

APPROVED BY:
E. Zlokovitz
COMMITTEE CHAIRMAN

**JOINT GSMFC & ASMFC ARTIFICIAL REEF SUBCOMMITTEE
MINUTES
Monday, January 12, 2015 – Tuesday, January 13, 2015
Clearwater Beach, FL**

Chairman Zlokovitz called the meeting to order at 8:30 a.m. The meeting began with introductions of the members and guests. The following were in attendance:

ASMFC Members

Mel Bell, SC DNR, Charleston, SC
Gregg Bodnar, NC DMF, Morehead City, NC
Hugh Carberry, NJ DWF, Port Republic, NJ
Chris Deacutis, RI DEM, Providence, RI
Christopher LaPorta, NYSDEC BMR, East Setauket, NY (via phone)
Bob Martore, SC DNR, Charleston, SC
Mike Meier, VA MRC, Newport News, VA
Keith Mille, FL FWCC, Tallahassee, FL
January Murray, GA DNR, Brunswick, GA
Mark Rousseau, MA DMR, Gloucester, MA
Kent Smith, FL FWCC, Tallahassee, FL
Jeff Tinsman, DE DWF, Dover, DE
Curt Weychart, NC DMF, Morehead City, NC
Melissa Yuen, ASMFC, Arlington, VA
Erik Zlokovitz, MD DNR, Annapolis, MD

GSMFC Members

James Ballard, GSMFC, Ocean Springs, MS
Dale Diaz, MS DMR, Biloxi, MS
Jon Dodrill, FL FWC, Tallahassee, FL
Mike McDonough, LA DWF, Baton Rouge, LA
Craig Newton, AL DCNR, Dauphin Island, AL
Doug Peter, BSEE, New Orleans, LA
Jimmy Sanders, MS DMR, Biloxi, MS
Brooke Shipley-Lozano, TPWD, Dickinson, TX
Jeff Tinsman, DE DFW, Dover, DE

Staff

Ali Ryan, GSMFC, Ocean Springs, MS

Others

Tim Mullane, American Marine Group, Norfolk, VA
Coleen O'Malley, Coleen Marine Inc., Virginia Beach, VA
Joe Weatherby, REEFMAKERS, Key West, FL

Adoption of Agenda

A motion was made to adopt the agenda with a minor change, and the motion passed unanimously.

Approval of Minutes

The minutes from the meeting held on February 25-26, 2014 were presented for approval. With a minor change, Tinsman made a motion to adopt the minutes, and seconded by Shipley-Lozano. The motion was seconded and the minutes were approved.

Artificial Reefs as Living Shorelines

Rousseau gave a PowerPoint Presentation entitled 'Massachusetts Shoreline Protection Using Complex Reef Habitat'. Hurricane Sandy made landfall near Brigantine, NJ on October 29, 2012 causing more than \$65 billion in damage along the eastern seaboard. In Massachusetts, coastal communities from the south coast to the north shore were impacted. The National Fish and Wildlife Foundation (NFWF) established the \$100 million Hurricane Sandy Coastal Resiliency Competitive Grant Program to fund coastal projects that “promote resilient natural systems while enhancing green spaces and wildlife habitat in areas along the Sandy-impacted landscape, enabling coastal communities and key habitats to withstand the impacts of future storms”. Applicants were encouraged to propose projects that will help reduce communities’ vulnerability to the growing risks from coastal storms, sea level rise, flooding, erosion, and associated threats through strengthening natural ecosystems that also benefit fish and wildlife. There were 54 grants totaling \$102.75 million. Grantees committed over \$72 million in additional funding and in-kind contributions to the program, for a total conservation investment of over \$175 million. MA DMF received \$240,000 to design a shoreline protection project that will weaken wave energy and protect transplanted eelgrass through the creation of complex hard bottom habitats. This is a design project that will inform specific recommendations for the beneficial re-use of approximately one million cubic yards of rock that will be dredged from the Boston Harbor federal navigational channel.

The goals of the project are to design structures to maximize wave attenuation while maintaining biological function; protect a vulnerable shoreline and locate areas with high potential for improving biodiversity and growing eelgrass; and draft recommendations for the beneficial reuse of dredged materials from the Boston Harbor. Tasks outlined in the Grant Proposal are site selection; engineering design; and recommendations for beneficial reuse and “living shoreline” options. Development zone site selection will be within a 22 nautical mile radius from Inner Boston Harbor. Identification will be done of vulnerable coastal areas, suitable slope/substrate/water quality, and suitable areas for eelgrass habitat. There are DMF policies and BMPs for eelgrass restoration, and reef planning and development. Low-profile stone structure will be used to contain fill to create eelgrass habitat where it does not naturally occur. Several meetings will be scheduled with project partners and other shareholders to develop recommendations for beneficial reuse materials. It must first be determined if the dredge materials being offered as beneficial reuse are suitable for the project. ACOE is currently collecting boring samples to determine actual material types and available quantities. This work is expected to be completed this spring. Many agencies will have input into the best use of dredge materials, and project partners will need to solicit additional input.

The contract between DMF and NFWF is still in the process of being finalized. Input is currently being solicited from coastal towns on potentially suitable locations. Locations will help inform engineering design. A partner working group was established to develop a request for response RFR to bring an engineering firm on board. Four partner/working group meetings will be held over the next year to discuss beneficial reuse recommendations.

Update on Invasive Species (Lionfish) Activities

Ballard gave a PowerPoint Presentation entitled 'National Invasive Lionfish Prevention and Management Plan'. In spring 2011, GSARP recommended that the ANSTF establish an Invasive Lionfish Control Working Group to scope the issues related to prevention, control, and management of invasive lionfish (*Pterois volitans*, *Pterois miles*). From May 2014 – September 2014, the Plan was reviewed by ANSTF members and NISC policy liaisons. All comments have been addressed, and missing sections under Chapter 6.0 have been incorporated or removed. The final draft of the Plan was presented to the ANSTF at their November meeting. In December 2014, the Plan was placed in the Federal Register for a 45-day public review.

The goals of the Plan are: to prevent the spread of invasive lionfish, provide coordinated early detection and rapid response, the control and management of invasive lionfish, and to assess impacts of the lionfish invasion. Funding is needed for: lionfish research; to identify high priority sites and the vectors of introduction threatening them; to develop and implement a standardized monitoring program; to establish a Rapid Response fund; outreach.

Update on Special Management Zones

Tinsman gave a PowerPoint Presentation entitled 'SMZ Status for the Delaware's EEZ Reef Sites'. The goals of the Delaware Reef Program are to enhance fish habitat by providing protective structure and trophic support for fish, increase invertebrate biodiversity, increase invertebrate biomass, and provide hook and line fishing opportunities. The origin of Special Management Zones in Federal waters is the Snapper-Grouper Plan. SMZs are common in the south Atlantic. Over the past 20 years, 51 SMZs have been created. Once a reef site has been designated an SMZ, gear restrictions can be used to eliminate conflicts with recreational and commercial hook and line fishing. With SMZs in place, Delaware could continue to manage ocean reefs for both recreational and commercial hook and line fishermen, and conduct many other surveys and activities essential to fisheries management, using Sportfish Restoration Funds.

In August 2012, the SMZ Monitoring Team found that gear conflicts were documented at sites 11 and 13, using Vessel Trip Reports; the value of landings was estimated at \$34,000 annually; the value of the recreational fishery, based on aerial flight survey (sites 11 and 13), exceeds \$1.5M annually; SMZ status would not impact a significant number of entities; the monitoring team provided a range of SMZ measures, including no action, seasonal and full-time SMZ status, and SMZ status for only certain sites. Additionally, the BSB Advisory Panel was convened and made recommendations. Three public hearings were held in Ocean City, MD, Lewes, DE, and Toms River, NJ. In February 2013, the Council brought out that this is a gear limitation request, and not an attempt to restrict commercial fishing. Commercial hook and line would not be affected. The MAFMC voted 11-3 to support Delaware's request by sending it to John Bullard, NMFS Northeast Regional Administrator. The request was made by letter from Chris Moore, MAFMC, to Jon Bullard on 2/16/13.

NMFS has prepared a Preliminary Rule, and accepted public comment for 60 days. The Preliminary Rule proposed creating five ocean SMZs with 500 yard buffer zones. Following public input, an environmental assessment will be written with its own comment period. NMFS will publish a Final Rule.

SMZ status will reportedly be approved for four Delaware permitted sites in the EEZ, without buffers.

South and Mid-Atlantic Artificial Reef Perspectives

Zlokovitz gave a PowerPoint Presentation entitled 'South and Mid-Atlantic Reef Perspectives'. The most active Atlantic states reefing during the last 5-10 years are New Jersey, south to Georgia. There is generally less activity north of NJ. There are also some artificial reef projects historically and currently in MA, RI, and NY. The reefs are located in offshore Federal waters, nearshore state waters, and bays/estuaries. Many of the estuarine/shallow water projects focus on oysters.

The U.S.S. Radford Destroyer was sunk in August 2011. This was a multi-state project (DE, MD, NJ). The ship is 563 feet long, and 50-60 feet of vertical profile. Within months of sinking, reports of fish were received from divers and anglers, ranging from typical black sea bass to stray barracuda.

In South Carolina offshore, a vertically enhanced barge sinking project in Type II MPA allows mid-water and surface trolling for large pelagics. Soon after sinking, amberjack were spotted.

In 2006, 1,600 stainless steel subway cars were received from the New York Transit Authority. They were constructed from Type 301 and 302 stainless steel, and were expected to be durable. The US EPA estimated the longevity of the cars would exceed the Redbird subway cars deployed in 2003. They were estimated to last at least 25-30 years. The subway cars were accepted as reef material by DE, VA, NJ, MD, SC, and GA. During a meeting in January 2013 with the DNR Fisheries Director and Coastal Fisheries Program Manager, commercial fishermen reported that subway car debris was being caught "daily" as a distance of 10-15 miles away from original reef sites. The majority of the debris was being caught by dragger fleet (Otter trawl gear). Since the latter part of 2013, the number of reports of loose debris has dropped off to near zero. Excellent catches of summer flounder, sea bass, and tautog at remains of subway car reefs have been reported by party boats.

The traditional process of Oyster Bar restoration in Chesapeake Bay is to add or aggregate shells and other small substrate, and add spat on shell. Alternate materials for oyster and fish reefs are larger rocks and boulders (granite/limestone), and reef balls.

Zlokovitz reported on special reef regulations for Delaware, Virginia, and South Carolina. Delaware SMZs are currently in place in state waters. Reefs in the EEZ are in the review process with NOAA (went through council). The rule would allow hook and line fishing (commercial and recreational), but not fish pots. In Virginia Bay reefs, hook and line/hand gear only in VA section of Chesapeake Bay. In South Carolina, Type II MPAs forbid bottom fishing, but allow mid-water and surface trolling for billfish and tuna. SC special regulations have included restricting fishing to hand-held gear only, and restricting all recreational or commercial catches on reefs to rec size and bag limits.

There are monitoring challenges in the South and Mid-Atlantic. Smaller state programs are limited by staff and resources. Time commitments are juggled between monitoring and deployments. May depend on volunteer angling and diving studies. Still requires coordination and data QA/QC.

Zlokovitz spoke on future directions and challenges in the South and mid-Atlantic, such as "Hybrid Reefs", which are artificial reefs combined with shoreline projects that benefit juvenile

and younger life stages and shallow water angling. No Rigs-to-Reef, but perhaps “Dams-to-Reefs” and wind towers. Wind towers may serve as “defacto” artificial reefs, but the “security zones” around the surrounding structures are a concern. Ongoing oyster and fish reef construction in Chesapeake Bay and other shallow water coastal waterways will require continued coordination with various user groups competing for space. Permit renewals require coordination with multiple state and federal agencies, including Historic Trusts.

Atlantic Coast Fish Habitat Partnership and Mid-Atlantic Fishery Management Council Partnership to Address Disturbed Mid-Atlantic Reef Fish Habitat

Kent Smith gave a PowerPoint Presentation entitled 'ACFHP-MAFMC Partnership Mid-Atlantic Natural Reef Restoration Project'. The MAFMC and its partners want to address damage to natural mid-Atlantic hard-bottom habitats caused by human activities through restoration/enhancement efforts. Fishing activities such as bottom trawling may be responsible for this damage. The lack of historically well-mapped natural hard bottom make interpretation of such damage challenging.

The MAFMC has \$100-250,000 to enhance/restore low-relief natural hardbottom that must be obligated by December 31, 2015. ACFHP will manage the RFP and project in partnership with MAFMC. The RFP will specify that the target location is Delaware to Virginia offshore waters; the project must benefit MAFMC trust species, such as black sea bass and summer flounder; on-the-ground establishment of offshore hardbottom habitats; must be natural reef systems. Considerations for the ecological nature of the natural reef system in the region will be the structure height, reef material, and location of the restored reefs. Pre- and post-installation monitoring will be done. The ideal project option is to create two reefs – one with fishing, and one without, that would provide data to better understand recruitment/fishing dynamics. These would be protected areas with certain gear restrictions, and require data to implement. There is not a lot of data on locations of existing reef systems. It would be informative for an ACFHP subcommittee to work with the ASMFC Artificial Reefs Committee to develop the RFP, which can also serve as an opportunity to highlight the use/benefits of artificial reefs for restoring fish habitats. An NFHP Foundation Fund chapter for ACFHP is currently being developed in order to carry out this funding opportunity.

Georgia's Oyster Reef Restoration Projects, Monitoring Efforts, and Logic Model

Murray gave a PowerPoint Presentation entitled 'Oyster Reef Restoration Projects, Monitoring Efforts, & Logic Model'. The Oyster Shell Recycling Program consists of eight DNR centers managed via CCA and UGA partnerships. Shell donations were received from restaurants and the general public. Volunteers bagged shells, and GADNR provided a shell bagging machine.

The total restoration from 2008-2014 totals 1.78 acres. Test plots were deployed in 2015 at Van Dyke Creek, Timmons River, Joe's Cut, and DNR dock. Lessons were learned from the test plots - the site selection process needs to be improved; experiment with materials and locations; the process is low cost and easy to deploy; Monitoring is time consuming. Spat densities, biomass of monitoring bags, and sedimentation rates were monitored.

Inshore artificial reefs are being considered as possible oyster reefs. The test plots will have donated steel drum frames and shell bags on pallets deployed. The goals are to determine which inshore artificial reef sites can house oyster reef materials, and to establish 3-year adaptive site plans. Year 1 of the Plan would have test plot deployments in April, visual monitoring in July, and biological monitoring in October. At the end of Year 1, it would be determined if the test

plot site could be scaled up for restoration. Year 2 would have restoration and enhancement deployments in April, visual monitoring in July, and biological monitoring in October. At the end of Year 2, it would be determined if maintenance is required. Year 3 would have maintenance deployments in April, visual monitoring in July, and biological monitoring in October. At the end of Year 3, it would be determined if the project was successful. The goal is to gather sufficient information about the sites by planning, collecting data, and reporting to implement design of the project and create a logic model.

By the end of 2014, four test plots with multiple treatments will be deployed in Jointer Creek, and monitored to determine density, recruitment, and changes in site footprint data. Test plot monitoring data will be processed and reported. By the summer of 2015, 0.21 acres of EFH will be created in the Jointer Creek Harvest Area. Enhancement site monitoring data will be processed and reported by the end of 2015 to determine recruitment, density, and changes in site footprint. Test plot and enhancement site construction, monitoring photos, and videos will be used to present an educational presentation at 2-3 public venues. By the end of 2015, over 50,000 people will be exposed to media and educational information regarding the Jointer Creek Harvest Area Enhancement Project.

Boat Visitation Rates from Acoustic Detections on Paired Artificial-Natural Reefs on the West Florida Shelf

Peter Simard gave a PowerPoint Presentation entitled 'Boat Visitation Rates from Acoustic Detections on Paired Artificial-Natural Reefs on the West Florida Shelf'. Boat traffic can be monitored using acoustic recordings. Data can be collected regardless of weather, daylight, etc. Spatial and temporal synoptic data is collected. A study was done to investigate boat visitation rate patterns on four artificial and natural reef pairs on the central west Florida Shelf using autonomous acoustic recorders. The reefs ranged from approximately 9m to 30m depth. Data was collected by Digital SpectroGram (DSG) acoustic recorders housed in PVC pipe containing a battery pack of 24 D cells, data logger, and hydrophone. They were moored on the sea floor. Since April 2013, approximately 900,000 acoustic files have been collected.

Boat noise is typically characterized by harmonics and higher amplitude at lower frequencies. There were 2,742 files in the test set of data from the study area. In these files, 184 had boat noise, and 2,558 did not. The overall success rate was 94.5%, with 26.6% true positives, and 0.7% false positives. The probability of boats in acoustic range, but not stopping at reef was 0.62 artificial (Clearwater Reef), and 0.11 natural (21 HS Ledge).

Results revealed that at the Clearwater Reef, boat visitation rates peak from May – September. This is similar to general recreational boat usage, and visual boat counts during USF research cruises. There were a high number of boats visiting the reef. This is similar to visual boat counts during USF research cruises. At the 21 HS Ledge, boat visitation rates were sporadic, but diffuse peak was from May – December. This is similar to visual boat counts during USF research cruises, and possibly due to a high proportion of “drive-by” boats. Very few boats visited the reef. This is similar to visual boat counts during USF research cruises. From May – September, the Clearwater Reef had 7,000 boats visiting, compared to 21 HS Ledge, which had 100 boats visiting it.

Conclusions of the study show that acoustic recordings are an effective method of estimating boat visitation rates.

Dodrill asked how often the units had to be replaced. Simard replied that it is approximately every 6 months.

Integrating Basic and Applied Ecology Using Paired Artificial-Natural Reef Systems

Chris Stallings gave a PowerPoint Presentation entitled 'Integrating Basic and Applied Ecology Using Paired Artificial Natural Reef Systems'. One of the goals of the FWC Artificial Reef Program is to use artificial reefs as a component of fisheries management. Stallings discussed expectations of how artificial reefs function ecologically and as a component of fisheries management. Also, if the ecological functions of artificial reefs can be predicted, given the wide variation in material, size, orientation, location, etc. Through 20+ years of monitoring community responses, there is a high variance and dissimilarity even in a controlled experimental system of natural patch reefs, translocated patch reefs, and artificial patch reefs.

There are more fish on larger reefs. Colonization rates and residency is influenced by interactive effects of reef size and spacing, and gag selected shelter at the expense of growth. Thus, reef fishes could experience density-dependent effects on growth, survival, and/or reproduction despite reduced stock sizes as a consequence of fishing.

The uncertainty surrounding the value of artificial reefs ecologically or as a fisheries management tool has arisen for at least four reasons: Many artificial reefs have been deployed without any predefined scientific program to study their effects; marine systems are notoriously variable and fish dynamics are affected by many factors; many investigations conducted so far have focused almost exclusively on the artificial reefs rather than on how nearby natural reefs may have been affected; artificial reefs may simply affect distribution by attracting fish from natural reefs and concentrating them upon artificial ones.

As for artificial reefs being a component of fisheries management, the assumption is that more reefs equal more fish. Production can be high on artificial reefs, according to articles written in the Bulletin of Marine Science and the ICES Journal of Marine Science. The relative effects of production vs. attraction is still not understood.

The Before-After-Control-Impact (BACI) of new artificial reefs on natural reefs

Stallings stated that BACI studies should be required for all future artificial reef deployments, as they result in improved predictive power and are a way to get a handle on attraction-production.

Review Draft "Guidelines for Marine Artificial Reef Material (Second Edition)

Ballard suggested dedicating the edition to Jim Francesconi. The Panel members agreed.

For the statement: 'Alabama continues to permit truck and school bus bodies for use by private artificial reef builders within the general permit areas'. **Newton** stated that they no longer do this.

The EPA has expressed an interest in further investigation into the use of automobile bodies for artificial reefs; however, no states are currently accepting car bodies or trucks.

Delaware's artificial reef program is the newest active state reef program among the Gulf and Atlantic states.

Experimentation is underway to use the inner tire bead as a connector, but **Carberry** stated that this was not successful, and the statement should be removed.

Guidelines for Marine Artificial Reef Materials Chapter/Title/Editor list: **Horn** stated that memorial reefs should be discussed.

Ballard stated that he would like updated chapters done by March 2015 and sent to him. **Ballard** will revise them and send back out.

Long-Term Socioeconomic Value of Vessels as Artificial Reefs

Tinsman stated that reefing vessels should continue. In the midst of an economic downturn, sinking naval vessels for artificial reefs aims to achieve multiple goals. It creates new ocean habitat and a tourist destination, while also ridding the Navy of outdated ships. It should dramatically increase the use of dive boats operating on states' ports, boosting tourism.

Artificial reefs can develop an invertebrate community and provide food and protection for reef fish such as tautog, seabass, scup, spadefish and triggerfish. In addition, gamefish such as bluefish, striped bass and weakfish are attracted to baitfish, which congregate around reef structures.

Other Business/Public Comment

There being no further business to discuss, **Zlokovitz** recessed the meeting at 5:00 p.m.

Tuesday, January 13, 2015

Chairman **Zlokovitz** called the meeting to order at 8:30 a.m.

Helping Fisheries Managers and the General Public Understand the Production-Attraction Effects of Artificial Reefs

Zlokovitz spoke on his work with developing artificial reefs in Maryland waters. Permits for artificial reefs are administered by Ocean City, Maryland. Information on reef locations are only accessed by members. The public often inquires about the role of artificial reefs in attracting or enhancing the production of fish species.

There are examples that artificial reefs do attract fish species, such as red snapper. Production is also evident, such as black sea bass and tautog. However, the answer is not simple, due to the fact that attraction/production varies by region and by species. The FWC provided a brochure that was written by Florida Sea Grant for the public that addresses the topic.

Consider Development of an Artificial Reefs Database

Yuen stated that possibly a working group can be formed to develop a database. The question of who would update the database, and how often, was presented. **Yuen** asked the members if they wanted to move forward on this. It was decided that the subject will remain open.

State/Federal Artificial Reef Program Updates

Alabama:

Newton reported that AMRD continues to be active in maintaining, constructing, and deploying artificial reefs within its territorial waters and adjacent federal waters of the Gulf of Mexico, up to 65 nautical miles offshore of Alabama. A complete side-scan mosaic was constructed of the 2.2 square mile nearshore artificial reef zone that was established in 2011 within state waters offshore of Baldwin County. In addition to the 254 reefs deployed in 2013, eight additional unknown structures were identified during the exercise. No movement, disassociation, or subsidence was measured since 2013 deployment.

AMRD is in the process of acquiring permits that authorize the construction of artificial reefs within an 86 square mile area that will diversify Alabama's Artificial Reef Program. This reef zone is sited inland of the 1,030 square mile offshore reef zone, and ranges between 6-9 nm offshore.

Oyster half-shells and #57 limestone were deployed in 2014 at three inshore reef locations.

AMRD continues to address the Idle Iron issue by encouraging owners of Idle Iron offshore of Alabama to consider reefing as a viable option. Permits were authorized to reef Viosca Knoll 385 and Main Pass 255 - "A", and construction is scheduled to begin in 2015.

AMRD is taking advantage of a unique opportunity to utilize imperfect concrete culverts and manholes that are being transported at a significantly reduced rate. Rather than deadheading loads to coastal Alabama, AMRD is paying the transportation company a significantly lower rate to deliver the material to AMRD's property. These materials will be stored at the property until additional funds and opportunities to construct new reefs or enhance existing reefs.

Delaware:

Tinsman reported that DFW recently promulgated regulations covering shellfish aquaculture activities in Indian River, Little Assawoman Bays, and Rehoboth. Delaware is currently seeking permission from the US Army Corps of Engineers to use Nationwide Permit 48, which authorizes discharge of grudge or fill material used for commercial shellfish aquaculture activities. When aquaculture leases are granted, Delaware will become the last state along the Atlantic coast to allow shellfish aquaculture.

In 2012, a bay-wide survey of the wild hard clam population in Indian River and Rehoboth Bays was concluded. This survey reveals that Delaware has a robust clam population, which is unchanged from the earlier survey conducted in 1976. Many Atlantic coast states have documented significant declines in native hard clam populations over this period.

In order to protect Delaware's native hard clam and oyster populations, aquaculture regulations will require disease testing of any shellfish imported into the state. Probably the most important measure will be the geographic separation of wild and aquaculture stocks to reduce disease transfer and genetic mixing. Delaware's oyster beds and fishery are in Delaware Bay, while oyster aquaculture will be limited to the three coastal bays. Wild hard clam stock and fishery are in the Indian River and Rehoboth Bays. Hard clam aquaculture will be limited to Little Assawoman Bay, an isolated system that will support hard clams, but has no native population.

Florida:

Mille reported on state-funded artificial reef construction projects that were completed during 2014. The city of Jacksonville implemented a first-time Florida riverine artificial reef pilot project to create two artificial reef patch reefs in the lower St. Johns River. Over a two-week time period, 18 barge loads of broken up end-of-day concrete waste was deployed at two small artificial reef locations. The project was completed in December 2014. This was the first time the FL FWCC artificial reef program had engaged in funding a reef construction project in a low salinity, low visibility river environment adjacent to a highly urbanized area. The project was promoted by members of the Coastal Conservation Association, who felt that with reduced visibility, loss of submerged aquatic vegetation, and increased salinity, the placement of piles of concrete deployed onto barren substrate would be suitable habitat substitute for the lost eel grass, and provide euryhaline aquatic organism habitat, and a fishing destination. These concrete patch reefs will need to be assessed with monitoring before future FWC money is expended in similar riverine reef building endeavors.

After a seven-year hiatus in artificial reef activities, the city of St. Marks renewed and expanded its St. Marks Reef area five miles offshore of the St. Marks River in October 2014. Within a month (early November), photographic reports were received of black sea bass and flounder being caught on this patch reef complex.

OAR assisted a small municipality with administrative resources and funds in applying for and securing a \$55,000 artificial reef construction grant from FWC, using saltwater fishing license revenues, and matched with \$12,000 cash from OAR. This project was implemented in June 2014, and was located at the Carrabelle 10-mile Reef Site in federal waters south of Dog Island. Three large 15 ft. tall, 18-ton concrete and limestone hollow tetrahedrons (“Super Reefs”) were deployed. Two super reefs were \$47,000 donations by a family as memorial reefs in honor of their son. These are the largest individual reef modules that have been deployed off Florida to date. Ten 8 ft. tall hollow limestone tetrahedrons were deployed around each of the Super Reefs.

FWC entered into a grant agreement with Bay County to deploy at two separate permit sites in state waters off Panama City in June 2014. Additionally, the county used local monies to fund the deployment of two former F-101 fighter jet fuselages onto a bed of secondary-use concrete culverts. These were the first aircraft deployed in over 10 years off of Florida. They will be closely monitored over time. The FWC reef program does not fund the purchase or deployment of aircraft.

In March 2014 in Eastern Bay County, 58 concrete and rock artificial reef modules were deployed as 18 patch reefs across four artificial reef permitted areas in federal waters, and one permitted area in state waters. Modules deployed were limestone hollow tetrahedrons, a rectangular concrete hybrid grouper ledge habitat with a triple disk layer “ecosystem” reef attached to the top.

This was the first deployment of the Walter “Super Reefs” in Florida. There were two Super Reef prototype designs deployed. Attached to the top of four Super Reefs was a metal rebar steeple extending an additional eight feet above the top of the hollow concrete and limestone rock-studded tetrahedron. FWC staff had concerns that the rebar steeples would be a potential focal point for entanglement and loss of monofilament fishing gear. The Mexico Beach Artificial Reef Association (MBARA), who purchased the steeples and have oversight of the artificial reef project, pledged to carefully monitor the steeples to assess any gear loss associated with them.

The second Super Reef design had a rock-studded three-layer concrete “ecosystem” disk design mounted to the top of the Super Reef unit, resulting in a vertical relief of about 17 feet.

A series of nine patch reefs were deployed in May and June 2014 in the Horseshoe Beach Artificial Reef Site in Dixie County in about 25 feet of water. The patch reefs consisted mostly of 3’x4’x5’ limestone boulders individually lowered to the sea floor. Some secondary-use concrete material was also utilized. The County reef coordinator reported harvests of legal size gag grouper at the patch reef complex within a month of reef deployment.

In Indian River County Reef Site 2 in July 2014, 859 tons of concrete bridge decking, culverts, and light poles were deployed equally between two patch reefs located there.

Martin County deployed over 2,700 tons of nested concrete culverts, riprap, poles, and cylinders to create six patch reefs in July and August 2014 at the South County permitted reef site.

In July and August 2014, St. Lucie County constructed a single 1,500-ton patch reef within the St. Lucie County permitted Reef Site #4. The reef was comprised of mixed secondary-use pre-cast concrete materials that consisted of concrete culverts, light poles, and light pole bases.

A single boulder reef composed of 943 tons of limestone boulders was deployed by Palm Beach County in July 2014. An additional reef consisting of 413 tons of pre-cast concrete materials was also constructed.

FWC contracted with the University of South Florida to engage in a project utilizing passive acoustic listening devices to assess boating activity over and immediately adjacent to three artificial reef sites and their paired natural reef sites. This project is ongoing, and a draft final report is expected by August 2015. Preliminary data from the acoustic listening devices indicate that the artificial reef sites are receiving significantly higher boating visitation activity than the paired natural reef sites.

Reef fish population studies of artificial reefs were conducted and nearby natural reefs mapped using side-scan sonar by FWC and the Florida State University Coastal Marine Lab. Comparisons were made between visual diver surveys and a prototype rotating GoPro camera system. The field work for this project concluded in August 2014, and a final project report was submitted for review in January 2015.

The FWC continued to fund the REEF Environmental Education Foundation (REEF) for the July 2014 completion of year four of a five-year fish census monitoring effort of the General Hoyt Vandenberg ship, which was sunk as an artificial reef in 2009 south of Key West in 135 feet of water. A summer 2015 monitoring effort by REEF will complete the five-year monitoring period.

Acoustic tracking of selected reef fishes associated with modular concrete and concrete/steel units within the Escambia East Large Area Artificial Reef Site will be conducted by the University of West Florida with funding provided by the FWC. Twenty-five reef fish were tagged, with the initially surviving 23 tracked over a three-month period to produce three-dimensional tracks of the tagged fish, estimates of home ranges, and factors affecting tagged fish. Results of the study will add to the knowledge of reef fish ecology on small-scale artificial

reefs off the Florida Panhandle. The final report from this one-year monitoring effort is expected by May 2015.

In compliance with requirements of the EPA risk-based PCB disposal permit for the ex-U.S.S. Oriskany that was sunk as an artificial reef off Pensacola Pass in May 2006, the FWC and Escambia County continued sampling legal-size recreationally targeted reef fish for PCB analysis. Between December 14, 2006 and April 16, 2014, 12 reef fish sample collection events were completed. A total of 417 reef fish collected on the Oriskany have been retained for PCB sampling from December 2006 through April 2006. Fifty-three fish caught on the Oriskany in April 2013 were analyzed for total PCBs and 208 congeners by the Texas A&M Geological and Environmental Group (GERG). For vermillion snapper and red snapper, the consistently most commonly caught fish species, mean total PCB concentration of skin on lateral muscle skin-on fillet samples continue to remain below the 20ppb EPA Tier 1 screening threshold, as has been the case for the last several years. In April 2014, 29 reef fish were analyzed, and were well below 20ppb for three of four red snapper, except for one red snapper slightly above the threshold at 21.5ppb. Three whitebone porgies were above the threshold at 65, 85, and 205.6 ppb. One red porgy exceeded the 20ppb threshold at 84ppb. One bank sea bass exceeded the threshold at 36.5 ppb. Tier 1 hook-and-line sampling for recreationally targeted legal size reef fish to assess tissue fillet PCB concentrations on the Oriskany Reef is expected to continue at least through spring 2015.

In July 2012, FWC entered into a contract with Dr. Bill Huth, University of West Florida, to conduct a state-wide artificial reef socioeconomic study. The draft final report was completed in late December 2014 and is currently undergoing final review.

In October 2014, a legal Record of Decision (ROD) was reached among State Trustees, British Petroleum, and their legal representatives, clearing the way for release of funds for Deepwater Horizon Oil Spill Phase III Natural Resource Damage Assessment Projects. FWC is expected to receive this funding from the Florida Department of Environment Protection sometime in the first quarter of 2015.

An outreach video was developed by FWC that focuses on fisheries research activities at the Florida Fish and Wildlife Research Institute, artificial reef development, and stock enhancement activities. The video is available to the public.

Several independent artificial reef construction projects undertaken at the County levels with local funding or donations occurred in 2014.

Bill Horn retired on September 30, 2014 after 22 years with the Florida Artificial Reef Program, and 35 years of service with the state of Florida.

Georgia:

Murray reported on artificial reef management. DNR annually deploys donated materials of opportunity to enhance both offshore and inshore artificial reef sites. DNR conducted offshore enhancements of two reef sites through deployments of a hopper barge loaded with 330 metal chicken transport cages, a steel deck barge, and other materials of opportunity. Inshore enhancements at two reef sites included the deployments of 49 concrete transmission line poles and 13 steel drum frames.

Reef project goals include obtaining donations of materials and funding, maintaining permits and partnerships, and annual material inspection surveys via side scan sonar, aerial reef flyovers, and SCUBA diving. DNR consults with the Department of Defense and US Army Corps of Engineers (USACE) on the decommissioning of eight offshore Tactical Aircrew Training System Towers to create fish habitat located in federal waters along the GA coast. Regional Permit 36 (RP 36) authorizes the deployment and maintenance of materials at Georgia's 30 offshore artificial reef sites. DNR maintained a State Coastal Marshland Protection Act permit (CMPA 682) and a federal USACE Programmatic General Permit (PGP 37) for the enhancement of 15 inshore artificial reefs at multiple locations throughout coastal GA.

Murray next gave an update on oyster reef restoration. In spring 2014, DNR partnered with Coastal Conservation Association of Georgia, Oatland Island Wildlife Center, and the Surf Rider Foundation to plant natural cultch materials at two sites and five test plot areas to enhance substrate for oyster restoration. Funds donated from the Georgia Natural Resources Foundation were used to assist with the costs associated with shellfish restoration projects.

Through DNR's Oyster Shell Recycling Program, the local community provided 24 tons of shells (cured three to six months). Over 10 tons of donated shells were used in two 2014 restoration projects. A third restoration project utilized wire bundles and bamboo spat sticks. Approximately seven tons of recycled oyster shells were planted to restore 0.017 acres of oyster reef. An additional 3.6 tons of recycled oyster shells, 240 bamboo spat sticks, and five oyster balls were planted at five test plot areas to verify the viability of each location. Each test plot was monitored to document changes in larval recruitment and sedimentation rates. GADNR conducts monitoring at all oyster restoration and test plot sites to ensure project objectives are achieved. These oyster restoration sites also serve as excellent locations for education and outreach projects showcasing restoration of shellfish in Georgia's estuarine waters.

Louisiana:

McDonough reported that their Artificial Reef Program continues to be very active in accepting new platforms into permitted artificial reef sites. Oil and gas jackets have been accepted, totaling 350. In 2013, 11 were deployed. There are 39 additional structures permitted for deployment; 28 are in the permit process. Eight drill rig legs have also been accepted.

The Program has also been developing several inshore artificial reefs. In collaboration with the Coastal Conservation Association of Louisiana, the Program developed a reef in Lake Pontchartrain, utilizing 2,000 tons of quarry limestone. This reef is within casting distance of a recently repaired fishing pier.

The Pickets 'nearshore' reef in Ship Shoal 26 was completed. 'The Pickets' were a collection of oil and gas structures that had become very popular for trout fishing. Although they were in too shallow water to do a Rigs-to-Reef, it was felt that this was a good fishing opportunity. After the removal of the platforms, 13,000 tons of quarry limestone was deployed.

An Inshore/Nearshore Reef Plan has been finalized by the Program. While it has developed inshore reefs previously, these reefs have always been built on a case-by-case basis. Progress has been intermittent. This Plan communicates how the Program develops these inshore reefs, and included the passage of Planning Areas where the reefs will be developed.

Maryland:

Zlokovitz reported that annual deployment of concrete reef balls in upper Chesapeake Bay at Memorial Stadium Reef was completed. Over 1,900 reef balls have been deployed since 2001 at this site. Along with MDDNR and the Army Corps, expansion by 1.5 acres of the existing area was done for additional reef ball deployments within the same existing low profile rubble field. The number of reef balls is limited by the Corps, and it is anticipated that the cap will be reached in two years.

At the Rt. 50 reef ball project, 240 “mini-bay” reefs balls were deployed on the Talbot County side of the river (“North Reef”). The North and South Reef Sites are now 85% full. A pre-deployment volunteer fishing survey was done in 2013 to look at catch rate and species composition before and after reef ball placement. A post-survey will be done in 2015.

Deployment of donated concrete will be done in the lower portion of Chesapeake Bay in 2015-2016.

Development of a more statistically rigorous monitoring program that can be maintained with limited staff and budget is continuing. A successful Pilot Volunteer Angler Logbook study in 2013 was conducted in 2013, and another survey in 2014 continued. The surveys compared CPUE and size distribution at natural vs. artificial reefs. Analysis of the 2013 data indicated that there was no significant difference between artificial reefs and natural reefs. Analysis of the 2014 data QA/QC is under way.

Anglers will be recruited for an expanded Baywide 2015 volunteer angler logbook study on several artificial reef sites and natural reef comparison sites.

Deployments of concrete “coral castle reef blocks”, and steel and concrete pipe were deployed at various reef sites off Ocean City. A total of 10,747 reef blocks have been deployed.

Concrete “stars” or “jax”, similar to the shape of the beach obstacles used at Normandy during WWII, have been constructed by volunteers of the MD coastal chapters of CCA and MSSA for deployment on OCRF reef sites.

During 2011-2013, MDDNR staff received multiple reports of subway car debris being caught daily by commercial draggers (otter trawl) at a distance of 10-15 miles from the original reef sites. The distances were not verified due to the draggers not providing exact coordinates in GPS or loran format. These stainless steel subway cars were deployed at four sites off the coast of MD. One reliable diver report indicated that a piece of subway car roof had drifted approximately 10 miles south from the Jack Spot Reef, and had wedged up against the side of the USS “Screw” Wreck. The number of reports of debris dropped significantly in late 2013, and no additional reports were received in 2014.

Massachusetts:

Rousseau reported that the Division of Marine Fisheries continues to administer the Massachusetts Artificial Reef Program on a part-time basis. Federal Aid in Sport Fish Restoration (Wallop-Breaux) money has been relied on by the Program for reimbursement of a portion of agency funds for staff time used to provide technical assistance and data analysis on projects that provide benefits to recreational fishing, including artificial reefs. Project personnel direct agency resources to support projects that promote and advance responsible artificial reef

development, including collecting and analyzing data, providing technical assistance, writing policy, and educating constituents of the benefits of artificial reefs to recreational fisheries.

In 2014, DMF received a second consecutive year of funding from the MA Marine Recreational Fisheries Development Fund for long-term support of reef monitoring and development activities. These funds support monitoring efforts at all permitted artificial reef sites in MA.

DMF obtained all permits in 2014 for two artificial reef sites within state waters in Nantucket Sound. The 127-acre reef site off the coast of Yarmouth was permitted to allow for the deployment of additional materials on a previously permitted artificial reef site. A new 10-acre site was permitted for reefing two miles off Sasquatucket Harbor.

A statewide GIS-based artificial reef site selection model was developed in 2014 that targets areas with limited hard bottom habitat. This model will inform future reef siting in MA.

In 2014, permanent bottom photo monitoring stations were established at all existing artificial reef sites.

A National Fish and Wildlife Foundation (NFWF) Hurricane Sandy Coastal Resiliency Competitive Grant Program was applied for and received in 2014 to examine the role of artificial reefs as a "living shoreline" option for coastal protection in MA.

DMF participated in a multi-agency working group of federal, state, local, and nonprofit resource agencies in MA in 2014 to identify potential suitable options for the beneficial reuse of one million cubic yards of dredge rock material expected to be removed from Boston Harbor by ACOE in 2015-2016.

Mississippi:

Sanders spoke on three 2014 artificial reef projects. The artificial reef bureau purchased and received a new side scan from Falmouth Scientific, Inc. on April 7, 2014. The artificial reef bureau staff conducted pre/post side-scanning of roughly 1,400 acres of the state's oyster reefs. These oyster reefs were an enhancement project that used National Resources Damage Assessment (NRDA) money. The images helped identify areas of the state's oyster reefs that needed to be enhanced for the upcoming oyster cultch deployment. Along with the NRDA project, there were four additional oyster reefs sites that were side-scanned to produce a current map of the oyster reefs.

There were three artificial reef deployments in 2014. The Katrina Key Expansion project that started on May 1, 2014 was completed August 26, 2014. During this period, 800 concrete columns from the old Margaritaville Casino were used to expand the reef 300 feet to the East. The Rigs-to-Reef Program accepted Chevron's VK384-A jacket that was deployed on the Main Pass 185 reef-site on November 11, 2014. MDMR used Coastal Impact Assistance Program funds to create and deploy 80 juvenile reef fish. This was in conjunction with the University of Southern Mississippi's Gulf Coast Research Lab.

For 2015, approximately 20,000 tons of concrete culverts will be deployed on selected offshore reefs. There are plans to restore three keys maintained by MDMR in west Harrison County and Hancock County to their original design specifications. The keys sustained damage from storm

surge and high wave conditions from Hurricane Isaac. MDMR is working with Omega Protein to deploy a 165 foot steel hull vessel in a designated offshore reef site.

New Jersey:

Carberry reported that they have lost all of their funding. They are moving forward on regulations.

A new reef for only recreational fishing is being created.

A new reef in Delaware Bay is being created.

Permit renewal is up in December 2015.

New York:

Chris LaPorta reported that budget costs continue to adversely affect the NYSDEC Bureau of Marine Resources. The Reef Program activity has been constrained due to limited resources and funding.

The Reef Program has received over 24,000 cubic yards of dredge rock on the Hempstead Reef from a US Army Corps of Engineers dredging project. This has been the first New York reef deployment in approximately nine years. There will potentially be additional rock deployments from future ACOE dredging projects.

The Rockaway Delivery Lateral Northeast Connector Project will involve placement of a natural gas pipeline near the Rockaway Reef. This site has not received new materials in over two decades. This action will increase the number of active New York reef permits to five.

Funding has been received from New York Environmental Protection Fund to conduct a focused biological study on two reef sites. The Stony Brook University School of Marine & Atmospheric Sciences is under contract to conduct a study using a variety of biological monitoring methods to determine the most effective and cost efficient for the New York reef sites. The study began in August 2014, and will continue into 2015.

North Carolina:

Bodnar reported that their Artificial Reef Program is continuing its focus on the state's estuarine reef system, and coordinating all offshore reef deployments. Currently, there are 50 permitted reef sites and 12 oyster sanctuaries throughout the offshore and inshore waters of North Carolina. Forty-two of these are ocean sites.

As of 2015, the Artificial Reef Program will be conducted under one SFR grant. This will streamline SFR grant proposals, reports, and administration of grants.

Essential Fish Habitat (EFH) and a juvenile abundance index (JAI) for reef-related finfish continues. EFH is expanding estuarine artificial reefs and oyster sanctuary sites by utilizing hook and line, gill net, sea bass pots, and underwater video stations. JAI is conducting trawl sampling in grass bed areas for gag grouper, sheepshead, spotted seatrout, and Paralichthys flounders. Data is used to develop criteria for new artificial reef sites.

A printed reef guide and web site will be done in summer 2015.

Authorization was granted to remove an ocean buoy system. To date, 10 buoys have been removed. The remaining buoys are on station until NOS charting is correct. There are legal issues with removing an aid to navigation from an improperly charted reef.

A 2015 overview of North Carolina's Oyster Sanctuary Program was given. There are 12 established sanctuary reefs, three proposed sanctuaries, and four future sites. A new oyster biological sampling protocol will be developed using U/W photography paired with image analysis software. Surface area will be established using side-scan sonar and multi-beam assessments. Different types of materials will be deployed and studies done for substrate suitability, such as precast concrete material and natural materials.

In 2014, the Raccoon Island Oyster Sanctuary Fishing Reef was completed. The Pea Island Oyster Sanctuary Fishing Reef and the Little Creek Oyster Sanctuary will be constructed in the future. Intertidal reefs will also be constructed in the Cape Fear River.

Rhode Island:

Deacutis reported that the state of Rhode Island is working with The Nature Conservancy (TNC) on a 5-year project to develop a series of three artificial reefs that have similar sediment type, depth, and slope. Each reef consists of 300 reef ball modules of three differing sizes. A number of different GIS data layers were used to map out suitable and non-suitable areas within Narragansett Bay. The total area per AR site will be 144 square feet. The final permits are expected to be issued in January 2015. It is anticipated that the reef balls will be deployed in spring or summer 2015. Colonization monitoring will begin immediately following deployment, and is expected to continue for at least four years. The objectives of the project are to provide a better understanding of what the real value of artificial reefs are as a fisheries enhancement and conservation tool by determining if artificial reefs increase the abundance (and biomass) of important species of demersal sport fish, and if reefs attract existing numbers of fish to the reef and increase the rate of exploitation, thus potentially decreasing the population. Results will be synthesized, and the RI Artificial Reef Plan will be finalized based on the project findings.

RIDEM F&W is continuing to work with USNRCS, aquaculturists, and The Nature Conservancy on EQIP oyster restoration reef development in the salt ponds (lagoon estuaries) along the southern shore of the state. This includes clean shell piles (surf clam) and spat on shell (surf clam).

The Nature Conservancy technical/GIS staff has worked with RIDEM on development of an oyster restoration (habitat) suitability model. This model has been used for site selection of the EQIP sites in recent years.

Texas:

Shipley-Lozano reported on the Rigs-to-Reefs Program. The TPWD Artificial Reef Program staff participated in a Rigs-to-Reefs panel discussion in New Orleans at the GOM Alliance's 1st Rigs-to-Reef Meeting in March 2014. The meeting was informative, and it is hoped that the meeting can be held annually at the spring GSMFC meetings.

Four petroleum platform donations were received. These will bring \$1.15m into the reef donation account for future reefing projects.

Fieldwood Energy has acquired the assets of Sandridge Petroleum which includes many deep-water platforms, such as EB-110. A donation agreement is underway with Fieldwood Energy to leave the base of the platform standing in 660 feet of water with a 90 foot clearance. This would leave 570 feet of structure profile off the bottom. The removed top portion will be scrapped. The archaeological survey is being conducted by Fieldwood Energy, and the reef site permit from the USACOE is expected by mid-summer. The structure is scheduled to be reefed in 2015. This will give the program its first deep-water structure. The EB-110 deep water reef site permit was received in November and discussions continue with Sandridge Company over an acceptable donation amount.

There are currently 8-10 Rigs-to-Reefs projects in process, as well as the anticipated NRDA/Restore Act reefings in 2015.

Shipley-Lozano next reported on the HI-A-389 and the Flower Gardens National Marine Sanctuary. HI-A-389 is located in the Flower Gardens National Marine Sanctuary. Initially, TPWD had a draft agreement with W&T Offshore to tow it to HI-A-349. If the structure was to be reefed in place and the FGBNMS imposed required monitoring, a decision would then be needed on who would do the monitoring and how it would be funded. Potentially, funding for the monitoring would be through the W&T Offshore donation. The Bureau of Safety and Environmental Enforcement (BSEE) has some funding that will help with monitoring the site for the next five years, and will be transferred to the FGBNMS early in 2015. The habitat at the platform is of significant value. Corals are growing on the cross members, and divers frequently encounter turtles, whale sharks, manta rays, and tremendous amounts of fish and invertebrate marine life at the site. A suitable resolution to HI-A-389 may determine how other structures in the sanctuary are handled for future reefings.

Since 2012, TPWD ARP has continued to work with W&T Offshore and the FGBNMS on the HI-A-389 platform donation. The proposed reef boundary is still under discussion. The reef permit application will be submitted to the USACOE for approval as soon as the boundary is agreed upon.

A public hearing was held by staff on the proposed Galveston Nearshore reef to constituents at the Galveston Yacht Club in April 2014. The proposal is for a 160 acre reef located 6.5nm from shore and 12nm south of the Galveston jetties in Texas state waters with a 48-foot water depth. Fifteen members of the public attended and all were in favor of the proposal. The next steps will be to contract an archaeology survey of the 160 acres, submit the USACOE reef permit application, obtain the TGLO surface lease, and negotiate the USCG clearance and buoy requirements.

The TPWD Artificial Reef Program began work on new nearshore reef locations in early April in Port O'Connor and Sabine. The next steps will be for staff to work with local residents at these cities to gather more information on where reefs would benefit the local communities the best.

Work continues on permitting three new nearshore reefs off Sabine, Port O'Connor, and Galveston. Generalized and proposed sites have been chosen. All three sites will require an archaeology survey, which is the next step before submitting applications to the USACOE.

TPWD Artificial Reef Program staff attended the Eternal Reefs casting in Galveston. Four memorial reef balls were deployed at Barr's Reef. Eternal reefs contain the cremated remains of

individuals, intermingled with the concrete. Staff accompanied the families and contractor to deploy the reef balls. A reef ball containing the cremated remains of a TPWD employee who passed away in 2014 was also deployed.

In May, TPWD Artificial Reef Program staff received the archaeology surveys for two reef sites that are scheduled for NRDA funding. The federal trustees can now complete their Environmental Review of all the NRDA projects.

In October, the program received word that projects being funded through the Deepwater Horizon (BP) funds could be advertised. The program has three projects slated, totaling \$6.6m.

Staff with the TPWD Artificial Reef Program worked on the annual American Academy of Underwater Sciences required reporting statistics. Overall, the program had 18 divers who logged 128 dives.

In April, TPWD Artificial Reef Program staff reviewed the Technical Appendix to the TAMU-College Station socio-economic survey of boaters and anglers using TPWD artificial reefs. A final report will be released by the end of 2014. Recommendations were also made on an upcoming TAMU-Corpus Christi interagency study of divers using TPWD reefs. Once completed, these two surveys will provide the reef program with newly updated and valuable information to help manage the program.

TPWD Artificial Reef Program staff are working with the Flower Gardens National Marine Sanctuary by collecting lionfish during monitoring trips and shipping frozen, tagged lionfish bodies to them for full work-ups. This is part of a state-wide effort where FGNMS has agreed to do the work-ups of lionfish bodies should the collectors not be able to do so. Information from the workups will be provided to TPWD.

The ARP team attended the 2014 DECOM World in Houston, Texas for the fourth year in a row. This is an annual event held during the month of March that is sponsored by petroleum companies, and focuses on decommissioning issues, how to remove platforms, and what to do with them once they are removed.

Staff attended the 3-day State of the Gulf of Mexico Summit in March 2014. The reef program set up its display booth, which was showcased by a local Corpus Christi news channel that discussed the Rigs-to-Reefs Program live. TPWD staff were interviewed on the importance of artificial reefs.

In July 2012, the TPWD ARP created an Artificial Reef Program Facebook page. As of January 2015, there were over 1,300 "likes".

Virginia:

Meier reported that their program has been scaled back. Funding has been lost completely. Recreational Licensing Board provided funding.

Operations at the Coast Guard have been shut down, as they no longer needed that support facility.

Some of the stainless steel subway cars have caved in.

The database of yearly deployments is available from **Meier**. They are all updated.

Meier will soon be retiring from the Subcommittee.

Next Meeting/Other Business/Public Comment:

Action Item: Ballard requested that members update their chapters for the “Guidelines for Marine Artificial Reef Material (Second Edition)” by March, and to send them to him, and any pictures.

Mark Rousseau was nominated as Vice Chairman.

The next meeting location will be in Galveston, Texas.

The next meeting date will be in January or February 2016.

There being no further business to discuss or public comments, Zlokovitz adjourned the meeting at 12:00 p.m.

OIL DISASTER RECOVERY PROGRAM (ODRP)

Summary of Discussions and Actions of the Ad Hoc Advisory Committee Conference Call 9:00 AM CST February 18, 2015

The Oil Disaster Recovery Program Ad Hoc Committee convened a conference call meeting coordinated by the GSMFC under NA10NMF4770481 for the purpose of reviewing individual contract progress and financial spending activity. Ralph Hode, Fisheries Disaster Recovery Program Coordinator facilitated the meeting.

Ad Hoc Committee representation

Dan Ellinor, FWC, *GSMFC Commissioner*, Tallahassee, FL
Lance Robinson, *GSMFC Commissioner*, TPWD, Austin, TX
Chris Blankenship, *GSMFC Commissioner*, ADCNR, Gulf Shores, AL
Kelly Lucas, *GSMFC Commissioner*, MDMR, Biloxi, MS
Randy Pausina, *GSMFC Commissioner*, LDWF, Baton Rouge, LA

GSMFC Staff

Alex Miller, GSMFC, Ocean Springs, MS
Ralph Hode, GSMFC, Ocean Springs, MS
Dave Donaldson, *Executive Director*, GSMFC, Ocean Springs, MS
Angela Rabideau, GSMFC, Ocean Springs, MS

Other Participants

Rene LeBreton, LDWF, Baton Rouge, LA
Mark Schexnayder, LDWF, Baton Rouge, LA

Overview:

The purpose of the called meeting was to review the current status of various contracts and sub-award agreements funded under the Oil Disaster Recovery Program, and to examine programmatic spending in order to identify the possibility of unused or unobligated funds that could be re-allocated for other uses in a timely manner.

Ralph Hode reported that all but \$26,600 of the \$14,985,000 provided to the Gulf through the ODRP were currently contractually obligated and that the Commission staff would be better positioned to account for any unspent balances after contract end dates (June 30, 2015 for most contractors).

Discussions and related actions

Dr. Kelly Lucas, MDMR, noted that under earlier provisions for use of unobligated funds, the Mississippi Seafood Marketing Division of the MDMR had submitted a proposal for \$45K (maximum amount programmed at the time) to support unfunded Mississippi Seafood marketing needs. It was pointed out that since then additional funding opportunities became available and

that the current maximum amount now allowed was \$70 K for ODRP compliant programs or projects. Dr. Lucas inquired, in light of the unobligated balance in the overall program, if it was appropriate to amend the Mississippi contract to the new limit.

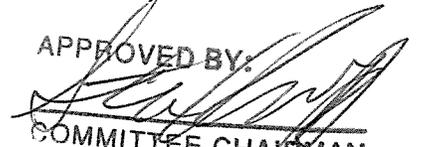
A motion was made by Chris Blankenship to authorize the amendment and the motion was seconded by Dr. Lucas. There was no objection.

Ralph Hode reference the potential for fund balances following the contract end dates and recent requests for funds for additional support of the Kemps nesting, tagging and aging analysis by the Gladys Porter Zoo. It was reported that the Commission will not have a full understanding of potential balances until all contracts have been finalized and outstanding invoices paid. It was generally agreed that any fund balances should be dedicated to the Kemps program in lieu of losing them; and, that staff should move forward with an agreement as determined appropriate to provide support at the earliest date possible within the guidelines of the grant.

Dave Donaldson inquired as to the Committee's position regarding the need to request new proposals for the second round of funding for the Great American Cook-off, noting that while funding had not yet been released it was expected within the next several weeks. By consensus vote it was the unanimous decision the Committee that the event should continue be managed by the Louisiana Seafood Marketing Board and there was no need to consider further requests for proposals. .

Dave Donaldson reported on the current status of the GSMFC Salary Survey. It was indicated that a survey was conducted in the 2010-2011 time period; and as a result, rather than advertise for professional services to conduct a new survey at this time, it was suggested that the positions defined therein be updated to include current job descriptions and forwarded to each of the Gulf States Marine agencies in order to obtain current comparative salary information. There was no objection and no further action was required at this time.

There being no further business, the meeting was adjourned.

APPROVED BY:

~~COMMITTEE CHAIRMAN~~
Facilitator

**TRIPLETAIL TECHNICAL TASK FORCE
MEETING MINUTES
February 19 & 20, 2015
New Orleans, LA**

Moderator VanderKooy called the meeting to order at 1:30 p.m. on Thursday, with the following in attendance:

- Chuck Adams, Florida Sea Grant, Gainesville, FL
- Paul Mickle, MDMR, Biloxi, MS
- Krista Shipley, FWC, Tallahassee, FL
- Bob Zales, Panama City, FL
- Carly Somerset, MDMR, Biloxi, MS
- Karon Aplin, ADCNR/MRD, Gulf Shores, AL
- Captain Chad Hebert, LDWF, Baton Rouge, LA
- Josh Harper, TPWD, Palacios, TX
- Jason Adriance, LDWF, New Orleans, LA
- Steve VanderKooy, GSMFC, Ocean Springs, MS
- Debbie McIntyre, GSMFC, Ocean Springs, MS

Introductions and Housekeeping

S. VanderKooy, IJF Program Coordinator, opened the meeting and introductions were made. He encouraged the group to review the membership roster for accuracy.

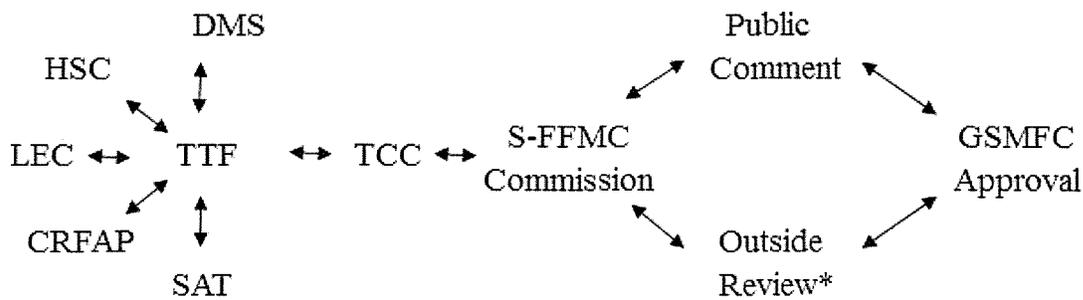
VanderKooy provided the group with a brief overview of GSMFC travel policies. The authorization and reimbursement procedures were explained and the group was referred to the *GSMFC Travel Guidelines* for detailed information. Any questions regarding travel should be addressed to Alyce Ryan, the Commission's travel coordinator.

Interjurisdictional Program Overview and Profile/FMP Process

VanderKooy explained that the task force is typically made up of five scientific representatives (one from each Gulf state), a recreational/commercial fishery representative, an economist, a habitat representative, and a law enforcement representative. When it is deemed necessary by the task force, another member may be added to the group.

VanderKooy presented an overview of the Interjurisdictional Fisheries (IJF) Program and Commission development process for FMPs. The IJF Program is authorized through the Interjurisdictional Fisheries Act of 1986 (Public Law 99-659, Title III). The purpose of the Act was to promote and encourage state activities in support of management of IJF resources identified in profiles and interstate FMPs. The Act also promotes and encourages management of IJF resources throughout their range.

Funding under the Act supports states' long-term monitoring and assessment programs and other research. The Act also provides funding for the three interstate marine commissions (Atlantic,



DMS = Data Management Subcommittee
 SAT = Stock Assessment Team
 HSC = Habitat Subcommittee
 LEC = Law Enforcement Committee
 CRFAP = Comm/Rec Fishery Advisory Committee
 TTF = Technical Task Force

TCC = Technical Coordinating Committee
 S-FFMC = State-Federal Fisheries Management Committee
 GSMFC = Gulf States Marine Fisheries Commission
 *Outside Review = standing committees, trade associations, general public

Table of Contents/Assignments

VanderKooy explained that the table of contents will serve as a means to divide up assignments and, in some cases, deadlines.

The importance of deadlines was explained as well as the importance of responding to emails. Face-to-face meetings are necessary so that everyone is held accountable for contributions to the document. It was discussed that there will probably be a total of three to four actual meetings while this document is being written, but there may also be webinars as needed for the purpose of touching base with each other and, at the same time, keeping expenses down.

The time frame for completion of this profile will be 6-12 months. Each state representative will be responsible for providing his/her fisheries data. One person will be responsible for the Fisheries section, in total, but all will contribute their individual state data. There will be some overlapping of landings and values by state. We will do our best to make these consistent.

VanderKooy reviewed the format of the bibliography and how works should be cited. A fairly extensive list of publications was provided regarding this species, international as well as Gulf.

VanderKooy suggested that the Habitat section will now be a GIS database in one document that will be referenced and not repeated. The entire document will be electronic. **VanderKooy** shared the current version of GSMFC's *Flounder Management Profile* and explained how the changes to the old style FMP came about. He explained the difference between "recommendations" and "research/recommendations." These are not to set regulations but a list of ideally what is needed for a species in the fishery. The *Flounder Management Profile* will be shared with this group as soon as it is released.

VanderKooy stated that he has found that there is very little information available on this species. Tripletail is a pelagic fish which represents primarily an incidental, opportunistic fishery, floating on their sides and mimicking mangrove leaves. **VanderKooy** will provide the landings data to

everyone. He reviewed the commercial landings chart, state by state, total U.S., Atlantic Coast, pounds, and dockside value.

After discussion, a *motion was made by Adams, seconded by Aplin, to add Jim Franks as a biology representative.* The motion passed unanimously. Franks has been researching tripletail for approximately 25 years and will serve as a great source of invaluable information for this group. **VanderKooy** will contact Franks about joining this Task Force.

Assignments:

3.0 DESCRIPTION OF STOCK COMPRISING THE MANAGEMENT UNIT

- 3.1 Geographic Distribution **Josh**
 - 3.1.1 World
 - 3.1.2 Atlantic
 - 3.1.3 Gulf and Caribbean
 - State specific
- 3.2 Biological Description **Karon**
 - 3.2.1 Classification and Morphology
 - 3.2.1.1 Classification
 - 3.2.1.2 Morphology
 - Eric Hilton - VIMS
 - Life history derives morphology?
 - 3.2.1.2.1 Eggs **Franks**
 - 3.2.1.2.2 Larvae
 - SEAMAP???? Joanne Luskowski-Schultz NOAA Pascagoula
 - Frank Hernandez – Dauphin Island/GCRL
 - 3.2.1.2.3 Juveniles
 - 3.2.1.2.4 Adults
 - 3.2.1.2.5 Anomalies and Abnormalities
 - 3.2.2 Age and Growth **Krista**
 - Parr Thesis
 - 3.2.3 Reproduction and Genetics **Paul**
 - 3.2.3.1 Reproduction
 - 3.2.3.1.1 Gonadal Development
 - 3.2.3.1.2 Spawning and Season
 - ~~3.2.3.1.2.1 Courtship and Spawning Behavior~~
 - 3.2.3.1.2.2 Spawning Duration
 - 3.2.3.1.2.3 Location and Effects of Temperature, Salinity, Dissolved Oxygen, and Photoperiod
 - 3.2.3.2 Larval Transport
 - 3.2.3.3 Migration **Franks**
 - Prevailing currents related to large scale gyres?????
 - GCRL Tagging
 - 3.2.3.4 Fecundity **Franks**
 - Brown-Peterson
 - 3.2.3.5 Incubation **Franks**
 - culturing

- 3.2.3.6 Genetics ?????
- 3.2.4 Parasites and Diseases Karon
 - Overstreet
- 3.2.5 Feeding, Prey, and Predators Krista

4.0 DESCRIPTION OF THE HABITAT OF THE STOCK(S) COMPRISING THE MANAGEMENT UNIT

- 4.1 Spawning Habitat
 - Offshore component
- 4.2 Embryo and Larval Habitat
 - Sargassum and Sargasso Sea – general description of preference for floating structure

- 4.3 Juvenile (postlarvae) Habitat Josh
 - Mangroves, inshore structure, debris, etc...
 - Don't have to be specific to tripletail if we know they occur there....

- 4.3.1 Salinity
- 4.3.2 Temperature
- 4.3.3 Dissolved Oxygen (DO)
- 4.3.4 Substrate
- 4.3.5 Vegetation

- Sargassum
- 4.4 Adult Habitat Karon
 - Propensity to structure... pilings, floats, buoys, trash, "artificial structures"
 - Larger fish bottom associated?????

- 4.4.1 Salinity
- 4.4.2 Temperature
- 4.4.3 Dissolved Oxygen (DO)
- 4.4.4 Depth
- 4.4.5 Substrate
- 4.4.6 Vegetation

- Sargassum
- 4.5 Threats to Survival
 - Who knows.....

5.0 FISHERY MANAGEMENT JURISDICTIONS, LAWS, AND POLICIES AFFECTING THE STOCK(S)

Law Enforcement Committee

6.0 DESCRIPTION OF THE FISHERY

- 6.1 Commercial Fishery VanderKooy
 - 6.1.1 History
 - Landings NOAA 1950-current
 - 6.1.2 State Commercial Fisheries
 - Years back to ??? to current
 - Gear info
 - Priority ports?

| | |
|---|-------------------|
| 6.1.2.1 Florida | Krista |
| West | |
| East | |
| 6.1.2.2 Alabama | Karon |
| 6.1.2.3 Mississippi | Paul |
| 6.1.2.4 Louisiana | Jason |
| 6.1.2.5 Texas | Josh |
| 6.2 Recreational Fishery | VanderKooy |
| 6.2.1 History | |
| Mrffs/MRIP | |
| Infrequency in intercepts | |
| Guides and charters... | |
| Popularity | |
| tournaments with categories | |
| state and world records | |
| 6.2.2 State Recreational Fisheries | |
| 6.2.2.1 Florida | Krista |
| West | |
| East | |
| 6.2.2.2 Alabama | Karon |
| 6.2.2.3 Mississippi | Paul |
| 6.2.2.4 Louisiana | Jason |
| 6.2.2.5 Texas | Josh |
| 6.3 Incidental Catch | Krista |
| LA trawl discards | |
| Recreational discards? | |
| 6.4 Mariculture | Franks?? |
| May move down.... | |
| 7.0 DESCRIPTION OF PROCESSING, MARKETING, AND ECONOMIC CHARACTERISTICS OF THE FISHERY | ADAMS |
| 7.1 Commercial Sector | |
| 7.1.1 Annual Commercial Dockside Value | |
| 7.1.1.1 Gulf-wide Dockside Value | |
| 7.1.1.2 Dockside Value by State | |
| 7.1.2 Monthly Commercial Dockside Value | |
| 7.1.3 Annual Ex-vessel Prices for Tripletail | |
| 7.1.3.1 Gulf-wide Ex-vessel Prices | |
| 7.1.3.2 Ex-vessel Prices by State | |
| 7.1.4 Monthly Ex-vessel Prices for Tripletail | |
| 7.1.5 Ex-vessel Prices by Type of Harvest Gear | |
| 7.1.6 Processing and Marketing | |
| 7.1.6.1 Market Channels | |
| 7.1.6.2 Other Commercial Sources of Tripletail Supply | |
| 7.1.6.3 Consumption Estimates | |

- 7.2 Recreational Sector
 - Charter/guides? Willingness to pay for target trip?
- 7.3 Civil Restitution Values and Replacement Costs
 - Aquaculture/mericulture potential????

8.0 SOCIAL AND CULTURAL FRAMEWORK OF DOMESTIC FISHERMEN AND THEIR COMMUNITIES

- 8.1 Introduction **VanderKooy and Adams**
 - 8.1.1 Targeted versus Incidental Catch/Bycatch
- 8.2 Commercial Harvesters
 - 8.2.1 Social Change and Commercial Fishery Demographics
 - 8.2.2 Trawl Harvesters
 - 8.2.3 Other Net Harvesters
 - 8.2.5 Hook-and-Line Harvesters
 - 8.2.6 Dealers and Processors
 - East Coast/South Atlantic
- 8.3 Recreational Anglers
 - 8.3.1 Regional Demographics and Recreational Angler Preferences
 - 8.3.1.1 Florida
 - 8.3.1.2 Alabama
 - 8.3.1.3 Mississippi
 - 8.3.1.4 Louisiana
 - 8.3.1.5 Texas
- 8.4 Stressors Affecting Fishery Participants
 - 8.4.1 Hurricanes and Tropical Activity
 - 8.4.2 Oil Spills and Pollution
 - 8.4.3 Gentrification
 - 8.4.4 Operational Costs
- 8.5 Basic Understanding and Information Needs

9.0 RESEARCH NEEDS **All**

- 9.1 Goals and Objectives for the Fishery
- 9.2 Data Gaps and Considerations for Management
 - 9.2.1 Status of the Stock(s)
 - 9.2.1.1 Western Gulf
 - 9.2.1.2 North-Central Gulf
 - 9.2.1.3 Eastern Gulf
 - 9.2.2 Fishery-Dependent and Fishery-Independent Monitoring
 - 9.2.3 Assessing Domestic Market Channels and Tracking Imports and Exports
 - 9.2.4 Environment
- 9.3 Regional Research Priorities and Data Requirements

10.0 REFERENCES **All**

- 11.0 APPENDIX
- 11.1 Glossary **All**

Everyone was encouraged to make notes as they compile their sections and send that information to those who may need it. **Adams** will send note requesting info to guy in Brazil, Raoul Cruz, who he is writing a paper with, as well as to Cuba.

Task Force Website

VanderKooy explained that he will provide a working website for use by the TTF to share literature, upload current drafts, and provide reviews of other sections when appropriate.

VanderKooy asked that anyone who downloads a section review, SEND the electronic copy back to the original author with track changes rather than reposting the edited section. Uploading the revisions will replace the version on the website and it is up to the individual authors to evaluate the suggestions from ALL of the reviewers and make those that are appropriate.

There will also be an electronic library available there. There will be a bibliography search on the GSMFC website which provides a vast amount of information – all things fishery-related. **VanderKooy** gave the group instructions on how to use this database. Everyone was advised that if any explanation of how to use the website/database is needed to please contact **VanderKooy**. A PDF or hard copy can also be made available upon request. The group was instructed that, when writing individual sections, they should not cite things on someone else's citing but should cite the original research. Do not use "as cited by so and so." Get PDFs for all of the literature you use. Everyone can share these working files with others.

Meetings, conference calls, and webinars will also be posted on the working website. When something is added to this website, TTF members will receive an email. The document repository was pointed out. Upload what you are working on into the appropriate sub-section so that everyone else can see it. Downloads and changes can be made but you MUST send back to original author with track changes. Only the author re-uploads this information and then with a new date. The working website should serve as an excellent tool to the TTF.

Next Meeting

Several sites for the next meeting were considered. After discussion, it was decided that this meeting should be scheduled for mid-May, possibly in Corpus Christi or Galveston. The next meeting would probably be scheduled for the end of July in St. Pete. If necessary, another meeting may take place in Port St. Joe in approximately mid-September.

VanderKooy will send out template and assignments. Respond to Doodle polls and each other's emails. Be sure to attach citations.

Election of Chair

*A motion was made by **Aplin** and seconded by **Zales** for **Adriance** to serve as Chairman of this task force. The motion passed unanimously.*

With no further business, the meeting adjourned at 11:00 a.m. on Friday.

TCC CRAB SUBCOMMITTEE MINUTES
Friday, February 27, 2015
Lafayette, Louisiana

APPROVED BY:

COMMITTEE CHAIRMAN

Chairman, R. Gandy called the meeting to order at 8:35 a.m. with the following in attendance:

Members

Martin Bourgeois, LDWF, Baton Rouge, LA
Rick Burris, MDMR, Biloxi, MS
Ryan Gandy, FWRI, St. Petersburg, FL
Harriet Perry, GCRL, Ocean Springs, MS
Glen Sutton, TPWD, Dickinson TX

Others

Jeffery Marx, LDWF, New Iberia, LA
Julie Anderson Lively, LA SEAGRANT, Baton Rouge, LA
Emma Clarkson, TPWD, Dickinson, TX
Ashford Rosenberg, Audubon Nature Institute, New Orleans, LA
Laura Picarililo, Audubon Nature Institute, New Orleans, LA

Staff

Steve VanderKooy, GSMFC IJF Program Coordinator, Ocean Springs, MS
Debbie McIntyre, GSMFC IJF Staff Assistant, Ocean Springs, MS

Introductions

VanderKooy addressed housekeeping issues with those present. **Chairman Gandy** led the audience and the committee members in introductions.

Adoption of Agenda

VanderKooy asked to add tagging study under "Other Business". ***Bourgeois** moved to adopt the agenda with changes. **Perry** seconded the motion, and the agenda was adopted with noted addition.*

Approval of Minutes

The subcommittee reviewed their minutes from the GSMFC Annual Meeting held October 13, 2014, in Gulfport, Mississippi. ***Bourgeois** moved to accept the minutes as written. **Burris** seconded, and the minutes were approved unanimously.*

Blue Crab FMP Revision Status

VanderKooy explained that the *Blue Crab FMP Revision* has been approved to go on to the full Commission and potential public comment. He explained that there has been substantial confusion among the NGOs regarding FMPs and how they relate to federal management plans. The state of Louisiana is developing FMPs for their state only, which will actually carry some authority; however, these are not cooperative plans for the region. **VanderKooy** indicated that he will present an electronic version of the draft FMP and a website concept, similar to the FINFO website, to the Commissioners. Currently, the IJF program has three documents in limbo: the Menhaden

FMP revision, the Blue Crab FMP revision, and the Flounder FMP revision. In the year 2016, the data included in the blue crab draft will be five years old and nearly ready for revision again. He informed the group that he has proposed some major format changes in the electronic documents, taking a lot of the boilerplate information out. The reformatted documents would be smaller and would be updated electronically. **VanderKooy** will present this idea at the Commission's annual meeting in a couple of weeks. Routine revisions will still be necessary, but the historical background information will pretty much remain the same. The only recommendation in the current Blue Crab FMP revision, is that the states' management for the crab fishery remains status quo.

Gandy suggested simply doing a *Status and Trends* which would be updated regularly to include effort, landings, climate, etc. This could replace the management plan concept with something more streamlined having data as the driver. In this scenario, the old document would be referenced and updated with the new data and the new *Status and Trends* could become a series of appendices. **Perry** was concerned about just amending the document and stated that new science should always be put into context with the history. **VanderKooy** stated that, even though we do not have an authoritative management plan, it is important that all five states coordinate their efforts and be credited for operating under some sort of FMP. **Gandy** indicated that the subcommittee is receiving a mixed message and requested that the GSMFC Commissioners clarify their expectations. In the end, each state may be instructed to formulate its own individual management plan.

Gandy also suggested updating the regional aspects of management, stating that, while setting policy is not the role of this group, regional collaboration is necessary. All stock assessments would feed into a regional *Status and Trends*. No matter what structure is decided upon, it is important that everyone work together.

An index-driven forecasting tool, similar to the one used for menhaden, may be useful for the subcommittee reports in the future. It would be a way to track recruitment and key indices, year-to-year, because the landings are not indices of abundance. It may be good to have a conversation regarding standard indices that this subcommittee would want to see. Assessment updates being added into the back of the plan may be an option as part of the *Status and Trends*. **Sutton** will work on something similar to the North Carolina "Traffic Light" model and circulate it through the subcommittee. The GDAR should be used as a template for deriving indices.

Diamondback Terrapin Status

Members of this Blue Crab Subcommittee attended the "Gulf Coast Regional Meeting of the Diamondback Terrapin Working Group" yesterday. **VanderKooy** shared an email expressing appreciation to this group for their attendance.

White Paper

Gandy asked the group, now that it is known that the terrapin folks are coming out with a document and what it will contain, does this subcommittee still need to do this white paper? The consensus was that it would be helpful to have a fisheries document presenting the crab fishery

side of the terrapin issue. It was agreed that each state should decide at what level to provide information.

Gandy proposed the following outline which would consist of pulling together work that is already scattered throughout the FMP and gathering it into one place to update:

Gulf of Mexico Overview

Introduction – Objective (blue crab fisheries information)

State-By-State sections

1. Blue Crab Fishery- trends in fishing effort (landings/traps/trips)
2. Regulations
 - a. Blue Crab
 - i. Trap Regulations (cull rings, biodegradable panel, TEDs)
 - b. Terrapin Harvest/Possession
 - i. Commercial
 - ii. Recreational
3. Turtle Excluder Device (TED's) relative to traps
 - a. Current requirements?
 - b. Recommended TED sizes?
 - c. TED research in the state (ongoing and prior either as a citation list or brief narrative)?
4. Derelict Trap Removals (trap #'s, terrapin bycatch data, etc)
5. Contact Information (State agency(s))
6. Reference (Lit Citation)

Gandy will coordinate this effort. He will delete all terrapin population status references and generate this as a technical document, maybe not an official white paper. This could be a stand-alone document that stays on the website. **Gandy** will contact Christina Mohrman and will keep the subcommittee updated. He will also do some research as to what Florida's Terrapin Workgroup, which is split from the rest of the Gulf, is doing.

The Terrapin Workgroup holds its national meeting every three years. In 2016, this group will meet on the Mississippi Gulf Coast. The Crab subcommittee intends to have a strong representation at that meeting. This would be a good opportunity to provide some information on derelict crab traps, bycatch, etc., to the national group.

Derelict Trap Cleanups

Sutton reported that Texas' closed season began on February 20, 2015 and ends on March 1, 2015. The main pick-up event scheduled for Saturday, February 21, was hampered by bad weather. Some volunteers managed to participate while some rescheduled their plans for Saturday, February 28. A synchronized joint closure arrangement was made with Louisiana for Sabine Lake. Both Texas and Louisiana closed their crab fisheries over the same 10 day period to allow for removal of all derelict traps in Sabine Lake. Texas removed 66 derelict traps from Sabine Lake on February 22, during the joint closure. Audubon Texas volunteered to participate this year for the first time

and plan to target near rookeries and other sensitive sites on February 28. Total numbers of traps removed and volunteers participating were not available yet but will be provided by **Sutton** in the fall report.

Bourgeois reported that currently, LDWF and Texas Parks and Wildlife Department (TPWD) are conducting a joint derelict crab trap removal project in Sabine Lake and adjacent state water bottoms. In order to conduct the cleanup, both the Louisiana and Texas sides of Sabine Lake temporarily closed to the use of crab traps so that staff from both agencies and volunteers could conduct the cleanup. The Sabine Lake crab trap closure began February 20, 2015 and ends March 1, 2015, and also includes portions of the Sabine River and other parts of Cameron Parish immediately east of Sabine Lake.

In mid-January, approximately 270 notices of the Louisiana crab trap closure and cleanup were mailed to LDWF licensed crabbers and dealers in Cameron and adjacent parishes, including 26 Texas residents licensed in Louisiana.

LDWF hosted a volunteer day at a boat launch located on Johnson's Bayou on February 21. Instructions, lunch, and door prizes were provided, including a gift card presented to the boat retrieving the most traps. Totals are still preliminary but approximately 54 Louisiana volunteers and staff have participated in the cleanup and 422 traps were collected and brought to the Louisiana disposal site. TPWD totals are not yet available.

Burris reported that no cleanups have been deemed necessary for Mississippi since the February 2013 cleanup; however, MDMR continues to monitor the situation. Staff removed 19 derelict traps recently (in 2015). A total of over 18,900 traps have been removed and recycled since 1999. A cleanup is planned for 2016.

Gandy explained that Florida closures for blue crab trap retrieval is alternated each year between the east and west coasts. Prior to the closure on the west coast, "actively fished" traps were removed from the area by fishery personnel, aiding in the identification and removal of lost and abandoned traps. Volunteers on the west coast pulled 293 derelict traps in 15 trips. One event was still pending.

Herrmann was not present at the meeting but sent Alabama's report. **VanderKooy** reported that, upon visual inspection of Alabama's main derelict crab trap removal sites, initial counts of derelict traps may warrant organizing a volunteer removal program in spring, 2015. The last removal was held in March, 2010.

State Report Summaries (Individual state reports are available at the Commission office.)

Gandy reported that Florida's oscillation in trends shows that they are maintaining. Florida's preliminary data on 2013 blue crab landings suggest a continuation of landings volume below its historic average. Overall, the years with lowest landings appear in 6-10 year intervals. The trend of landings for the lowest landing years appears to be declining over time. Gulf trips for hard shell crabs started a recovery in 2013 from the 2011 and 2012 decline. Gulf trips for soft shell crabs in 2013 increased from the declining trend of 2010-2012.

The Blue Crab Effort Management Program was implemented in 2007 to address problems of seasonal crowding of traps in confined waterways, lost traps, bycatch, overcapitalization, latent endorsements that are unused, and conflict between hard and soft shell blue crab producers in the fishery. In 2008, this program assessed a blue crab endorsement fee and trap tag fee for each blue crab trap fished. Non-renewals could appeal if there were extenuating circumstances that prevented them from renewing on time. Otherwise, those non-renewal endorsements were lost, permanently decreasing the number of endorsements in the fishery. Total numbers of traps in the fishery in 2013/2014 was about 260,000. Total trap endorsements dropped to 772.

Congratulations went to **Bourgeois** who announced that he is retiring later this spring. **Marx** will likely replace **Bourgeois** on the subcommittee. **Bourgeois** stated that there is a lot going on in Louisiana right now regarding crab legislation. Eligibility requirements have been established for the sale of commercial crab trap gear licenses. A final rule has been ratified by the WFC implementing commercial crab gear requirements that detail program components and requirements.

Bourgeois indicated that the Louisiana Crab Task Force has met and reviewed information on crab trap and licensing regulations in each of the Gulf and Atlantic states, 2014 blue crab stock assessment update, and the recently completed LDWF Blue Crab FMP including current issues and management options.

LDWF, in cooperation with the Audubon Nature Institute's Gulf United for Lasting Fisheries Program, is pursuing certification of the blue crab fishery through a third party certification program. LDWF has also completed the development of a Louisiana Blue Crab Fisheries Management Plan which serves as a centralized document summarizing current information about the biology and status of Louisiana blue crab; Louisiana's commercial and recreational blue crab fisheries; ecosystem considerations and environmental factors; management approaches within the state and regional framework; issues and options to address these issues, and future research needs.

Preliminary 2014 LDWF trip ticket data through October indicate that approximately 36.4M pounds of blue crab were landed in Louisiana with a dockside value of just over \$58M. It is important to note that Louisiana blue crab landings in 2013 were 38M with a value of \$51M, an all-time dockside value record.

Sutton stated that Texas commercial landings reported to date for 2014 totaled 2.2M pounds. The average ex-vessel price reported by dealers was \$1.69 per pound which is the highest recorded average annual price paid for hard shell crabs. Commercial crab fishermen license buybacks continued, but no licenses were bought back for the 2014-2015 license year. This leaves 178 active commercial crab licenses available in the fishery.

Gill net reports early data for 2014 shows a doubling of blue crab abundance from 2013 and explains the increase seen in commercial landings. Proposed regulation changes to protect female crabs were introduced but were tabled due to insufficient industry support. These changes may be proposed again summer 2015. Other proposed regulatory changes included: no take of mature females (April-June); increase escape ring size from 2 3/8" to 2 7/16"; seasonal area closures (April-June); reduce trap limit to 150; and band peeler operations.

The Audubon Institute's Blue Crab Sustainability rating and Caddy Checklist for Texas shows sustainability benchmarking is 100% complete.

Burris reported that total Mississippi resident commercial license sales were down from 158 in the 2013-2014 season to 145 for the 2014-2015 season, while most other crab licenses remained about the same. MDMR is in its fourth year with a mandated trip ticket program. Quality improvements are ongoing as this program is still in the beginning stages.

Preliminary landings through September 2014 are substantially up from the same 2013 period. The price of crabs is also up from around \$1.15 per pound in 2013 to around \$1.64 per pound in 2014.

A cooperative effort between the crab fishery and the MDMR continues to address accidental catch of diamondback terrapins through voluntary use of crab trap turtle excluder devices (TEDs). The MDMR is installing TEDs in commercial crabbing traps at no cost to the fishermen to deter incidental catch. These TEDs are 2" X 6" rectangles of either plastic or stainless material and are installed in the funnels of the traps to prevent terrapins from entering the trap. The MDMR plans to reach out to recreational crabbers by distributing TEDs at the point of contact where licenses are sold, pending securing funding. To date, the MDMR has supplied 13,633 TEDs with the equivalent of 3,415 traps.

Herrmann was not present at the meeting. **VanderKooy** reviewed Alabama's report with the subcommittee and reported that the preliminary total number of commercial crabbing trips made in 2014 was 4037. With funding from the National Fish and Wildlife Foundation as part of a multifaceted fisheries and ecosystem monitoring program, the Alabama Marine Resources Division will begin collecting commercial blue crab catch data beginning in 2015. An AMRD biologist will observe 24 commercial blue crab trips annually from 2015 through 2019. During these trips, the biologist will collect biological information including blue crab sex ratios, size frequencies, crab maturity, bycatch identification and enumeration, and catch per unit effort data. During each trip, 20 crabs will be retained for macroscopic inspection.

Next Meeting

VanderKooy indicated that the Commission's fall meeting will be held in St. Augustine, Florida, in November, 2015. This will be a joint meeting with the ASMFC and may be a good opportunity for the Gulf crab people to meet the South Atlantic invertebrate people. It would be necessary for everyone to cover his/her own expenses. **Gandy**, who serves on both the ASMFC and GSMFC, will discuss the possibility of a joint meeting with the ASMFC/Southeast Crustacean group.

Other Business

VanderKooy indicated that Zack Darnell's proposal for funding of a Gulf-wide blue crab mark-recapture study was submitted to NOAA in December, 2014, and a response is expected in the next couple of months. In the meantime, he is adding the tagging proposal to another proposal which would look at the effects of oil exposure on blue crab reproduction, recruitment, and

connectivity and proposing that to another agency. Basically, Darnell wanted to make sure that the subcommittee members are still on-board for agency participation in the study. It was the consensus of this group that all would still support the study should it receive funding, by either agency. Per Darnell, if both studies receive funding, it would increase the duration of the study and the number of crabs tagged.

Julie **Lively** (LA SEAGRANT/LSU) stated that the current Crab FMP is a helpful learning tool for her graduate students at LSU. She also indicated that the ghost fishing report is almost complete.

VanderKooy indicated that he will be happy to present the Blue Crab Subcommittee Report to the TCC at the Commission's annual meeting in March, 2015.

There being no further business to discuss, **Gandy** moved to adjourn, **Perry** seconded, and the meeting was adjourned at 11:55 a.m.

**FISHERIES INFORMATION NETWORK (FIN)
MINUTES
March 17, 2015
Point Clear, AL**

APPROVED BY:


COMMITTEE CHAIRMAN

Chairman **Richard Cody** called the meeting to order at 8:30 a.m. The following members, staff, and others were present:

Members

Chris Denson, ALDCNR, Gulf Shores, AL
Nicole Beckham, ALDCNR, Gulf Shores, AL
Grisel Rodriguez (proxy for Craig Lilyestrom), PRDNER, San Juan, PR
Darrin Stewart (proxy for Matt Hill), MDMR, Biloxi, MS
Paul Mickle (proxy for Bill Richardson), MDMR, Biloxi, MS
Michael Harden, LDWF, Baton Rouge, LA
Nicole Smith, LDWF, Baton Rouge, LA
Justin Esslinger, TPWD, Rockport, TX
Thomas Sminkey, NOAA/ NMFS, Silver Spring, MD
Richard Cody, FLFWC, St. Petersburg, FL
Daniel Matos, PRDNER, Mayaguez, PR
John Froeschke, GMFMC, Tampa, FL
Ken Brennan, NOAA Fisheries, Beaufort, NC
Dave Gloeckner, NOAA Fisheries, Miami, FL

Staff

David Donaldson, GSMFC, Ocean Springs, MS
Gregg Bray, GSMFC, Ocean Springs, MS
Donna Bellais, GSMFC, Ocean Springs, MS
Deanna Valentine, GSMFC, Ocean Springs, MS
Doug Snyder, GSMFC, Ocean Springs, MS
Ashley Lott, GSMFC, Ocean Springs, MS
Alex Miller, GSMFC, Ocean Springs, MS

Others

Andrew Petersen, Bluefin Data, Prairieville, LA
Mike Cahall, ACCSP, Arlington, VA
Steve Turner, NMFS/SEFSC, Miami, FL
Rene Lebreton, LDWF, Baton Rouge, LA
Francine Karp, Harborlight Software
Bill Spain, Harborlight Software
Joe Smith, NOAA Fisheries, Beaufort, NC
Gordon Colvin, MRIP, Silver Spring, MD
Leah Sharpe, MRIP, Silver Spring, MD
Mark Lingo, TPWD, Austin, TX
Emily Satterfield, MDMR, Biloxi, MS
Kevin Anson, ALDCNR, Gulf Shores, AL
Ron Lukens, Omega Protein, High Springs, FL

Joe Jewell, MDMR, Biloxi, MS

Approval of Agenda

The agenda was approved with a few additions. A brief description of the Recreational Expenditure Survey add to the Access Point Angler Intercept Survey (APAIS) was added to Other Business. Under Other Business, a presentation regarding Public Accessibility to Research Results (PARR) presented by **S. Turner** was also added to the agenda.

Approval of Minutes

The minutes of the Fisheries Information Network (FIN) meeting held on June 3, 2014 in Miami, FL were approved as presented.

Update of Atlantic Coastal Cooperative Statistics Program (ACCSP)

M. Cahall gave an overview of ACCSP's organization, it's similarities to GSMFC and how ACCSP is working more closely with ASMFC. **M. Cahall** briefly went over current program goals including effort and landings data, biological data, releases, discards, protected species, economic and sociological data. An overview was given on recent projects comprising of NOAA Southeast Fishery Science Center (SEFSC) aging, herring biological sampling, recreational data collection, and improvements to the data warehouse and SAFIS. **T. Sminkey** asked in the near future would ACCSP high priority switch from catch and effort to biological sampling. **M. Cahall** stated that instead of ACCSP funding the states for catch and effort sampling the states would fund a large portion leaving more ACCSP funding for biological sampling. **R. Cody** asked if ACCSP was using the same kind of module used in the gulf for recreational sampling. **M. Cahall** stated ACCSP are providing funds directly to the states for surveys and ACCSP will hire staff for those states that don't have the ability to add necessary staff. **M. Cahall** went over future projects consisting of a SAFIS visioning project and continued expansion with handheld tools such as the development of eDR mobile that will be swipe card enabled. **F. Karp** and **B. Spain** of HarborLight Software gave a demo of ACCSP's eTrips mobile version both for-hire and commercial trips. This has a lot of feedback from the captains built into it and will be going into production shortly.

Marine Recreational Information Program (MRIP) Update

Fishing Effort Survey (FES) update – **G. Colvin** provided a presentation on the current progress of MRIP on implementing the new FES. The FES is a mail survey that will eventually replace the current Coastal Household Telephone Survey (CHTS) used to generate estimates of fishing effort in shore and private boat modes. MRIP completed six pilot projects since 2009 testing various sample frames and methodologies before determining the FES was the current best option for collecting effort data. Their pilot research shows the FES has a significantly higher response rate than the telephone survey, does not negatively impact the timeliness of estimation, and significantly reduces coverage and sampling error bias. MRIP has developed a transition team made up of state and federal partners that are engaged in making decisions on how to move towards implementation of the FES. The transition strategy involves benchmarking the new design side-by-side with the CHTS for 3 full years along with developing a calibration method to adjust the historical effort time series to align with the estimates from the new methodology. After three years of side-by-side new estimates can be incorporated into key stock assessments and the CHTS will be discontinued. Colvin also stated that MRIP continues to focus resources on evaluating for-hire reporting options for census-based approaches that utilize electronic reporting, evaluating

supplemental surveys used to effectively manage pulse/rare event fisheries and other fisheries requiring finer data resolution (i.e., red snapper), and transitioning away from pilot research to implementation at the regional level.

Regional Communication Team – **L. Sharpe** provided a presentation detailing the MRIP National Communication Team and the need for developing a regional team for the Gulf of Mexico. The national team is composed of NOAA Fisheries and MRIP staff along with regional partner organizations and focus on newscasts, website development, and developing products and tools that support MRIP and regional outreach efforts. The regional teams are being formed to utilize existing regional networks and resources to more effectively deliver communication products and messages to stakeholders. The priorities of the regional teams for 2015 are to deepen the engagement and understanding of the MRIP process among internal and external audiences, develop regionally targeted communication materials and support communications related to the new FES. MRIP CET staff also plan to conduct field visits in the regions to gather feedback on MRIP issues. **After further discussion the FIN Committee passed a motion to recommend a subcommittee be developed that included representatives from Florida, Alabama, Mississippi, NOAA Southeast Regional Office (SERO), NOAA Southeast Fishery Science Center (SEFSC), and Gulf of Mexico Fishery Management Council (GMFMC).**

Angler registry data submission schedule – **G. Bray** stated that some of the Gulf States are concerned about the need for providing monthly quality controlled angler registry data to NOAA Fisheries by the 3rd of the following month. Currently, Alabama and Mississippi have difficulty receiving those data from agencies outside the offices and being able to produce quality controlled datasets that timely is currently not possible. **C. Denson** stated to meet that deadline they would have no opportunity to quality control any of the records. **G. Colvin** stated that he would like to see NOAA Fisheries and state partners working together on quality control issues and NOAA is very appreciative of all the hard work that has been accomplished. **G. Colvin** stated that the sample frame for the new FES is being pulled by the 5th of every month and if the new month data are not available they have to use the prior month's data. **C. Denson** asked if it would be possible to provide data for the first 24 days that were quality controlled, realizing that licenses sold during the last week of each month would not be quality controlled until the following month's data were provided. **G. Colvin** said he would discuss that with the FES database personnel to find out if that option would be beneficial. **D. Stewart** stated Mississippi license data is collected in Jackson, MS and it is difficult for Mississippi Department of Marine Resources staff to get access in a timely manner for quality control purposes. **G. Colvin** stated that possibly reconvening parts of the angler registry workgroup to address issues like this might be beneficial. Some of those members from NOAA Fisheries are willing to make trips to individual states to help them with angler registry data management issues if necessary. **D. Bellais** represents GSMFC on angler registry data issues and she will stay in contact with state and federal partners to continue addressing this issue.

Alabama request for dockside red snapper add-on questions – **G. Bray** stated that Alabama has requested to utilize two add-on questions for the 2015 red snapper season for the APAIS survey. The first question would be a reef question used in 1998 and 2003 that asks anglers if they spent the majority of their time fishing adjacent to standing oil and gas platforms or submerged artificial reefs. The second questions would simply prompt the sampler to collect a vessel name and vessel registration number to be used later to validate whether that vessel was also federally

permitted in the reef fish fishery. **K. Anson** provided some justification for why Alabama would like to ask these questions. Alabama is concerned about the impact on MRIP estimation for vessels that hold federal reef fish permits but are not included in the for-hire telephone survey (FHTS) because they don't truly operate as a charter for-hire vessel. These vessels might significantly impact estimates of effort and landings under a new sector separation fishery management scenario that will allow for more days at sea for charter for-hire vessels than private boat anglers in 2015. **T. Sminkey** had several questions regarding the usefulness of permit list validation process if data were not being collected on vessels that were permitted but also not part of the for-hire telephone survey FHTS. **After some additional discussion, the Committee decided that a conference call between NOAA Fisheries and interested state partners would be beneficial to determine a course of action going forward.** **G. Bray** stated he would coordinate the conference call between all interested partners.

MRIP Regional Implementation Plan – **T. Sminkey** stated that the MRIP Executive Steering Committee (ESC) has approved the regional implementation structure for how MRIP monitors the recreational survey. GulfFIN was identified as the administrator and developer of a regional plan in the Gulf of Mexico. **G. Bray** stated that he received a letter from Dave Van Voorhees with NOAA Fisheries regarding their desire to work with GulfFIN regarding a regional implementation plan for MRIP in the Gulf region. The goals of the regional implementation plan are 1) to support implementation of certified methods that satisfy the minimum needs for management and science, and result in regional survey programs that achieve at least the minimum MRIP standards for coverage, resolution, and data elements, and 2) establish a consistent, priority-based foundation for investment of available funds for data collections that exceed minimum needs. **T. Sminkey** stated the goal would be for FIN to develop a process for developing and submitting annual implementation plans. **G. Colvin** stated it's likely that there will be competing interests within regions regarding improving precision, timeliness, or expanding geographic coverage. This process would provide a way for the region to identify needs for the base MRIP survey and prioritize survey desires for work that would be complementary but in addition to the base MRIP survey. **G. Bray** stated this process is very similar to the GulfFIN funding process where data collection needs are identified and prioritized realizing that funding may be a limiting factor. **Although a timeline has not been suggested by NOAA Fisheries the Committee agreed that extending the 2015 facilitated session by a day to begin discussing a regional implementation plan could be a good first step.**

Unified Trip Ticket Program Issues

A. Petersen gave an update on the progress of the unified trip ticket program development. Most development has occurred on the back end and the program is being developed server side first so many different applications, such as the oyster project from MS, can be added to the entire program. The web site version will be developed first versus the PC based version to make maintaining (updates, backups, etc.) the system easier. **A. Petersen** went over preliminary ideas for end users (Dealers) and how the screens are customizable. **A. Petersen** discussed ideas and screens with TX and have a couple of dealers willing to beta test. **G. Bray** asked if the PC version will still be developed for states to have another option other than the web site. **A. Petersen** stated there have been no plans to discontinue developing the PC end user tool. **C. Denson** is concerned about the states using the web site and not having the PC version available after a certain timeframe especially if the web site goes down or the internet connection is lost and dealers can't meet

reporting requirements. **D. Gloeckner** asked how data from proprietary software will be handled in the new system. Currently data are appended to the Bluefin data file are sent to GSMFC. Bluefin's API for the new program will have validation built in. **J. Wilson** does not want to use a file upload system as this causes many problems with the HMS system. **G. Bray suggested the ComTech group work meet to discuss how data from third party software be handled.** **C. Denson, V. Cefalu** and **M. Harden** requested no state data be sent to quota monitoring and HMS, only federal data from Alabama and Louisiana be sent. A current data flow was requested from **C. Petersen** on how the data flows from the dealer to the agencies. **C. Denson** voiced his discontent with federally managed species from a state only dealer being sent to the quota monitoring and HMS systems. **C. Denson** asked for this issue to be resolved as soon as possible. **D. Gloeckner** stated that compliance reports would need to be developed at GSMFC for SEFSC to determine that federal dealers that landed state only species are meeting reporting compliance deadlines. **After further discussions GSMFC staff agreed to work with SEFSC staff to develop the necessary compliance reports so that no state only data will need to be provided to SEFSC staff for Alabama and Louisiana.**

Status Report on Caribbean Commercial Fisheries Statistics Program

D. Matos gave a presentation on the Status of Puerto Rico's DNER/Commercial Fisheries Program (CFSP). The CFSP was started in 1968. In 1998, Law 278 came into being obligating commercial fishermen to submit their data. Failing to do so could result in the loss of their license. The Trip Ticket program was established in 2004. In 2010, due to financial problems, CFSP personnel were reduced. Moving forward, the CFSP hope to complete a Commercial Fishing Census in 2015, develop a telephone application for the Trip Ticket Program, improve the correction factor and increase funds.

Status of Biological Sampling and Analysis Activities

Analysis Activities

G. Bray provided an update on processing and data entry of biological sampling activities for 2014. Most of the states are almost complete in entering data. Some age data has started to flow in. Florida is close to providing data transmissions directly to GulfFIN so that Florida data can now be supplied with the other states data. **G. Bray** asked the states to please review their data and once it is deemed clean let **D. Bellais** know so it can be moved. **R. Cody** asked about bar coding and if any other developments have been made since it was discussed in Miami. **G. Bray** stated no due to funding issues.

Funding Discussion/State Sampling Plans/Reference Sets/Meeting

G. Bray stated that there is no money for collecting age structures in 2015. However, if states are willing to provide data to FIN, GSMFC is more than willing to process and store it. Also, we still plan to continue circulating the reference sets and encourage the states to continue reading them because hopefully funding will be restored. Every year there has been an Otolith Training Workshop to go over priority species and do readings. There is money to support the workshop if the states are interested. **C. Denson** stated that he thinks it is important to continue the workshop. Louisiana, Texas, Mississippi and Puerto Rico feel the same. **G. Bray** will get potential dates for the workshop. It is usually held in May at the St. Petersburg labs.

Discussion of Development of FIN Facilitated Session

T. Sminkey stated that NMFS initiated a review process a few years back and one of the recommendations that came out of that was a FIN facilitated session. This is a benefit to both NMFS and the FIN partners. A proposal was put together for FIS and funds were awarded for the facilitated session. This will be a one to two day meeting for all FIN parties to get together and discuss with a facilitator where FIN is at, where does FIN want to go, what are our hot topics and put together a five year plan for FIN. **G. Bray** will work with **T. Sminkey** on hiring a facilitator and then reach out to the committee for potential dates for the session.

Ongoing Activities

Discussion of Confidential Data Roll-Up Procedures

M. Lewis gave a presentation on confidential data roll-up procedures. He is working on a nation-wide confidentiality roll-up procedure and wanted to see if the Gulf States would be interested in participating. The goal is to preserve species totals in the Gulf but also protect confidentiality. In the Gulf, commercial confidential landing data are removed from the public reports. The Atlantic rolls that information up to the next level. Would the Gulf States be interested in doing something similar to the Atlantic states? This would be done through FOSS (Fishery One Stop Shop). The concept for the roll-up is to say that these are the total landings for the Gulf and as long as you do the roll-up in such a way that the confidential data cannot be figured out through subtraction, it protects that confidential data. **C. Denson** voiced concerned over finding a state total if a species is confidential. **M Lewis** stated that if one state is confidential, then all the states would be rolled up confidential for that species. All the states would be aggregated together and you would not be able to determine which state had what. **M. Lewis** asked if the Gulf States are interested in pursuing confidential data roll-ups through FOSS. If so, he will work on furthering development for the Gulf States. If not, then he will stop trying to find a way to show the data the same way for every region. The ultimate goal is to have a method everyone can agree upon and present data the same way across the board. A question was raised as to whether or not this system could be linked into InPort. **G. Bray** stated that InPort is not designed for this. **R. Cody** stated that we can all acknowledge that there is a way for someone to figure out confidential data. Why not go ahead and try the confidential data roll-ups through FOSS and then provide comments back to **M. Lewis** on what they like or do not like about it. **Louisiana, Florida, Texas, Mississippi and Alabama** stated that they are willing review any procedures developed by FOSS. **M. Lewis** will continue to work on the system so the states can review potential roll-up procedures in the future.

Discussion of Area and Sub Area Codes for Waters Outside of EEZ Waters

D. Bellais stated that this topic came up at the last FIN meeting. The middle of the Gulf did not have any designated area codes and there is concern over duplication of codes being used. She presented three options to the group to look over. **M. Cahall** stated that he has worked on this for ACCSP and that the two need to be compatible. No easy choice that applies to every state is available. **It was decided that the Commercial Technical Work Group needs to look at this. Joe Myers from ACCSP will be invited to participate so that there is some compatibility.**

FIN Data Management System Issues

Review of list of personnel with access to confidential data - **D. Bellais** provided a list of personnel with access to the FIN Data Management System (DMS) and requested that members look over it to see if any changes need to be made and to let her know.

Status of FIN DMS - **D. Bellais** reported on the status of the FIN DMS and presented public access counts by commercial and recreational business areas. **D. Bellais** gave an update on record counts in the FIN DMS for commercial landings. The Louisiana and Alabama recreational fishing license data are now being loaded on a monthly basis. Mississippi and Texas are loaded yearly. NMFS has access to the data for import into the Angle Registry Database and they continue to publish their findings. Quota Monitoring/HMS data from Bluefin Trip Ticket program continues to be loaded into the FIN system. **D. Bellais** gave a review on biological sampling data, marine recreational fishery catch estimates and marine recreational fishery effort data.

Status of Metadata Compilation and Reporting

G. Bray gave a report on the status of updating and compiling metadata. All of this data is entered in InPort. Currently, parent nodes for descriptors created and second-level child nodes created have been completed. We are in the process of parent node information checking, second-level information entry and seeking information for possible third-level nodes. Third-level node creation for selected parent nodes has not yet begun. We will continue updates and maintenance, data discovery and the review of data accuracy for parent nodes and the review of structure for parent child nodes.

Discussion Regarding Location and Responsibility of the FIN Data Management System

This topic is looked at every five years. Does the committee have any thoughts, concerns, comments or ideas in regards to the FIN DMS being housed at the GSMFC? **S. Turner** did note the need for some improvements to the data management system at FIN. He is hoping funds will become available to address these needs. **T. Sminkey** asked about backing up the data. **G. Bray** stated that the Commission has the capabilities to restore the data and has offsite back up.

Review and Approval of 2014 FIN Annual Report

FIN Committee members were provided with copies of the draft 2014 FIN Annual Report. This is basically a summary of what FIN did over the past year. **G. Bray** requested that members of the Committee review the Annual Report and provide comments, revisions or corrections to staff by July 31, 2015. **G. Bray** noted that even though Head Boat Sampling and Biological Sampling are not fully funded by GulfFin, we do continue to support them. He also noted that on page 10, those were the activities that came out of the last facilitated session. **C. Denson** moved to accept the FIN 2014 Annual Report with pending editorial changes. **D. Matos** seconded and the motion passed unanimously.

Subcommittee and Work Group Reports

FIN member were provided with copies of all Subcommittee Work Group Reports. The reports are part of these minutes and are attached.

Gulf Geographic Subcommittee – (Attachment A)

The Gulf of Mexico Geographic Subcommittee/TCC Data Management Subcommittee (DMS) met in October 2014. An action item pertaining to the FIN response to SEFSC Data Peer Review report was voted on. Two letters were drafted. A shorter letter was originally drafted but the FIN Committee felt it should go into greater detail so a second, longer letter was drafted. The DMS voted 8-1 for the original, shorter letter to be sent. They make this recommendation to the FIN. **G. Bray moved to accept the DMS recommendation and send the shorter letter. C. Denson seconded and the motion passed unanimously. C. Denson moved to accept the report. D. Matos seconded and the motion passed unanimously.**

Commercial Technical Workgroup – (Attachment B)

The Commercial Technical Workgroup met via conference call in February 2015 to discuss state commercial conversion factors. There were questions as to where the origin of the conversion factors came from and if there are any newer/updated versions. **D. Bellais** sent a request to NMFS regarding updated conversion factors but has not heard back. **M. Cahall** stated that there are no new updates. ACCSP is also working on this and their report should be out soon. **M. Cahall** believes GSMFC and ACCSP should work to together on updating the commercial conversion factors. **C. Denson moved to accept the report. J. Esslinger seconded and the motion passed unanimously.**

Recreational Technical Workgroup – (Attachment C)

The Recreational Technical Workgroup met via conference call in February 2015 to discuss the need for updating the FIN recreational standards documentation. It was requested that a member from Alabama and Texas be added to the workgroup so that all five Gulf States would be represented. It was determined that the best approach for getting started would be to determine the necessary data inputs that stock assessment scientists and managers require from the field sampling data. Once that is determined, use that as the next step for generating a generalized standards document as a starting point. **C. Denson moved to accept the report. D. Matos seconded and the motion passed unanimously.**

Operations Plan

Status of 2015 Activities – The FIN Committee was provided with the status of the activities currently being conducted. The Committee reviewed the various activities and noted that all activities were either completed or being addressed as outlined in the Operations Plan.

G. Bray noted a couple of the highlighted areas to the Committee:

B7 – Otolith Processors Training Workshop – this topic was discussed above.

B8 – Develop Methods for Validating Recreational Discards Data – The Commercial Technical Workgroup needs to look at this task and come up with alternative ways to validate discards.

B11 – Development of Recreational Standards – this topic was discussed above.

Review and Approval of 2016 Operations Plan – The FIN Committee was asked to review the 2016 Operations Plan. The Plan is in preliminary form, knowing things will change once the Committee has the facilitated session, and will be finalized later this year when the State/Federal Fisheries Management Committee (S/FFMC) decides what activities will be funded in 2016. Any edits to the 2016 Operations Plan should be sent to GSMFC by July 31, 2015.

Discussion of FIN Funding Issues

2016 FIN Funding Priorities – Committee members were provided with a list of items for funding consideration in 2016. The final prioritized list will be forwarded to the S/FFMC for their meeting in August 2015. At that time, they will decide which items will be included in the 2016 FIN Cooperative Agreement. All items listed as high priority will require budgets and statements of work by July 31, 2015. **R. Cody moved to list as high priority all ongoing activities and biological sampling with the understanding that items can be added/removed after the facilitated session, one being conversion factors. C. Denson seconded and the motion passed unanimously. The list that will be presented to the S/FFMC is as follows, again with the understanding that items may change after the facilitated session:**

Ongoing

- H - Coordination and Administration of FIN Activities
- H - Collecting, Managing and Disseminating Marine Recreational Fisheries Data
- H - Operation of FIN Data Management System
- H - Trip Ticket Program Operations
- H - Head Boat Port Sampling
- H - Gulf Menhaden Port Sampling

Reinstating

- H- -Biological Sampling of Commercial and Recreational Catches

New

- L - Recreational Red Snapper Data Collection for Catch and Effort
- L - At-Sea Sampling for Catch and Discards Data from For-Hire Boats
- L - Collection of Catch and Effort Data via Logbooks for For-Hire Boats
- L - Highly Migratory Species Recreational Catch and Effort Sampling
- L - Biological Sampling for FIN Secondary Priority Species
- L – Commercial Conversion Factor Development

Election of Officers

Committee members were provided with a list of historical committee chairpersons. Currently the vice chairman is **Mike Harden**. **M. Harden** was nominated to become the chairman. **Justin Esslinger** was nominated as vice chair by **C. Denson** and seconded by **G. Bray**. The nominations were closed and the chairman and vice chairman selections were approved by the Committee.

Vince Cefalu is the current chairman of the Data Management Subcommittee with Nicole Shaffer as the vice chair. No action was taken to elect new officers for the Data Management Subcommittee.

The next FIN meeting will be in March 2016 with the Data Management meeting being held in October 2015. This meeting structure will be followed until a change is necessary.

Other Business

T. Sminkey stated that it has been five years since the last recreational socioeconomic survey has been done. **T. Sminkey** asked about the feasibility of an economic add-on being done in the Gulf in 2016? **C. Denson** stated that he has some concerns over the add-on questions and is not in a position to commit to it yet. **T. Sminkey** noted that it would take under a minute to ask the additional questions. **T. Sminkey** asked the states to respond back to him within the next month as to whether or not they are willing to participate.

S. Turner gave a presentation on Public Accessibility to Research Results (PARR). The purpose of PARR is to increase access to federally funded scientific research results to the public, industry and the scientific community. The PARR is based on a Presidential Executive Order issued in 2013. The bottom line of PARR is that ALL federally funded data collection, research results, publications and products MUST be made publically accessible.

There being no further business, the meeting was adjourned at 5:35pm.

**TCC DATA MANAGEMENT SUBCOMMITTEE
MINUTES**

**Monday, October 12th, 2014
Gulfport, MS**

Chairman Vince Cefalu called the meeting to order at 8:35 a.m. The following members and others were present:

Members

Chris Denson, AMRD, Gulf Shores, AL
Nicole Shaffer, AMRD, Gulf Shores, AL
Richard Cody, FWC, Saint Petersburg, FL
Justin Esslinger, TPWD, Rockport, TX
Vince Cefalu, LDWF, Baton Rouge, LA
Mike Harden, LDWF, Baton Rouge, LA
Ryan Rindone (proxy for John Froeschke), GMFMC, Tampa, FL
Bill Richardson, MDMR, Biloxi, MS
Brittany Chudzik, MDMR, Biloxi, MS
Dave Gloeckner, NOAA SEFSC, Miami, FL

Staff

David Donaldson, Executive Director, Ocean Springs, MS
Gregg Bray, FIN Program Manager, Ocean Springs, MS
Donna Bellais, ComFIN Programmer, Ocean Springs, MS
Ashley Lott, Administrative Assistant, Ocean Springs, MS
Deanna Valentine, RecFIN Data Entry Technician, Ocean Springs, MS
Doug Snyder, RecFIN Programmer/Survey Coordinator, Ocean Springs, MS
Ralf Hode, Fisheries Disaster Recovery Coordinator, Ocean Springs, MS

Others

Steve Turner, NOAA SEFSC, Miami, FL
Thomas Maurer, FWC, Saint Petersburg, FL
Wes Devers, MDMR, Biloxi, MS
Emily Satterfield, MDMR, Biloxi, MS
Jason Froeba, LDWF, Baton Rouge, LA
Jackie Wilson, NOAA HMS, Silver Spring, MD
Joe Desfosse, NOAA HMS, Pascagoula, MS
Lance Robinson, TPWD, Dickinson, TX
Peter Nguyen, MS-AL SeaGrant, Biloxi, MS
Ralf Riedel, Metadata Contractor, Ocean Springs, MS
Gary Fitzhugh, NOAA Fisheries, Panama City, FL
Julianna Mullen, Audubon Nature Institute, New Orleans, LA
Phil Werdal, Trace Register, Seattle, WA

Kelly Lucas, MDMR, Biloxi, MS

Adoption of Agenda

The agenda was approved with minor modifications. The discussion of MRIP Regional Communication Team was removed for a later date.

Approval of Minutes

The minutes of the Data Management Subcommittee (DMS) meeting held on March 17th, 2014 in New Orleans, LA were approved as written.

Status of Biological Sampling Activities

Bray provided an update on processing and data entry of biological sampling activities for 2014. All states are progressing on data entry of 2014 sample data. **Cody** mentioned that Florida is close to completing the necessary programming to provide biosampling data directly to GSMFC. The plan is to test using the 2009-2013 red snapper data that were provided for this year's stock assessment. **Cody** also stated that it may be possible in the future for GSMFC to pull data directly from FWRI data tables. **Bray** reminded the states to plan on completing 2014 age data processing and entry if biosampling funds are not available for 2015.

Discussion of Commercial Electronic Reporting/Unified Trip Ticket

Claude Petersen gave a presentation updating the subcommittee on the new unified trip ticket program. **Petersen** stated the two main sections are a website for administration of lookup tables for state supervisors and a PC based dealer interface section. The new design allows for states to manage their own species, area fished, and gear tables. The dealer interface will synchronize with the central server and provide landings data directly to the central server. **Petersen** provided some additional detail regarding the proposed Microsoft Azure cloud storage database. He explained that Bluefin Data is basically renting storage space and the trip ticket database will reside there. The Azure storage space will be located in a data center that is hardened to withstand natural disasters, provides backup power support, the data centers are secured, and exact locations are not advertised. Bluefin Data will select a primary location and a secondary backup center that will both be located in the continental United States. Advantages are that the system can be scalable based on the amount of data and users utilizing the system. The system allows for no capital outlay meaning we can pay as we go, and provides for additional software capabilities. **Petersen** provided some advantages and disadvantages in comparing MS Azure with a local server storage option at Bluefin Data. A local server would still be part of the cloud, Bluefin Data would need to purchase web server expertise and SQL Server software, would be limited by only a single internet connection, and not as hardened against storms and power outages without increased costs. **Petersen** also touched on the importance of securing trip ticket data. The current system is encrypted data transmission using SFTP. The new system proposal is to use Secure Socket Layer protocol which is the appropriate encrypted transmission method for internet transfers. Bluefin Data will grant specific rights to data access for only key

personnel. No one will have unrestricted access to the data. Microsoft employees would not have access to the data stored in Azure. **Petersen** stated that after talking with Microsoft, only the U.S. Attorney General and Homeland Security have the right to force Microsoft to provide any privately owned data. Requests from the U.S. Attorney General would provide 90 days for data acquisition while Homeland Security could request data immediately. None of those scenarios would be any different for data stored on a local server at Bluefin Data. **Petersen** also stated that the concern over a Microsoft Azure outage was brought up recently. Azure did have a significant outage but it was not a global loss of all nodes. The service was restored quickly and Bluefin Data did not see any interruption in the two databases they currently have on Azure. **Andrew Petersen** then provided login information for the states to review and manage their non-confidential reference tables that support the dealer interface. The administration website will support Google Chrome, Mozilla Firefox, and Internet Explorer version 10+. **Petersen** demonstrated how the administration website worked and how the states could manage their data tables. **Denson** asked who would have access to edit these tables. **Petersen** stated that the states will have to decide specific roles for editing tables. **Petersen** also stated that a discussion will need to be had as to what role the Federal partners have with potentially updating their data stored in the species tables.

Presentation of Commercial Data Reporting Tool

Guste with GCR Consulting gave a presentation of an online GIS reporting and mapping tool. This tool provides a secure online portal to track Louisiana commercial trip ticket landings and licensing statistics. The tool helps managers make informed up-to-date decisions based on current fisheries data. The tool provides answers to meet ecological and political needs by allowing users to query landings results for specific geographic or political areas over current and historical time periods. All of the landings are potentially confidential and cannot be shared with the general public. GCR used historical sample data for the presentation that was all deemed as non-confidential. **Guste** ran queries for multiple geographic and political areas to demonstrate the capabilities of the reporting tool. **Esslinger** asked what the costs for development have been. **Guste** stated development costs over the last two years have been approximately \$250k. Costs are directly linked to the level of detail provided by the reporting tool. **Esslinger** also asked if the tool could handle sampling data. **Guste** stated the tool can be customized for sampling data, license data, and census data along with many other types of data. **Cefalu** asked if the development costs would be less since the tool has been developed for Louisiana already. **Guste** said that would potentially be the case unless state data requirements or storage standards were different. **Denson** asked how LA stores their data to provide to GCR. **Harden** said they store the data in SQL to provide to GCR. **Denson** asked if there was a way to flag confidential data. **Guste** stated the current tool is only designed for state use and not the public so nothing has been designed to flag confidential data. **Cefalu** and **Denson** added that even confidential users might need to be flagged so they are aware that those result reports may not be shared with other non-confidential users.

Presentation of Electronic Reporting Tool

Kelly with CLS America gave a presentation of the Thorium Mobile Vessel Monitoring System (VMS) tool that is currently being used on approximately 5,000 vessels worldwide. The Thorium VMS was developed in cooperation and input from fishermen to look for ways to make the system

the most user friendly system and obtain the best quality data. The Thorium VMS utilizes a simple reliable satellite email system, provides multiple NOAA weather services, and allows for the development of electronic forms that can be sent to vessels allowing for instant outreach and data entry capabilities. Data can also be transmitted through options other than satellite such as cellular data. Customized e-logbooks can be provided to vessels. Installation is simple by providing a single antenna with an integrated satellite modem and GPS receiver. Online activation is simplified and 24/7 customer support is provided. Based on SPB technology which helps minimize transmission costs. Any android smartphone or tablet can connect to the Thorium dome unit. It allows for a small portable unit and takes up minimal space onboard vessels. **Kelly** provided screenshots from the main screen showing the multiple data options available outside of just the VMS coordinates. He also demonstrated some of the reporting capabilities from the VMS data that can be linked data collected via the customized e-logbooks and forms. **Cody** asked what the startup cost and monthly service requirements are. **Kelly** stated their unit costs \$1,799 which is a government rate provided for the Headboat Collaborative participants. An additional \$750 per year is required for yearly service contracts. **Gloekner** asked how small of a vessel this system would work on. **Kelly** stated the system was designed for smaller center console vessels so it has a wide range of applications.

Review of Response to SEFSC Data Peer Review Report

Bray provided two versions of a response letter FIN has generated to respond to the recommendations from a peer review of data that feeds into the SEFSC assessment and management process. One version is basically a summary letter and the second provides more detail with regard to specific recommendations provided from the peer review. **Denson** asked if the subcommittee could receive a copy of the full peer review report again. **Cody** suggested the subcommittee be given a couple weeks to review the report and letters before selecting a version to send to the FIN Committee in March 2015. **Bray** distributed a copy of the full peer review report and the two versions of the letter for review following the subcommittee meeting and asked for responses via email as to which version of the letter the subcommittee members preferred. **By a vote of 8-1 with 2 non-responses the subcommittee recommended to the FIN Committee that the shorter version 1 of the response letter be the preferred choice.** FIN will take action on this during the March 2015 meeting with the goal of providing the final letter to Dr. Ponwith at the SEFSC.

Update on MRIP Calibration Workshop

Bray provided an update on the NOAA Calibration Workshop that was held in September 2014. The goal was determine if a need existed for calibrating MRIP Access Point Angler Intercept Survey (APAIS) data after methodology changes were made in 2013. The workshop did identify a need for calibration after extensive data analyses were completed. Much of the differences in estimates after the 2013 methodology changes were attributable to changes in the temporal distribution of when angler interviews were collected. The 2013 methodology changes increased the number of angler interviews collected during the morning and late afternoon/evening hours. The workshop participants came up with 3 potential methods for calibration. Two ratio estimator methods focus on calibrating the 2013 estimates to the older 2004-2012 estimates. These are relatively easy methods from a computational standpoint and will provide calibrated estimates for

species currently undergoing stock assessments. As more year's data are collected using the new methodology a modeling approach will be used to calibrate the older estimates to the more recent estimate.

Findings from ACCSP PSE Workshop

Bray provided a short summary of a PSE Workshop conducted by ACCSP that attempted to determine how differing levels of uncertainty in recreational fishery landings estimates impact stock assessment and management of a population. A model was developed using simulated fish species of slow, medium, and fast life histories; low, medium, and heavy exploitation levels; 30%, 60%, and 90% recreational landings to total landings composition; and 7 different levels of PSE. A total of 189 model scenarios were developed. The model results showed that PSEs greater than 60% produced biased estimates across all model scenarios. The threshold for unbiased estimates was in the 40-60% range but lower thresholds were observed for heavy exploitation scenarios and fisheries with a recreational landings component less than 60%. Many of the managed species in the Gulf of Mexico have annual PSEs less than 40% so the impact on sampling and survey methodology could be minimal. A final report is being produced by ACCSP staff and will be provided to the FIN Committee for review once completed.

Discussion of Election of Officers

Bray reminded the subcommittee that the FIN Committee will be taking the place of the Data Management Subcommittee at the spring and fall GSMFC meeting for future years. A decision needs to be made as to which group of officers would be used moving forward. After several alternatives were discussed the subcommittee decided to address this issue in March 2015 when the full FIN Committee is present.

Other Business

Riedel gave an update on his progress with the metadata program. The purpose of this work is to enable high-level data discovery in a time-efficient manner. Work is ongoing with documenting existing data collection programs, license data, and regulations. Riedel plans in the future to continue updates and maintenance of current data, continue to look for additional data sets that would be suitable to document, and work on improving the tool to provide a more useful user interface.

Review of 2013 Commercial Data

Each state provided feedback based on a review of the spreadsheets **Bellais** sent out prior to the meeting. The States mentioned that the FIN DMS numbers were very close to their state totals and the slight differences likely indicated that they collected some additional data that has yet to be delivered to GSMFC. States representatives also mentioned that there were a few coding errors on their part. **Richardson** asked if it was possible for LA or AL to provide the programming scripts and conversion factors for converting landed weight to whole weight. **Harden** agreed to help. **Denson** asked if it was possible for MDMR personnel to enter the shrimp landings into the Trip Ticket System so the data would be in one system. **Chudzik** will talk with supervisors for

approval and coordinate with SEFCS on the mechanism for preventing duplicative data in the Trip Ticket and GSS systems. All necessary corrections to the 2013 data will be made at the state data level and submitted to GSMFC for loading into the FIN DMS.

Continued Discussion of Unified Trip Ticket System

C. Petersen presented two options for populating licenses lists for those agencies wanting to validate and maintain the lists: Dealers can enter licenses by hand or agencies can provide the license databases as a starting point. The issue of locking electronic trip tickets with a 30 day window was briefly touched upon and **C. Petersen** stated regardless of the decision, all fields will be in an audit table to allow tracking of edits. Each state was asked if they were comfortable enough with Microsoft's Azure platform to continue with the development of the new trip ticket system. TX and FL were good with Azure and will be the first states to move to the Unified Trip Ticket System. **Chudzik** stated MDMR will have to check with their IT Department once the personnel issues there are solved. Alabama and Louisiana are not comfortable with Azure at this time and **Harden** stated their state legal department has stated a Non-Disclosure Agreement will have to be signed by Microsoft. **C. Petersen** stated Bluefin will continue to work on the web site for now as no further information from the agencies is needed at this point and stated dealer beta testing of the Unified Trip Ticket System could possible begin in spring of 2015.

Being no further business, the meeting was adjourned at 3:35 p.m.

**Commercial Technical Workgroup
Conference Call Summary
February 3, 2015 10:30 a.m.**

The following workgroup members were present:

Mike Harden, LDWFP, Baton Rouge, LA
Darrin Stewart, MDMR, Biloxi, MS
Chris Denson, ADCNR/MRD, Gulf Shores, AL
Justin Esslinger, TPWD, Rockport, TX

Others

Vicki Swann, TPWD, Austin, TX
Cindy Bohannon, TPWD, Dickinson, TX
Vince Cefalu, LDWFP, Baton Rouge, LA
Nicole Smith, LDWFP, Baton Rouge, LA
Nicole Schaffer-Beckham, ADCNR/MRD, Gulf Shores, AL
Tom Maurer, FWC/FWRI, Saint Petersburg, FL

Staff

Donna Bellais, GSMFC, Ocean Springs, MS

Review State Commercial Conversion Factors

A request was made by the states at the October 2014 Data Management Subcommittee Meeting to review the state commercial conversion factors and determine the origin of these factors. The starting point for review included just the state members in order to hash out state specific issues and to include other Commercial Technical Workgroup (CTW) members in the next phase. It was determined the factors used by each state originated from the 1980's - 1990's versions of NOAA-NMFS factors. The exception being Louisiana and Alabama using in-house conversions for oysters.

The CTW suggested GSMFC request from NMFS, the origins of the original factors and a newer version of conversion factors along with methodologies if available. Some states asked how to handle historical data if changes were made to the factors and what to do with the oyster differences among the states. After further discussion, it was decided to table these questions and re-visit the conversion factors after reviewing the latest from NMFS.

The CTW requested each state's current conversion factor documentation be disseminated to all the Gulf States for historical reference documents and added to GSMFC's Metadata Library.

There being no further business, the call was adjourned at 11:55 a.m.

**Recreational Technical Work Group
Conference Call Summary
February 27th, 2015 2:00 p.m.**

The following workgroup members were present:

Beverly Sauls, FLFWC, Saint Petersburg, FL
Nicole Smith, LADWF, Baton Rouge, LA
Paul Mickle, MSDMR, Biloxi, MS
Rob Andrews, NOAA Fisheries, Silver Spring, MD
Ken Brennan, NOAA Fisheries, Beaufort, NC
Craig Lilyestrom, PRDNER, San Juan, PR

Others

Steve Turner, NOAA Fisheries, Miami, FL
Vivian Matter, NOAA Fisheries, Miami, FL
Andy Strelcheck, NOAA Fisheries, Saint Petersburg, FL

Staff

Gregg Bray, GSMFC, Ocean Springs, MS

Review and update FIN Recreational Standards Documentation

G. Bray gave a brief overview of the need for updating the FIN recreational standards documentation. Bray mentioned that ACCSP has recently updated their recreational standards and he provided those to the work group for review with the most recent version of the FIN Program Design document. **Turner** stated that there are several different recreational survey programs collecting data on catch and effort in the Gulf and having a document that recommends consistent data collection standards would be beneficial. **Bray** stated that he would like to request a member from Alabama and Texas to be added to the workgroup. That would provide for representation from all five Gulf States. No one objected to adding members to the work group. **Sauls** asked if we were limited to revising the program design document or if we could redesign the standards documentation. **Bray** stated that we could change the design of the new recreational standards to meet our current needs. **Lilyestrom** stated he wanted to make sure the FIN recreational standards expressed a need to include shellfish along with finfish for some regions. The group agreed that shellfish were just another species with landings that could be included in this document. **Turner** suggested that the best approach for getting started would be to determine the necessary data inputs that stock assessment scientists and managers require from the field sampling data. **Sauls** suggested categorizing the inputs by effort, landings, discards, and biological data and determining if the data inputs are different across shore, charter, head boat, and private modes of fishing. The group agreed this would be a good starting point. **Bray** stated he would work with the appropriate assessment and management biologists to start collecting and summarizing the necessary data inputs. Once compiled the work group will meet again via conference call to review the inputs and determine the next steps for generating a generalized standards document as a starting point. **Bray** stated he intends to update the FIN Committee in March on the workgroup progress and the

plan for development moving forward.

There being no further business, the call was adjourned at 2:50 p.m.

APPROVED BY: *Hebert*
Cap. Chad Hebert
COMMITTEE CHAIRMAN

LEC/LEAP Joint Meeting Summary
Tuesday, March 17, 2015
Point Clear, Alabama

The meeting was called to order at 8:30 a.m. by LEAP Chair Rama Shuster.

Adoption of Agenda/Approval of Minutes

The agenda and the minutes of the October 20, 2014 Joint LEC/LEAP/Gulf Council Law Enforcement Committee were adopted as written.

GMFMC LAW ENFORCEMENT AP SESSION

Current GMFMC Amendments and Framework Actions

Reef Fish Amendment 39 – Red Snapper Regional Management

Steven Atran reviewed the actions and alternatives in the March 2015 draft of Amendment 39

Action 1 – Regional Management

Panel members expressed concern regarding the preferred option to allow regions to establish closed areas in the EEZ. Panel members indicated that they understood that this amendment was intended to be primarily directed toward landings regulations, but this is an offshore regulation that would require on-the-water enforcement. If states can establish an unlimited amount of closed areas, it would make enforcement much more difficult.

Action 2 – Regional Management and Sector Separation

Panel members noted that sector separation for a single species requires an additional workload for law enforcement due to different sets of regulations, and the possibility of added notification requirements. A suggestion was made that there be a cost recovery fee placed on the for-hire sector to account for increased costs of enforcement and administration due to sector separation.

Action 3 – Establish Regions for Management

A question was raised about the states' ability to enforce regulations in the EEZ. Panel members responded that the states have authority to enforce regulations in the EEZ under the Joint Enforcement Agreement. Also, enforcement is already responsible for addressing regional shrimp closures, so the creation of recreational red snapper regions by itself does not create enforcement issues. However, concern was expressed about how to enforce state regulations in the EEZ if an out-of-state vessel is exceeding bag limits for the state it is offshore from but not exceeded bag limits for an adjacent state that it will be landing in. Some possible solutions were:

- Staff noted that the amendment suggested enforcing only the most lenient state regulations for vessels in federal waters.
- Some AP members noted that they have transit provisions in state waters, and suggested that a similar provision be applied to the EEZ waters, i.e., a vessel could transit the EEZ off of that state, but if it stopped it would be subject to the regulations for that state. However, other Panel members felt that any boundaries that are established should be strict, hard boundaries. Any exceptions, such as transit provisions, would make enforcement

more difficult.

- Enforce regulations at the dock, so that it doesn't matter where the fish are caught, only where they are landed. However, states have limited enforcement resources and cannot afford to have officers continuously monitoring the docks for one species. This limits the effectiveness of dockside management. Without hard boundaries, if fish caught off of one state are landed in another state, this could lead to inaccurate counting of catches within a region, which could result in inaccurate regional catch monitoring and management.
- Enforcement could be assisted if the states could require that vessels fishing in their adjacent EEZ waters could be required to have the appropriate state permit (either resident or non-resident). However, there was a question as to whether the states would have the authority under National Standard 4 to impose state permitting requirements on vessels fishing in the EEZ.

Panel members noted that states have limited enforcement resources and cannot afford to have officers dedicated to continuously monitoring the docks for one species. In addition, challenges exist for land based officers to gain access to recreational and commercial docks. This limits the effectiveness of dockside management. Consequently, effective management requires a combination of dockside and on-the-water enforcement.

Under single-species regional management, a vessel will be able to fish for species other than red snapper in the EEZ when a state has closed its region to red snapper fishing. Consequently, enforcement will need to be able to determine where, when, and what a vessel is fishing for, and possibly where the vessel is from, in order to determine if a vessel is in violation of fishing regulations. Without hard boundaries, an enforcement vessel might need to follow a recreational fishing vessel back to its landing port to determine if it is violating that state's regulations. This could create an enforcement nightmare.

Action 4 – Apportioning the Recreational Quota Among Regions

Action 5 – Post-season Accountability Measures

Panel members did not feel that these actions items had any enforcement issues.

South Florida management Issues

Steven Atran reviewed the actions and alternatives in the February 2015 draft options paper for Modifications to Gulf Reef Fish and South Atlantic Snapper Grouper Fishery Management Plans.

Action 1 – Partial Delegation of Commercial and/or Recreational Management of Yellowtail Snapper to the State of Florida for Federal Waters Adjacent to the State of Florida

Staff questioned whether allowable gear requirements specific to only yellowtail snapper, such as an exemption from the circle hook requirement, would create a problem for enforcement. Panel members responded that they already enforce species-specific gear restrictions on other stocks such as sheepshead and grouper. In addition, it was felt that experienced enforcement officers can tell if a fisherman is targeting yellowtail snapper from the way in which he is fishing. Also, most fishermen will answer truthfully when asked what they are fishing for. Commercial fishermen

who target yellowtail snapper will have catches comprised mostly of that species, making enforcement on the commercial sector easier. However, from a more general perspective, exceptions add complexity, and therefore difficulty, to enforcement of a specific regulation. The difficulty factor is compounded when there are multiple exceptions, which by themselves seem insignificant.

Action 2 – Establish ABCs and ACLs for Yellowtail Snapper

Panel members did not feel that this action item had any enforcement issues.

Action 3 – Partial Delegation of Commercial and/or Recreational Management of Mutton Snapper to the State of Florida in Federal Waters Adjacent to the State of Florida

Except for the comment from Action 1 that allowable gear exceptions add complexity and difficulty to enforcement, Panel members did not feel that this action item had any enforcement issues.

Action 4 – Establish ABCs and ACLs for Mutton Snapper

Panel members did not feel that this action item had any enforcement issues.

Action 5 – Mutton snapper recreational bag limit in Gulf of Mexico and South Atlantic

Panel members felt that having different bag limits at different times of the year could create confusion among the public.

Action 6 – Mutton Snapper Commercial Trip Limit in the Gulf of Mexico and South Atlantic

Panel members noted that, for a small amount of fish, trip limits in terms of numbers of fish are easier to enforce than trip limits in pounds.

Action 7 – Partial Delegation of Recreational Management of Black Grouper to the State of Florida in Federal Waters Adjacent to the State of Florida

Except for the comment from Action 1 that allowable gear exceptions add complexity and difficulty to enforcement, Panel members did not feel that this action item had any enforcement issues.

Action 8 – Establish ABCs and ACLs for Black Grouper

Panel members did not feel that this action item had any enforcement issues.

Action 9 – Specify Accountability Measures for South Florida Species

It was noted that in the Atlantic, recreational yellowtail snapper fishing takes place predominately along the reef line which may be in state or federal waters depending on location. For this reason, Florida state waters and the EEZ should have consistent regulations.

Action 10 – Modify the shallow-water grouper species compositions and seasonal closures in the Gulf and South Atlantic

Council staff noted that species in the South Atlantic shallow-water grouper complex that were not in the Gulf shallow-water grouper complex had little or no landings in the Gulf, and some of the species are not included in the Reef Fish FMP. Panel members had no immediate enforcement comments, but requested an opportunity to re-review the draft amendment at a future time.

Action 11 – Modify Black Grouper Fishery Closures and Bag Limits in the Gulf of Mexico and the South Atlantic

Panel members felt that allowing exceptions to shallow-water season closures adds complexity and difficulty to enforcement.

Action 12 – Harmonize bag and size limits for species in shallow-water grouper complex seasonal closures in the Gulf and the South Atlantic

Panel members did not comment on this action because it contained no alternatives other than the no action alternative, and Panel members were unsure what the intent was for this action.

Action 13 – Changes to Circle Hook Requirement in Gulf and South Atlantic Jurisdictional Waters

Panel members felt that, as with venting tools, an education program would be more productive than enforcement of a gear restriction.

After reviewing Amendment 39 and the south Florida management options paper, Panel members felt that they would like another opportunity to review the documents once they were further developed and passed the following motion.

By unanimous consent, the Law Enforcement AP requests an opportunity to review the south Florida management plan and Amendment 39 before final action is taken.

Illegal, Unreported, and Unregulated (IUU) Fishing Issues and Possible Council/Commission Actions

Presentation on IUU fishing – Mexican Lanchas

LCDR Jason Brand presented the Eighth Coast Guard District's Mexican Lancha Threat Overview and Impact Analysis Model Results which were introduced at the last Gulf Council meeting. The lancha problem is not new and has been occurring for at least 25-30 years in an area of federal waters north of the U.S./Mexico EEZ line. The area currently encompasses 3500 square miles (three times the size of Rhode Island). The boats run illegally from Mexico into the U.S. EEZ and fish with a variety of gears from hand lines to long lines, and gill nets which can span up to seven miles in length. The Coast Guard has been sighting more of these boats every year but still have limited success with intercepting them. An estimate of the total take of red snapper alone is around 1.5 million lbs poached from U.S. waters by the lanchas over the past 2 years. This is greater than the entire reported recreational red snapper catch off of Texas. Intercepting the IUU vessels is hazardous and the alien fishermen are technologically advanced. Once an enforcement plane or vessel is spotted, the lanchas quickly move out of the illegal fishing area. There just aren't enough assets on the water or in the air to sufficiently patrol such a large area. In addition, international treaties with Mexico make prosecution nearly impossible¹. Catch, vessels, and gear are seized but the fishermen are returned to Mexico. The lanchas are destroyed based on instructions from Mexico. In many cases the vessels are not seaworthy, and some have sunk while being pursued.

GSMFC IUU Letter

Related to this issue of IUU fishing, Jim Landon, from NOAA OGC, provided an excerpt from the "Improving International Fisheries Management", Feb 2015 Report to Congress (Attachment A). In that report, Mexico was identified as engaging in IUU fishing; specifically for having vessels (lanchas) fishing illegally in the US EEZ. Identified nations that fail to take appropriate actions to address the basis for their certification can face trade sanctions. The Panel agreed that this was not solely a Texas issue but the poached red snapper could impact the total quota for all the Gulf sectors. In addition, it is suspected that much of the illegally caught red snapper is being exported back to the U.S. Because these fish have not been properly iced down on the lanchas, they are not considered to be fit for human consumption. Therefore, the Commission is drafting a letter to consider sending forward to the appropriate agency and people requesting more funding to address the states challenges in combating IUU fishing in all the Gulf states in a significant and meaningful way.

Proposed Magnuson-Stevens Reauthorization language

The Panel did not discuss this agenda item. It was noted that the Council cannot comment on the proposed reauthorization unless asked to by Congress. LCDR Brand added that any support for changes to the Act by the Coast Guard would need to go up the chain of command for approval.

¹ One Panel member explained, after the LEC/LEAP meeting, that the U.S. Coast Guard provides Mexico with a case package documenting the violation. It is then up to the Mexican authorities to prosecute the individuals. The lanchas are held for retrieval by Mexican officials. Failure to pick-up the vessel after a given time is deemed to imply forfeiture.

Ideas for Actions by Council and Commission

Mr. Atran stated that he had hoped to come up with a list of ideas for actions by either the GMFMC or the GSMFC that could help improve enforcement. The only idea he was able to come up with was to sponsor the development of a smartphone app for reporting fishery violations. Several state agencies have similar apps or toll-free numbers, but this app would be designed for reporting both federal and state violations. Rather than requiring someone to determine the correct agency to which a violation should be reported, the app would send reports to a central location, perhaps operated by NOAA enforcement, who would then relay the report to the appropriate agency. Panel members agreed that this idea was worth considering. Other ideas that were suggested included developing a relationship with oil companies to help report violations around offshore rigs, or developing a procedure for fishermen to report violations via VHF radio. It was noted that the Coast Guard already monitors all VHF calls.

Discussion of Ways to Avoid Waste of Seized Fish

As noted in the presentation on Mexican lancha fishing, the illegally caught fish that are seized are taken back out to sea and dumped. These fish cannot be sold because they have not been properly iced and are considered unfit for human consumption. LCDR Brand noted that the Coast Guard is looking into providing the fish to non-profit functions such as sea turtle rehabilitation centers or for research.

Mr. Atran suggested that a vessel of origin requirement might help to reduce sales of illegally caught fish. After the LEC/LEAP meeting, NOAA Fisheries announced the release of a report containing the final recommendations of the Presidential Task Force on Combating Illegal, Unreported, and Unregulated (IUU) Fishing and Seafood Fraud. That report includes a recommendation for a traceability program to track seafood from point of harvest to entry into U.S. commerce. The report is available at http://www.nmfs.noaa.gov/ia/iuu/noaa_taskforce_report_final.pdf

Proposed Officer of the Year Award Program

Council staff described the proposed Officer of the Year program. The program calls for a review of nominees by the LEC/LEAP to select the top three candidates. Since this may involve reviewing personal information of individuals, it may require a closed door session. The Council's LEAP can conduct closed door sessions, but the GSMFC's LEC does not have any such provision. To get around this, a suggestion was made to have the review conducted only by the LEAP in an LEAP only session. The Panel passed the following motion.

By unanimous consent, the Law Enforcement AP recommends that the language involving the Gulf States Marine Fisheries Commission's Law Enforcement Committee in review of nominations be removed from the program description.

The program only recognizes individuals. Panel members stated that there are also team efforts where it is not possible to single out an individual, and suggested that there be a team of the year

award. This could be done as a separate award program rather than try to compare team activities to individual activities.

The Law Enforcement AP unanimously concurred that there should be a second award for team of the year.

GSMFC LAW ENFORCEMENT COMMITTEE SESSION

IJF Program Activity

GSMFC staff provided the LEC with a short update on the Interjurisdictional Fisheries Program (IJF) activities. He reminded the representatives that the GSMFC would be requesting updates for the various 'law enforcement' related publications the Commission publishes annually: The 'Red Book' with all the states' annual commercial and recreational regulations, the annual license and fees pub, and the Officers Pocket Guide to Fishing Regulations. The GSMFC had in the past printed the Pocket Guide on waterproof paper which was spiral-bound, and sized to fit in officers' ticket books, however, due to funding issues, printing was discontinued for the past two years. The LEC indicated that if funds were available, the waterproof copy was much more useful than a Xerox copy which didn't last long on the water. Commission staff will look into the cost of printing once they have a better idea of what the Commission's total 2015 printing costs look like.

State Reports

Due to lack of time at this meeting, the state reports were submitted electronically for inclusion in this meeting summary, and are attached (Attachment B).

Other Business

The LEC/LEAP group is routinely running out of time when meeting in a half-day session. A large part of the Tuesday session was spent on Council amendment discussions, and the LEAP would like to continue to be involved in review of amendments as they are developed. It is hoped that the LEC/LEAP meeting could go back to a full day or afternoon/morning setup as it used to be a few years ago. In anticipation of this issue coming up, the GSMFC has already considered a full day for the meeting when bidding for the November meeting. As issues tend to overlap, it seems appropriate to keep it a joint session and not split half days between Council and Commission issues.

The next GSMFC meeting will be the week of November 3. This will be a joint meeting with the Atlantic States Marine Fisheries Commission, and it will meet in St. Augustine, Florida.

The meeting adjourned at 12:40 p.m.

LEAP Members in Attendance:

Rama Shuster, FWC, Chair
Brandi L. Reeder, TPWD, Vice-chair
Scott Bannon, ADMR
Tracy Dunn, NOAA/OLE
Cynthia Fenyk, NOAA/GCES
Chad Hebert, LDWF
Rusty Pittman, MDMR

LEC Members in Attendance:

Chad Hebert, LDWF, Chair
Rusty Pittman, MDMR (Vice-chair)
Scott Bannon, ADMR (Chair)
Jason Brand, USCG
Tracy Dunn, NOAA/OLE
Cynthia Fenyk, NOAA/GCES
Brandi L. Reeder, TPWD
Rama Shuster, FWC

Others:

Chris Blankenship, GSMFC Commissioner
Doug Boyd, GMFMC member
Dan Ellinor, GSMFC Commissioner
Jim Hewitt, Audubon Nature Institute
Jim Landon, NOAA
Campo Matens, GSMFC Commissioner/GMFMC member
Robert Perkins, USCG
Ashford Rosenberg, Audubon Nature Institute

Staff:

Steven Atran, GMFMC
Steve VanderKooy, GSMFC
Debbie McIntyre, GSMFC
Alex Miller, GSMFC

**Excerpt from the “Improving International Fisheries Management,”
February 2015 Report to Congress**

Mexico

Bases for Identification. Mexico is being identified for having vessels fishing illegally in the U.S. EEZ, and for overfishing of stocks shared with the United States, in areas without applicable international measures or management organizations, that has adverse impacts on such stocks.

While foreign fishing without authorization in the U.S. EEZ has been illegal since 1977, the definition of IUU fishing under the Moratorium Protection Act was revised only recently to include such activity. The United States and Mexico have worked to address unauthorized fishing by Mexican vessels in the U.S. EEZ of the Gulf of Mexico over many years, but more violations of this type occurred in 2013.

The USCG apprehended 24 open-hulled vessels powered by outboard motors (known locally as lanchas) in the U.S. EEZ with 82 Mexican nationals onboard, along with evidence of fishing activity. The vessels had made incursions as far as 41 nautical miles into the U.S. EEZ. The USCG documented a total of 1,418 red snapper, five gag grouper, and four gray triggerfish onboard the lanchas; these three species are from stocks shared with the United States and that have been determined to be overfished by the United States. Under the Moratorium Protection Act, the definition of IUU fishing includes overfishing of stocks shared by the United States that has adverse impacts on such stocks. Mexico reported to NMFS that it considers Red Snapper to be fully exploited. NMFS is concerned about the adverse impacts of this fishing activity, particularly on Red Snapper, given the status of that stock and the large amount of catch documented.

The sources of information on Mexico’s fishing activities are 24 case package reports from USCG District Eight transmitted to Director General de Inspeccion y Vigilancia, Comision Nacional de Acuacultura y Pesca, dated between February 21, 2013 and May 29, 2014.

Outreach to Mexico. NMFS sent a letter to Mexico dated October 17, 2014, and received a response letter dated December 10, 2014. In its response, Mexico described a number of initiatives it hopes will address the issue of lancha incursions into the U.S. EEZ. These include carrying out a verification of vessel registrations and permits by the end of December 2014, expediting the installation of Automatic Identification System transmitters on registered vessels, strengthening the Mexican Navy’s surveillance and patrol efforts in the area, and analyzing the feasibility of establishing a fishing exclusion zone near the maritime boundary.

**Florida Fish and Wildlife Conservation Commission
Division of Law Enforcement
LEAP/LEC State Report - March 2015**

Curtis Brown, Colonel

The Florida Fish and Wildlife Conservation Commission (FWC) Division of Law Enforcement's 853 sworn personnel operate in six regions throughout the state. FWC officers are responsible for uniformed patrol and investigative law enforcement services on more than 8,400 miles of coastline, 13,200 square miles of offshore waters, and over 34 million acres of land encompassing a variety of habitats including wildlife management areas, state parks and forests. FWC officers stand as sentinels for the protection of Florida's precious resources and the public who utilize these resources. The motto of the Division describes its role and dedication to Florida's resources and public: Patrol, Protect, Preserve. FWC officers are highly trained, versatile law enforcement officers with full police powers and statewide jurisdiction. FWC officers are an effective model of modern law enforcement multi-tasking – providing law enforcement services for: the protection and enforcement of laws relating to all wild animal and aquatic resources; public safety in Florida's state parks; boating safety enforcement; the protection of the public in rural, semi-wilderness, wilderness and offshore areas where no other law enforcement agencies routinely patrol; regulating commercial wildlife activities and inspecting personal and commercial native/exotic wildlife facilities; natural disaster and civil disturbance response; search and rescue missions; environmental crimes/protection; dignitary protection; mutual aid requests; and domestic security initiatives.

TRAINING

FWC Academy

The FWC training academy held one physical assessment this year with over a total of 400 applicants at three different locations throughout the state. These assessments also incorporated the newly adopted Physical Agility Test. A basic recruit class began in August 2014, and will we will graduate 37 new officers into the field on April 24, 2015.

The Training Section hosted a NASBLA Comprehensive Boating Accident Investigation Class in October with 45 attendees. In addition, a NASBLA Advanced Class was held in November with 40 members attending, along with conservation officers from 3 other states. The Training Section conducted a Special Operations Group (SOG) Basic Operators Course with over 30 attendees. The section also provided a three day patrol rifle instructor school which put 18 new instructors into the field.

The Section also provided in-service reality-based training, (RBT), which focused on active shooter scenarios. Every sworn member participated in the two day training event which was the

largest training event undertaken by this section. Members were put through their paces with 6 different active shooter scenarios to include hostage and bomb scenarios. The Training Section held a 16 hour Taser Instructor training class that certified 15 new FWC Defensive Tactics Instructors. This was the result of having one of our senior members designated as a Master Taser Instructor by Taser International. Additionally, members of our staff have been recently certified as Cross-Fit instructors and received certification by the Force Science Institute. The Regional Training Lieutenants, (RTLs), provided training that maintained the Division members' standards in both First Aid and CPR

INNOVATIONS IN CONSERVATION LAW ENFORCEMENT

Aviation

Aviation Unit personnel participated in several multiple agency training exercises for Air to Ground coordination of Radiation Nuclear Detection using aerial and ground based radiation nuclear detectors. These exercises were in preparation and concluded with participation in a Department of Domestic Nuclear Detection (DNDO) Air to Ground Pilot program involving many Federal, DOD, and State of Florida personnel and equipment.

Several pilots participated in Volusia County Emergency Management, Operation Vanishing Mosquito regarding a simulated downed mosquito control helicopter containing hazardous materials. FWC personnel provided marine, land, and aerial based support for the exercise. Aviation personnel provided reconnaissance (RECON) and Air Deployable Search and Rescue (ADSAR) with Florida Task Force 4, Urban Search & Rescue (US&R) teams conducting Wide Area searches.

In preparation for the upcoming hurricane season, aviation unit participated in a planning meeting with Florida Department of Emergency Management (FDEM), State of Florida Emergency Operation Center (SEOC). Aviation unit personnel provide Air Coordination for aviation assets during SEOC activation for disasters. Aviation personnel provide aviation support for a Department of Homeland Security, Integrated Advance (mass migration) exercise.

Aviation Unit personnel participated in several multi-agency training initiatives which included: the Airborne Law Enforcement Association, regional aviation safety training conference in Tampa, along with other airborne law enforcement partners from around the world. This training provides opportunities to learn about the latest in technology, and aviation safety; training for law enforcement patrols; aerial cannabis detection with Florida Domestic Marijuana Eradication Program; Air Deployable Search and Rescue (ADSAR) teams attached to Urban Search & Rescue (US&R) teams.

PUBLIC SAFETY

Regional Domestic Security Task Force, Waterborne Response Team

To address the threat of waterborne attacks and to enhance Florida's response capabilities to critical incidents occurring on or near the water, Waterborne Response Teams (WRTs) have been established within each of the seven Regional Domestic Security Task Forces (RDSTFs). The

WRTs are comprised of representatives from local and state agencies including the Florida Fish and Wildlife Conservation Commission (FWC), county sheriffs' offices and municipal police departments that possess maritime capabilities. These WRTs will utilize specialized waterborne equipment and trained personnel provided by local, state and federal law enforcement agencies to augment the United States Coast Guard (USCG) mission to ensure compliance with the Maritime Transportation Security Act of 2002 (MTSA), ensure security of Florida's ports and waterways, and provide a rapid and organized response to WMD events and other critical incidents.

JEA ENFORCEMENT EFFORTS

Fisheries Unit – Joint Enforcement Agreement (JEA)

FWC's Division of Law Enforcement has provided over 5,185 hours of JEA patrol during the current contract period which began on August 28th, 2014. In addition to the ongoing IFQ enforcement efforts, FWC was offered additional JEA funding to perform Marine Mammal Protection patrols. These patrols are focused on dolphin interactions involving feeding and harassment.

FWC's Offshore Program recently took delivery of a new 12 Meter Impact built by Brunswick. At nearly 40 feet, this high speed vessel will provide an all-weather platform to conduct offshore JEA patrols.

FWC completed a two day JEA review in February. Upon completion of the administrative review, NOAA staff conducted an overnight JEA patrol on the offshore patrol vessel Gulf Sentry.

Attachment B-2 – Alabama State Enforcement Report

Alabama State Report Fall 2014

From October 1, 2014 to February 28, 2015 AMRD officers conducted the following:

Commercial Fishermen Intercepts- 2,005
Recreational Fishermen Intercepts- 3,715
Total vessel intercepts- 2,289
Total hours of patrol- 6,132

Enforcement Officers assisted NOAA/OLE in the investigation of a dolphin killed by an arrow.

Additionally, they assisted in the investigation of a marine turtle that was caught and killed by an individual.

Legislation

The Alabama Legislature will consider a bill from AMRD to allow the use of a fish “stamp” to provide funding for stock assessment of certain species of fish.

Regulations

Changed the mullet limit of 25 during the Oct 1- Dec 31 roe mullet season to a recreational limit to allow for commercial cast nets for of mullet during the roes season.

Increased size limit of Greater Amberjack to 36”

Change red grouper limit to 2 per person in the 4 fish aggregate.

Removed prohibition on taking oysters by diving, swimming or wading in Heron Bay.

Removed specific locations where the AMRD Oyster Management stations would be located.

Define the “inside waters” of Alabama as the Territorial Sea Line

Staffing

AMRD Enforcement is in the process of hiring 3 additional officers to bring the total to 18. This will result in the largest enforcement staff in over 20 years. AMRD is researching the potential use of a resource canine program.



MARINE PATROL

MARCH 2015

Mississippi Spring Report for 2015

For the months of October 2014 through January 2015, Officers with the Marine Patrol spent 3072 hours patrolling the marine waters of the state. Officers made 7012 stops during the same time period. During these patrols officers issued 196 state citations for various seafood and boat and water safety violations.

For the months of October 2014 through January 2015, officers conducted 34 Joint Enforcement Agreement patrols resulting in 759 man hours with 218 at sea hours. These patrols made 238 contacts and there were 17 state citations issued. There were no Enforcement Action Reports issued during this time period. On January 15, 2015, MDMR Officers worked a Joint Detail with Alabama Marine Resources, LA Wildlife and Fisheries, NOAA and MS DOT, at the I-10 East bound Weigh Scales in Hancock County, MS and the I-10 West bound Weigh Scales in Jackson County, MS.

Marine Patrol officers taught two Boat and Water Safety Classes which resulted in 68 students being certified. Officers attended Career Day at Pass Road Elementary with 200 children attending for one Outreach Program during the months of October 2014 through December 2014.

LDWF

Highlights:

10/1/2014 – 02/28/2015

- 531 Dockside hours and 143 inspections
- 4,646 At-Sea Personnel Hours with 2,978 Vessel hours
- 148 Catch Share Hours
- 50 Outreach Hours educating over 334 people
- Recreational Public Contacts: 7,555
- Commercial Public Contacts: 1,987
- Boardings: 3,482

Agents are actively investigating several Lacey Act violations pertaining to oysters and mislabeling of seafood. They are working closely with NOAA/OLE.

Agents participated in the Louisiana Fisheries Forward Summit discussing commercial fishing issues with individual fisherman and industry.

Gray Triggerfish in Louisiana has been changed to a 2 per person daily limit in aggregate.

Tripletail now has an 18 inch minimum with a 5 per person daily limit. The state has increased the resident saltwater license fee from \$5.50 to \$13.00 effective August 1, 2014.

The enforcement division recently graduated fifteen agents from the training academy with eight of those agents working coastal Louisiana.

Attachment B-5 – Texas State Enforcement Report

Texas Parks and Wildlife Department
Law Enforcement Division
LEAP/LEC State Report - March 2015
Submitted by: Asst. Commander Brandi L. Reeder

- **Funding and Staffing Issues** – TPWD-LE continues to maintain a substantial force of over 500 game wardens statewide. As with many agencies TPWD-LE has had to work with senior management, legislators, and constituents to ensure the strong tradition of Texas Game Wardens endures during difficult economic times. While there are still Law Enforcement Division concerns, such as the aircraft fleet and the vehicle fleet, the division as a whole has fared well. Some highlights include:
 - TPWD-LE now has two full time recruiters (one Game Warden V and one Lieutenant Game Warden) to assist with recruiting efforts.
 - In addition to the new recruiters game wardens statewide will have a recruiting component added as part of their annual performance evaluation in an effort to increase diversity in the work force.
 - The 84th Session of the Texas Legislature has started with many Bills filed proposing amendments to many Texas Parks and Wildlife Code Statutes.
 - A game warden cadet class started January 5, 2015 with 19 cadets. In addition, this is the first class to include cadets from the State Parks division that will serve as Park Peace Officers upon graduation from the 7 month academy.
 - TPWD-LE has a new Airbus AS350B3e helicopter outfitted with the latest law enforcement technology, purchased with funding appropriated by the 83rd Texas Legislature. The helicopter is outfitted with a hoist allowing insertion of personnel to conduct search and rescue operations.
- **Training Issues** – The Texas Parks and Wildlife Department – Law Enforcement Division (TPWD-LE) continues to encourage and promote relevant training to ensure game wardens are prepared to meet the demands of their job. Some highlights from the past year include:
 - TPWD-LE has provided officer water survival (OWS) training to game wardens in advance of the spring and summer water safety season. Training Academy Staff will deploy this training to all game warden personnel in a series of in-service training as well as a training module for game cadets. This training is part of the National Association of State Boating Law Administrators (NASBLA) Boat Operations and Training (BOAT) Program catalog of nationally credentialed courses.

- TPWD-LE now has 10 K-9 Teams fully trained in Search and Rescue and scent detection. In its first year, the K-9 Team has found 16 people and assisted in innumerable narcotics and resource related arrests.
 - TPWD-LE continues with a strong tradition of representation at the prestigious FBI – National Academy with game wardens attending when in positions are offered to the LE division. The 10 week course of study is instrumental in providing the training to prepare ranking game wardens for future roles in senior management.
 - TPWD-LE has expanded leadership training to include the FBI – Law Enforcement Executive Development Association training classes as well as the FBI – National Academy Associates Command College.
- **Major Conservation Law Enforcement Trends** – Significant advances have been made by TPWD-LE in support of major conservation law enforcement trends. Whether working traditional conservation law enforcement efforts in federal waters or being the lead agency on border operations game wardens continue to adapt and excel as their job duties change and expand. A few examples of TPWD-LE involvement in these trends include:
 - TPWD-LE has conducted numerous fisheries outreach events for other government and non-government agencies as well industry personnel to ensure commercial and sport fishing regulations are understood and concerns are addressed.
 - TPWD-LE is recognized as being the lead agency enforcing the Texas Water Safety Act on all public waters in the state. Boating While Intoxicated (BWI) is an integral part of that enforcement effort and game wardens have incorporated “no refusal weekends” and “mandatory blood draws” as tools to be utilized when handling BWI suspects.
 - Border operations continue to be an enforcement effort game wardens are involved with along the Texas/Mexico border and in the Gulf of Mexico. TPWD-LE game wardens fill a vital niche with their expertise of navigating the waterways and back country of rural Texas. Some of the most challenging areas for game wardens to patrol are the remote mountains and canyons in the Big Bend region of west Texas. While maintaining these patrols game wardens are constantly in search of illegal drug and human smuggling activity in addition to their enforcement efforts of the Texas Parks and Wildlife and Penal Code. These operations serve a dual purpose by allowing game wardens to practice conservation law enforcement while serving as a force multiplier providing security along the border.
 - **Unique Cross Boundary or Cooperative, Enforcement Efforts** – TPWD-LE continues its involvement with several cooperative enforcement efforts with federal and state partners which include:

- The U.S. Coast Guard continues to be a partner on the maritime forefront whether working together on border operations or fisheries issues. In addition, Recreational Boating Safety funds enable game wardens to maintain and enhance their officer presence on all waters of the state as they continue to serve as the lead agency ensuring public safety on public water.
 - TPWD-LE has partnered with NOAA – Office of Law Enforcement, National Marine Fisheries Service since 2001 by maintaining a Joint Enforcement Agreement that provides federal funds for state game wardens to patrol coastal waters and points-of-entry for enforcement of recreational and commercial fisheries violations. This successful partnership has provided equipment and operational funds which have allowed for increased officer presence in the bays and Gulf of Mexico.
- **New Innovations in Conservation Law Enforcement –**
 - After successful iPhone provisioning statewide to game wardens, the agency has rolled out its first app, which allows game wardens to verify Hunter/Boater Education status without making a call. A daily reporting app is coming out next, and several more are planned thereafter. 440 Mini iPads have been acquired, and additional registration/ticketing systems are being evaluated for field use.
 - TPWD-LE has rolled out many new applications this year Pocket Cop enabling game wardens to run individuals and items for warrants in the field. A TPWD license verification app will be released in April allowing game wardens to verify licenses and determine whether a subject has been placed on a license block or suspension due to Child Support, Civil Restitution, Criminal Judgement, or check with insufficient funds. A fisheries enforcement application is currently in construction, set for release in September 2016, which will allow wardens to capture Joint Enforcement Agreement vessel and fish dealer contact information and provide an administrative component to run reports and complete invoicing forms.
 - 10 Mobile Fingerprint Readers have been successfully deployed to game wardens statewide, with 40 more in process. These have led to enhanced identity verification capabilities in the field.
 - The TPWD Law Enforcement Division Facebook presence is sizeable, with an average of 4,400 weekly engaged users. Twitter presence is sizeable, with over 2,000 followers and growing. The social media team has completed two virtual ride-alongs, resulting in exposure to over 120,000 viewers.
 - Internal and external web sites have been updated and are now authored by game wardens for game wardens and their constituents. The intranet site has been optimized for the field, making forms easier to navigate and use.
 - Operation Game Thief (OGT), enacted by the 67th legislature in 1981 is the states' premier crime stoppers program for reporting fish, wildlife and certain water safety and

environmental crimes violations. The primary focus of the program is to assist game wardens of the law enforcement division in the investigation and apprehension of violators. This is accomplished through the rewards program offering up to \$1000.00 for information leading to a conviction. OGT is no stranger to the age of new technology and as a result the program has incorporated a Text Tip reporting feature at **847411** in addition to the already established **1-800-792-4263** hotline, to further add to the game wardens ability to receive information quicker in real time and improve apprehension of violators. In addition OGT has a new software program for the reporting and tracking of information and violations that greatly increased officer efficiency reporting allowing game wardens to spend more time in the field instead of the office writing OGT reports.

- **Cost Savings Initiatives –**

- TPWD-LE continues to move forward with embracing new technology and incorporating new ideas and concepts into the traditional methods of accomplishing the agency and division missions. E-documents and interactive conference calls are replacing massive mailings and face-to-face meetings which were once the standard. As a result TPWD-LE disseminates information in a more timely and efficient manner at an overall cost savings to the Law Enforcement Division.

- **Other Special Law Enforcement Issues –**

- TPWD-LE remains on the forefront of providing the most advanced equipment; technology and training available for all personnel to ensure officer safety and productivity are maintained at the highest level. This is accomplished at a time when the Law Enforcement Division continues to expand its conversation law enforcement efforts into non-traditional fields such as border operations and numerous team concepts. Additionally, TPWD-LE continues with efforts within the conservation realm by more intense participation in areas ranging from fisheries enforcement in federal waters to education and enforcement efforts of harmful exotic species regulations within the state.

**S-FFMC MENHADEN ADVISORY COMMITTEE
MINUTES
March 17, 2015
Point Clear, Alabama**

APPROVED BY:

COMMITTEE CHAIRMAN

Chairman Mareska called the meeting to order at 1:35 p.m. with the following in attendance:

Members

John Mareska, ADCNR/MRD, Dauphin Island, AL
Rick Schillaci, Omega Protein, Inc., Moss Point, MS
Jason Adriance, LDWF, New Orleans, LA
Joseph Smith, NOAA Beaufort Lab, Beaufort, NC
Jerry Mambretti, TPWD, Port Arthur, TX
Harry Blanchet, LDWF, Baton Rouge, LA
Ron Lukens, Omega Protein, Inc., Gainesville, FL
Borden Wallace, Daybrook Fisheries, Inc., Empire, LA
Matt Hill, MDMR, Biloxi, MS

Others

Monty Graham, GCRL, Ocean Springs, MS
Read Hendon, GCRL, Ocean Springs, MS
Harry Blanchet, LDWF, Baton Rouge, LA
Mark Schexnayder, LDWF, New Orleans, LA
Tommy Williams, Daybrook Fisheries, Baton Rouge, LA
Ben Landry, Omega Protein, Houston, TX
Jeff Short, JWS Consulting LLC, Juneau, AK
Scott Herbert, Daybrook Fisheries, New Orleans, LA
Emily Posner, Recirculating Farms Coalition, New Orleans, LA
Seth Watkins, Loyala Univ. College of Law, New Orleans, LA
Kelly Simpson, Loyala Univ. College of Law, New Orleans, LA
Chris Flemming, NOAA/GSMFC, Ocean Springs, MS
Karl Wulf, Daybrook Fisheries, Empire, LA
Shane Treadaway, Daybrook Fisheries, Inc., Empire, LA
Ed Swindell, Marine Process Services, LLC, Hammond, LA
Tabitha Lindley, Omega Protein, Inc., Houston, TX
Camp Matens, *GSMFC Commissioner*, Baton Rouge, LA
Carly Somerset, MDMR, Biloxi, MS
Kirk Mitchell, LA Bait, Abbeville, LA
Johnny Hollifer, LA Bait, Abbeville, LA

Staff

Dave Donaldson, Executive Director, Ocean Springs, MS
Steve VanderKooy, Program Coordinator, Ocean Springs, MS
Debbie McIntyre, Staff Assistant, Ocean Springs, MS
Jeff Rester, SEAMAP Coordinator, Ocean Springs, MS

Introductions

Mareska took a few minutes for some housekeeping items and started the introductions around the room. **VanderKooy** explained the voting seats on the Advisory Committee and noted agenda item #14 to discuss reinstating a 'bait fishery' seat on the roster.

Adoption of Agenda

VanderKooy explained agenda item #15 Public Comment and noted that this period was being offered to attendees to comment on any topics not covered under the current agenda. He encouraged the audience to feel free to ask questions throughout the meeting as long as they were specific to the topic.

Mambretti moved to approve the agenda, Wallace seconded, and the agenda was approved as written.

Approval of Minutes

The MAC reviewed the draft minutes from the last annual meeting, October 14, 2014. **Wallace** moved to accept the minutes as written, **Lukens** seconded, and the minutes were accepted as written.

Review of 2014 Gulf Menhaden Season

Smith provided a review of the 2014 Gulf fishing season. **Smith** reported that a total of 391,854 mt, or 1,289 million standard fish, were landed in 2014. This was down 21% from 2013 (497,503 mt) and down 23% from previous 5-yr average (505,262 mt). He reminded that only three plants were open in 2014 since Omega Protein closed its Cameron fish factory in December 2013. Four of the Cameron vessels were moved: three to Abbeville and one to Moss Point. It was generally a cold, wet spring and strong winds limited fishing until July. June landings were the least for that month since 1958 mainly due to turbidity and rough seas. However, as summer progressed, fishing got better as fish as the water clearer and winds subsided. Catches in July were around 78,000 mt and oil yield was reported as normal. Fishing was good through September and October; large numbers of fish reportedly stayed in inside waters until the end of the fishing season. **Smith** reported that 33 vessels (31 regular steamers, 1 run boat, and 1 bait boat) operated in 2014. With the Cameron factory closed, effort was down about 3% from the previous year. Based on the port samples, age-2 fish dominated the catch coast-wide with greater numbers of older fish showing up in Moss Point and Abbeville. Empire had a fair amount of age-1 fish suggesting that the 2013 year class may be average or above; this correlates with the Texas seine data as well. Based on the historical relationship between effort and catch, **Smith** predicts that the landings in 2015 should be around 401,000 mt with a strong 2013 year class still showing in the population.

It was noted that Vince Guillory's old forecasts generally predicted good year classes with a combination of cold/dry winters; winter 2014-15 was cold and wet, yet with numerous fronts; the strength of the 2015 year class thus is uncertain.

Wallace asked **Smith** to give a brief overview of the Gulf's CDFR program. Since the 1960s, the NMFS had access to the landings at all of the Gulf reduction plants, but there were issues with determining harvest and effort by specific area. In the late 1970s, the industry entered into a joint program with the states and the Feds and began providing reports on daily purse-seine sets. These

are called the Captain's Daily Fishing Reports (CDFRs); they itemize each vessel's activity throughout the fishing day including catch estimates, fishing location, set duration, and weather conditions for each and every set. The CDFRs are verified against each plant's pump-out records. In the early years of the program, set locations were reported using the old five-digit industry codes, but in the mid-2000s, much more precise GPS coordinates were included and also the forms were made scan-able. On the Atlantic coast, the CDFRs are mandatory, but in the Gulf they are voluntary, however, the Gulf fleet has been 100% compliant for decades. The Gulf has all the CDFR forms entered into a database housed at NOAA from 1984 forward. This data is used in the annual report provided here and has been used to estimate catchability in and around areas of Gulf hypoxia. The lone menhaden-for-bait vessel in the Gulf is also reporting using the CDFR form and did provide them last season.

Atlantic Menhaden Fishery Update

Smith also reported on the Atlantic menhaden season. The 2014 landings for reduction purposes were constrained to 131,065 mt which was equivalent to 2013 (first year of TAC; 131,031mt). Seven vessels landed fish at the Reedville Omega Protein plant, although an eighth vessel was used sparingly when a regular steamer was tied up briefly for repairs. Two Virginia menhaden bait purse seiners unloaded some fish for reduction; five to six purse seiners landed for bait only in New Jersey.

After the 2012 update assessment, the Atlantic Menhaden Management Board had concerns about internal problems with the assessment model and the potential for overfishing. They chose an ad hoc measure of a coast-wide TAC (170,800 mt) until a new benchmark assessment could be completed. The TAC was allocated among the states based on recent historical landings. Immediately following the Gulf SEDAR of 2013, the Atlantic benchmark was expedited and the peer review occurred in December 2014. The newest assessment (SEDAR 40) was approved by the Board and shows the population to be in much better condition than originally thought. Atlantic stock is not overfished nor is overfishing occurring. The Management Board requested some projections exploring various harvest strategies and will review those at their meeting in May 2015.

Mareska noted that at the last meeting we had agreed to evaluate where the annual Gulf landings were compared to the proposed benchmarks in the management plan draft. **VanderKooy** did not have anything formal to present, but reported that based on the Gulf-wide management reference points for the Gulf menhaden fishery of a target of 663,583 mt ($F_{35\%}$ fecundity SSB) and a limit of 680,765 mt ($F_{30\%}$ fecundity SSB), the 2014 landings were far below those threshold levels at around 59% of the target. **VanderKooy** will work on something more formal for future meetings including the phase plot if possible.

Louisiana Forecasts

Blanchet (LDWF) provided a new review tool that the Louisiana is working on to replace the "Louisiana forecast" which used to be provided by Guillory annually. The LDWF bag seine survey and experimental gillnet survey have been incorporated into this new approach. It is a delta log-normal approach that examines year effect, area, and month and looks at the probability of positive catches as well as the log-normal catch per effort, similar to the approach taken in the SEDAR assessment. **Blanchet** provided a paper copy of the report and showed that many of the

new indices of abundance (IOA) match up reasonably well with the estimates of number at age from the assessment. In general, the 2014 young-of-year IOA was above the 2013 level and the longer-term historic levels. The CPUEs for older fish from the gill net survey did not correspond to the age-one abundance from the assessment, but did relate to the age-2 abundance in the same year. The data from the trawl survey do not fit as well as the data from the seine survey for the juvenile IOA, but they will continue to evaluate all of the IOAs generated from their fishery-independent data and hopefully have something they can continue to present to the MAC in the future. Menhaden recruitment indices in Louisiana were above average during the last couple years, although there is a lot of variance in the results.

2014 Review of the Texas ‘Cap’

Mambretti again reported on the Texas Cap for 2014 and what to expect for 2015. He noted that 2014 went well with the Abbeville factory providing the reports since the closure of the Cameron factory. Removals for reduction from Texas waters were only around 1 M lbs, far below the cap of 31.5 M lbs; in 2015 an “underage” bonus of 10% will be added making the 2015 TAC 34 M lbs total. **Smith** noted that other than a minor adjustment to the CDFRs to match the company offloads, everything looked pretty good.

Role of Large Coastal Jellyfish and Forage Fish as Energy Transfer Pathways in the Northern Gulf of Mexico

Dr. Monty Graham (GCRL) presented on an ecosystem based approach to examining the trophic interactions between jelly fish and Gulf menhaden. Lenfest funded **Graham’s** work in an effort to relate jelly fish with fisheries in the context of management. Lenfest wanted a follow-up to the Pikitch et al. study, which everyone now believes that the original work was probably unfair in their blanket recommendations for 50% reductions everywhere and not really valid. **Graham’s** study is not geared at harvest reductions, instead it looks at the drivers behind the relationship of jellies, fisheries, and the environment.

Jellyfish overlap in diet with menhaden and other forage fish as filter feeders in time and space. They feed similarly and looking at the morphometrics of the filtering structures, the overlap is very high. This is not just a Gulf story, their work is broader and includes northern California and the eastern Bering Sea and could apply globally.

When jellyfish feed they ‘lock up’ a large amount of energy which is no longer available to higher level fish predators which don’t generally consume jellyfish. In contrast, menhaden and other forage fish release a large amount of energy further ‘up the chain’. In other two regions of the globe, there are periods when fish populations go down, jellyfish go up and visa-versa. Therefore, there seems to be an inverse relationship between these two plantivores; ideally, fishery managers would want to manage for systems with low jellyfish abundances.

Graham pointed out that at this time, they are primarily using SEAMAP data to derive jellyfish estimates. **Lukens** indicated concern over the use of menhaden landings for ‘abundance’ estimates instead of something more realistic like biomass. **Graham** only recent received the menhaden assessment and will plan to include data from that document in the future. There are about seven or eight forage species that are considered in the ECOPATH model the “drives” **Graham’s** model (derived from SEAMAP data). There is a need for better survey data but SEAMAP was the best

data available at the time they did the work.

FMP Revision Status Update

VanderKooy reported that the draft FMP was still in review with the Commission. There will be a public comment period during the Business Session on Thursday and it is anticipated that the Commissioners will vote on the final draft.

Potential Changes in IJF Program and Future Documents

VanderKooy reported that the Commissioners are still evaluating the proposed changes to future management plans. **VanderKooy** suggested moving to an electronic document for all future plans and profiles. In addition, we are proposing an intermediate version of the profiles and plans to allow for development of a Management Profile rather than just a Biological Profile or full FMP. The Management Profile would contain many of the same elements as an FMP, but not an assessment or any recommendations on reference points or benchmarks. There will also be an elimination in all the documents of much of the boilerplate material. **VanderKooy** is suggesting that development of a Habitat Profile could provide much of the background material for future plans and profiles and be updated through the Commission's Habitat Program on a continuing basis.

Port Sampling in 2015 and NMFS Beaufort Lab's Cooperative Research with Industry in Summer 2015

Smith reported that at this time, funding for menhaden port sampling after 2015 is unclear. FIN had a little money to cover student samplers at the three plants this year, but there won't be any extra next year. **Smith** noted that student sampling is by far the cheapest way to get the data. They are paid by sample along with a little mileage. The samples are actually taken by bailers who work for the companies, again on a per sample basis. They freeze the samples and the students pick them up for processing. The total cost for student workers is somewhere around \$10-12K annually, a contractor or LDWF employee could be as much as \$40-60K. *The group was very concerned that there needs to be a stable funding source to continue this critical work and would like the Commission to be aware of the importance of this data.* **Smith** or **VanderKooy** would relay that concern during the MAC report to the Commission.

Smith noted that he and Dr. Amy Schueller have applied and were awarded a Cooperative Research Program (CRP) grant from NOAA to examine sampling the top-of-hold issue and the question of dome-shaped selectivity in the fishery. They will be acquiring "at-sea" samples this summer to compare against the routine dockside samples. Also, they are trying to contract with the only bait purse seiner in the northern Gulf (near Abbeville) to sample small sets during two one-week periods; size and age composition of these sets will be examined. These were two items that were identified in the SEDAR32A as data/research recommendations.

Succession Planning at NMFS Beaufort Lab

Smith discussed the transition plan at NOAA to find replacements for both himself and Ethel Hall, the scale reader for the last 40+ years. Ethel is retiring June 1 and Joe will be retiring in July. Ideally, the plan is for overlap with the 'new Joe' for a couple of months. The new scale reader will be under Jennifer Potts in the new reorganization plan, rather than under the 'new Joe'. Dr. Schueller has been dedicated to 'all things menhaden' and won't be participating in any other

species assessments in the near future. In 2015 she will be working on additional menhaden research recommendations (from recent SEDARs), prior to entering into a Gulf menhaden assessment update scheduled for 2016.

Gulf Menhaden Ageing Protocols

VanderKooy reminded that one of the issues that emerged out of SEDAR32A was that there are not any age composition data from Gulf menhaden taken from the state fishery-independent monitoring programs. **VanderKooy** and **Smith** put together a menhaden scale reference set in an attempt to train others throughout the region and ensure standardized ageing protocols are used by the states as well as NOAA. All five states attended the training workshop last November held in Beaufort and the Atlantic States Commission put their own reference set and training together this past February. The Gulf reference set is now traveling the Gulf as part of the regular biological sampler training and the results will be discussed at the processor meeting in Tampa in May.

At this time, Alabama and Mississippi are pulling Gulf menhaden scales from their fishery-independent sampling and will be ageing those samples. The protocols were clear in the age and growth manual, although according to Ethel ageing is as much an art as a science. We are in the process of improving ageing protocols to reflect more of her general rules so others can incorporate them.

Inclusion of Bait Industry on the MAC

VanderKooy and **Smith** reminded everyone of the history of the 'bait seat' on the MAC. Jack Simpson, formerly with ABC Bait Co., was the last representative in that seat until about the early 2000s. When ABC shut down, the MAC deactivated the seat in an effort to get quorums at meetings on a regular basis. Bait has become an important harvest component (up to 20-25% of total menhaden landings) on the Atlantic coast. **Smith** believes that the Gulf will see growth as there is interest in growing the Gulf bait fishery. A new bait company has started in Louisiana and it seems appropriate to keep that developing sector at the table; menhaden are a preferred bait in the blue crab and crawfish fisheries. Therefore, *Mambretti moved to request the SFFMC and the Commission add a seat to the current MAC roster for a member of the bait industry who is commercially licensed and actively harvesting and selling Gulf menhaden as bait.* **Wallace** seconded and the motion passed. **Lukens** noted that any company landing menhaden for bait should probably be included in the CDFR data program. **Smith** was pleased that the new company was indeed using the forms last year.

Public Comment

Seth Watkins and **Kelly Simpson**, Loyola Univ. College of Law, both provided comment to the MAC as well as **Emily Posner** with Recirculating Farms.

Seth Watkins: Good afternoon, my name is **Seth Watkins** and I'm a student at Loyola College of Law out of New Orleans. At Loyola, I've been working in the Environmental Advocacy Program and our project this year has been Gulf menhaden and over the course of the semester I've learned that there is no recommendation for a Total Allowable Catch for the Gulf States. I find this problematic since there are historic examples of other forage fisheries that have collapsed due to the absence of such regulations. For example, I would include the sardine fishery off of California, the herring fishery in the north Atlantic and of course the Atlantic menhaden fishery.

Therefore, I would request that the committee recommend a Total Allowable Catch across the Gulf states to maintain its current position as a really well maintained fishery and to follow other areas and jurisdictions such as the Atlantic menhaden fishery and of course Texas. Subject to questions that you may have I do appreciate the opportunity to speak and thank you.

The committee asked what level of TAC would be recommended and how was that number derived? **Mr. Watkins** didn't have a specific number but only that a Gulf-wide TAC should be considered. He indicated that there would be written comments also submitted.

Kelly Simpson: Hi, my name is **Kelly Simpson** and I am also with Loyola University New Orleans College of Law and am also in the Environmental Advocacy Program and my focus this semester has been the menhaden fishery but more specifically bycatch and bycatch reduction. When reviewing the FMP I noticed there was no recommendation for a uniform bycatch or monitoring program. The benefit of such a program would be to ensure efficiency in bycatch and monitoring of bycatch across the states and to hopefully reduce the amount of bycatch taken each year. We are not only concerned about the species taken in the purse seines but also species that could be directly affected through bycatch such as species that may be protected federally under the ESA or the MMPA. In fact, under the MMPA it could be considered a taking of a protected species if an action interferes with its feeding, its breeding, or its habitat and remember the issue has come up in courts and they have ruled in favor of conservative regulation and the protected species. By implementing a conservative regulation at the forefront, you would be ensuring maximum compliance under these acts. With that being stated, I would like to thank you all so much for your time and this opportunity to speak to you and just request that the Committee recommend that there be a uniform bycatch and monitoring program. Thank you.

Smith noted that the group is struggling to come up with \$20-30K to collect foundational data on the commercial landings, size and age of the catch. Observer programs are notoriously expensive and the last one done by LSU was around \$300-400K. It would be extremely expensive and hard to guess where the money would come from. **Mareska** agreed and noted that this is the case for most of our fisheries, data collection takes money and when there isn't a lot available, you need to collect the most critical data first.

Emily Posner: I'll make just a brief comment. Good afternoon everyone, I'm **Emily Posner** with the Recirculating Farms Coalition. Again, this was a super informative meeting, I learned a lot, thank you for putting together a great agenda and I've also been supervising and working with the two students from Loyola and for having a public comment period for folks from the public to come and participate and ensure a completely open and transparent process. Just to tie up a few comments, again, we've been here before and put on the record that we are pushing and advocating for an ecosystem-based management plan and out of developing that type of science we believe that then we can come up with an appropriate number to recommend for a Total Allowable Catch. So at this point we're not saying that Recirculating Farms believes the Total Allowable Catch should be at 600,000mt but we want to look and develop appropriate ecosystem-based management and science so we can get to that point where we can get a specific number. Again, the last time I was here I am very interested and our organization is very interested in possible impacts from the BP oil spill as well as the ongoing coastal erosion that taking place mostly in Louisiana on this fishery and the overall population of Gulf menhaden. In regards to bycatch, I

have put in a Freedom of Information Act request almost two years ago now to try to get some of the information on bycatch monitoring program that was done by NOAA in 2011 and I still haven't gotten any response from that FOYA and I'm saddened by the lack of response and looking forward to seeing that data to determine whether there is a problem with bycatch in the fishery. I do appreciate all of the opportunities that you are continuing to be super transparent and helpful in helping us understand how the fishery and the population are.

Other Business

The MAC members requested **Smith** to step out of the room for a moment so the MAC could discuss something related to a state-management issue. Once **Smith** was excused, the group considered a resolution in honor of **Smith** for his many years of service to the MAC and the Commission. *Schillaci made the motion to approve the resolution for adoption by the full Commission later in the week. Wallace seconded the motion passed by acclamation. VanderKooy* asked that no one mention it to **Smith** as they plan to surprise him while he is delivering the MAC report on Thursday morning.

The resolution was presented as follows:

RESOLUTION

Mr. Joseph W. Smith

for Distinguished Service to the

State-Federal Fisheries Management

Committee's Menhaden Advisory Committee

Whereas, Mr. Joseph W. Smith of the NOAA Beaufort Laboratory has been involved with federal commercial fisheries since 1983 and an active member of the State-Federal Fisheries Management Committee's Menhaden Advisory Committee (MAC) for nearly 25 years; and

Whereas, he has coordinated the menhaden commercial data collection programs, including port sampling and menhaden ageing for both the Gulf of Mexico and the Atlantic; and

Whereas, he has provided annual forecasts and updates to the MAC on menhaden fishing in both the Gulf of Mexico and the Atlantic; and

Whereas, he has published dozens of professional articles and reports on various menhaden life history, fishery, and population dynamic topics; and

Whereas, he has collaborated with NOAA, state, and industry representatives to develop stock assessments and management strategies related to menhaden in both the Gulf of Mexico and the Atlantic in completing SEDARs 20, 27, 32A, and 40; and

Whereas, he has been one of the principal contributors to the Gulf Menhaden Fishery Management

Plan revisions since 1995; and

Whereas, he is recognized as a distinguished historian of the people, factories, and fleet of the menhaden fisheries.

Therefore, be it resolved that the Gulf States Marine Fisheries Commission wishes to express their sincere thanks to Mr. Joseph W. Smith of the NOAA Beaufort Laboratory for his dedication and service to the Menhaden Advisory Committee.

Given this the 19th day of March in the year of Our Lord, Two Thousand and Fifteen.

Dan Ellinor, Chairman

Smith was allowed to return.

With no further business, *Lukens* moved to adjourn, seconded by *Mambretti* and the meeting adjourned at 4:25 p.m.

**TCC SEAMAP SUBCOMMITTEE
MINUTES
Tuesday, March 17, 2015
Point Clear, Alabama**

APPROVED BY:
Jake F. Mareska
COMMITTEE CHAIRMAN

Chairman J. Mareska called the meeting to order at 8:00 a.m. The following members and others were present:

Members

John Mareska, *Chairman*, ADCNR/MRD, Gulf Shores, AL
Read Hendon, USM/GCRL, Ocean Springs, MS
Ted Switzer, FWC/FWRI, St. Petersburg, FL
Chloe Dean, LDWF, Grand Isle, LA
Fernando Martinez, TPWD, Corpus Christi, TX
Butch Pellegrin, NOAA Fisheries, Pascagoula, MS

Others

Denice Drass, NMFS, Pascagoula, MS
Eric Hoffmayer, NMFS, Pascagoula, MS
Andre DeBose, NMFS, Pascagoula, MS
Charles Weber, NMFS, Pascagoula, MS
Jill Hendon, USM/GCRL, Ocean Springs, MS

Staff

Jeff Rester, *SEAMAP/Habitat Program Coordinator*, GSMFC, Ocean Springs, MS
James Ballard, *SFP/ANS Program Coordinator*, GSMFC, Ocean Springs, MS
Ashley Lott, *Staff Assistant*, GSMFC, Ocean Springs, MS

Adoption of Agenda

R. Hendon moved to adopt the agenda as submitted. F. Martinez seconded and the motion passed.

Approval of Minutes

R. Hendon moved to approve the SEAMAP minutes from the October 13-14, 2014 meeting as submitted. C. Dean seconded and the motion was passed.

Administrative Report

J. Rester reported that since the last Commission meeting, the Bottom Longline Survey, Vertical Line Survey, Fall Shrimp/Groundfish Survey, and the Winter Plankton Survey have been completed. The Environmental and Biological Atlas for 2012 and 2013 are completed. Due to budget limitations they are not printed but are available online. Also due to budget limitations, the Joint Meeting that is usually held in July/August of each year does not look like it will be feasible to hold. J. Rester proposes that instead of doing a conference call, this meeting be held in conjunction with the Joint Meeting of the Atlantic States and Gulf States November 2-5, 2015 in Florida. In regards to data, he asked that SEAMAP partners please turn in their data in a timely

fashion. He stated that he still does not have all of the 2014 data. He stated that he was still seeing information not being filled out or being filled out incorrectly. When data comes in to the Commission, it needs to be in the standardized format that has been agreed upon. J. Rester also noted that he has sent out three years of surveys for fall and summer station selection. He has only heard back from Alabama at this time, so please send in your station selections.

Bottom Longline Survey Design

The Subcommittee has been working with a contractor, Mary Christman, to review the current Bottom Longline Survey sampling design, the data collected, the sample sizes and the uses of the data, in order to make recommendations for modifications that will provide consistency in design, spatial representativeness and robustness to funding changes. As part of the analyses, the contractor has provided recommendations to the Subcommittee. **B. Pellegrin** asked if she is still available for advice. **J. Rester** stated that she is interested in the outcome of today's meeting and could be available in the future, but she will want to be paid for her time. He envisions using her or someone like her in the future for the Vertical Line Survey, but will need to budget for it.

E. Hoffmayer asked how the Subcommittee would like to implement the recommendations provided by the contractor. The issues that will need to be resolved are seasons, number of stations and buffers between seasons. Based on her results, it appears that March and October are not going to be an issue except for maybe blacktip shark. The seasons, as suggested would be April through September. The concern is can everyone get the sampling done in a two month window? If for some reason (vessel issues, weather) a state cannot get out, there is no backup plan. The NMFS Survey would still be just August and September. Texas was asked if they would be able to participate. **F. Martinez** stated that he is still in discussion with his directors to include April/May, however, he needs a better idea of the sampling size. **J. Rester** stated that he can run stations today, but you never know how the stations will be allocated. He can run the stations for the next three years so the states can plan the sampling into the future. **F. Martinez** stated that this would be very helpful for Texas.

E. Hoffmayer next asked about depth strata. Per the contractor's analysis, there is no big difference in catch rates between the 3-10 m and 10-20 m depth strata. Would the states be interested in dropping the 10-20 m depth and just focusing on the 3-10 m? This would give the states less area of higher density stations and with the budget cuts, this would help to limit area and sea days. Texas and Louisiana stated they would be ok with this. **J. Rester** ran several 3-10 m depth strata samples using area, shrimp statistical zones, and state boundaries. No consensus was reached at the meeting on how to allocate stations within the depth strata. The Subcommittee agreed to communicate through email on how to handle this issue.

With the three seasons running April through September, broken down as April-May, June-July, and August-September, the discussion next turned to the two week buffer between seasons. **T. Switzer** stated that we are not treating seasons for analysis. **J. Mareska** likes a buffer between seasons for better temporal coverage. **E. Hoffmayer** sees the buffer as being flexible.

J. Mareska made a motion that the Bottom Longline Sampling should take place during three seasons (April-May, June-July, and August-September) and to the greatest extent

possible, avoid consecutive weeks between seasons. **C. Dean** seconded the Motion. The Motion passed.

J. Rester will run a year's worth of stations using the 3-10 m depth strata with at least four stations per stat zone. The states will see how this works during the 2015 sampling season and discuss it at the October meeting.

Review of the SEAMAP Trawl and Plankton Operations Manual

The SEAMAP Trawl and Plankton Operations Manual has been discussed and worked on for the past several years. In October, the Subcommittee went over the Louisiana edits. Since then, **J. Rester** has only heard back from Florida regarding any more edits. Those edits were discussed and changes were made to the manual during the meeting, including:

Environmental data must be collected within one hour of a trawling event and must pass within ½ a nautical mile of the SEAMAP sample site.

In the event of a snag while trawling, the trawl station should be abandoned and the correct operations code should be entered in the database.

At the discretion of the Chief Scientist, individuals identified to the genus or higher level can be measured either at the time of capture or upon subsequent laboratory identification.

It is recommended that QA/QC checks should be made daily.

A surface chlorophyll water sample, sufficient for three replicate filters, must be collected at all SEAMAP plankton stations, except those stations inside 20 fathoms off Louisiana. A question arose as to the amount to be sampled. **J. Rester** will send this to the Environmental Work Group for them to look over and get back to the Subcommittee within the next few weeks.

J. Rester will look for a place in either the Plankton Section or Environmental Section to note that a CTD can be done after an event.

For Hydrocast Sampling Procedures, water samples may be collected on all primary plankton surveys and select trawl surveys.

T. Switzer asked, in reference to instructions for completing ichthyoplankton sample labels, is there any way it could be made shorter. **D. Drass** stated that it has been this way for so long, not sure if they would be willing to change, but she will look into it. **T. Switzer** stated that it might be a good idea to look at using bar codes. He will get some information on bar codes and send it out to the Subcommittee.

T. Switzer also asked about Appendix 7 and how frequently the codes can be updated. **E. Hoffmayer** stated that the codes are in the process of being updated and will be passed out once they are done.

J. Hendon had a question regarding primary bongo sample, right or left? **C. Dean** will let her know. **J. Hendon** also asked about tow times in shallow water. Need at least three (3) minutes and you can do a double bounce. If you cannot achieve a three minute tow on a straight tow, then can lower the net again and then retrieve to achieve the three minute minimum. Record wire angle and bottom time for both maximum depths.

B. Pellegrin had a question concerning formalin and ethanol for bongo samples. It was noted in the manual that currently, only the left bongo is preserved in formalin. It is preferred that the right bongo samples be preserved in 95% ethanol (i.e. no formalin for the right bongo samples).

E. Hoffmayer recommended to move the PARR discussion and FSCS discussion up to next on the agenda due to time constraints. There were no objections.

Public Access to Research Results (PARR)

A. DeBose gave a presentation on Public Accessibility to Research Results (PARR). The purpose of PARR is to increase access to federally funded scientific research results to the public, industry and the scientific community. PARR is based on a Presidential Executive Order issued in 2013. The bottom line of PARR is that all federally funded data collection, research results, publications and products must be made publically accessible.

FSCS Discussion

C. Weber gave an update on FSCS. Based on a letter he received last year from **J. Mareska**, they have implemented several of his requests. They have adopted compressed codes and have increased the species. They are also looking into rewriting FSCS in its current format, but that will not start until next year. However, as they distribute the software, they do not have personnel available to support it. **C. Weber** would like to establish a reporting chain so that all request go through **J. Rester** and GSMFC. **J. Rester** stated that there is a protocol for this, but it is not being followed by everyone. Therefore, from now on, funnel all questions through **J. Rester** and GSMFC. **E. Hoffmayer** also asked that anytime you need to talk with NOAA regarding SEAMAP, please go through **J. Rester** or himself so they know what is going on.

T. Switzer mentioned that through their NFWF project, Florida has funding available to build a tablet service to help out with their surveys and it should be available later this year. **J. Ballard** stated that his program has built some boards and tablet service. **J. Rester** will get with **J. Ballard** to discuss the boards he has developed and how they could be used for SEAMAP.

In light of the recent budget cuts and the fact that IT does not have the time to support SEAMAP, **E. Hoffmayer** has been talking to J. Rester about hiring an IT person to be housed at GSMFC to handle SEAMAP IT issues. He wanted to bring it to the Subcommittee's attention. Not sure if feasible with the budget cuts to do it right now, but there is a need for it. For this year, if anyone has any IT issues, send out an email to the states to see if they have a way to fix it before going to NMFS for help.

Detailed SEAMAP Survey Budget Discussion

As the Subcommittee is aware, SEAMAP is receiving 9.7% less funding in 2015 than it received in 2014. **E. Hoffmayer** stated that this is due to a government wide assessment applied to any

federal line item. This assessment has not been applied in the past, but going forward, it will be applied. The SEAMAP budget for the Gulf of Mexico is \$1.8 million. This is a shortfall of \$194,000. The question is how does the Subcommittee want to handle the shortfall? **E. Hoffmayer** stated that NMFS could pick up some of the stations to help if there is interest from the states to help save some money. **R. Hendon** stated that Mississippi has some roll over days they can use for this year since this is the end of their five-year grant cycle. But this would be a one-time deal. **J. Rester** asked the other states if they have the ability to do something like this to please let him know, sooner rather than later. **E. Hoffmayer** also asked that if the states would be cutting work on a joint survey to let NMFS know. A conference call will be set up for Monday, March 23, 2015 at 1pm for the Subcommittee to discuss the budget and make final decisions on how to handle the shortfall.

The Subcommittee also talked about some detailed budget analysis last fall and what it cost the states to do the various surveys. All of the states have turned in their information. **R. Hendon** asked J. Rester if this information could be compiled into one spreadsheet and talk about it during the conference call on Monday. He does not see it affecting things this year, but thinks it would be good to look at the information for the next five-year plan.

Vertical Line Survey Design

The Subcommittee has discussed the Vertical Line Survey through email and how they would like to standardize the survey like they have done for the Bottom Long Line Survey. A work group meeting will be set up to start the process of standardizing the Vertical Line Survey and ask J. Ballard to give an overview/demonstration on the data collection boards he had developed.

One of the questions raised at the last meeting dealt with unstructured habitats and how many can be done. **J. Mareska** asked Clay and his response was that unstructured habitats “should be optimized for the key species of interest” and “this can be guided by the existing data” and “if you do not care about the species that live in the unstructured habitat, then do not include it, otherwise, include it.” **E. Hoffmayer** stated that he does not see why a lot of effort needs to be put into unstructured habitats since the primary focus of the Vertical Line Survey is focused on structured habitats. **J. Mareska** stated that this topic can be brought up with those who actually conduct the assessments to see how important the unstructured information is.

Another question brought up at the last meeting dealt with habitat classifications and what constitutes a target. **E. Hoffmayer** stated that this is an important question but a bigger issue that needs to be dealt with involves natural and artificial bottoms. **R. Hendon** agrees and states that the issues with rigs needs to be addressed.

Operations Codes for the Vertical Line Survey

C. Dean brought this up at the last SEAMAP meeting. The Vertical Line Survey does not have operations codes specific to that survey. She would like to suggest that the Subcommittee that the Vertical Line Survey use the same operations codes that are used in the other SEAMAP surveys. **J. Rester** stated that you can use Appendix 6 for operations codes for the Vertical Line Survey. He will come up with some standard definitions for the operations codes and narrow down Appendix 6 to only those codes that are relevant to the Vertical Line Survey.

There being no further business to discuss, **R. Hendon moved to adjourn.** **B. Pellegrin seconded the motion and it passed.** The meeting adjourned at 12:04 p.m.

**SEA GRANT ADVISORY PANEL
MINUTES**

**Wednesday, March 18, 2015
Point Clear, AL**

Members present:

Bryan Fluech- FL Sea Grant
Betty Staugler- FL Sea Grant
Julie Lively- LA Sea Grant
Bill Balboa- TX Sea Grant
Tony Reisinger- TX Sea Grant
Dave Burrage - MS/AL Sea Grant
Peter Nguyen- MS/AL Sea Grant

Guests:

Alex Miller, GSMFC
Ashford Rosenberg, GULF Audubon
Laura Picariello, GULF Audubon
Erik Sparks, MS State
Chris Nelson, Bon Secour

Chairman Fluech called the meeting to order at 1:30 pm. All present introduced themselves. **Fluech** made the motion to accept the minutes from the Oct. meeting. **Burrage** seconded the motion. The minutes were approved.

Miller gave an update on FinFo. Several federal species have been added. With funding running out, the website will be moving to the GSMFC servers so that it can remain active. It is primarily updated by the states directly. There is now more overlap with NOAA fish watch. It should migrate by June.

Rosenberg and **Picariello** (GULF Audubon) presented an update on their program and possible interactions with Sea Grant. First they showed one of four videos they have produced. **Rosenberg** provided a full overview of their three major pieces: certification, marine advancement plans (MAP), and education.

A Certification of Sustainability is based on regional certification. LA oysters and blue crabs are in the process now. MAP is looking at regional/state management versus FAO standard. For Education, they have been participating at festivals and engagement of the industry. **Fluech** asked if they were educating any restaurants or if they were focused using their chef council to connect with restaurants. An app has launched for Gulf Seafood for seasons, species, etc. Current Sea Grant partnerships have been Whole Foods Sea to Table events with LA. Another is helping TX crabbers navigate the new LA LFF program if they want to crab in LA.

Picariello asked for potential future collaborations with Sea Grant. **Fluech** suggested that some areas feel fishermen/ direct wholesale need trip ticket education. It was also suggested that consumer education of where seafood comes from, imported seafood, etc. is needed.

Balboa commented about one grocery store asking to promote Gulf seafood but not at the expense of imports as they make a lot of money with imports. **Balboa** and **Burrage** talked of focusing on flavor and the benefit to the local economy to avoid bashing imports.

Texas: **Balboa** began the Sea Grant restoration topic with a summary of an oyster reef project in Texas. It began in 2005, and most projects have been led by TXPW. About 1,000 acres have been restored or created. One is off the dock where tourists and the community can see the buoy with information nearby. TX Sea Grant got involved with Halfmoon reef, which is historically significant due to its octagon lighthouse. Eventually the reef totally went away. The hydrology was returned and substrate was still there so the site was chosen to create staggered row reefs. These were built with large rocks for restoration, not fishing. There is great recreational fishing near the reef, and the university is monitoring the reef. **Balboa** would like to get recreational fishing data to see recreational impact on the reef. Funding came from the Nature Conservancy, Army Core, Shell Oil, and others. They are trying to get more money to build more.

Louisiana: **Lively** provided updates on various restoration projects that LA Sea Grant is directly or indirectly involved with including plantings, living reefs with concrete oyster rings, and diversions of a very large scale. The plantings and living reefs are directly linked to Sea Grant. Diversions are more indirect but a major division in the state with fishermen on one side, the state on the other, and many others spilt on one side or the other. Science is being used by both sides so it is hard to get involved as honest brokers.

Mississippi: **Sparks** presented on the economic analysis of several different salt marsh planting/ restoration designs. This project was funded by Sea Grant. There are multiple options for restoration, but all are costly and need to be looked at functionality, for cost effectiveness, and sustainability. They used a study site at Grand Bay and looked at three different densities of black needle rush plantings (control, half density, and full density). By two years out, both densities had the same growth. They looked at eight scenarios for cost effectiveness. The scenarios compared donated or hired preplanning/ prep of site, personnel to do it, and boat time required. Half density was always more cost-effective. For functionality, they looked at nutrient removal (DIN in pore water). The full and half density at two years out were very similar. Ongoing and future work would look at more designs, species, scale and longer time. One almost done is looking at sea level rise using boxes that let water in but let it out at different rates.

Florida: **Staugler** provided a summary of bay scallop restoration. **Staugler** started with an overview and then the biology emphasizing two week larval stage is important as they try to get them just as settling. Bay scallops are especially susceptible to red tides. **Reisinger** felt this was probably a problem in TX too. **Staugler** explained that Southwest FL is closed to harvest and the season is based on economics and for larger scallops- it's not at all linked to spawning. Charlotte Harbor is the focus area. Restoration started in 2010 with a cage program off the docks. Small scallops are originally too small and go into lingerie bags until large enough to stay in the cage. They record growth monthly, and brood stock comes from areas FWC says based on

genetic diversity. Spawned and larvae are released at 10 days old. Some are held until juvenile stages. In 2012, 8 million larvae were released at 2 sites. A red tide hit one month later for 5 months. In 2013, 12 million larvae were released at 5 sites. They put out spat collectors to see if settlement was occurring. A subset of the settlement goes to FWC for genetics. In 2013, 30,000 juveniles were deployed in 14 releases, and 1,000 sub adults at 2 releases. They do transecting surveys to look at sites versus control background sites. In 2013, there was a 20% increase in restoration sites. They have funding for 2015. However 2014 was a really bad year for bay scallop spawning.

Fluech adjourned for a break at 10:26 and called the meeting back at 10:45.

State reports.

Mississippi/Alabama: **Burrage** reported on their site visit is coming up. A new oyster council formed with Sea Grant represented. Their emphasis is on restoring oysters, and public meetings will be coming. **Nguyen** and **Burrage** are involved with panel on how agencies can better engage with the Asian communities, but efforts so far have been minimal. **Burrage** provided an update on FishBizplan.org online. You can register and go look at it, but it's still in beta testing. They tried to make it very user friendly, and it's good to help the fishermen take a view of their business. Currently, 24 fishermen across the country are testing the program. The emphasis is on seafood producing fishermen, and it might work for aquaculture or charter businesses, but it wasn't designed or tested with these groups.

Florida: **Fluech** began with the artificial reef summit in January that had 180 attendees. The feedback was for these to occur more frequently than every 4 to 5 years. There was also some interest in regional focused workshops. **Staugler** felt production was a big topic this year. Lionfish on artificial reefs was also a topic. There were questions among the group about interactions between lionfish and red snapper. The FL barotrauma outreach is continuing. A survey went out to get perceptions. Venting was known by many, but decompression was not as known. Chuck Adams student is working on the data.

Staugler started pilot fishery forums in SW FL for recreational and commercial anglers to discuss water quality and other concerns. It has started slow but is gaining momentum from 12 to 70 attendees between meeting 1 and 3. It is a one year funded FL SG project. Recreational fishermen made up the majority, and sea grass was always a big topic among them. There is interest in a training program like Louisiana's LFF with stone crabs. A trap reduction program is still going. A new seafood specialist and panhandle agent have been hired.

Texas: **Balboa** explained the only state leases are in Galveston Bay. STORM company leased a lot, and they are claiming they get complete control/ ownership over the bottom of these 23,000 acres. There is a push to lease all navigational areas. However, the water is still owned by the state of Texas. He asked if Sea Grant Legal has looked into this at all, and if this is a problem that could spread to other states.

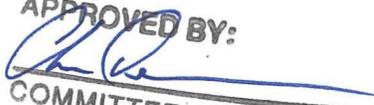
Nelson asked for a minute from Texas to update that there is interest to look for funding for the large oyster hatchery. Regional funding is hard to do find, so it might be state by state.

Reisinger continued with TED and sea turtle updates: 350 fishermen have been trained. Gary Graham and **Reisinger** are teaching crews to install and use TEDs correctly. Kemp's took a hit in 2010. The angle is very important to make sure correct. They are giving a copy to boat owners to show to buyers that they were inspected. NOAA is requiring 88% compliance but currently they are at 87% compliance. A large focus on the work is on compliance for regulations but also on public perception of the issue. They are also still looking at BRDs with TEDs. Some new HDPE doors are also out.

Louisiana- **Lively** provided updates on a possible FEN national meeting in next few years perhaps in the Gulf. Louisiana has their site visit in June. Currently, La has opened red snapper as of Friday 7 days a week, and there is still the issue of the state recognizing farther than three miles, but the federal government only recognizing three. She then provided a few slides showing the blue crab state FMP, including stocks. She also showed a video of Tiger shrimp going after juvenile blue crabs but not local shrimp based on Jennifer Hill's work.

Lively motioned to adjourn, and **Reisinger** seconded.

Respectfully submitted: Julie Lively, Vice-Chairman
Approved: Nov. 4, 2015.

APPROVED BY:

COMMITTEE CHAIRMAN

**TECHNICAL COORDINATING COMMITTEE
MINUTES
Wednesday, March 18, 2015
Point Clear, Alabama**

Chairman Chris Denson called the meeting to order at 8:30 a.m. The following members, staff, and others were present:

Members

Harry Blanchet, LDWF, Baton Rouge, LA
Richard Cody, FWC/FWRI, St. Petersburg, FL
Chris Denson, ADCNR/MRD, Gulf Shores, AL
Dan Ellinor, FWC, Tallahassee, FL
Matt Hill, MDMR, Biloxi, MS
Paul Mickle, MDMR, Biloxi, MS
Jerry Mambretti, TPWD, Port Arthur, TX
John Mareska, ADCNR/MRD, Dauphin Island, AL
Mark Schexnayder, LDWF, Baton Rouge, LA
Glenn Constant, U.S. FWS, Baton Rouge, LA

Staff

James Ballard, GSMFC, Sport Fish/Aquatic Invasives Coordinator, Ocean Springs, MS
Gregg Bray, GSMFC, FIN Data Program Manager, Ocean Springs, MS
Ali Ryan, GSMFC, Sport Fish/Aquatic Invasives Staff Assistant, Ocean Springs, MS
Joe Ferrer, GSMFC, Systems Administrator, Ocean Springs, MS
Jeff Rester, GSMFC, SEAMAP/Habitat Coordinator, Ocean Springs, MS
Ralph Hode, GSMFC, EDRP Coordinator, Ocean Springs, MS
Angie Rabideau, GSMFC, Senior Accountant, Ocean Springs, MS
Alex Miller, GSMFC, Staff Economist, Ocean Springs, MS
Donna Bellais, GSMFC, ComFIN Programmer, Ocean Springs, MS
Dave Donaldson, GSMFC, Executive Director, Ocean Springs, MS
Steve VanderKooy, GSMFC, IJF Coordinator, Ocean Springs, MS

Others

Chris Blankenship, ADCNR/MRD, Dauphin Island, AL
Lance Robinson, TPWD, Austin, TX
Mark Lingo, TPWD, Austin, TX
Steve Turner, NOAA Fisheries, Miami, FL
Tom Sminkey, NOAA Fisheries, Silver Spring, MD
Ken Brennan, NOAA Fisheries, Beaufort, NC
Laura Picariello, Audubon Nature Institute, New Orleans, LA
Gordon Colvin, ECS Federal, Inc. Port Jefferson, NY
Steve Heath, Retired ADCNR/MRD, Gulf Shores, AL
Read Hendon, USM/GCRL, Ocean Springs, MS
Ron Lukens, Omega Protein Corp., High Springs, FL
Doug Boyd, Boerne, TX

the landings reports, biological and enforcement staff will intercept anglers, and ask them the same questions required on the mandatory report. They also plan to increase at-sea validations with enforcement staff, and their remote monitoring program that utilizes cameras to validate fishing effort. Alabama will also be starting an at-sea sampling program for the charter for-hire fleet similar to Florida's program.

Florida – **Richard Cody** stated that Florida's program is still a work in progress. Their Gulf reef fish survey, which was voluntary in 2014, will become mandatory in 2015. They also plan to introduce red snapper catch and effort surveys to complement MRIP efforts. These new surveys will work within the MRIP framework, using the same site registry to identify the offshore access points which will make up their new offshore stratum that will be added to the MRIP sample draw. By using this approach, they can increase efficiency because data obtained in state survey interviews can be augmented with MRIP interview data. For the effort component, they will survey vessel owners that have an offshore permit with a monthly mail survey that will have a sample target size of 10,000 and a compliance target of 25%.

Update on the Gulf Regional Oyster Hatchery Proposed Project

LaDon Swann provided an update on the proposed Gulf Regional Oyster Hatchery project. The group has developed a four-page facts sheet that summarizes the program and a video. He showed the four minute video to the Committee, which outlined the need for this project and how it would help restore oyster stocks and support the oyster fishery in the Gulf. LaDon also pointed out that if this project was to be funded, the Commission has agreed to manage it. He stated that the hatchery would implement biosecurity measures so that stocks from different estuaries could be reared and stocked without mixing with oyster stocks from other areas across the Gulf region.

Little Bay Restoration Project

Carl Ferraro provided a presentation on the Little Bay Restoration Project that was funded by EDRP. The project established about a mile of breakwater made up of wave attenuation units with riprap on either end seaward of Little Bay, filled behind the breakwater to reestablish the Little Bay peninsula that had been breached and severely degraded due to excessive shoreline erosion, and restored about 30 acres of salt marsh habitat. They used marsh plugs from the adjacent marsh to establish marsh grass on the new fill and in the first growing season had 400% increase in stem density. Dauphin Island Sea Lab conducted four years of monitoring at the site and concluded that marsh area continues to expand southward and into bare ground areas; nekton and benthic infauna assemblages are approaching that of natural marshes; sediment organic matter content has increased significantly in the restored marsh; and oysters have colonized 100% of the breakwater faces at significant densities.

Overview of State NFWF Projects

Texas - **Jerry Mambretti** stated that TPWD is utilizing NFWF funding for coastal land acquisitions and coastal restoration and protection projects. To date, NFWF has awarded over \$56.5 million from the Gulf Environmental Benefit Fund to support 14 projects in the state of Texas. With these funds, TPWD has been able to secure three land acquisitions totaling approximately 20,000 acres of coastal land, and conduct six projects that resulted in the restoration and protection of 5,758 acres of critical coastal habitat and 18,700 feet of fragile shoreline.

it. The Commissioners decided that a joint workshop may not be the best way for the Commission to approach this problem. At a meeting of the State Directors in October of last year, it was suggested that the Commission could possibly establish an Ecosystem-based restoration/management Subcommittee to address this need. James pointed out that if the Commission was to establish this Subcommittee, it could help identify data gaps in current monitoring/restoration activities that limit ecosystem-based restoration/management decisions in the Gulf States. However, there is no dedicated funding to support the activities of this Subcommittee. The TCC discussed the possibility of establishing this new Subcommittee and the roles it could serve for the Gulf States. At the end of the discussion, the TCC decided to take no action.

Subcommittee Reports

Data Management - **Richard Cody** stated Mike Cahall provided the Subcommittee with an update of the Atlantic Coastal Cooperative Statistics Program. They also had an update on the new MRIP Fishing Effort Survey and the steps that are being taken to benchmark it with the Coastal Household Telephone Survey. Leah Sharpe provided a presentation detailing the MRIP National Communication Team and the need for developing a regional team for the Gulf of Mexico. The national team is composed of NOAA Fisheries and MRIP staff, along with regional partner organizations and focuses on newscasts, website development, and developing products and tools that support MRIP and regional outreach efforts. The regional teams are being formed to utilize existing regional networks and resources to more effectively deliver communications products and messages to stakeholders. After a short discussion, the FIN Committee made a recommendation to the TCC to form an Ad-hoc Subcommittee under FIN, made up of representatives from FL, AL, MS, NOAA SERO, NOAA SEFSC, and the Gulf Council to address the need for an MRIP regional communication and education team. After a brief discussion by the committee, Richard Cody made the following motion:

To form an ad-hoc subcommittee under FIN made up of representatives from FL, AL, MS, NOAA SERO, NOAA SEFSC, and the Gulf Council to address the need for an MRIP regional communication and education team. Harry Blanchet asked where the funding for this new ad-hoc subcommittee would come from. Dave Donaldson stated that MRIP would be providing the funding to support the activities of this new group. **The Motion passed by voice vote with one opposed.**

Tom Sminkey provided the Subcommittee with an overview of the MRIP regional implementation plan. He pointed out that the MRIP Executive Steering Committee (ESC) has approved the regional implementation structure for how MRIP monitors recreational survey. GulfFIN was identified as the administrator, and was charged with developing a regional plan in the Gulf of Mexico. Mike Lewis gave a presentation on confidential data roll-up procedures. He is working on a nation-wide confidentiality roll-up procedure, and wanted to see if the Gulf States would be interested in participating. The goal is to preserve species totals in the Gulf, but also protect confidentiality. Richard stated that the subcommittee reviewed and discussed two draft letters that were developed in response to the 2013 Southeast Fishery Science Center peer review of the data collection and data management programs that feed assessments and scientific advice for stocks managed under the Magnuson-Stevens Act. Following the discussion, the Subcommittee made a

or the state runs the risk of losing future funding from the program. The two Subcommittees are continuing to revise their 2004 publication of the Artificial Reef Material Guidelines, and are working on a white paper outlining the long-term socioeconomic value of reefing large vessels.

A motion to accept the report was moved by John Mareska, and passed without opposition.

State/Federal Reports

Written reports were provided to the TCC members the week prior to the meeting, and hard copies were incorporated in the meeting folders. **During the meeting, Chris Denson made a motion to dispense with the reports in the interest of time, which passed without opposition. To see the full reports that were provided to the TCC, please see the minutes from the Commission Business meeting held on Thursday, March 19, 2015.**

Other Business

Steve Turner presented on the Public Accessibility to Research Results (PARR) regulation that came out of a presidential executive order in 2013 that will need to be implemented by March 2016. The purpose of PARR is to increase access to federally-funded scientific research results to the public, industry and the scientific community. It states that all research results, data collections, publications, and products that were obtained/developed with the use of federal funding must be made publicly available within one year of data collection.

With no further business to discuss, Chris Denson adjourned the meeting at 12:00 p.m.

**COMMISSION BUSINESS MEETING
MINUTES - 65th Annual Spring Meeting
Wednesday, March 19, 2015
Point Clear, AL**

APPROVED BY:

COMMITTEE CHAIRMAN

Chairman D. Ellinor called the meeting to order at 8:35 a.m.

D. Donaldson gave a brief overview of Commission voting procedures.

The following Commissioners and/or Proxies were present:

Commissioners

Dan Ellinor, *Chairman*, FWC, Tallahassee, FL (*Proxy for Nick Wiley*)
Michael Hansen, Tallahassee, FL
Lance Robinson, TPWD, Dickinson, TX (*Proxy for Carter Smith*)
Robert Barham, LDWF, Baton Rouge, LA
Randy Pausina, LDWF, Baton Rouge, LA (*Proxy for Robert Barham*)
Camp Matens, Baton Rouge, LA
Brett Allain, Franklin, Louisiana
Chris Blankenship, ADCNR/MRD, Gulf Shores, AL (*Proxy for Gunter Guy*)
Chris Nelson, Bon Secour Fisheries, Bon Secour, AL
Kelly Lucas, MSDMR, Biloxi, MS (*Proxy for Jamie Miller*)
Read Hendon, USM/GCRL, Ocean Springs, MS (*Proxy for Joe Gill*)

Staff

Dave Donaldson, *Executive Director*, Ocean Springs, MS
Nancy Marcellus, *Administrative Officer*, Ocean Springs, MS
Chery Noble, *Administrative Assistant*, Ocean Springs, MS
Steve VanderKooy, *IJF Program Coordinator*, Ocean Springs, MS
Jeff Rester, *SEAMAP/Habitat Coordinator*, Ocean Springs, MS
Gregg Bray, *FIN Program Manager*, Ocean Springs, MS
Joe Ferrer, *Systems Administrator*, Ocean Springs, MS
Ralph Hode, *Fisheries Disaster Recovery Coordinator*, Ocean Springs, MS
James Ballard, *Sport Fish Restoration/Aquatic Invasives Coordinator*, Ocean Springs, MS
Alex Miller, *Staff Economist and Program Coordinator*, Ocean Springs, MS
Angie Rabideau, *Staff Accountant*, Ocean Springs, MS
Ali Catchot, *Staff Assistant*, Ocean Springs, MS

Others

Roy Crabtree, NOAA Fisheries/SERO, St. Petersburg, FL
Glenn Constant, USFWS, Baton Rouge, LA
Leah Sharpe, NOAA Fisheries, Silver Spring, MD
Gordin Colvin, NOAA Fisheries, NOAA Fisheries, Washington, DC
Mark Lingo, TPWD, Austin, TX
Joe Smith, NOAA Fisheries, Beaufort, NC
Borden Wallace, Daybrook Fisheries, Inc., Empire, LA
Tom Sminkey, NOAA Fisheries, Silver Spring, MD

Bryan Fluech, FL Sea Grant, Naples, FL
Betty Staugler, FL Sea Grant, Port. Charlotte, FL
Julie Lively, LA Sea Grant, Baton Rouge, LA
Laura Picariello, Audubon GULF, New Orleans, LA
Ashford Rosenberg, Audubon GULF, New Orleans, LA
Rene Lebreton, LDWF, New Orleans, LA
Ken Brennan, NOAA Fisheries, Beaufort, NC
John Hewitt, Audubon GULF, New Orleans, LA
Larissa Graham, MS-AL Sea Grant, Mobile, AL
Teri LaRose, LDWF, Baton Rouge, LA
LeAnn Hogan, NOAA Fisheries, Silver Spring, MD
Ron Lukens, Omega Protein Corporation, High Springs, FL
Mark Schexnayder, LDWF, New Orleans, LA
Emily Posner, Recirculating Farms Coalition, New Orleans, LA

Adoption of Agenda

Item No. 10 will move to No. 7 due to travel. M. Hansen moved to adopt the agenda as amended. L. Robinson seconded and the agenda was adopted as amended.

Approval of Minutes

C. Blankenship moved to approve the minutes of the Commission Business Session held on October 15, 2014. C. Matens seconded the motion and the minutes were approved.

Public Comment

There was no public comment.

GSMFC Standing Committee Reports

Law Enforcement Committee

S. VanderKooy reported the Law Enforcement Advisory Panel and the Gulf Council's Law Enforcement Advisory Panel met Tuesday, March 17, 2015. He said he will report on the Commission's items only. He said there is one item from the meeting he will request approval.

Both the LEC and the LEAP covered the issue of illegal, unreported and unregulated (IUU) fishing in the Gulf of Mexico. One of the most prevalent IUU is related to Mexican incursions in U.S. waters to illegally harvest red snapper and sharks. Jason Brand with the U.S. Coast Guard presented the Coast Guard district's Mexican Launch Threat Overview and Impact Analysis Model Results which were introduced at the last Gulf Council meeting. The launch problem is not new, it has been occurring for the last 25-30 years in an area of federal waters north of the U.S./Mexico border in the EEZ. The area encompasses 3,500 square miles. Boats run illegally from Mexico into the US EEZ and fish with a variety of gears from handlines to longlines, and gill nets which can span up to seven miles in length. The Coast Guard has been citing more of these

boats every year but still has limited success in intercepting them. Estimates of the total take of red snapper alone is about 1.5 million pounds poached from US waters by launchas over the last 2 years. Intercepting the IUU vessels is hazardous and the alien fishermen are technologically advanced. Once an enforcement plan or vessel is spotted, the launchas quickly move out of the illegal fishing area. There are not enough assets on the water or in the air to sufficiently patrol such a large area. In addition, international treaties with Mexico make prosecution nearly impossible. Catch vessels and gear are seized but the fishermen are returned to Mexico.

Related to this issue, Jim Landon from NOAA OLE provided an excerpt from the "Improving International Fisheries Management" report to congress in February 2015. Behind the scenes, NOAA and the White House have been in talks with Mexico pressuring them to address these IUU problems. Subsequently, Mexico has been placed on the "bad list" regarding IUU fishing and without improvement, could face sanctions. The Committee agreed that this was not a Texas issue but poaching red snapper could impact the total quota for all gulf sectors. Therefore, the LEC has drafted a letter which they would like the Commission to consider sending forward to the appropriate agency and people, requesting more funding to address the states' challenges in combating IUU fishing in all the Gulf States in a significant and meaningful way (handout).

S. VanderKooy reported he gave the group a brief overview of IJF program activities which will be discussed on a later agenda item. The representatives were reminded they will be asked to provide updates to the various Law Enforcement publications that the Commission publishes annually.

S. VanderKooy reported due to lack of time at the meeting, the state reports were submitted electronically for review of the Committee. He then stated the LEC/LEAP agenda is always full and requested an all-day format during the Commission's annual meetings.

The Commissioners discussed the IUU letter and **D. Donaldson** asked who should actually send the letter, the Executive Director or the Chairman. It was suggested the letter should be from both. **M. Hansen** asked how this would be funded if approved. **D. Donaldson** stated there is a Joint Enforcement Agreement (JEA) which is the mechanism to provide funding to the states. He said there is a request in the 2015 NMFS budget asking for \$3 million to be allocated towards IUU fishing enforcement. **B. Allain** asked if this would target just foreign fishermen. **S. VanderKooy** said it will target all IUU fishing. **D. Donaldson** stated if approved, to send all editorial comments in and they will distribute to the Commissioners before sending the final letter. The Commissioners agreed the congressional delegation should be copied to make them aware of the situation.

C. Matens moved to approve sending the letter to the United States Secretary of Commerce stating concern on illegal, unreported and unregulated (IUU) fishing after editorial comments are incorporated and the letter is distributed one more time. The letter will be copied to Commissioners and Proxies, LEC/Leap and the Congressional Delegation. K. Lucas seconded and the motion passed.

K. Lucas moved to approve the Law Enforcement Committee report. C. Matens seconded the motion and the motion passed with no opposition.

The Commission had no objection to changing the meeting format to a full day at future meeting when necessary.

Technical Coordinating Committee

D. Ellinor gave the following Technical Coordinating Committee report.

Plans for the 2015 Red Snapper Season by State:

Texas will proceed with assessing their snapper landings by partnering with the Harte Research Institute. This year iSnapper will replace TPWD's self-reporting red snapper program. TPWD will continue with their routine creel survey which will be paired with the results from iSnapper to estimate total red snapper landings. The two datasets will be matched by utilizing the vessels TX registration number and date, which are common to both surveys.

Mississippi is implementing a mandatory reporting program for the owner or captain of any vessel recreationally harvesting red snapper which will require them to complete a harvest report. Under this program, anglers will be required to register and request a trip authorization code for any trip on which they intend to target Red Snapper. This code will only be good for one day and must be reported on even if the trip does not occur. A new authorization code will only be generated for an angler if their previously issued code has been reported on. For enforcement and validation purposes, daily active trips will be available to Marine Patrol and MDMR will be repeating their aerial survey efforts.

Alabama will continue with their mandatory reporting of red snapper landings and add some new questions to the report to collect information on public versus private access points for the recreational sector and multi-day trips in the charter fleet. They are also planning to install more drop boxes for paper reports at marinas where poor telephone signals prohibit the use of the mobile app. They plan to emphasize the use of their reporting app by utilizing multiple outreach venues. To validate the landings reports, biological and enforcement staff will intercept anglers and ask them the same questions required on the mandatory report. They also plan to increase at sea validations with enforcement staff.

Florida's program is still a work in progress. Their Gulf reef fish survey, which was voluntary in 2014, will become mandatory in 2015. They also plan to introduce red snapper catch and effort surveys to complement MRIP efforts. These new surveys will work within the MRIP framework using the same site registry to identify their offshore access points. By using this approach, they can increase efficiency because data obtained in State survey interviews can be augmented with MRIP interview data. For the effort component they will survey vessel owners that have an offshore permit with a monthly mail survey that will have a sample target size of 10,000 and a compliance target of 25%.

Update on Gulf Regional Oyster Hatchery Proposed Project:

LaDon Swann provided an update on the proposed Gulf Regional Oyster Hatchery project. The group has developed a four page facts sheet that summarizes the program and a video. The video outlines the need for this project and how it would help restore oyster stocks and support the oyster

fishery in the Gulf. L. Swann pointed out that the hatchery would implement biosecurity measures so that stocks from different estuaries could be reared and stocked without mixing with oyster stocks from other areas across the Gulf region.

Little Bay Restoration Project Presentation:

Carl Ferraro provided a presentation on the Little Bay Restoration Project that was funded by EDRP. The project established about a mile of breakwater seaward of Little Bay and then filled behind it to reestablish the Little Bay peninsula that had been severely degraded due to excessive shoreline erosion. They used marsh plugs from the adjacent marsh to establish marsh grass on the new fill and in the first growing season had 400% increase in stem density. Dauphin Island Sea Lab conducted 4 years of monitoring at the site and concluded that marsh area continues to expand southward and into bare ground areas; nekton and benthic infauna assemblages are approaching that of natural marshes; sediment organic matter content has increased significantly in the restored marsh; and oysters have colonized 100% of the breakwater faces at significant densities.

Overview of State NFWF Projects

Texas PWD is utilizing NFWF funding for coastal land acquisitions and coastal restoration and protection projects. To date, NFWF has awarded over \$56.5 million from the Gulf Environmental Benefit Fund to support 14 projects in the state of Texas. In 2014 TPWD received funding to acquire approximately 20,000 acres of coastal land, and to restore and protect 5,758 acres of critical coastal habitat and 18,700 feet of fragile shoreline.

Mississippi DMR is collaborating on a NFWF funded project with GCRL. This project has three main goals: map reef habitats to delineate benthic habitat types for stratified reef fish sampling; utilize standardized methodologies to assess red snapper and reef fish species; and define site-specific relationships between fisheries abundance and diversity and environmental conditions.

Alabama DCNR is conducting a multifaceted fisheries and ecosystem monitoring project. This project will have four main focus areas: offshore, estuarine, ecosystem, and data management. For the offshore component, they will implement vertical line, bottom longline, and trawl sampling. For the estuarine monitoring, they are utilizing a baitfish survey that uses the SEAMAP protocol and a skimmer trawl survey as well as blue crab observer surveys. Under the ecosystem component, they are conducting gut content analysis and age and reproduction assessments through ovary and otolith processing. They are also conducting habitat mapping and water quality assessments at 5 continuous monitoring stations throughout Mobile Bay. For the data management component, they are looking to bring on new staff: an analyst, data scientist, and a GIS specialist to manage all the data collected under this project.

Florida is conducting an at sea project to validate discards and an electronic log book reporting project with the University of Florida to augment their fisheries dependent monitoring. They are also looking to enhance their reef fish surveys which will support their red snapper monitoring effort. For independent sampling, they will be continuing with the enhanced baitfish and larval sampling and add some new inshore sites that have not been sampled in past efforts.

Establishment of an Ecosystem-Based Management Subcommittee:

James Ballard explained that the PEW Charitable Trust approached the Commission with the idea of holding an ecosystem-based management workshop and wanted the Commission to host/sponsor it. The Commissioners decided that a joint workshop may not be the best way for the Commission to approach this problem. At a meeting of the State Directors in October of last year, it was suggested that the Commission could possibly establish an Ecosystem-based restoration/management Subcommittee to address this need. The TCC discussed the possibility of establishing this new Subcommittee and the roles it could serve for the Gulf States. At the end of the discussion, the TCC decided to take no action.

Subcommittee Reports

Data Management:

Richard Cody stated that the Subcommittee had an update on the new MRIP Fishing Effort Survey and the steps that are being taken to benchmark it with the Coastal Household Telephone Survey. The FIN Committee recommended to the TCC to form an Ad-hoc Subcommittee under FIN made up of representatives from FL, AL, MS, NOAA SERO, NOAA SEFSC, and Gulf Council to address the need for an MRIP regional communication and education team. After a brief discussion by the committee, the following motion was made.

The Committee recommends to form an ad-hoc subcommittee under FIN made up of representatives from FL, AL, MS, NOAA SERO, NOAA SEFSC, and Gulf Council to address the need for an MRIP regional communication and education team.

Richard Cody stated that the subcommittee reviewed and discussed two draft letters that were developed in response to the 2013 Southeast Fishery Science Center peer review of the data collection and data management programs that feed assessments and scientific advice for stocks managed under the Magnuson-Stevens Act. Following the discussion the Subcommittee made a motion to recommend to the TCC to send the provided letter to Dr. Ponwith at the SEFSC providing feedback from FIN regarding the 2013 peer review. Following a brief discussion about the motion, the TCC made the following Motion

The Committee recommends that the Commission send a letter to Dr. Ponwith at the SEFSC providing feedback from FIN regarding the 2013 peer review of the data collection and data management programs that feed assessments and scientific advice for stocks managed under the Magnuson-Stevens Act.

R. Pausina asked that in reference to the first motion to form an ad hoc subcommittee, what the team is going to do. **D. Ellinor** stated it will be an outreach and education team. **D. Donaldson** stated it will be a team made up of regional representatives to help to direct how MRIP gets implemented in the Gulf instead of having headquarters make the decision on how to do it. **R. Pausina** asked if it will be education and information from the public. **D. Donaldson** said that could be part of it if that is what the team deems necessary. **R. Pausina** also asked how this would be funded and **D. Donaldson** responded MRIP will fund the team. He stated a lot of the meetings

will be done via conference call. **R. Pausina** asked if it is a regionalization of decision making to assist with further development of MRIP and **D. Donaldson** said yes. **K. Lucas** asked if this group is also going to tackle some of the issues with developing some of the states systems into MRIP. She said the state of Alabama and the state of Mississippi have mandatory reporting and asked if they are going to be looking at how to calibrate those into the system. **D. Donaldson** said yes they could certainly be utilized for that as well. He said the team will identify and prioritize what needs to be addressed. **C. Matens** and **R. Pausina** expressed concern that their state would be bound even more by MRIP and **D. Donaldson** stated he feels this would provide the states more input on how MRIP gets implemented in the Gulf of Mexico. **R. Pausina** asked to hear the MRIP point of view.

G. Colvin stated Dr. Leah Sharpe will discuss the strategy they are following on a later agenda item. He stated that MRIP developed an implementation plan for this year and it focused on changing their outreach efforts towards moving away from research and methods development into decision making about implementation and actually carrying out the new and improved survey designs that they have worked on. They are going to the implementation stage and focus less on the research results. He said the implementation strategy that they developed is focused on working with the FINs to make the key decisions about selecting methods for implementation and identifying needs and goals and priorities for each region. He said they want to work with the people in the region, the same people who will be working with to set priorities, and to help implement the data collection programs to most effectively help to prioritize communication needs and to develop and deliver communication outreach messages. The approach is to try to formulate a regional group in each of the regions. They have a group on the Atlantic coast and are working to form the group on the Pacific coast. The intent is to work with the regional partnerships so they will have input on the implementation.

R. Pausina asked to add Louisiana to the team.

D. Ellinor stated the new motion will read the Committee recommends to form an ad-hoc subcommittee under FIN made up of representatives from FL, AL, MS, LA, TX, NOAA SERO, NOAA SEFSC, and Gulf Council to address the need for an MRIP regional communication and education team. C. Blankenship moved to accept the motion. K. Lucas seconded the motion and it passed.

C. Matens moved to accept the motion to send a letter to Dr. Ponwith which provides feedback from FIN regarding the 2013 peer review of the data programs. C. Blankenship seconded the motion and it passed.

SEAMAP:

D. Ellinor reported John Mareska stated that the budget was decreased for FY2015 by 10% from the FY2014 budget and that state partners will make reductions to surveys to account for the funding decrease. The Subcommittee also continues to make standardized improvements to the bottom long line survey. The Subcommittee was able to come to a consensus on a sampling time frame and a minimum number of stations to sample annually. Discussions will continue on the most effective sampling and stratification design for this survey, however, depth zones were

reduced to one zone covering the 3-10 m depth range.

Crab:

D. Ellinor reported Steve VanderKooy stated that the Blue Crab FMP has been passed on to the full Commission for review and possible public comment. The Subcommittee is now developing a technical report summarizing the blue crab fishery for the Terrapin Work Group to use while they develop their white paper.

Artificial Reef:

D. Ellinor reported James Ballard pointed out that the Subcommittee held a joint meeting with the ASMFC's Artificial Reef Subcommittee in January. This meeting was held in conjunction with the Florida Artificial Reef Summit to allow Subcommittee members to attend the Summit. The two Subcommittees are continuing to revise their 2004 publication of the Artificial Reef Material Guidelines and are working on a white paper outlining the long-term socioeconomic value of reefing large vessels.

Other Business:

D. Ellinor reported Steve Turner presented on the Public Accessibility to Research Results regulations that came out of a presidential executive order in 2013 that will need to be implemented by March 2016. It states that all research results that were obtained through federal funding have to be made publicly available within one year of data collection.

C. Nelson moved to accept the TCC report. B. Allain seconded and the motion passed.

State-Federal Fisheries Management Committee

Menhaden Advisory Committee

S-FFMC Menhaden Advisory Committee Report

J. Smith reported the MAC met Tuesday afternoon with a long agenda. He stated there is one action for the Commission's consideration.

He reviewed the 2014 Gulf fishing season. He stated the gulf menhaden landings were 391,854 metric tons, or 1,289 million standard fish. This is down 21% from 2013 (497,503 t) and down 23% from the previous 5-year average (505,262 t). He reported the reasons for the decline could be the closing of the Omega Protein Cameron fish factory in December of 2013 and inclement weather during the fishing season. Peak landings were in July 2014 and the lowest landings were in June. Age-2 fish dominated the catch coast-wide with older fish in Abbeville. Empire had a moderate amount of age-1 fish suggesting the 2013 year class was decent again. This correlates with the Texas seine data as well. The 2015 fishing season forecast is expected to be around 401,000 mt using 33 vessels.

J. Smith also provided a short update on the Atlantic fishery. He stated after the last assessment, the Management Board had concerns about the problems with the model and entered into a period

of higher conservation until a new assessment could be completed. The newest assessment (SEDAR 40) was approved and shows the population to be in much better condition than originally thought.

J. Smith reported Harry Blanchet provided a new reviewing tool that the Department is working on to replace the 'forecast' which used to be provided by Vince Guillory annually. Like the assessment, it is a Delta Log normal approach that examines year affect, area, and month. They will continue to 'tweak' the IOA and hopefully have something they can continue to present into the future. It looks like recruitment was good the last couple years although there is a lot of variance in the current results.

J. Smith reported Jerry Mambretti reported on the Texas Cap for 2015. 2014 went well with Abbeville providing reports since the Cameron closure. Texas withdrawals were only around 1M lbs, far below the cap of 31.5M lbs. Monty Graham (GCRL) presented on an ecosystem based approach to examining the trophic interactions between moonjellies and Gulf menhaden. Jellyfish overlap in diet with menhaden as filter feeders in time and space. Jellyfish 'lock' a large amount of energy which becomes unavailable to higher level predators. Menhaden release a large amount of energy 'up the chain.' There appears to be an inverse relationship between the two planktivores, high menhaden = low jellies. Managers would want systems with low jellies.

J. Smith stated the draft menhaden FMP was under final consideration with this body.

J. Smith reported that he and Ethel Hall, the scale reader since 1969, will retire this year and there is a transition plan at NOAA to find replacements for both of them.

J. Smith also reported that at this time, funding for menhaden port sampling after 2015 is unclear. FIN had funds to cover student samplers at the three plants this year but there will not be any extra funding next year. The group was very concerned that there needs to be a source to continue to critical work.

J. Smith said that S. VanderKooy reported that all the five states have participated in scale ageing training with Ethel at the Beaufort Lab. Some of the Gulf States have begun collecting scales from their independent samples. A reference set has been sent to all the state ageing labs and will be discussed and reviewed during the processors meeting in May. In addition, the ASMFC just completed their own training at Beaufort so there is a definite interest in sharing the knowledge before Ethel's departure in June.

Finally, the Action from the MAC is to reinstitute a 'bait industry' seat on the MAC. Historically, the MAC had a chair for bait but when the last company closed, the seat was removed for quorum purposes. A new bait company has started in Louisiana and it seems appropriate to keep that developing sector at the table. *Therefore the MAC moves to request the seat be added back to the roster.*

J. Smith reported there were public comments from Emily Posner and students from Loyola Law School. They essentially are advocating for closer scrutiny of the gulf menhaden fishery for bycatch issues and also advocating attack for the fishery.

S. VanderKooy stated that unbeknownst to J. Smith, the MAC moved and passed a resolution recognizing the distinguished service by J. Smith to the SFFMC MAC. The resolution was distributed to the Commissioners and he asked for the Commission's approval.

K. Lucas moved for the Commission to approve the resolution for the distinguished service to the SFFMC Menhaden Advisory Committee by Joe Smith. C. Matens seconded and the motion passed.

B. Allain moved to add a seat to the current MAC roster for a member of the bait industry who is commercially licensed and actively harvesting and selling Gulf menhaden as bait. C. Nelson seconded and the motion passed with no opposition.

Sea Grant Fisheries Extension Meeting Report

B. Fluech reported the Committee met Wednesday, March 18. A. Miller gave a presentation on the FINFO website and Ashford Rosenberg and Laura Picariello gave a presentation on the Audubon G.U.L.F. Program. They discussed ways that Audubon and Sea Grant can continue partnering to address sustainability issues. Each Sea Grant Program discussed restoration projects that they are involved in. Bill Balboa discussed the Half Moon Oyster Reef Project that TPWD and Nature Conservancy are working on. Louisiana discussed several projects their Sea Grant is involved in including managing and recruiting volunteers for salt marsh restoration, plantings, oyster rings, living shorelines, and freshwater diversions. It was suggested utilizing the resources of the National Sea Grant Law Center for some of the issues regarding freshwater diversions. Dr. Parks from the MASGC gave a presentation on the economic analysis of different marsh restoration methods. Betty Staugler, FL Sea Grant, discussed the Bay Scallop restoration project which is a partnership with FWC.

B. Fluech reported D. Burrage stated the Alabama Governor has developed an oyster council and Sea Grant is represented on that to provide input. He and P. Nguyen continue to try to work with some of their specialists to engage the Vietnamese fishing community, but they have had limited success. Sea Grant will have their National Site Review in the next couple of months. D. Burrage and other Sea Grant faculty around the country is also involved in developing the Fishbizplan.org website. This is geared to help commercial fishing operations to develop business plans. They hope to integrate charter captains as well as aquaculture businesses. They are beta testing this now and getting input from fishermen and they hope to have the website live sometime in June.

B. Fluech reported Florida just held the Artificial Reef Summit in Clearwater. They had record attendance of 180 participants from multiple states and GSMFC and South Atlantic representatives also played a role in that. This has been a very successful program, a joint effort between Sea Grant and FWC. The participants indicated they needed to have the summits more frequently instead of waiting 4-5 years.

B. Fluech reported Betty Staugler has been working on fishery forum programs in west Florida. He said these are pilot studies to engage local stakeholders, both recreational and commercial users, to help provide solutions to fisheries based issues particularly when it comes to water

quality, trawl and pull zones, and sea grass beds issues. He said Gary Graham and Tony Reisinger continues to offer TED compliance training. They have trained over 350 shrimpers around the Gulf and they will have a TED law enforcement work shop on TED compliance in Biloxi next week.

B. Fluech reported Louisiana may be hosting the next National Sea Grant Fisheries Extension Network Meeting. They are also having a fisheries and aquaculture technical in-service training that will be held April 20-23 in New Orleans and this is geared towards processors, anybody in the seafood industry, extension agents, those who will be working with various fisheries stake holders to learn more about processing HACCP food safety and other outreach issues. Finally, Julie Lively showed a video from the DISL of tiger shrimp feeding on blue crab. This showed their aggressiveness and immortality of blue crabs associated with the tiger shrimp.

Update on Marine Recreational Information Program (MRIP) Program Activities

G. Colvin gave a presentation on the MRIP Overview, Priorities and Status. He explained the MRIP Approach and the governance by teams organized under an Executive Steering Committee. He stated that from the beginning the MRIP Executive Steering Committee and Teams have been inclusive of the partner and stakeholder communities, the primary data customer communities, to help ensure this meets expectations and needs. He reviewed the make up of each team, the milestones of the program and then discussed the new mail effort survey and the transition plan to implement that survey. He then reviewed the current MRIP Priorities, the expansion of the Communications Team, and the regional implementation. G. Colvin's presentation may be obtained via request from the GSMFC office. A more detailed report of the MRIP Program Activities is under the FIN minutes.

L. Sharpe gave a presentation on the expanded Communications approach which is driven by the overall MRIP shift from research to implementation. She said they will consist of representatives from regional partner organizations and NOAA programs beyond MRIP at the federal level and include existing networks to improve delivery of MRIP-related communications and outreach and to tailor communications at the regional level.

L. Sharpe stated the goal of these regional teams is to take advantage of existing networks, not set up a whole new team just for the sake of having one. The overall expansion has four key goals: 1) improve flow of national messages to regional audiences; 2) improve coordination among the various parties concerned with recreational fishing outreach; 3) better understand regional MRIP outreach messaging needs; and 4) develop communications tools that meet regional needs. With this approach the national team will still take on the primary responsibility for the high level national messaging pathways like the MRIP newscast and the website, but they are also taking on the responsibility of establishing and supporting the regional teams and developing products and tools for those regional teams. Then the regional teams will use their existing regional networks to distribute communications products and outreach materials in their areas and provide feedback. The Communications 2015 Priorities is to deepen engagement and understanding of the MRIP process among internal and external audiences and partners; continue expansion of the CET to incorporate regions; develop regionally targeted communication materials, conduct field visits to gather feedback and to support communications related to the new angle effort.

M. Hansen asked who gets surveyed, how is the household identified, what species are being surveyed, state or federal waters, and how does this information fit into the overall picture of determining stock assessments. **G. Colvin** stated the approach to developing recreational catch estimates for the Atlantic and Gulf Coasts and mostly everywhere else is a two part survey. There is an angler intercept survey at which anglers are interviewed at the end of their fishing trips and that gives information about the catch rate. They ask how many of each species did they catch, release, land, and when possible examine the fish, measure, weigh, etc. So the intercept survey is the catch part per trip. Then there is the coastal household telephone survey which will become the mail survey he discussed earlier, to get an estimate of the number of trips that were taken. Ultimately, more or less the product of the catch per trip times the number of trips generates the overall estimate of catch. That is the basic framework. He stated there is more detailed information in the briefing book. He also stated they could provide more technical briefings at a later date if the Commission would want that. He said the post office delivery sequence file will be used to pull a random sample that is free of bias. He said they will then match the random sample with the states fishing license databases. So both the delivery sequence file and the registry are necessary components for this overall design, they work well together. That gives the trip estimate.

G. Colvin stated that for the other part of the question, how does the catch data get used, catch data, particularly data that reflect the level of removals from the population is a fundamental piece of most fishery stock assessments. You need to know what was removed. The MRIP estimates that they have been doing overtime, and the MRFSS estimates that preceded them are all part of this longterm database of fishery catch statistics that are a cornerstone of stock assessments for those stocks that have a recreational fishery component. The new MRIP estimates will take over from that and that is why there is a need to get them in the same currency so that there is a consistency to those over time. The last part of the question dealt with state or federal waters. The way the surveys are designed is to get both catch and effort data from all fishing that goes on in saltwater. It has generally been a partnership exercise, even when it was under MRFSS and now under MRIP, they are working in partnership with the states to get a complete estimate, species by species, state by state stratified, generally at the state level of catch from all salt water fishing.

C. Blankenship asked why the angler registry information is just now being used. He said they have been collecting that for several years and forwarding that but this is the first time it is being used. **G. Colvin** said it has taken the last seven years to complete the various studies and come up with a design that can be applied coast wide.

R. Pausina asked what the overall annual MRIP budget is. **G. Colvin** stated with the additional funds they are getting for MRIP, above and beyond the base funds for surveys, is around \$9-10 million, it varies. Base funding is approximately \$20 million. **R. Pausina** stated that it is mind boggling to go back to a U.S. mail survey. He feels it is a step backwards. **G. Colvin** said they feel it will be effective. They do have cash incentives which induces people to return their surveys quickly.

Report on Oil Spill Workshop –

L. Graham, MASGC, reported she is one of the four specialists that have been hired by the Sea Grant Programs in the Gulf of Mexico to do outreach related to the oil spill - to share oil spill science with the coastal stakeholders. She thanked the Commission for allowing them to have the

work shop in conjunction with the annual meeting. Around 65 participants attended and reporters from the media also attended. She said they had four speakers followed by Q&A sessions.

L. Graham reported Dr. Murawski from the University of South Florida discussed fish health and gave a presentation on his fish lesion work. They have seen a decline in lesions since 2010 but they cannot directly link that to the oil spill because there are so many other factors that might be in play. He also talked about PAH, Polycyclic aromatic hydrocarbons that are found in oil. They are studying those levels and fish liver and bile and that is because those PAHs accumulate in those fatty tissues and for the research that they have done so far, they saw that it is linked to an episode not necessarily chronic affects so it's probably not from natural oil leaks but an actual episode that happened. She said they feel that about 4-10% of the oil that leaked during the oil spill are trapped and remains in those deep sea sediments. Also, he looked at recruitment of reef fishes and they saw some decline in those species after the spill but recruitment was back up to the typical levels about 3 years post spill. Dr. Murawshi is part of a group that has been funded for the next 2 years from the Gulf of Mexico research initiative to do some gulf wide fish survey work and this is all around the gulf even including Mexico.

L. Graham reported Dr. Ken Heck with DISL and UA gave a presentation on two studies he has been involved with. The first one looked at wetlands in Alabama. The wetlands in Alabama did not get a lot of oil so these were lightly oiled wetlands. They had some data from before the oil spill and they compared that to after the oil spill and they did not see a significant difference in recruitment in those samples that they took. He also did another study looking at sea grasses. These were in Louisiana, Mississippi and Alabama and again they had data from before the spill and compared it to data after the spill and they did not see any shifts in catch per unit effort or species composition. So with both of those studies they did not see short term impacts in those areas with those habitats but he did stress the importance of looking for long term impacts. He also talked about the mismatch in studies. The two studies that he talked about show that there were not a lot of negative impacts to those population levels during the short term but if the lab experiments that look at oils impact on individual species do see negative impacts. Dr. Heck is also funded by GOMRI for the next two years to do some work with different groups that will be looking at biodiversity studies.

L. Graham said the third speaker was Dr. Tracy Sutton from NOVA Southeastern University and he discussed the different levels of the pelagic zone and how they interact with some species. Even though the zones are away from each other there are species that use each of the zones throughout their life span. He discussed sampling in the different depths and have collected over 300,000 samples. They have identified 717 species which about half of those that are found in the Gulf of Mexico. They found 27 new species that had never been discovered before. Also, 60 species that were reported in the Gulf of Mexico for the first time. Dr. Sutton is also among the researchers that have been funded by GOMRI for the next two years so he will be able to continue this work which is very important because it will give baseline data in this zone where a lot of data have not been collected before. He is going to continue that sampling and really look at the connectivity among those pelagic zones.

L. Graham reported Dr. Joye from the University of Georgia talked about dispersants and how they work and why they are used. She then highlighted some peer reviewed studies that talked about the impact that dispersants could have to the food web.

L. Graham said they did have great question and answer periods. She said they also did evaluations and all feedback will be included in the publications on the oil spill science and at science seminars. She asked if anyone has any feedback on the presentations to please contact her.

D. Donaldson stated the Commission has hosted various workshops in conjunction with the annual meetings over the years and will continue hosting workshops as it is a good opportunity to bring other people in to allow Commission meeting participants to interact on different issues.

NOAA Fisheries Southeast Regional Office

R. Crabtree reported on personnel changes at the regional office. He said they will be involved in the TED compliance workshop being held next week. He said there were a few years where they observed poor TED compliance but feels it is at a pretty good level but they must remain vigilant to keep it up. **R. Crabtree** reported HMFS has been engaged in a strategic planning exercise and the plan has been distributed to the Commission and it is posted on their website. He said this is a high level strategic plan and it focuses on how the region can operate more effectively and more efficiently in this time of budget uncertainty. He discussed the five different challenges that they think they will face over the next year: increased demand for Endangered Species Act and Essential Fish Habitat consultations; anticipated influx of large-scale Gulf of Mexico restoration projects funded by the Deepwater Horizon Oil Spill settlement agreements and other legislation; the changing regulatory landscape and desire for increased economic opportunities which touches on the amount of fish they are able to take; elevated scrutiny of the science supporting conservation and management decisions; and expectation to provide additional services with less resources.

R. Crabtree reported on the final rule that went to the federal register this week that makes adjustments to the accountability measures for the recreational red snapper fishery. These measures have been put in place at the council's request through an emergency rule this past season. There was a court decision that said the current accountability measures were not adequate and they are not doing enough to keep the recreational fishery within their quota. So these accountabilities that were put in place through emergency rule and made permanent is to maintain the current 20% buffer between the annual catch limit and the annual catch target for the fishery. It also contains a payback provision so that if the recreational fishery exceeds their annual catch limit they have to pay it back the next year. The good news is for the first time in several years in 2014 the catches stayed below the annual catch limit. The council held an emergency council meeting on March 3 and voted to increase the total allowable catch for this year. This is based on a new stock assessment that was presented to the council at their February meeting. The council's request would increase the total allowable catch this year from 11 million pounds to 14.3 million pounds which is by far the highest catch level they have ever had in the fishery. The goal right now is to go through rule making and try to implement that increase in the catch level before the fishery opens on June 1 so that can be factored into the seasonal computations for this year. He said he does not have preliminary season estimates yet but the goal is to have preliminary season estimates available at the next Gulf council meeting which starts March 30. The preliminary estimates will be contingent on a number of things. They will be contingent on the TAC increase actually going through. They will be contingent upon Amendment 40 which is the sector separation amendment, if that is approved or not. It will also have to make assumption about what the states' seasons are going to be. Amendment 40 is a controversial amendment that the council

has submitted for review, this is the amendment for sector separation which would establish two subcomponents of quota, one for federally permitted for hire vessels, anglers fishing off those vessels and one for anglers fishing off private vessels. The comment period on that ended earlier this week and they had over 17,000 comments which are being reviewed now. He said he expects they will make a decision to approve or disapprove by mid April. He said he also expects that at the next Gulf Council meeting they will continue their work on amendment 39 which is the regional management amendment that gave staff a number of instructions that will have to be incorporated into the new catch levels. He said he thinks depending on how quickly the council can make decisions, they will take final action on that amendment by possibly August but more likely October of this year. Amendment 28 will also be looked at and it looks at reallocating some of the quota to the recreational fishery. That amendment is being updated with new information, new catch levels and some new analyses that were requested. He said with that amendment, depending on how quickly the council can come to a decision they can potentially vote on that amendment in August or October for final action.

B. Allain stated in reviewing the minutes from the last Commission meeting, Representative Wiggins asked Mr. Croom to explain the disconnect between the states and NOAA on the red snapper issue. He said they talked about several things such as lack of communication with the anglers, their discontent with the small seasons which was nine 9 days last year and as stated could be less this year, and asked R. Crabtree to discuss this.

R. Crabtree said the season has been short and likely will be shorter than people would like it to be again this year, and that is largely due to the high catch rates. The council is looking at some things to potentially change fundamentally how the fishery is managed, most notably the regional management approach. If a reasonable plan is presented he feels the council will support the ideal. There are a number of disagreements on the plan particularly what would happen to the federally permitted charter boats. A lot of those vessels want to remain under the council's management so the council is going to have to figure that out. In terms of the communications side, he said they do have large turn outs of fishermen at council meetings and they periodically do question and answer sessions. He said there are disagreements between the states among themselves and with the federal government on the red snapper issue. He said the Council can not come to agreement on what to do either. He said he hears a lot of disagreements about the science on how many pounds of fish are caught but the assessments are done by the Council's Scientific and Statistical committee and that committee is comprised largely of state employees and university people.

B. Allain said the anglers are seeing more red snapper than they have ever observed but still only have four to nine days to fish. They feel they should have more days. **R. Crabtree** stated the stock assessments do show more fish are out there but there are more fishermen and they catch the fish quickly, hence the short season.

B. Allain stated back to the communication problem between NOAA and the anglers, he knows there is public comment at the Council meetings but could a regional meeting be held where the fishermen could be invited to express their concerns to you over what they see is the disconnect, separate from the council meeting. Have more outreach to the anglers so they can understand what you are trying to tell them and let them provide their own input. There has been no effort to do that. **R. Crabtree** said he is willing to do that but he said he does hear from and responds to a lot of fishermen.

D. Ellinor thanked R. Crabtree for reporting to the Commission as some here do not attend the Council meetings.

USFWS Region 4 Office Comments

G. Constant gave an overview on the USFW Region 4 activities. He stated the new Assistant Regional Director for Fisheries, Alan Brown, wanted him to relay that he sees his new tenure as an opportunity to continue to connect with the partners in the southeast region to work collaboratively on the issues the region is facing. He said they have traditionally been involved in inland fisheries, with freshwater, but now considering the rather large resources potentially available in coastal restoration in the Gulf Restoration Effort his intent is to connect more broadly to the regional partners in participating in the restoration efforts. He stated the Gulf Restoration Program DOI's representative for FWS is led by Linda Walker through a ten member team whose role is to facilitate the development of what DOI's interests are in response to the oil spill and the restoration efforts.

He said there are several things he would like to address the Commission about today. One being the review process. He said they have been through several rounds of review of NFWF proposals. Recently, there were 52 restore act proposals dealing with habitat such as living shorelines, oyster reef creation, marsh creation, monitoring, and better assessment of stocks. These are projects FWS traditionally have not dealt with and they ask for the Commission's and states' input on prioritizing these projects. He said they also noticed most of these projects were created independently that none seemed to be coordinated efforts. He said they discussed developing a process for more coordinated Gulf wide conservation efforts and asked for feedback on that issue.

C. Blankenship stated some of the states do collaborative monitoring projects but are limited in collaborative projects because of how the funding comes to the individual states and how it must be distributed. There are no mechanisms in place to do this.

K. Lucas stated the Gulf of Mexico Alliance does have regional habitat projects but agrees with C. Blankenship that the way the funding is distributed they are limited on working with other states on these beneficial use programs.

G. Constant also expressed FWS would like to facilitate discussions on freshwater availability throughout the region.

D. Donaldson stated they can certainly set up a session to discuss these regional issues at an upcoming Annual Meeting. Several of the Commissioners agreed this could be beneficial. **K. Lucas** suggested having the states' coastal zone management personnel at his meeting. **G. Constant** asked for input on topics to discuss and who should be invited.

NOAA Fisheries Budget Update

D. Donaldson stated the FY2015 NMFS budget is in the briefing book. He said congress passed the omnibus appropriations bill and overall it is a better budget than last year's. There is a slight increase from last year's funding, about 2%. There were increases in all the areas that affect the Commission's expansion of stock assessments and developing data collection or improving data collection. The regional councils and fisheries commissions was up about 2.5%. Fisheries statistics was slightly up, less than 1% but it was up, as well as GulfFIN. IJF was up about .5%,

enforcement was up over 3%, and SEAMAP was up by just a little they are not taking any cuts. He said while SEAMAP was up some, they were assessed taxes that were supposed to be taken out of all the programs last year but SEAMAP's was not deducted. So they did receive a cut and J. Rester worked with the state partners to look at ways to absorb those cuts. So SEAMAP had an overall 9.7% reduction.

The FY2016 budget is also in the briefing book and there are a couple things about the 2016 budget that are a bit concerning. They are proposing to consolidate even further some of the line items into fewer categories. The explanation from the budget people is that it gives them more flexibility to move money around. He said they currently have seven PPAs that the Commission is interested in and they are consolidating those into 2 or 3. **D. Donaldson** stated that he and the state directors will be meeting with the congressional delegation and the NMFS budget personnel to discuss these concerns. He said the other regional commission's Executive Directors will also attend these meetings because they have similar concerns.

D. Donaldson said there are some positive increases in the proposed 2016 budget for electronic monitoring, expansion of stock assessments, and fisheries management programs which have the potential to be beneficial to the states. He said they do not understand the rationale for the increase for an ecosystem science program, habitat EFH implementation, and increase in marine mammal and sea turtle section 7 and 10. This is about a \$30 million increase. The 2016 budget is in Tab E of the briefing book.

R. Crabtree stated as mentioned earlier, the increase in Section 7 is because they have a huge backlog for Section 7 consultations and they do not have the personnel to do these in a timely manner. He said he understands the concerns about the consolidations of the budget but he feels this is a good thing particularly when something happens like sequestration they have to cut essential programs, but have funding for other programs because of how the budget is structured. Consolidating will give flexibility to shift funding if needed.

D. Donaldson stated that is how it was explained to him but he still has concern that the funding would not go to the states. **D. Donaldson** asked if there are many recovery grants for marine mammals in the Gulf of Mexico. **R. Crabtree** said he would have to look into that.

K. Lucas stated she takes calls all the time for Section 7 consults because they are a permitting agency and asked how many FTEs are there in the southeast. **R. Crabtree** said he does not have a number for that because the decision has not been made on how they will allocate that increase and it is not all going to come to the southeast. He said they have gotten some new positions in the southeast as a result of coral listings that recently occurred. So they are going to create a new branch within the protective resources division to do coral work and they are going to get 4-5 positions either FTEs or contractors.

Discussion of Legislative Issues and Actions

Magnuson-Stevens Fishery Conservation and Management Act Reauthorization

D. Donaldson reported the House and Senate versions on the reauthorization of the Magnuson Stevens Act is in the briefing book under Tab F and G. He said no revisions have been made since

the last Commission meeting but stated the House is supposed to be taking some action in the near future. He will distribute any new versions for comment when they become available.

D. Donaldson reported there are four different red snapper bills under Tab H, I, J, K in the briefing book. The first is S. 105, Red Snapper Improvement Act which was sponsored by Senator Vitter. It was introduced earlier this year and essentially states that if each gulf state agrees to a fishery management plan, the states would have exclusive authority to manage and conserve red snapper in state and federal waters and have appropriate funding to carry out the necessary stock assessments and data collection, and funding shall be provided by the Secretary of commerce.

D. Donaldson reported HR. 3099/S. 1161, Gulf of Mexico Red Snapper Conservation Act is a House and Senate version of this act introduced last year and it essentially transfers the authority of red snapper to the Commission and charges the Commission to develop and implement data collection and assessment procedures via a FMP.

D. Donaldson reported HR. 4465, Supporting New Avenues to Protect Our Fishermen's Resources Act or SNAPR Act that essentially supports new avenues to protect the fishermen's resource act. It repeals the requirement to establish catch limits for Gulf of Mexico red snapper.

D. Donaldson reported HR 981, Red Snapper Regulatory Reform Act was introduced by Representative Byrne of Alabama and it addresses repealing and flexible quota systems for the red snapper fishery creating jurisdictional parody among the five states. It would give the states that do not have 9 miles of state waters, 9 miles of state waters, improving stock assessment and data collection activities and updating the processes and qualification for Gulf Council appointees.

M. Hansen asked about the bill that tried to transfer red snapper regulatory authority from the Council to the Commission. **D. Donaldson** stated that was sponsored by Representative Miller and a senate bill by Senator Landrieu but there has not been any further action on that or revisions to that. **C. Blankenship** asked if HR3099 and HR4465 were the only current bills and **D. Donaldson** said yes.

Approval of Revised Commission's Bylaws and Operating Procedures

R. Pausina reported Drue Winters, staff attorney for LDWF, has been updating the Commission's Bylaws and Operating Procedures. This item has been discussed before and most changes have been incorporated. **D. Donaldson** stated the latest version is in the briefing book. Questions were raised about the make-up of the Executive Committee. It is proposed that the Executive Committee consist of the five state agencies. After discussion, it was proposed the Executive Committee consist of representatives from the five state agencies and the Chairman. The Executive Committee makes decisions on funding and that is the reasoning for having a representative from each state agency on the Committee. After further discussion, it was decided to table this discussion until next meeting or during conference calls.

C. Nelson stated D. Winters was supposed to provide an example of the Financial Disclosure form the Commission will use but he has not received it. He asked how involved would this disclosure be. It was suggested to use a form similar to the Council's. This item will also be discussed before or at the next meeting. **R. Pausina** will ask D. Winters to provide a sample of the Financial

Disclosure form that was discussed at the previous meeting and he will ask her to attend the next Commission meeting to further discuss this agenda item.

Status of Executive Committee Actions

D. Donaldson reported the Commission directed staff to revise/update the Commission's website. He stated J. Ferrer is currently working with the coordinators on redesigning the web site and the changes are in the briefing book. **D. Donaldson** asked the Commissioners to contact him or J. Ferrer with any changes or comments. **C. Blankenship** stated he will send J. Ferrer a different logo to use for Alabama.

D. Donaldson reported the Commission directed staff to develop a salary comparison survey. He said he will send a revised spreadsheet to the state and federal representatives with the descriptions/salaries of the current positions at the Commission and ask how the salaries compare to their positions. The results will be presented to the Executive Committee in November.

D. Donaldson reported the Commission directed staff to research hiring an attorney or having an attorney on retainer. **D. Donaldson** stated that in the twenty-five years that he has been employed by the Commission there has only been two or three instances where an attorney had to be hired. Due to the expense of having an attorney on retainer or contract, D. Donaldson suggested to only hire an attorney on a case by case bases. The Commissioners decided not to hire an attorney on retainer. An attorney will be hired only if the need arises.

Draft Amendment 6 to the 2006 Consolidated Atlantic HMS FMP for Management of Atlantic Sharks

L. Hogan gave a presentation on the Draft Amendment 6 to the 2006 Consolidated HMS FMP. She stated she will discuss the recent SEDAR 34 Stock Assessments and the alternatives that will be used in this rule making. SEDAR 34 was a stock assessment for small coastal sharks. Based on the results of this stock assessment a federal register notice was published regarding the status of Bonnethead shark and Atlantic Sharpnose Sharks. During this assessment scientists determined that genetic information clearly indicated that these two stocks of sharks should be split into an Atlantic and Gulf of Mexico stock. However, due to the limited time to do four separate assessments, there was agreement to continue with a standard assessment of both species as a single stock. Based on the results of SEDAR 34 they recommended splitting both stocks into a Gulf of Mexico stock and an Atlantic stock.

L. Hogan then reported on the range of alternatives to consider. The first thing they considered was permit stacking. Permit stacking is where a fisherman holds multiple permits and they could use multiple permits on one vessel and therefore they get multiple trip limits. So they looked at three alternatives. The first one was the no action alternative, actually the preferred alternative is to not implement permit stacking. The second alternative was implementing permit stacking where they would have 2 permits which would allow the fishermen to harvest 2 trip limits or 72 sharks per trip. Then thirdly, if a fisherman had 3 permits they could use those 3 permits concurrently and harvest 3 trip limits which would be 108 sharks per trip. Again the preferred alternative is no action, to not implement permit stacking.

The next set of alternatives relates to commercial shark retention limits. During the pre-draft stage they received comments requesting an increase in commercial trip limits instead of permit stacking. Fishermen were worried about the inequality of permit stacking that it would only favor those who had multiple permits so they thought maybe a better ideal would be to increase trip limits for all of the fishermen. So they are considering a series of alternatives related to commercial trip limits. The current retention limit is 36 large coastal sharks, other than sandbar sharks, per trip. That was implemented in Amendment 2 in 2008. They based that trip limit on the number of sandbar sharks that would be discarded dead from the number of large coastal shark (LCS) trips that were expected to interact with sandbars. So as the trip limit increases for large coastal sharks they had to decrease the sandbar shark research quota to account for sandbar sharks that might be interacted with on those LCS trips. She said they are currently preferring the alternative of 55 LCS per trip limit.

L. Sharpe reported the next set of alternatives deal with Atlantic and Gulf of Mexico regional and sub-regional quotas. She said Gulf and south Atlantic fishermen have been suggesting different shark season opening dates based on sub-regional differences such as availability of sharks in different regions. For example, in the Gulf of Mexico the fishermen in the western gulf would like to fish around the religious holiday Lent and the eastern Gulf of Mexico fishermen generally like to have the season open on January 1. She said they are considering a number of options. She said they are looking at implementing sub-regional Quotas in the Gulf of Mexico. They are considering the breaks for the sub-regional quota at the 88° line and the 89° line. They are looking at dividing the Blacktip aggregated LCS and the Hammerhead quotas using data from Gulf FIN from 2008-2013. They are not proposing to modify small coastal shark regions, they will keep that as one regional quota. They are also considering prohibiting harvest of hammerhead sharks in one of the Gulf of Mexico sub-regions. She showed a map of the current preferred alternative for Blacktip aggregated large coastal and hammerhead sharks. She said in determining the percentage of quota that each sub-region would receive for a given management group they calculated the total landings from 2008-2013 using Gulf FIN data and multiplied that percentage by the 2014 management group quotas.

She said even though they are proposing to divide the region into a western gulf and an eastern gulf, they are proposing to keep the quota linkages for aggregated large coastals and hammerheads in the eastern gulf. They are proposing to remove that linkage between aggregated LCS and hammerheads in the western gulf. The reason being is because 99.4% of the hammerheads are caught in the eastern gulf. Basically .5% are caught in the west so once that is split it would be a very small quota making it hard to monitor. So they would prohibit the harvest of hammerheads in the western gulf and this is their preferred alternative.

She said as stated before, the small coastal quotas would not be divided into sub-regions, this would be one overall quota. The current Gulf of Mexico non-blacknose SCS is 45.5 metric tons. They are currently preferring to increase that commercial base quota to the 2014 adjusted annual quota of 68.3MT. They are doing that because there were some uncertainty in the SEDAR 34 stock assessment results and they are proposing using the TAC on current landing as the base. They also have a range of alternatives from maintaining the current base quota and increasing the commercial quota to 2 times the current limit.

The final set of alternatives deals with modifying the vessel upgrading restrictions. They are proposing to remove the current upgrading restriction for shark limited access permit holders. This preferred alternative increases the flexibility for fishermen when buying, selling or transferring their limited access permit. They feel the current management measures in the shark fishery including trip limits really eliminate the need for upgrading restrictions. Also, the New England and Mid-Atlantic councils are considering initiating action to modify their upgrading restrictions as well. For consistency purposes, removing the upgrading restrictions for permit holders are being considered. This would not be applicable to swordfish permits. Swordfish permit holders would still have the same upgrading restrictions.

The proposed rule was published on January 20, 2015, public hearing are being held through March 2015 and the comment period ends April 3, 2015. The target effective date is summer 2015.

K. Lucas and **C. Blankenship** expressed concern about the quota line being through the state of Mississippi instead of one border or the other. **L. Sharpe** said they consulted law enforcement and this was determined by where the shark fishery occurs. **C. Blankenship** said he will send comments in on this.

Interjurisdictional Fisheries Program

S. VanderKooy reviewed the IJF Program Activities that were in the briefing book

Spring 2015 IJF Activities

FMP Revisions

He said they continue to work on redefining the structure of the IJF program and the format of documents developed in the program. A white paper has been submitted to the Commissioners for consideration and discussion. **The Commissioners discussed the proposed changes to the IJF Program and agreed that the approach described in the White Paper should be the new direction of the program.** At this time there are still three management plans in draft awaiting final action or review. There are two additional species that have been identified for Profile development and their format will be dependent on some of the decisions made during and after the March meeting.

Gulf Menhaden

The fifth revision to the Gulf menhaden FMP is awaiting final action from the Commission. After the meeting last October, the Commission agreed to release the draft for a 45-day public comment. All submissions were received just before Christmas and provided to the Commissioners for their consideration. The need to talk about the 'FMP' format was noted but without any additional substantive comments, the document was finalized for final review and discussion at the March, 2015, Commission meeting.

Blue Crab

Review of the third installment of the Blue Crab FMP has been completed by the TCC and has been distributed to the Commissioners for their review and discussion during the March, 2015, meeting. Pending the results of that review, the document may be released for a short public comment period but may undergo significant changes in format depending on the program discussion. It is hoped that the document can be finalized sometime later this spring or early summer.

Gulf and Southern Flounder

The revision to the Gulf and Southern Flounder FMP was released to the TCC for review but was pulled back until the IJF program discussions could occur. The document has been modified in draft form to fit the proposed changes outlined in the white paper. Depending on the discussions by the Commissioners at the March, 2015, meeting, the document should be able to restart its review with the TCC in hopes of completing it sometime this summer.

Tripletail

The Tripletail Technical Task Force (TTF) was organized and held their first meeting in New Orleans in the end of February. They reviewed the strawman Table of Contents and various writing assignments were agreed upon. While the format of the document is yet to be decided, the drafting has begun in the meantime. The assumption is that the data related to this fishery and species will be somewhat limited so a standard Species Profile will be the path at this time. The document will highlight the data needs and prioritize research opportunities.

Atlantic Croaker

Over the summer, the Croaker TTF will be identified and an organizational meeting will be held in late summer or early fall to start on the Species Profile. Again, the final format will be determined during or after the March, 2015, Commission meeting.

Law Enforcement Committee (LEC)

The GSMFC Law Enforcement Committee (LEC) continued to work toward regional enforcement goals. The IJF Program continues to support enforcement activities in any way they can with a limited budget. The LEC and the Gulf of Mexico Fishery Management Council's Law Enforcement Advisory Panel (LEAP) are preparing to revise the *Annual Law Summary* (red book), the *Rules and Regulations Officer's Pocket Guide for 2015-2016*, and the 2014 annual *License and Fees* publication.

Crab Subcommittee

The Crab Subcommittee met with the Diamondback Terrapin Work Group in Lafayette, Louisiana last month. Their meeting was intended to begin the necessary dialog with the terrapin experts and share the state efforts related to crab trap interactions. Bycatch issues related to terrapins are a major concern among a number of NGOs, NOAA, the states, as well as seafood certifying bodies,

and it is hoped that consolidation of the states' work will aid in reducing some of these concerns. The draft terrapin white paper was distributed and several of the state sections were updated after talking with the work group. The Subcommittee held their regular spring meeting the following morning. A report on their meeting was provided to the TCC.

Otolith Manual Revision

The Otolith Work Group, the IJF staff, and the Atlantic States Marine Fisheries Commission (ASMFC) staff are continuing to revise the age and growth manual, *A Practical Handbook for Determining the Age of Gulf of Mexico Fishes*. The workgroup met last fall to start the revision and will meet again in early April. In addition to updating the Gulf's species and techniques, the ASMFC has developed about 25 species accounts of their own to add to the joint effort. Several new techniques are being added to the protocols section as well as modifications to the shared Gulf and Atlantic species. The new revision should further help standardize age-and-growth techniques within fisheries science.

Menhaden Ageing

Late last fall, the state agencies' FIN processors attended a training session at the NOAA Beaufort Lab to cross-train on reading Gulf menhaden scales. There have been several initiatives to begin collecting biological data on menhaden from the fishery-independent samples in a few states. The intent of the training was to share the knowledge that NOAA staff have acquired over 40 years with the state agency processors. During the completion of the Gulf Menhaden Stock Assessment (SEDAR32A) and the revision to the Gulf Menhaden FMP, it was determined that the age composition of the menhaden population outside the commercial fishing grounds was needed for future assessments. The ASMFC is conducting a similar training exercise based on the Gulf's initiative. The IJF coordinator attended the ASMFC's session at the NOAA Beaufort Lab last week and shared the Gulf's experience with their processors. About a dozen state reps from the Atlantic participated and read Atlantic menhaden scales. Both the Gulf and the Atlantic states have developed reference scale sets which are currently in circulation among the state agencies as part of the quality control efforts and additional training which takes place at the annual processors' meeting.

Other Activities

The IJF coordinator is serving on the Audubon Nature Institute's Technical Advisory Committee to develop a "G.U.L.F. Standard" in their efforts to develop a better certification standard for the region. The coordinator participated in several other invited meetings.

S. VanderKooy stated the Gulf Menhaden FMP has gone through public comment, gone through the revision process and is ready for action by the Commission. C. Nelson moved to accept the Gulf Menhaden FMP. K. Lucas seconded and the motion passed.

S. VanderKooy stated he provided a White Paper via email (in briefing book) on updating the format and renaming the Fishery Management Plans to Management Profiles. He said they would like to start with a biological profile, go to a management profile and if requested, go to a fishery

management plan. Part of the overall reason for this change is to make these documents electronic and it will be more cost effective. He is also proposing to remove a lot of the “boiler plate” information i.e., list of federal treaties, legislative acts, licenses and fees, habitat profile, etc. He said that information has already been published and feels it does not need to be included in every plan. He said they are also proposing to develop a separate habitat profile for the Gulf of Mexico which would describe in detail offshore and inshore habitats, state by state, estuary by estuary and update it continuously.

S. VanderKooy said the Blue Crab Fishery Management Plan has been reviewed by the Commission and requests to send it out for public comment. He said the Gulf and Southern Flounder FMP has been reviewed by the TCC, they withdrew it and would like to resubmit it in the new format if approved.

C. Nelson moved to distribute the Blue Crab FMP for public comment. K. Lucas seconded and the motion passed.

C. Nelson moved to reformat the Gulf and Southern Flounder FMP and redistribute it as a management profile to the TCC. K. Lucas seconded and the motion passed.

R. Pausina stated Louisiana will not be participating in the IJF Program or development of FMPs.

SEAMAP

J. Rester reported that since the last Commission meeting, SEAMAP has completed the Bottom Longline Survey, Vertical Line Survey, Fall Shrimp/Groundfish Survey, and the Winter Plankton Survey. This year begins the thirty-fourth year of SEAMAP sampling in the Gulf of Mexico.

The SEAMAP Subcommittee continues to work towards standardizing gears, station selection, protocols, and techniques as much as possible. The Subcommittee has been working with a contractor to review the current Bottom Longline Survey sampling design, the data collected, the sample sizes and the uses of the data (e.g. model based estimation vs trend analysis), in order to make recommendations for modifications that will provide consistency in design, spatial representativeness and robustness to funding changes. As part of the analyses, the contractor provided recommendations as to the number of observations needed to obtain different levels of precision for data collected from the survey.

This year SEAMAP will be conducting a variety of surveys. These include the Winter, Spring, and Fall Plankton Surveys, the Summer and Fall Shrimp/Groundfish Surveys, the Bottom Longline Survey and the Vertical Line Survey. Several states have received NFWF funding to conduct additional fishery independent sampling work. Since the NFWF projects will be using SEAMAP gear and protocols, the collected data will be managed by the Commission. NFWF funds will allow SEAMAP to fill in spatial and temporal gaps in current SEAMAP surveys since current funding levels do not allow for expansion of existing surveys.

The Commission continues to manage SEAMAP data and distribute the data to interested parties. The Commission has fulfilled six SEAMAP data requests since October.

R. Hendon asked if staffing is sufficient to handle the increased data loads now that three Gulf States are using NFWF funding for increased SEAMAP sampling. **J. Rester** said it should not be a problem. **R. Hendon** also commented that they are having problems with IT support from NOAA particularly with the SECS and FISCUS onboard systems. He suggested that if SEAMAP can find the funding, to add a staff member to handle these SEAMAP IT issues.

Sportfish Restoration Program

J. Ballard reported as the Program Coordinator he will be conducting a pilot study of the Gulf Artificial Reef Monitoring and Assessment Program (GARMAP) with the state of Mississippi, utilizing a draft standardized monitoring protocol that incorporates vertical line, side-scan/multibeam sonar, Chevron traps with GoPro cameras, and water quality sampling. This draft protocol is modeled after existing long-term monitoring programs, utilizing comparable gear types and methodologies where possible. The goal of this pilot study is to test the protocol's functionality, including site selection procedures, best order to deploy the selected gear types, usability of the selected gear types on the vessels available to the state agencies, average amount of time required to carry out the sampling procedure outlined in the protocol per site, etc. The first part of the year will be spent acquiring and building all necessary gear that will be utilized in the project, and developing a data-entry program that will be used to collect and distribute all the sample data back to GSMFC, where it will be housed. The remainder of the year will be spent field testing the gear and sampling protocol, and starting to collect standardized data on Mississippi's artificial reefs. The long-term goal of this effort is to develop a program that will provide standardized baseline data for artificial reefs across the Gulf of Mexico. This will allow states to assess impacts from natural and man-made disasters in the future, and to understand how their reefs are functioning over time, compared to natural reefs.

J. Ballard reported he is exploring funding opportunities to support the full implementation of the previously-mentioned GARMAP.

J. Ballard stated the GSMFC's and ASMFC's Artificial Reef Subcommittees are continuing to revise their 2004 publication of "*Guidelines for Marine Artificial Reef Materials: Second Edition*". At their joint meeting held in January, the two Subcommittees agreed to have all preliminary revisions back to him by the beginning of March. Once all revisions are received, a complete revised draft will be compiled by the Coordinator and distributed back to both Subcommittees for a final review with the goal of having the document complete and ready for publication by the end of the year. The new third edition will include updates to the reef materials covered in the second edition, as well as covering new materials that have been implemented in recent years.

J. Ballard reported Alabama has completed a second year of lionfish assessment dives under the Mississippi Bight Lionfish Response Unit project that was funded by Region 4 of the USFWS. In 2014, AL DNR was able to revisit sites sampled in the first year of the project, as well as four new sites, to assess any changes in the lionfish density and the native species assemblages. Mississippi DMR plans to conduct survey dives at sites in the western reach of the study area that they were unable to visit in 2013 due to some unforeseen staffing problems. Alabama is also developing a

new program that will assess the possibility of utilizing the diving public to conduct reef surveys through an Adopt-a-Reef program with a website for the public to enter their assessments of the reef sites, including density of lionfish.

The data collected by Alabama in this project gives where they stand in regards to the invasive lionfish population in northern Gulf waters, and how that population has changed over the last two years. He showed a map that shows all sites that had lionfish present and removed when visited in 2013 and 2014. The data also shows that lionfish are present at almost 100% of reef sites that are located in water depths over 100'. If funding allows continuation of this work over the next few years, the long-term goal is to provide much-needed information on how lionfish are impacting the native species assemblages, which will be useful when considering future management actions.

D. Ellinor stated they are working with Brian Clark on a similar concept that Alabama has that will be introduced in May at the Lionfish Awareness Campaign event in Pensacola. He suggested working together and maybe having all the data go to one place. He explained they will have a smart phone app and B. Clark will create new maps with all the artificial reefs that people can adopt and it will show what has been taken from those reefs. He stated they also hired Guy Harvey magazine out of Pensacola to make the new website for the "Adopt-a-Reef" program.

Fisheries Information Network

G. Bray gave a presentation on FIN which is the fishery-dependent data collection program that the Commission coordinates with the Gulf States. He stated FIN consists of two major components which is ComFIN (commercial component) and RecFIN (SE) (recreational component). He said that in 2014 for the recreational catch and effort they conducted over 67,000 angler interviews in Florida, Alabama and Mississippi. Much of that was due to increased funding that was provided by MRIP to address improving the accuracy and precision of estimates that came from that survey. He said there is a commercial trip ticket program in all five Gulf States. He said they are focused on improving the electronic trip ticket reporting system. The electronic reporting method provides a more efficient way to get clean data in a timely manner. They are working with dealers in all of the Gulf States to improve access to electronic reporting. They currently have over 850 dealers that are online providing data electronically. That equates to over 60% of the total commercial landings in the Gulf. The FIN data management system (DMS) is the data repository that provides end user access to data and user access to data results. They currently have over 30 million records loaded into the FIN DMS across a multitude of data collection programs. They have commercial trip data from 1985-2015. There is biological fish age data from 2002-2014. They have recreational catch and effort estimates in the DMS for the entire Gulf region from 1981-2014. He said they are currently working on some new end user query tools to allow for easier access to canned summaries and canned results for those recreational catch and effort estimates. The FIN DMS has been online and usable since the summer of 2002 and it also has a system that allows for access to confidential commercial data where approved by the states and the federal government. There are currently about 44 users with confidential data access privileges. In 2014 the Biological sampling program collected over 25,000 ageing structures from almost 20 species. It is targeted sampling and he reviewed the priority species. This is a targeted sampling program for both the commercial and recreational fisheries. He said they have provided data for recent SEDAR assessments.

G. Bray reported that for 2015 they have approximately \$6M in funding to support ongoing activities which includes the administration of FIN; recreational sampling including assisting with the LA Creel/MRIP benchmarking study; headboat port sampling; commercial trip tickets; and FIN DMS. He said that for the first time since 2002 they were not able to fund FIN biological sampling in 2015. He said funding Gulf FIN used to be able to allocate to support biological sampling represented a large portion of the recreational age structures that were used in the stock assessment process, and they are working to try to find dedicated funding to support this sampling in the future. So there is a significant chance there will be a gap in that dataset for the first time in about 12 years. He said they are also supporting and assisting with the administration and coordination of five MRIP projects. Two projects in Alabama focus on specialized surveys for red snapper data collection, one for the for-hire industry and one for private boats. They are assisting with a Louisiana research project that is looking to improve the quality of the data that is in their angler registry. They are working with the program in Texas on implementation of the iSnapper system for private recreational anglers. They are also working on the completion of a survey of recreational queen conch and spiny lobster anglers in Puerto Rico.

Aquatic Nuisance Species Program

J. Ballard reported the Fall Aquatic Nuisance Species Task Force (ANSTF) meeting was held November 5-6, 2014 in Falls Church, Virginia. He said in order to help the Region 4 USFWS AIS Program with their coordinator position transition, he took over administration of their AIS small grants program in 2014. The eleven projects that were selected for funding in 2014 are all progressing well, with the majority of the field work associated with those projects scheduled to take place in the spring/summer of this year. He is also working with the USFWS on the 2015 funding opportunity. In December, the RFP for 2015 was revised by the review committee made up of GSARP members and the Coordinator, and provided to the USFWS for distribution. The regional office of the USFWS is pleased with how smoothly the first year of having the GSMFC administer their small grants program went, and plans to continue with this new protocol over the next few years. In 2015 they are proposing to provide the Commission with \$260,000 to support projects and to administer the program, but the final funding amount will depend on the regional office's budget.

J. Ballard reported the Invasive Lionfish Control Ad-Hoc Committee (ILCAC) finished development of the "National Invasive Lionfish Prevention and Management Plan" (NILPMP), and he presented the final draft to the ANSTF at their fall 2014 meeting for final approval. At that meeting, the ANSTF decided the Plan would have to go through a 45-day public review in the Federal Register before they could take final action. In December, the Plan was placed in the Federal Register and all comments were forwarded to him. He is currently working on addressing the comments and hopes to have the document ready for final approval at the May 2015 ANSTF Meeting.

J. Ballard reported the GSARP has drafted a Guidance Document for 2015–2019, which is an update of its 2010–2014 Strategic Plan. This new document is currently being reviewed by the full Panel membership, and will be adopted at the spring 2015 meeting. The GSARP conducted a review and update of its Research and Management Priorities lists. These newly revised lists were

provided to the ANSTF at their fall 2014 meeting for consideration when they develop the national ANS research priorities list.

J. Ballard reported on the new introduction and range expansions. There was a report of a Marbled Pim in Miami, Florida which is the first time this species has been reported in this country. There were also two reports of African clawed frogs in Tampa and Miami, Florida which have not been reported in this country in almost a decade. There were also several species that were reported in new drainages within states in the Gulf and South Atlantic region: Blue catfish – Georgia, Bowfin – Georgia, Chinese mysterysnail – Georgia, Cuban treefrog – North Carolina, Florida, and Louisiana, Giant applesnails – Georgia and Mississippi, Sailfin catfish – Georgia, and Silver carp – Mississippi.

J. Ballard reported the Invasive Species Traveling Trunk have been utilized by over 30 different organizations ranging from federal and state agencies, universities, schools, and NGOs. He said that over the 31 months that the trunks have been available, they have been utilized for a total of 550 days. To date, the reviews received have all been very positive and the few suggested changes they received have been incorporated. These trunks are provided to the borrower at no cost, with the ANS program covering the shipping to and from the borrower's location.

J. Ballard reported the GSARP is hosting the ANSTF's spring 2015 Meeting in Fort Lauderdale, Florida. The Panel will hold its meeting on May 5th followed by the Task Force's Meeting on May 6-8, 2015.

Oil Disaster Recovery Program

R. Hode stated a complete overview of the ODRP is in the briefing book. He said the ODRP is in its final stages rapidly approaching a September 30, 2015 end date. He said as previously stated, there is virtually no chance of extensions for any of the activities under this program similar to those that were given under the post Katrina Grants. He said that since the last meeting four additional contracts have been added and those contracts resulted from a determination of the availability of unobligated funds. He said they have entered into contract about \$70,000 with the five Gulf States to develop marketing initiatives to support ODRP. He said currently they have 28 contracts or subawards in total. Eleven are completed, two have late end dates, fifteen of the twenty-eight subawards are scheduled to end June 30 and they received briefings on these during the ODRP at Tuesday's meeting. He said they have monitored the work that has been done under these contracts and most all of the work that was proposed under the grant is being done and being done fairly well. He said they have tried to determine if all funds obligated will be spent and at this point it seems \$6,000 has yet to be obligated. He said they may have one additional contract between now and September. He said they continue to work on the Great American Seafood Cook Off but as of now, funding has not been released for this project.

A. Miller reported on the Traceability component of the ODRP. This program started in March 2011 and came to end in 2014. For that time period they had about 1,310 participants and 82 enrollees (processors, distributors, and docks) that ended up tracing about 72 million pounds of Seafood through the supply chain. The program was successful in helping businesses achieve financial gains and to get market share and meet their market requirements. Some companies reported increases in business as high as 18-30%. It was nice to see the program was able to help different companies and businesses move forward in the market place. He said they had a number

of different partnerships primarily with the Gulf Seafood Marketing Coalition. They had a traceability commitment in place so that what was being promoted at the retail level was traced to ensure the product came from the Gulf of Mexico. They worked with different retailers such as H-E-B, Wegmans, Fairway Market, WinCo Foods, Hannaford, Rouses and Publix. They also worked on a pilot program with the state of Louisiana and their Louisiana Certified Wild Seafood Program again substantiating the claims that they had with their program making sure their product was meeting their requirements. They also had a partnership with the Mississippi Hospitality & Restaurant Association for a promotional program called "Every Shrimp Has A Tale" and that was with 50 restaurants and it was a unique program with a heavy amount of marketing, point of sale materials coupled with the electronic traceability, again to make sure that what was being promoted was from the Gulf of Mexico and getting it to consumers and consumers could see where that product was coming from. One other pilot project was for the Oyster industry moving from the paper based current traceability system to an integrated electronic program by adding a digital element. That was a good effort and it helped move things forward and the report is on the Commission website. He stated as this program is closing, the federal government has announced they will start traceability efforts and have produced a blueprint of the program.

A. Miller reported on the FINFO Program which is primarily a website that was launched last year at a seafood show in Boston. He said it started out with 24 species, 13 state species and 11 federally managed species. He said Phase 1 was the initial blueprint for the site, Phase 2 was identifying the 24 different species, and they are moving into Phase 3 which will add additional state and federal species. They are updating the site by adding the most recent data available. They are also incorporating different state initiatives such as the Audubon Nature Institute's Marine Advancement Plan, and including information on aquaculture throughout the region. They are working to develop a site content and maintenance plan so when the funding is greatly reduced in June, the states and Commission will have a plan to keep this up to date. They are also working with the states and the contractor, GCR, to have a communications plan in place.

Lyles-Simpson Award Recipient Selection for 2015

The Commission discussed potential candidates for this year's award. After discussion, C. Nelson moved to select Ellie Roche for the 2015 Lyles-Simpson Award recipient. R. Pausina seconded and the motion passed.

State Directors' Reports

D. Ellinor stated they will forego the State Directors' reports and asked the reports be submitted to the Commission for inclusion in the minutes. The reports are included under Attachment I.

Future Meetings

N. Marcellus stated the annual meeting will be held in conjunction with the Atlantic States Marine Fisheries Commission in St. Augustine, FL on November 2-5, 2015. ASMFC will be making the arrangements and all information will be distributed as soon as it is available. **N. Marcellus** also asked the Texas delegation to send her suggestions on the location of the March 2016 annual spring meeting.

Publications List

D. Donaldson stated this agenda item is informational only but said in discussions with the state directors it was decided to update the format for the annual report. D. Donaldson will send a template on the new format for the annual report as discussed with the state directors.

With there being no further business, the meeting adjourned at 3:10 p.m.

ATTACHMENT I

FLORIDA FISH & WILDLIFE CONSERVATION COMMISSION

Nick Wiley, Executive Director



DIVISION OF MARINE FISHERIES MANAGEMENT

Director: Jessica McCawley

The major responsibilities of the Division of Marine Fisheries Management include: (1) development and implementation of marine fisheries management and policies; (2) angler outreach and marine aquatic resource education; (3) commercial fisheries assistance; (4) the state artificial reef program; (5) monitoring compliance with the marine fisheries trip ticket reporting requirements through audits of applicable fish house records; (6) administrative penalty assessments for violations of specified fisheries regulations, and retrieval of lost and abandoned spiny lobster, stone crab and blue crab traps; and (7) issuance of Special Activity Permits. Highlights of staff efforts in 2013 [i.e., state fiscal year 2013/2014] are summarized below.

ANALYSIS AND RULEMAKING SECTION

The Marine Fisheries Management and Policy Development program develops regulatory and management recommendations for consideration by FWC Commissioners designed to ensure the long-term conservation of Florida's valuable marine fisheries resources.

The 2014 Florida Legislature passed one bill that allowed for four additional recreational license-free fishing days.

During the state fiscal year 2013/2014, the Florida Fish and Wildlife Conservation Commission (FWC) approved a number of amendments to marine fisheries rules contained in Chapter 68B of the Florida Administrative Code.

The Florida Fish and Wildlife Conservation Commission (FWC) moved forward to create a Gulf Reef Fish Data Reporting System that would help improve recreational reef fish data collection in Florida Gulf waters. This new system will help determine how many anglers are targeting reef fish in the Gulf. A sample of these anglers would be surveyed to provide more accurate catch and effort data for reef fish trips.

A Restricted Species Endorsement Exemption was created for Florida's veterans wishing to enter the commercial fishing industry. The endorsement waived the income requirements for a restricted species endorsement for Florida veterans wishing to enter into commercial fishing for one year for veterans meeting certain requirements.

The FWC implemented several management changes including prohibiting the importation of live lionfish into Florida. Management changes were developed in coordination with the Florida Department of Agriculture and Consumer Services (FDACS) and include:

- Prohibiting the harvest and possession of lionfish eggs and larvae for any purpose other than destruction;
- Prohibiting the intentional breeding of lionfish in captivity.

A recreational harvest season for gag grouper was established for Franklin, Wakulla, Jefferson and Taylor counties, Indian Pass Apalachicola Bay and the Steinhatchee River to be April 1 through June 30. For the rest of the Gulf of Mexico excluding Monroe County a July 1 through December 31 season was established to be consistent with the federal Gulf of Mexico Fisheries Management Council (GMFMC) season.

Consistency with the GMFMC was established for gray triggerfish. A recreational and commercial closure of June 1 through July 31 was established and a recreational two-fish daily bag limit and a commercial trip limit of 12-fish were established.

FWC Commission removed the venting tool requirement in Gulf state waters, making state regulations consistent with rules in federal waters.

A rule cleanup process has begun that will simplify rule language and improve enforceability. Nineteen chapters were amended in the first phase of this process and a general chapter has been created comprised of definitions and provisions that apply to all saltwater fishing.

Several changes to the recreational and commercial management of swordfish in state waters were approved by the Florida Fish and Wildlife Conservation Commission (FWC). Changes to state rules approved by the Commission will allow fishermen who participate in this new commercial fishery to land and sell their catch in Florida. Additional changes include designating swordfish as a restricted species and specifying hook and line as allowable gear for swordfish harvest in state waters. Several changes to state rules are also consistent with existing federal rules, including a change to the cleithrum-to-keel (see below) minimum size limit for recreational and commercial swordfish harvest.

OUTREACH AND EDUCATION SUBSECTION

The objective of this activity is to inform the public and to increase public participation in the management and conservation of Florida's marine resources by heightening their awareness of and personal responsibility toward these resources.

Outreach and education staff engaged 31,204 contacts during fiscal year 2013-2014 in the Gulf of Mexico region of Florida

Three Kids' Fishing Clinics (KFC) were conducted in coastal cities throughout the Gulf. A total of 869 youth attended the KFC's. All participating children received a rod and reel combo provided by Fish Florida! or purchased with donations from individuals and businesses from the hosting community. One weeklong saltwater fishing camp was conducted with a total of 11 youth participating in this program.

One *Ladies, Let's Go Fishing!* (LLGF) seminar was conducted with total of 68 women participating in the event. In addition to learning what FWC does to conserve fisheries resources in Florida, the participants at these events learned about how they can have a positive impact on Florida's marine resources and what they can do to promote fish conservation while fishing.

Three one-day events Women's Fishing Clinics targeting 51 current and future female recreational anglers were conducted. These shore-based clinics focus on the Sport Fish Restoration Program,

basic saltwater fishing skills (casting, knot tying, rods and reels, conservation equipment, terminal tackle, and lures/bait), how FWC functions to conserve marine fisheries resources (research, outreach, and management), catch and release techniques, and ways participants can support and be actively involved in the conservation of Florida's marine resources.

Two events were attended by 45 youth in the Cedar Key region. At these events the participants were provided with information about importance of marine habitats to coastal fisheries, how they as anglers can conserve fish resources and ways they can contribute to the overall enrichment of marine resources. The participants also conducted field sampling activities similar to what state biologists do to gather resource data for management.

Staff interacted with anglers at boat ramps, tackle shops, and other fishing related events to promote fisheries conservation, resource stewardship, and the Sport Fish Restoration Program. This work included giving presentations at various fishing club meetings in the region which resulted in 1,521 anglers and other resource users receiving information about marine fisheries conservation, SFR, and habitat conservation. Staff also provided this information to anglers at three large events targeting 27,791 attendees of these events.

Staff also engaged the public at five outdoor events to provide information to 859 participants of these events.

The following educational publications were made available to the public through numerous events. Most of these publications are also available online and, if so, the links to each publication are provided below.

- *Fishing Lines: An Angler's Guide to Florida's Marine Resources*
<http://www.myfwc.com/fishing/saltwater/publications/fishing-lines-magazine/>
- *Florida Recreational Saltwater Fishing Regulations (English and Spanish editions)*
<http://www.myfwc.com/fishing/saltwater/recreational/>
- *Fish ID Poster series by artist Diane Rome Peebles*
- *Sea Stats*
<http://research.myfwc.com/products/products.asp>
- *Catch and Release Techniques*
http://catchandrelease.org/Catch_and_Release_web.pdf
- *Florida Boater's Guides*
<http://research.myfwc.com/products/products.asp>
- *Kids Fishing Activity Book (Freshwater and Saltwater)*
http://myfwc.com/media/1316038/Fishing_Florida.pdf
- Monofilament Recycling and Recovery Program

<http://mrrp.myfwc.com/educational-materials.aspx>

COMMERCIAL AND RECREATIONAL REGULATORY OUTREACH

Through the efforts of this group, FWC will develop and distribute new informational tools, conduct presentations, and provide other services that are designed to improve the understanding of state and federal marine fisheries regulations and how they are changing over time.

The subsection, a team of three including a public information specialist, is currently developing new tools to make our management efforts easier to understand. One example is a new web-based and printable "Recreational Seasons Chart" that will allow the viewer to quickly determine which species are open or closed on any given day of the year. The team is also reaching out to recreational and commercial fishing organizations and charter boat captains, offering direct assistance with saltwater fishing regulations.

During state fiscal year 2013/2014, the FWC continued ongoing commercial and started recreational saltwater fisheries regulatory assistance activities.

Three commercial fisheries newsletters were prepared and a total of 45,000 newsletters were distributed by mail (also available on agency website). As many as 325,000 emails were prepared and sent, informing commercial license holders, law enforcement and commercial industry representatives of 35 agency press releases (also available on agency website). As many as 5,400 telephone calls related to commercial fisheries were received and answered and 7,200 emails related to commercial fisheries were received and answered. As many as 11,245 saltwater products license holders received the printed copy of the commercial regulations publication (also available on the agency website) thanks to Cummins.

Two editions (January and July) of the recreational regulation publication (650,000 each edition) were distributed to 2,000 license sales agents and FWC regional offices around Florida. The recreational regulatory position has given twelve presentations to fishing clubs, solved 1339 knowledgebase questions, and answered 1400 telephone and 1300 e-mail request.

Our public information specialist sends out, on average, 65 press releases each year on subjects including season openings and closures; Commission meeting updates; regulation changes; and events such as Kids' Fishing Clinics, Women's Fishing Clinics and Ladies, Let's Go Fishing! More than 150 media calls were responded to including calls from newspapers, local television stations, magazines, national television production companies, radio stations and more. Responses varied from supplying basic information to conducting live and recorded television and radio interviews.

Marine Fisheries is always involved in the agencies social media efforts, including helping craft posts and responses for Facebook and Twitter, providing photos for Flickr and video for YouTube. Three promotional videos were created with the assistance of the video editing team and FWRI staff on Ladies, Let's Go Fishing! (347 views since published Sept. 27, 2012); Kids' Fishing Clinics (84 views since published July 18, 2013); and how to remove a stone crab claw (13,120 views since published Oct. 9, 2012). These were featured on YouTube and on the MyFWC.com website.

STATE ARTIFICIAL REEF PROGRAM

The primary Florida Fish and Wildlife Conservation Commission state artificial reef program objectives are to provide financial and technical assistance to coastal local governments, nonprofit corporations, and state universities to develop artificial reefs and to monitor and evaluate these reefs.

During the period September 1, 2013 through August 31, 2014 seven artificial reef construction projects were completed in Florida utilizing funds from the U.S. Fish and Wildlife Service's Federal Sport Fish Restoration (SFR) Program and managed by the FWC Artificial Reef Program with the Division of Marine Fisheries Management. An eighth reef construction project using state funding was also completed.

Four of the seven (57.1%) new SFR artificial reef construction activities funded took place on the Atlantic Coast and three of the seven (42.9%) were off the Gulf Coast. On the Gulf Coast, three artificial reef construction activities took place in the Florida 'Panhandle' (Bay County, and the City of Mexico Beach); while one other took place off the Florida Big Bend located southwest of the mouth of the Steinhatchee River Northern Dixie County). On the Atlantic Coast three construction activities occurred off south central Florida (Indian River, Martin, and St. Lucie Counties) and one construction activity occurred off southeast Florida (Palm Beach County). There were also three artificial reef monitoring projects under way as of August 2014. These various projects are summarized below.

Bay County (Florida Panhandle)

Bay County deployed 48 concrete and limestone rock modules (about 120 tons total) to create 8 patch reefs placed around the inside perimeter of each of two permitted artificial reef area locations in state waters known as Small Area Artificial Reef Sites (SAARS) C and D respectively. Both 40 acre sites (squares 1320 feet on a side) were located in 71-77 ft. of water seven and nine nautical miles SW of the St. Andrews Bay entrance channel respectively. The \$60,000 project consisted of three primary module designs (48 total); with three at each of 16 patch reefs). One unit design was the Walter hollow tetrahedron unit about eight feet high with a ten foot base and with windows cut in the limestone studded concrete walls. The other two modular unit designs were incorporated into a single module unit that consisted of one three feet by three feet three disk layer concrete rock studded "ecosystem" reef attached to the top of a low profile ten feet long by 5 feet wide by three feet tall concrete grouper ledge module, with one long side of the module left open. Modular units were lowered by crane at their respective locations on June 26, 2014.

Dixie County (Florida Big Bend, Gulf Coast)

Dixie County deployed 900 tons of concrete culverts, other pre-cast concrete materials and multi-ton limestone boulders, approximately equally divided among 22 patch reefs. Deployments were made over a ten day deployment period beginning May 21, 2014 and concluding June 6, 2014. On each deployment trip, the contractor carried between 90 and 107 tons of material on the barge along with a crane. Each piece of material was lowered to the sea floor while the barge was held in position by an anchor and a small push tug. The patch reef complex was deployed at a depth of 25 feet in the 2,700 feet by 2000 feet Horseshoe Beach permitted area located approximately 10

nautical miles on a bearing of 239 degrees from Horseshoe Beach, Florida. This project had a federal share of \$69,047.67 and a state fishing license revenue match of \$20,952.32.

Indian River County (South Central Florida East Coast)

Indian River County on July 18, 2014 deployed 859 tons of concrete bridge decking, concrete culverts, box culverts and concrete light poles with materials divided approximately equally between two patch reefs located within the Indian River County Reef Site 2 permitted area. Each of the two patch reefs consists of concrete materials placed as a single pile (400 tons each) located about 200 feet apart from each other. The Reef Site 2 permitted area is a square permitted zone measuring one square nautical mile encompassing 745.7 acres, in federal waters off Indian River County. The permitted site center is located approximately 10 nautical miles on a bearing of 68° from St. Lucie Inlet. The patch reefs were located within the northeast quadrant of the permitted area at a depth of 70 feet and with a maximum vertical relief of about 16 feet. This \$62,091 project originally consisted of \$41,000 in SFR funds, \$12,091 in state match and a County cash match of \$9,000. A total of \$14,000 in state reimbursement was subsequently withheld from the County for placement of some materials outside the permit area in non compliance with the contract agreement and Army Corps of Engineers permit conditions.

Martin County (South Central Florida East Coast)

Martin County deployed 2,734 tons of nested concrete culverts (two feet-six feet inside diameter by eight feet long) along with concrete riprap, concrete poles and concrete cylinders to create six patch reefs placed in 72-75 feet of water at the South County permitted reef site, located eight nautical miles on a bearing of 125 degrees from St. Lucie Inlet. The patch reefs were located about 738 feet apart from each other. Patch Reef #11 (424 tons of concrete culverts) was deployed 7/28/14. Patch Reef #7 (490 tons of concrete culverts) was deployed 07/31/14. Patch Reef #8 (441 tons of concrete culverts, slabs and poles) was deployed 08/3/14. Patch Reef #10 (424 tons of concrete culverts with secondary material concrete slabs and poles) was deployed 08/07/14. Patch Reef #12 (490 tons of concrete slabs, cylinders and culverts was deployed 08/12/14. The sixth and final Patch Reef #9 (465 tons of four feet diameter to six feet diameter concrete cylinders and two to four feet diameter culverts) was deployed on 08/14/14. The total project cost included \$50,000 in federal SFR funds, \$50,000 in state saltwater license revenue funds and \$48,702.35 in County Funds.

St. Lucie County (South Central Florida East Coast)

St. Lucie County on July 21, 23, and August 14, 2014 constructed a single 1,500 ton patch reef within the St. Lucie County permitted Reef Site #4 (North County Near shore Site) located 5.6 nautical miles on a bearing of 61 degrees from Fort Pierce Inlet, Florida. The reef, placed in 57 feet of water, comprised three barge loads (490, 535, and 500 tons respectively) of mixed secondary use pre-cast concrete materials that included concrete culverts, light poles, and solid concrete cylindrical light pole bases. The project was funded with \$59,000 in federal SFR funds and a \$7,500 County cash match.

Mexico Beach, City of (Northwest Florida)

The City of Mexico Beach over a two day period (March 31 and April 1, 2014) deployed 58 modules of three different artificial reef module types across a depth range of 22 to 100 feet within five different permitted sites: Bell Shoals, Bridge Rubble, Bridge Span, North and South Sites, located in state and federal waters off eastern Bay County, Florida. The module designs deployed were eight feet tall Florida Limestone Tetrahedrons (33 units), low profile concrete grouper ledge reefs (three feet tall by eight feet by five feet) with a triple disk layer three feet diameter by three feet tall “ecosystem” reef attached to the top of the grouper reef (15 units) and 20 ton “super reef” modules (concrete and limestone sided tetrahedrons 17 feet tall, some with metal rebar steeples extending the vertical height to 25 feet (10 units). The project was funded with \$70,000 in federal SFR funds, \$50,000 in state saltwater fishing license revenues and a \$55,000 local cash match.

Palm Beach County (Southeast Florida)

Palm Beach County on July 29, 2014 constructed a single boulder reef composed of 943 tons of limestone boulders deployed off a large double anchored barge utilizing two excavators. The limestone reef, built in 30 feet of water was spread in a north-south orientation, some portions of the reef comprising a single layer of boulders, at other locations stacking of the boulders occurred to a maximum height of 11 feet. The County, utilizing its own funding, constructed an additional reef with a foot print of 125 feet x 100 feet immediately to the west of the limestone boulder reef with 413 tons of pre-cast concrete materials. Both reefs are located in the Juno Pier artificial reef site, three nautical miles on a bearing of 163 degrees from Jupiter Inlet. The project was funded with \$50,000 in federal SFR funds, \$10,000 in state saltwater fishing license revenues and a \$69,899 County vessel registration fee match.

Other Artificial Reef Construction Projects Utilizing State Funds

City of Carrabelle (Franklin County, Northwest Florida)

On June 17 and 18 2014 The City of Carrabelle in coordination with the non-profit Organization for Artificial Reefs (OAR) deployed 30 Florida Limestone Specials (limestone studded concrete walled hollow tetrahedron units, with a 10 foot base and a vertical height of eight feet) and one 20 ton Limestone studded concrete walled hollow tetrahedron reef module with a vertical height of 15 feet at the Carrabelle 10 mile permitted reef site south of Dog Island, FL. The units were distributed among four patch reef locations in the permit area at depths of 61-64 feet. Two additional super reefs paid for with private funding to serve as memorial reefs were also deployed. The project was funded by \$55,000 in state saltwater fishing license revenues, a \$12,000 cash match from the City of Carrabelle. Additional private donations of \$47,000 funded the memorial super reefs.

Artificial Reef Monitoring Projects (on going)

Fish Census Monitoring on the Hoyt Vandenberg

The FWC continued to fund the Reef Environmental Education Foundation (REEF) for the July 2014 completion of year four of a five year fish census monitoring effort of the 520-foot-long, steel-hulled, former missile tracking ship the General Hoyt Vandenberg , sunk as an artificial reef in 2009 six miles south of Key West. This monitoring project continues to document the changes in fish presence /absence and relative abundance and biomass over time at the Vandenberg artificial reef site and seven reference reef sites based upon single summer fish censuses at each location. The Vandenberg rests in 135 feet of water about six miles south of Key West at 24° 27.60’

N latitude and 81° 44.25' W longitude. A summer 2015 monitoring effort by REEF will complete the five year monitoring period.

Acoustic Tracking of Red Snapper on Artificial Reefs off Pensacola FL

The FWC Artificial Reef program provided funding to the University of West Florida to conduct acoustic tracking of selected reef fishes associated with modular concrete and concrete and steel units located in 110-130 feet of water in federal waters within the Escambia East Large Area Artificial Reef Site, 15 nautical miles south of Pensacola Pass. The work which began during summer 2012 was the project will conduct a multidisciplinary, process-oriented study using an acoustic array of 16 Vemco VR2 receivers deployed in a defined pattern over a 22 kilometer squared area to continue work on the ecological function of small artificial reef patch reefs deployed by the FWC in 2003. Twenty-five reef fish were be tagged and tracked over a three-month period to produce three-dimensional tracks of fish and estimate home ranges and factors effecting tagged fish. Results of this study will add to our knowledge of reef fish ecology on small-scale artificial reefs off the Florida Panhandle. The final report from this one-year monitoring effort is expected by May 2015.

Oriskany fish sampling for PCBs

The FWC and Escambia County continued sampling legal-size recreationally targeted reef fish (red snapper, gray triggerfish, red and whitebone porgy, vermilion snapper, gag, red, and scamp grouper) for PCB analysis (using skin-on lateral muscle tissue fillets) in compliance with requirements of the EPA risk-based PCB disposal permit for the ex-U.S.S. Oriskany (CVA-34), sunk as an artificial reef in 212 feet of water 22.5 nautical miles off Pensacola Pass on May 17, 2006. Between Dec. 14, 2006, and April 16, 2014, 12 reef fish sample collection events were completed, eight during the spring and four during late fall/winter. A total of 417 reef fish collected on the Oriskany have been retained for PCB sampling through April 2014.

Sampling results on 53 fish (5 scamp, 3 gag, 1 gray triggerfish, 9 red porgies, 20 vermilion snapper and 14 red snapper) caught on the Oriskany April 24-25 2013 as sample round 11 were analyzed for total PCBs and 208 congeners by the Texas A and M Geological and Environmental Research Group (GERG). Mean total PCB concentration of skin on lateral muscle fillet samples for vermilion snapper and red snapper, the consistently most commonly caught fish species, continue to remain below the 20 ppb EPA tier 1 screening threshold as has been the case for the last several years. Sample Round 12 specimens caught April 16, 2014 are currently at the lab undergoing analysis as of August 2014. These include 3 bank sea bass, 15 vermilion snapper, 5 whitebone porgies, 4 red snapper, and 2 red porgies. Tier one hook-and-line sampling for recreationally targeted legal size reef fish to assess PCB concentrations on the Oriskany Reef is expected to continue at least through spring 2015.

Additionally, 11 underwater visual assessments have been conducted on the Oriskany Reef over the past few years by FWC divers, confirming that the observed recreationally targeted species found on the Oriskany are well represented among the fish retained for PCB analysis. Visual observations by FWC divers also documented that the Oriskany Reef had settled into the sediments about 10 feet at 2.5 years post-deployment and sustained minor structural change to the exterior covering of the smoke stack at 3.5 years post-deployment following the tropical storm events of 2007 and 2008, respectively.

Assessment of User Activities on Artificial Reefs and Natural Reefs off Pinellas County, FL.

FWC has contracted with the University of South Florida to engage in a project utilizing passive acoustic listening devices to assess boating activity over and immediately adjacent to three artificial reef sites and their paired natural reef sites. This project is ongoing as of August 2014. Preliminary data from the acoustic listening devices indicate that the artificial reef sites are receiving significantly higher boating visitation activity than the natural reef sites. The draft final report is expected by August, 2015.

Comparison of reef fish communities on artificial and adjacent natural reef sites off Franklin County (Northwest Florida)

FWC contracted with the Florida State University Coastal Marine Lab to conduct reef fish population studies of artificial reefs and nearby natural reefs mapped using side scan sonar. The field work for this project concluded in August 2014 and work on a final project report has commenced.

MONITORING COMPLIANCE WITH THE MARINE FISHERIES TRIP TICKET REPORTING REQUIREMENTS THROUGH AUDITS OF APPLICABLE FISH HOUSE RECORDS

Monitoring the compliance with marine fisheries trip ticket reporting requirements ensures accurate fisheries information.

Four audits of wholesale dealers were conducted. Twenty-four wholesale dealers were visited to determine whether or not a detailed audit is necessary. Two hundred thirty-three wholesale and retail dealers received delinquent notices for failing to submit trip tickets within 90 days. Research into reported landings was conducted on three hundred fifty-seven wholesale dealers and commercial fishermen. Of these, ninety-three (93%) percent was for FWC law enforcement and staff and seven (7%) percent was for federal law enforcement.

Additionally, four audit reports were issued from prior year audit fieldwork. One report resulted in a substantial increase in the amount saltwater products one dealer reported in several prior years.

ADMINISTRATIVE PENALTY ASSESSMENTS FOR VIOLATIONS OF SPECIFIED FISHERIES REGULATIONS

Florida Statutes specify administrative penalties and license suspensions for violations of specific fishery regulations.

Twenty-three administrative penalties were assessed in FY 2013-2014 for a total of \$96,000. Penalties paid totaled \$11,100. Sixteen of the administrative penalties (70%) were for net violations; two (9%) were for unlawful harvest, purchase, or sale of saltwater products; one (4%) penalty was for major blue crab violations; one (4%) penalty was for major stone crab violations; and three (13%) were for other major violations.

During the 2013-2014 fiscal year, the FWC received eight petitions requesting informal administrative proceedings, and two petitions requesting formal administrative hearings. Two

petitions for informal administrative proceedings and one petition for a formal administrative hearing were dismissed. Four informal administrative hearings were conducted, and three informal administrative proceedings were conducted, where the petitioner elected the option to submit additional evidence for consideration in lieu of proceeding with an informal administrative hearing. There were no formal administrative hearings conducted during the 2013-2014 fiscal year. One petition for an informal administrative hearing and one petition for a formal administrative hearing were resolved by settlement agreement.

RETRIEVAL OF LOST AND ABANDONED SPINY LOBSTER, STONE CRAB, AND BLUE CRAB TRAPS

The FWC has two programs dedicated to removing lost and abandoned traps from state waters. The Spiny Lobster, Stone Crab and Blue Crab Trap Retrieval Program contracts with commercial fishermen to remove lost and abandoned traps from state waters during closed seasons.

The Derelict Trap and Trap Debris Removal Program provides a mechanism to authorize volunteer groups to collect derelict traps and trap debris during open or closed seasons.

Blue crab, stone crab and spiny lobster have a number of trap restrictions and/or tagging requirements. Trap retrieval programs were conducted with revenues paid from fees received by these fisheries. During the 2013-2014 fiscal year, 43 trap retrieval trips were conducted (29 trips for stone crab and lobster; 14 trips for blue crab) where a total of 5,202 traps (4,208 stone crab and lobster traps; 994 blue crab traps) were retrieved for a total expenditure of \$119,989. Additionally, 11 authorizations were issued for volunteer derelict trap cleanup events, resulting in the removal of 268 traps (one cleanup event was canceled, and one event did not provide a report).

ISSUANCE OF SPECIAL ACTIVITY LICENSES

The marine fisheries special activity license program issues licenses for activities that require a waiver of marine fisheries regulations.

Two hundred eighty-three Special Activity Licenses were issued, 46 license amendments were issued, two applications were denied, and two applications were withdrawn. Thirty-seven percent (104) of the licenses issued or amended were for scientific research, thirty-nine percent (110) were for education and or exhibition, and 12 percent (35) were for redfish catch, hold and release tournament exemption permits (the remainder were for stock collection and release (23), aquaculture brood stock collection (6), and gear innovation (1)).

FLORIDA FISH AND WILDLIFE RESEARCH INSTITUTE:
2013/2014
Director: Gil McRae

FINFISH

The Florida Fish and Wildlife Research Institute exists to provide timely information and guidance to protect, conserve and manage Florida's fish and wildlife resources through effective research and technical knowledge.

We continued our efforts to monitor and characterize the recreational snook fishery in Florida and to conduct studies to establish movements and exchange rates between groups of snook inhabiting freshwater, estuarine and coastal reef habitats and also between the major estuarine systems. We also expanded our biological sampling of snook for age and reproductive status into riverine and offshore areas not previously sampled. Monitoring of spotted seatrout courtship sounds at a key spawning site was continued and a pilot project to evaluate red drum spawning sites and site fidelity off the mouth of Tampa Bay was continued, using a similar combination of acoustic telemetry and passive acoustic monitoring as used in our spotted seatrout spawning studies.

Studies of Florida's permit fishery were initiated, with an emphasis on developing a better understanding of the fishery and examining population movements and stock structure using both conventional and genetic tagging studies. Our studies of movements, habitat fidelity and home ranges of recreationally important reef fish species in the Florida Keys were continued, as was our effort to identify and document spawning sites of the mutton snapper (*Lutjanis analis*) and other reef fish species.

We also continued a field study to provide quantitative information on habitat associations and movement patterns of goliath grouper (*Epinephelus itajara*) within the central eastern Gulf of Mexico, as well as initiating a catch and release mortality study and continuing our opportunistic collection of life history information from specimens made available through natural mortality events or enforcement actions of this protected species. Lastly, we began development of a histological atlas of Florida reef fish using samples from FWRI's West Florida Shelf reef fish surveys.

Statistically robust habitat suitability models (HSM) were developed that relate fish species catch rates to water quality and benthic habitat data derived from Fisheries Independent Monitoring (FIM). The HSM models (BEINF0, ZAGA) account for zero-inflation in the FIM data. Seasonal HSM maps were created for 87 species life-stages in Tampa Bay. The model was validated by comparing outputs from two time periods. Maps illustrating upper and lower bounds of the confidence intervals for CPUE estimates for each species/life-stage/season combination were also created. A new web-enabled database has been created called Ecospecies that incorporates over 90 species life history profiles. As part of the Ecospecies contract with the South Atlantic Fisheries Management Council, 6 life history profile shave been created and will be added to the database. These species are: Black Sea Bass, Gag Grouper, Gray Snapper, Goliath Grouper, Red Grouper and the Spanish mackerel.

MOLLUSKS

Bay scallop (*Argopecten irradians*) population monitoring and restoration is ongoing from Pine Island Sound to St. Andrew Bay, with success evaluated via surveys of adult abundance and recruitment patterns. All of the areas open to harvest that were surveyed in 2011 were classified as healthy except the St. Mark's region, which was in a transitional status (showing signs of recovery after low densities in 2009 and 2010). The 2011 harvest season opened six days early

compared to the 2010 season, which opened 11 days early. The 2011 season was also extended to September 25, elongating the season by 21 days total in 2011.

We will conduct a post-season survey for the first time since 2003 (Steinhatchee), 2005 (St. Joe Bay and Homosassa) and 2007 (Anclote and St. Andrew Bay) to assess mortality rates in both open-harvest and closed populations. The two monitored populations in the region potentially affected by the Deepwater Horizon oil spill (St. Andrew Bay and St. Joe Bay) had densities in 2011 that exceeded those in 2010, and also had higher recruitment levels, suggesting no immediate impact. Scallop densities in most closed areas were at the highest levels seen since surveys were initiated in 1994. But two populations, Tampa Bay and Sarasota Bay, were at their lowest since surveys started there in 2007, suggesting the population in the southwest region has not fully recovered despite restoration efforts. These efforts are organized with the cooperation of FWRI, but are largely funded through micro-grants and other fundraisers by volunteer-based organizations.

Oyster (*Crassostrea virginica*) population assessment studies are being conducted in southeast Florida as part of the Comprehensive Everglades Restoration Program and also as a component of a federally-funded (ARRA) oyster restoration in St. Lucie County. Additional studies of Gulf of Mexico oysters were initiated as part of two actions related to the Deepwater Horizon oil spill: a rapid-response study meant to establish base-line metrics (which will be useful in comparing data from several Florida Gulf estuaries) and, also, as part of the Federal NRDA response. FWRI is also participating in updating the FMP for Gulf oysters. A draft version of the plan is complete and is being prepared for public comment and the 2012 GSMFC review process.

CRUSTACEANS

Research into lipofuscin age determination of Florida blue crabs continues with investigation into the correlation of lipofuscin accumulation and chronological age. The investigation into the effect of the Blue Crab Effort Management Plan (BCEMP) on commercial blue crab effort and landings continues to track annual changes in landings, license renewals and traps tags post-BCEMP implementation. A statewide disease monitoring program, using histology and qPCR for the detection of *Hematodinium sp.* in wild populations of blue crabs continues. This program is working to understand the role of this disease in the natural mortality of blue crab populations.

We continue to identify horseshoe crab spawning beaches and collect spawning site information through an online reporting system. This reporting system continues to demonstrate annual increases in public participation and has revealed new spawning sites throughout the state.

The stone crab fishery independent monitoring program continues at nine locations along the west Florida coast. This program gathers fishery independent data on the stocks exploited in this claws-only fishery. Since the implementation of this program, sufficient data has been collected to suggest fishery specific trends that are currently being integrated into the 2012 stock assessment.

This year, Florida has experienced an increase in the reporting of Giant Tiger Prawn, *Penaeus monodon*, from the Panhandle and East coast of the state. We have distributed press releases and contact information statewide to encourage reporting from recreational and commercial fishermen. The extent of this exotic invasive population is unknown.

FISHERIES GENETICS

With angler assistance, we continued to use DNA markers to genetically track individual tarpon in capture/recapture studies in Florida. To date, about 9,000 samples from caught-and-released tarpon have been obtained and genotyped. The majority of movements for recaptured tarpon have occurred over small distances (less than 10 km); however, some have occurred over large distances (e.g., from the Tampa Bay area to the Florida Keys).

Analyses of genetic data for spiny lobster and common snook continued. We also continued to examine the distributions of bonefish species inhabiting Florida and are completing the formal description of a newly discovered bonefish species, which occurs in south Florida, Mexico and some Caribbean locations (Wallace and Tringali. 2010. J. Fish. Biol. 76:1972-1983). Mean single-generation dispersal distances were estimated for members of sand seatrout populations along Florida's Gulf of Mexico coast. Observed patterns of genetic heterogeneity conformed to an isolation-by-distance model of gene flow, and individual sand seatrout can be expected, on average, to disperse from natal locations a distance of about 80 km. The genetic effective population size for the west-central Florida stock of Gulf of Mexico red drum was determined based on genotype data from more than 23,000 wild red drum ($N_{ew} = 48,580$; 95% CI = 32,720 to 86,830). The effective size of hatchery red drum released during Project Tampa Bay was computed based on genotype data from more than 2,200 hatchery recaptures ($N_{eh} = 34$; 95% CI = 32 to 36). Using 29 microsatellite DNA markers, about 250 specimens of hogfish from the Florida Atlantic and west-central Florida Gulf of Mexico were tested to ascertain levels of geographic connectivity. Spatially-associated genetic differentiation was not observed over the sampled range. For spotted seatrout, approximately 500 breeding adults and 650 young of the year from Tampa Bay were genotyped for mark/recapture and kinship studies, which are ongoing.

FISHERIES STATISTICS

Fisheries-independent monitoring (FIM) of fish continues in Tampa Bay, Charlotte Harbor, Indian River Lagoon, Cedar Key, Apalachicola and Northeast Florida. The FIM program uses a systematic sampling strategy to collect fish free from the biases associated with collecting data from recreational and commercial fisheries. Data has been used for numerous stock assessments for several inshore species. Staff has spent much time developing models that describe fish abundance associated with different habitats. Additionally, staff in this program have been involved in the mercury concentration in fish program, fish health assessment, environmental health and fish diets, as well as studying fish from the rivers feeding Charlotte Harbor and Tampa Bay. We have continued to work on expanding our FIM program into reef areas along the coast.

During 2010-2011, preliminary numbers indicate Florida commercial landings from 216,902 commercial fishing trips totaled approximately 95.4 million (M) pounds of fish, crab, clams (wild harvest only, excludes aquaculture), lobster, shrimp and other invertebrates worth over \$200 M in dockside value. Marine life landings (live fish and invertebrates for aquaria and other uses) from 5,601 commercial collecting trips in 2010-11 amounted to 8.2 M individual specimens worth nearly \$2.9 M in dockside value. The top 10 species in dockside value harvested during 2010-11 in Florida were: Caribbean spiny lobster (\$38.3 M), stone crab (claws: \$25 M), pink shrimp (\$13.8 M), red grouper (\$12.4 M), blue crab (including soft-shell crabs; \$12 M), white shrimp (\$10.5 M), king mackerel (\$8.7 M), bait shrimp (\$7.4 M), oysters (\$6.7 M) and black mullet (\$5.9 M). The total commercial harvest of food shrimp in Florida was 17.4 M pounds (heads on; \$34.7 M dockside value) in 2010-2011.

STOCK ENHANCEMENT RESEARCH

Preliminary designs for future marine eco-centers were completed for sites in Escambia and Walton counties in the panhandle. Demolition of buildings and progress on the youth development center and aquatic plant nurseries were ongoing at the New Smyrna Beach Ecocenter. Planning continued for development of an intensive marine hatchery for Tampa Bay. A fourth trial of intensive culture of juvenile red drum *Sciaenops ocellatus* was completed evaluating new equipment to optimize oxygen levels in circular culture tanks. We continued to make improvements to transition existing culture capabilities from extensive to intensive. A new, six-tank production system for intensive culture of larval red drum was completed in the intensive culture lab. Larval red drum were stocked into these tanks to develop husbandry protocols for indoor, phase-I production. We continued coordination with the crustacean group for an aging study for blue crabs (*Callinectes sapidus*) in pond 16 and greenhouse two. There were no snook or red drum releases during this period. Spartina plugs (33,000) and shoots (10,000) were harvested from the hatchery effluent treatment marsh for shoreline restoration or nurseries at six locations throughout Tampa Bay.

MARINE FISH

Fish and Wildlife Health (FWH) staff in St. Petersburg monitors the health of aquatic organisms throughout the state of Florida. During the 2013-2014 FY, the FWH group conducted necropsies (laboratory or field examinations of fish to collect health data) on 844 specimens that covered four project aspects: 1) health monitoring (n = 217), 2) event response (n = 68), 3) stock enhancement support (n = 291), and 4) special project (n = 268). **Event response** specimens (8%) were evaluated as part of fish kill investigations or other fish and wildlife health related events. **Health monitoring** specimens (26%) were collected primarily by Fisheries Independent Monitoring (FIM) as part of our collaborative disease surveillance efforts, and were submitted to FWH because they exhibited gross external abnormalities or because we requested apparently healthy specimens to gather baseline data and develop health profiles for sport fish. Fish categorized under **special projects** (32%) included sport fish collected for parasitological analysis to study parasites that may impact native fish or potential aquaculture species and for other, experimental research. Fish examined for **stock enhancement** purposes (34%) were evaluated in support of the Florida Marine Fisheries Enhancement Initiative. These fish came from trial recirculating aquaculture systems from FWC's Stock Enhancement Research Facility.

During 2013-2014, we received a total of 977 reports on FWH Fish Kill Hotline, through the FWRI website or via direct calls. The statewide, toll-free Fish Kill Hotline (1-800-636-0511) and our web-based fish kill reporting form allow the public to report aquatic mortality and disease events directly to scientists, who can respond immediately to their concerns. We document and monitor fish kills, coordinate event response with partners, and provide general information about fish kills and disease to the public. Monitoring fish kills around the state allows us to recognize important epizootics and opportunistly collect biological samples that we would not normally be able to get. The public and the media used the hotline not only to report fish kills and disease, but also to request information about on-going mortality events. Anglers called to report catching fish with parasites, tumors, lesions, and deformities. We also received information requests on other marine related topics such as fish identification, fishing regulations, and algal blooms (i.e. - red tide). Since its inception, the FWH group has received and responded to over 20,000 reports/information requests. Forty-three sites were investigated for fish kills. A fish kill was considered an "event" when it was politically, economically, or ecologically significant. Only one group of reports

(n=164; group report ID 19499) from the Indian River Lagoon was designated as an event during this segment.

FWH participated in various types of outreach activities to promote the Fish Kill Hotline and to promote conservation through education. Outreach consisted of a variety of activities intended to reach many people, particularly anglers. This year, FWH Sport Fish Restoration research was one of several FWRI projects highlighted in a Mark Sosin video, to be shown at fishing shows and fishing shops. To promote the hotline as a public resource, we gave out specialty items throughout the year, including fishing towels, stickers, reusable grocery bags, and key chains imprinted with the FKH number and the Sport Fish Restoration logo. We logged over 241 hours of preparation time and 203 direct contact hours with the public during outreach events.

MARINE MAMMALS

FWC documented 830 manatee carcasses in Florida during 2013, an unprecedented level. Two 'Unusual Mortality Events' were declared and those events contributed to the high number of reported deaths. Preliminarily, 88 of the cause of death determinations in 2013 were human-related fatalities. Eighty-eight statewide manatee rescues were conducted in 2013. Of those rescues 31 were directly from human-related causes including watercraft collision, entanglement, and entrapment.

A statewide "synoptic" survey was flown in January 2014 and 4,824 manatees were counted by a team of 20 observers from nine organizations. An important objective within the state Manatee Management Plan includes improving these methods and implementing statistically sound methods to estimate the manatee population. Work progressed in developing and refining new methodology.

During the 2013-14 North Atlantic right whale calving season (December 01, 2013 –March 31, 2014) staff coordinated and conducted aerial surveys off the coastal waters of Florida and portions of Georgia in an effort to alert vessels to the presence of right whales, monitor calf production, identify unique individuals and describe whale distribution and habitat. Through our collaborative effort with NOAA-Fisheries, Georgia Department of Natural Resources and the Sea to Shore Alliance, 52 unique right whales, including 10 newborn calves, were documented and fourteen right whales, including eight calves, as well as two humpback whales were biopsy sampled.

No right whale carcasses were detected during this calving season, but one calf loss was documented through photo-identification. FWC documented and assessed new injuries on three right whales. The injuries were likely caused by entanglement prior to the whales' migration to the calving area; these whales were not carrying any fishing gear. Lastly, one entangled whale was documented this winter. During a two-day operation, we assessed, tagged and partially disentangled a four year-old whale in collaboration with our partner agencies and organizations. Heavy fishing rope removed from the whale was examined by FWC and then transferred to NOAA-Fisheries along with a gear report. The rope is not consistent with that used in southeastern U.S. and the whale likely migrated here with the gear attached.

DIVISION OF HABITAT AND SPECIES CONSERVATION

Director: Thomas Eason

Aquatic Habitat Conservation and Restoration

The Marine and Estuarine Subsection (MES) of the Aquatic Habitat Conservation and Restoration Section is responsible for the FWC's coordinated management of marine and estuarine habitat in Florida waters. This subsection is staffed by regional biologists that work around the state with partners to develop and implement conservation projects, such as marine habitat restoration efforts, which support healthy marine fisheries. MES activities are supported by the state Marine Resources Conservation Trust Fund, and through various federal grant programs for specific habitat restoration efforts.

Marine and Estuarine Conservation through MES

The strategic actions of the marine and estuarine habitat program revolve around collaboration with other agencies, partners, and stakeholders to support marine habitat conservation activities. These actions revolve around five central goals:

1. Restoration and enhancement of the quality and quantity of marine and estuarine habitats.
2. Conservation and maintenance of intact native estuarine and marine habitats and their ecological functions.
3. Protection of Florida's native estuarine and marine habitats and their functions within respective ecosystems from degradation.
4. Influence marine and estuarine habitat management through proactive coordination and participation with partners.
5. Support marine and estuarine habitat restoration, conservation, and protection activities.

Accomplishments

- FWC northwest regional biologists acquired National Fish and Wildlife Foundation funding for Phase I (\$150,000) of the West Bay (St. Andrews Bay-Panama City) oyster enhancement and possible seagrass community restoration project. This phase of the project will use a series of oyster reefs of about 1 acre in area located on the historic deep seagrass bed edges to anchor sediments that currently suspend during periods of wave activity and cause light limitations in the water column. Oysters will also filter the water column and bind available nutrients further enhancing water quality in the system. FWC staff also submitted complete Phase II funding (\$2,000,000) for this project through the second round of the NFWF-Gulf Environmental Benefits Fund. Combined with appropriate seagrass transplantation, this project will provide approximately 2 miles of oyster reef habitat and potentially lead to the restoration of as much as 2,000 acres of seagrass historically found in West Bay. The resulting oyster reefs will enhance habitat for important fish species such as red drum, spotted seatrout, and gray snapper, and will support endangered species such as Kemp's ridley sea turtles.
- FWC completed surveys and initiated engineering design for a 3 acre living shoreline oyster and saltmarsh enhancement project in coordination with the Florida State University

Marine Laboratory (FSUML) at Turkey Point. This project will enhance existing oyster reefs, augment saltmarsh habitat and improve shorebird nesting habitat on FSUML lands, and will be used by research and outreach coordinators well into the future.

- FWC continued to work with TNC, USFWS, NOAA and regional and local governments to develop coordinated and prioritized watershed-level conservation projects related to RESTORE Act activities in waters from Hernando to Escambia Counties. This effort will result in a comprehensive priority list of aquatic habitat conservation efforts supported by regional partners and directed toward a significant funding source for the conservation and restoration of estuarine marine habitats in coastal northwest Florida.
- FWC staff conducted an 9th season of integrated seagrass monitoring in the Big Bend region of Florida as part of a long-term seagrass health assessment effort. This monitoring effort has continued for a number of years, and has been incorporated into an comprehensive “Seagrass Integrated Monitoring and Mapping (SIMM)” report available at: <http://myfwc.com/research/habitat/seagrasses/publications/simm-report-1/> This monitoring effort is designed to assess changes in seagrass system health over a broad area of highly productive habitat in the northeastern Gulf of Mexico, and report the findings to managers and the public.

FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES

Adam H. Putnam, Commissioner

DIVISION OF AQUACULTURE

Director: Kal Knickerbocker

The Division of Aquaculture conducts numerous activities to promote the development of aquaculture and ensure the quality of aquaculture and shellfish products in Florida. These activities include regulatory, administrative, advisory, and technical functions directed toward ensuring that aquaculture operations are compatible with the Florida Aquaculture Plan, Aquaculture Certification Program, best management practices, resource management goals, and public health protection. The Division provides several primary service programs to support aquaculture and shellfish resource development:

- 1) Aquaculture Certification Program;
- 2) Sovereignty Submerged Lands Aquaculture Leasing Program;
- 3) Oyster Culture and Shellfish Resource Development Program;
- 4) Shellfish Sanitation;
- 5) Shellfish Environmental Assessment; and
- 6) Technical Support Program (Ombudsman, training, technical outreach, grants).

The Division has been very progressive in its support of aquacultural development as a practical alternative to commercial fishing and conventional agriculture to foster economic development in rural and coastal communities. The Division's programs offer unique and essential services to this emerging sector of Florida's agriculture community. These programs provide the regulatory framework for aquacultural operations and public health protection, provide specific farming areas on state-owned submerged lands, and provide responsible stewardship for Florida's natural aquatic resources.

During FY 2012/2013, the Division continued its commitment to encourage the development of the aquaculture and shellfish industries in Florida. This commitment is based on the belief that aquaculture will become an integral segment of Florida's agricultural and economic future by providing high quality aquacultural products to worldwide markets while advancing resource management.

The following is a summary of the activities related to aquaculture and shellfish industry regulation and development carried out during fiscal year 2012/2013.

Aquaculture Certification Program

Chapter 597, Florida Statutes (F.S.) established the Aquaculture Certificate of Registration to recognize aquafarming businesses. Aquacultural businesses in Florida are required to be certified annually and to attest that they will comply with the Best Management Practices provided in Chapter 5L-3, Florida Administrative Code (F.A.C.). The aquaculture certificate is used to identify aquaculture producers as members of Florida's agricultural community and to identify aquacultural products produced in the state.

The Aquaculture Certificate of Registration is linked to the Best Management Practices Program. Best Management Practices have been established by and for the aquaculture industry and represent the most appropriate and practical framework for Florida's diverse aquaculture businesses. More than 1,100 site inspections are conducted at aquaculture facilities to ensure compliance with Aquaculture Best Management Practices and state and local regulations. Staff is trained to provide a standardized evaluation, provide the aquaculturist with applicable industry updates and act as a resource for the aquaculture industry.

The Division certified 962 aquaculture facilities during FY 2012/2013. Shellfish producers (354 farmers) make up 37% of the certified farms, 273 food fish producers make up 28% of the certified farms, 189 ornamental producers make up 20% of the certified farms, with the remaining producing live rock, alligators, and bait. Certified farms are found in 61 of the state's 67 counties: with the highest number of certified farms occurring in Levy County (17%) and Hillsborough County (8%).

Sovereignty Submerged Lands Aquaculture Leasing Program

The Division is responsible for the Aquaculture Lease Program under the provisions in Chapter 253, F.S. During FY 2012/2013, the Division administered 475 aquaculture leases containing about 1,106

acres and 56 shellfish leases containing about 999 acres. Aquaculture and shellfish leases are located in 16 counties, including: Bay, Brevard, Charlotte, Collier, Dixie, Franklin, Indian River, Lee, Levy, Manatee, Monroe, Palm Beach, Pinellas, Santa Rosa, St. Johns, and Volusia Counties. In response to its statutory mandate, the Division identifies tracts of submerged lands throughout the state that are suitable for aquacultural development. Twenty special aquaculture use areas have been identified by the Division and authorized by the Board of Trustees in nine coastal counties.

Unlike many upland agricultural ventures that are conducted on privately-held lands, marine aquaculture must be conducted on or over submerged lands that are largely held in the public domain. Since only an insignificant amount of suitable submerged acreage is privately owned, marine aquafarmers are uniquely dependent upon the use of public lands to grow their crops. Accordingly, the Department must act on behalf of the Governor and Cabinet to administer and manage these public lands in the best interest of the people of Florida, including protecting valuable natural resources.

Late in 2013, the Board of Trustees approved two modified lease agreements for floating oyster cages in Alligator Harbor. Utilization of the full water column allows aquaculturists to place oysters in the nutrient dense upper layer of the water column and offers protection from common predators.

The Aquaculture Lease Program supports marine aquaculture in a very unique way, and producing hard clams on sovereignty submerged lands is the largest marine aquaculture business in Florida. The most recent sales and value survey of hard clam farmers reported that 136.3 million clams were sold during 2012.

Shellfish Sanitation and Environmental Assessment Programs

A total of 39 shellfish harvesting areas totaling 1,445,833 acres are currently classified and managed statewide. During FY 2012/2013, 481 sampling excursions were conducted to collect and analyze 10,588 water samples for fecal coliform bacteria. There were 358 management actions to close or re-open shellfish harvesting areas in accordance with the management plans for individual shellfish harvesting areas. During FY 2012/2013, a total of 87 Shellfish Processing Plant Certification Licenses were issued and 313 regulatory processing plant inspections were conducted. Based on inspection results, 31 warning letters and two settlement agreements were issued.

Oyster Culture and Shellfish Resource Development Program

Under the mandate to improve, enlarge, and protect the oyster and clam resources of the state, the Division is actively engaged in enhancing shellfish resources and restoring oyster reefs on public submerged lands. During FY 2012/2013, the Division collected 120,744 bushels of processed oyster shell from processors located primarily in Franklin County and collected 24,624 bushels of clam shell from processors in Cedar Key. Shell planting operations accounted for the deposition of 8,292 cubic yards of processed and fossil shell on public oyster reefs in Bay, Franklin, Levy, and Santa Rosa Counties. Oyster resource development projects involving the relaying and transplanting of live oysters were conducted in cooperation with local oystermen's associations in three coastal counties.

Alabama State Report to the Gulf States Marine Fisheries Commission Spring 2015

Fisheries Section

Renovation activities to the boat and barge basins located at Claude Peteet Mariculture Center (CPMC) in Gulf Shores continue. Renovation plans include the installation of 4 boat slips with lifts, a boat ramp, new docks, and seawalls, and renovation of a barge basin to be used in conjunction with Alabama's artificial reef program. Construction is expected to be completed by spring 2015.

Alabama Marine Resources Division (AMRD) staff successfully completed the installation of the aquaculture and hatchery equipment in the newly constructed wet lab at CPMC. Red drum and pompano broodstock have been collected and treated. The red drum broodstock have been placed on temperature and photoperiod cycles to induce natural spawning. In anticipation of upcoming spawning events, algae and rotifer mass production has also begun.

Data and results from the Alabama Red Snapper Reporting program for 2014 were disseminated at various meetings including the GMFMC and GSMFC. Alabama Regulation 220-3-.83-.211ER – "Recreational Reporting of Red Snapper" required the captain of each recreational vessel to report certain data including vessel registration, the numbers of anglers, the number of red snapper retained, and the number of red snapper discarded dead. AMRD staff and NOAA MRIP staff are examining the data from the Alabama reporting program and the APAIS in order to determine if potential improvements to either survey can be identified. Preparation for 2015 red snapper season sampling is underway, including utilizing the 2014 Alabama sampling and reporting procedures, as well as, the development of additional information to be collected from anglers and an at-sea component.

Fall oyster reef cultch plantings placed approximately 11,000 cubic yards of oyster shell and limestone on reefs located in Mississippi Sound and Mobile Bay. Subsequently, individual seed oysters and spat on shell were placed on top of a limestone plants. Success of the plants will be evaluated in the summer. AMRD received 3.2 million in funding for oyster restoration through the NRDA process and will begin deploying cultch material in April to cover approximately 500 acres.

The oyster management station was utilized to monitor the commercial harvest of oysters from Alabama's public oyster reefs. Heron Bay, Cedar Point East, and Cedar Point West were open to harvest from November 17, 2014 through February 27, 2015. Commercial oyster harvesters harvested a total of 7,126 sacks of oysters from reefs.

National Fish and Wildlife Foundation (NFWF) funding was received to conduct twelve fisheries related projects that will address data needs for state management; some will complement ongoing SEAMAP activities. Funding for year one of a five-year proposal totaled \$1.8 million. Proposed activities include fishery-dependent and fishery-independent surveys. Activities will begin in March and run through the end of the year.

SEAMAP will continue with trawl, vertical line, and bottom long line surveys during 2015. Funding levels for 2015 have not been announced. AMRD staff continues to work with SEAMAP workgroups on standardizing design and methodologies for bottom and vertical long line surveys.

The Biological Sampling program continued through December 2014. From October 1 through December 31, 2014, a total of 51 recreational otoliths with 13 additional measurements and 393 commercial otoliths with 72 additional measurements were collected by AMRD's staff. Some targets for primary species such as grey triggerfish, greater amberjack, and red snapper were not met due to fishery closures. No sampling has taken place as of this time in 2015.

From October 1, 2014 through January 31, 2015, a total of 433 APAIS interviews were collected in all modes combined. During the period, samplers completed a total of 166 assignments. Three new samplers in Mobile County were hired and trained. Throughout this time period, samplers received fish identification training and testing, ongoing survey training and malfunctioning/missing field equipment was replaced.

AMRD continues to register anglers in the Angler Registry Program. AMRD continues to publicize the Registry through posters and business cards displayed and handed out at public fishing access sites. Exempted individuals such as lifetime license holders and residents over the age of 64 are required to register annually at no cost to them.

AMRD acquired property (2.9 acres for an oyster management station relative to reefs in the eastern portion of Mississippi Sound utilizing CIAP funds. Site improvement plans for the property necessary for management station utilization are being developed.

AMRD has received imperfect concrete culverts, manholes, and junction boxes that were donated by Foley Pipe Co. These concrete materials will be utilized in artificial reef building projects.

AMRD and the Alabama Gulf Coast Reef and Restoration Foundation (AGCRRF) collaboratively constructed a reef site in the R. V. Minton East Nearshore Reef Zone that caters to young or inexperienced SCUBA divers. The reef site, referred to as Poseidon's Playground, lies in 30'-40' depths and consists of whimsical reef structures that include statues of the Greek God of the Sea (Poseidon) and the Roman Goddess of Love (Venus) as well as sculptures of fish, sea turtle, and sea horses.

AMRD participated in several outreach events and provided educational opportunities to the public in order to learn about the marine environment. These events included the Alabama Coastal Birdfest, Youth Center Career Night, Mobile County public schools Academy Showcase, and the multiday Mobile Boat Show.

Enforcement Section

From September 1, 2014 to January 31, 2015, AMRD enforcement officers conducted 2,162 commercial fishermen intercepts, 4,348 recreational fishermen intercepts, 6,256 patrol hours, and 2,499 vessel boardings.

AMRD officers continue to participate in joint investigations with NOAA/OLE regarding Gulf Reef fish. Additionally, officers worked jointly with NOAA/ OLE in obtaining an indictment for intentionally killing a Kemp's Ridley turtle.

AMRD Enforcement entered into the 13th Joint Enforcement Agreement with NOAA/OLE. The JEA provides equipment and funding for officers to enforce federal laws and regulations.

AMRD officers are partnering with Bryant High School in bayou La Batre, AL in their Coastal Academy program. The program is designed to introduce students to different career opportunities in the marine community.

AMRD Oil Spill Response and Activities

AMRD, in conjunction with the Alabama Department of Public Health (ADPH) and the Alabama Department of Agriculture and Industries (ADAI), concluded a 3-year seafood tissue testing program. The testing program was broken down into 2 projects: (1) Direct Sampling Effort Project and (2) Dealer/Processor Sampling Project. Both programs tested polycyclic aromatic hydrocarbons (PAH) levels using the LC-Florescence method, dispersants and key heavy metals. The Direct Sampling Effort Project, operated by AMRD and ADPH, tested seafoods collected directly from Alabama waters or reef zones. The Dealer/Processor Sampling Project, operated by ADAI, tested seafoods obtained from processors and dealers regardless of harvest location. The results of this program were distributed to the public. AMRD submitted a total of 1,484 composite samples for testing; all results were returned as being below the FDA's level of concern. This multi-agency program was administered by AMRD.

Alabama continued a seafood promotional campaign under the direction of the Alabama Seafood Marketing Commission. The Alabama Seafood Marketing Program consists of public relations, television commercials, print ads and articles, radio ads, billboards, speaking appearances, distribution of marketing materials, sponsorships of events and participation at community festivals and chef events. The website eatalabamaseafood.com has been developed and has received rave reviews from the public. The program to date has been very successful. The Seafood Marketing Program is managed by AMRD.

AMRD continues to participate in the Natural Resources Damage Assessment program.

A total of 92,796 bushels of live oysters were re-planted on public reefs in Dixie, Levy, and Wakulla Counties.

In 2006, the Department entered into a subcontract agreement with the Gulf States Marine Fisheries Commission (through NOAA) to restore oyster reefs adversely affected by hurricanes under the Emergency Disaster Recovery Program (EDRP). The grant subcontract agreements were extended several times with a firm ending date of September 30, 2013. The \$4.2 million contract provides for three project components: 1) restoring public oyster reefs, 2) providing economic assistance to oyster farmers, and 3) developing a scientific model to assess the success of oyster reef restoration efforts in the Pensacola Bay system. In 2012/2013, the Division began winding down the restoration activities to coincide with the remaining funds and grant deadline. Oyster reef restoration operations accounted for the deposition of 8,292 cubic yards of substrate materials on public oyster reefs in some of Florida's most productive estuaries.

Technical Support Programs

Providing technical assistance to the aquaculture and shellfish industries is an important role of the Division. Staff provides substantial technical and administrative support for aquacultural and shellfish operations through site visits, compliance inspections, technical meetings, conferences, workshops, and outreach projects. Staff provides guidance to aquaculture businesses to ensure compliance with Aquaculture Best Management Practices and other state and local regulations.

Apalachicola Bay Oyster Harvesting License

An oyster harvesting license is required to harvest oysters from Apalachicola Bay. In FY 2012/2013, 1,790 oyster harvesting licenses were sold, representing a 12 percent decline in the number of licenses sold in the preceding year. License sales continue to demonstrate a large number of fishers remaining in the fishery, although the number of license holders has declined from a high 1,909 in 2010.

Mississippi Department of Marine Resources
Activity Report
Gulf States Marine Fisheries Commission (GSMFC)
65th Annual Spring Meeting
March 17 – March 19, 2015

Shrimp and Crab Bureau

Mississippi Territorial Waters North of the IntraCoastal Waterway (ICW) closed to shrimping at 12:00 a.m. on January 1, 2015. Shrimping remains open south of the ICW until April 30, 2015. These seasonal area closures occur annually to protect the incoming season's shrimp crop.

The Shrimp and Crab Bureau continued monthly monitoring of shrimp populations in the Mississippi Sound through trawl sampling at historical stations as well as collection of monthly landings data. Long term fishery independent trawl sampling was also conducted in conjunction with the NOAA Project "Monitoring and Assessment of Mississippi's Interjurisdictional Marine Resources." Cooperation continued with the Gulf Coast Research Laboratory on commercial and recreational Blue Crab Catch per Unit Effort projects. Bureau personnel also coordinated and administered U.S. Fish and Wildlife Service Sport Fish Restoration Projects, Issued Scientific Collection Permits per Title 22 Part 18, and inspected and licensed Live Bait Catcher Boats per Title 22 Part 6.

Artificial Reef Bureau

The Artificial Reef Bureau (ARB) continued to monitor fish assemblages and physiochemical parameters at selected inshore reef sites. Personnel marked 36 inshore reefs in the three (3) coastal counties (Hancock, Harrison and Jackson) to assist small boaters in locating the low-profile reefs. Offshore reef sites were visited to check reef sustainability and subsidence rates.

In addition to monitoring artificial reefs, the ARB worked on securing and deploying more structure. Staff organized the donation and deployment of Chevron's VK 384-A jacket in the Main Pass 185 reef site. Artificial Reef Bureau collaborated with Omega Protein in Moss Point, MS to secure a 165 foot pogy boat for future deployment in Fish Haven 13. Reef material was stockpiled at the Gulfport staging site for future offshore and inshore reef developments.

Side-scan sonar was used to assist the Shellfish Bureau with three (3) projects. Mapping of the post deployment clutch material was completed for the Mississippi Oyster Cultch Early Restoration Project. Mapping was also completed on oyster reefs in Waveland, Stanislaus and Bay St. Louis Bridge in Hancock County. In addition, the ARB mapped oyster reefs for The Nature Conservancy project.

The ARB contributed to multiple outreach events and educational meetings. ARB staff attended and presented at the Joint GSMFC and Artificial Reef Subcommittee meeting in Clearwater Beach, FL. AR staff members also attended a ROV monitoring workshop in Gulfport, MS to learn about fisheries sampling methods. In addition, staff members went to an Alternative Shoreline Management Expo in Biloxi, MS to look at different types of materials used for shoreline management and creating artificial habitat.

Lastly, the ARB is currently preparing and working on several upcoming projects: negotiating and organizing the deployment of concrete culverts in FH-13, assisting with organizing personnel and gear for the start of National Fish and Wildlife Foundation and Gulf Artificial Monitoring and Assessment Program sampling, and preparing for the start of the Mississippi Bight Lionfish Response Project.

Finfish Bureau

The Finfish Bureau continued to oversee the Marine Recreational Information Program (MRIP). All assignments from October through February were completed and surveys obtained were reviewed and processed before being sent to the GSMFC office for processing. From October to February, there were a total of 310 ramp surveys and a total of 52 shore surveys in Jackson, Harrison and Hancock Counties. Survey site validations to update the site registry for 2015 and state-wide site effort estimates continued to be refined in an effort to improve the accuracy of the survey. The for-hire vessel frame was evaluated and edited to better reflect our most recent and updated state license file. This will allow Mississippi Department of Marine Resources (MDMR) employees to develop a more comprehensive and accurate active vessel frame to more precisely estimate for-hire effort.

A total of 192 otoliths were collected October through February. Samples were collected from nine different species: Atlantic Croaker, Black Drum, Gray Snapper, Sheepshead, Red Drum, Red Snapper, Spanish Mackerel, Spotted Seatrout and Striped Mullet. Samples were processed as part of the MDMR biological sampling program. The data collected through this process will aid in management decisions for our state and are submitted to the GSMFC in addition to the FIN Data Management System for use in upcoming stock assessments.

Finfish staff continued to target Red Drum in Mississippi coastal waters as part of an ongoing research-oriented project aimed at filling in age and size information gaps of Red Drum in Mississippi waters. The Red Drum project began in February of 2014 and targeted fish of size 20-30 inches. Red Drum within this size range have been missing from past and current monitoring projects. The project utilizes four 300 foot gill nets of various mesh sizes (5.5, 6.0, 6.5 and 7.0 inches) at several inshore locations, including an 800 foot strike net with four continuous sections of the same size mesh that is employed only during select months in fall and spring. In addition, samples have been collected on a voluntary basis from recreational fishermen. These samples will be used to enhance existing data sets in order to complete a Red Drum stock assessment currently underway.

Recreational Red Snapper season was reopened each weekend in October including the first weekend in November. Anglers targeting Red Snapper were asked to report trip details via a voluntary reporting program through the MDMR website or by filling out an information card available at local bait shops. Aerial and vessel surveys were conducted in areas where Red Snapper fishing was likely to occur in order to measure effort and validate information received through the voluntary angler reporting program. Surveyors were also placed at selected boat ramps and harbors to collect lengths and weights of Red Snapper being landed. At the September Commission on Marine Resources (CMR) meeting, the decision was made to require mandatory reporting of Red Snapper harvest and effort information for any future Red Snapper fishing seasons. MDMR has contracted with an information technology consulting organization to develop a mobile application and corresponding website that will allow MDMR to electronically track and record all recreational Red Snapper landings in Mississippi. This application will provide recreational anglers with an easily accessible and simple way to report their Red Snapper catch information in addition to supplying the MDMR Office of Marine Fisheries with a large amount of valuable harvest and effort data.

Three recreational fishing records for conventional tackle were accepted for state records between October, 2014 and February 30, 2015. These Included:

- Longspine Porgy (*Stenostomus caprinus*) 14.72 oz.
- Speckled Hind (*Epinephalus drummondhay*) 12 lbs.12.16 oz.
- Yellow Edge Grouper (*Epinephalus flavolimbatus*) 35 lbs. 5.7 oz.

Shellfish Bureau

Oyster harvesting season opened on November 14th with a sack limit of 7 sacks per day for dredgers and 10 sacks per day for tongers. A, limited oyster resources available, status was assigned from independent sampling conducted by MDMR personnel. Dredging totals were 18,645 sacks harvested with 1,974 trips. Tonging totals were 7,362 sacks harvested with 1,362 trips. As of February 28 2015, the season totals are 3,336 harvesting trips and 26,007 sacks harvested from oyster reefs in the Pass Christian and St. Josephs Reef area.

To improve the accuracy and efficiency of the harvester check out procedure during oyster season, an electronic card reader was installed at the Pass Christian check station. The reader has replaced the manual method of collecting data from oyster harvesters on daily catch.

Shellfish staff continued monthly analysis of oyster beds by performing weekly water samples, quantitative measurements of existing stocks using one-minute oyster dredge tows, and twice monthly phytoplankton tows.

The Shellfish Bureau conducted several oyster sanitation seminars for oyster harvesters. During this 30-minute seminar, participants learn important information regarding basic handling techniques, hygiene, and regulations regarding safe harvest of oysters from Mississippi's public oyster reefs. A total of 419 certificates of completion have been issued to date.

Oysters were relayed from the Pascagoula River Causeway to the Pass Christian tonging grounds during the month of October. A total of 8,552 sacks of oysters were transferred during this relay. These oysters were then harvested by tongers at the start of the oyster season.

2015 Oyster Season (January 1-February 28)

The Pass Christian and Bayou Caddy check stations were open a total of 15 out of the possible 24 days for commercial and recreational oyster harvesting during the month of February. The MDMR Shellfish Bureau was able to reopen the oyster harvesting waters of Area 1B, and 2F at legal sunrise on February 2, 2015. Unfortunately, these areas were forced to shut down at 4p.m. on February 26, 2015 due to exceeding the river management plan criteria of 10 feet. In addition, Area 2A was also forced to close at 4pm on February 28th due to also exceeding the river management plan of 12.5 feet. As of February 28, 2015 these areas remain closed until the Pearl River at Pearl crests. At that time bacteriological water samples will be taken to ensure these areas meet FDA shellfish consumption criteria.

Seafood Technology Bureau

Seafood Technology Bureau's (STB) regulatory program requires on-going quarterly reviews of the current 58 certified seafood dealers and processors' regulatory records, verification and follow-up inspections. To ensure Federal Drug Administration (FDA) compliance in October, STB staff completed review of Hazard Analysis Critical Control Point plans of seven oyster dealers purchasing oysters directly from harvesters. Recall packets for each Mississippi certified dealer underwent a review and update process to increase readiness in response to state and federal mandated recalls. In preparation for the annual FDA Vibrio Risk Management Program Element Evaluation, all Vibrio vulnificus records dating from 2006 to 2014 were updated and reviewed. Staff received the Vibrio Risk Management Program Element Evaluation Report in October stating Mississippi is in conformity with FDA regulations.

In response to requests from the seafood industry, wage determination surveys were conducted for entry level shellfish laborers and entry level shrimp line factory laborers. Technical assistance to the seafood industry on post-harvest processing, validation testing, and verification records assistance were also provided.

In order to provide members of the seafood industry with the most qualified service and trained personnel, the STB staff completed 21 FDA training courses and pursued continuing education courses. Other training courses taken are Basic Supervisory Class Training, First Aid-CPR Renewal Training, Seafood Safety Labeling, Aquaponics Webinar, Arc GIS II, Business Writing for Professionals, MSU/Institutional Review Board (online course) and Wellness Champion Training. A staff member attended the annual Bays and Bayous Symposium in Mobile, AL and presented a poster entitled "The CIAP Environmental Stewardship Program in Coast Schools Impacted by Hurricane Katrina." The

Bureau also assisted the office of Marine Fisheries in the hosting of FD242 Sanitary Surveys of Shellfish Growing Areas Biloxi, MS February 24-26, 2015 for the training of new Shellfish Bureau personnel.

Marine Patrol

Marine Patrol Officers spent a total of 3,532.5 patrols hours on water and land, which resulted in 8,134 contacts. During these patrols, officers issued 271 state citations for various offenses and no Enforcement Action Reports.

**Gulf States Marine Fisheries Commission
65th Annual Spring Meeting
Technical Coordinating Committee
March 19, 2015**

LOUISIANA STATE REPORT

Resource Management

LA Creel

Beginning on January 1, 2014, the LDWF initiated a new recreational statistics sampling program, LA Creel, in place of the Marine Recreational Information Program (MRIP). The LA Creel survey is conducted throughout the state and uses a combination of data collected at various public fishing areas and phone surveys of fishing license holders. While LA Creel and MRIP both provide recreational saltwater harvest data, LA Creel is able to provide more precise, real-time estimates.

During the period of October 2014 to March 2015, 3,754 recreational fishing trips were surveyed, constituting 8,718 individual anglers, those numbers were obtained by 62 different interviewers working 458 assignments during that time period. A total of 38,458 finfish were recorded as harvested of which 25,635 (67%) were seen and counted by trained staff.

During calendar year 2015 La Creel will be benchmarking with NOAA's Marine Recreational Information Program (MRIP) in order to allow for the comparison of harvest estimates between both surveys and better link prior harvest data collected through MRIP with current and forthcoming La Creel harvest data. This is the final year MRIP will be conducted in Louisiana.

Stock Assessment:

LDWF fisheries staff completed stock assessments of spotted seatrout, black drum, southern flounder, and sheepshead in Louisiana waters and updated the stock assessment for striped mullet in Louisiana waters using a statistical catch-at-age model to describe the population dynamics of each species. An updated stock assessment of blue crab in Louisiana waters was also completed using a stage-structured model to describe the population dynamics. Based on results of these assessments, none of these species are currently being overfished or experiencing overfishing.

Marine Mammal and Turtle Stranding Response:

The Louisiana Department of Wildlife and Fisheries (LDWF) is the lead stranding and rescue response organization for marine mammals and sea turtles, covering the entire vast coastline of Louisiana. Twenty-one Kemp's Ridley sea turtles that were successfully rehabilitated following the New England cold stun event and one Green Sea Turtle rescued by LDWF and rehabilitated were released back into the Gulf of Mexico on January 29, 2015.

Between October 2014 and March 2015 9 marine mammal strandings and 6 sea turtle strandings have been covered. The one live green sea turtle that was rescued, was successfully rehabilitated and released.

Data Management:

LDWF processes requests for trip ticket landings to assist with commercial fishermen's claims related to the *Deepwater Horizon* oil spill. After BP announced that it would require certified copies of trip tickets from LDWF, the department started receiving multiple sets of trip tickets from previous years, 2008 and 2009 in particular. All late submissions were thoroughly reviewed and forwarded to LDWF Enforcement for investigation. Several citations have been issued and two arrests for fraud have been made to date. The investigations are ongoing. For the time period of October 2014 to March 2015 LDWF has processed 24 data requests for commercial fisherman.

LDWF has completed upgrades to its data management system allowing for quicker scanning and digitization of paper tickets as well as QA processing of all trip ticket data. This has improved turnaround of data reporting to GSMFC.

Age and Growth:

The collection of age, growth, and reproductive information used to develop age-structured stock assessments is coordinated through the LDWF Age and Growth Laboratory, in Baton Rouge. The lab in Baton Rouge monitors 17 species of fish. Monitoring is done by the collection of otoliths and spines (gray triggerfish), for ageing purposes. Length, weight, gender, and location are also recorded when these fish are collected in the field. The 17 fish species consist of 14 saltwater and three freshwater species. Currently, the saltwater species are Black Drum, Gray Snapper, Greater Amberjack, Gray Triggerfish (spines), King Mackerel, Red Drum, Red Snapper, Sheepshead, Southern Flounder, Spotted Seatrout, Striped Mullet, Tripletail, Vermilion Snapper, and Yellowfin Tuna. This is the first full year that Tripletail and Yellowfin Tuna were collected by our field biologists. These are considered research species, because they were added to this list to gain new fishery information through field collection and to develop an ageing protocol. The three freshwater species are Black Crappie, White Crappie, and Largemouth Bass.

From the final quarter of 2014 to present the Age and Growth lab in Baton Rouge has received 5,036 otoliths; out of that total, 4,104 have been aged. Within that total 1,470 of those otoliths are fresh water species. Spotted Seatrout is the most collected species for the year and has been the most frequently collected marine species the past four years. The totals for each species are: Black Crappie-563; Black Drum-586; Gray Snapper-13; Greater Amberjack-0; Gray Triggerfish-0; King Mackerel-6; Largemouth Bass-502; Red Drum-472; Red Snapper-80; Sheepshead-214; Southern Flounder-254; Spotted Seatrout-1,171; Striped Mullet-664; Tripletail-29; Vermilion Snapper-0; White Crappie-405; Yellowfin Tuna-48.

Since the annual GSMFC (Gulf States Marine Fisheries Commission) Otolith Processor's Workshop in May, the age and growth lab received the reference sets for Gray Snapper, Gray Triggerfish, Red Drum, and Spotted Seatrout. These reference sets are used to help improve biologist otolith ageing skills and ensure that all labs are basing their ages on the correct criteria. There is a reference set for each of the saltwater species, excluding the research species and each biologist in the lab is required to view the reference sets. Reference sets are sent to each of the GSMFC member state's labs and once each state has had a chance to review them, the primary lab will present their findings at the annual meeting in May.

Fisheries Research Lab

Since our last report in October of 2014, the Fisheries Research Lab (FRL), located on Grand Isle, continues to work on the following sampling programs and research projects:

The lab currently works in collaboration Federal, State, and University partners to conduct long-term monitoring of fisheries resources along the coastal waters of Louisiana. Louisiana's SEAMAP program is housed and coordinated from the FRL. Lab staff conduct Vertical Line Surveys, Bottom Longline Surveys, Ichthyoplankton Surveys, and Shrimp/Groundfish Surveys following SEAMAP protocols. This sampling regime is part of the largest fisheries independent monitoring effort in the Gulf of Mexico. In addition, the lab also independently conducts a Nearshore Groundfish Monitoring that provides fisheries independent data that is used as a tool for constructing management policies.

The LDWF Biological Reproduction Laboratory is located in our facility. This research tool allows staff to process samples taken in the field and to determine reproductive patterns of many commercially and recreationally important species.

Preliminary work is being done at the lab to examine oyster cultch material to examine spat on shell survival on whole oyster shell planted on Louisiana public oyster reefs. The new oyster hatchery is being constructed pursuant to the Phase I *Deepwater Horizon* Oil Spill NRDA Early Restoration Plan as part of the Louisiana Oyster Cultch Project. The state recently completed an indoor climate controlled oyster hatchery to help facilitate and expedite success of the Early Restoration cultch plants through placement of larvae and/or seed onto the cultch plants, if project monitoring calls for corrective action. Larvae produced at the hatchery can be released into the water directly over cultch material or be remotely set on oyster cultch to create oyster seed. This hatchery will not only supplement our natural spawning, but will also be used to conduct various research activities.

Shrimp Program:

The 2014 fall inshore shrimp season opening dates were as follows:

- Opened at one-half hour before sunrise Monday, August 18 in state inside waters from the western shore of the Atchafalaya River and the Atchafalaya River Ship Channel

westward to the Louisiana/Texas state line

- Opened at 6 p.m. Monday, August 18 in state inside waters east of the Atchafalaya River
- Closed at official sunset Monday December 22 in all state inside waters except for the following waters located east of the Mississippi River:
 - Lake Pontchartrain, Chef Menteur and Rigolets Passes, Lake Borgne, Mississippi Sound, Mississippi River Gulf Outlet (MRGO), and the open waters of Breton and Chandeleur Sounds

Closed at official sunset Wednesday, January 28, 2015 in remaining state inside waters except for the following:

The open waters of Breton and Chandeleur Sounds

Offshore Shrimp Seasons:

- That portion of state outside waters extending three nautical miles seaward from the shoreline from the Atchafalaya River Ship Channel at Eugene Island as delineated by the Channel red buoy line westward to the western shore of Freshwater Bayou Canal at -92 degrees 18 minutes 33 seconds west longitude closed at official sunset., Monday, December 22
- That portion of state outside waters extending a distance of three nautical miles, seaward of the Inside/Outside Shrimp Line, from the northwest shore of Caillou Boca at -90 degrees 50 minutes 27 seconds west longitude westward to the eastern shore of the Atchafalaya River Ship Channel at Eugene Island as delineated by the channel red buoy line closed at official sunset, Wednesday, January 28, 2015

Shrimp Landings:

Preliminary statewide shrimp landings (all species combined/heads-off weight) for January-October, 2014 totaled 88.7 million pounds with a dockside value of \$200.4 million (Source: LDWF Trip Ticket Data). The dockside value of 2014 Louisiana shrimp landings has already reached the second highest value on record (2000 landings were valued at \$253.1 million)

Crab Program

Work has continued on a coast wide crab trap bycatch survey designed to collect and analyze incidental bycatch in commercial blue crab traps with special emphasis on diamond back terrapins (*Malaclemys terrapin*) since the inception of the study in Dec. 2013.

Currently, LDWF and Texas Parks and Wildlife Department (TPWD) are conducting a joint derelict crab trap removal project in Sabine Lake and adjacent state water bottoms. In order to conduct the cleanup, both the Louisiana and Texas sides of Sabine Lake are now temporarily closed to the use of crab traps so staff from both agencies and volunteers can conduct the

cleanup. The Sabine Lake crab trap closure began at 6:00 am February 20, 2015 and will end at 6:00 am March 1, 2015 and also includes portions of the Sabine River and other parts of Cameron Parish immediately east of Sabine Lake.

In mid-January, approximately 270 notices of the LA crab trap closure and cleanup were mailed to LDWF licensed crabbers and dealers in Cameron and adjacent parishes, including 26 TX residents licensed in LA.

LDWF hosted a volunteer day out a boat launch located on Johnson's Bayou on February 21. Instructions, lunch and door prizes were provided, including a gift card presented to the boat retrieving the most traps. Totals are still preliminary but approximately 54 LA volunteers and staff including 7 boats have participated in the cleanup and 422 traps were collected and brought to the LA disposal site. TPWD totals are not included.

Since its inception the derelict crab trap program has recovered 24,665 abandoned traps.

Crab Legislation:

Act 540 of the 2014 Louisiana regular legislative session established eligibility requirements for the sale of commercial crab trap gear licenses. Beginning November 15, 2014, no person shall be issued a commercial crab trap gear license unless that person qualifies under one or both of the following provisions:

- The person possess a valid commercial crab trap gear license during any two license years between 2011 and 2014
- Complete the crab industry training program established by LDWF

The Wildlife and Fisheries Commission has ratified a final rule implementing the Louisiana Fisheries Forward commercial crab gear requirements that detail program components and requirements. The program includes education in the following:

- Proper fishing techniques necessary for the health and sustainability of the species
- Proper techniques for the best capture and presentation of the crabs for marketability
- Proper instructions regarding the placement, tending, and maintenance of crab traps to reduce potential conflicts with other user groups

The program consists of the following training components:

- 1) Basic requirements - online courses and successful completion of a NASBLA approved boating safety class as required by R.S. 34:851.36 (Mandatory) *Note: Vessel captains licensed by the U.S. coast Guard are exempt from the boater safety certification requirement*

2) On the job / field component (Completion of one of the following options is mandatory)

a. Apprenticeship – Applicant works directly with another fisherman (mentor) as a deck hand or helper

b. Sponsorship – Applicant fishes another fisherman’s (sponsor’s) crab traps under their indirect supervision
iii. Seminars and meetings (Optional)

3) **The entire process must be completed within one consecutive 12-month period.**

Complete program information including program eligibility, detailed training requirements, application process and reporting requirements can be found on the LDWF website at <http://www.wlf.louisiana.gov/crabtraining>.

Louisiana Blue Crab Fishery Certification:

LDWF in cooperation with the Audubon Nature Institute’s Gulf United For Lasting Fisheries Program (G.U.L.F.) is pursuing certification of the blue crab fishery through a third party certification program. The purpose of the G.U.L.F. Certification Program is to provide US Gulf State fisheries with a “Certification of Responsible Fisheries Management for lasting use” to an internationally recognized standard and based on the FAO’s Ecolabelling Guidelines of fish and fishery products from Marine and Inland capture fisheries and the 1995 UN FAO Code of Conduct for Responsible Fisheries. In early February, an on-site sustainability assessment was conducted by representatives of Global Trust.

Louisiana Blue Crab Fisheries Management Plan:

The LDWF completed development of a Louisiana Blue Crab Fisheries Management Plan in November and the FMP can be viewed on the LDWF website at <http://www.wlf.louisiana.gov/sites/default/files/pdf/page/37762-fishery-management-plans-marine/finalbluecrabfmp11-7-14.pdf>. This fishery management plan creates a centralized document that summarizes current information about the biology and status of Louisiana blue crab; Louisiana’s commercial and recreational fisheries for blue crab; ecosystem considerations and environmental factors; management approaches within the state and regional framework; issues and options to address these issues; and future research needs.

Louisiana Blue Crab Landings:

Preliminary 2014 LDWF trip ticket data is only available through October and indicate that approximately 36.4 million pounds of blue crab have been landed in Louisiana with a dockside value of just over \$58 million. It is important to note that Louisiana blue crab landings in 2013 were 38 million pounds and valued at \$51 million, an all-time dockside value record.

Oyster Program:

The 2014-2015 oyster season in some areas of the public grounds opened on September 3, 2014 and additional areas opened on October 20, 2014. For the first time ever, sack limits were imposed in all areas of the public grounds, ranging from 50 sacks day in the eastern portion of the state to 40 per day in Terrebonne Parish to 10 per day in Calcasieu Lake. Limited harvest has occurred during the season and fisheries dependent sampling has estimated that approximately 50,000 sacks of market oysters and 16,000 barrels of seed oysters have been harvested through the end of January 2015. One area of the public grounds (St. Bernard Parish) is anticipated to open to harvest in March 2015 and should have a significant impact on overall harvest levels for the remainder of the season.

Oyster dredge sampling since October 2014 has occurred in all public areas across the coast and indicated a similar picture of the oyster population as during the annual oyster stock assessment in July 2014. Very few oyster spat have been found in areas east of the MS River and south of the MRGO (Coastal Study Area 1 – South). A healthy spat set was noted in samples in the public grounds of St. Bernard Parish (north of the MRGO) in October 2015, and that area has remained closed to harvest to protect the young oysters. Samples from other portions of the public oyster areas appear normal with very little natural mortality observed. Special cultch plant sampling has also indicated similar results with the cultch plants in CSA 1 – South showing poor recruitment of spat, but cultch plants in other areas of the coast indicating a healthy oyster reef community.

A new cultch plant is being planned for Calcasieu Lake during May/June 2015. Permit applications are being finalized and bid packages are anticipated to go out for public consideration in early March. It is anticipated that a total of approximately 50 acres of oyster reef will be constructed at four locations within Calcasieu Lake at a cost of approximately \$1,000,000.

Sampling of small reef plots seeded with hatchery-raised spat-on-shell also continued during this reporting period, but results showed poor survival at some locations. In Hackberry Bay, all four plots showed less than 10% survival after six months and two of the four plots showed a less than 1% survival of the planted spat-on-shell. In California Bay (east of MS River), sampling of two reef plots at month two post-deployment showed survival of just over 25%. Month six sampling of the plots in California Bay will be accomplished in March 2015.

Finfish Program:

LDWF conducts biological monitoring statewide in the coastal, nearshore, and offshore areas of Louisiana for finfish.

On November 7, LDWF closed state waters to the commercial harvest of king mackerel. Federal waters closed to the harvest of king mackerel on October 17.

At its December 2014 meeting, the Louisiana Wildlife and Fisheries Commission (LWFC) moved

forward a notice of intent to modify its rules pertaining to a Recreational Offshore Landing Permit (ROLP). Proposed changes include and exemption for anglers under the age of 16, adjusting the validity of the permit to coincide with the annual saltwater license year (July-June) for private anglers and with the annual charter guide license year (Jan. – Dec.) for licensed guides, and adding an exemption for anglers on a vessel while on a paid for-hire trip when a valid ROLP is held by the captain of that vessel. Public comments were accepted through Thursday, February 5, 2015.

On December 31, 2014, LDWF closed state waters to the recreational harvest of red snapper.

On January 1, 2015, LDWF opened state waters for the commercial harvest of Large Coastal Sharks.

At its January meeting, the LWFC set the commercial season for the harvest of king mackerel to open July 1, 2015 and gave authority to the Secretary of the LDWF to modify the season should an established quota be met or other factors warrant a change in the season.

At its February meeting, the LWFC heard the stock assessment reports for black drum, sheepshead, southern flounder, and striped mullet in state waters. No stocks were deemed to be overfished or undergoing overfishing. The above assessment reports will be transmitted to the Louisiana Legislature in March as required by statute.

Finfish program staff continues to participate in Gulf Council SSC meetings, Gulf States Task Forces, the SEDAR process and other national and regional meetings and workshops.

Fishing Access and Opportunity

Artificial Reef Program:

The Artificial Reef Program continues to assess and permit reef deployments related to offshore oil and gas structures. The Program has accepted 1 new structures. Thirty-eight (38) structures are permitted for deployment as permanent artificial reefs. Permitting of an additional 26 structures is currently underway. The multibeam surveying of the Program's offshore reefs has been completed and is available on the Program's website.

The Program hosted an ROV monitoring workshop at the Gulf States Marine Fisheries Commission in October 2014. The Program has incorporated techniques and ideas learned at the workshop into the current contract for ROV monitoring of its offshore reefs.

The Program has completed the inshore/nearshore reef plan that will guide the development and preservation of fisheries habitat and fishing opportunities in coastal waters (inshore) and waters less than 100 feet deep (nearshore). The Program has developed three reefs with Fieldwood Energy, Apache and CCA in place of the nearshore oil platforms known as the Pickets, a premier

speckled trout destination.

Boating and Non-Boating Access Projects

The objective of the Boating and Fishing Access Program is to increase or improve access to Louisiana's public waters for recreational boaters and anglers. Since our last meeting in October of 2014, the program continued project development on four boating access projects including: Forsythe Pointe public boat launch improvements in Monroe, West End-Breakwater Drive boat launch improvements in New Orleans, LA, Bonnabel Drive boat launch improvements in Metairie and Port O'Bisteneau boat launch improvements in Webster Parish. In addition, project development continued for one fishing access project, St. Tammany Pier Fishing Pier in Slidell.

Commercial Seafood Programs

Shrimp Task Force:

No meetings have been held since the last report.

Crab Task Force

The Louisiana Crab Task Force met on November 5 and January 27 and reviewed information on crab trap and licensing regulations in each of the Gulf and Atlantic states, 2014 blue crab stock assessment update and the recently completed LDWF Blue Crab FMP including current issues and management options. Discussion items included changes to the fisheries forward commercial crab trap gear requirements, gear license fee increases, trap limits, use of radio frequency indicator devices (RFIDs) in crab trap buoys, harvest of prepubertal female crabs, and increased funding for marketing efforts. The Task Force took action and endorsed drafting legislation that would increase the commercial crab trap gear fee from \$35 to \$50 and dedicate an additional \$10 from the sale of each license to the Derelict Crab Trap Removal and Crab Promotion and Marketing Accounts (\$5 per Account)). Authority for the Wildlife and Commission to adopt rules on a crab trap buoy marking system would also be included in the draft.

Oyster Task Force:

The Oyster Task Force met on October 7, December 9 and December 18 and January 13. The Oyster Task Force is working with LDWF and Louisiana Department of Agriculture on consistency of oyster weights and measures within the industry. There was a public/private oyster grounds committee meeting on November 13 to discuss potential legislation requiring Vessel Monitoring Systems (VMS) on all oyster harvesting vessels, this item will be discussed again at their February 24 committee meeting. There was a coastal restoration subcommittee

meeting on January 13 to discuss the Mid-Barataria sediment diversion and working together with the agencies involved in this project to provide comments on behalf of the industry. In January, task force members participated in the annual Washington, D.C. "Let the World Be Your Oyster" and "Louisiana Alive" marketing events. In February, task force members participated in a tour of the public reefs to check on the status of those reefs. LDWF will be updating the task force on the status of these grounds at their February 24 meeting.

Professionalism:

Earlier this year LDWF and LSU Sea Grant began working together to create the Louisiana Fisheries Forward Program. This program will be developed and released in several phases. The first phase is scheduled for completion in early 2015 and includes the following:

- 4 web based training videos
 - How to be a Commercial Fisherman
 - How to be a Seafood Dealer / Processor
 - How to be a Crab Fisherman
 - Seafood Business Finance and Management
- State wide extension / outreach components
 - Sea Grant Dock Days
 - Annual Fisheries Summit
 - Demonstration projects
 - Chemical free black spot prevention
 - Vessel refrigeration systems

The program will be offered on a voluntary basis to Louisiana's entire commercial fishery. Later phases of the program will include at least 6 additional videos covering the other major Louisiana Fisheries, ecological, cultural, and economic significance of Louisiana's commercial fishery, and an overview of fisheries management.

The Louisiana Crab Task Force adopted some components of this voluntary program and will make them mandatory to obtain a commercial crab trap license beginning the 2015 license year. Fishermen not meeting previous license requirements will be required to complete the relevant online coursework and participate in some form of an apprenticeship program. The program was launched in November and will be utilizing 3 of the 4 initial videos as well as crab dock days and the summit as optional training which can substitute for required field time.

The program remains on schedule. Several dock days have already been held. The Fisheries Summit will be held March 11, and all 4 initial videos are scheduled to be complete in April.

Sustainability:

LDWF continues to work with Audubon Nature Institute and Global Trust to develop a Louisiana certification model that can be used to certify gulf fisheries. Global Trust conducted on-site visits from February 3-5, 2015 in Baton Rouge and New Orleans to assess the Louisiana blue crab and oyster fisheries. The assessment team spoke with Louisiana fishery managers and scientists, representatives from Louisiana SeaGrant, and members of the Louisiana Blue Crab and Oyster Task Forces. The information and data collected will also be used to inform the Audubon GULF technical advisory committee regarding certification guidelines and criteria. The technical advisory committee is expected to meet in Spring 2015 to discuss responses to the GULF standard and the certification assessments.

In addition, LDWF has begun working on developing best management practices for small scale subtropical coastal fisheries with several international partners from Brazil, Mexico, and Australia. A representative of the FAO is also directly participating in the Working Group. This working group held its initial meeting July 2014 and has held meetings in October 2014, two meetings in January 2015, and is currently planning another meeting in late March 2015. The goal of this working group is to develop a new set of best management practices and guidelines for responsible fishing as it relates to smaller subtropical fisheries in hopes that the FAO will elect to adopt the new guidelines giving the Gulf and fisheries around another tool in their sustainability tool box.

Deepwater Horizon Oil Spill

Disclaimer: This report does not rely on information collected as part of the *Deepwater Horizon* Oil Spill Natural Resource Damage Assessment (NRDA), and is not intended to analyze impacts resulting from the *Deepwater Horizon* Oil Spill and related response for NRDA purposes.

Fishery Openings/Closings:

On December 10, LDWF re-opened all previously closed waters due to oiling from the 2010 Deepwater Horizon oil spill, with the exception of a 100-yard buffer from any shoreline in a portion of the upper Barataria Basin centered near Bay Jimmy and Bay Batiste.

News releases announcing our openings with maps of waters that still remain closed to commercial fishing and certain recreational fishing activities may be viewed at:

<http://www.wlf.louisiana.gov/news/38712>

<http://www.wlf.louisiana.gov/news/38135>

NRDA:

LDWF Fisheries' staff along with other state and federal trustees are actively assisting with the *Deepwater Horizon* Oil Spill Natural Resource Damage Assessment (NRDA) to quantify impacts to Louisiana's natural resources and the human use of those resources. Some NRDA work plans are available online here: <http://losco-dwh.com/viewworkplans.aspx>.

Gulf States Marine Fisheries Commission

65th Annual Spring Meeting

Technical Coordinating Committee

Wednesday, 18 March 2015

Point Clear, Alabama

TEXAS REPORT

REGULATORY ISSUES

Regulatory Changes and Proposals

The Texas Legislature has filed House Bill No. 1189, a bill that would create a voluntary oyster license buyback program. Funding for this license buyback program would come from 20% of the current license fee. Licenses purchased under this program would be permanently retired. The Texas oyster fishery has been operating under a license moratorium since 2007.

2015-2016 Coastal Fisheries Scoping Items

Clarification of a fish guide deckhand definition which could be interpreted to allow for operation of second vessel to aid in transporting customers of the licensed fish guide. Proposed change the definition to be a person in the employ of a fishing guide who assists in operating a boat for compensation to accompany or to transport a person or persons engaged in fishing in the water of this state (while onboard a vessel with the licensed fish guide), so a fishing guide deckhand must remain on board a vessel with licensed fish guide.

Clarification of finfish and crab rule to state that only one licensed individual may fish under the authority of one plate at a time. Current rule could be interpreted to allow for more than one license to be fished at a time so long as one display license is visible on the vessel. Only one set of commercial fishing licenses may be fished at one time on a vessel, so a boat operated for the purposes of commercial finfish fishing is required to have a commercial finfish fisherman's license plate issued under this subchapter prominently displayed as to be clearly visible from both sides of the boat. No more than one set of commercial finfish fisherman's display license plates may be on board a commercial finfish fishing boat and fished at any one time.

During the 25-26 March 2015 Texas Parks and Wildlife Commission meeting, Coastal Fisheries will propose changes to the spring season shrimp regulations and new regulatory proposals for fall shrimp and oysters. Public comments were received concerning the spring shrimp proposals that include extending lawful bay and bait shrimping hours during the spring from 2:00 p.m. until 30 minutes after sunset and increasing the daily bag limit for the spring bay shrimp season from 600 pounds to 800 pounds. The Texas Parks and Wildlife Commission is set to take action on these proposals, and if approved, will be in effect for the 2015 spring season.

Staff will also be presenting proposals for the fall shrimp fishery that include eliminating a size/count requirement for commercial bay shrimping during the fall season, updating a citation to the effective date of federal regulations governing turtle excluder devices, and updating the rules to clarify that under federal rules, TED requirements apply in all coastal waters. The goal is to have the Commission take action on these items at the May meeting, allowing them to be effective for the 2015 fall season, if approved. Finally, staff will propose to include shell as part of the 15 percent undersize allotment for oysters.

COASTAL FISHERIES PROGRAMS & PROJECTS

Abandoned Crab Trap Removal Project

During February 2015, a preliminary count of 102 volunteers removed 553 abandoned crab traps coastwide from Texas coastal waters. This brings the number of abandoned crab traps removed from Texas coastal waters since this project started in 2002 to a total of 31,790. In addition, more than 50 volunteers removed 422 abandoned crab traps from Louisiana Sabine Lake as a result of the Louisiana Department of Wildlife and Fisheries' Derelict Crab Trap Rodeo on 21 February 2015.

2014 Fish Stocking Totals

| | |
|----------------------|-------------------|
| Red Drum | 17,741,892 |
| Spotted Seatrout | 11,696,138 |
| Southern Flounder | 38,866 |
| Total Stocked | 29,476,896 |

So far during 2015, TPWD has stocked 79,525 southern flounder.

Artificial Reef Program

Fieldwood Energy's HI-A-467 petroleum platform was towed to an existing TPWD reef site at HI-A-466 in October 2014.

Staff completed a successful reefing of the M/V *Kinta*, a 155 foot long vessel that was deployed at the Corpus Christi Nearshore Reef Site (MU-775) on 17 September 2014.

Eternal Reefs castings occurred in Galveston in October 2014. Staff witnessed four memorial reef balls that were deployed at Barr's Reef. Eternal reefs contain the cremated remains of individuals mixed in with the concrete.

Archaeology/benthic surveys were awarded to three companies to perform for Port O'Connor, Galveston, and Sabine proposed nearshore reefs. Surveying and Mapping, LLC has completed the Port O'Connor 361-acre survey and is processing the data currently. Terrasonde has completed surveying Big Man Reef in Galveston (160 acres), and BioWest is working on their permit to survey the Sabine (160 acre) reef.

Staff attended the January GMFMC's Special Reef Fish SSC meeting in Florida in early January.

In January, Artificial Reef Program staff attended both the ASMFC/GSMFC Joint Artificial Reef Subcommittee meeting and Florida Reef Summit.

The Artificial Reef Program has begun advertising 3 projects being funded through Deepwater Horizon (BP) funds, totaling \$6.6M: 1) Ship Reef (HI-A-424) project will enhance fishing and diving opportunities by sinking a suitable ship at least 200 feet long to create an artificial reef approximately 67 miles offshore of Galveston (Funding: \$1.9 million, plus \$200,000 reimbursement add-in for prior work). 2.) Freeport Artificial Reef (Brazoria County) project will increase the amount of reef materials in a currently permitted artificial reef site, the George Vancouver (Liberty Ship) Artificial Reef, approximately 6 miles from Freeport, placing concrete pyramids (artificial reef materials) at a water depth of 55 feet (Funding: \$2.2 million). 3.) Matagorda Artificial Reef (Matagorda County) project will create a new artificial reef site approximately 10 miles offshore of Matagorda County, Texas, through deployment of concrete pyramids at a water depth of 60 feet (Funding: \$3.6 million).

The 2nd Annual Texas Artificial Reef Program Consortium was held in early February 2015 at the TAMU-CC Harte Institute. The meeting was designed to bring together all of the TPWD Artificial Reef Project subcontracting agencies that conduct monitoring and research on TPWD artificial reefs through Interagency Agreements.

Artificial Reef Program staff and senior Coastal Fisheries staff met with Rep. Greg Bonnen (District 24) on constituent concerns about artificial reefs off Galveston and red snapper issues. One of the outcomes was the formation of the Artificial Reef Texas, a nonprofit group that would play a significant role in reefing operations off Galveston.

The Artificial Reef Program organized a Texas Diving Safety Officers meeting in Galveston. It was very successful in getting together the majority of the scientific diving organizations in the state. There were 15 people representing 11 of the 15 scientific diving organizations in Texas. One of the most significant is a multi-agency emergency drill for offshore rescue operations.

Staff completed four offshore monitoring trips between June and October 2014. Biological monitoring protocols continue to utilize roving diver surveys, vertical line surveys, video camera surveys with parallel lasers for fish size estimates, and water quality analyses. TPWD continues to work in cooperation with Texas A&M University – Galveston, Texas A&M University – Corpus Christi, United States Geological Survey, and the University of Texas – Brownsville.

Staff met with US Geological Survey to go over previous results from the offshore monitoring and define the long-term goals of the ARP. New scopes of work for offshore water quality monitoring and datasonde deployment in the offshore region are under review. Staff also developed a plan to take an autonomous underwater vehicle out to the George Vancouver reef, off Freeport to determine the feasibility of the nearshore monitoring that has been developed and whether the maps produced will be of a quality acceptable to our program.

Perry R. Bass Marine Fisheries Research Station - Life History Research

Routine monitoring otolith collections from gill net samples continued, as were processing and aging of otoliths collected from previous years.

The GSMFC funded FIN-Biological Sampling project for otolith collection and processing for various marine species was discontinued again as of December 31, 2014 due to lack of funding. Sample collection and processing for 2014 was completed, and 2014 samples and data were entered in the FIN database.

A study was initiated to investigate differences in age at maturation of black drum in the upper Laguna Madre as compared to other bays. This study will continue through March 2015.

Perry R. Bass Marine Fisheries Research Station - Genetics Research

A genetic survey of gulf menhaden along the Texas coast was continued. Sample processing and data collection and analysis is ongoing.

A genetic survey of inshore black drum populations was continued. Sample collection and processing is ongoing.

A genetic and meristic survey of *Menidia spp* populations was summarized. Additional sample collection and processing continues.

Buyback Programs

Shrimp License Buyback Program

Inshore shrimp buyback round #32 application period closed 7 November 2014. During this round, 31 bids were received and a total of 6 (4 bay and 2 bait) licenses were purchased at a total cost of \$52,800. The average purchase price was \$8,800 with a range of \$8,000 to \$9,500.

Shrimp - Overall totals since 1996

- 2,152 licenses purchased
- 1,089 bay licenses and 1,063 bait licenses
- Total cost of \$14.3 million
- 2,152 / 3,231 original licenses = 67% of licenses retired

Crab License Buyback Program

Crab buyback round #18 application period closed on 7 November 2014 during which 3 applications were received and 1 license was accepted at a total cost of \$7,500, with a range of \$7,500 to \$10,500.

Crab - Overall totals since 2001

- 65 licenses purchased
- Total cost of \$454,449
- Average price over all rounds = \$6,992
- 65 / 287 original licenses = 23% of total retired

Finfish License Buyback Program

Finfish buyback round #21 application period closed on 7 November 2014 during which 8 applications were received and 5 licenses were purchased at a total cost of \$47,000. The average purchase price was \$9,400 with a range of \$8,500 to \$10,000.

Finfish - Overall totals since 2002

- 246 licenses purchased
- Total cost of \$1,493,200
- Average price over all rounds = \$6,000
- 246 / 549 original licenses = 45% of licenses retired

Oyster Fishery

Using the department's emergency closure authority, three shellfish harvesting areas of Galveston Bay were closed to commercial oyster harvest in December 2014 and remain closed as of February 20, 2015. The majority of sampled oysters were less than 3" triggering the closure. Copano Bay (near Rockport/Fulton, Texas) was closed in late April 2014 due to large percentages of undersize oysters and also remains closed.

SPECIAL EFFORTS, STUDIES, AND TOPICS

Coastal Fisheries congratulates two of its team members as they move into new roles. Lance Robinson is the new Deputy Division Director functioning also as the Management Operations Branch Chief, and Mark Lingo is the new Science and Policy Branch Chief. Perry Trial is the new Lower Coast Regional Director.

So far during the 2014-2015 cold stunning season (from 13 November 2014 through 12 January 2015), 408 cold stunned sea turtles (345 alive, 63 dead) were found in Texas, between Galveston Bay to the lower Laguna Madre. All were green turtles except for two loggerheads, one Kemp's ridley, and one hawksbill turtle.

'OTHERS'

TPWD made a change to the way we will handle public hearings for statewide proposals. In the past, we held multiple hearings around the state at the requested sites from each division, including the major metropolitan areas like Houston, Dallas-Fort Worth, Austin, and San Antonio. As attendance has been steadily declining over time, the department has decided to shift to more of an online presence, although in-person public hearings can still be held at the request of the divisions. As part of the online presence, staff will upload audios for statewide presentations to a public comment e-page and can hold a live webinar where presentations will be given and questions and comments will be received and addressed in real-time.

Otolith Work Group Meeting Summary
April 7-9, 2015
Baton Rouge, Louisiana

APPROVED BY:

COMMITTEE CHAIRMAN
Facilitator

VanderKooy opened the meeting at 1:10 p.m. Tuesday afternoon, April 7, 2015 with the following in attendance:

Gary Gray, USM/GCRL, Ocean Springs, MS
Isis Longo, LDWF, Baton Rouge, LA
Jaime Miller, AMRD, Dauphin Island, AL
Jessica Carroll, FWRI, St. Petersburg, FL
Carly Somerset, MDMR, Biloxi, MS
Britt Bumguardner, TPWD, Palacios, TX
Prince Robinson, LDWF, Baton Rouge, LA
Kim Walsh, LDWF, Baton Rouge, LA
Steve VanderKooy, GSMFC, Ocean Springs, MS

VanderKooy welcomed everyone and gave a short update on the draft to date. In addition, he was pleased to report that another veterinarian had agreed to help with x-rays or radiographs of fish should they need to be redone or new species be added. The vet he had previously worked with had upgraded their machine to a digital one and **VanderKooy** was no longer able to generate high resolution outputs from their software. Dr. Lisa Wilkerson at Big Ridge Veterinary Hospital still uses films and has a close relationship with the MDMR. **VanderKooy** can help anyone interested in generating images at a minimal cost.

Section Reviews

Table of Contents

VanderKooy immediately began reviewing the Table of Contents and the changes that had been made since the first meeting of the group in August 2014. There were a few additions that had been provided by Workgroup members but his intention was to work through all the text in Sections 2-4 and have people provide what information they could at the table for inclusion. There were still a lot of placeholders that needed addressing and the Workgroup would hopefully flesh some of those out this week. Any additional work would be assigned for inclusion as the document was reviewed. It is **VanderKooy's** intention that the Gulf portion of the draft would be completed by mid-July so the Atlantic States representatives and agencies could incorporate their own material. **VanderKooy** will attempt to get both coasts together sometime in late August if all goes according to schedule.

Section 2

VanderKooy had made some progress to move some of the other structure background up to this section. It is not really an 'otolith' manual anymore but needs to cover all hardparts in more detail. **VanderKooy** made room in the overview section for vertebrae, opercula, scales, spines, and finrays. In addition, there may be a need to address the usefulness of each of the parts other than for just ageing here, such as micromilling, amplifying DNA, and historical/archeological

samples (changes in stock composition). It was suggested that more care be given to terminology and make sure we don't interchange terms that can make the narrative confusing. In addition, each section may need expansion of what makes the marks true annuli, remembering that external structures such as fins and scales, can be 'marked' by the environment or hold artifacts of life history changes, shifts, or physical damage.

Scales - **VanderKooy** moved some of the original material drafted by McBride to cover the scales overview but more may be necessary.

Opercula - **VanderKooy** would need the Atlantic States contributors to fill in the opercle bone overview.

Vertebrae – **VanderKooy** hopes that the **Panama City Lab** may have background already written for sharks and **Potts** indicated she is looking at validation of annuli using teleost vertebrae from snappers as well.

Spines and Rays – **Carroll** and the **Panama City Lab** may be able to generate something here using information developed originally by Carrie Fioramonti.

Section 3

VanderKooy reported that there had been a lot of rearranging based on the first meeting and he was still adjusting some of the subsections so the number scheme should be disregarded for now.

Removal

Bumgardner suggested that another otolith removal technique should be included on 'score and break' which is the basic technique described in the striped mullet species account. He provided a short paragraph detailing the technique which is applied to a number of species that are small to medium in size and don't need to be sold whole.

Labeling

It was suggested and agreed by the Workgroup that the order in which steps are presented should reflect the actual steps taken to remove, clean, label, and ultimately process the hardparts. At this point, labeling was noted. At the previous meeting, a lot of time was spent discussing the importance of standardized labeling but nothing more had been worked out. Over the course of the meeting, the Workgroup became very aware of the extreme differences in how each agency/lab keeps track of their field and sample information. TPWD records ALL their field data directly on their sample envelopes while other states have varying levels of detail on hand-written sheets which need to be key entered in the office. One state is currently using the preprinted barcodes for their samples which are assigned prior to sampling. The original discussion included the need to be able to refer back to samples for other purposes such as the second otolith and biological tissues which might be used for genetics work or sent to a completely different location. This section will need a lot of Workgroup discussion to come up with the minimal data elements and any recommendations on how to track samples. It is hoped that the **Panama City Lab** and **Fitzhugh** may take the lead on this.

Archiving

At the previous meeting, it was suggested that long-term storage of otolith sections or archiving is a huge problem for most labs. **Miller** provided a short overview of the process ADMR uses to digitize their sections which can be discarded after 5 years. All the representatives indicated 'space' is the ultimate issue with samples. Not only do they require physical space, but even digital images and electronic data require greater amounts of digital storage now. Scales will have the same space issues as well as the other hardparts. **The various representatives working with specific biological materials should contribute the issues (pros and cons) of each related to storage and archiving.**

Sectioning

Again, the need to have the steps put in order was discussed and the various sections discussing marking the core were combined and moved forward, ahead of embedding or sectioning.

Embedding

The embedding medium description was shortened and simplified since most people use the basic two part epoxies today. The descriptions of single and double pours in molds was cleaned up as well.

Sectioning Techniques

The addition of the Benetec Machine was provided by the **Panama City Lab** and added throughout the document where appropriate. There may be other saws available but we are staying away from specific brands. Details of saws and supplies will still be included as appendices.

Common Mistakes

A list of things to watch out for when sectioning was provided by **Longo** prior the meeting. The section was added here to help the reader prevent some of these classic problems. Several images were contributed by **Carroll** to clarify the various problems.

General Preparations for Sectioning

Since the TPWD and the LDWF both use high speed saws by different companies, the LDWF provided some additional items to update for both brands (Buehler and Struers).

Production Sectioning

Carroll provided a short update to the technique the FWC utilizes and described the 'sacrificial chuck'.

Thin Sectioning Machine

Miller provided an explanation of how their lab determines when to stop grinding as they approach the focus using their Hilquist. A series of images had been drawn for various species and **Miller** provided them for clarification. Essentially, the drawings guide the processor to know when to stop using the precision grinder.

Benetec

Palmer (Panama City Lab) had provided their techniques write-up prior the meeting. Since they and **Potts (Beaufort Lab)** currently use the saw, they provided their specific procedures. The

machine is much more popular in the NE and it is expected that the Atlantic States representatives will have more to add. There were several questions that came up related to the resin used. **VanderKooy** wasn't sure but thought it was fiberglass rather than epoxy.

Whole Otolith Reading

While the material already in the manual is a good overview of the use of whole otoliths, there is a lot of information not included. These specific items were pointed out as a list and it was suggested that the mackerel training CD developed by the **Panama City Lab** could be a good source for the missing narrative. **VanderKooy** would check with **Palmer** and **Allman**.

Break and Burn

This section remains virtually unchanged. **VanderKooy** will remind **Murie** to look over it and see if there is anything to add or modify. It was noted that one of the section 'enhancements' was scorch or bake. **VanderKooy** wondered if this might need to be moved here or left under enhancement.

Other Hardparts

Because these sections will be expanded, an introductory paragraph needs to lead this off. **VanderKooy** noted a few things but somebody will need to flesh this out a bit more related to the advantages of other materials than otoliths.

Scales

VanderKooy had updated some of this section already with material taken from the training workshops held at the Beaufort Lab and some of the narrative developed by McBride in the original manual. It is expected that this will have a lot more information provided by the Atlantic States representatives using scales for species other than just menhaden.

Spines and Finrays

Carroll will be taking this entire section on and coordinate with the **Panama City Lab**, **Potts**, and **Murie**. The introduction to this section was already moved up to chapter 2. Additional images and text will be added by **Carroll** et al.

Vertebrae

As noted earlier, this section will need to be fully developed for both fish and sharks. It is hoped that the **Panama City Lab** and **Potts** can provide more information. **VanderKooy** suspects that the **Panama City Lab** already has an extensive protocol developed that could be adapted easily.

Opercle Bones

VanderKooy took the liberty of cutting and pasting background material here from the Atlantic States species accounts for Tautog. Some images were lifted from other publications but the whole section needs to be fleshed out and will need to be handled by the Atlantic States representatives using these techniques.

Microscopy and Image Analysis

Some minor updates were provided here and the Workgroup discussed the various systems available. It was suggested that a description of the systems utilized by the various agencies/labs

should be added to the appendices. The details should include the software/hardware for image analysis, spreadsheets, measurements, cameras, monitors, and scopes. In addition, each system should describe the benefits and general cost to maintain, license, or update each system, allowing a reader to pick and choose a system that best suits their needs and budget.

Section 4

VanderKooy reviewed the ageing section with the group. A few minor edits were included throughout. Since the entire chapter was written for otoliths, the other hardparts need to have equal time and development. Those have been placed in the document as placeholders and will need fleshing out. Highlighted here are the major changes/needs and the individuals tasked or best suited to address them.

Annuli Enumeration

Bumgardner suggested that more information needs to be presented throughout the chapter on QA/QC and there needs to be expansion later in the chapter.

Opercle Bones, Spines, Rays, and Vertebrae

As noted before, all these sections on reading and interpreting need to be fully developed. There are some notes regarding labs or individuals throughout.

Scales

VanderKooy stole information from several sources including the menhaden training to begin expanding the 'reading' of scales. This section will need a lot of additional work to include scales from other species as well. One of the critical issues addressed at both menhaden training workshops in Beaufort was the need for a margin code. **VanderKooy** is still not sure how the other Atlantic States code or record scale margins but it's hoped something standard can be used for ALL the other hardparts similar or at least compatible with the otolith margin codes.

Assignment of Age

There remains a need to include variation within species based on regional variation in life histories. This will likely be expanded once the Atlantic States have had a chance to review and provide their own materials.

Quality Control

Fitzhugh had previously indicated a need to really expand this section with more up-to-date techniques and protocols. We need to add information on bias and how to evaluate ageing programs and processors. This section is one of the most critical in ensuring trust in our ageing abilities by outside agencies, labs, and stock assessment experts reviewing our data.

Otolith Weights

Bumgardner indicated that the TPWD continues to weigh their otoliths as a QA/QC measure and provided a short paragraph explaining how. He will continue to expand this section as needed.

Isotopic and Micromilling

These techniques have been well developed and documented already by the **Panama City Lab**

and **VanderKooy** would get with them to include some narrative on their procedures and equipment. It is expected that there may be several agencies/labs in the NE that utilize micromilling for a variety of purposes and will have a lot to contribute once they review our draft.

Section 5

Intro

The introduction was updated to include the Benetec machine as well as include a place to identify all the various species for which the state agencies may collect biological material but not necessarily process or include in the manual. This can include any species that have been 'played with' by a lab. If anyone was looking for material or some information on what's been done, they could find a point of contact using this list of species.

Species Accounts

VanderKooy pointed out the rearranging based on 'like' species. It was suggested that perhaps, rather than having individual accounts for every species that might overlap 90-95% (weakfish and spotted seatrout), perhaps they could be combined into one account with notes on the differences between the similar species. For example, combine Atlantic and Gulf menhaden into one overall account which could also include the congeners from the Gulf (finescale and yellowfin) as well.

VanderKooy couldn't remember the argument from the original manual to develop individual species accounts but would consider it and offer it as a suggestion to the other Workgroup members. In the meantime, the rearrangement could be completed based on that idea and combined later if everyone agreed.

Some of the species that were considered for inclusion based on the rearrangement and available information are as follows:

White seatrout *Cynoscion arenarius*
Sand seatrout *Cynoscion nothus*
White Mullet *Mugil curema*
Gulf Flounder *Paralichthys albiguta*
Finescale Menhaden *Brevoortia gunteri*
Yellowfin Menhaden *Brevoortia smithi*
Scamp *Mycteroperca phenax*
Golden Tilefish *Lopholatilus chamaelonticeps*
Lesser Amberjack *Seriola fasciata*
Yellowfin Tuna *Thunnus albacares*
Blackfin Tuna *Thunnus atlanticus*
Bluefin Tuna *Thunnus thynnus*
Cobia *Rachycentron canadum*
Dolphin *Coryphaena hippurus*
Wahoo *Acanthocybium solandri*
Swordfish/Sailfish/Billfish in general
Tripletail *Lobotes surinamensis*

Sharks - various

VanderKooy noted that he already had some image and radiographs for a number of these species on hand should they be included in the manual.

Appendices

References

VanderKooy noted that any new material included anywhere in the manual need to be cited and copies of the literature provided electronically to **VanderKooy** for inclusion in the bibliographic database housed at the Commission.

Supplier and Supplies

After some discussion, it was agreed that these lists need to be updated and kept in the manual. The Workgroup still finds the information useful even though much of the vendors and prices are out-of-date.

Scopes, Cameras, and Systems

As noted above, it was suggested that each lab should describe in detail the systems they are using and the pros/cons of each.

Lab Tour

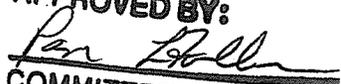
The LDWF staff invited the Workgroup members to see their lab space and took time to explain how their protocols worked. The Workgroup members appreciated the offer to see how another lab operates and shared their own information and asked questions. Thanks is expressed to the LDWF staff for the opportunity to see their facility.

Other Business

VanderKooy would send out the various draft sections to the Workgroup and would contact those unable to attend the meeting. **VanderKooy** would put together a short summary of the overall discussions and changes from the meeting as well. He will contact **Jeff Kipp** at the ASMFC about the potential for a face-to-face meeting with some of their folks later in the year. It was suggested that a good location would be either Woods Hole, MA or somewhere further south like Charleston, SC.

There being no further business, **VanderKooy** thanked the Workgroup for their participation and closed the meeting at 10:30 a.m. on Thursday morning.

**GULF & SOUTH ATLANTIC REGIONAL PANEL
ON AQUATIC INVASIVE SPECIES
MINUTES
Tuesday, May 5, 2015
Ft. Lauderdale, FL**

APPROVED BY:

COMMITTEE CHAIRMAN

On Tuesday, May 5, 2015 Chairman **Fuller** called the meeting to order at 8:00 a.m. The meeting began with introductions of the members and guests. The following were in attendance:

Members & Proxies

Lad Akins, REEF, Key Largo, FL
James Ballard, GSMFC, Ocean Springs, MS
Tim Bonvechio, GA DNR, Waycross, GA
David Britton, USFWS, Arlington, TX
Rick Burris, MS DMR, Biloxi, MS
Paul Carangelo, Port Authority, Corpus Christi, TX
Pam Fuller, USGS, Gainesville, FL
Lisa Gonzalez, HARC, The Woodlands, TX
Leslie Hartman, TPWD, Palacios, TX
Tom Jackson, NOAA-NMFS-SEFSC, Miami, FL
Chuck Jacoby, Indian River Lagoon National Estuary Program, Palatka, FL
Peter Kingsley-Smith, SCDNR, Charleston, SC
David Knott, At-Large Member, Charleston, SC
Herb Kumpf, At-Large Member, Banner Elk, NC
Craig Newton, AL DCNR, Dauphin Island, AL
Steven Rider, AL DCNR, Montgomery, AL
Dennis Riecke, MS DWFP, Jackson, MS
Don Schmitz, FL FWC, Tallahassee, FL
Kristen Sommers, FL FWC, Tallahassee, FL
Lindsey Staszak, NCDENR, Elizabeth City, NC
John Teem, FDACS, Tallahassee, FL
Linda Walters, UCF, Orlando, FL

Staff

Ali Ryan, GSMFC, Ocean Springs, MS
Joe Ferrer, GSMFC, Ocean Springs, MS

Others

Brian Bohnsack, USFWS, Arlington, VA
Margaret Brady, NOAA, Silver Spring, MD
Matt Cannister, USGS, Gainesville, FL
John Galvez, USFWS, Vero Beach, FL
Jackson Gross, Smith-Root, Inc., Vancouver, WA
Liana Lerma, TPWD, Brownsville, TX
Don MacLean, USFWS, Arlington, VA
Susan Pasko, NOAA, Silver Spring, MD
Jennifer Possley, Fairchild Tropical Botanic Garden, Miami, FL

Jeffrey Schardt, Tallahassee, FL
Shailesh Sharma, NOAA, Silver Spring, MD
Erin Spencer, Don't Release Me, Washington, D.C.
Dan Thayer, South Florida Water Management District, Palm Beach, FL

Public Comment

Chairman **Fuller** provided the opportunity for public comment. No public comments were received.

Adoption of Agenda

A Motion to adopt the agenda was made, and passed unanimously.

Approval of Minutes

The minutes of the September 18, 2014 meeting in Houston, TX were presented for approval.

A Motion was made to approve the minutes. The Motion was seconded, and the Motion passed.

Overview of SERC's Benthic Monitoring Program

Ian Davidson presented a PowerPoint presentation entitled "Benthic Monitoring for Marine Invasions – SERC's Approach". In 2016, the Panama Canal expansion will be completed, and there will be more traffic and larger ships. Other Gulf and Atlantic Coast ports will also expand. This will lead to more invasion opportunities. The challenge will be to measure marine invasions by sampling the communities, detecting species, determining biogeography, determining establishment statuses, timing of detection, and vectors responsible for bringing them in.

The National Exotic Marine & Estuarine Species Information System (NEMESIS) is a public database that shows all of the invasive invertebrates in marine and estuarine waters in the U.S. Inputs are from literature, museum collection records, and reporting systems. Outputs are both scientific and applied, and deal with patterns, biogeography, predictions, management/policy, and early detection/rapid response.

Invertebrate and algae invasions in the U.S. have significantly increased in the last 30 years. Shipping has played a major role in this invasion.

Standardized repeated measures that can be used are port surveys. There are three main components of this: Sessile benthic (fouling panels); infauna (benthic grabs); and plankton (net tows and pumps). Fouling plates are used to sample hard-bottom organisms. Ten sites with ten plates per bay are sampled. Morphological and genetic analyses are done to detect what organisms are present and to test taxonomic skills in order to find a more standardized and better approach to quantifying the organisms. Specimens are kept in a voucher library at the SERC facility. A genetics and eDNA component is also being done, and the benefit to this genetic

approach is that it is quality control for the taxonomies, a DNA barcode library is being created, cryptic diversity is being discovered, and efficiency of eDNA becomes better.

The surveys have been done throughout North America and into Panama. Seasons affect the abundance of species. Summer species abundances vary as a function of the previous winter's outflow.

The benefits are that management options to disrupt pattern/rate are identified; completeness of invasion inventories are improved, there is comparison among sites, and comparison over time; management efficacy is evaluated.

Fuller asked the Panel members if members would be interested in working with SERC and assist them in collecting samples, etc. **Ballard** stated that the Panel has raised this question before, and to possibly expand the effort into their regions. He asked the state members if they were still interested and if there were specific ports that they would want sampled. **Ballard** will send Ian's contact information to the state members to see if they would like to follow up with this partnership. Ian will provide the Panel with the expectations of the partnership, such as what would be needed from the states and how often the ports should be sampled. This subject will continue to move forward.

Overview of the Everglades CISMA Program

Tony Pernas gave a PowerPoint presentation entitled "CISMA – Everglades Cooperative Invasive Species Management Area". The Everglades CISMA is a formal partnership of federal, state, and local government agencies, tribes, individuals, and various interested groups that manage invasive species in the Everglades area, based on the CWMA model. The Mission is to improve the effectiveness of invasive species control by sharing information, innovation, and technology across borders. CISMA is comprised of a steering committee, various subcommittees, and teams. The goals are to integrate outreach efforts; integrate coordination, control, and management strategies; provide for information and technology transfer; early detection and rapid response of new invasive species.

To integrate coordination, control, and management strategies, annual Invasive Species Summits are held, and a digital aerial sketch mapping (DASM) region-wide invasive plant assessment tool was developed. Systematic reconnaissance flights were done in 1995, 2005, and 2015. Laurel Wilt has been found in Big Cypress National Preserve. The epidemic is clearly moving from east to west across the ECISMA, and about half of Big Cypress is now infected.

Outreach efforts are being done that include public events (Pet Amnesty Days, etc.); "Don't Let It Loose" billboard campaign; social media (Facebook, Twitter); newspapers; radio; email messaging; kiosks; non-native fish round-ups; and a website (www.evergladescisma.org). CISMA also publishes an online newsletter.

The 1st Annual Nonnative Fish Catch-Click-Submit Contest was held February 21-March 1, 2015. The objectives are to document the distribution of non-native fish in Florida using angler-caught fish that are photographed and reported to the FWC through the www.EDDMaps.org reporting system; increase public awareness of the potential negative impacts of releasing non-

native fish into Florida's waters; and to encourage anglers to target these non-native species for consumption. The most unusual species was a Red Tailed Catfish.

The Annual Everglades Non-native Fish Roundup is held to raise public awareness about the potential negative impacts of releasing non-native fish into Florida's waters; to encourage anglers to target these non-native species for consumption; and to gather data into non-native fish distribution and abundance that can assist in their management. Prizes are awarded for various categories, and all participants receive shirts. At the 2014 event, 55 people registered, and 580 pounds of invasive fish were caught. A new exotic fish was documented: Marbled-Pin Catfish.

Pernas spoke on the development of the REDDy (Introduced Reptile Early Detection & Documentation) Program. It is an online training class to educate people about the difference between native and invasive reptiles, and how to report them. Class participants receive a certificate upon completion.

CISMA produces several types of fliers, bumper stickers, bookmarks, etc. Fliers are distributed to agriculture areas where invasive reptiles might be encountered in farms or groves. Other fliers are distributed about lionfish. These are all available in English, Spanish, and Creole.

Reporting can be done via a hotline, website, and an iPhone app called "I'veGot1".

An Early Detection/Rapid Response Plan was developed for 2009-2011. The second edition of the Rapid Response Plan is being developed. Their website is currently being updated.

At the National Tropical Botanical Garden, 85 non-native red-flowered mangrove trees, saplings, and seedlings thriving in the mangrove preserve were destroyed in May by uprooting, cutting, and/or herbiciding by a seven-member interagency team.

In 2006, numerous sightings of Sacred Ibis were observed. In 2008, the ECISMA EDRR Sacred Ibis Eradication Plan was developed and implemented. There have been no sightings since 2011.

There is mounting evidence of a North African Rock Python population at the Bird Drive Basin. Surveys were initiated in 2010. Over 29 NAR pythons have been captured since 2009. No reports have been received since August 2014.

Argentine Black and White Tegu were first identified in September 2008. Since 2009, surveys, trapping, necropsy, radio telemetry, camera traps, and burrow traps have all been implemented. From 2009-2014, 920 tegus have been observed.

On February 28, 2015, the 2015 5K "Race Against Invasives" was held in the Everglades National Park.

The DOI Invasive Species Strategic Action Framework enhances collective efforts to combat invasive exotic species. It helps decision-makers understand the connection between goals, strategies, and tactics, and to make wise and timely investment decisions in the battle against invasive exotic species.

Exotic Mangrove Control

Jennifer Possley gave a PowerPoint presentation entitled “*Lumnitzera racemosa*, a Non-native Mangrove at Fairchild Tropical Botanic Garden & Matheson Hammock Park”. *Lumnitzera racemosa* is native to Asia and Australia, and thrives in dwarf red mangrove stands and on slightly higher ground than the native mangroves. It looks similar to white mangrove.

In 1964, 150 *Lumnitzera racemosa* seeds were collected from a botanic garden in Taiwan. In 1966, two trees from this seed collection survived and were planted at the Fairchild Tropical Garden, near native mangroves. In 1969, 100 seeds were collected from the two trees for propagation. In 1970 and 1971, seeds and seedlings were sold and planted. In 2008, the infestation was discovered.

The first step in eradication was Fairchild and Miami-Dade Parks joining forces with Everglades CISMA in 2009. Step 2 was holding volunteer removal workdays. Step 3 was surveying with GPS/GIS to determine distribution. Step 4 was conducting herbicide trials in 2009/2010. The herbicide treatments resulted in a decrease in *Lumnitzera* stems. Step 5 was FWC contracted removal from 2010-2015. Research interest in *Lumnitzera racemosa* has increased.

It is not known if *Lumnitzera racemosa* has spread beyond the known infestation area. Surveys in and near the known infestation area will continue. Research will be done on seed propagation and viability, and genetics. Workshops for the general public will be held. FWC funds will be requested again if needed.

Update on Lionfish Activities in Florida

Sommers gave a PowerPoint presentation entitled “Lionfish in Florida”. Lionfish were first reported in Florida near Dania Beach in 1985. There were additional reports from Florida and Bermuda in the 1990s. After 2000, the lionfish population rapidly spread, and they are currently distributed throughout the Bahamas, Caribbean, U.S. Southeast, Gulf of Mexico, and South America. Native species, habitats, and economy are all negatively impacted.

Complete eradication of lionfish is unlikely. Deepwater lionfish repopulate shallow reefs, and are difficult to harvest. Harvest by divers is currently the primary means of lionfish removal. Localized removal efforts can significantly reduce densities.

The FWC has a Lionfish Team made up of staff from across the agency. The 2014-15 *Florida Lionfish Control and Action Plan* is currently in progress. Stakeholder engagement goals are to encourage statewide public involvement and support in long-term lionfish control; and to cooperate with other Gulf Coast states, REEF, Sea Grant, and other organizations. The Lionfish Summit was held in 2013.

Recently, FWC made regulatory changes by reducing barriers to enhance removal efforts. Fishing license requirements for harvest by specific gears were waived; the bag limit for recreational and commercial fishermen was removed; rebreathers are allowed when harvesting lionfish; a permit was created for tournaments/events allowing spearing in prohibited areas; the importation of all species of *Pterois* was prohibited; and breeding of lionfish or aquaculture of larvae was prohibited.

To encourage public involvement in a long-term control initiative, localized removal efforts and derbies are supported and sponsored; lionfish workshops are developed; Reef Rangers was created, which is similar to the “Adopt-A-Highway” program. Divers pledge to conduct lionfish removals at local reefs of their choice, and are recognized for their efforts.

To educate public awareness of the threat of nonnative species, over \$250,000 was appropriated for Lionfish Awareness for FY2014/15. Online and print publications are being developed; workshops and presentations are being held; social media (Facebook, Twitter) is being utilized; the first Saturday after Mother’s Day was declared as “Lionfish Removal and Awareness Day”; a human dimension study to evaluate public perception and knowledge of lionfish is being done.

On May 28, the “Report Florida Lionfish” app was unveiled during a live Twitter chat. It was downloaded by over 2,500 people. Data was submitted by over 500 people. An interactive map, the ability to post on social media, additional data fields, and data sharing with USGS have all been implemented since the release of the app.

Lionfish Removal and Awareness Day was held in May 2015 in Pensacola. It was hosted by FWC and their partners, and events were held around the state. It was held in conjunction with a local lionfish derby.

FWC research is being done such as studying recolonization rates and species abundance and diversity after removal; tagging and acoustic tracking/video monitoring; research on mercury content of lionfish. Recreational lobster harvest surveys were done to gather information on lionfish encounters. The number of lobster fishermen who killed/removed lionfish increased from 2010-2013. Fishery independent trawl and camera surveys were conducted in the Gulf of Mexico. Lionfish were identified in deepwater habitats.

The next steps are to continue to implement an integrated approach for the control of lionfish by identifying additional outreach and education opportunities, continuing to coordinate and support control efforts, identifying innovative gear research and developments, and developing and implementing a FWC Lionfish Control and Action Plan.

Overview of NOAA's Habitat Program

Peg Brady gave a PowerPoint presentation entitled “Overview: Aquatic Invasive Species Task Force & National Invasive Species Council”. Peg spoke on the National AIS Strategy. She stated that the key to solving AIS problems is to prevent them from becoming established. Many arrive on our coasts via ballast water and/or biofouling from ships. Early detection, assessment, and rapid response strategies may act as a critical second defense. Control and management, restoration of high-value habitats, research, and collaboration and education/outreach are all needed.

The mission of the Aquatic Nuisance Species Task Force (ANSTF) is to develop and implement a program for waters of the U.S that prevents the introduction and dispersal of ANS; monitors and controls them; conducts research on methods to monitor/manage/control/eradicate; coordinates ANS programs and activities of ANSTF members and state agencies; educates and informs the general public and stakeholders. The Members work in conjunction with Regional

Panels and issue-specific committees to coordinate efforts among the agencies, as well as the private sector and North American interests. Membership includes 13 Federal agency representatives and 13 representatives from *ex officio* member organizations. ANSTF-approved Plans receive approximately \$1million annually for implementation. As more plans are approved, funds divided between the states to implement the plans are reduced.

The National Invasive Species Council has as its mission to provide national leadership and oversight on both terrestrial and aquatic invasive species, and to ensure that federal programs and activities to prevent and control invasive species are coordinated, effective, and efficient. Membership includes 13 member departments and their constituent agencies and small Council staff. The Invasive Species Advisory Committee is a FACA group consisting of ~30 non-federal experts and stakeholders who provide advice and recommendations on invasive species-related issues.

The U.S. Government Accountability Office (GAO) was directed to review the federal costs of, and spending on, AIS as mandated by Congress in the Water Resources Reform and Development Act of 2014 (WRRDA). A GAO study is under way.

The mission for NOAA Aquatic Invasive Species is to prevent new invasions and eliminate, mitigate, or control existing invasive species in U.S. coastal, Great Lakes, and ocean ecosystems. These are done by engaging in research and restoration activities to understand AIS threats, mitigate impacts, and prevent invasions; work at state, national, and international levels to address AIS problems and to reduce effects on marine ecosystems, commerce, and trade; provide leadership in the coordination of federal AIS programs; promote collaboration among NOAA line offices and programs.

NOAA's restoration center consists of programs and initiatives that restore, provide damage assessment, remediation, support and guidance. The Habitat Blueprint is NOAA's strategy to integrate habitat conservation throughout the agency, focus efforts in priority areas, and leverage internal and external collaborations to achieve measurable benefits within key habitats. While developing Habitat Blueprint Focus Area Implementation Plans, NOAA identified state and federal invasive species experts, and plans to consider invasive species prevention and management. As of January 2015, there are 10 focus areas.

The Hazard Analysis & Critical Control Point (HACCP) is the international standard for reducing or eliminating the spread of unwanted species during natural resource management activities. Teams from NOAA and the USFWS have revised manuals, forms, and teaching materials to better align with natural resource management work, and developed a "Train the Trainer" course. A new website is under development.

The "Regional Preparedness and Response Workshop to Address Biofouling and Aquatic Invasive Species on Japan Tsunami Marine Debris" was held July 31-August 1, 2012 in Portland, Oregon. The goal is to provide effective and consistent response to potential AIS associated with this marine debris.

Peg gave an overview of NOAA Regional highlights. The Gulf and South Atlantic: A Lionfish Web Portal is being developed. The Great Lakes Environmental Research Lab: Work is continuing on the GLANSIS database and factsheets; links between quagga/zebra mussels and harmful algal blooms are being investigated. Hawaii/Pacific Islands: Invasive algae removal on Hawaiian reefs is being done; AIS monitoring and vessel inspection is being done on the Papahānaumokuākea Marine National Monument. The Northeast/Mid-Atlantic coordinates the Chesapeake Bay Invasive Catfish Taskforce. In the West, an AIS management plan has been created for the Sacramento-San Joaquin River Delta; control and removal of invasive algae is being done; impacts of nonnative species on ESA-listed salmon is being investigated.

Recommendations were made at the June 2012 NOAA AIS Workshop. These recommendations are: To adopt a NOAA “Invasive Species-Conscious Policy” to encourage accountability and communication across NOAA and outside stakeholders; raise awareness of NOAA actions that respond to AIS threats and solutions; develop a NOAA invasive species portal to capture and communicate information; improve coordination and collaboration between NOAA and the ANSTF; develop and distribute a NOAA list of taxonomic and AIS experts.

The 2015 NOAA AIS Workshop was held March 31-April 1, 2015 in Santa Cruz, CA. The objectives were to identify ways to use existing NOAA processes, programs, and priorities to advance AIS prevention and control; examine AIS issues and explore mitigation strategies; examine AIS case studies and issues where NOAA is making progress, and those that need greater attention; establish a prioritized list of objectives for the NOAA AIS team, and a framework for moving forward. Draft recommendations were made: To create a list of potential funding sources; draft a model for the NOAA regional AIS team that is focused on coordination and efficiencies; review the draft National Invasive Species Council NEPA guidance and identify information that may be relevant to NOAA projects; identify environmental economists to inquire about opportunities for including AIS in economic studies; identify AIS training needs; promote use and enhancement of AIS risk assessment tools and compile information on models and training opportunities; construct a webinar series at NOAA.

Deep Water Trapping of Invasive Lionfish in the Caribbean

Jackson Gross reported that a group of Costa Rican fishermen called the Association of South Caribbean Artisanal Fishermen have established a program to reduce the population of lionfish using capture techniques and local knowledge of fishermen, maintaining the integrity of coral reef ecosystems. Also, to encourage local lionfish intake both within the population and tourist shops for it to be sold as an exotic food dish, to sensitize the local community (people and businesses) about the threat of lionfish, and that increased intake contributes to controlling their population.

At issue is how trap fishing for lionfish will affect native fisheries when constant lionfish trapping and harvesting is being done, since there would be obvious bycatch. This group functions mostly in waters from Puerto Viejo to the Panama border. Other than commercial fishermen, no one there is targeting lionfish with traps. Spear fishing is the method being used.

Funding was provided to build 600 traps. The traps are fished every 3-7 days. There are approximately 30 families participating. Each family has 25 traps. More traps are being built.

The traps have been successful. The importance is to establish a public demand for lionfish for food, etc. Jackson and Smith-Root are helping to generate needed resources.

Akins asked if landings data was available yet on lionfish or bycatch from the trapping program. Gross stated that they are currently working on that information.

Population Dynamics of Introduced Flathead Catfish

Bonvechio gave a PowerPoint Presentation entitled “Population Dynamics of Introduced Flathead Catfish Occurring in 2 Coastal Plain Blackwater Rivers”. In the Pee Dee River system, 51 flathead catfish were first stocked in Lake Marion in 1964. They were introduced in the late 70s-early 80s. On May 11, 2001, an 18-year-old resident caught a 79-pound flathead catfish in the Santee Diversion Canal, which was the new state all-tackle record for South Carolina.

Little flathead removal has been done in the Pee Dee River system. The flathead catfish have a “Do Not Consume Any” mercury advisory. Several batches of redbreast sunfish have been stocked since the flathead introduction. The river is known for its bream – most notably redbreast sunfish. Nearly all native Ictalurids have been decimated.

The first confirmed flathead catfish from the Satilla River was caught in June 1996. There has been active flathead removal since 1996, and increased removal efforts since 2007. Over 59,000 flatheads have been removed from 1996-2014. No native fish stocking has been done yet, but hopefully native fish populations such as the redbreast sunfish and native bullhead catfish will be restored back to historical levels.

Low amp pulsed DC electrofishing was done in the Satilla River and Little Pee Dee River. For age analysis, five fish per cm group less than 700 mm TL, and all fish >700 mm TL were sacrificed. The objectives were to describe the population dynamics of introduced flathead catfish that occur in two coastal plain blackwater rivers, and the relative abundance, size structure, age structure, mortality, and growth.

In the Satilla, the CPE was 75.1 fish/hr (18pps). There were less older fish, and truncated towards smaller fish. The maximum age obtained was 12. It took approximately 4.5 years to reach the preferred size of 710 mm TL, and just over 10 years to reach trophy size of 1020 mm TL.

In the Pee Dee, the CPE for 18pps was 144.5 fish/hr. The CPE for 15pps was 75.9 fish/hr. It was more evenly distributed with older, larger fish. The mean of young fish and stock size fish was significantly more on the Little Pee Dee than the Satilla River. The maximum age obtained was 26. It took just over nine years to reach the preferred size of 710 mm TL, and over 23 years to reach trophy size of 1020 mm TL.

Florida Pet Amnesty Program-Discussion on Possible Expansion

Sommers gave a PowerPoint Presentation entitled “Exotic Pet Amnesty Program”. There are over 600 nonnative wildlife species in Florida, and over 150 that probably have reproducing populations. One of the pathways of introduction is through the pet trade. State regulations require that these animals be classified. Class I – Very dangerous; Class II - Not as dangerous.

Class III – Everything else. Prohibited species - Piranhas, sea snakes, and gambian rats. Conditional species – Burmese pythons, six other large constrictors, Nile monitors, red-eared sliders, and lots of fish.

The Exotic Pet Amnesty Program was developed in 2006 as a method for prevention. Its mission is to prevent and reduce unlawful releases of nonnative pets by providing an alternative to “Letting it Loose”, and to foster responsible pet ownership through outreach and education at amnesty events. Amnesty is given to people to encourage those possessing unwanted nonnative fish or wildlife to relinquish pets to qualified adopters as an alternative to releasing them into Florida’s environment. One-day events are held throughout the state where individuals can surrender exotic animals, with no questions asked. Surrendered animals are adopted the same day by pre-registered qualified adopters. Year-round adoptions through a toll-free number (1-888-Ive-Got1) can also be done. News releases and press meet-and-greets are given before each event. Educating the public on the threats of releasing exotic animals into the wild, and encouraging people to research care requirements for an animal before buying a pet, are done at the events. The program partners with numerous government and private agencies in co-hosting events. Since 2006, 32 events have been held, and 1,629 animals rehomed. Since 2011, 687 animals have been rehomed through the hotline.

There are several challenges for the program, such as the ability to accept exotic fish, keep them alive for the duration of the event, and have adopters willing to accept them; unanticipated species and volume; less-common animals surrendered on occasion; the time required to facilitate adoptions outside of events; and the need for adopters.

In the future, an online adoption database will be developed to help with day-to-day adoptions. Options with aquarists and hobbyists to better address aquatic species will be explored. Out-of-state inquiries will be addressed.

Discussion of the 2015-2019 GSARP Guidance Document

Ballard stated that at the spring meeting, the work groups got together and went through the strategic plan to update the content. From that discussion, **Ballard** developed the Guidance Document. Prior to this meeting, **Ballard** sent out the revised version of the 5-year Strategic Plan. **Riecke** stated that on page 7, Goal 2 should be listed as an action statement. (Develop partnerships and coordination for multi-agency invasive species prevention and management). He also suggested that Goals should be listed in a bullet format. **Knott** pointed out that in the Introduction on page 2, in the third paragraph, GSARP should not be used as an acronym for the Gulf of Mexico Regional Panel on Aquatic Invasive Species. **Kumpf** questioned whether the Panel was in a position to undertake Strategy D of Task 4 on page 11. The Panel agreed, and it will be removed. **Fuller** asked for a motion to approve the Guidance Document, with the amendments just discussed. **A Motion was made to approve the amended Guidance Document. The Motion was seconded, and the Motion passed.**

Update on the USFWS Region 4 AIS Small Grants Program

Ballard gave a PowerPoint presentation entitled “Update on the USFWS Region 4 AIS Small Grants Program”. The Panel took over the review of the USFWS Region 4 AIS Small Grants Program. Last fall, the Panel updated USFWS’s RFP. USFWS sent it out for proposals. When

the proposals had been submitted, they were sent to **Ballard**, who in turn sent them to the Review Committee for ranking. Forty-one proposals were received, totaling almost \$1 million. The estimated budget for the total Program is approximately \$200,000. The Committee ranked the proposals, and **Ballard** submitted the final list to USFWS. The top eight will be funded, with the possibility of additional funding being received for more proposals. **Ballard** stated that the details of the selected proposals would not be discussed at this time. **Ballard** will be sending emails to the PIs next week, but could not pinpoint when the funding will become available. He will send out the sub-awards to the selected PIs when they become available.

Akins asked about the review process. **Ballard** explained that the Panel decided to use the Research Work Group as the Review Committee, but the Chairmen of the other Work Groups would also be involved so that there would be input from all of the work groups.

Discussion of the Invasive Species Experts Database

Fuller explained that the database was created many years ago with the idea that if someone found a possible invasive species, they could contact the appropriate state person who is familiar with what species are native to their state, and if the species is not native, the state person has access to a second tier of experts who are taxonomists and experts in distinct fields.

This database is being revived, after being dormant for some time. The state contacts need to be updated, so the Panel members will provide their contact information to **Ballard**, which will then be provided to the Task Force to be entered into the experts database. The next step will be to update contact information of the Tier 2 experts.

“Don't Release Me” Program Overview

Akins and Erin Spencer gave a PowerPoint Presentation entitled “Don't Release Me”. There are approximately 150 million exotic fishes comprising 2,000 different species that are imported into the U.S. annually for the aquarium trade. At least 185 different species of exotic fish have currently been caught in U.S. waters, with 75 known to have breeding populations. Over half of the introductions are from people releasing aquarium fish into the wild.

The idea for the “Don't Release Me” campaign comes from a preventative side, but also to work with aquarium vendors and pet owners. The Mission of the “Don't Release Me” Program is to prevent the release of nonnative pets and subsequent ecological and economic damages by promoting responsible pet ownership. The goals are to enable owners to make wise choices in dealing with pets they are no longer able or willing to care for; to educate the general public in the severity of seemingly innocuous pet release behavior; to join together with other like-minded organizations to promote invasive species issues and pet release problems and solutions.

Aquatic pets are primarily the main focus now. Clear plastic bags (20,000) in two sizes were printed with the “Don't Release Me” logo/information and sold to aquarium vendors for pet stores and pet trade events. Several partnerships have sponsored the printing of the bags.

Another goal of the program is an online education/outreach campaign. A user-friendly website has been developed with information and resources available to the public. A Facebook page and Twitter page have also been created.

At the Reef-a-Palooza event in Orlando, Florida, over 5,000 bags were distributed. The response was very positive. Vendors used the bags when they sold aquarium fish. This event is the largest saltwater aquarium event in the nation.

The bags will continue to be distributed, and a pledge program to not release aquarium pets will hopefully be created with pet stores. The social media presence will be strengthened. Partnerships will be consulted with and confirmed. The official launch of the program will be done at MACNA in September. Other types of messaging will be created in the future, such as fliers, stickers, etc.

State Reports/ Members Forum

Alabama

Rider reported that a draft report on efforts to control apple snails in Threemile Creek is now available. In January 2015, a Threemile Creek Invasive Species Working Group was formed to develop a grant proposal for comprehensive control of aquatic and terrestrial invasive nuisance species in the Threemile Creek watershed.

During the 2015 commercial paddlefish season, large bighead carp continued to be caught by commercial paddlefish harvesters in the Alabama River (Mobile River basin).

Additional requests have been received to allow the importation and aquaculture of Barramundi in Alabama. Risk assessments were reviewed on several species, and one indicated a moderate to high probability of invasion – the other was uncertain. Therefore, a recommendation was made to blacklist this species, and develop a policy statement that the species remain blacklisted unless an acceptable risk assessment can be provided.

During April 27-May 1, USFWS biologists from Region 3 will be collecting eDNA samples from the Tennessee River of Alabama in an attempt to identify the invasion front of Silver Carp.

Newton reported that the Asian tiger shrimp has been a species of concern since 2006, when it was first observed in Alabama's inshore waters. Captures of tiger shrimp have incrementally increased, and indications are that they occur within all of Alabama's primary estuary basins. However, the concern for tiger shrimp has decreased within the commercial shrimping community, which has resulted in fewer validated reports. AMRD received fewer validated reports in 2013 and 2014 than in previous years. Despite the reduction in validated reports, communications between AMRD and commercial shrimpers indicate a significant abundance of tiger shrimp within Alabama waters. Commercial shrimpers indicate encounters with tiger shrimp throughout 2013, although they no longer record collection information, preserve the specimen, or report encounters to AMRD in a timely manner. There have been no official reports of tiger shrimp in 2014 and 2015. AMRD continues to focus on documenting occurrence, characterizing the population structure, and processing samples for genetic investigation. To address the lack of reporting, and the need to collect distribution/abundance data, AMRD included tiger shrimp on commercial trip tickets to document landings. Efforts are also being

made by local academic institutions to acquire live specimens, and conduct research regarding behavior and interactions of tiger shrimp with native fauna.

Several other invasive species have been documented in Alabama coastal waters. The Bocourt swimming crab, tessellated blenny, Australian spotted jellyfish, Asian green mussel, Asian tiger shrimp, and red lionfish have all been documented, although non-validated/undocumented reports of additional invasive species likely exist. Prey of Australian spotted jellyfish include early life history stages of many commercially and recreationally-important finfish. The Bocourt swimming crab could compete for resources of the native blue crab. However, the current status of the Australian spotted jellyfish and the Bocourt swimming crab does not indicate that these two invasive species pose an imminent concern. The tessellated blenny and Asian green mussel also do not appear to pose an immediate threat, but their distribution and abundance should be monitored. However, the Asian tiger shrimp and red lionfish continue to be invasive species of heightened concern, and their broadened distribution and increased abundance warrants investigation.

The first confirmed report of lionfish was documented in June 2011 by a spear fisherman who collected one from an oil/gas platform approximately 43 miles south of Dauphin Island. Numerous unconfirmed reports of lionfish to various government agencies indicate lionfish were abundant on the Trysler Grounds in 2011. Up to 30 lionfish were observed by SCUBA divers during single dives in this area during the 2011 dive season. During 2012-2013, unconfirmed reports from SCUBA divers indicate lionfish abundance had increased from previous levels. A recreational diver reported observing up to 60 lionfish during a dive at Trysler during the 2012 diving season. Another diver reported observing up to 100 lionfish during a dive at an artificial pyramid reef in June 2012. After a lionfish rodeo in June and July 2012, 26 lionfish were donated to AMRD by a local dive shop.

In December 2012, AMRD received a grant from Gulf States Marine Fisheries Commission (GSMFC) to monitor reef communities in the Gulf of Mexico, dispatch red lionfish when encountered during SCUBA surveys, increase public awareness of the lionfish invasion, and streamline the general coordination between state agencies. AMRD personnel completed eighteen dive surveys during 2013. T-shirts were distributed to the members of the SCUBA community who were active in submitting reports, samples, and increasing public awareness. Additional funding was secured from GSMFC to continue the monitoring in 2014 and continue increasing public awareness. SCUBA surveys were conducted by AMRD personnel at 18 reef sites in 2014. AMRD is also developing an Adopt-a-Reef Program that emphasizes the reporting and capturing of lionfish. In addition to conducting surveys, AMRD is coordinating with a software-development company to create a web-based application that will allow for the submission and viewing of reports submitted by Adopt-a-Reef participants.

Educating the public is paramount to obtaining quality information on invasive species. The DCFR/MRD continues their efforts to enhance public awareness. Participation in additional lionfish derbies and the promotion of the Adopt-a-Reef Program is expected to result in routine eradication efforts at important reefs. A page within the Alabama Marine Information Calendar dedicated to educating the public about the lionfish and the Adopt-a-Reef Program has been

distributed to a variety of establishments, where it becomes readily available to DCNR/MRD constituents.

Florida

Schmitz reported that invasive non-native plants were found in 96% of Florida's 457 public lakes and rivers that comprise 1.25 million acres of fresh water. Eradicating established invasive aquatic plant populations has proved to be nearly impossible. Routine maintenance is needed to suppress invasive plants at low levels to sustain flood control, navigation, and recreation, while conserving native plant habitat. Floating water hyacinth and water lettuce, two of the world's fastest growing and most invasive plants, covered approximately 125,000 acres of Florida public waters, and are the FWC's highest aquatic plant management priorities. Floating plants were present in 249 public lakes and rivers in 2014, and are under maintenance control in 99% of Florida's public waters. Approximately \$5 million was spent on controlling over 43,000 acres of floating plants in Florida public lakes and rivers during FY 2013-2014.

In 2014, hydrilla was reported in 185 public waters. It is considered to be under maintenance control in 98% of Florida's public lakes and rivers. However, subterranean tubers still infest approximately 60,000 acres, and represent the potential for immediate regrowth. During FWC inventories of public lakes and rivers in 2014, 61% of the hydrilla acreage reported occurred in the four lakes of the Kissimmee Chain of Lakes. The FWC spent over \$5 million treating 9,000 acres of hydrilla in public waters during FY2013-2014 to conserve the multiple uses of these resources.

Fourteen of the 28 non-native aquatic plants found in Florida public waters are considered to be invasive, and capable of disrupting aquatic ecosystems, and causing economic or environmental harm. In addition to hydrilla, water hyacinth, and water lettuce, nine invasive species were found in 94% of Florida's public waters. During FY2013-2014, over \$3 million was spent controlling approximately 8,000 acres of aquatic plants other than hydrilla and floating plants.

Sommers reported that the FWC is continuing the statewide outreach campaign in 2015, with the goals of raising awareness and influencing behaviors toward lionfish. The FWC approved a resolution declaring the first Saturday after Mother's Day each year to be "Lionfish Removal and Awareness Day". The agency encourages divers and saltwater anglers to remove as many lionfish as they can on this day. The inaugural year will be celebrated by events held on this day throughout the state, and a festival and lionfish tournament will be held May 16-17, 2015 in Pensacola, Florida to serve as the main FWC event. This event will be co-sponsored by Guy Harvey's Ocean Foundation, and will include lionfish tastings and filleting demonstrations.

FWC has developed the Reef Rangers Lionfish Control Program. This program will be advertised throughout the upcoming year, and will be an incorporated requirement associated with funding provided by FWC for lionfish tournaments. A Reef Rangers website has been developed that will incorporate information from the lionfish reporting application "Report Florida Lionfish", which was developed by FWC's Lionfish Control Team for use on smart devices. For more information see: www.ReefRangers.com.

The FL FWCC revised rule language regarding lionfish aquaculture in an effort to address potential future introductions of lionfish. Breeding of lionfish and aquaculture of larvae are no longer allowed. To further address potential future risks of other genera of lionfish, the FWC will be working with the University of Florida to calibrate a marine FISK tool to ultimately test other genera to determine if they are a risk in Florida waters. Work on this project will hopefully begin within the next year.

The University of Florida was contracted to conduct pre- and post-outreach campaign surveys to help FWC develop and evaluate the 2015 lionfish outreach campaign. The pre-campaign survey has been completed, and the results will be summarized and shared with partners to inform other outreach campaigns. Post-campaign data will be collected in fall 2015, and will be presented within a Final Report to FWC describing effects of the outreach campaign on public awareness, attitudes, and behaviors.

Asian swamp eels were reported from locations outside their known range. A small number of juvenile swamp eels were discovered inside Sarasota city limits, after a ditch flooded, then receded, stranding the eels. A second population was found in Payne Creek (Hardee County), a tributary of the upper Peace River. It is unknown if these populations represent separate introductions, or are the result of range expansion after high water events. Genetic analysis will be done on swamp eels from the Hardee County population to determine if they are one of the three species that are known to occur in Florida, or a new species.

The nonnative swimbladder nematode *Anguillicoides crassus* was discovered in American eels in the St. Johns River in 2004. A nematode infection affects the condition and function of the eel's swim bladder. An infected eel can be more prone to disease, have a reduced growth rate, experience swim bladder collapse, and potentially die. American eel populations in Florida are considered to be in "depleted status". This nematode is a cause for concern. Based on preliminary findings, *Anguillicoides crassus* has only been found in the St. Johns River population. Additional funding is being sought to expand upon this work.

In August 2014, 15 members of everglades Cooperative Invasive Species Management Area conducted a first-ever removal effort of a nonnative fish identified as red bay snook. Bay snook are a large, piscivorous cichlid native to the Atlantic slope of Central America. Bay snook were found in a property entrance "koi" pond, and throughout the interconnected streams, sinkholes, and small ponds on the property. The pond was drained and all unwanted nonnative fish (including bay snook) were removed. No specimens of bay snook were collected in extensive electrofishing in the fresh and brackish water sections of the main canal.

FWC partnered with U.S. Fish and Wildlife Service (USFWS), U.S. Geological Service (USGS) and National Park Service to host the First Annual Nonnative Fish Catch, Click and Submit Contest. The contest was held February 21-March 1, 2015 as part of National Invasive Species Awareness Week. The objectives of the contest were to use anglers to document the presence of nonnative fish species across the state, using the Early Detection and Distribution Mapping System (EDDMapS) reporting system, increase public awareness on nonnative fish issues, and to encourage anglers to consume nonnative fish. Participation was low, but outreach through Facebook was very good. The contest news release was delivered to over 200,000 subscribers,

with 23,000 of the messages opened. No new nonnative fish were reported, but a redbtail catfish and a sailfin catfish were caught.

A dedicated group of bass anglers have hosted bullseye snakehead specific tournaments called "Snakehead Roundups" since 2010. FWC has not officially sponsored these tournaments, but a biologist has acted as the official weighmaster, and provides information and outreach to the anglers. To date, there have been 23 tournaments, and 728 anglers have caught 3,030 bullseye snakehead. One of the concerns of the anglers is the potential impact on largemouth bass populations within the range of bullseye snakehead. The number of bass caught by anglers during these tournaments is also recorded. The catch-rates of largemouth bass in these tournaments is similar to creel survey results of area canals, despite them being held during the summer months when bass fishing is generally less productive. These data support standardized electrofishing results that strongly suggest largemouth bass are not being negatively impacted by bullseye snakehead.

MyRightFish is a digital interactive buyer's guide funded by the USFWS and is designed to help aquarium hobbyists make wise decisions when purchasing marine fish and invertebrates, to decrease chances of illegal releases of unwanted pets. The MyRightFish webpage was launched in January 2015 and contains information of compatible fish species, tank size selection, technical tips, and fun facts. MyRightFish is part of a continuing effort to educate the public on the potentially serious ecological consequences of releasing non-native pets.

In April 2015, FWC is partnering with the Recreational Boating and Fishing Association and the Fish and Wildlife Foundation of Florida in hosting the first Vamos a Pescar Miami Family Fish Festival. The primary objectives of this one-day event are to provide Miami families, many of whom are Hispanic, opportunities to participate in fishing and boating activities, and to promote conservation education. Hopefully, adults and children will take an interest in these activities and sign up for outdoor sports-related camps to continue their education.

Nutria have been reported from 22 central and north Florida counties. Nutria were introduced into Florida in the 1950s for fur farming. They subsequently escaped, and there are reproducing populations in several parts of the state.

In March 2015, an unconfirmed report of a capybara in southwest Everglades National Park in southern Collier County was received through EDDMapS. This sighting is over 250 miles south of the known range of a small population of capybara that is located in the Santa Fe River drainage area in north central Florida.

Akins reported that there have been recent reports of lionfish in Sarasota Bay and Charlotte Harbor. These two bodies of water are on the west coast of Florida.

Hook-and-line catches of lionfish are increasing, including from the shoreline along a jetty on the Gulf Coast.

There will be lionfish derbies in Florida throughout the summer. Also, as part of the FWS funding through GSARP, a lionfish workshop tour has been created, with 14 coastal cities

around the southeast that will host lionfish collection and handling workshops for the public. Fliers will be distributed, and more information is available on the FWS website for these events.

The Gulf and Caribbean Fisheries Institute now has a lionfish web portal active, which is funded through the NOAA program. Current events and lionfish research papers are available to the public.

For the 7th year, a special lionfish session at GCFI will be held. This year, it will be held in Panama. There will also be a series on marine ecology progress.

IGFA now has an all-tackle class for world-record lionfish catch. **Akins** requested that if the members are keeping track of the data, it would be helpful to get the total length in metric, grams, and millimeters. A lot of the data being collected, as far as research projects, are all metric.

A report was received of a chocolate surgeon fish sighting at the Blue Heron Bridge in Palm Beach. The sighting was confirmed via diver photograph. The fish was captured live, and was shipped to the Toronto Aquarium.

Walters reported that she has been working for 15 years on oyster reefs on the Indian River Lagoon. She has documented three invasive species on the oyster reef, but none have been seen for the last three years. However, the charru mussel and green mussel have reappeared this year. It has been documented that both of these mussels have a negative impact on intertidal oysters.

Georgia

Bonvechio reported that a shoal bass was caught and released live on the Altamaha River by DNR personnel conducting routine electrofishing samples. The shoal bass is a very popular riverine sportfish in Georgia and Florida, and is native to the Flint and Appalachian river basins. It most likely expanded from a well-established non-native Ocmulgee River population upstream.

Four small patches of water hyacinth were removed from the canal leading to Stephen C. Foster State Park to Billy's Lake, in the Okefenokee Swamp in December 2014.

After draining a pond in January 2015 at the Georgia DNR Bowens Mill Fish Hatchery, a large 6" crayfish and two smaller ones were obtained. It was believed to be a White River crayfish. The crayfish was most likely brought in from Arkansas last spring on a truck with a load of fathead minnows.

Giant salvinia was discovered in a pond in Evans County in January 2015. Contamination of the 3-acre pond originated from an upstream pond via a drainage ditch for its overflow water. At last inspection, the upstream pond had 100% coverage of giant salvinia. The downstream pond had approximately 50-60% coverage. Control of the salvinia will be done with herbicides, and complete control should be achieved within 30-90 days. The infested areas will be monitored and retreated as necessary throughout the season. Next spring, onsite visits will be done to ensure that the salvinia has not returned.

The Georgia DNR is instituting a protocol to collect and test grass carp ploidy, in a proactive effort to monitor grass carp ploidy, and to minimize the potential establishment of wild grass carp populations in state-managed waters. The protocol was put into action by October 2014. From November 2014 until April 2015, ten wild grass carp were captured and submitted for triploid testing in Warm Springs, GA. Eight of the ten fish tested positive as triploids, and test results of two other fish are expected soon.

In an effort to reverse the impacts of flathead catfish on native fish populations, the GA Wildlife Resources Division (WRD) Fisheries Management Section (FM) began removing flathead catfish from the Satilla River as time permitted. Sampling and creel surveys revealed declines in abundances of redbreast sunfish and bullhead catfishes, which coincided with significant increases in the abundance of flathead catfish. Despite these efforts, the number and size of flathead catfish continue to increase. In 2006, FM instituted the Flathead Catfish Removal Project Georgia, using legislatively-appropriated funding. The project funds two positions which are focused on long-term population control through direct removal of flathead catfish. Over 16,000 flathead catfish were removed during the 2014 sampling season. Since 2007, over 47,000 flathead catfish have been removed. Numbers from this year's sampling effort show an increase in several population indices. The size structure, average length, and biomass per effort of the population have declined. Catch per effort has fluctuated between 18 and 40 fish per hour since 2004, but steadily increased to 75.1 fish per hour in 2014. It appears that successive high water periods from the fall of 2012 until spring 2014 has helped the flathead population rebound.

Anglers in the Satilla River reported impressive stringers of large redbreast sunfish, including 10" "Roosters", which were caught in the heart of the flathead catfish removal area in 2014. The river was in the floodplain most of the fall and winter, so redbreast sunfish have had ample foraging opportunities, which resulted in increased survival and accelerated growth rates.

Louisiana

Bourgeois did not attend, but provided a written report. LDWF treated over 57,000 acres of nuisance aquatic weeds in 2014. Areas previously controlled by the U.S. Army Corps of Engineers (USACE) remained a priority in 2014, especially large areas of the Terrebonne marsh and Henderson Lake. Over 11,000 acres in these areas were treated. The majority of this effort was directed toward water hyacinth control. The USACE Removal of Aquatic Growth Program has resumed on a limited basis, and a water hyacinth infestation in Bayou Petit Caillou was treated in 2014.

Since 2006, giant salvinia has been a major focus of aquatic plant control efforts in Louisiana. Regular herbicide applications and drawdowns are currently being used to keep salvinia infestations at manageable levels. During the recent winter, much of north Louisiana experienced sub-freezing temperatures and ice for extended periods of time. As of March 2015, giant salvinia coverage in waterbodies in this area was greatly reduced from estimates taken in fall 2014. However, salvinia coverage in most waterbodies is expected to return to near normal levels by mid-July.

Throughout 2014, giant salvinia weevil stocking and monitoring efforts continued. Weevils were released throughout the state, including onto relatively new infestations in Henderson Lake and

the St. Bernard marsh. The weevils have continued to increase their level of control on giant salvinia infestations in south Louisiana. In 2015, giant salvinia weevils from the nursery ponds in Houma have been distributed throughout the state, and stocking will continue throughout 2015.

The LDWF and LSU Agricultural Center have entered into an agreement to research and potentially develop a population of cold-tolerant weevils for use in north Louisiana. As the population builds, it will continually be exposed to low temperatures in growth chambers to select those weevils that can survive a cooler winter climate. After many generations and several cold exposures, it is expected that a cold-tolerant weevil population can be accessed that can be mass-produced for stocking across north Louisiana. As of April 2015, necessary equipment has been purchased, and experiments to determine the supercooling points of the weevil have begun.

In Toledo Bend Reservoir, yellow floating heart has become established. As of April 2015, approximately 50 acres are covered. In spring 2015, herbicide trials will be conducted to evaluate the efficacy of existing aquatic herbicides on yellow floating heart.

Apple snail interest has increased, which has resulted in an apple snail conference. Attending the conference were researchers who are studying some aspects of apple snails. Also in attendance were state, parish, and federal agencies. The group will meet again in early 2015.

No reports of tiger shrimp were received from November 2013 to August 2014. From August to November, approximately 70 tiger shrimp were reported.

Several reports of lionfish have been received from the commercial diving industry. One of the companies has made contacting LDWF and recording lionfish as a company policy. Periodic spreadsheets of sightings are sent to LDWF.

A LDWF 2013 ANS grant to survey selected public urban ponds in Baton Rouge and Lafayette for the presence of ANS is complete, with the exception of some analysis. Plants, invertebrates, and fish were sampled. The only exotic species found so far in the samples were plants. The 2014 ANS grant will be used to look at the trophic effects of Asian carp on some Louisiana oxbows.

LDWF received a USFWS grant to extend and expand their 2012 ANS grant for drift net sampling for Asian carp. The first summer of sampling ichthyoplankton is finished, and the samples are currently being analyzed to determine the presence, relative abundance, and distribution of Asian carp. The 2013-2014 grant will be used to expand sample site coverage and to help further understand these species.

ANS information and education has been distributed at festivals, fishing tournaments, boat shows, expos, and outreach events. LDWF is also posting brochures, links, and articles about ANS species and concern on their Facebook page.

The revision of the state wildlife action plan is under way, and the Introduced and Exotic Species section will be expanded in this version. Hopefully, this will result in an increase in state wildlife

grants to provide needed research on ANS species. One ANS-related grant has been submitted for funding.

Mississippi

Burris reported that a Certified Official Mississippi State Record lionfish (*Pterois volitans*) weighing 1 lb. 11.20 oz. (pending IGFA World Record) was caught by an angler. It was caught approximately 70 miles south of Biloxi in 205 feet of water. The fish was 15.2" total length, with an approximate 13" girth.

Herbicide spray activities were conducted on small infestations of alligator weed.

In Robinson Bayou in the Pascagoula River, 45 giant apple snail egg masses were found and destroyed.

Thirty-nine field surveys, and one aerial survey were conducted for early detection of AIS.

Common salvinia weevils from the Pascagoula River were collected and provided to MDWF for use on an infestation near Hattiesburg, MS.

Giant apple snail awareness posters were created and distributed.

At an invasive species seminar in Gautier, MS, an "Invasive Species of South Mississippi" presentation was given.

Riecke reported that giant salvinia was found in two lakes near Hattiesburg, MS in September 2014, and also in a pond near Picayune, MS in November 2014. Water hyacinth was found in Belzoni Cutoff in October 2014. Nile tilapia young-of-the-year was collected in the Big Sunflower River in October 2014. In January 2015, armored catfish (species identification pending) washed up on the shoreline of St. Louis Bay, MS. In March 2015, a black carp was brought to the Moons River Foods Plant. Plant officials will save all future black carp they receive for MDWF.

Reprinting and distribution of the "Stop Aquatic Hitchhikers" cards continues. The cards are included with all boat registrations or renewals that are mailed out.

The "Stop Hitchhikers" logo and bullet list continues to be printed in the annual *Mississippi Outdoor Digest* and *Guide to Mississippi Saltwater Fishing*.

Links to the MS River Basin Panel on Aquatic Nuisance Species and the Gulf and South Atlantic Regional Panel on Aquatic Invasive Species, "Stop Aquatic Hitchhikers", and Habitattitude websites are on the department website.

Formation of the Mississippi Aquatic Invasive Species Council will be done to guide implementation of the activities specified in the *Mississippi State Management Plan for Aquatic Invasive Species*.

Freshwater fishing bait regulations will be composed to specify what bait can be legally sold, possessed, transported, and used in Mississippi.

A list of approved, restricted, and prohibited species under the authority specified in MS Code 49-7-80, and as specified in the *Mississippi State Management Plan for Aquatic Invasive Species* Amend list of approved, restricted, and prohibited species as specified in the public notice that regulates aquaculture activities in Mississippi will be adopted.

An EDRR monitoring program comprised of state and federal personnel who sample aquatic species in Mississippi public waterways on a routine basis will be established.

Pursley did not attend, but provided a written report. Common salvinia weevils released in the previous reporting period were provided to MDWFP for use on an infestation near Hattiesburg, MS.

Three reports of Asian tiger shrimp were received during this period, and reported to the NAS database.

Two aerial surveys and 39 field surveys for early detection of AIS were conducted. Herbicide spray activities were conducted on small infestations of alligator weed.

Several citizen reports of AIS were received and investigated. One report proved to be accurate for alligator weed.

Invasive species educational materials were displayed and distributed at the “Celebrate the Gulf Nature Festival” in Pass Christian, MS. Items from the GSARP “Traveling Trunk” of invasive species were exhibited as part of these educational outreach activities.

At the October 2014 Science Cafe at the Gulf Coast Research Laboratory, a presentation entitled “Invasive Species of South Mississippi” was given.

North Carolina

Staszak reported that 21 tiger shrimp were reported from July-September, 2014, but only 12 were confirmed. One red striped variant was reported from a cast net. Landings data were less than 10 lbs.

Chinese mystery snails continue to be found in new locations. The WRC Aquatic Wildlife Diversity staff continues to monitor for them. They have been identified in several reservoirs and tailraces within river basins.

White perch, blueback herring, and alewife have been introduced into inland reservoirs, resulting in a negative impact on existing fisheries. In Lake James and Hiwassee Reservoir, walleye recruitment failure has been linked to these introductions. To maintain those fisheries, WRC is currently stocking fingerling walleye annually. In conjunction with the introductions, white bass has also shown similar declines.

Gill lice were observed on brook trout within several headwater streams of Cullasaja River in Macon County in September 2014. This discovery marked the first time that gill lice have been documented on brook trout within NC waters. Samples of the copepod were provided to the USFWS's Wildlife Service's Warm Springs Health Center for identification. It was identified as *Salmincola edwardsii*, an ectoparasite that only affects salmonids of the genus *Salvelinus*. Specimens have been provided by biologists to geneticists with USGS to determine if the strain of *S. edwardsii* observed on NC brook trout is the same that has been observed in northern states and Canada. The NC Wildlife Resources Commission will continue to sample brook trout populations across the mountains of NC to document the distribution and status of gill lice. Anglers have been asked to report observations of gill lice during recreational outings.

Reports for lionfish go directly to NOAA Fisheries Laboratory in Beaufort, NC.

For the first time, state funds have been allocated to invasive aquatic plant management on a recurring basis in NC. Up to \$500K can be used from the Shallow Draft Navigation Channel Dredging and Lake Maintenance Fund for aquatic weed control. Money comes from 1/6 of 1% of the motor fuel tax, plus a portion of the money collected from boat titles and registrations.

Lake Waccamaw Hydrilla Project: An aquatic plant survey of the entire lake was done in 2012. Hydrilla was found scattered throughout a 950-acre portion of the 9,000 acre lake. Herbicide treatments were done in 2013 and 2014. Treatments will also be done in 2015.

Lake Gaston Hydrilla Project: The cost of hydrilla management at Lake Gaston over the last five years has averaged \$850,730 per year. Annual vegetation surveys in 2013 and 2014 have shown a significant reduction in hydrilla across the lake. Approximately 3,500 acres of the 20,000 acre lake have been infested with hydrilla since 2000. Management has consisted of large-scale fluridone treatments and grass carp stockings.

South Carolina

Kingsley-Smith reported that collections of island apple snail shells were reported from a location in Mount Pleasant, SC in 2010 and 2011. It was believed that this population had been eradicated following chemical treatment and cold winters. However, a site visit in August 2014 revealed the presence of empty shells and egg masses deposited during the previous season. In April 2015, a site visit revealed no apple snails or egg clutches.

Researchers revisited a site in March 2015 in West Ashley, SC where apple snails had previously been observed. Remnants of egg clutches, one dead snail, and one live snail were observed. The live snail was sacrificed for future parasite studies. In April 2015, researchers revisited the site. Sixty-five live apple snails were collected from the pond.

Storm-water ponds will be surveyed in 2015, using a stratified randomized sampling design to determine the abundance and distribution of apple snails throughout the state. Their abundance and distribution will be compared to those of native snail species. Various eradication methods will be tested in an effort to assist in the control of apple snail populations. Examinations will be done on the snails for the presence of the parasite *Angiostrongylus cantonesis*, which can cause a form of meningitis in humans.

FY2014 funding was secured under the State and Interstate ANS Management Plan Program to improve understanding of the recent invasion of the South Atlantic Bight and Gulf of Mexico by the Asian tiger shrimp. The funding has enabled hiring of a temporary grant Wildlife Biologist I position at the Institute, who is working on both Asian tiger shrimp and island apple snail.

Preservation and archiving of pleopod tissue samples for genetic analyses that began in 2008 continues as specimens become available. The samples are being held in a tissue repository in Beaufort, NC, which is maintained by the NOAA National Centers for Coastal Ocean Science Laboratory. Two such invaded regions of particular interest are Columbia and Belize. In addition, a publication currently in review for *Biological Invasions Records* reports the first collection of tiger shrimp from the Caribbean Sea of Costa Rica.

In 2014, reports of tiger shrimp collected in U.S. waters was considerably lower compared to previous years. This is likely due to reporting apathy, rather than a reflection of a change in abundance. The majority of 2014 reports were from recreational fishermen, rather than commercial sources. There was a noteworthy collection of the smallest tiger shrimp ever collected in U.S. waters since the reappearance of tiger shrimp in 2006. It was 61mm total length, and weighed 1.46g. Previously, the smallest tiger shrimp reported was 102mm. This new finding supports the premise that tiger shrimp is now established and reproducing in U.S. waters.

The invasive parasitic nematode *Anguillicoloides crassus* that infects the swimbladder of the American eel, *Anguilla rostrata*, was first detected in wild American eels in 1995 in eels collected from Winyah Bay, South Carolina. The parasite is believed to originate from Asia, where it infects the Japanese eel, *Anguilla japonica*. However, it has been unintentionally spread throughout the world, and now infects numerous other anguillid eel host species. The parasite has spread to other areas along the North American coastline. Infections can cause damage to the swim bladder which impairs the ability of eels to migrate to their oceanic spawning grounds, and can also induce mortality. This is of concern because the American eel has declined in recent decades. Research conducted by the SCDNR Estuarine Finfish Research Section found that at least 45% of American eels in the estuaries of South Carolina are infected by *A. crassus*. The U.S. Stock of *A. rostrata* is considered to be depleted, and a proposal to have the species listed under the Endangered Species Act is currently under review.

Through a 2014-2015 USFWS grant, researchers at the SCDNR Marine Resources Research Institute are conducting species identification tests, targeting the mitochondrial cytochrome oxidase (COI) gene. Tests were also done with *A. crassus* L₂ larval stages. Over the last year, the team has successfully developed and optimized a species-specific qPCR assay for *A. crassus*, with the ability to differentiate this invasive species from closely-related parasitic nematode species found in local ecosystems. The application of the molecular tool to a field setting is the next priority. It will be useful for rapidly identifying infected versus non-infected habitats for conservation purposes, and for screening harvested eels before transport. The researchers recently submitted a follow-up proposal for consideration by GSARP for USFWS funding in order to continue this work.

Knott reported on the results of a rapid assessment of the Indian Ocean that he made off the coast of Zanzibar. **Knott** saw a lionfish while snorkeling, and a giant African land snail in the butterfly center.

Texas

Chilton did not attend, but provided a written report. There were no new confirmed zebra mussel lakes. There are seven confirmed water bodies.

Legislature is considering a \$3.6 – 5.0 million increase in aquatic invasive species funding.

TPWD staff are working on significant revisions to the aquatic invasive species regulations and permitting, including a new permit for use of biological controls.

In an effort to hold down giant salvinia population, and to take advantage of the winter die back, herbicide treatments began several weeks ago.

At several locations in the state, crested floating heart has now been found.

Hartman reported that legislature is no longer considering a \$3.6-5.0 million increase in aquatic invasive species funding. The amount has reportedly been dropped significantly.

In Lake Austin, an extreme number of triploid grass carp have been used to control hydrilla.

USFWS – Region 2

Britton reported that USFWS Region 2 has a request out for proposals for quagga zebra mussel actions in the West, targeting prevention actions on trailered boats. It closes June 1. That RFP is available at grants.gov.

John Galvez reported that there is a job opening for a Fish Biologist for the Regional Aquatic Nuisance Species Coordinator, which is Jeff Herrod's former position. The position will be based in Atlanta, GA.

Discussion of ANSTF Recommendations

Ballard stated that he has been working with the regional office on attempting to provide information to them for proposals they are putting together under RESTORE. The regional office wants to address invasive species in some of their proposals. **Ballard** sent an email to the five Gulf state coordinators requesting information on their state plans on three key criteria for the proposal. Proposals are being put together by people for invasive species in the Gulf; however, a large number of these people, along with some of the reviewers of the proposals, are aware of the structure in place with the Task Force and the Regional Panel that could provide their expertise and input in preparing proposals. He suggested that a recommendation be made to the ANSTF that they send a letter that provides information on the structure of the ANSTF to the Gulf Coast Ecosystem Restoration Council, which is the body that oversees the restoration funding. **Ballard** contacted the ANSTF to inquire if this would be acceptable, and he was informed that legislation allows that they could provide the information.

Kumpf made a Motion to have the ANSTF send a letter to the Gulf Coast Ecosystem Council that provides information on the structure of the ANSTF. Walters seconded, and the Motion passed.

Fuller reported that the recommendation made to the ANSTF to have lionfish designated as Lionfish on import forms, instead of being categorized as marine/tropical fish, has been approved.

The recommendation made to the ANSTF to provide funding to **Fuller's** aquatic plant program has been approved. **Fuller** has hired one employee, and will hire an additional employee soon.

Riecke made a Motion to recommend that ANSTF engage the National Boating Association and other related industries to explore ways that those industries can help fund ANS prevention/control/management/research activities on a National level. Knott seconded, and the Motion passed.

Brian Bohnsack, Council Coordinator with the USFWS Sport Fishing and Boating Partnership Council, offered to speak about the recommendation idea with Tom Dammrich, the head of the National Marine Manufacturers Association, which is the organization that the boating industries report up to, including ABYC. He is also a member and former Chairman of the USFWS Sport Fishing and Boating Partnership Council. The Panel members accepted Brian's offer.

Other Business

The Panel would like to learn more about CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats), which could potentially modify the genomes of invasive or harmful species such as disease-carrying mosquitos. These modifications could possibly spread throughout an ecosystem and selectively eliminate "pests". The Research Committee will create a list of potential expert speakers on the subject for the GSARP fall meeting, and send it to James for review. Selected speakers will be invited to the meeting.

Next Meeting Time and Place

The next meeting location will be Charleston, SC.

The next meeting will take place during the week of October 5-7, 2015.

Public Comment

Fuller provided the opportunity for public comment. There was none.

A Motion was made to adjourn the meeting, and the Motion was approved. There being no further business, the meeting adjourned at 5:00 p.m.

**FIN Otolith Processors Training Workshop
Meeting Summary
May 19-20, 2015
St. Petersburg, Florida**

The meeting was called to order at 9:00 a.m. and the following people were present:

Alison Amick, FWRI, St. Petersburg, FL
Jessica Carroll, FWRI, St. Petersburg, FL
Kristen Wolfgang, FWRI, St. Petersburg, FL
Kristin Cook, FWRI, St. Petersburg, FL
David Westmark, FWRI, St. Petersburg, FL
Jessica Marchant, AMRD, Dauphin Island, AL
Jaime Miller, AMRD, Dauphin Island, AL
Tyler Rose, AMRD, Dauphin Island, AL
Debbie Belk, MDMR, Biloxi, MS
Jon Barr, MDMR, Biloxi, MS
Carly Somerset, MDMR, Biloxi, MS
Cijii Marshall, LDWF, Venice, LA
Isis Longo, LDWF, Baton Rouge, LA
Erik Lang, LDWF, Baton Rouge, LA
Gregg Bray, GSMFC, Ocean Springs, MS
Dave Donaldson, GSMFC, Ocean Springs, MS
Joe Smith, NOAA Fisheries, Beaufort, NC
Robert Allman, NOAA Fisheries, Panama City, FL
Beverly Barnett, NOAA Fisheries, Panama City, FL
Ellen Crow, NOAA Fisheries, Panama City, FL
Gary Gray, University of Southern Mississippi Gulf Coast Research Lab, Ocean Springs, MS
Andy Ostrowski, NOAA Fisheries, Beaufort, NC
Jennifer Potts, NOAA Fisheries, Beaufort, NC
Ethel Hall, NOAA Fisheries, Beaufort, NC

May 19, 2015

Please note that this summary includes tables that outline the reference sets APEs, by year as well as the agency contacts and responsible person(s) for each of the reference sets. This information can found at the back of the document.

Discussion of Greater Amberjack Reference Set

D. Murie mentioned the set is still in circulation and NOAA Panama City staff still needed to read the set for 2015. APEs have gotten better from 2014 and most problems are linked to proper slide preparation. Identification of the first annuli can contribute to discrepancies. Murie will provide updated APE results to GSMFC once she receives the results from NOAA Panama City readings. **J. Potts** would like to review the reference set also. NOAA Panama City staff will send the set to NOAA Beaufort staff once they have completed their reading.

Discussion of Red Snapper Reference Set

R. Allman presented results for the red snapper reference set. He stated this has become a success story considering the APEs have consistently been dropping. NOAA PC suggested that

potentially they might not read the reference sets annually and only read them during years when species are assessed. **Bray** asked if that could potentially cause APEs to increase since they are not being read every year. **Allman** stated it would be necessary to revisit the training materials before reading the reference sets. For 2015 most lab APE's were below 4% except for Mississippi (6.29%). **Allman** also stated that reference sets should be constructed similar to the age structure obtained in the landings data. NOAA Panama City staff stated it would be important to know how many readers are reading reference sets and who is contributing to readings for assessment datasets. **Bray** stated that we should be able to work together with the state and federal partners to provide that level of detail.

Discussion of Southern Flounder Reference Set

I. Longo presented results from the southern flounder reference set. The Southern flounder reference set (n= 199 otolith samples) was circulated during the winter of 2014 and spring of 2015. Average percent error (APE) was calculated among all the Gulf States except TX. For this gulf wide calculation the APE was calculated using the average age from all the Gulf States involved. APE was 3.91% which was higher than the last couple years but still below 5%. There continues to be quite a bit of variation in age estimation and edge code assignment. This suggests the importance of continued distribution of the Southern flounder training/reference set. LDWF may provide capture dates and let labs adjust ages when the set is distributed again. **Longo** stated this might be a set that needs to be updated based on landings distribution.

Discussion of King Mackerel Reference Set

B. Barnett presented for **C. Palmer** and stated NOAA Panama City staff has not read the king mackerel set. This reference set is only circulated every 2 years. Once NOAA Panama City staff reads this set they will start circulating again for 2016.

Discussion of Red drum/Spotted Seatrout/Striped Mullet Reference Sets

J. Carroll stated that all agencies have read the various sets and the APEs are 3.03%, 1.26% and 3.41% for spotted seatrout, red drum and striped mullet, respectively. The reference sets will again be distributed to the various agencies and the results of the readings will be presented to the group at the May 2016 meeting. The historical APEs for this species can be found at the back of this document.

Discussion of Sheepshead Reference Set

C. Sommerset reported that the sheepshead reference set has not been read by Alabama and still resides with GCRL. The overall APE will be calculated once all agencies have completed reading the reference set and the results will be delivered to GSMFC. The historical APEs for this species can be found at the back of this document.

Discussion of Vermilion Snapper Reference Set

B. Barnett presented the results for the vermilion snapper reference set. The set has been read by PC Lab staff and FWRI is currently completing their reading. PC Lab APE was 9.25%. PC Lab is interested in building a new reference set. Some of the current slides are potentially unreadable by some labs and some are having difficulty with the last 100 slides that are really thin and hard to read. No one had any problem with NOAA's request to rebuild part of the reference set and **Barnett** would like to get samples from the states so that a revised set could be distributed for 2016. **Barnett** will provide suggestions regarding slide preparation quality and age class numbers. **Allman** stated they may also do a pilot study looking at ageing whole otoliths for

vermillion snapper and possibly using otolith weight as an indicator.

Discussion of Black Drum Reference Set

G. Gray stated he has completed the images for the reference set and he is distributing it to Florida to start the review for 2015. **Gray** stated that a reef fish project at GCRL is starting and needs some help with processing some of these species GCRL has never processed. **Carroll** asked what date should be used for the age bumping date on sheepshead. **Gray** will talk to VanderKooy at GSMFC and provide some updated details.

Discussion of Gray Triggerfish Reference Set

Allman presented the results for the gray triggerfish reference set. The set was read by NOAA Panama City staff and FWRI for all 115 slides in the set. It was noted that since the spines are difficult to read, the target APE for this species is 15% not the 5% standard. NOAA Panama City staff and FWRI are both under 10% which is great. Alabama, Mississippi, and Texas were all close to 15%. **Allman** produced some bias plots that indicated that AL, LA, and MS are under aging compared to the reference set. **Allman** stated the marks stack up on the edge for older fish which makes it hard to count. Samplers need to try and follow increments all the way up to the tips. **Murie** suggested it also appeared that identifying the first annulus is presenting some difficulty. **Potts** asked if ages are being bumped based on margin codes. **Allman** stated they are not and samplers are instructed to just note if a mark occurs on margin. **Allman** recommends going over the training set that NOAA Panama City staff have produced. The reference set will again be distributed to the various agencies and the results of the readings will be presented to the group at the May 2016 meeting. The historical APEs for this species can be found at the back of this document.

Discussion of Gray Snapper Reference Set

A. Amick reported that the reference set has been read by all states and the overall APE is 2.19%. **Allman** stated they have funding to do some research on gray snapper and have found fish from the Gulf over 30 years old. The reference set will again be distributed to the various agencies and the results of the readings will be presented to the group at the May 2016 meeting. The historical APEs for this species can be found at the back of this document.

Discussion of Red Grouper Reference Set

Barnett stated NOAA Panama City staff have developed a set of 204 whole otoliths that produced an APE of 3.62 between their lab and FWRI. FWRI has a set of 200 sectioned otoliths that produced an APE of 5.10 between their lab and NOAA Panama City staff.

Discussion of Gag Grouper Reader Exchange Set

Barnett stated FWRI is only state ageing Gag. APE for FWRI was 1.8%. The reference set consists of whole and sectioned otoliths. The preference is to read whole and use the sections when the whole otolith is difficult to read.

Discussion of Gulf Menhaden Reference Set

The reference set was read by all states. The APE was 20.87%. The group discussed how to handle margin codes. **Potts** stated that samplers just read the annuli and that becomes the year class the fish resides in for Gulf fish. October samples start to lay down annuli but it's more of a suggested ring and not truly counted. Gulf fish when harvested dependent samples are never going to have a margin code issue. The pattern of formation indicates that unless samples are collected during the winter the margin codes are not important. This could be an issue for fishery

independent samples collected by the states. It was agreed that we likely need more samples collected during an entire year to develop bumping criterion.

Discussion of Revision to GSMFC Otolith Manual

Bray discussed that **VanderKooy** stated the otolith processor manual changes are in development. He is waiting on materials from many of the contributors that offered to provide revised information. ASMFC is preparing to send VanderKooy frozen fish heads for radiograph imaging. Any species that are being added to the manual that they don't already have images for will need to be provided by agency staff. VanderKooy plans to have a face-to-face meeting with ASMFC contributors in late summer or early fall of 2015.

Discussion of Future of Biological Sampling under FIN

Donaldson stated that currently there is no funding to continue FIN priority species sampling in 2015. NOAA has identified the data gap and is trying to allocate some funding for a partial season in 2015. He stated that the Commission continues to work with NOAA to identify funding that would support biological sampling long term.

Discussion of Future Training Meeting

Most states have expressed an interest in continuing with the otolith processors meeting even if FIN biosampling funding is not obtained. This would assist the states that are continuing to collect ageing structures utilizing state funding. The group discussed the date and location for the next otolith meeting processors training workshop. It was decided that we may hold the next meeting at the NOAA Panama City Lab during May 2016.

Conducting Otolith Reading Exercises for Black Drum, Red Drum, Spotted Seatrout, Gray Triggerfish, Greater Amberjack, King Mackerel, Southern Flounder, Sheepshead, Striped Mullet, Gray Snapper, Red Snapper and Vermilion Snapper

The afternoon of the first day of the meeting consisted of a reading exercise where the groups read otoliths. The group split into five sections and conducted readings of various sets of otoliths for king mackerel, gray triggerfish, snappers (red, gray and vermilion), greater amberjack, sciaenids (black drum, red drum and spotted seatrout) and inshore species (flounder, sheepshead and striped mullet). Each group read the otoliths, counted annuli, and determined edge type for each fish. This information was recorded and provided to the moderator for compilation. All groups were completed by lunch on the first day which indicates the readers are getting better and reading these priority species.

May 20, 2015

The meeting was reconvened at 8:30 a.m.

Review and Comparison of Reading Exercise by Groups

After each group determined the age of the various fish, the information was entered into a spreadsheet and J. Carroll, A. Amick, K. Wolfgang and K. Cook calculated APEs for all species. The following table outlines the APEs for each species and provides a historical look (where applicable) for those species (please note that APEs are recorded as a percentage).

| | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|-------------------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Black drum | | | | | 0.67 | 0.21 | 2.67 | 0.00 | 3.93 | 4.69 | 2.67 | 1.08 | 0.11 |
| Red drum | | | | | 0.52 | 4.35 | 1.63 | 2.83 | 1.04 | 1.48 | 4.07 | 2.87 | 1.05 |
| Spotted seatrout | | | | | 0.00 | 4.55 | 1.17 | 1.44 | 1.64 | 0.86 | 2.78 | 2.00 | 1.09 |
| Southern flounder | | 10.54 | 9.51 | 4.00 | 2.86 | 8.78 | 3.03 | 6.48 | 6.81 | 1.70 | 9.15 | 7.62 | 4.57 |
| Striped mullet | | | | | 6.97 | 7.48 | 9.84 | 2.87 | 2.72 | 2.08 | 2.40 | 2.89 | 2.58 |
| Sheepshead | | | | | 0.42 | 8.72 | 2.96 | 4.12 | 4.36 | 2.07 | 0.00 | 0.85 | 0.33 |
| Red snapper | 16.01 | 4.97 | 5.58 | 3.32 | 1.14 | 6.04 | 3.55 | 1.30 | 4.03 | 2.74 | 3.90 | 2.87 | 3.33 |
| Gray snapper | | | | | 3.19 | 9.22 | 1.80 | 3.41 | 1.34 | 1.36 | 0.00 | 2.01 | 0.44 |
| Vermilion snapper | | | | | 6.10 | 16.32 | 8.54 | 7.02 | 12.97 | 9.37 | 9.76 | 6.95 | 6.70 |
| King mackerel | | | 13.60 | 2.88 | 11.51 | 6.48 | 13.12 | 10.26 | 10.12 | 2.86 | 4.43 | 6.59 | 4.71 |
| Greater amberjack | | | | | | | | | 16.43 | 9.07 | 5.00 | 12.00 | 4.96 |
| Gray triggerfish | | | | | 16.81 | 21.79 | 16.02 | 10.18 | 28.58 | 23.95 | 10.61 | 13.09 | 10.64 |
| Gulf menhaden | | | | | | | | | | | | | 7.69 |

After the comparison exercise, otoliths, where there were differences among the groups, were identified and everyone examined these otoliths (as a group) to determine where each group had differed. The group believed this was a useful activity and it helped everyone identify where errors can (and were) made while reading the otoliths. It was noted that having the groups mark where they counted the rings on print outs was also very helpful during the discussions. It is also useful to remind groups which species are important to measure to the first annulus. Overall, the APEs for most of the species were at or below the 5% threshold. Where the APEs did exceed the 5% standard, it was due to several issues: 1) difficulty in identifying the first annulus (vermillion snapper and greater amberjack) and 2) general difficulty in identifying what is considered a ring (gray triggerfish).

Being no further business, the meeting was adjourned at 10:20 a.m.

Reference Sets APEs, by Year

| <i>REFERENCE SET</i> | <i>2006</i> | <i>2007</i> | <i>2008</i> | <i>2009</i> | <i>2010</i> | <i>2011</i> | <i>2012</i> | <i>2013</i> | <i>2014</i> | <i>2015</i> |
|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Black drum | | | | | 7.93 | | | | | |
| Red drum | | | | 2.36 | 3.82 | | 7.96 | 3.80 | 3.53 | 1.26 |
| Spotted seatrout | | | | 3.15 | 3.73 | | 6.78 | 2.91 | 2.68 | 3.03 |
| Southern flounder | 6.71 | 18.89* | 7.35 | 3.22 | 8.32 | 7.24 | 2.59 | 1.17 | 1.46 | 3.91 |
| Striped mullet | | | | 7.12 | 5.88 | | 6.87 | 4.70 | 4.81 | 3.41 |
| Sheepshead | | | | 3.91 | | | 5.05 | 6.25 | | |
| Red snapper | 2.74 | 4.90 | 4.34 | 5.01 | | | | 8.99 | | |
| Vermilion snapper | | | | | | | | 13.99 | | 9.25 |
| King mackerel (overall) | | | 5.83 | 7.45 | 5.92 | | | 5.05 | | |
| King mackerel (sectioned) | | | 3.39 | 4.87 | 0.68 | | | 2.71 | | |
| King mackerel (whole) | | | 9.13 | 10.04 | 13.83 | | | 7.43 | | |
| Greater amberjack | | | | | | | | 2.73 | | 2.10 |
| Gray triggerfish | | | | | | 20.80 | | 22.7 | | 18.50 |
| Gag (only read by FWRI) | | | | | | | | | 1.80 | 1.80 |
| Gray snapper | | | | | | | | | 6.43 | 2.19 |

*data transcription errors resulted in elevated APE

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APPROVED BY:

COMMITTEE CHAIRMAN

Facilitator

**TRIPLETAIL TECHNICAL TASK FORCE
MEETING SUMMARY
August 11-12, 2015
Galveston, Texas**

Moderator VanderKooy called the meeting to order at 8:50 a.m. on Tuesday, August 11th, with the following in attendance:

Chuck Adams, Florida Sea Grant, Gainesville, FL
Krista Shipley, FWC, Tallahassee, FL
Carly Somerset, MDMR, Biloxi, MS
Josh Harper, TPWD, Palacios, TX
Jim Franks, GCRL, Ocean Springs, MS
Steve VanderKooy, GSMFC, Ocean Springs, MS
Debbie McIntyre, GSMFC, Ocean Springs, MS

Call to Order

S. VanderKooy, IJF Program Coordinator, opened the meeting and thanked all for attending.

Approval of Minutes

The minutes from the organizational meeting held in New Orleans, February 19 & 20, 2015, were reviewed and, on motion by **Adams** and second by **Somerset**, the minutes were approved unanimously as written.

Review of TTF Membership

VanderKooy encouraged the group to review the membership roster for accuracy. **McIntyre** will make sure that the appropriate corrections are made to the roster. It was not certain as to whether the position of Comm/Rec representative would need to be filled (vacated by **Zales**). **VanderKooy** also pointed out that since Louisiana is not participating in this project any longer, we do not have a presiding chairperson (vacated by **Adriance**). It was agreed that **VanderKooy** would serve as moderator of the task force in lieu of electing a new chairperson. He also reminded everyone that **Rester** (GSMFC) is working on a species profile for Habitat in the Gulf of Mexico which will be referenced and incorporated into the Tripletail profile.

Housekeeping

VanderKooy provided the group with a brief overview of GSMFC travel policies. The authorization and reimbursement procedures were explained and the group was referred to the *GSMFC Travel Guidelines* for detailed information. Any questions regarding travel should be addressed to Alyce Ryan, GSMFC's travel processor. All were encouraged to submit their Travel Expense Reports as soon as possible after this meeting.

Task Force Website

VanderKooy encouraged everyone to take advantage of the TTF website to share literature, upload current drafts, and provide reviews of other sections when appropriate.

Meetings, conference calls, and webinars will also be posted on the working website. When something is added to this website, TTF members will receive an email. The document repository was again pointed out. Upload what you are working on into the appropriate sub-section so that everyone else can see it. Downloads and changes can be made but you **MUST** send back to original author with track changes. Only the author re-uploads this information and then with a new date. The working website should serve as an excellent tool to the TTF.

General Discussion and Review

VanderKooy stated that the purpose of this meeting will be, for the most part, to edit and discuss the information that has been gathered so far on this very interesting tripletail fishery. What is produced here by this group will be very useful information for potential management and will also provide many possibilities for studies to be done by graduate students, in the future.

Although this publication will not be printed and distributed, appropriate artwork for the cover was discussed and it was suggested that Tony Reisinger's work may be a good option. **Adams** agreed to contact Reisinger and ask if he has any tripletail artwork that might be fit our needs.

VanderKooy stated that this document will include a contributors list which will include **Somerset, Hebert**, and the contributors from Georgia. The "Preface" will be boilerplate. "Abbreviations" will be reviewed and updated once the document is put together. **VanderKooy** is proposing to eliminate the typical numbering system for the "Table of Contents" and throughout the document. This will present a different look than we are accustomed to but the stylized hierarchy may be a better way to address the chapters and make it more similar to a book rather than one of the Commission's old FMPs.

The "Introduction" will serve as an overview of program. The changes in the "IJF Program and Management Process" have been highlighted in blue. These are going to be further modified with no actual management recommendations, but will basically highlight what we actually know and how each state manages their fisheries. There will be no need for public comment on this type document because there will be no recommendations for management made here and no evaluation of stock status. The Technical Coordinating Committee (TCC - the 'science' advisory panel to the Commission) is the only reviewer necessary. The whole process has gotten too burdensome and reviews take far too long. The biologists who actually provide the input into the document and the TCC members are the only two entities that probably need to approve a profile. **VanderKooy** will recommend this process to the Commissioners at their November meeting.

The "Biology" section basically contains all new material. **VanderKooy** explained that this is more an academic exercise to explain what we do know about this animal. He reminded everyone that unpublished data and anecdotal reports are perfectly acceptable in a Commission document.

The "Geographic Distribution" edits will be reviewed by **Harper** and he will make any

modifications necessary. He used three or four representative papers but stated that there are many more in the Caribbean that mention tripletail. **VanderKooy** will summarize the non-US Caribbean islands in the “Fisheries” section. **Franks** mentioned that the Caribbean Community and Common Market (CARICOM) and Caribbean regional fisheries mechanism may also be helpful regarding these islands.

VanderKooy pointed out that it is now okay to use color in the graphics since this document will be available online only. If color photos and illustrations are helpful, the group should feel free to use them.

Biology

The “Biological Description” information submitted by **Aplin** (not present at the meeting) was reviewed by the group. **Franks** will work with **Aplin** to provide some “Morphology” description. **Franks** stated that he also has some other unpublished parasites literature for inclusion which he will provide to **Aplin**.

The “Age and Growth” section was compiled by **Shipley**. **Franks** has some information that he will forward to **Shipley** regarding validation attempts. Again, personal communications, grey literature, anecdotal information, and unpublished data can also be included in the profile in lieu of any published material which may not exist.

The “Reproduction” section, containing gonadal development information provided by **Mickle** and **Franks** was reviewed. **VanderKooy** stated that he has been working on larval transport, looking at the SEAMAP data and the fishery independent data. **Franks** has information to add regarding spawning locations but there is a lot still unknown.

It was agreed that a new section would be added to the overall biology section entitled “Adaptations and Mimicry”. This section will include the physical and behavioral adaptations tripletail make according to their surroundings.

Franks is currently working on SEAMAP Data Migration. He is tagging fish to follow their cross-boundary movements through a tagging program out of New Orleans, headed up by Maumus Claverie. **VanderKooy** will contact T-Mo regarding this program. He will start with the Gulf and expand from there. **VanderKooy** will forward tagging literature to **Shipley**. **Franks** will supply **Shipley** with the FAD information he has, including the Atlantic into Georgia. **VanderKooy** will forward the Georgia information he has regarding tagging as well.

Franks is the only one with any known information regarding tripletail incubation although there was also a project conducted by a private organization in the Keys. **Shipley** will contact John Hunt (Florida) to see if he knows anything about the Keys hatchery.

The “Genetics” section will be aided by a huge database for the United States that has a lot of science available. Also, India has a huge database online that includes tripletail data from all over the world. **Franks** and **VanderKooy** are working with a graduate student at Dauphin Island who is interested in comparing Atlantic and Pacific tripletail genetics in a more rigorous effort. **Franks**

noted that some of the fish being imported for sale into Biloxi are originating from Costa Rica or Guatemala and may actually be eastern Pacific fish.

The “Parasites and Disease” section is currently being compiled by **Aplin**. **VanderKooy** stated that **Aplin** is still researching some papers. Dr. Overstreet (GCRL) may have some unpublished data and we may run this section past him eventually. Again, **Franks** will provide some of his unpublished findings to **Aplin** for inclusion.

“Feeding, Prey, and Predators” includes a lot of detailed information provided by **Shipley**. She asked that everyone look this section over for clarity. Eventually, this may work better as a table. **Shipley** will research a predator/prey review that was done by Jim Simons at Texas A&M which could possibly provide insight as to whether young tripletail show up in the stomachs of certain birds.

VanderKooy will put the “Biology” section together and get a draft back out to the group. Everybody needs to read these sections and contact the person who is responsible with anything that will make it better. This needs to look like one continuous document rather than separate sections.

Habitat

The “Habitat” section is currently being worked on by **Rester**. There will be an introduction and explanation of how the currents flow. The biologic and physiologic specifics of the fish itself will be provided by the rest of the group - flotsam, weeds, and debris specifically. **VanderKooy** will get with **Aplin** and **Rester** to see what they have and follow up with them re: fish abundances in these habitats.

“Spawning Habitat” is currently being worked on by **Harper** and **Aplin** is working on “Adult Habitat”. **Franks** and **VanderKooy** will corroborate regarding the “Embryo/Larva” section.

Adams will contact Luis Gomez from Cuba re: Cuban catch. **Shipley** will contact Alex from Helldivers.

In order to spur ideas regarding the “Threats to Survival” section, **VanderKooy** will send out several ideas about things that may become threats to this fishery, i.e. pollution, sargassum, climate change, etc.

Enforcement

The “Enforcement” section is largely boilerplate. **VanderKooy** adapted what he could of this basic information to tripletail. Even though Captain Chad Hebert will not be an active member of this TTF, he is an active member of the LEC currently and stated that he will continue to advise us if needed. There are no federal regulations for tripletail, so state regulations preempt. **VanderKooy** will make sure with the enforcement people that this particular section is written correctly, excluding the loopholes. **VanderKooy** will research a sargassum EEZ regulation re: harvesting. The “License Requirements” section was simplified but still needs approval from the

state representatives.

VanderKooy pointed out that everyone needs to double check and add to their Historical Regulation Changes. Any regulatory change may contribute to how we interpret the landings.

Reeder will forward their Texas' regulations to **VanderKooy** or to **Harper**. **Somerset** will check into when Mississippi's regulations went into effect recreationally. **Franks** will provide the national sargassum regulations. There is a question as to whether there are regulations regarding imported tripletail. The possibility of conducting a market survey was discussed.

Fisheries

"Fisheries" is a section that needs a lot of input. **VanderKooy** pointed out that there is not much information out there regarding the tripletail fishery. The information that is available mainly speaks to where the fish is found. **VanderKooy** tried to pull together an account of how the fishery began. He also included some information on licensing but noted that he is no longer including the list and cost of every license since the information is out-of-date by the time the document is completed anyway. **VanderKooy** revised the text for each state to have the reader check with their respective state agency for license information.

Each state representative will be responsible for providing his/her fisheries data and all will contribute their interpretation of their individual state's data. There will be some overlapping of landings and values by state but we will do our best to make these consistent.

- FL: **Shipley** will check on years 1986-1990 at which time the state of Florida reported all zeros.
- AL: **Franks** stated that Jimbo Meader managed Bon Secour Fisheries and is a great source of information. Commercial and recreational additions will also be made here.
- MS: **Mickle** has made some edits. There basically has been no commercial tripletail fishery in MS. The number of pounds landed is not reported, although there are some gaps in the data. Perhaps they were not reported as tripletail. **Somerset** will find out from **Mickle** why the gear table was removed. Also, she will find out the actual numbers for Figure 1.
- LA: **VanderKooy** wrote this section but will have a Louisiana representative review it.
- TX: This state basically has no reported commercial landings. No fishery exists or at least none has been reported.
- GA: Very little commercial information was provided even though there is a big recreational fishery.
- Caribbean: Puerto Rico information is confidential data. **VanderKooy** averaged the commercial data for approximately 10-year averages and their representatives are happy

with the report.

Regarding the Recreational Fishery, all anecdotal information will be welcomed as long as it is not redundant. A lot of historical information has been included.

A brief overview of the State Recreational Fisheries will be provided before individual state information, looking at annual saltwater licenses in each state only and trends in willingness to fish. Perhaps this should be more specific (lifetime, non-resident, etc.)

- FL- This section needs some fleshing out.
- AL- **VanderKooy** is waiting on their comments as well as the Recreational component.
- MS – **Somerset** will find out if what **Mickle** submitted is replacement or additional information.
- LA – **VanderKooy** included some of the information from Pete Cooper but, again, a LDWF representative will need to look over this.
- TX – **Harper** stated that he will beef this section up.
- GA – GA representatives reviewed this section and approved it.
- Puerto Rico – Inshore/offshore designation at 10 miles is reported but total numbers reported are small. The other islands probably get tripletail as well, but that data is not accessible to us. **VanderKooy** has requested landings data from the Virgin Islands but has not received a response from them.
- World Fisheries – Although, there are no recreational landings data available, **VanderKooy** plans to expand on this section with what commercial landings data he can get.

VanderKooy noted that the term “bycatch” really only applies in directed fisheries. This may only be an issue in the U.S. **VanderKooy** asked all to look at this section because, by definition, there really is not a lot of “bycatch” anywhere else in the world. This is an issue for developed countries. Everyone needs to review this section and determine if **VanderKooy** went too far with this discussion.

VanderKooy encouraged each person on this committee to review his/her state section and make changes. Also, please make any contacts who may add anecdotal information as long as it is not repetitive.

“Mariculture”, it was agreed, should be moved to Biology and will be called Culture.

Economics

“Economics” was reviewed by **Adams** and he explained his process in creating this section. There will be no adjustments for inflation. He will re-compute these prices to include the confidential data but, with such low landings, there may not be much information here. **Adams** will calculate two-month increments (state-by-state) for the last 10 years from the trip ticket data and get an average. **VanderKooy** and **Adams** will develop a survey instrument of seafood dealers. These would probably consist of private interviews, perhaps just by telephone.

Each state representative will try to find out if there are any dedicated guide services that target tripletail. Each was asked to grease the wheel with his/her state port samplers and let them know what is going on as far as answering questions. They should let the samplers know what we plan to do with the fish house survey results and we will focus on those actually submitting trip tickets.

The question came up as to whether the “Sociology” section should be addressed in the “Fisheries” section, if at all. This would be decided at a later date.

Research Needs

“Research Needs” may be an extensive list since very little research has been done related to tripletail specifically. As people draft, they should note those items that need further work for inclusion in the list. For example, fecundity studies, maturity, age-and-growth, foraging, etc.

Next Meeting and Timeline

VanderKooy asked that all representatives please provide finalized drafts in the next couple of months. The next meeting of this TTF will be to edit the final draft, and will probably be scheduled mid-late October or mid-late November if everything goes smoothly. This profile will serve as a baseline document for future graduate students and researchers and has already generated interest in several of the state agencies and our information will likely contribute to their efforts to explore and manage tripletail.

With no further business to discuss, the meeting adjourned at 2:45 p.m. on Wednesday, August 12th, 2015.

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APPROVED BY:
John F. Mareska
COMMITTEE CHAIRMAN

**SEAMAP - GULF, SOUTH ATLANTIC
AND CARIBBEAN SUBCOMMITTEES
JOINT MINUTES**
Ocean Springs, MS
August 12, 2015

Gulf Chairman John Mareska called the meeting to order at 8:35 a.m. The following members and others were present:

Members:

- Read Hendon, USM/GCRL, Ocean Springs, MS
- Ted Switzer, FWC/FWRI, St. Petersburg, FL
- John Mareska ADCNR/MRD, Gulf Shores, AL
- Chloé Dean, LDWF, Grand Isle, LA
- Fernando Martinez, TPWD, Corpus Christi, TX
- Roger Pugliese, SAFMC, Charleston, SC
- Larry DeLancey, SCDNR, Charleston, SC
- Patrick Geer, GADNR, Brunswick, GA
- Marcel Reichert, SCDNR, Charleston, SC
- Patrick Campfield, ASMFC, Arlington, VA
- Tina Udouj FWC/FWRI, St. Petersburg, FL
- Jeanne Boylan, SCDNR, Charleston, SC
- Ricardo Lopez, PR/DNR, DFW, St. Thomas, USVI
- Eric Hoffmayer, NMFS, Pascagoula, MS
- Kelly Donnelly, NMFS, St. Petersburg, FL
- Aida Rosario, PR/DNR, Mayaguez, PR
- Todd Kellison, NMFS, Beaufort, NC
- Tracy Smart, SCDNR,
- Casey Knight, NCDMF,
- Jill Hendon, USM/GCRL, Ocean Springs, MS
- André DeBose, NMFS, Pascagoula, MS
- Melissa Cook, NMFS, Pascagoula, MS

Staff:

- Jeff Rester, GSMFC, Ocean Springs, MS
- Ashley Lott, GSMFC, Ocean Springs, MS
- Shanna Madsen, ASMFC, Arlington, VA
- Edgardo Ojeda, UPR Sea Grant, Mayaguez, PR

Adoption of Agenda

P. Greer moved to adopt the agenda as submitted. R. Hendon seconded and the motion passed. R. Lopez noted that he would be giving the Caribbean report instead of R. Pemberton.

Approval of Joint Minutes (July 30, 2014)

The July 30, 2014 meeting summary of the Joint Annual SEAMAP meeting was approved as submitted.

Overview of SEAMAP Components

Overview of SEAMAP - Caribbean

R. Lopez submitted the following report:

Virgin Islands

Administrative/Staff Changes

There were staff shortages in both districts, with St. Croix facing the most shortages. No hiring has been initiated. The purchase of a new vessel, as specified in the modified grant, has been initiated.

Acoustic Hydrophones

Three bottom acoustic hydrophone dataloggers were deployed at Lang Bank, the Marine Conservation District MCD at (138 ft depth) and the other at the Granmanik Bank (210 ft depth), which are known as Nassau grouper SPAG area. Past year data has been downloaded and processed for quality control.

Parrotfish 2011-2012

The parrotfish study has not begun however all the supplies for the STX and STT have been received. Supplies have been shipped to the PR-DNER Fisheries Laboratory. Gonad fixation protocol has been reviewed and agreed upon. A modification to the SEAMAP grant was submitted to allow sampling from August 2015-March 2016. A sampling schedule of 150 samples per month per one year has been developed. Gonad samples of four parrotfish species will be sent by mid-August to Puerto Rico DNER's fisheries laboratory for histological analysis, sex and reproductive phase determination. The samples from St Thomas and St Croix will include the following species: redband parrotfish- *Sparisoma chrysopterum*, stoplight parrotfish- *Sparisoma viride*, redband parrotfish- *Sparisoma rubripinne*, and redband parrotfish- *Sparisoma aurofrenatum*.

Conch & Lobster 2012-2013

The conch study was completed in 2013. The juvenile lobster "casitas" study was completed in the first quarter of 2015. No lobsters were observed at any of the three sites throughout the study period.

Reef Fish Hook and Line Surveys 2013-2014

The reef fish study has not begun. A modification to the SEAMAP grant was submitted to allow sampling from August 2015-March 2016, and a sampling schedule was developed.

Deep Water Snapper Survey 2014-2015

The deep water snapper study has not begun. A modification to the SEAMAP grant was submitted to allow sampling from September 2015-February 2016, and a sampling schedule was developed. DFW is currently involved in contract negotiation with local commercial fishers who specialize in these species.

Yellowtail Snapper Survey 2015-2016

The yellowtail snapper study has not begun. A modification to the SEAMAP grant was submitted to allow sampling from September 2015-February 2016, and a sampling schedule was developed. DFW is currently involved in contract negotiation with local commercial fishers who specialize in this species.

Puerto Rico

Conch Assessment Survey

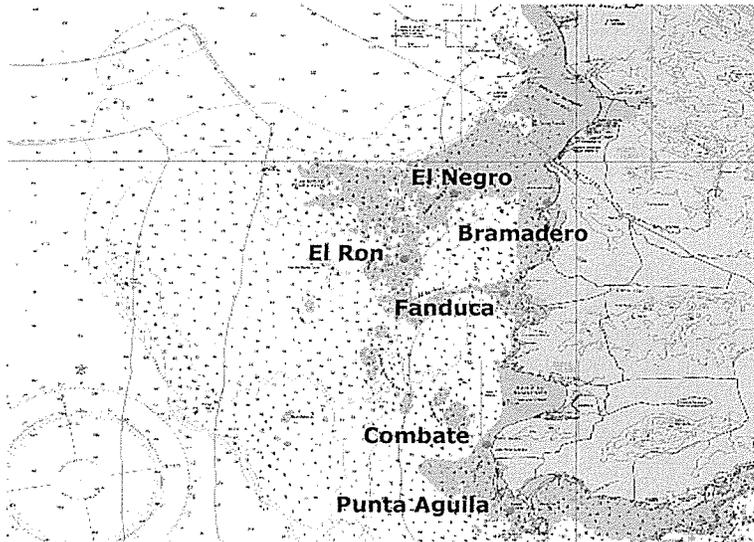
The east coast have not been sampled due to the fact that DNER has not received the replacement for the lost scooters by the contractor in 2013. Until the FRL does not received the scooters field work cannot be scheduled to finished the conch survey at the east coast.

Queen conch survey was to be carried out before the end of March 2014 at the east coast, in order to have the same crew that performed the survey in 2013. Those students are not available at the present time since some graduate already. Nonetheless, due to the fact that two scooters were lost by the contractors, DNER Legal Division gave instructions not to prolong the contract until an investigation was carried out of the incident. The DNER Rangers Corp conducted such investigation that ended in July 2014. They recommended that the University replace the lost (2) and damage scooters (1) while they were conducting the survey. At the moment of preparing this report they are still in the process of procure those scooters. Therefore we don't have the scooters needed to end the queen conch survey at the east coast, no vessel and no crew. It's being evaluated other options to finish this survey as soon as possible. Among those is to contract the University of Puerto Rico Humacao Campus, which is located at the east coast to finish this survey.

Lobster Assessment Survey

The six stations were visited to reassess the status of the structures. At each station 10 casitas are deployed. Most of the structures are in good condition to continue sampling, although there is a lot of overgrown of all kind of organisms such as algae, mollusks, soft and hard corals. This pose a dilemma since these structures, most specifically the ones with corals has become essential fish

habitat. We need to basically rebuild the 10 casitas of only one station, at Boquerón. In some other stations at least one of the casitas has been buried in sand and became almost cemented to the bottom.



The SEAMAP-C Committee evaluated the conditions of the casitas and recommends to keep monitoring the structures as they are, without removing the overgrown, since they are still recruiting lobsters. At the stations where the casitas have been buried by sand and cemented to the bottom, new casitas were deployed near them.

| Lobster habitat stations | Latitude | Longitude | Collectors ID | Latitude | Longitude |
|--------------------------|-----------|------------|---------------|------------|-----------|
| Bramadero | 18°08.331 | 67°11.136 | A-1 | 18° 03.711 | 67°13.996 |
| El Negro | 18°08.795 | 67°14.208 | A-2 | 18° 03.639 | 67°13.996 |
| Fanduca | 18°05.002 | 67°12.435 | B-1 | 18° 06.010 | 67°14.894 |
| El Ron | 18°06.344 | 67° 16.046 | B-2 | 18° 05.985 | 67°14.875 |
| Boquerón | 17°59.266 | 67°13.113 | C-1 | 18° 05.714 | 67°17.640 |
| Pta. Aguila | 17°56.724 | 67°12.260 | C-2 | 18° 05.743 | 67°17.665 |

| Lobster habitat stations | Latitude | Longitude | Collectors ID | Latitude | Longitude |
|--------------------------|----------|-----------|---------------|------------|-----------|
| | | | D-1 | 18° 04.564 | 67°17.568 |
| | | | D-2 | 18° 04.586 | 67°17.586 |
| | | | E-1 | 18° 01.818 | 67°17.487 |
| | | | E-2 | 18° 01.821 | 67°17.460 |
| | | | F-1 | 18° 02.627 | 67°14.041 |
| | | | F-2 | 18° 02.632 | 67°14.018 |

The casitas have been monitored for the last seven months starting in December 2014. All the habitats have been deployed and accounted for. A total of 168 individuals have been recorded ranging in size from 0.25" to 3" in carapace length (CL). Most of the juveniles recorded (97.6%) were collected between 0.5" – 2.5. The highest amount of juveniles was caught measuring 0.5" and 1" of CL.

Casitas are deployed at six sites off the west coast that includes Boquerón, Bramadero, El Negro, El Ron, Fanduca and Punta Aguila. Boquerón (12 individuals) and Punta Aguila (13 individuals) recorded the lowest amount of juveniles. The highest amount is reported at El Ron with 60 individuals, followed by El Negro with 40 individuals. Fanduca and Bramadero reported the same amount of juveniles (22). We suspect that fishers are harvesting some of the casitas, most specifically at El Negro.

A total of 55 octopus and 146 morays have been removed from the casitas. Out of the 55 octopus 54 pertain to the same species.

Table 1. Spiny lobster juveniles catch summary for the sampling period of December 8 2014 to July 14 2015 off the west coast of PR.

| Site | 0.25 | 0.5 | 0.75 | 1" | 1.25 | 1.5 | 1.75 | 2 | 2.25 | 2.5 | 2.75 | 3 | Total | Octopus | Morays |
|--------------|------|-----|------|----|------|-----|------|----|------|-----|------|---|-------|---------|--------|
| Boquerón | 0 | 2 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 7 | 30 |
| Bramadero | 0 | 6 | 4 | 8 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 22 | 8 | 10 |
| El Negro | 0 | 1 | 5 | 3 | 6 | 10 | 3 | 8 | 2 | 2 | 0 | 0 | 40 | 11 | 13 |
| El Ron | 2 | 18 | 11 | 9 | 6 | 10 | 3 | 1 | 0 | 0 | 0 | 0 | 60 | 6 | 9 |
| Fanduca | 0 | 0 | 4 | 4 | 1 | 6 | 4 | 2 | 0 | 0 | 0 | 1 | 22 | 15 | 82 |
| Punta Aguila | 1 | 6 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 8 | 2 |
| Grand Total | 3 | 33 | 31 | 33 | 16 | 26 | 11 | 11 | 2 | 2 | 0 | 1 | 169 | 55 | 146 |

All larvae collectors have been deployed at six sites close to the casitas. At each site two collectors have been deployed at different depths, at mid-water and close to the bottom. Larvae have been recorded at all sites and collectors. Sampling started in April 2015. Larvae are classified as transparent, transparent pigmented, pueruli and juveniles. A total of 800 individuals has been recorded with the highest amount being pueruli (426), followed by transparent larvae (153). Meanwhile, juveniles reported 117 individuals and transparent pigmented larvae were the lowest amount of individuals (104) caught. Thus far June has been the most productive month with 344 individuals, April with 194, May with 175 and July with 87.

Table 2. Spiny lobster larvae catch summary for the sampling period of April 10 to July 15 2015 off the West coast of Puerto Rico.

| Collector ID | Transparent | Trans. Pigmented | Puerulli | Juveniles | Total |
|--------------------|-------------|------------------|------------|------------|------------|
| A1D | 23 | 18 | 2 | 2 | 45 |
| A1S | 2 | 1 | 4 | 3 | 10 |
| A2D | 10 | 7 | 8 | 9 | 34 |
| A2S | | | 6 | 2 | 8 |
| B1D | 16 | 20 | 24 | 9 | 69 |
| B1S | 3 | | 7 | 3 | 13 |
| B2D | 17 | 15 | 19 | 9 | 60 |
| B2S | | 1 | 4 | 1 | 6 |
| C1D | 1 | 1 | 84 | 5 | 91 |
| C1S | | | 14 | | 14 |
| C2D | 1 | | 41 | 6 | 48 |
| C2S | 1 | | 3 | 2 | 6 |
| D1D | 10 | 7 | 26 | 12 | 55 |
| D1S | | | 4 | 3 | 7 |
| D2D | 14 | 13 | 20 | 21 | 68 |
| D2S | 1 | 1 | 2 | 5 | 9 |
| E1D | 16 | 8 | 32 | 1 | 57 |
| E1S | 3 | | 11 | | 14 |
| E2D | 17 | 3 | 33 | 4 | 57 |
| E2S | 1 | | 18 | 8 | 27 |
| F1D | 9 | 2 | 26 | 5 | 42 |
| F1S | 2 | 5 | 9 | 4 | 20 |
| F2D | 6 | | 10 | 1 | 17 |
| F2S | | 2 | 19 | 2 | 23 |
| Grand Total | 153 | 104 | 426 | 117 | 800 |

Reef Fish Survey - 2012-13

The report for this sampling period is being finalized and will be available by the end of August to all interested parties. We were waiting for the results regarding the histological examination of the samples collected. The report includes the histological results for all samples and compares the visual vs. the histological results for the dominant species of this survey catch.

Reef Fish 2013-14

During the sampling period of April 7 to December 23, 2014, a total of 30 stations were sampled at twice off the west coast of Puerto Rico. Hook and line yielded 46 species representing 19 families weighing over 496 kg of finfish. The categories of fish that dominate the catch in terms of number were the groupers, followed by snappers, jacks and porgies. Five species of groupers comprised 25.78% of which three species made up 25.60%. The snappers were represented by eight species making up 25.66% of total catch, of which two species represented 24.08% in terms

of number. The lane snapper (*Lutjanus synagris*) was the most caught species making up 18.56% of the catch, followed by the blue runner (*Caranx crysos*, 14.91%) and the pluma porgy (*Calamus pennatula*, 12.68%) in terms of number. In terms of weight the blue runner was the most caught species with 18.98%, followed by red hind (*Epinephelus guttatus*, 14.04%), the lane snapper (8.21%) and the coney (*Cephalopholis fulva*, 7.71%).

For the sampling period of February 2, 2014 to June 4, 2015, a total of 17 stations were sampled at least once off the east coast. A total of 14 species representing 5 families weighing 49 kg of finfish were collected. Two groups of fish constituted most of the catch, the snappers with 45.15% and the groupers with 42.62% of total catch by number.

Three species constituted the bulk of the east coast catch by number and weight 91.0% and 79.9%, respectively. The vermilion snapper (*Rhomboplites aurorubens*, 40.51%) was the most caught species; followed by the coney (*Cephalopholis fulva*, 32.91%), the longspine squirrelfish (*H. rufus*, 6.75%) of total catch per number. Snappers and groupers which are considered the most valuable commercial species group represented 87.76% of the total catch.

Species composition by sampled stations varied according to two factors: area and depth. Species composition collected at the west coast was comprised by groupers (25.78%), followed by the snappers (25.66%); jacks (15.56%), porgies (12.68%), squirrelfishes (7.28%), sand tilefish (5.46%), grunts (4.29%), and representation of 14 families made the other category (2.4%) in terms of number of individual caught. In terms of weight the species composition was led by the groupers (23.86%), followed by the jacks (22.01%), snappers (20.10%), porgies (10.05%), sand tilefish (4.83%), the grunts (3.0%), the squirrel fishes (3.20%), the triggerfishes (3.02%) and the other category of fishes made up 9.7%.

The east coast species composition was comprise of snappers (45.15%), followed by groupers (42.62%), squirrelfishes (7.59%), grunts (2.53%), jacks (1.27%) and porgies (0.84%) in terms of number. In terms of weight the first two dominant groups were the same that in term of number followed by the jacks.

Catch per unit of effort (CPUE) recorded at sampled stations at the west coast ranged from 0.0245 to 0.443 kg/hook hour, in terms of kg/trip ranged from 1.775 to 31.874. East coast stations CPUE ranged from 0.007 to 0.472 kg/hook hour, in terms of kg/trip ranged from 0.246 to 16.975.

Table 7. Summary of species caught during reef fish survey off the east and west coasts of Puerto Rico during 2014. Weight is in kilograms.

| | Species | West Coast | | | | East Coast | | | |
|----|---------------------------------|-------------|--------|---------------|--------|------------|--------|---------------|--------|
| | | # | % | Weight | % | # | % | Weight | % |
| 1 | <i>Lutjanus synagris</i> | 316 | 18.56% | 40.753 | 8.21% | 3 | 1.27% | 0.401 | 0.81% |
| 2 | <i>Caranx crysos</i> | 254 | 14.91% | 94.164 | 18.98% | 3 | 1.27% | 2.864 | 5.82% |
| 3 | <i>Calamus pennatula</i> | 216 | 12.68% | 49.861 | 10.05% | 2 | 0.84% | 0.607 | 1.23% |
| 4 | <i>Cephalopholis fulva</i> | 211 | 12.39% | 38.274 | 7.71% | 78 | 32.91% | 14.042 | 28.52% |
| 5 | <i>Epinephelus guttatus</i> | 152 | 8.93% | 69.68 | 14.04% | 14 | 5.91% | 7.878 | 16.00% |
| 6 | <i>Ocyurus chrysurus</i> | 94 | 5.52% | 35.538 | 7.16% | 6 | 2.53% | 1.585 | 3.22% |
| 7 | <i>Malacanthus plumieri</i> | 93 | 5.46% | 23.973 | 4.83% | | 0.00% | | 0.00% |
| 8 | <i>Holocentrus rufus</i> | 81 | 4.76% | 8.511 | 1.72% | 16 | 6.75% | 1.741 | 3.54% |
| 9 | <i>Cephalopholis cruentata</i> | 73 | 4.29% | 10.293 | 2.07% | 9 | 3.80% | 1.188 | 2.41% |
| 10 | <i>Haemulon plumieri</i> | 46 | 2.70% | 12.845 | 2.59% | 4 | 1.69% | 1.266 | 2.57% |
| 11 | <i>Holocentrus adscensionis</i> | 43 | 2.52% | 7.384 | 1.49% | 2 | 0.84% | 0.457 | 0.93% |
| 12 | <i>Haemulon aurolineatum</i> | 26 | 1.53% | 1.936 | 0.39% | 1 | 0.42% | 0.07 | 0.14% |
| 13 | <i>Lutjanus apodus</i> | 12 | 0.70% | 11.347 | 2.29% | 2 | 0.84% | 1.026 | 2.08% |
| 14 | <i>Balistes vetula</i> | 8 | 0.47% | 8.888 | 1.79% | | 0.00% | | 0.00% |
| 15 | <i>Chaetodipterus faber</i> | 7 | 0.41% | 8.18 | 1.65% | | 0.00% | | 0.00% |
| 16 | <i>Lutjanus analis</i> | 7 | 0.41% | 9.135 | 1.84% | | 0.00% | | 0.00% |
| 17 | <i>Lactophrys trigonus</i> | 6 | 0.35% | 5.702 | 1.15% | | 0.00% | | 0.00% |
| 18 | <i>Sphyræna barracuda</i> | 5 | 0.29% | 17.979 | 3.62% | | 0.00% | | 0.00% |
| 19 | <i>Synodus intermedius</i> | 5 | 0.29% | 0.568 | 0.11% | | 0.00% | | 0.00% |
| 20 | <i>Melichthys niger</i> | 4 | 0.23% | 1.814 | 0.37% | | 0.00% | | 0.00% |
| 21 | <i>Canthidermis sufflamen</i> | 3 | 0.18% | 4.28 | 0.86% | | 0.00% | | 0.00% |
| 22 | <i>Caranx lugubris</i> | 3 | 0.18% | 5.126 | 1.03% | | 0.00% | | 0.00% |
| 23 | <i>Caranx ruber</i> | 3 | 0.18% | 1.675 | 0.34% | | 0.00% | | 0.00% |
| 24 | <i>Diodon hystrix</i> | 3 | 0.18% | 4.544 | 0.92% | | 0.00% | | 0.00% |
| 25 | <i>Lutjanus vivanus</i> | 3 | 0.18% | 0.465 | 0.09% | | 0.00% | | 0.00% |
| 26 | <i>Rhomboplites aurorubens</i> | 3 | 0.18% | 0.304 | 0.06% | 96 | 40.51% | 15.618 | 31.72% |
| 27 | <i>Albula vulpes</i> | 2 | 0.12% | 0.992 | 0.20% | | 0.00% | | 0.00% |
| 28 | <i>Caranx latus</i> | 2 | 0.12% | 6.569 | 1.32% | | 0.00% | | 0.00% |
| 29 | <i>Echeneis naucrates</i> | 2 | 0.12% | 1.185 | 0.24% | | 0.00% | | 0.00% |
| 30 | <i>Echeneis neucratoides</i> | 2 | 0.12% | 0.215 | 0.04% | | 0.00% | | 0.00% |
| 31 | <i>Elgatis bipinnulata</i> | 2 | 0.12% | 1.171 | 0.24% | | 0.00% | | 0.00% |
| 32 | <i>Serranus tabacarius</i> | 2 | 0.12% | 0.093 | 0.02% | | 0.00% | | 0.00% |
| 33 | <i>Bothus ocellatus</i> | 1 | 0.06% | 0.094 | 0.02% | | 0.00% | | 0.00% |
| 34 | <i>Caranx bartholomaei</i> | 1 | 0.06% | 0.518 | 0.10% | | 0.00% | | 0.00% |
| 35 | <i>Carcharhinus acronotus</i> | 1 | 0.06% | 2.946 | 0.59% | | 0.00% | | 0.00% |
| 36 | <i>Carcharhinus perezii</i> | 1 | 0.06% | 5.783 | 1.17% | | 0.00% | | 0.00% |
| 37 | <i>Eucinostomus argentus</i> | 1 | 0.06% | 0.054 | 0.01% | | 0.00% | | 0.00% |
| 38 | <i>Gerres cinereus</i> | 1 | 0.06% | 0.034 | 0.01% | | 0.00% | | 0.00% |
| 39 | <i>Haemulon flavolineatum</i> | 1 | 0.06% | 0.106 | 0.02% | | 0.00% | | 0.00% |
| 40 | <i>Hypoplectrus unicolor</i> | 1 | 0.06% | 0.046 | 0.01% | | 0.00% | | 0.00% |
| 41 | <i>Lutjanus buccanella</i> | 1 | 0.06% | 0.444 | 0.09% | | 0.00% | | 0.00% |
| 42 | <i>Lutjanus jocu</i> | 1 | 0.06% | 1.743 | 0.35% | | 0.00% | | 0.00% |
| 43 | <i>Sphoeroides nephelus</i> | 1 | 0.06% | 0.341 | 0.07% | | 0.00% | | 0.00% |
| 44 | <i>Sphoeroides spengleri</i> | 1 | 0.06% | 0.257 | 0.05% | | 0.00% | | 0.00% |
| 45 | <i>Synodus foetens</i> | 1 | 0.06% | 0.079 | 0.02% | | 0.00% | | 0.00% |
| 46 | <i>Trachinocephalus myops</i> | 1 | 0.06% | 0.33 | 0.07% | | 0.00% | | 0.00% |
| 47 | <i>Haemulon macrostomus</i> | | | | | 1 | 0.42% | 0.494 | 1.00% |
| | Grand Total | 1703 | | 496.22 | | 237 | | 49.237 | |

Table 8 displays the species composition by sampled families at both coasts. East coast had a limited number of families represented (5) in the catch. West coast exhibited a wide variety (19) of shallow water reef fish families caught. Notwithstanding the limited number of families caught at the east coast, those are the same of the west coast. There is no difference in the families caught.

Table 8. Summary by fish families sampled during shallow water reef fish survey off the west and east coast of PR 2014-15.

| Family | West | | | | East | | | |
|----------------|-------------|--------|----------------|--------|------------|--------|---------------|--------|
| | # Ind. | | Wt. | | # Ind. | | Wt. | |
| Sparidae | 216 | 12.68% | 49.861 | 10.05% | 2 | 0.84% | 0.607 | 1.23% |
| Serranidae | 439 | 25.78% | 118.386 | 23.86% | 101 | 42.62% | 23.108 | 46.93% |
| Lutjanidae | 437 | 25.66% | 99.729 | 20.10% | 107 | 45.15% | 18.63 | 37.84% |
| Carangidae | 265 | 15.56% | 109.223 | 22.01% | 3 | 1.27% | 2.864 | 5.82% |
| Haemulidae | 73 | 4.29% | 14.887 | 3.00% | 6 | 2.53% | 1.83 | 3.72% |
| Malacanthidae | 93 | 5.46% | 23.973 | 4.83% | 0 | 0.00% | 0 | 0.00% |
| Holocentridae | 124 | 7.28% | 15.895 | 3.20% | 18 | 7.59% | 2.198 | 4.46% |
| Balistidae | 15 | 0.88% | 14.982 | 3.02% | 0 | 0.00% | 0 | 0.00% |
| Ostraciidae | 6 | 0.35% | 5.702 | 1.15% | 0 | 0.00% | 0 | 0.00% |
| Geridae | 2 | 0.12% | 0.088 | 0.02% | 0 | 0.00% | 0 | 0.00% |
| Echeneidae | 4 | 0.23% | 1.4 | 0.28% | 0 | 0.00% | 0 | 0.00% |
| Tetraodontidae | 2 | 0.12% | 0.598 | 0.12% | 0 | 0.00% | 0 | 0.00% |
| Sphyraenidae | 5 | 0.29% | 17.979 | 3.62% | 0 | 0.00% | 0 | 0.00% |
| Synodontidae | 7 | 0.41% | 0.977 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Bothidae | 1 | 0.06% | 0.094 | 0.02% | 0 | 0.00% | 0 | 0.00% |
| Diodontidae | 3 | 0.18% | 4.544 | 0.92% | | 0.00% | | 0.00% |
| Ephippidae | 7 | 0.41% | 8.18 | 1.65% | 0 | 0.00% | 0 | 0.00% |
| Albulidae | 2 | 0.12% | 0.992 | 0.20% | 0 | 0.00% | 0 | 0.00% |
| Carcharinidae | 2 | 0.12% | 8.729 | 1.76% | 0 | 0.00% | 0 | 0.00% |
| Total | 1703 | | 496.219 | | 237 | | 49.237 | |

Figure 3 compares the obtained species composition by fish categories or groups collected at the west and east coasts by number and weight. The same information is presented in Table 9. The composition was identical with the same groups represented at both coast: groupers, snappers, jacks, squirrelfishes, porgies, grunts and triggerfishes. Grouper and snappers were the two dominant groups by number at each coast. The exception was the sandtile fishes and the other category that were not represented at the east coast. The other category does not account for more than 2% of total number. Within this category are represented bonefishes, trunkfishes, puffers, morays, barracudas and sharks.

In terms of weight its follows the same pattern. The other category and triggerfishes accounted for a higher percentage. For instance, barracudas and morays are the major contribution to the other category. The obtained results of the species composition by group yielded statistical significant results by coast (Mann-Whitney U Statistic = 10.50; P = 0.009).

Table 9. Catch summary by fish category caught during reef fish survey 2014-15

| | West | | East | |
|---------------|--------|--------|--------|--------|
| | # Ind. | Wt. | # Ind. | Wt. |
| Porgies | 12.68% | 10.05% | 0.84% | 1.23% |
| Groupers | 25.78% | 23.86% | 42.62% | 46.93% |
| Snappers | 25.66% | 20.10% | 45.15% | 37.84% |
| Jacks | 15.56% | 22.01% | 1.27% | 5.82% |
| Grunts | 4.29% | 3.00% | 2.53% | 3.72% |
| Sandtile fish | 5.46% | 4.83% | 0.00% | 0.00% |
| Squirrelfish | 7.28% | 3.20% | 7.59% | 4.46% |
| Triggerfishes | 0.88% | 3.02% | 0.00% | 0.00% |
| others | 2.40% | 9.70% | 0.00% | 0.00% |

Figure 1. Species composition by fish groups or categories sampled at the east and west coasts of Puerto Rico during the sampling period of February 2, 2014 to December 23, 2014.

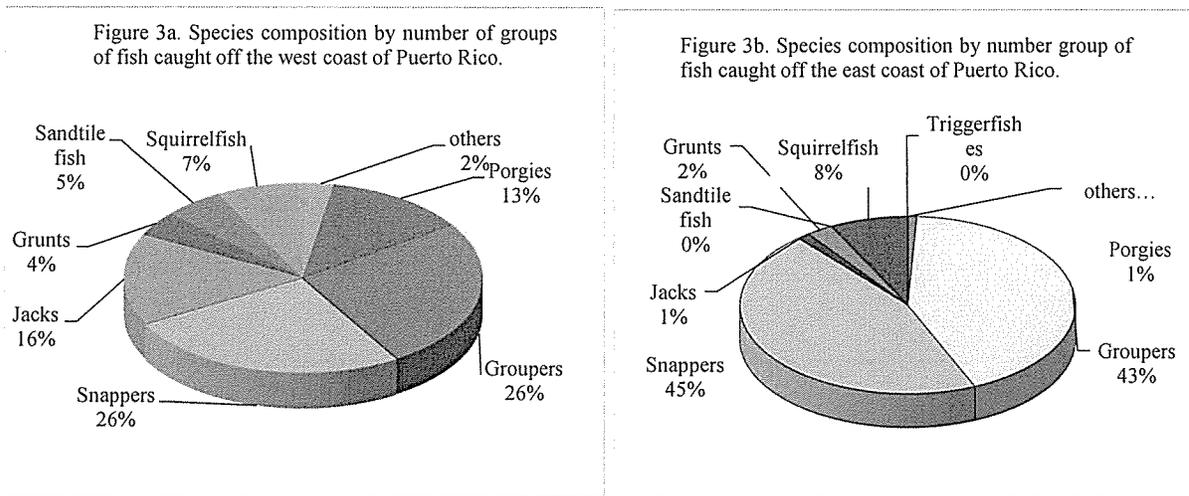
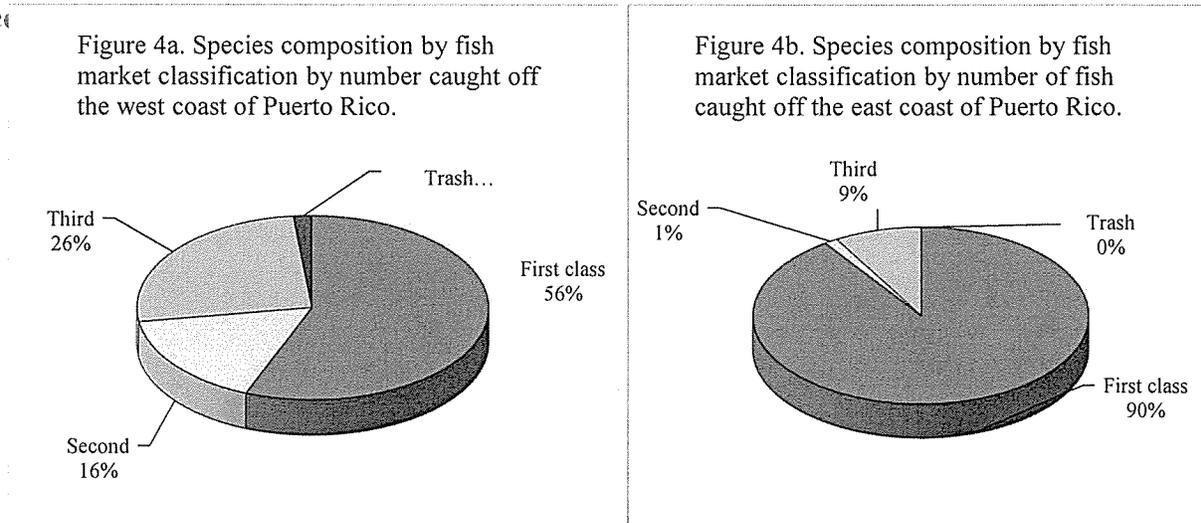


Figure 2. Species composition by market classification of sampled fish at east and west coasts



Yellowtail Snapper 2014-15

All contracts were submitted and are being processed. As soon they are in place sampling will start.

Lane Snapper 2015-16

Recently we received the approval of the funds for the last year of sampling. We will start all the logistic preparations and the contracting process as soon as possible.

SEAMAP-C UPR/Administrative Report

Administrative Coordination

A total of four SEAMAP-C meetings were conducted between August 2014 and July 2015. The meetings took place alternately on Puerto Rico and the U.S. Virgin Islands to review all programmatic surveys on conch, lobster, and reef fish being done in the USVI and Puerto Rico. In addition, the Caribbean SEAMAP chairing members from PR and USVI and the coordinator participated in the 2014 Annual Joint Meeting held in San Juan, PR. On 2014, the PR coordination component made all the arrangements to host the SEAMAP annual joint meeting in San Juan, Puerto Rico.

Outreach Material Production and Dissemination

Two SEAMAP-C color posters summarizing the main studies performed by the Caribbean program in each region entitled “SEAMAP-C in Puerto Rico” and “SEAMAP-C in the Virgin Islands”, have been used as outreach materials to the general public during several fisheries workshops for fishermen. Educational brochures and handouts on conch, whelk, lobster, and reef fish were also used as outreach materials. These materials have been updated to include the results from the most recent surveys, and are in process to order a second printout.

A PhD graduate student was contracted to continue updating the SEAMAP-C sampling protocols and to summarize the information of all projects conducted by the Caribbean program, in addition to continue working on the SEAMAP-C web information maintenance. The main goal was to have a clear and uniform sampling protocol, and to make the information accessible for dissemination and outreach. The educational material was made available to fishermen during workshops and to targeted groups during routine coastal and shore visits. All SEAMAP-C study reports, including the sampling protocols document have been made available for public dissemination at the Puerto Rico Sea Grant fisheries coordinator’s blog site <<http://prsgfisheriesoutreach.wordpress.com/>>.

A Masters degree graduated student from the Department of Marine Sciences (DMS), has been hired through a part-time contract, to provide professional services with the ROV during fish

spawning aggregation samplings and to provide collaboration on other SEAMAP-C samplings, equipment maintenance, and hydrophone dataloggers deployment and retrieval. In addition, a DMS master degree student assistantship was provided to work on the post-processing of the hydroacoustic bottom dataloggers data, obtained during spawning aggregations in PR and the USVI. Two DMS Master Thesis using SEAMAP-C data were successfully defended; one was based on the Puerto Rico conch survey and a second on Nassau Grouper spawning aggregations evaluations using hydroacoustic collected data. The titles of these theses are: “Effectiveness of management regulation and update analysis of population health and trends of queen conch *Strombus gigas* in Puerto Rico”, and “Use of Passive Acoustic Recordings to Quantify Abundance Relationship from Courtship Associated Sounds of the Nassau Grouper (*Epinephelus striatus*) at Spawning Aggregation Sites in Puerto Rico and the US Virgin Islands”. Currently, the most recent hydroacoustic recorded data is under a post-processing evaluation, to monitor the sound production of Red hind (*Epinephelus guttatus*) at Spawning Aggregation Sites in the Caribbean (PR & USVI).

Acquisition of Reef Fish/EFH Sampling Gear

After a malfunction event on two hydrophone dataloggers recorders, they were sent to the “Loggerhead Instruments” matrix company for repair. All batteries sets, and hard drives needed for the deployment and data downloading for storage, were provided during this period for all the seven “Bottom Acoustic Receivers Data-loggers” acquired by the Coordination section. Three of the dataloggers have been recording fish spawning aggregation information on the Virgin Islands, and four in Puerto Rico. The Virgin Islands dataloggers have been deployed at the “Grammanik Bank” and the historic “Nassau-Hind Bank”. The four recording instruments deployed in Puerto Rico are located at two different depths at the “Bajo de Cico” and “Abril la Sierra” spawning grounds.

Overview of SEAMAP - Gulf

J. Mareska submitted the following report:

The Fall Plankton Survey took place from August 25 – September 28, 2014. One hundred fifty stations were sampled. The objective of this survey was to collect ichthyoplankton samples with bongo and neuston gear for the purpose of estimating abundance and defining the distribution of eggs, larvae, and small juveniles of Gulf of Mexico fishes, particularly king and Spanish mackerel, lutjanids and sciaenids.

The Fall Shrimp/Groundfish Survey was conducted from October 1 to November 26, 2014 from off southwest Florida to the U.S.-Mexican border. Four hundred twenty-seven trawl stations and 102 plankton stations were sampled during the survey. Vessels sampled waters out to 60 fm with trawls and plankton nets in addition to environmental sampling. The objectives of the survey were to sample the entire U.S. Gulf of Mexico to determine abundance and distribution of demersal organisms from 2 to 60 fm, obtain length-frequency measurements for major finfish and shrimp species to determine population size structures, collect environmental data to investigate potential relationships between abundance and distribution of organisms and environmental parameters, and

collect ichthyoplankton samples to determine relative abundance and distribution of eggs and larvae of commercially and recreationally important fish species.

Note that Florida's participation in the Fall Shrimp/Groundfish Survey was only due to National Fish and Wildlife Federation (NFWF) funds. Several states have received NFWF funding to conduct additional fishery independent sampling work. Since the NFWF projects will be using SEAMAP gear and protocols, the collected data will be managed by the Commission. NFWF funds will allow SEAMAP to fill in spatial and temporal gaps in current SEAMAP surveys since current funding levels do not allow for expansion or in some cases maintenance of existing surveys.

The SEAMAP Winter Plankton Survey took place from March 3 – April 2, 2015. NOAA Fisheries collected ichthyoplankton samples at 113 SEAMAP stations. The objectives of the survey were to sample a systematic grid of plankton stations to assess the distribution, occurrence, and abundance of the early life stages of a variety of species of fishes and invertebrates. The survey specifically targeted larvae of grouper, tilefish and other winter spawning species.

The SEAMAP Spring Plankton Survey was conducted from May 1 - 31, 2015. One hundred twenty-four stations were sampled during the survey. The objectives of the survey were to collect ichthyoplankton samples on the continental shelf for estimates of the abundance and distribution of Atlantic bluefin tuna larvae and collect environmental data at all ichthyoplankton stations.

The Gulf SEAMAP Subcommittee continues to work towards standardizing gears, station selection, protocols, and techniques as much as possible for all surveys. An extensive review of SEAMAP protocols, gear, and station selection for all surveys took place last fall. As part of this effort to standardize protocols, Texas no longer participates in the SEAMAP Summer or Fall Shrimp/Groundfish Surveys since their research vessels are not able to tow the same size trawls as other SEAMAP partners.

Until 2014 each partner in the Bottom Longline Survey randomly selected stations off their coast independent of other states. There were discrepancies among the partners regarding number of stations sampled, the frequency of sampling, the size of the sampling universe, and the depth strata targeted. In an effort to make the bottom longline data as useful as possible in federal and state stock assessments, the SEAMAP Subcommittee began an effort in 2014 to develop a protocol for station selection procedures. This effort sought to better standardize the sampling effort among the partners and develop a more uniform design and resultant data set.

The Subcommittee worked with a contractor to review the current Bottom Longline Survey sampling design, the data collected, the sample sizes and the uses of the data (e.g. model based estimation vs trend analysis), in order to make recommendations for modifications that would provide consistency in design, spatial representativeness and robustness to funding changes. As part of the analyses, the contractor provided recommendations as to the number of observations needed to obtain different levels of precision for data collected from the survey. Using the contractor's recommendations, the Subcommittee modified the sampling strategy of the Bottom Longline Survey. At the March 2015 SEAMAP Subcommittee meeting, firm station selection protocols were established.

Sampling occurs during three seasons Spring (April-May), Summer (June-July), and Fall (August-September). Sampling is conducted in waters defined by the 3-10m depth contour. NMFS Statistical Zones are used as guides to ensure effective distribution of sampling effort. Stations are proportionally allocated and randomly distributed within the 3-10m depth contour in each statistical zone based on the proportion of those depths present. Since the 3-10m depth strata is smaller in some statistical zones relative to other statistical zones, each statistical zone is allocated at least two stations during each season in order to ensure adequate sampling coverage. Partners usually survey the stations that occur off their state boundaries for each season.

The Bottom Longline Survey is currently ongoing with Mississippi, Alabama, Louisiana, and Texas participating. This survey targets shark and finfish species within the shallow waters of the north central Gulf of Mexico. The objectives of the survey are to collect information on coastal shark and adult finfish abundances and distribution with a 1-mile longline and also to collect environmental data.

The SEAMAP Vertical Line Survey is currently being conducted off Alabama and Louisiana. One hundred fourteen stations have been sampled so far this year. The survey samples reef fish over artificial reefs, oil and gas platforms and natural hardbottom to assess reef fish abundances and collect fishery independent biological samples. Fishing video is obtained at select stations through the use of GoPro cameras and Alabama is using an ROV camera to obtain species abundances, distribution, and length frequency data. In 2015, approximately 260 stations will be sampled by the two programs

NOAA Fisheries is conducting the SEAMAP Reef Fish Survey from May through August this year. The primary purpose of this survey is to assess relative abundance and compute population estimates of reef fish found on natural habitat throughout the Gulf of Mexico. The Reef Fish Survey uses stereo cameras and vertical line gear to sample reef fish populations. Correspondingly, Florida conducts reef fish sampling from May through August each year as part of the SEAMAP Reef Fish Survey. The primary purpose of this survey is to assess relative abundance and compute population estimates of reef fish found on natural habitat on the central west Florida shelf. The Reef Fish Survey uses video stereo cameras and chevron fish traps to sample reef fish populations. In 2015, approximately 570 stations will be sampled by the two programs. The SEAMAP Subcommittee is currently working to standardize station selection and methodology in these surveys.

The SEAMAP Summer Shrimp/Groundfish Survey was conducted from May 30 to July 16, 2015. Three hundred seventy-eight trawl and 103 plankton stations were completed in this year's survey. The objectives of the survey were to monitor size and distribution of penaeid shrimp during or prior to migration of brown shrimp from bays to the open Gulf; aid in evaluating the "Texas Closure" management measure of the Gulf Council's Shrimp Fishery Management Plan; and provide information on shrimp and groundfish stocks across the northern Gulf of Mexico from 2 to 60 fm. SEAMAP sent out weekly real time plots of total catch and brown, pink, and white shrimp distribution during the Summer Shrimp/Groundfish Survey. The plots were mailed and emailed to approximately 125 individuals and distributed via the Commission's web site.

Overview of SEAMAP - South Atlantic

R. Pugliese submitted the following report for the South Atlantic:

Overview of SEAMAP NMFS

M. Cook gave an update on the NEPA marine mammal LOAs. This started in 2012 with all the science centers going through this process at the same time. The reason is that NOAA needed to get in compliance with the Fishery Independent Monitoring Surveys, NEPA and to make sure permits have been issued in the event of a take as well as biological opinions written for endangered species in the event of a take. **M. Cook** has been working on the Environmental Assessments (EAs) and the Letter of Authorization on Marine Mammals (LOAs). Andy Herndon has been working on the biological opinion. The biological opinion has gone through two rounds of internal review. At this time, they do not have a timeline as to when this will be completed. The EAs and LOAs have had the first internal review and **M. Cook** is still going through the edits and comments from that review. It will be another month or two before the second review starts due to the fact that they are having problems with the bottlenose dolphin stocks and take request. Once a permit is issued, it is good for five years. However, if any changes are made, increase effort, change gear, ect., pass this information along to **E. Hoffmayer** so a modification to the permit can be made if needed. Please use the Protected Species Incidental Procedure Take form in the event of a take. This form was sent out as a draft form but will most likely be used as the finalized form. If you do have a protected species take, if alive, take appropriate measurements, photos and fill out the form and get the species back in the water. If dead, spray paint it and toss it back into the water, this is for turtles. For marine mammals, if dead, contact the local stranding coordinator if possible. A four page document will be sent out explaining all of the above procedures. The most important thing is to report all takes. If a report is not filled out, there is a chance NOAA could be held liable and could risk funding in the future. **T. Kellison** had a question regarding when the permit is finally granted, are there going to be any big changes to the form and how it is filled out? **M. Cook** said not really, the only changes that may be on the form will relate to the mitigation factors which they are still working on. **M. Reichert** asked what do you do if your current LOA expires. **M. Cook** noted that the biological opinion will cover endangered species takes. **T. Switzer** asked if it is not a NOAA funded project, how do you report a take. **M. Cook** stated that you should go through the stranding network, and whoever you get your grant through, inform them of the take. If you have any EA or LOA questions, please go through **E. Hoffmayer** and he will pass them on the **M. Cook**.

E. Hoffmayer discussed the federal initiative for Public Access to Research Results (PARR). As of February 2013, all federal data must be accessible to the public. The government is requiring all federally funded data to be publically accessible by 2016. SEAMAP is in good shape with the PARR requirements. December 31, 2015 is the deadline to have the system up and running in some form or fashion. All of the partners that receive federal funds have another year to meet all of the requirements. Under PARR, there are four priorities that SEAMAP has to meet: Data Management Plan for every funded project. With this requirement, **E. Hoffmayer** would like to see a SEAMAP data management committee formed. Also need meta data, accessibility and data

archive. Once PARR is in place, if you do not follow the requirements, there could be repercussions. NOAA will be as proactive as possible and will pass along information as needed.

Proposed Activities and Budget Needs for FY2016

Caribbean – R. Lopez reported the Caribbean component would continue with their current surveys and they are in the process of reviewing the sampling methodology of the Reef Fish Survey, and if they need to implement any changes as requested by NMFS, that will cost more money. The main change is a NMFS suggestion to conduct all studies every year to include the sample size. This will require a significant increase in the funding level. A funding level below the current one would impose a great constraint to keep with their current surveys which are reef fish, lobster, king conch, yellow tail and length snapper surveys. Currently, level funding for Puerto Rico is \$205,000, \$190,000 for the USVI and \$64,000 for coordination cost for a total of \$460,000. However, the Caribbean also needs a new boat which they have an invoice for. The boat would cost approximately \$180,000 and this is not included in the \$460,000.

Gulf – J. Mareska reported that the Gulf component would continue to maintain the trawl, plankton, vertical line, reef fish and bottom long line survey. The Gulf's proposed needs to conduct those surveys are \$2,143,067.

South Atlantic – R. Pugliese reported that the South Atlantic budget was built off of the 2015 budget with the idea of not seeing any increase.

NMFS – E. Hoffmayer stated NMFS would stay with what they got in 2015, \$670,043, and would try to continue all current programs.

J. Rester asked **K. Donnelly** about the 10.6% assessment fee. This is a maintenance and administrative fee that comes off of the top before the money is handed down to the various programs.

Joint Discussion of SEAMAP Budget for FY2016

During the joint discussion, it was noted that the Gulf based their FY2016 budget on the amount of money that they need to do the work while the South Atlantic based their FY2016 budget on the amount they think they will receive.

R. Pugliese made a motion to propose the FY2016 budget based upon the agreed upon percentages of Gulf = 41.3%, South Atlantic = 32.9%, Caribbean = 10.5%, NMFS = 15.3 % using the FY2016 Gulf request as a base.

| | |
|-------------------------|--------------------|
| Gulf | \$2,143,067 |
| Caribbean | \$544,848 |
| Caribbean Vessel | \$180,000 |
| South Atlantic | \$1,707,189 |
| NMFS | \$793,921 |

R. Hendon seconded the motion and it passed unanimously.

Updating the SEAMAP Joint Management Plan 2016-2020

S. Madsen stated that the South Atlantic had gone through the 2016-2020 Management Plan and made several edits and changes. It was discussed as to who is the management plan aimed to, and the South Atlantic thought the plan should be aimed at the SEAMAP users. Therefore, a one to two page document may be needed to provide to outside sources for funding. This would be a short and concise document for outside funding sources to read instead of the full management plan. **R. Pugliese** noted that the Executive Summary will need to be edited and consolidated to make it more effective. Under Regional Issues and Needs, **J. Mareska**, thinks this should be put into a table. **S. Madsen** stated that the South Atlantic thought that a lot of information in this section should be moved to accomplishments. It was also noted that Climate Change and Invasive Species categories need to be added to this section.

Under Program Mission, the South Atlantic went through the bullet points and consolidated them to make them more concise. They went from nine to five bullet points. **T. Switzer** noted that long and short term needs for fishery independent data needed to be prioritized. Also, Supporting Ecosystem Based Management Needs should be added or included in a bullet.

Not many changes were made to Goals and Objectives. The SEDAR specific language was deleted.

For Chapter 2 Program Organization and Management, each of the partners will need to read through their sections and make any changes as needed.

Chapter 3 SEAMAP Accomplishments, again, each of the partners will need to read through their sections and make any changes as needed.

There was some discussion as to whether or not the partners wanted to break the management plan into two documents. A 2-tier approach, an Operations Plan and a History. **R. Pugliese** stated that the group should first focus on updating and refining the information and then, at a later date look at the reorganization of the document and whether or not the partners wanted to keep the management plan as one document or two. There were no objections to this.

Chapter 4 Expanding SEAMAP Activities, again each of the partners will need to read through their sections and make any changes/edits as needed.

R. Pugliese asked that all the partners try and get the core updates/edits/changes to S. Madsen within a month. **S. Madsen** would like to have a conference call in October 2015 with the coordinators to discuss the status of the management plan. **S. Madsen** hopes to have a solid draft of the 2016-2020 Management Plan by the end of 2015.

SEAMAP Data Management Plan

E. Hoffmayer stated that with the PARR requirements, SEAMAP needs to have something more formalized in regards to a data management plan. He would like a SEMAP Data Management Committee formed. **R. Pugliese made a motion to establish a Joint SEMAP Data Management Work Group of which each component provides a member. P. Greer seconded the motion. The motion passed unanimously.** Please provide member names to **E. Hoffmayer**.

Other Business

It was noted that next year's meeting will be the week of July 25, 2016 in Key West, FL.

There being no further business the meeting adjourned at 2:50 p.m.

**Otolith Work Group Meeting Summary
August 19-21, 2014 Panama City, Florida**

APPROVED BY:

COMMITTEE CHAIRMAN

Facilitator

VanderKooy opened the meeting at 2:15 p.m. Tuesday afternoon, August 19, 2014. He asked all participants to sign in and provide complete contact information. Email addresses are critical. The following attended and introduced themselves:

Gary Fitzhugh, NOAA/NMFS, Panama City, FL
Gary Gray, USM/GCRL, Ocean Springs, MS
Isis Longo, LDWF, Baton Rouge, LA
Jaime Miller, AMRD, Dauphin Island, AL
Jeff Kipp, ASMFC, Arlington, VA
Jess Carroll, FWRI, St. Petersburg, FL
Chris Palmer, NMFS/SEFSC, Panama City, FL
Wes Devers, MDMR, Biloxi, MS
Steve VanderKooy, GSMFC, Ocean Springs, MS
Debbie McIntyre, GSMFC, Ocean Springs, MS

Gulf Menhaden Reference Set

While waiting for a couple of members to arrive, **VanderKooy** introduced the Gulf menhaden scale reading reference set to the group and reviewed the coming training in Beaufort, North Carolina scheduled for early November of this year. He indicated that the reference set is 49 slides and included as CD with an introductory PowerPoint and presentation with both RAW and ANNOTATED images of the scales based on the readings by the NOAA Beaufort Lab. Each state should be able to read these before going to the Beaufort meeting in November as the reference set is mailed around the Gulf. The meeting at the Beaufort Lab will actually be only one day but will involve travel one day on either side. **VanderKooy** stressed the importance of sending someone to the meeting who is experienced and will be employed by each state for a long time.

VanderKooy reminded all that there is no intention of having the states take over the fishery-dependent port sampling. This exercise is to assist each state with its fishery-independent data. Currently, the states are not prepared to take this task on. For now, this is an educational tool. The Atlantic States Commission will produce the same type of reference set for Atlantic menhaden and have a similar training exercise in early 2015 at Beaufort.

VanderKooy noted that, if during the course of working with the reference set, the states come up with better ways to mount and preserve scales than the technique currently being used by NOAA, we should think about including them in the manual revision. In addition, NOAA does not address an 'edge code' which might need to be discussed before finalizing any techniques in the manual.

Manual Revision

VanderKooy explained that the Gulf States Marine Fisheries Commission (Commission) published *A Practical Handbook for Determining the Age of Gulf of Mexico Fishes* (The Otolith Manual) in May 2003. Initially, copies were distributed to Gulf agencies and libraries.

Nationwide requests were received and filled. The document was recently presented during the International Age and Growth Conference and worldwide requests were received. Hardcopies were mailed when possible, but electronic formats (CDs and downloadable PDFs) have become the preferred media. An updated version was released in 2009 which included a few new species accounts and some updated techniques. It continues to be a frequently downloaded pub from the Commission website. The Atlantic States Marine Fisheries Commission has been interested in collaborating on revising the manual for several years and **Jeff Kipp** has been working with his Commission to begin to draft material for inclusion. The new revision will be a multi-coast effort and should further help standardize age and growth techniques within fisheries science.

VanderKooy stated that the agenda will serve this meeting as a checklist of what we want to accomplish and update. **VanderKooy** pointed out what is included in our handouts. This needs to be an improved, useful tool. An interactive website would be nice but a tangible copy is still needed. Flipping through pages and bookmarking them is very helpful.

It is the intention of the group to go through the table of contents and assess what needs to be updated, i.e. techniques, software, etc. **VanderKooy** encouraged everyone to not be timid and to make suggestions. See what needs to be merged. The appendices need to be updated and possibly should be an interactive online tool that can be updated routinely.

VanderKooy distributed the table of contents and pointed out that today's discussion will follow this outline. Sections will be reviewed independently to determine if changes are needed. After the meeting, all effort will be conducted via email, mail, telephone, and telephone conference calls.

TABLE OF CONTENTS

Contributors should be updated and added to the existing ones. The group will go through a section at a time and recognize what everyone is still doing and perhaps what they are not.

There was a lot of discussion on standardization of labelling which is very much needed. This could stand to be mentioned and at the least, there should be a ground work set here for more standard labelling techniques. Also, an explanation would help. See below in Section 3.

Section 2 – Otolith Structure and Function. Biology behind otoliths – background and function of these structures is most of what is currently here. **VanderKooy** suggested maybe moving some of the other structure from the back forward: vertebrae, opercles, scales, spines, and finrays. In addition, there may be a need to address the usefulness of these parts other than for just ageing here, such as micromilling, amplifying DNA, and historical/archeological samples (changes in stock composition).

Section 3 – Processing Techniques

Some of this section will need to be rearranged. We need to set out the options for physical storage in more detail where needed: coin envelopes, vials, depending on large or small otoliths – whole, large, hard parts, scales, and slides.

Per **Fitzhugh**, long-term storage of otolith sections archiving is a huge problem and digitization of the sections may also be a problem. Every lab is confronted with how to secure their slides and any images for future reference. This may need to be included in the manual now. What about the use of digital images for long-term storage? One single image is not clear enough per **Carroll**. Per **Miller**, after five years, her lab throws away the slides for adult finfish. They save as JPEGs using Q-Capture. No one else is doing digital storage. **Miller** will write up their techniques. **Kipp** will check into their digitization and see what the Atlantic coast labs are all doing as well.

VanderKooy wondered how opercle bones are stored on the Atlantic and what issues there are having. What about scales along the Atlantic? We know what Beaufort does, but is anyone else doing it better? Include spines which are sometimes stored dry. **Miller** stated that they just keep the section on the slide and the rest is disposed of.

Are there any better techniques for otolith removal? These techniques need to be explained for hard parts. 3.6.4 Removal for all general (FWC). **Carroll** is having her group start finrays this season and will keep this group updated on that. Spines and finrays should actually be separated in the procedures discussion. In addition, the FWC 'hot glue' technique should be explained in more detail and updated if the technique has changed from 2009. Check with **Murie (U of F)** and **Carroll** will update finrays section and include lots of images.

VanderKooy wondered if more warnings should be included. Should we add some of the ugly sections and images to highlight and warn about the more common mistakes in sectioning, mounting, etc? What about concerns over potential toxicity of materials for embedding, etc? This should not be included for each section but in Safety Procedures or Issues 3.3. This is different from Common Mistakes. This would be before sectioning. **Longo** will provide this verbiage and others will contribute imaging.

Each species needs a better account of where to begin the first cut and add or modify images we do have. We need to do this species-specific. A 3-D image would be great. **Carroll** will work with **VanderKooy** since they have done some better images like this at FWC in the past.

VanderKooy wondered about minimal data elements again, i.e., what to record and how to record it? Should this be included in more detail or would this be another manual altogether? Some of the concern was related by **Fitzhugh** regarding the coding or numbering of samples between and even within each state agency and NOAA. This might be the wrong time for the discussion but there needs to be some consistency and we may want to address this more than was done in the previous version.

VanderKooy noted that it was decided that imaging software changes very often and it was agreed to not include specific information related to different packages. We could, but would it still be useful in a year?

Whole otoliths – Palmer and Allman (NOAA PC) will update some of the whole otolith discussion including what not to do when extracting, cleaning, reading, and storing in short and long-term.

VanderKooy asked everyone to review Chapter 3 and make recommendations as far as the images and anything else that may need to be addressed.

Section 4 – Age Determination

VanderKooy explained this portion briefly and how it instructs the reader as to how to interpret an otolith. DVDs will be included at the back of the manual. This is more about the importance of utilizing the reference sets. **Fitzhugh** will look at this again since he put most of it together. 4.4.4 Digital vs physical circulating the set for quality control. For training purposes, use the annotated.

4.2.1.1 Section Margins - We need to address the margin codes and necessity of standard codes for each of the additional hardparts beyond just otolith sections. The following will be put into individual sections:

- Opercula – Tautog ASMFC
- Spines – NOAA & FWC
- Rays – **Murie (U of F) & FWC**
- Vertebrae – Sharks general - NOAA
- Scales – **Beaufort & ASMFC** striped bass

4.3.1 Biological Ages – **Fitzhugh** pointed out that this may be the place to draw attention to latitude variations since we are expanding this. For each overlapping species between the Atlantic and Gulf, and within the north and south Atlantic, we should probably have multiple timelines that identify how the age may shift between regions and localities.

Kipp will find out if what we have in the generalization is adequate for ASMFC purposes. **VanderKooy** wondered if perhaps each region needs to be considered almost a separate species account if they are vastly different... the group suggested not.

There was considerable discussion over the use of the terms ‘opaque’ vs ‘translucent’ since they are opposite for the light source when reading and some species are opposite in how they ‘lay down’ annuli. We may need to unilaterally go with something that is more defined regardless of technique.

Finally, there is quite of bit of disagreement as to whether the reader should simply read the number of rings and provide a margin code or if the reader should assign an age/year class to the fish. This needs to be addressed. In addition, there should perhaps be more discussion of reader bias and variability and how it is adjusted for in the stock assessment models (incentive for use to measure it in advance of assessments through training).

Section 5 – Species Accounts

Discussion ensued as to how to determine what to add to the revision. The group agreed to attempt the following as examples:

Vermilion Snapper 5.16 and Red Snapper 5.7 and Gray Triggerfish 5.6 have some unique issues which are already included in the training CDs but for the manual we might need to include them.

- Add cutting plane/marking core type image
- Variations of quality sections
- Core-annulus variations
- Where doublets exist
- Settlement checks
- Margin glare
- Delta region
- Early/late spawn images

There was much discussion regarding how in-depth each of the species should be addressed.

It was generally thought that 'like species' accounts should be rearranged and put together....scianids, groupers, snappers, herrings, etc. With the addition of Atlantic Menhaden and several other species from the Atlantic, this might be a better organization.

Kipp stated that they have some decent validation to their menhaden scales. **VanderKooy** showed **Kipp's** blueback and alewife herring document and an Excel version of the ageing timeline as a new template. **Kipp** will try to find comparable images as examples of otolith sections for the latitudinal change if there are significant differences in any overlapping species.

VanderKooy will touch base with **Jennifer Potts (NOAA Beaufort)** next month re: gray snapper, greater amberjack, and vermilion question.

Joe O'Hop (FWC) had sent some changes that need to be made. **VanderKooy** will make these corrections.

Comments were also received from **Britt Bumguardner (TPWD)** regarding a few images and suggestions.

VanderKooy offered to get x-rays of just about anything anybody would want as long as they provide the fresh or frozen skull. He has a great relationship with the local vet to have images generated as needed – provided he does not have to come up with the specimens himself.

VanderKooy began listing additional species that the Gulf and the Atlantic may want to develop for inclusion. **VanderKooy** already has a number of additional species that could have species accounts written for. However, he reminded everyone that we should only include those we have confidence in the ability to age as well as validation of those ages and techniques. Any species is fair game at this point since the manual will be primarily electronic. Users can download only those species they are interested in and add more later to their own printed manual.

Remaining materials: We need to begin writing and finding people to get this information together. The workbook is available online and **VanderKooy** will generate Word files of each section without the images for people to begin working on. As far as formatting, **VanderKooy** asked that each contributor submit their text without columns, note where any images or tables should go and include

them at the end of the Word file along with complete references. **VanderKooy** will take care of numbering the photos/graphs. Again, everyone should provide the information as to where these should be placed within the text as well as if there is a photo credit or source for any graphics used.

VanderKooy reminded all that, regarding literature cited, everyone should provide electronic PDFs of the literature they use for the Commission electronic library.

Glossary of Terms. These may differ from Atlantic to Gulf. Please identify and provide updated definitions. Terms we use commonly may not be common to the reader.

Appendices: Equipment, Consumables, and Suppliers are probably still worth noting as sources for our lab stuff... even though prices and contacts may change, it is still helpful to someone searching for OUR materials.

Finally, everyone should keep a running list of contributors... both for the list as well as for acknowledgements.

There being no further business, **VanderKooy** thanked the group for their participation and closed the meeting at 4:30 p.m. on Wednesday afternoon.

Gulf States Marine Fisheries Commission

State Directors Meeting

Venice, Louisiana

August 26-28, 2015

Participants

Dan Ellinor - FWC
Chris Blankenship - ADCNR
Jamie Miller - MDMR
Mark Lingo – TPWD
Randy Pausina - LDWF
Dave Donaldson - GSMFC
Steve VanderKooy - GSMFC

Agenda

1. *ANS RESTORE Act Proposal*
2. *Status of FINFO at GSMFC*
3. *Discussion of GulfFIN Vessel Tracking module*
4. *IJF Document Review Process*
5. *Commission and Council Relationship*
6. *BP Settlement and RESTORE Act Funding*
7. *Other Business*

APPROVED BY:

COMMITTEE CHAIRMAN

**STATE-FEDERAL FISHERIES MANAGEMENT COMMITTEE
MINUTES**

Thursday September 10, 2015
New Orleans, LA

Dave Donaldson called the meeting to order at 10:00 a.m. The following members and others were present:

Members

- Chris Blankenship, ADCNR, Gulf Shores, AL
- Kelly Lucas, MDMR, Biloxi, MS
- Randy Pausina, LDWF, Baton Rouge, LA
- Lance Robinson (proxy for M. Lingo), TPWD, Dickinson, TX
- Bonnie Ponwith, (proxy for R. Crabtree), NMFS, Miami, FL
- Dave Donaldson, GSMFC, Ocean Springs, MS

Others

- Joe Jewell, MDMR, Biloxi, MS
- Dave Van Voorhees, NMFS, Silver Spring, MD
- Gordon Colvin, MRIP, Silver Spring, MD
- Myron Fischer, LDWF, Grand Isle, LA

Staff

- Gregg Bray, FIN Program Manager
- Angie Rabideau, GSMFC Senior Accountant

Adoption of Agenda

The agenda was approved as written.

Discussion and Final Approval of FIN Funding Activities for 2016

G. Bray outlined the status of 2016 funding for data collection and management activities. The preliminary numbers show the GulfFIN line item at \$4.275M and RecFIN line item at \$3.470M. The Gulf portion of the RecFIN line item works out to be about \$1.076M. In addition, there is an additional \$855K provided by the NOAA OST to allow for increased MRIP sampling. **D. Van Voorhees** stated that it is envisioned that NMFS will be operating with a similar budget as 2015. NMFS will likely be required to charge the same administrative fees as 2015 also. Fees for administration of economic surveys in the regions are still mandated to be retained by NOAA each year. With administrative fees removed the amount available for FIN funding in 2016 totals \$5.518M. The breakdown of the funding is as follows:

| | | |
|------------------------------|-----------|------------------|
| GulfFIN line item | 4,275,751 | |
| OMB administrative fee | (287,686) | |
| SER administrative fee | (2,434) | |
| GulfFIN - available | | 3,985,631 |
| | | |
| RecFIN line item | 3,470,861 | |
| OMB administrative fee | (240,674) | |
| RecFIN - available | 3,230,187 | |
| Gulf portion of RecFIN (1/3) | 1,076,729 | |
| SER administrative fee | 0 | |
| Economics survey | (167,674) | |
| SEFSC data collections | (231,118) | |
| RecFIN - available | | 677,937 |
| | | |
| Additional funds | | |
| MRIP funds | | 855,000 |
| SEFSC funds | | 0 |
| SER funds | | 0 |
| HQ funds | | 0 |
| | | |
| TOTAL AVAILABLE | | 5,518,568 |

G. Bray then provided a brief overview of the documents that were distributed to the group. He then discussed the summary of the activities for potential funding in 2016 that was developed by the FIN Committee. The list is attached (Attachment A).

The original amount proposed for 2016 for all the jobs proposed was approximately \$5.830M, which meant there was about \$312K (-5.3%) deficit. This is lower than past years as we only asked the states for budgets to fund biosampling for the remainder of 2016 (August-December). G. Bray stated that the Headboat Port Sampling program is fully funded through 2016 with funds provided by NOAA SEFSC in 2015. That job was not listed in any of the review documents as Headboat Port Sampling funds come from a different source and do not impact the GulfFIN or RecFIN line item amounts. Under the original proposed scenario cutting the biosampling program would have resulted in a surplus of \$134K (2.5%). D. Donaldson stated the surplus \$134K could be allocated to assisting with LA Creel realizing that it would not cover all the program costs and it would provide several months to find alternative sources of funding for biological sampling. This scenario would also prevent cuts to recreational and commercial data collection programs for 2016. After further discussion C. Blankenship moved to fund Job 1 (Coordination and Administration of FIN Activities), Job 2 (Collecting, Managing, and Disseminating Marine Recreational Fisheries Data), Job 3 (Menhaden Data Collection Activities), Job 4 (Operation of FIN Data Management System), Job 5 (Trip Ticket Program Implementation and Operation), and Job 6 (Biological Sampling of Commercial and Recreational Catches) and was seconded by K. Lucas and each agency would need to take a 5.3% reduction. R. Pausina

asked where the \$610K was allocated that was used in 2015 for the LA Creel/MRIP benchmarking study. **Bray** explained that those available RecFIN funds were currently allocated to help pay for biological sampling in 2016. He explained that GSMFC was unclear if the benchmarking was to continue into 2016 and what the exact timeline was for certification of LA Creel. **D. Van Voorhees** stated currently all partners are thinking positively about the potential for LA Creel getting certified by MRIP. Once certified LA Creel would be able to be considered to receive FIN funding as an MRIP certified design. **D. Donaldson** state another scenario would be to allocate \$610K to recreational sampling in Louisiana. **B. Ponwith** asked when the earliest possible scenario would be for certification of LA Creel. **D. Van Voorhees** stated it is hard to put an exact date on this issue but the peer review is near completion and work will need to be done regarding calibration of LA Creel estimates from the benchmarking study. He stated that it remains possible that a decision could be made by late 2015 or early 2016. **D. Donaldson** stated with that information is likely best that GulfFIN allocate the \$610 towards recreational sampling in Louisiana in 2016. This would equate to a deficit of approximately \$921K (-14.3%). **G. Bray** asked if the benchmarking would potentially continue into 2016. **R. Pausina** stated if benchmarking need to continue in 2016 he would be fine with that and the necessary funds to support that would be utilized from the \$610K provided by GulfFIN. **R. Pausina** also stated that LA Creel actually costs \$2.2M but he would only be asking for the \$610K to support the data required by MRIP for annual estimates of landings. That would allow Louisiana the flexibility to focus on other areas of research such as discard collections. For that reason he would like to see the \$610K for recreational sampling in Louisiana to remain in the budget. **K. Lucas** stated she thought when Louisiana pulled out of MRIP their intent was to accomplish their own survey to meet their state needs and assume the total cost of funding that survey. **R. Pausina** stated that Louisiana did pull out in 2014 and assumed 100% of LA Creel costs but the intent was always to get MRIP certified and to receive funding to support the program at some level as those estimates would be the official landings for Louisiana. Under this new scenario the deficit for all proposed work would be \$921K (-14.3%), if biosampling was eliminated the deficit would be reduced to \$475k (-7.9%). **After further discussion the original motion was withdrawn by C. Blankenship and C. Blankenship moved to fund Job 1 (Coordination and Administration of FIN Activities), Job 2 (Collecting, Managing, and Disseminating Marine Recreational Fisheries Data), Job 3 (Menhaden Data Collection Activities), Job 4 (Operation of FIN Data Management System) and Job 5 (Trip Ticket Program Implementation and Operation). That produced a total proposed budget of \$5.994M which meant that \$475K still needed to be removed from the proposed budget. To address this issue, the Committee agreed to take an across the board cut of 7.9% to reach the 2016 funding level (at \$5.518M). The motion was seconded and passed unanimously.** **R. Pausina** asked if he could fully fund Job 5 (Trip Ticket Program Implementation and Operation), and Job 6 (Biological Sampling of Commercial and Recreational Catches) and take the full 7.9% reduction from the \$610K he was receiving for Job 2. **D. Donaldson** stated that seemed acceptable. The group discussed the situation where the funding level was either higher or lower than the amount discussed at the meeting. It was noted that if the reduction was at the 7.9% level or lower, each agency would still take an across the board cut. If the reduction was higher than the 7.9% level, then the Committee would convene (via conference call) to discuss how to handle reduction. The reductions are as follows:

| | Proposed | Reduction | Revised total |
|-------------------|--------------------|------------------|--------------------|
| GSMFC | \$926,605 | \$73,534 | \$853,071 |
| Texas | \$192,073 | \$15,243 | \$176,830 |
| Louisiana | \$1,210,838 | \$96,091 | \$1,114,747 |
| Mississippi | \$674,440 | \$53,523 | \$620,917 |
| Alabama | \$480,180 | \$38,107 | \$442,073 |
| Florida | \$2,378,662 | \$188,769 | \$2,189,893 |
| Bluefin Data (TT) | \$106,570 | \$8,457 | \$98,113 |
| Menhaden | \$24,900 | \$1,976 | \$22,924 |
| | | | |
| TOTAL | \$5,994,268 | \$475,700 | \$5,518,568 |

The Committee agreed to reduce their budgets by the outlined amounts. G. Bray stated that in order to meet the submission deadline, states would have to provide their revised statements of work and budgets to the GSMFC no later than October 9, 2015.

Red Snapper Issues

Discussion of 2015 MRIP estimates

K. Lucas stated her concerns about a zero landings estimate for red snapper in private boat mode obtained by MRIP in wave 3, 2015 for Mississippi. She has concerns about lobbying for more federal funding to support MRIP data collections when the survey is doing a poor job of collecting data for certain species in Mississippi. She realizes MRIP is not a good method for capturing a short season derby fishery but Mississippi is considering pulling out of MRIP and focusing on expanding their state survey following the model Louisiana has adopted. **R. Pausina** mentioned Louisiana also observed similar problems with the MRIP survey estimates for other species besides red snapper. **K. Lucas** stated she thought MRIP was targeting sampling during the red snapper season to improve estimates but the sample draw they received did not focus any sampling at sites with high probabilities of interviewing red snapper anglers. **C. Blankenship** was concerned about 75,000 pounds of red snapper estimated harvest that was calculated from a few red snapper dead discards observed in March 2015 by MRIP. He believes these types of outliers reflect poor survey performance in Alabama too. **D. Donaldson** stated that MRIP is likely not doing as well red snapper in Mississippi but moving towards certification and having state surveys as an alternative data source to complement MRIP landings could be highly beneficial for red snapper. **D. Van Voorhees** stated that all of the state concerns really center on precision issues for MRIP. Not having enough data to produce precise estimates sometimes results in zero estimates. Increasing the amount of assignments completed by dockside field staff would be one way to solve this issue. He thinks that for species operating under short fishing seasons the better option might be specialized surveys like the states are currently testing. Allocating additional sample during these short fishing season for the general MRIP survey is going to result in less sample in other times or areas. **J. Jewel** stated that the MRIP survey draw for wave 3, 2015 did a poor job of surveying sites where private boats that were harvesting red snapper departed. **G. Bray** stated that he was informed by MRIP staff that technical problems existed in trying to redistribute

sampling effort at sites where offshore species like red snapper were more frequently observed in Mississippi and Alabama. Both states agreed that finding a method for distributing MRIP sample to the necessary sites to capture landings of red snapper and offshore species would be beneficial. **K. Lucas** stated that her ultimate goal would be Mississippi's red snapper survey be certified and use that as the official method moving forward. **C. Blankenship** stated Alabama would like to understand better how the MRIP estimates are generated and that might help improve the process of comparison between MRIP and Alabama survey estimates. **J. Jewel** is also concerned about the public relations aspect of the large difference between MRIP estimates and state survey estimates. **D. Van Voorhees** stated that through the GulfFIN planning process we could be evaluating trade-offs of how MRIP allocates sampling. It might be possible to shift sample from shore to boat modes, or shift sample to different types of access sites or different times of the day within boat modes. **K. Lucas** is still worried about having two different estimates within a state and how we can move towards one single estimate for each species. **G. Colvin** stated these discussions are centered on survey performance and communication breakdown with outlier or misunderstood estimates generated by MRIP. He would like the opportunity to address the communication issues and provide some ideas on how MRIP can address survey performance. **C. Blankenship** stated communication with the public is one issue but we also need to be concerned with communication between MRIP and state partners. It would be beneficial to have state feedback before getting results provided for public viewing. **M. Fisher** suggested having constituent meetings that state directors provide participant input that would assist with the review process to improve communications. **D. Van Voorhees** suggested other federal agencies are potentially suppressing statistics that fail to meet levels of precision and wondered if that would be beneficial for us to consider. **K. Lucas** stated that it still likely would not reduce public concern. **D. Van Voorhees** stated that the goal might be to develop a cumulative species estimate that would be presented once enough data was compiled by the end of a calendar year. **B. Ponwith** stated that certification is a valuable process for reviewing new methods but the difficulty in using the state survey results for indices of abundance calculations produces difficulties if we are talking about four or five different methods that may have operational differences. It could result in not being able to calculate statistics like indices of abundance that are important to stock assessment scientists due to a lack of uniformity in sampling methodologies. **D. Van Voorhees** stated that MRIP consultants previously stated that Alabama, Mississippi, and Texas are operating under a similar capture-recapture design and the opportunity exists to come to agreement on a standardized design format that would not require calibrating three different survey designs with the general survey. This might help address Ponwith's concerns. **C. Blankenship** stated that if we are using MRIP that is imprecise in the stock assessment process for red snapper could we be utilizing something else like the state specific surveys. **B. Ponwith** stated SEFSC has not explored this yet since the sampling methodologies have not yet stabilized with the new survey methods. She also stated that the red snapper stock assessment is one of the most complex in the nation and already uses multiple indices of abundance out of necessity and that is not necessarily a good process.

Timeline for Special Survey Certification and Implementation

J. Jewel asked about the timeline for review and certification. **G. Bray** stated the timeline was provided to all the states for review and input. Modifications were made based on state comments. **J. Jewel** asked that Mississippi be considered for starting the certification process as

soon as possible. **G. Bray** stated the timeline was developed based on when state data collections were completed for 2015 and when states indicated they were ready for independent consultant review of their program. **J. Jewel** stated the Mississippi red snapper season ends on October 31st and much of the program documentation has already been compiled. He think Mississippi could be ready to begin a certification process as early as November 2015. **D. Van Voorhees** stated that the timeline was developed to start discussions with the states on how soon they would like to proceed. **G. Colvin** stated MRIP is clear that Alabama and Mississippi want to pursue a final evaluation of their pilot red snapper programs along with decisions on certification as soon as possible. He realizes the states want to get to a point to make final decisions in early 2016. MRIP is hoping that a review schedule for Alabama and Mississippi would be January through April of 2016 but it might be necessary to reflect an earlier schedule if both states are ready at an earlier time.

Sharing of State/Federal Commercial Trip Ticket Data

G. Bray gave a brief history of the electronic commercial trip ticket data sharing methods. Historically the raw data were placed on a FTP site where GSMFC and NOAA SEFSC had access. The most recent request from Alabama and Louisiana was to restrict access to the federal raw data files to just GSMFC staff. Both states are concerned about state landings being transmitted to NOAA prior to any state quality control procedures. GSMFC is modifying federal dealer data to zero out landings of state species so that those data are not transmitted to NOAA SEFSC. NOAA SEFSC has requested to have access to just the raw federal file in a read-only format that cannot be downloaded. **B. Ponwith** stated the intent is not to use state landings data for monitoring purposes. NOAA is focused on generating datasets to make projections on federal species managed with annual catch limits (ACL). NOAA SEFSC would like to be able to view the federal raw files as there have been data transmission problems in the past and having access to the federal raw file helps prevent delays in compliance monitoring processes. **R. Pausina** asked if this issue had evolved from a concern about NOAA changing data in the past. **B. Ponwith** stated some of the original state concerns centered states maintaining version control of state landings data. She also stated their intent would be to work with the states and not the dealers regarding potential quality control errors. She stated the difficulty is the federal landings are on a weekly schedule and state landings are monthly and they have a much greater need for quicker quality control on species being managed with an ACL. **C. Blankenship** stated Alabama's biggest concern is not having data changed before state biologists have the chance to run quality control methods. He was also concerned that state dealers were being contacted by federal port agents about potential data errors in state landings data. **B. Ponwith** stated she hopes that read-only access to read only data should help reduce these concerns. She stated that if agreeable NOAA SEFSC would set up protocols on how these federal raw files would be accessed and utilized. **D. Donaldson** stated written protocols that are agreed upon by all partners would be necessary at this point. **B. Ponwith stated NOAA SEFSC would draft protocols outlining rules and guidelines for federal staff utilizing the read-only federal raw files so state partners would feel more comfortable with the level of accountability of federal partners in the data sharing process. Once developed GSMFC will provide a copy of this protocol to the GulffIN Commercial Technical Workgroup along with the S/FFMC for their review.**

Other Business

B. Ponwith stated Gulf and South Atlantic Councils are working on electronic reporting procedures for for-hire sector. She asked if the state permitted vessels could be included in the federal program to allow for one single estimate of for-hire effort and landings. **G. Colvin** stated currently there is no MRIP certified methodology for an electronic for-hire design in the Gulf of Mexico. He hopes that the regional MRIP Implementation process will provide a consensus on preferred methodologies for implementation. The goal is that the councils will work as a partner with the regional FIN programs to try to achieve a consensus on methodologies and avoid spending resources on competing data collection programs within the for-hire sector. **J. Jewel** stated the way federal and state permit holders access state and federal waters are different among different states. Mississippi anglers have to travel a long distance to access deep water species so most often it is only federally permitted vessels that fish for red snapper. State for-hire vessels often stay closer inshore targeting state species. He thinks adapting a survey methodology to collect data from accurate data from those two different layers will be very difficult. **K. Lucas** asked if the goal would be to include state permitted vessels in the program with federally permitted vessels that are mandated to report. **B. Ponwith** stated she would prefer to not have two separate reporting systems that would apply to the state permitted and federally permitted vessels. **K. Lucas** stated she thinks it would be difficult to convince the state permitted fleet of the benefits of reporting through the federal system. **G. Colvin** stated MRIP is working on a roadmap for development of determine whether to implement logbooks for for-hire fleet. The end goal would be that certified methodologies are developed and made available to the regions should they decide to use logbooks for effort and landings in the for-hire sector. MRIP is not trying to tell regions that logbooks are necessary but instead how they could proceed and what methods could be used if a region prioritized logbook data collections. **C. Blankenship** stated there will not be a desire from Alabama's state vessels to report under a federal system since most of those state permitted vessels are targeting state waters species only. **G. Bray** stated that would mean that two reporting systems would be necessary to calculate landings for state permitted vessels and federally permitted vessels. **B. Ponwith** stated that it likely possible that it would be cost prohibitive to run two data collection programs for the for-hire sector. After further discussion most states agreed that including the state permitted vessels in a federally permitted vessel mandatory reporting program would be difficult and problematic.

Being no further business, the meeting was adjourned at 1:57 p.m.

ITEMS FOR CONSIDERATION IN 2016

High Priority

Coordination and Administration of FIN Activities – *Ongoing*

Collecting, Managing and Disseminating Marine Recreational Fisheries Data – *Ongoing*

Operation of FIN Data Management System – *Ongoing*

Trip Ticket Program Operations in Texas, Louisiana, Mississippi and Alabama – *Ongoing*

Gulf Menhaden Port Sampling – *Ongoing*

Head Boat Port Sampling in Texas, Mississippi, Alabama, and Florida (funded via alternative source) – *Ongoing*

Biological Sampling of Commercial and Recreational Catches – *Reinstating*

Low priority

At-sea Sampling for Catch and Discards Data from For-Hire – *New*

Collection of Catch and Effort Data via Logbooks for For-Hire Boats – *New*

Highly Migratory Species Recreational Catch and Effort Sampling in the Gulf of Mexico – *New*

Biological Sampling for FIN Secondary Priority Species – *New*

Recreational Red Snapper Data Collection for Catch and Effort - *New*

APPROVED BY:

COMMITTEE CHAIRMAN

**ATLANTIC CROAKER TECHNICAL TASK FORCE
MEETING MINUTES
September 22 & 23, 2015
Gulfport, MS**

Moderator VanderKooy called the meeting to order at 1:00 p.m. on Tuesday, September 22, 2015, at the Courtyard by Marriott, Gulfport, MS. The following were in attendance:

Ed Swindell, Marine Process Services, Hammond, LA
Michelle Sempsrott, FWC, Panama City, FL
Nicole Beckham, AMRD, Gulf Shores, AL
Jason Ferguson, TPWD, Brownsville, TX
Carly Somerset, MDMR, Biloxi, MS
Brandi Reeder, TPWD, Austin, TX
Ralph Hode, GSMFC, Ocean Springs, MS
Steve VanderKooy, GSMFC, Ocean Springs, MS
Debbie McIntyre, GSMFC, Ocean Springs, MS

Adoption of Agenda

The agenda was reviewed by the TTF members. *Reeder made a motion to accept the agenda as written; it was seconded by Sempsrott and passed unanimously.*

Introductions and Housekeeping

S. VanderKooy, IJF Program Coordinator, opened the meeting and introductions were made. He encouraged the group to review the membership roster for accuracy.

VanderKooy provided the group with a brief overview of the Commission's travel policies. The authorization and reimbursement procedures were explained and the group was referred to the *GSMFC Travel Guidelines* for detailed information. Any questions regarding travel should be addressed to Alyce Ryan, the Commission's travel coordinator.

Interjurisdictional Program Overview and Profile/FMP Process

VanderKooy presented an overview of the Interjurisdictional Fisheries (IJF) Program and Commission development process for FMPs. The IJF Program is authorized through the Interjurisdictional Fisheries Act of 1986 (Public Law 99-659, Title III). The purpose of the Act was to promote and encourage state activities in support of management of IJF resources identified in profiles and interstate FMPs. The Act also promotes and encourages management of IJF resources throughout their range.

Funding under the Act supports states' long-term monitoring and assessment programs and other research. The Act also provides funding for the three interstate marine commissions (Atlantic, Gulf, and Pacific) to develop and revise management plans used by the states to enact appropriate management strategies to maintain harvestable stocks of commercial and recreational fish.

The Commission patterns its plans to those of the Gulf of Mexico Fishery Management Council (GMFMC) to ensure compatibility in format and approach between regional and federal FMPs. Since the passage of the IJF Act in 1986, the Commission has produced nine FMPs, three revisions, and one amendment.

In order to alleviate confusion with the federal definition of essential fish habitat and its associated requirements, profiles and plans developed under the Commission program utilize the term "essential habitat."

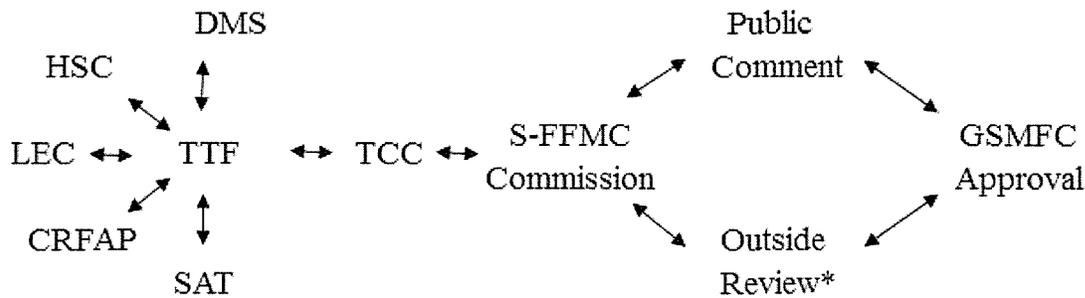
The development of profiles and plans begins with species prioritization. The State-Federal Fisheries Management Committee (S-FFMC) accomplishes this task and establishes a technical task force (TTF) to review all technical material, draft a document incorporating current biological, sociological, economic, and fishery information. In the case of an FMP, the TTF shall also provide management scenarios based on this information.

The TTF is composed of a core group of scientists from each Gulf state and is appointed by the respective state directors that serve on the S-FFMC. Also, a TTF member from each of the following GSMFC committees or subcommittees (Law Enforcement, Habitat, Commercial Fisheries Advisory, and Recreational Fisheries Advisory) is appointed by the respective committee. In addition, the TTF may include other experts in economics, socio-anthropology, population dynamics, and other specialty areas when needed. The TTF is responsible for development of the profiles and plans and receives input in the form of data and other information from the Data Management Subcommittee and the Stock Assessment Team.

Once the TTF completes the profile or plan, it may be approved or modified by the Technical Coordinating Committee (TCC) before being sent to the S-FFMC for review. The S-FFMC may also approve or modify the profile or plan before releasing it for public review and comment. After public review and final approval by the S-FFMC, the profile or plan is submitted to the GSMFC where it may be accepted or rejected. If rejected, the profile or plan is returned to the S-FFMC for further review.

Once approved by the Commission, the profile or plan is submitted to the Gulf states for their consideration for adoption and implementation of management recommendations.

The review process is outlined below:



DMS = Data Management Subcommittee
 SAT = Stock Assessment Team
 HSC = Habitat Subcommittee
 LEC = Law Enforcement Committee
 CRFAP = Comm/Rec Fishery Advisory Committee
 TTF = Technical Task Force

TCC = Technical Coordinating Committee
 S-FFMC = State-Federal Fisheries Management Committee
 GSMFC = Gulf States Marine Fisheries Commission
 *Outside Review = standing committees, trade associations, general public

Overview of Croaker

VanderKooy gave an overview of the species, explaining that Atlantic croaker are a bottom-dwelling species, in the same family as red drum and weakfish. They can be found from the Gulf of Maine to Argentina. In the Gulf of Mexico, they can be found inshore to offshore waters as deep as 325 ft. Larger croakers show some attraction to offshore oil and gas platforms in the northern Gulf.

Atlantic croaker have been a large part of the recreational catch as reported in MRFSS/MRIP but the final dispensation isn't always clear. There may be a large component of the catch that is only retained for bait. The height of the Atlantic croaker fishery occurred in the late 1960s and 1970s. There have been a few blips but the historic fishery was for petfood/meal.

In the past, trawl gear was used to take industrial bottomfish in the Gulf of Mexico for the pet food industry but the fishery disappeared in the early 1980s. The "croaker boats" used modified heavy-twine small-mesh shrimp trawls to harvest fish for meal or pet food production. However, not all of the Atlantic croaker may have been identified to species. It was often combined in a group of finfish such as spot, young trout, and other species including croaker. NOAA has a large number of unclassified bait/animal food landings that may be these landings.

Today, the live bait fishery is probably the largest component of the commercial Atlantic croaker fishery. Recently, most of the states have begun collecting data specifically on bait. Croaker are highly prized from many inshore and offshore species so there is no limit to the size available to rec anglers. **Ferguson** explained that croaker is a targeted fishery in Texas, currently selling for \$9.00 per pound. Fishermen use shrimp trawls with short drags and take extra precaution to keep croakers alive to sell for bait. There is higher value for croaker in Louisiana as well, which is likely part of the live bait fishery. This will be very interesting when **Adams** begins working on the Economics chapter.

Table of Contents/Assignments

VanderKooy explained that the table of contents will serve as a means to divide up assignments and, in some cases, deadlines.

The importance of deadlines was explained as well as the importance of responding to emails. Face-to-face meetings are necessary so that everyone is held accountable for contributions to the document. It was discussed that there will probably be at least three or four actual meetings while this document is being written, but there may also be webinars as needed for the purpose of touching base with each other and, at the same time, keeping expenses down.

The time frame for completion of this profile will be approximately 12+ months. Each state representative will be responsible for providing his/her own fisheries write-ups. One person will be responsible for the overall Fisheries chapter, but all will contribute their individual state sections.

VanderKooy reviewed the format of the bibliography and how works should be cited. A fairly extensive list of publications was provided regarding this species, international as well as in the Gulf region. He indicated that, as a rule, everyone should refer to the *Transactions of the American Fisheries* as the format for most references.

VanderKooy suggested that the Habitat section will now be a GIS database in one document that will be referenced and not repeated. The entire document will be electronic. **VanderKooy** shared the current version of GSMFC's *Flounder Management Profile* and explained how the changes to the old style FMP came about. He explained the difference between "recommendations" and "research/recommendations." These are not to set regulations but a list of ideally what is needed for a species in the fishery. The *Flounder Management Profile* will be shared with this group as soon as it is released.

VanderKooy stated that he has found that there is a lot of information available on this species but that culling out the less useful components may take some effort. There is also a lot of research being done, not all of which has to do with the actual fishery. There is a lot of physiologic and biomedical research which includes Atlantic croaker. **Somerset** has a lot of valuable genetics information also that she will provide to the group.

The following is the draft Table of Contents which will also serve as a means of keeping track of duties assigned:

| Table of Contents | Page |
|---|-----------|
| Chapter 1 SUMMARY | Staff |
| Chapter 2 INTRODUCTION | |
| IJF Program and Management Process..... | Staff |
| Profile Objectives | Staff |
| Chapter 3 DESCRIPTION OF STOCK COMPRISING THE MANAGEMENT UNIT | |
| Geographic Distribution | Sempsrott |

| | |
|--|----------|
| Biological Description | Beckham |
| Classification and Morphology..... | Beckham |
| Classification | Beckham |
| Morphology | Beckham |
| Eggs | Beckham |
| Larvae | Beckham |
| Juveniles..... | Beckham |
| Adults..... | Beckham |
| Anomalies and Abnormalities | Beckham |
| Age and Growth..... | Ferguson |
| Reproduction and Genetics..... | Somerset |
| Reproduction..... | Somerset |
| Gonadal Development | Somerset |
| Spawning and Season | Somerset |
| Courtship and Spawning Behavior | Somerset |
| Sound Production..... | Somerset |
| Spawning Duration | Somerset |
| Location and Effects of Temperature, Salinity, Dissolved Oxygen, and | |
| Photoperiod..... | Somerset |
| Migration | Ferguson |
| Fecundity | Ferguson |
| Incubation | Ferguson |
| Larval Transport | Ferguson |
| Genetics | Somerset |
| 3.2.4 Parasites and Diseases | Beckham |
| 3.2.5 Feeding, Prey, and Predators | Ferguson |

Chapter 4 DESCRIPTION OF THE HABITAT OF THE STOCK(S) COMPRISING THE MANAGEMENT UNIT

Brief intro to GOM

| | |
|-------------------------------------|-----------|
| Spawning Habitat..... | Sempsrott |
| Embryo and Larval Habitat..... | Sempsrott |
| Juvenile (postlarvae) Habitat | Sempsrott |
| Salinity..... | Sempsrott |
| Temperature..... | Sempsrott |
| Dissolved Oxygen (DO) | Sempsrott |
| Substrate..... | Sempsrott |
| Vegetation..... | Sempsrott |
| Adult Habitat..... | Sempsrott |
| Salinity..... | Sempsrott |
| Temperature..... | Sempsrott |
| Dissolved Oxygen (DO) | Sempsrott |
| Depth..... | Sempsrott |
| Substrate..... | Sempsrott |
| Vegetation..... | Sempsrott |
| Threats to Survival..... | Sempsrott |

Bring in old list and determine what to keep later

Chapter 5 FISHERY MANAGEMENT JURISDICTIONS, LAWS, AND POLICIES
AFFECTING THE STOCK(S)

| | |
|---|-----|
| Federal | LEC |
| Management Institutions..... | |
| National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC) | |
| Regional Management Councils..... | |
| South Atlantic Fishery Management Council..... | |
| Gulf of Mexico Fishery Management Council..... | |
| Caribbean Fishery Management Council | |
| Treaties and Other International Agreements..... | |
| Federal Laws, Regulations, and Policies | |
| Magnuson Fishery Conservation and Management Act of 1976 (MFCMA); Magnuson-Stevens Conservation and Management Act of 1996 (Mag-Stevens) also called the Sustainable Fisheries Act (P.L. 104-297) | |
| Interjurisdictional Fisheries Act (IFA) of 1986 (P.L. 99-659, Title III)..... | |
| Federal Aid in Sport Fish Restoration Act (SFRA); the Wallop-Breaux Amendment of 1984 (P.L. 98-369) | |
| State | |
| Florida..... | |
| Florida Fish and Wildlife Conservation Commission (FWC)..... | |
| Legislative Authorization | |
| Reciprocal Agreements and Limited Entry Provisions..... | |
| Reciprocal Agreements..... | |
| Limited Entry..... | |
| Commercial Landings Data Reporting Requirements | |
| Penalties for Violations..... | |
| License Requirements..... | |
| Laws and Regulations..... | |
| Size Limits | |
| Gear Restrictions..... | |
| Closed Areas and Seasons | |
| Quotas and Bag/Possession Limits..... | |
| Other Restrictions | |
| Historical Changes to Croaker Regulations in Florida | |
| Alabama | |
| Alabama Department of Conservation and Natural Resources (ADCNR); Alabama Marine Resources Division (MRD) | |
| Legislative Authorization | |
| Reciprocal Agreements and Limited Entry Provisions..... | |
| Reciprocal Agreements..... | |
| Limited Entry..... | |
| Commercial Landings Data Reporting Requirements | |
| Penalties for Violations..... | |

License Requirements.....
Laws and Regulations.....
Size Limits.....
Gear Restrictions.....
Closed Areas and Seasons.....
Quotas and Bag/Possession Limits.....
Other Restrictions.....
Historical Changes.....
Mississippi.....
Mississippi Department of Marine Resources (MDMR).....
Legislative Authorization.....
Reciprocal Agreements and Limited Entry.....
Reciprocal Agreements.....
Limited Entry.....
Commercial Landings Data Reporting Requirements.....
Penalties for Violations.....
License Requirements.....
Laws and Regulations.....
Size limits.....
Closed Areas and Seasons.....
Quota and Bag/Possession Limits.....
Historical Changes to the Regulations.....
Louisiana.....
Louisiana Department of Wildlife and Fisheries.....
Legislative Authorization.....
Reciprocal Agreements and Limited Entry Provisions.....
Reciprocal Agreements.....
Limited Entry.....
Commercial Landings Data Reporting Requirements.....
Penalties for Violations.....
License Requirements.....
Commercial.....
Recreational.....
Laws and Regulations.....
Size Limits.....
Gear Restrictions.....
Closed Areas and Seasons.....
Quotas and Bag/Possession Limits.....
Other Restrictions.....
Historical Changes in Regulations.....
Texas.....
Texas Parks and Wildlife Department (TPWD).....
Legislative Authorization.....
Reciprocal Agreements and Limited Entry Provisions.....
Reciprocal Agreements.....
Limited Entry.....

| | |
|---|--|
| Commercial Landings Data Reporting Requirements | |
| Penalties for Violations..... | |
| License Requirements..... | |
| Recreational | |
| Commercial..... | |
| Laws and Regulations | |
| Size Limits | |
| Gear Restrictions..... | |
| Closed Areas and Seasons | |
| Quotas and Bag/Possession Limits | |
| Recreational | |
| Commercial..... | |
| Other Restrictions | |
| Historical Changes to Regulations..... | |
| Regional/Interstate | |
| Gulf States Marine Fisheries Compact (P.L. 81-66) | |
| Interjurisdictional Fisheries Act of 1986 (P.L. 99-659, Title III) | |
| Development of Biological and Management Profiles for Fisheries (Title III, Section 308(c)) | |

Chapter 6 DESCRIPTION OF THE FISHERY

| | |
|-----------------------------------|-----------------|
| Commercial Fishery..... | |
| History | VanderKooy/Hode |
| Gear Specific Trends, etc. | |
| State Commercial Fisheries | State Reps |
| Florida (West Coast)..... | |
| Alabama | |
| Mississippi | |
| Louisiana..... | VanderKooy |
| Texas..... | |
| Bait Fishery..... | Ferguson |
| Recent Trends | |
| Distribution of Industry | |
| Recreational Fishery | |
| History | VanderKooy/Hode |
| State Recreational Fisheries..... | State Reps |
| Florida (West Coast)..... | |
| Alabama | |
| Mississippi | |
| Louisiana..... | VanderKooy |
| Texas..... | |
| Bycatch | VanderKooy |
| Commercial..... | |
| Recreational | |
| Mariculture..... | Somerset |

Chapter 7 DESCRIPTION OF PROCESSING, MARKETING, AND ECONOMIC CHARACTERISTICS OF THE FISHERY

Commercial Sector Sir Charles

- Annual Commercial Dockside Value

 - Gulf-wide Dockside Value
 - Dockside Value by State.....

- Monthly Commercial Dockside Value
- Annual Ex-vessel Prices for Atlantic Croaker

 - Gulf-wide Ex-vessel Prices.....
 - Ex-vessel Prices by State

- Monthly Ex-vessel Prices for Atlantic Croaker.....
- Ex-vessel Prices by Type of Harvest Gear
- Processing and Marketing.....

 - Market Channels
 - Other Commercial Sources of Atlantic Croaker Supply
 - Consumption Estimates

Bait Fishery.....

Recreational Sector

Civil Restitution Values and Replacement Costs

Aquaculture/Mariculture Potential

Chapter 8 SOCIAL AND CULTURAL FRAMEWORK OF DOMESTIC FISHERMEN AND THEIR COMMUNITIES

Introduction..... TBD

- Targeted versus Incidental Catch/Bycatch

Commercial Harvesters.....

- Social Change and Commercial Fishery Demographics
- Trawl Harvesters.....
- Other Net Harvesters
- Hook-and-Line Harvesters
- Dealers and Processors

Commercial Live Bait.....

Recreational Anglers.....

- Regional Demographics and Recreational Angler Preferences.....

 - Florida.....
 - Alabama
 - Mississippi
 - Louisiana.....
 - Texas.....

Stressors Affecting Fishery Participants.....

- Hurricanes and Tropical Activity
- Oil Spills and Pollution.....
- Gentrification.....
- Operational Costs.....

Basic Understanding and Information Needs

Chapter 9 RESEARCH NEEDS

ALL

Goals and Objectives for the Fishery.....

Data Gaps and Considerations for Management

 Fishery-Dependent and Fishery-Independent Monitoring.....

 Assessing Domestic Market Channels and Tracking Imports and Exports.....

 Environment.....

Regional Research Priorities and Data Requirements

Chapter 10 REFERENCES.....ALL

Chapter 11 APPENDIX

Market Channel Survey

Everyone was encouraged to make notes as they compile their sections and send that information to those who may need it.

Task Force Website

VanderKooy explained that he will provide a working website for use by the TTF to share literature, upload current drafts, and provide reviews of other sections when appropriate.

VanderKooy asked that anyone who downloads a section for review, SEND the electronic copy back to the original author with track changes rather than reposting the edited section. Uploading the revisions will replace the version on the website and it is up to the individual authors to evaluate the suggestions from ALL of the reviewers and make those that are appropriate.

There will also be an electronic library available there. There is a bibliography search on the GSMFC website which provides a vast amount of information – all things fishery-related. **VanderKooy** gave the group instructions on how to use this database. Everyone was advised that if any explanation of how to use the website/database is needed to please contact **VanderKooy**. A PDF or hard copy of references can also be made available upon request. The group was instructed that, when writing individual sections, they should not cite things on someone else’s citing but should cite the original research. Do not use “as cited by so and so.” Get PDFs for all of the literature you use. Everyone can share these working files with others.

Meetings, conference calls, and webinars will also be posted on the working website. When something is added to this website, TTF members will receive an email. The document repository was pointed out. Upload what you are working on into the appropriate sub-section so that everyone else can see it when it is ready for review or you need help. Again, downloads and changes can be made but you MUST send back to original author with track changes. Only the author re-uploads this information and then with a new date. The working website should serve as an excellent tool to the TTF.

Next Meeting

Several sites for the next meeting were considered. After discussion, it was decided that the next meeting would most likely take place in January of 2016, possibly in Panama City, FL.

VanderKooy will put templates up on website for the various sections/chapters. He advised all to respond to *Doodle* polls and each other's emails. Be sure to attach citations. **McIntyre** will email a meeting summary which will include assignments ASAP following this meeting.

It was agreed that this TTF could use a sociologist (or someone with a similar background/interest) to serve on this committee and **VanderKooy** asked that everyone try to identify such a person. All will also keep their eyes open for interesting artwork for the cover of this document.

Election of Chair

It was decided to table election of a chairperson until the next meeting.

With no further business, the meeting adjourned at 2:00 p.m. on Wednesday, September 23, 2015.

APPROVED BY:
Kristen Sommers
COMMITTEE CHAIRMAN

**GULF & SOUTH ATLANTIC REGIONAL PANEL
ON AQUATIC INVASIVE SPECIES
MINUTES**

**Tuesday, October 6, 2015 & Wednesday, October 7, 2015
Myrtle Beach, S.C.**

On Tuesday, October 6, 2015, Chairman **Fuller** called the meeting to order at 8:30 a.m. The meeting began with introductions of the members and guests. The following were in attendance:

Members & Proxies

Lad Akins, REEF, Key Largo, FL
James Ballard, GSMFC, Ocean Springs, MS
Tim Bonvechio, GA DNR, Waycross, GA
David Britton, US FWS, Arlington, TX
Rick Burris, MS DMR, Biloxi, MS
Earl Chilton, TPWD, Austin, TX
Corrin Flora, NC DMF, Elizabeth City, NC
Pam Fuller, USGS, Gainesville, FL
Lisa Gonzalez, HARC, The Woodlands, TX
Leslie Hartman, TPWD, Palacios, TX
Chuck Jacoby, Indian River Lagoon National
David Knott, At-Large Member, Charleston, SC
Jon Lane, USACE, Jacksonville, FL
Robert McMahon, UT Arlington, Arlington, TX
Roberto Mendoza (via conference call), Univ. of Nuevo Leon, Nuevo Leon, Mexico
Chris Page, SCDNR, West Columbia, SC
Dennis Riecke, MS DWFP, Jackson, MS
Peter Kingsley-Smith (via conference call), SC DNR, Charleston, SC
Kristen Sommers (via conference call), FL FWC, Tallahassee, FL
Don Schmitz (via conference call), FL FWC, Tallahassee, FL
John Teem, FL DOA, Tallahassee, FL

Staff

Alyce Ryan, GSMFC, Ocean Springs, MS

Others

Stas Burgiel, National Invasive Specie4s Council, Washington, D.C.
Jackson Gross, Smith-Root, Vancouver, WA
Su Jewell, USFWS, Arlington, VA
Jianghong (John) Min, Harvard University, Boston, MA
Philippe Parola, Can't Beat 'Em, Eat 'Em, Baton Rouge, LA
Anna Toline, National Park Service, Washington, D.C.
Katie Walters, (via conference call), UF CAIP, Gainesville, FL

Matthew Waters, Valdosta State University, Valdosta, GA
Aaron Watson, SC DNR, Charleston, SC

Public Comment

Chairman **Fuller** provided the opportunity for public comment. No public comments were received.

Adoption of Agenda

After minor changes, a motion to adopt the agenda was made, and passed unanimously.

Approval of Minutes

The minutes of the May 5, 2015 meeting in Ft. Lauderdale were presented for approval.

After a minor change, a motion was made to approve the minutes. The motion was seconded, and the motion passed.

qPCR Tool for Detection of the Invasive Parasite of American Eels

Aaron Watson provided a PowerPoint presentation entitled "Update on the Invasive Parasite, *Anguillicoloides crassus*, of the American Eel, *Anguilla rostrata*". Irreversible damage is caused by *Anguillicoloides crassus* feeding on the eel's blood, and larvae migrating through the swimbladder wall. Consequences of swimbladder damage include: damages to gas gland and cell function; reduced O₂ content; problems with buoyancy control; compromised swimming efficiency and survival in migrating eels; mortality under stressful conditions.

A subcontract was awarded by Gulf States Marine Fisheries Commission: *Detection of an invasive parasite of American eels using qPCR*. The project goals are to test whether qPCR can detect *A. Crassus* collected from the wild, through the collection of planktonic and benthic crustaceans at the Goose Creek Reservoir, South Carolina; to generate standard curves and establish limits of detection for qPCR through laboratory cultures and infections of intermediate hosts (i.e., copepods); to use data from qPCR standard curves to quantify parasite abundance and densities in the field.

Quantitative PCR (q-PCR) is an excellent method for detection of rare DNA in environmental samples (endangered species, invasive species, parasites, etc.) It is also an excellent method for quantifying relative differences in gene expression between species, tissue types, treatments, etc.

Lab assay was successful for detection and quantification of *A. crassus* DNA from L2 stage. However, eggs, L2 and L3 stages are all in the environment or immediate hosts. There was potential inhibition of q-PCR in environmental samples. Further testing and validation of assay

needs to be done for successful use as a field tool, as well as increased specificity and reliability at low DNA concentrations.

Current progress includes sampling at the Goose Creek Reservoir site, where there was a high prevalence of infected eels during the summer sampling. In the fall sampling, there was a new cohort of young eel recruits to the area. Sampling of water, algal mat, sediment in the middle of the creek, and plankton were done. Adult eels were collected and checked for infection. Gravid *A. crassus* adults were dissected out from eel bladders and parasitic eggs were collected. Copepod cultures are being exposed to *A. crassus* eggs to establish supply of L3 stage parasites. There are plans to establish standard curve of L3 life stage similar to L2 curve already established.

Overview of South Carolina's Freshwater ANS Activities

Page gave a PowerPoint presentation entitled "Aquatic Invasive Species Program". The purpose of the program is to prevent and control the introduction, spread, and impact of aquatic invasive species in South Carolina's public waters, and to improve habitat and minimize the problematic impacts to water use caused by invasive species through management and prevention efforts.

The staff are members of the South Carolina Invasive Species Advisory Committee, a newly-formed committee that was established by statutory regulation, and is tasked with reviewing requests from state agencies, industry stakeholders, agricultural and environmental representatives, and concerned citizens to make recommendations for additions or deletions to the official list of regulated plant pests in the state, including both terrestrial and aquatics.

Funding sources of approximately \$600,000 per year consist of water recreational resource funds, federal AIS grants, and local sponsors.

The SC Aquatic Plant Management Plan development process is to develop a draft of the plan for APM Council yearly; solicit public comments on draft day for a 30-day period, and final approval of the Annual Plan at the March Aquatic Plant Management Council meeting.

The program promotes prevention through literature/plans, boat ramp signs, inspections, and billboards. Management includes herbicides, mechanical, drawdowns, and biological.

Control efforts year to date by SCDNR consisted of over 3,000 acres of control. Santee Cooper was over 2,900 acres of control.

The SCDNR Marine Division is taking the lead for island apple snails by surveying ponds, collecting snails and egg clutches, and preserving specimens from Beaufort and continuing up the SC coast to the North Carolina border.

There are a new AIS issues in SC. Whirling disease has been found, which is a disease of salmonid fish such as trout and salmon. The disease is caused by a microscopic parasite known as *Myxobolus cerebralis*. There is no known cure. AVM has been found on Lake Thurmond.

Overview of Smith-Root's Current AIS Efforts

Jackson Gross gave a PowerPoint presentation entitled "Research and Management of Invasive Species: On the Road to Ecological Recovery". There are many invasive aquatic species, but few management methods proven to be successful. Current methods primarily target adult fish.

Innovative conservation technology objectives include: specific life stages; lethal and non-lethal; critical periods of susceptibility; dose response. Methods: Suction/water jet technology; electricity (early embryonic stage most susceptible); electric barrier for fish control and passage. Studies were designed to evaluate fish physiology associated with common electric barrier settings to prevent fish passage. Testing was done on the ability to move and incapacitate bighead and silver carp. UV light and seismic technology tests were done as potential control strategies for Dreissenid mussels. A two-year study is being done in Lake Mead, Nevada to determine the dosage of UV to prevent settlement in a flow-through system, and at variable transmissibilities. Also, to determine minimum UV-C and UV-B dose to prevent larval settlement. Carbon dioxide / dCO₂ tests were conducted, and revealed little effect of acute dCO₂ exposure from fertilization to early hatch. Lethal and sublethal effects of electricity on Ranid larvae (American bullfrog) was done. Dose-dependent decrease in behavioral response in tadpole larvae was associated with increased voltage. The use of electricity to control African frogs is being tested. The use of seismic technology to divert or eradicate Asian carps is being tested. There was successful fish clearing in an electric barrier October 2011 and May 2012. The use of acoustic pulse pressure technology is being tested for fish deterrence. Laser transmission spectroscopy has a high sensitivity and the ability to detect differences between similar species.

Overview of the University of Florida's Education and Outreach Activities

Katie Walters provided a PowerPoint presentation entitled "Research and Outreach, the Foundation of Good Invasive Plant Management in Florida". The total for research and outreach from 1970-2015 is \$28,207,386. Over 250 projects have been funded.

The University of Florida's Invasive Plant Education Initiative program allows students to understand and become aware of the ecological and economic problems that are caused by invasive species. A "3-day plant camp" for science teachers was held. There were activities, student lessons, and materials.

Field testing for using newly labeled aquatic herbicides will be a 3-5 year process. It will start out in small ponds, then small lakes, then small areas of large systems and shoreline strips, then fully-operational large-scale treatments.

A "Plant Management in Florida Waters" website has been created. It has an encyclopedic guide to plant management in Florida waterways, information about developing management plans, and covers over 400 topics.

FWC has issued a *Call for Research and Outreach Pre-Proposals Related to Invasive Plant Management in Florida for Fiscal Year 2015-2016*. The deadline for pre-proposal submission is March 23, 2016.

Overview of NAISIN Activities

Don Schmitz provided a PowerPoint presentation entitled “North American Invasive Species Network”. NAISN’s overall goal is to link existing invasive species regional efforts (centers, institutes, labs, networks) into an overall coordinated network. It is a consortium that uses a coordinated network to advance science-based understanding and enhance management of non-native invasive species.

NAISN is targeting certain areas to improve invasive species management in North America. They are working to become the lead coordinating entity for invasive species on PCLs. Ideally, invasive species expenditures would be tracked by each state on public conservation lands; invasive species ranges would be defined and what they actually threaten; economic impact studies in North America would be conducted, funded, tracked and coordinated. At the landscape level, invasive species management would be prioritized through risk and pathway analyses, identification, and assessment of new threats. Realistic management goals for each species would be developed, such as recommendations and protocols. Help with early detection and rapid response would be offered through emergency management coordination, technical assistance and other resources would be provided, funding would be coordinated, the public would be worked with, and easy web-based ID tools and pathways to identify new arrivals would be developed. There are over 25 smart phone apps. Local participation would involve helping to form and nurture partnerships or CISMAs within all the states. Help would be given to coordinate and disseminate research by tracking research in the U.S., encouraging research on IS pathways, developing exclusion technology, increasing and hosting more webinars aimed at dispersing current research, and developing IS Watch List for each state.

NAISN is working to establish a national public awareness campaign, along with education. They are working to expand this effort throughout North America’s public schools, and include all invasive species and ecosystems. They are providing a forum for international policy and invasive species management efforts in North America. A North American Invasive Species Forum Conference will tentatively be held in February 2017 in south Florida. Topics will include international policy issues, jurisdictional issues, planning, prevention, etc. The conference will focus on invasive plants, but will also include invasive animal species.

Update on Lacey Act/Injurious Animals: Snakes Lawsuit; Bsal Chytrid in Salamanders; 1002 of FWS Risk Assessments; and More

Peter Jenkins gave a PowerPoint presentation entitled “New Court Ruling Undermines Federal Injurious Animal Regulation – and Other Related Topics”. In May, an injunction was granted for a lawsuit by the United States Association of Reptile Keepers, Inc. A judge ruled that because the court has concluded that the meaning of the Lacey Act’s relevant language was clear at the time of its enactment in 1960, Congress cannot be deemed to have adopted an alternative construction of the statute through ratification, particularly where it did not amend, or even discuss, the relevant language. The injunction is pending resolution by the Court of Appeals.

New authority to prevent high and medium risk imports is needed, and clear authority over interstate commerce. Species should be proactively assessed for invasiveness and disease risk using modern tools. There should be a clear emergency authority, especially for diseases like Bsal. One solution is HR 996/S.1153 – 113th Congress; Invasive Fish and Wildlife Prevention Act. It has not been reintroduced in this Congress yet.

A newly described pathogen poses a major threat to salamanders via trade. Bsal Chytrid is an emerging wildlife disease in salamanders. Southeastern U.S. is most at risk. To avert this North American biodiversity crisis, a moratorium/clean trade regulation is urgently needed. There is strong support, including from importers. There is proposed legislation: *America's Wildlife Health Protection Act of 2015*.

USFWS Risk Assessments: Over 1,900 species screened. There have been 714 RAs written up; 179 RAs finalized; only 18 RAs are on the FWS webpage. There are 535 “draft” RAs not produced.

The Center for Invasive Species Prevention (CISP) is a new non-profit organization that advances policy and non-governmental approaches to prevent the introduction and spread of invasive species. Two areas are being focused on at present: Cleaning up the invasion pathways that spread tree-killing insects and diseases, and limiting the introductions of invasive animals and pathogens and parasites that may introduce harmful diseases. CISP can help on a spectrum of invasives prevention projects through analysis, advice, public education, and advocacy.

Overview of Recent Federal Activities

Stas Burgiel gave a PowerPoint presentation entitled “NISC Update”. Jamie Reaser has been named Executive Director of NISC. The Invasive Species Advisory Committee will meet on October in Maryland. An NISC Management Plan has been developed for prevention, early detection/rapid response, control, eradication and restoration, and coordination and collaboration.

National Invasive Species Awareness Week will be in February 2016. DC events include a kickoff event, award ceremony, NISAW fair, congressional briefing and reception, and a kid’s day. Other events include webinars and state and local events.

Within 12 months, the Secretary of the Interior, working with other members of NISC, including NOAA, EPA, and USDA, will work with states and tribes to develop a framework for a national EDRR program, and develop a plan for creating an emergency response fund to increase the capacity of interagency and interjurisdictional teams. The EDRR framework objectives are to connect and build upon existing initiatives and EDRR networks; identify gaps in coverage and needs; increase the overall effectiveness of efforts to protect priority landscapes and aquatic areas; and scope a funding mechanism to support preparedness and response activities.

The EDRR report process will include a federal work group, ISAC work group, tribal consultation, and OMB/CEQ and agency review, and will be delivered by the Secretary of the Interior to the Council on Climate Preparedness and Resilience.

The EDRR report content will include a national EDRR framework with purpose and guiding principles, stages of the EDRR process, coordination, roles and responsibilities. Funding mechanisms and recommendations will also be included.

Burgiel spoke on their Options Paper for the Movement of Aquatic Invasive Species onto and off of Federal Lands. It includes an introduction of background and need, an overview of current federal authorities, policy options, and appendices with federal agency roles and responsibilities, summary tables, and federal agency laws and regulations. Recommendations are also listed.

Alternative Solution: Can't Beat 'Em, Eat 'Em

Chef Philippe Parola gave a PowerPoint presentation entitled “Can't Beat 'Em, Eat 'Em - An Alternative Solution”. Parola stated that the main priority of his solution is to tackle the Asian carp crisis. All signs point toward increasing numbers of Asian carp and worsening impacts.

Parola's plan is to sustainably harvest and transform Asian carp into Silverfin™ value-added food products for human consumption in domestic markets. The current business model is that 100% of Asian carp is used for by-products such as fish fertilizers, fish meal, pet food, surimi, and others. The cost to properly process Asian carp for export is more than the purchase price foreign importers will pay for the delivered product, and what processing plants can pay fishermen for their catch. The Silverfin™ business model for processing and selling Asian carp products will maximize fish value, such as 30% filet for value-added products such as fish cakes, and 70% for fish fertilizers, fish meal, pet food, and others. The Silverfin™ Group will pay fishermen more.

An eco-friendly food processing plant will be built. It will specialize in producing Silverfin™ value-added food products, develop recipes in a kitchen lab, and deploy sustainable practices and green technology to minimize environmental footprint.

The Mississippi River Basin will be served with the Silverfin™ flagship and satellite plants. There will be an FDA-approved processing plant, a cold storage facility to hold the raw product, and a satellite raw fish processing plant that can process up to 30k of whole fish per best day of fishing.

The Silverfin™ value-added products include croquettes, boulettes, and fish cakes. Sysco, the largest food distributor in the U.S., will be promoting and selling Silverfin™ products.

A “Can't Beat 'Em, Eat 'Em” documentary will be produced, uniting fishery and wildlife leaders, policy makers, scientists, fishermen, hunters, chefs, and home cooks in the common goal to sustainably harvest and transform invasive species into food sources.

Update on AVM Research in the Southeast

Susan Wilde gave a PowerPoint presentation entitled “New Locations and Species at Risk from Avian Vacuolar Myelinopathy”. Avian Vacuolar Myelinopathy (AVM) is the most significant unknown cause of eagle mortality in the history of the U.S. From 1994-1996, there were large

die-offs of bald eagles in Arkansas. It was confirmed that they had AVM. It was also confirmed in American coots. In 1997, eagles began dying on Lake J. Strom Thurmond. From 1998-2015, there were 83 bald eagle deaths.

AVM causes lesions in the white matter of the central nervous system, specifically an intramyelinic edema. Animals become neurologically impaired, including “drunken” gait and inverted swimming. Also affected are mallards, ring-necked ducks, buffleheads, American wigeon, Canada geese, great horned owls, and killdeer.

Aquatic systems, including freshwater wetlands, ponds, and lakes are prone to invasion.

Aetokthonos hydrillicola is a previously undescribed cyanobacterium. It grows as an epiphyte on hydrilla and other invasive exotic aquatic plants in all AVM sites. It produces a neurotoxin. Coots eat the hydrilla and accumulate cyanobacterium neurotoxins in their tissue. An eagle feeding on a dead coot might consume the neurotoxins and develop a deadly neurological disease. A study was done to see if it might be possible for the AVM toxin to effect other herbivores and be transferred to their predators. As part of intensive surveys and monitoring that began in 2001, dense aquatic macrophytes were associated with sites. Three most abundant species were all nonnative. The most abundant plant at all of the sites was nonnative *Hydrilla verticillata*. It was heavily colonized by epiphytic algae. In 2014, thirty sites had hydrilla and *Aetokthonos hydrillicola*. There were 166 eagles confirmed with AVM. Twenty sites had AVM+, hydrilla, and *A. hydrillicola*.

Taxa affected by ingesting *Aetokthonos* positive *Hydrilla* include: Fish, salamanders, frogs, caecilians, mammals, turtles, crocodiles, alligators, caimans, birds, tuataras, lizards, and snakes.

Experimental feeding of *hydrilla verticillata* colonized by stigonematales cyanobacteria on painted turtles maintained at the Whitehall Herpetology Laboratory induced vacuolar myelinopathy in the turtles. Between days 80 and 90, all turtles fed *Aetokthonos* positive *hydrilla* exhibited associated clinical signs of VM, which included weakness, lethargy, anorexia, floating abnormality, and ataxia.

Solar powered PTT/GPS 70g units were mounted on juvenile eagles, and programmed for the winter risk period of November to January.

Field trials were conducted on triploid Chinese grass carp to see if fish are susceptible to AVM. They are susceptible, as vacuolar lesions were found in grass carp feeding on hydrilla.

In fall 2012, sentinel birds with access to hydrilla were found to be AVM positive. Without hydrilla, they were AVM negative.

A pilot study will be done in fall of 2015. Grass carp will be stocked in J. Strom Thurmond Reservoir. Twenty-four grass carp will be fitted with body implant radio transmitters to assess

movement. A small subset of stocked grass carp will be collected for health assessments and laboratory feeding trials to test for risk of AVM toxin transmission.

Impacts and Interactions of Dominant AIS in Lake Seminole

Matthew Waters gave a PowerPoint presentation entitled “Impacts and Interactions of Dominant Aquatic Invasive Species in Lake Seminole, GA”. Hydrilla is up to 50% coverage on Lake Seminole. It is managed with carp and herbicides, and dam release. Also found in the lake are *Corbicula fluminea*, *Pomacea maculata*, and *Pomacea paludosa*. Mapping of the lake for these species was done from 2012-2015. Sediment transport was done in 2014 and 2015.

Objectives are to continue density and distribution maps of the three invasive species in Lake Seminole, and begin to look at the impacts of invasive species on sediment transport and lake ecology. Hydrilla and other SAV appear to be linked to precipitation, and the coverage percentages fluctuate from year to year.

Pomacea are largely concentrated on the Flint and Spring Creek arms. Very few sites contained both species. Impacts on hydrilla coverage are unknown.

Future control include drones, eDNA, and c dynamics.

Wednesday, October 7, 2015

The meeting reconvened at 8:30 a.m. The Chairman again provided the opportunity for public comment. No comments were received.

Overview of CRISPR and its Applications in ANS Management

Jianghong Min gave a PowerPoint presentation entitled “CRISPR Technology and Ecosystem Restoration”. CRISPR (clustered regularly inter-spaced short palindromic repeats)/Cas9 is a gene-editing technique that scientists can reprogram with artificial guide RNAs to cleave sequences within genomes and enable the surgical insertion of new fragments of genetic information into cells. An organism carrying one copy of an altered gene normally passes it on to 50% of the offspring. A gene drive can ensure that nearly all of the offspring inherit the altered gene, which would cause it to rapidly spread through the population and eliminate the species.

One possible application is to genetically modify mosquitoes so they cannot transmit diseases such as malaria. The wild-type mosquitos would be replaced with genetically modified ones, and malaria would be eradicated.

The Non-Native Seagrass *Halophila stipulacea*, Introduction and Threats

Anna Toline provided a PowerPoint presentation entitled “SERO NPS Oceans Program – Managing the Non-Native Seagrass *Halophila stipulacea*”. This nonnative seagrass is rhizomatous and monocotyledonous. It is highly salt and light tolerant, and is dioecious (males and females). It is native to the Western Indian Ocean – Red Sea and Persian Gulf, as well as

coastal islands of Eastern Africa and the southeast coast of Indian subcontinent. In the 1800s, it invaded the Eastern Mediterranean Sea via the Suez Canal. It invades native seagrass beds via water column transport through storms and disturbances.

In five years, there has been an increase of 19 to 669 ha. It has rapid growth, and invades occupied seagrass beds and bare sand. It has a lower species abundance and diversity than native seagrass, and is not an equivalent substitute for native fish. It overlaps with sea clover, manatee grass, shoal grass, and turtle grass. It has the potential for overlap with Johnson's seagrass and ESA-listed endangered species.

Research was done for fish use of native vs nonnative seagrass habitats. Results showed that it yields larger fish, but half as many juveniles. It supports lower fish species richness. Research on growth rates at seagrass edge and tank-planted/floating seagrass showed lateral growth up to >6cm/day, and up to 50% increase in biomass in seven days. Research on herbivory by native fish, invertebrate analysis, and nutrient analysis showed fish and invertebrates preferentially grazed on native seagrasses, and harbored fewer organisms.

Education and outreach is being done through mapping, monitoring, and a web page for reporting. NPS is working with parks and partners to control the seagrass. Currently, NEPA coordinators have been contacted. Funds are being sought, and permits and a budget are needed.

Aquatic Nuisance Species Task Force Update

Su Jewell reported that an Executive Secretary will be hired soon, and they are currently interviewing for the position.

The fall Task Force meeting, hosted by NOAA, will be held on November 4-5, 2015 in Silver Spring, MD.

For the State and Interstate Aquatic Nuisance Species Management Plan Grant Program, FAC received one million dollars in 2015. The first stage of the grant process, which was the review of the pre-proposals, is complete. The FWS regional coordinators are now working with their regional grant staff to complete the grant process.

For fiscal year 2016, the language from the House report includes an additional \$1 million for the State and Interstate Aquatic Nuisance Species Management Plan Grant Program.

The aquatic hitchhiker campaign will be upgraded and revitalized.

Habitattitude will be redesigned, updated, and expanded. They are looking to engage partners to participate on an advisory committee. The updated website will hopefully be completed by November.

The Government Accountability Office (GAO) conducted a review of all aquatic invasive species, and the costs for all federal agencies for aquatic invasive species. Key questions

included: identification of current federal spending and projected future costs of operation and maintenance related to mitigating the impacts of aquatic invasive species on federally owned or operated facilities; identification of current federal spending on aquatic invasive prevention; analysis of whether current federal spending is adequate for the maintenance and protection of services provided by federal facilities; miscellaneous items deemed appropriate. The GAO compiled the responses from the federal agencies into a report. The draft report was received on October 1. The comments were compiled, and the GAO report is being finalized.

Invasive Species Traveling Trunk Update and Discussion

Ballard gave a PowerPoint presentation entitled “Traveling Trunk Update”. Over 30 organizations and schools have used the traveling trunk. Some of the positive comments received were that it is a “great real-world learning experience”, “the kit was amazingly simple to use”, “it brought our curriculum to life”, and “the python skin really hit home with the students”.

Suggestions were made for the traveling trunk. These include to consider including a few hands-on activities, such as a game, to use in K-12 classrooms to illustrate the effect of invasives. Also, to include a banner in the trunk that can be used at public events to draw attention to the display.

Update on New Introductions

Fuller gave a PowerPoint presentation entitled “New Species Occurrences”. In the past six months, 84 nonindigenous aquatic species have been confirmed. Three are new to the U.S.; eight are new to the state; 52 are new to drainage; 21 are new to the county. The groups include: 31 fish, 29 mollusks, and 11 reptiles. Some of these NAS include: brown hoplo; giant applesnail; red-bellied pacu; Cuban treefrog; lowland cichlid; giant cichlid; silver carp; redbelt catfish; zebra mussel; quagga mussel; Chinese mysterysnail; Japanese mysterysnail.

REEF's Lionfish Control Programs

Akins gave a PowerPoint presentation entitled “Lionfish Collecting and Handling Workshops in the Southeast United States”. Headquarters for REEF are located in Key Largo, with an office at Scripps, San Diego. There are 60,000 members. Over 197,000 fish surveys have been done.

Projects include: grouper, fish survey, and artificial reefs. There are education and trip programs. Exotic and invasive species involve regional management, research, control, and outreach.

A “Field Guide to the Nonindigenous Marine Fishes of Florida” was created through collaboration by USGS, NOAA, and REEF.

There has been a 95% reduction in fish biomass on Bahamian reefs between 2007-2010. Lionfish impacts can be minimized by population suppression. Local control can be effective through training, focused effort, regular visitation, prioritizing sites, removal targets, and resource allocation.

In 2013, a lionfish derby was held in Green Turtle Cay, Bahamas. After the derby, there was a 75% decline in a 180sq km area.

In October 2013, an Invasive Lionfish Collecting and Handling Workshop was held in Cape Canaveral, FL.

In 2015, lionfish workshops were held at many locations in the southeast. The workshops focused on lionfish background, biology/ecology, impacts, control and techniques, and hands-on training. In May 2015, the Reef Environmental Education Foundation and Audubon Nature Institute held an Invasive Lionfish Collecting and Handling Workshop in New Orleans, LA. A lionfish workshop was held at the Gulf Coast Research Laboratory in Ocean Springs, MS in May, 2015.

“The Lionfish Cookbook – The Caribbean’s New Delicacy” has been published by REEF. Lionfish capture and removal has been allowed in the Florida Keys National Marine Sanctuary. Permits are issued to capture lionfish in the 18 sanctuary preservation areas only. Training is provided, and participants must attend a workshop and complete a Lionfish Response Review. The permit must be carried at all times while on the water in the sanctuary.

Update on the 2015 USFWS Region 4 AIS Small Grants Program

Ballard gave a PowerPoint presentation entitled “Update on the Selected Projects for 2015”. In April, all proposals were sent to the review committee for individual ranking. In May, a meeting was held with GSARP the review committee to discuss averaged proposal rankings, and the final ranking was sent to FWS for review. Notifications indicating funding status were sent to all PIs. Eight projects were funded, and sub awards were sent out. Total funding provided was over \$185,000.

Next year, the RFP for the 2016 funding opportunity will be reviewed, and any necessary changes will be made. In order to make the funding available before the peak sampling season, the process will be expedited as much as possible. The proposal review and ranking process will be assessed, and changes made if necessary.

State Reports/ Members Forum

Alabama

Rider reported that two fishing guides from north Alabama were recently charged with illegal importation, possession, and selling of blueback herring, which is considered an invasive species in Alabama. The herring were used as bait for striped bass fishing charters. Alabama law prohibits the importation of invasive species that pose a threat to native wildlife and public safety. Blueback herring have become established in Lewis Smith Lake, and threaten to disrupt the lake's gamefish composition and feeding habits. Based on information from local anglers, state biologists think these fish were purposely introduced to augment the lake's baitfish population. A study has been funded through Auburn University to examine the potential impacts of blueback herring on the fishery in Lewis Smith Lake.

A young-of-the year flathead catfish was collected in Lake Eufala in May.

An Oscar was recently caught in Lake Martin.

During April and May, USFWS and AL DWFF biologists collected eDNA samples from the Alabama portion of the Tennessee River to try and identify the invasion front of Silver Carp. There was one eDNA-positive detection identified in Wilson Dam tailwaters in Pickwick Reservoir. There were four positive detections for Bighead Carp, and two positive detections for Silver Carp in the Guntersville Dam tailwaters in Wheeler Reservoir. A silver carp was caught by a recreational angler below Wilson Dam in April. Over 40 sightings were reported to the NAS website.

Florida

Sommers reported that over 2,000 lionfish were removed from Florida waters during the Lionfish Removal and Awareness Day held on May 16-17, 2015. Twelve events were held around the state. In Pensacola, more than 3,000 people attended the festival. Six local celebrity chefs prepared lionfish tastings to demonstrate how easy it is for the general public to be involved in lionfish removal efforts. Guy Harvey and the Mayor of Pensacola attended the event. It was covered by over 50 media outlets.

A small number of tiger shrimp reports continue to be received by FWC from around the state.

In May, the 6th Annual Everglades Cooperative Invasive Species Management Area Nonnative Fish Roundup was held. The primary objectives of this event are to promote consumptive use of nonnative fishes and increase public awareness of nonnative fish issues. Over 1,000 fish comprised of 15 different species were brought in during the one-day event. No new species of nonnative fish were caught.

Swamp eels were collected from four interconnected locations in Hardee County.

Bullseye snakehead have expanded their range into more of southern Palm Beach County, most likely due to illegal releases.

The Bullseye Snakehead Roundup 2015 tournament season ended in September. Six catch, keep, and kill tournaments were held. The total number of bullseye caught was 827. Anglers are being recruited from the tournaments to assist in determining the distribution of nonnative fish, especially in waterbodies that cannot be sampled by standard methods.

FWC is assisting the USGS in an eDNA study that will help define the range of bullseye snakehead in south Florida.

In July, a 12-month study on blackbelt cichlid in the West Palm Beach Canal was initiated to determine life history attributes, including stomach contents, fecundity, and spawning seasonality.

At the Everglades Cooperative Invasive Species Management Area Summit in July, FWC hosted a nonnative fish breakout session. Upcoming events were discussed with interested partners, such as the Nonnative Fish Catch; Click and Submit Contest; a Fish Chat; and the 7th Annual Nonnative Fish Roundup.

The majority of permits issued during June-September 2015 were for removal and transport of conditional reptiles – primarily Burmese pythons. The FWC python removal program continues to be a popular citizen-based effort program. The number of persons permitted through the program continues to grow yearly.

Schmitz gave a PowerPoint presentation entitled “Research and Outreach: The Foundation of Good Invasive Plant management in Florida”. Their budget was increased this year by \$5 million. Since 1970, over \$28 million has been spent for research and outreach. The majority of research funds were spent on hydrilla, and the majority of funds spent by category was for biocontrol. When successful, biocontrol provides long-term, sustainable suppression of weed populations.

Schmitz will be retiring at the end of January.

Georgia

Bonvechio provided an update on the Satilla River Flathead Catfish Removal Project. During the 2015 sampling season, 8,428 flathead catfish were removed. Since 2007, over 55,000 flathead catfish have been removed. Suppression of the flathead catfish population in the Satilla River has been demonstrated through measured changes in biomass, size, and age-structure.

Anglers reported a few large redbreast sunfish, including 10 inch “Roosters” that were caught in the heart of the flathead catfish removal area.

The river record largemouth bass of 12 pounds was caught on March 27th.

In October, a 140mm TL shoal bass was caught and released on the Altamaha River by DNR personnel conducting electrofishing. The shoal bass is a very popular riverine sportfish in Georgia and Florida, and is native to the Flint and Appalachicola Rivers and its drainages.

Four small patches of water hyacinth were removed from the canal in the Okefenokee Swamp leading to Stephen C. Foster State Park to Billy's Lake.

After draining a pond at the Georgia DNR Bowens Mill Fish Hatchery in January, a large 6 inch White River crayfish and two smaller individuals were obtained. The crayfish were most likely brought in from Arkansas on a truck with a load of fathead minnows last spring.

In January 2015, giant salvinia was discovered in a pond in Evans County. The contamination originated from an upstream pond, which discharges into the lower pond. The upstream pond had

100% coverage coverage of giant salvinia, and the downstream pond had approximately 50-60% coverage. Control of the salvinia was achieved through the use of a combination of liquid and granular fluridone herbicides. The infested areas will be monitored and retreated as necessary throughout the season.

The Georgia Department of Natural Resources Fisheries Management Section is instituting a protocol to collect and test grass carp, in a proactive effort to monitor grass carp ploidy and to minimize the potential establishment of wild grass carp populations in state-managed waters. From November 2014-April 2015, 10 wild grass carp were captured and submitted for triploid testing. All 10 of the fish tested positive as triploids.

Mississippi

Burris reported that 50 field surveys, and two aerial surveys were conducted for early detection of AIS. New infestations of kudzu were discovered in the Jourdan River and manually removed.

Beach vitex was discovered on Deer Island by a Mississippi Habitat Steward during a bird survey. The single plant infestation was manually removed by DMR Invasive Species Program personnel.

In Robinson Bayou in the Pascagoula River, 406 giant apple snail egg masses were destroyed during weekly apple snail control missions. Seven live snails were captured and checked for rat lung worm parasite. All snails tested negative.

Eleven Asian tiger shrimp captured in Mississippi were confirmed and reported to the NAS database.

A small population of common salvinia was manually removed from the Wolf River.

Burris reported on coordination and outreach activities. Specimens from the GSARP Traveling Trunk of Invasive Species were displayed at the Celebrate the Gulf Marine Education Festival in Pass Christian.

Lionfish catch and seafood surveys were conducted at the Gulf South Fishing Rodeo, and online through the MDMR website.

A downloadable/printable 18" x 24" invasive species educational poster that is distributed via the MDMR website was produced.

Riecke provided the freshwater report. The Aquatic Nuisance Species 2014 Report to Congress was reviewed and revised.

Two meetings were held with groups trying to establish an Asian Carp processing facility in Mississippi. Special harvest permits were issued to Moon River Foods to use stabilized seines

and fixed barrier nets to harvest Asian carp in lakes and rivers. Commercial fishermen are being recruited to harvest the carp. Two containers of gutted, frozen carp have been shipped to China.

The “Stop Aquatic Hitchhikers” logo and message has been placed in the Commercial Fishing Laws and Regulations brochure, and 8,000 copies were printed.

The “Stop Aquatic Hitchhikers” cards continue to be reprinted and distributed along with all boat registrations or renewals that are mailed out.

Links to the Mississippi River Basin Panel on Aquatic Nuisance Species, Gulf and South Atlantic Regional Panel on Aquatic Invasive Species, “Stop Aquatic Hitchhikers”, and Habitattitude websites are on the department website.

The Mississippi Museum of Natural Science has a permanent exhibit on exotic species.

The Mississippi Aquatic Invasive Species Council will be formed to guide implementation of the activities specified in the *Mississippi State Management Plan for Aquatic Invasive Species*.

Freshwater fishing bait regulations will be composed to specify what bait can be legally sold, possessed, transported, and used in Mississippi.

A list of approved, restricted, and prohibited species as specified in the Mississippi State Management Plan for Aquatic Invasive Species will be adopted.

An EDRR monitoring program comprised of state and federal personnel who sample aquatic species in Mississippi public waterways on a routine basis will be established.

Mississippi contacts listed in the Expert Taxonomic Database will be updated and expanded.

North Carolina

Flora reported that there were 23 tiger shrimp reports in 2014. Fourteen were confirmed. Gear types included cast nets, trawls, channel nets, and a crab pot. So far in 2015, there have only been two reports, with one being confirmed. Tiger shrimp have now been added to trip tickets.

The Chinese mystery snail is found from the Catawba basin, Yadkin/Pee Dee basin, Cape Fear basin, and the Roanoke Basin. Inland Fisheries Division staff will continue to monitor for the snails, and is in the process of producing educational materials for the public.

Gill lice have been found on brook trout and rainbow trout populations, with each species of trout being infected by a different species of gill lice. Although it has only been documented on rainbow trout, this copepod has the potential to affect the state's only kokanee salmon population within the Nantahala Reservoir.

The current funding mechanism for the Aquatic Weed Control Program is the Shallow Draft Navigation Channel Dredging and Lake Maintenance Fund. This is the first time state funds have been allocated to invasive aquatic plant management on a recurring basis in NC.

Albemarle-Pamlico National Estuary Partnership (APNEP), along with several government organizations and a citizen science monitoring network, have begun a baseline survey of Hydrilla spread in the Albemarle Sound. The APNEP is currently forming a small Hydrilla Technical Advisory Group. The group will draft an action plan on how to monitor and manage hydrilla. Signs are also being posted at boat ramps to educate boaters and other users on stopping the spread of aquatic vegetation.

The NC Aquatic Nuisance Species Management Plan has been finalized by the working group and is currently being sent for the Governor's signature. It will be submitted to the Task Force for approval at the next meeting.

South Carolina

Kingsley-Smith reported that FY2015 funding under the state and interstate ANS Management Plan Program was secured to improve understanding of the recent invasion of the South Atlantic Bight and Gulf of Mexico by the Asian tiger shrimp. A temporary biologist has been hired to work on both tiger shrimp and island apple snails.

The first 2015 report of tiger shrimp from South Carolina waters was made on July 13th. Since then, five other specimens collected have been donated to the SCDNR. The preservation and archiving of pleopod tissue samples for genetic analyses that commenced in 2008 continues as specimens become available. These samples are being held in a tissue repository in Beaufort, NC.

Collections of island apple snail shells were reported in 2010 and 2011 from a location in Mount Pleasant, SC. It was believed that this population had been eradicated following chemical treatment and cold winters; however, a site visit in August 2014 revealed the presence of empty shells and egg masses deposited during the previous season. In August 2015, apple snails and egg clutches were observed in the pond and also several surrounding ponds, suggesting that the population may be spreading.

A site in West Ashley, SC was revisited where apple snails had previously been observed. An empty shell, a dead snail, and a live snail were observed. In April, the pond was revisited, and 65 live snails were collected. All snails and accessible egg clutches were collected and brought back to the laboratory for studies. Researchers have sampled the site every two weeks between May and September 2015. All snails observed were removed, and all accessible egg masses were destroyed. This study will continue until no newly laid egg masses are observed. To date, 485 live snails have been removed from this single pond, and 2,033 egg masses have been destroyed. In September 2015, all ponds nearby were sampled biweekly for the presence of snails or egg masses to determine the extent of the population. Of the 23 ponds surveyed, eight additional

ponds contained apple snails and egg masses. In addition, egg masses were observed in small creeks running from ponds into wooded areas.

In a residential pond on Hilton Head Island, an additional invasive snail species was discovered. All ages and sizes of *Melanoides tuberculata* were found. This is a freshwater gastropod native to Northern Africa. In addition, an established population of *Pyrgophorus spinosus* was found in a ditch at the same location on Hilton Head Island, which represents the first record of this species reported north of Florida.

In the spring of 2015, funding was secured from a State Wildlife Grant for a study to characterize invasive Indo-Pacific lionfish populations in the Atlantic off of the southeastern United States. The funding will support the analysis of data collected from an ongoing trap/video survey to provide estimates that have been requested by researchers and managers for some time, and will be important for monitoring and management purposes. In 2010, video cameras were included on all chevron traps deployed. Currently, SERFS deploys about 1,500 traps in the region annually. The videos are examined for individual fish counts of fish species that are important for fisheries management in South Carolina and across the region. In addition, bottom habitat characteristics were recorded and paired with environmental data, such as depth, temperature, and salinity collected at each location. Over 10% of all videos examined have contained lionfish. A final report is expected in December 2015.

In addition to that research, a College of Charleston graduate student is currently undertaking a comparative analysis of invasive lionfish population demographics among four areas of its invasive range.

Researchers at the SC Department of Natural Resources recently found that at least 45% of American eels are infected with the swimbladder parasite, *Anguillicoloides crassus* in the estuaries of SC, and that the young glass eel stages become heavily infected within months of recruiting to coastal habitats from their oceanic spawning areas. South Carolina is one of two states in the U.S. where harvesting glass eels is still permitted. *Anguillicoloides crassus* is a nematode of Asian origin that infects the swimbladder of its native host, the Japanese eel *Anguilla japonica*. It was unintentionally introduced to the U.S. in the 1990s, where it now infects the American eel *Anguilla rostrata*. It is one of several factors that may have caused a decline in American eel numbers. Using funding from the USFWS during 2014-2015, SCDNR staff successfully developed and optimized a species-specific qPCR assay for *A. crassus* with the ability to differentiate this invasive species from closely-related parasitic nematode species found in local ecosystems. Through a grant from USFWS in 2015-2016, the molecular detection tool will be applied in a field setting. Following field validation efforts, broader surveys using the qPCR approach will help to better characterize the current distribution and rate of spread of this invasive parasite of American eels.

Texas

Hartman reported that tiger shrimp are being found up and down the coast.

Lionfish are being caught by commercial shrimpers.

A Texas-only, invitation-only lionfish workshop will be held in Corpus Christi in February. Discussions will focus on priorities, current research, funding sources, outreach, and control methods.

Public outreach: Campaign being created to prevent aquarium dumping.

Additional monies awarded were \$7 million, which are available for weed management and control, but also for habitat restoration, research, education, and outreach.

McMahon reported that zebra mussels have infested central and northeast Texas waters.

U.S. Army Corps of Engineers

Lane reported that crested floating heart is expanding quickly in numerous water bodies.

In the research realm, at the University of Florida, they are creating aquatic labeled grass herbicides. Field trials are currently being conducted.

USFWS

Strakosh reported on grants and funding. They are hoping to increase their funding towards GSARP this year.

HARC

Gonzalez reported that the Galveston Bay National Estuary Program, a forum for invasive species, was dormant for several years, but has started up again. A meeting was held in August.

Massive rain and flooding on Memorial Day have caused water hyacinth and other aquatic invasive species to become dislodged from upper regions and travel to other areas.

Discussion of ANSTF Recommendations

Provide increased financial support to the panels and identify alternative funding sources that the panels can utilize to support annual meetings, coordination, and panel activities. **McMahon made a Motion to accept the recommendation. The Motion was seconded, and passed.**

Encourage the Federal Lands Committee to explore options for federal agencies to clarify situational authorities, support full implementation of agency authorities, and harmonize policies across federal agencies for the movement of aquatic nuisance species onto and off federal lands and waters. **Page made a Motion to accept the recommendation. The Motion was seconded, and passed.**

Establish an ANSTF Ad-hoc committee specific to the boat industry. **Akins made a Motion to accept the recommendation. The Motion was seconded, and passed.**

Have a presentation on the potential use of CRISPR in the control and management of ANS at the next ANSTF meeting. **Riecke made a Motion to accept the recommendation. The Motion was seconded, and passed.**

Encourage ANSTF member agencies to continue to explore development of new barrier technologies that will address the problem of bi -directional inter-basin movement of ANS. **Fuller made a Motion to accept the recommendation. The Motion was seconded, and passed.**

Election of Officers

Kristen Sommers was elected Chairman.

Lisa Gonzalez was elected Vice Chairman

Other Business

Hartman made a motion to change the bylaws. The amended bylaws will be sent by Ballard, along with the original bylaws. The amendments will be voted on. McMahon seconded.

Next Meeting Time and Place

The location of the next meeting will be in Alabama.

The next meeting will take place the first week in April.

Public Comment

Fuller provided the opportunity for public comment. There was none.

A Motion was made to adjourn the meeting, and the Motion was approved. There being no further business, the meeting adjourned at 5:00 p.m.

**ASMFC/SEAMAP CRUSTACEAN WORKGROUP AND GSMFC BLUE CRAB
SUBCOMMITTEE
MEETING MINUTES
Tuesday, November 3, 2015
St. Augustine, Florida**

Chairman, R. Gandy called the meeting to order at 8:35 a.m. with the following in attendance:

Attendees

Rick Burris, MDMR, Biloxi, MS
Ryan Gandy, FWRI, St. Petersburg, FL
Glen Sutton, TPWD, Dickinson TX
Jeffery Marx, LDWF, New Iberia, LA
Jim Page, GADNR, Brunswick, GA
Jason Rock, NCDMF, Washington, NC
Stephen Czwartacki, SCDNR, Charleston, SC
Jeff Brunson, SCDNR, Charleston, SC
Shanna Madson, ASMFC, Arlington, VA
David Simpson, CT DEEP, Old Lyme, CT
Amy Fowler, SCDNR, Charleston, SC
Larry Delancey, SCDNR, Charleston, SC
Tracy Smart, SCDNR, Charleston, SC
Charles Crawford, FWC, St. Petersburg, FL
Claire Crowley, FWC, St. Petersburg, FL
Jane Brockmann, UF, Gainesville, FL
Matt Ogburn, SERC, Edgewater, MD
Laura Picariello, Audubon Nature Institute, New Orleans, LA
Julie Lively, LA SEAGRANT, Baton Rouge, LA
Daniel McKiernan, MADMF, Boston, MA
Mark Lingo, TPWD, Austin, TX
Traci Floyd, MDMR, Biloxi, MS
Fernando Martinez, TPWD, Corpus Christi, TX
Jimmy Sanders, MDMR, Biloxi, MS
Mike Millard, USFWS, Lamar, PA
Zack Darnell, Nicholls State University, Thibodeaux, LA
Ronnie Cromer, Arlington, ASMFC, SC
Patrick Geer, GADNR, Brunswick, GA

Staff

Steve VanderKooy, GSMFC, Ocean Springs, MS
Debbie McIntyre, GSMFC, Ocean Springs, MS
Jeff Rester, GSMFC, Ocean Springs, MS

Introductions

Chairman Gandy led the audience and the committee members from both the ASMFC and the GSMFC in introductions.

Adoption of Agenda

Gandy suggested moving the “public comment” item up before the assessment. *Marx moved to adopt the agenda with the change. Burris seconded the motion, and the agenda was adopted.*

Approval of Minutes

The subcommittee reviewed their minutes from the February 27, 2015 meeting in Lafayette, Louisiana. *Marx moved to accept the minutes as written. Burris seconded, and the minutes were approved unanimously.*

Election of Chair for GSMFC Blue Crab Subcommittee

A motion was made by Burris and seconded by Marx to re-elect Gandy as Chairman. The motion passed unanimously.

Public Comment

No comment was provided by the public.

Gulf Blue Crab Stock Assessment

Gandy introduced **Sutton** who gave a presentation on GDAR 2012 GOM Blue Crab Assessment. In this assessment, two separate modeling approaches were employed to address the GOM stocks. The primary model was a modified catch-survey analysis similar in structure to the Chesapeake Bay 2011 assessment model), while the supporting model was a surplus production model. Based on tagging and genetic investigations, two potential management populations may exist in the Gulf of Mexico: a Florida or “Eastern GOM stock” occurring along the Florida Coast to Apalachee (centered in Tampa Bay), and a “Western GOM stock” occurring from central Texas to Apalachicola Bay and centered in Louisiana.

Fishery-independent estimates of abundance for both juvenile and adult stocks have shown either decreasing or steady trends throughout the last two decades while commercial landings have declined. The Western stock has undergone a strong decline in juvenile abundances since the mid-1980s, and a decline in adult abundances from the mid-1980s until the mid-1990s, after which it has remained relatively stable. Eastern stock adult abundances have shown a similar trend (declining through the mid-1990s and stable since), while the juvenile abundance has been relatively stable since the late 1980s.

In both stocks, the abundances have experienced substantial variability from year-to-year. There are some correlations between increased recruitment and freshwater inflow. The estimated MSY from the base model configuration was 164 million individuals for the Western GOM stock and 23 million individuals for the Eastern GOM stock, where fisheries on both stocks have landed

less than the MSY for the majority of the time series. The Western GOM stock experienced overfishing in 1999 and 2002, while the Eastern GOM stock experienced overfishing in 1996 and 1998. The base model found that both stocks are currently neither overfished nor undergoing overfishing, although the Western stock is in a depressed state and approaching an overfished limit.

Regional Derelict Trap and Gear Issues

Gandy gave a history of derelict trap removal in the Gulf of Mexico. He reported that Florida's Derelict Blue Crab Trap Retrieval Program has retrieved 4,399 blue crab traps since 2010 with a composition of 89% commercial and 11% recreational. Prior to the closure of a region, all of the "actively fished" traps are removed from the area by fishery personnel. The fishery closures and removal of "active" traps aid the identification and removal of lost and abandoned traps. In order to reduce disruptions to commercial blue crab activities, the annual Florida closures for blue crab trap retrieval changed in 2011 to an even/odd year closure by coast (odd years Gulf and even years Atlantic).

Sutton explained that Texas shuts down the fishery every February for 10 days for abandoned crab trap retrieval. Tentatively, the shutdown for 2016 will take place February 19-28. The numbers of traps retrieved continue to decrease every year.

Marx reported that Louisiana closes certain small areas for 10-14 days with volunteers participating. LDWF will target three different coastal areas for cleanup in February 2016. LDWF was also awarded a NOAA Marine Debris Removal grant in July. This project will target the Lake Pontchartrain basin and the Barataria-Terrebonne basin. Side-scan sonar will be used to identify derelict crab traps in selected bodies of water. Biological data of bycatch will be collected from the derelict traps as well.

Burris stated that Mississippi has not had a derelict crab trap cleanup since 2013; however, MDMR continues to monitor the situation regularly and, utilizing staff effort, has removed 72 derelict traps during 2015. There are plans to have a cleanup involving Mississippi resident commercial crab fishermen in early 2016, applying funds from the NOAA Bonnet Carre' Fisheries Disaster Grant. Over 19,000 derelict traps have been removed and recycled by commercial fishermen and volunteers since 1999.

VanderKooy shared **Hermann's** report indicating that Alabama has not conducted a derelict trap removal since 2010. Upon visual inspection of the main derelict crab trap removal sites, initial counts of derelict traps may warrant organizing a volunteer removal program in the spring of 2016, although a definite date has not been set.

Representatives from South Carolina and North Carolina pointed out that their states have some versions of derelict trap removals also. **Gandy** will share with the ASMFC members the legal rules regarding trap ownership and who can remove them from the respective state waters once they are declared derelict or abandoned in the Gulf.

Horseshoe Crab Fishery Overview

Larry DeLancey (SCDNR) presented an overview on the horseshoe crab fishery. In August of 2015, FWC issued a horseshoe crab bleeding permit to a commercial entity which allowed them to potentially harvest from either Florida coast. In response, the International Union for the Conservation of Nature issued a letter to the Florida Fish and Wildlife's Department of Marine Fisheries Management and the GSMFC stating their concerns regarding the bleeding and harvest of horseshoe crabs along the Florida Gulf coast. It was agreed that the individual Gulf states would continue to monitor interest in the horseshoe crab fishery on a state-by-state basis to ensure long-term viability of the horseshoe crab populations in the Gulf of Mexico.

Regional Terrapin Working Group

Dr. Amy Fowler (SCDNR) gave a presentation regarding the BBRD (Better Bycatch Reduction Devices) for Diamondback Terrapins in crab traps. She explained that terrapins enter traps either to reach the bait inside or out of curiosity and then they cannot get back out. The current devices (BRDs) being used are not adequate. This group would like to experiment with a differently constructed BRD. Scientists have been designing a BRD with two different points of entry. They are testing this version and it is working fairly well but there are still areas that need improvement. Once a design is decided upon, they would like to get fishermen to try them out. Eventually they would like to see promotions and regulations in this regard.

Gandy explained that in February 2015, the Gulf contingency met with the regional Terrapin Work Group and discussed the role of fishery management on existing terrapin populations. It was agreed that a clear need exists for the development of better communications between state crab biologists and academic-based terrapin researchers. The Terrapin Workgroup holds its national meeting every three years. In 2016, the national work group will meet on the Mississippi Gulf Coast. The Crab Subcommittee intends to have a strong presence at this meeting to take advantage of the opportunity to provide some information on derelict crab traps, bycatch, etc., to a national audience. **VanderKooy** will initiate a conference call to finalize the plans for this meeting.

Next Meeting

The next official meeting for the TCC Crab Subcommittee will be in the fall of 2016 and will take place in Louisiana in association with the GSMFC's 67th Annual Meeting.

Other Business

VanderKooy indicated that he will be happy to present the Blue Crab Subcommittee Report to the TCC.

There being no further business to discuss, *Marx moved to adjourn, Burris seconded, and the meeting was adjourned at 10:50 a.m.*

State Report Summaries (Individual state reports are available at the Commission office.)

SEAMAP-South Atlantic Crustacean Workgroup/ GSMFC Crab Subcommittee
Florida Report
November 2015
Ryan L. Gandy Ph. D.

Abstract: Six million pounds of blue crabs were landed in Florida in 2014. This volume is a continuation of landings below the historic average of 13 million pounds. The value for hard shell blue crab has recovered from the recession induced drop in price and volume of 2008-2009 and stabilized over the past 3 years whereas the value of softshell crabs has remained relatively stable over the same period. In 2011, Florida completed a statewide stock assessment for blue crabs. The conclusions of the 2011 assessment were the same as the previous 2005 assessment in that blue crabs on the Gulf and Atlantic coasts were not overfished or undergoing overfishing. Blue crab populations are highly resilient and have dramatic swings in year to year abundance that are directly related to freshwater inflow. The Blue Crab Effort Management Program was implemented in 2007 to address problems of seasonal crowding of traps in confined waterways, lost traps, bycatch, overcapitalization, latent endorsements and conflict between hard shell blue crab producers and soft shell blue crab producers. The effort management program was successful in eliminating most of the latent effort (>800,000 unused trap certificates) and has resulted in <270,000 current trap tags purchased. This has resulted in good estimates of the traps used in the fishery. The Derelict Blue Crab Trap Retrieval Program has retrieved 4,399 blue crab traps since 2010 with a composition of 89% commercial and 11% recreational. In August of 2015, FWC issued a horseshoe crab bleeding permit to a commercial entity on the Gulf coast. In response, the International Union for the Conservation of Nature (IUCN) issued a letter to the Florida Fish and Wildlife's Department of Marine Fisheries Management and the Gulf States Marine Fisheries Commission stating their concerns regarding the bleeding and harvest of horseshoe crabs along Florida's Gulf coast. The Florida east coast shrimp landings have declined since 2010. Florida does not perform state stock assessments for shrimp. However, Florida representatives participate in regional fisheries assessment and management.

Blue Crab Landings

Florida's 2014 blue crab landings suggest a continuation of landings volume below its historic average (pre-2000). Overall, the years with lowest landings appear in 6 to 10 year intervals. The trend of landings for these lowest landing years appears to be declining over time (Figure 1). The value for hard shell blue crab has recovered from the recession induced drop in price and volume of 2008-2009 and stabilized over the past 3 years whereas the value of softshell crabs has remained relatively stable over the same period (Figure 2). Florida does not collect recreational blue crab data.

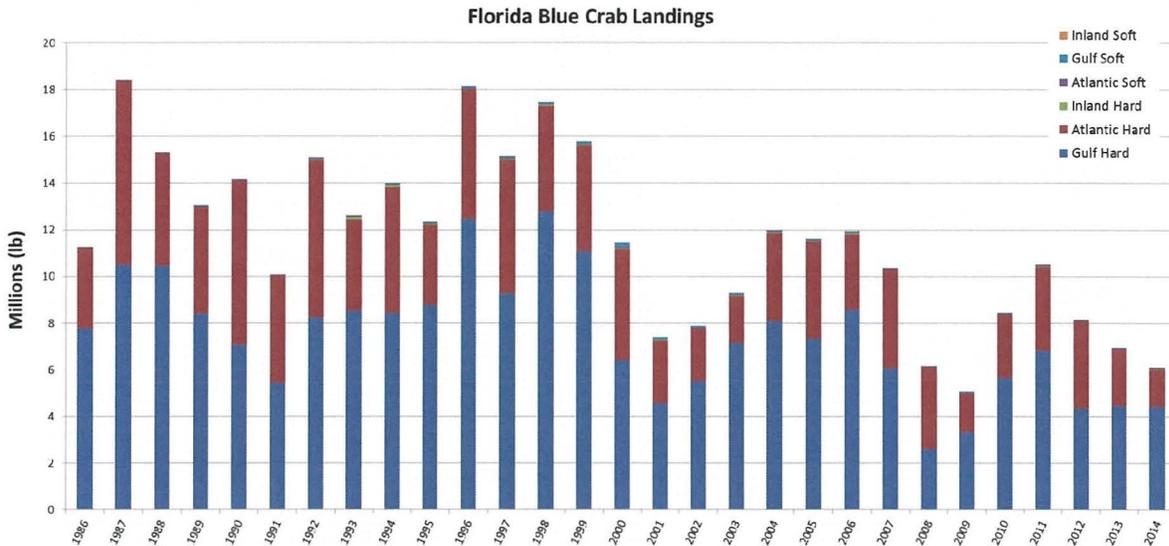


Figure 1. Florida Blue Crab Landings. Data obtained from Florida Fish and Wildlife Marine Fisheries Information System.

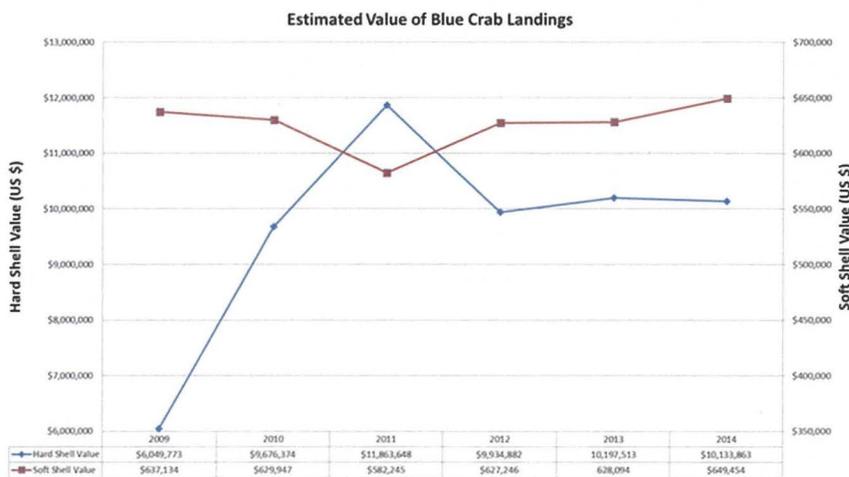


Figure 2. Florida Blue Crab Value. Data obtained from Florida Fish and Wildlife Marine Fisheries Information System.

Florida (Gulf and Atlantic) Blue Crab Stock Assessment 2011

In 2011, Florida completed a statewide stock assessment for blue crabs. The assessment split the state into two regions west coast (Gulf of Mexico) and east coast (Atlantic) although blue crab management is not split between coasts. Three analysis were used. The primary model, a two-stage catch survey analysis, found that neither coast is overfished or undergoing overfishing, with an estimated MSY of 31.9 and 12.0 million crabs for the west coast and east coast, respectively. The second model, a stochastic stock reduction analysis (SSRA), concluded the stock was not overfished or undergoing overfishing and estimated an MSY of 35.3 million crabs and 23.2 million crabs for the west and east coasts, respectively. The third model, a surplus production model, differed from the other models in that the east coast was found to be overfished and undergoing overfishing while the west coast was not, with an estimated MSY of 22.1 million crabs for the west coast and 15.4 million crabs for the east coast. The conclusions of the 2011 assessment were the same as the previous 2005 assessment. Blue crab populations are highly resilient and have dramatic swings in year to year abundance are directly related to freshwater inflow.

Blue Crab Effort Management Program

The Blue Crab Effort Management Program (BCEMP) was implemented in 2007 to address problems of seasonal crowding of traps in confined waterways, lost traps, bycatch, overcapitalization, latent endorsements and conflict between hard shell blue crab producers and soft shell blue crab producers in the fishery. On July 1, 2008 the BCEMP assessed a blue crab endorsement fee and trap tag fee for each blue crab trap fished. Non-renewals of endorsements may appeal if there were extenuating circumstances that prevented them from renewing on time. Otherwise, those non-renewal endorsements were lost, permanently decreasing the number of endorsements in the fishery. The per trap fee appears to have had a drastic effect on latent effort for trap tags ordered which provides a better estimate of traps available for fishing.

| Year | Total Traps | Trap Endorsements |
|-------|-------------|-------------------|
| 07/08 | 822,750 | 1,171 |
| 08/09 | 290,699 | 1,021 |
| 09/10 | 257,050 | 925 |
| 10/11 | 252,209 | 834 |
| 11/12 | 273,250 | 821 |
| 12/13 | 266,950 | 825 |
| 13/14 | 267,725 | 772 |

Table 1. Blue Crab Effort Management Plan - Changes in the Blue Crab Endorsements and Traps

Derelict Blue Crab Trap Retrieval Program

From July 2009 to February 2011, all six regional blue crab trap closures occurred each year. Prior to the closure of a region all the “actively fished” traps are removed from the area by fishery personnel. The fishery closures and removal of “active” traps aid the identification and removal of lost and abandoned traps. In order to reduce disruptions to commercial blue crab activities; the annual Florida closures for blue crab trap retrieval changed on January 26th 2011 to an “even/odd year” closure by coast (odd years Gulf and even years Atlantic). The proportion of blue crab traps retrieved since 2010 has been 89% commercial and 11% recreational.

| Year | Total Blue Crab Traps Removed | Commercial Traps | Recreational Traps | Blue Crab Trap Equivalents* | Annual Subtotal |
|---------------|-------------------------------|------------------|--------------------|-----------------------------|-----------------|
| 2010** | 207 | 195 | 12 | 12 | 219 |
| 2011 | 1,408 | 1,294 | 114 | 93 | 1,501 |
| 2012 | 408 | 313 | 95 | 12 | 420 |
| 2013 | 964 | 858 | 106 | 30 | 994 |
| 2014 | 313 | 234 | 79 | 24 | 337 |
| 2015 | 891 | 827 | 64 | 37 | 928 |
| TOTALS | 4,191 | 3,721 | 470 | 208 | 4,399 |

* Trap equivalents: occasionally, we remove pieces of trap debris (trap ropes, buoys, or partial traps) that are no longer connected to a fishable trap. For contract purposes, 1 trap equivalent is equal to 3 pieces of trap debris removed.

**Four of the six regional blue crab trap closures in 2010 were waived to relieve potential economic hardships on fishing communities from the April 2010 BP Deepwater Horizon oil spill. These data represent traps removed from the two trap closures that were not waived: Escambia through Franklin County, Jan. 5-14, 2011; and the St. Johns River, Jan. 16-25, 2011.

Table 2. Total Blue Crab Traps Retrieved

Horseshoe Crab

The majority of Florida horseshoe crab landings are derived from the marine life industry. Horseshoe crabs are also harvested as bait for the eel fishery however the harvest level is low enough for the Atlantic States Marine Fisheries Commission to regard the fishery as “de minimus” in status. Florida has not historically had commercial operations bleeding horseshoe crabs in the state. In August of 2015 we issued a horseshoe crab bleeding permit to a commercial entity on the West coast. In Response to the state issuing a permit, the International Union for the Conservation of Nature (IUNC) issued a letter to the Florida Fish and Wildlife’s Department of Marine Fisheries Management and Gulf States Marine Fisheries Commission stating their concerns over the harvest of horseshoe crabs in Florida.

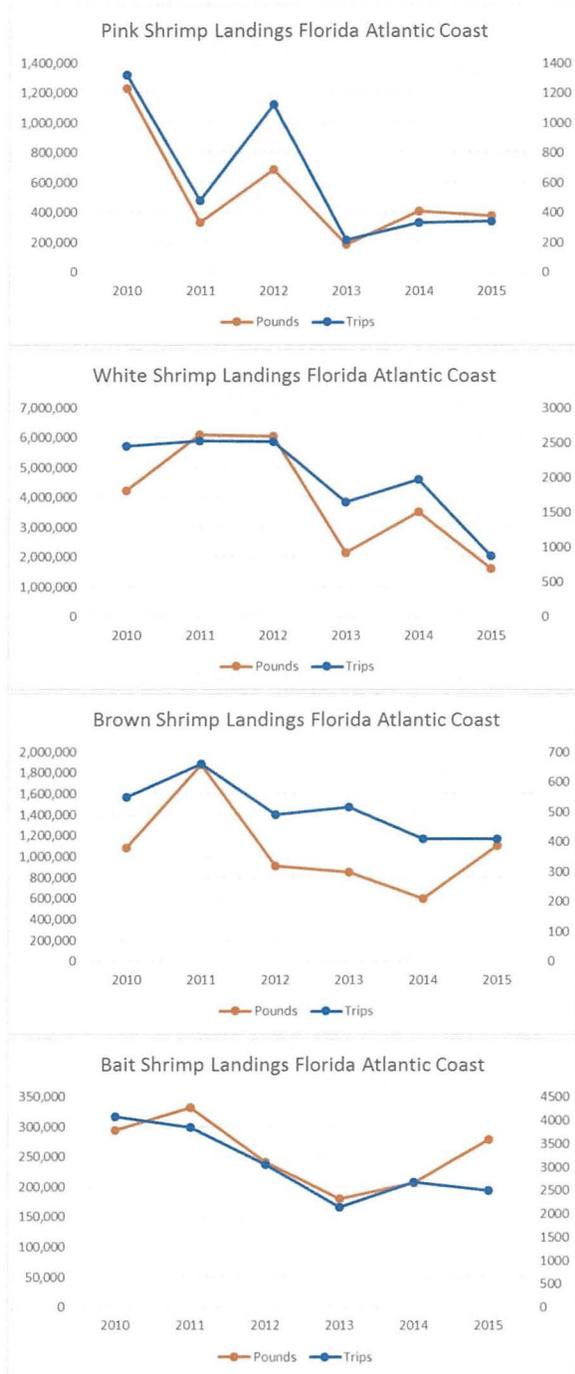
Their specific concerns about the emergence of a biomedical fishery for horseshoe crabs in the Gulf of Mexico are:

1. The State does not have an overall limit of the number of horseshoe crabs that can be collected in the State.
2. The permit suggests, *but does not require*, that the permit holder follow best practices for biomedical bleeding as detailed in the 2011 Best Management Practices developed by the ASMFC.
3. There is no clear management structure for the West Coast of Florida since the Gulf States Marine Fisheries Commission does not have a horseshoe crab management plan. Fishery managers throughout the Gulf of Mexico should consider their response proactively, *before* the problem becomes serious.
4. The lack of long-term data for the Gulf of Mexico should not preclude management; indeed, following the precautionary principle, caution should be exercised in allowing the exploitation of population(s) of uncertain size.
5. Gulf of Mexico populations are genetically distinct with little interchange with Atlantic Coast populations; moreover, there appear to be some genetic differences between southern and northern Florida Gulf Coast animals

They urge the State of Florida and the GSMFC to enact the necessary rules and regulations to ensure the long-term viability of horseshoe crab populations in the Gulf of Mexico.

Florida East Coast Shrimp Landings

The Florida East (Atlantic) coast shrimp landings have declined since 2010. Florida does not perform state stock assessments for shrimp. However, Florida representative participate in regional fisheries assessment and management.



LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES

FALL 2015 GSMFC CRAB SUBCOMMITTEE REPORT

Executive Summary:

Louisiana's blue crab fishery is an open access fishery. There is an apprenticeship/sponsorship program that is required for new commercial crabbers in order to receive their gear license. This program was developed to increase the professionalism of commercial crabbers in the industry. Legislation passed in early 2015 increased the resident license fees from \$35 to \$50. The five year average of crab landings (2010-2014) in Louisiana were 40.7 M pounds worth an average of \$46 M. In 2014, landings were just above the five year average at 40.7 M pounds worth \$67 M, a record high. There has been a push from the industry to reduce the effort that exists currently. Several options have been discussed including trap limits, license moratoriums, increasing license fees and seasons. Work on a crab trap bycatch study was completed in June of 2015 and data are being analyzed currently.

Derelict Crab Trap Removal Program:

In September, the Louisiana Wildlife and Fisheries Commission adopted a notice of intent that targets three different coastal areas for derelict crab trap cleanups. The first closure will take place in the Lake Pontchartrain Basin from 6:00 a.m. February 12 through 6:00 a.m. February 21, 2016. The second closure will take place in the Barataria Basin from 6 a.m. February 19 through 6 a.m. February 28, 2016. The first two closures will have public cleanups associated with them. The third closure will take place in Sabine Lake from 6 a.m. February 19 through February 28, 2016. A large section of Sabine Lake and surrounding areas were closed during February 2015, however, wind during the public cleanup limited access to Sabine Lake itself. The Louisiana side of Sabine Lake (and only the Lake) will be closed to allow the cleanup taking place in Texas to clean the entire lake.

LDWF was also awarded a NOAA Marine Debris Removal grant in July. The project targets derelict crab traps in two of the state's basins, the Lake Pontchartrain basin and the Barataria-Terrebonne basin. Side-scan sonar is being used to identify derelict crab traps in selected bodies of water. The traps will be retrieved and disposed of, or recycled if possible. After cleaning the derelict traps from the water bodies, areas will be rescanned to find a rate of repopulation. Biological data of bycatch will be collected from the derelict traps as well.

Table 1. Annual derelict crab trap closure areas, dates, and trap totals.

| | | | |
|------|--|-----------|--------------|
| 2004 | Upper Terrebonne Bay Estuary | 2/28-3/14 | 6,676 |
| | W. Vermilion Bay | 5/14-5/22 | 218 |
| | 2004 TOTAL | | 6,894 |
| 2005 | Sabine Lake | 2/18-2/27 | 4 |
| | Breton Sound Estuary | 2/26-3/13 | 1,941 |
| | Middle Terrebonne Bay Estuary | 3/5-3/20 | 2,437 |
| | E. Vermilion Bay / West Cote Blanche Bay | 5/16-5/22 | 241 |
| | 2005 TOTAL | | 4,623 |
| 2006 | SW Terrebonne Bay Estuary | 3/4-3/13 | 2,935 |
| 2007 | E. Lake Pontchartrain | 2/24-3/5 | 774 |
| | Upper Barataria Bay Estuary | 3/3-3/12 | 724 |

| | | | |
|-----------|--------------------------------|-----------|---------------|
| | 2007 TOTAL | | 1,498 |
| 2008 | Upper Terrebonne Bay Estuary | 2/23-3/2 | 1,234 |
| 2009 | Terrebonne Bay Estuary | N/A | 788 |
| 2010 | Upper Barataria Bay Estuary | 2/27-3/7 | 477 |
| 2011 | Western Plaquemines Parish | 2/26-3/5 | 1,100 |
| 2012 | St. Bernard/Plaquemines Parish | 2/25-3/5 | 1,961 |
| | Terrebonne Parish | 3/17-3/26 | 747 |
| | 2012 Total | | 2,708 |
| 2013 | Plaquemines Parish | 2/16-2/25 | 492 |
| | St. Bernard Parish | 3/9-3/18 | 411 |
| | 2013 Total | | 903 |
| 2014 | Western Terrebonne Parish | 2/15-2/24 | 1,063 |
| 2015 | Sabine Lake | 2/21-3/1 | 422 |
| 2004-2015 | OVERALL | | 24,645 |

Crab Legislation:

Act 303 of the 2015 Louisiana legislative session raised the fee of a Commercial Crab Trap Gear License from \$35 to \$50 for residents and for non-residents, \$140 to \$200. Of those fees, for resident licenses \$5 will go to the crab promotion fund and \$5 to the derelict crab trap clean-up fund.

Louisiana Crab Task Force:

The Louisiana Crab Task Force met on July 21, September 22 and October 8 and reviewed information on crab trap and licensing regulations and management options. Discussion items included changes to the fisheries forward commercial crab trap gear requirements, gear license fee increases, trap limits, license moratoriums and harvest of prepubertal female crabs. The Task Force took action and created legislation to impose a moratorium on crab trap gear licenses. Many of the task force members indicate that there is “too much wire in the water” and that the moratorium would be the first step in reducing effort in the crab industry.

Louisiana Blue Crab Fishery Certification:

LDWF in cooperation with the Audubon Nature Institute’s Gulf United For Lasting Fisheries Program (G.U.L.F.) is pursuing certification of the blue crab fishery through a third party certification program. The purpose of the G.U.L.F. Certification Program is to provide US Gulf State fisheries with a ‘Certification of Responsible Fisheries Management for lasting use’ to an internationally recognized standard and based on the FAO’s Ecolabelling Guidelines of fish and fishery products from Marine and Inland capture fisheries and the 1995 UN FAO Code of Conduct for Responsible Fisheries. LDWF continues to work with Global Trust and address some of the nonconformance issues that arose during the site visit in February.

Louisiana Blue Crab Bycatch Study:

Work was completed on a survey designed to collect and analyze data on incidental bycatch in the Louisiana crab trap fishery with special emphasis on diamond back terrapins (*Malaclemys*

**Mississippi Crab Fishery Report - MDMR
GSMFC Crab Subcommittee
November 2015**

Abstract

Commercial crab license sales for 2014 were slightly lower than 2013; however recreational license sales greatly exceeded those from previous years. Total Blue Crab landings for Mississippi in 2014 were 580,197 pounds with a dockside value of \$954, 977. Landings are still below the 10 year average, but through preliminary data, appear as if they are improving. Average dockside value of Blue Crabs continued to increase through 2014 and is currently at a historic high of \$1.83 per pound. The Mississippi Derelict Crab Trap Removal Program has removed over 19,000 traps since its inception in 1999. The MDMR is currently examining the recreational blue crab fishery through a fishery independent catch-per-unit-effort (CPUE) project. Preliminary results from September 2014 – September 2015 show the highest CPUE in the Pascagoula River system and the lowest in the Bay of St. Louis. The Mississippi Department of Marine Resources (MDMR) recently received a NOAA Fisheries Disaster Recovery Grant for the 2011 opening of the Bonnet Carré spillway which caused damage to the state's crab and oyster fisheries. Projects to be funded through this grant will include: Commercial and Recreational Blue Crab CPUE, Recruitment and Habitat Needs, Red Drum Predation on Juvenile Blue Crabs, Shorelines Initiative to Enhance Crab Habitat, and Crab Trap Bycatch Reduction Voluntary Program.

Licenses

Through October 2015, resident commercial license sales are down from 149 in 14-15 season to 138 for the 15-16 season. (Figure 1) All other crab licenses are down as well: non-resident commercial at 15, non-resident recreational at 66, and crab trawl license for shrimpers at 68. Resident recreational licenses are also lower down from 705 in 2014 to 607 so far for 2015. These numbers are preliminary as the commercial license season will run through April 30, 2016 and the recreational license is valid one year from date of purchase.

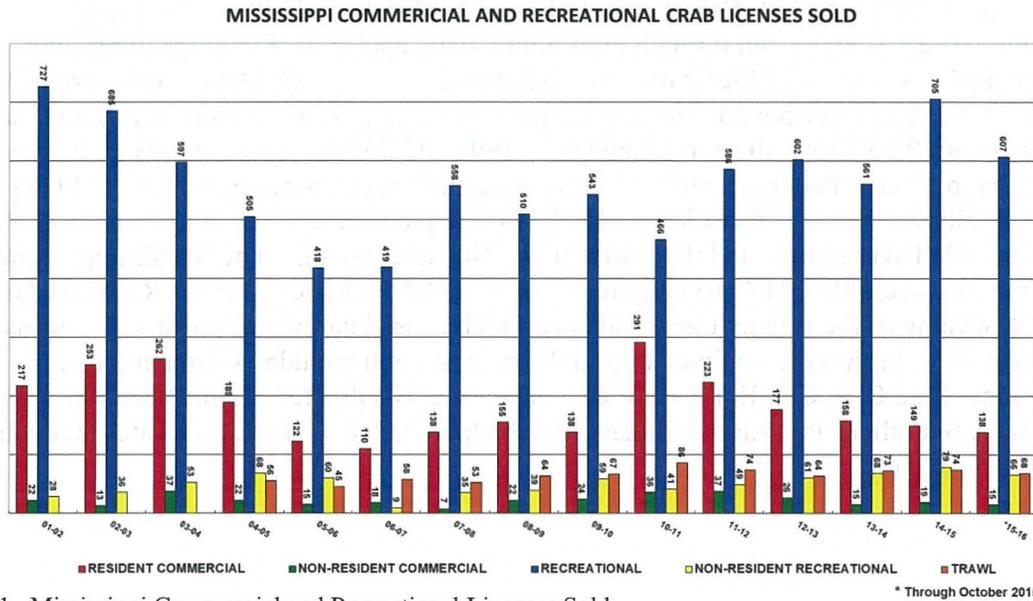


Figure 1. Mississippi Commercial and Recreational Licenses Sold

Landings

Preliminary data through August 2015 show 512,438 pounds of blue crabs landed in Mississippi with a dockside value of \$937,087 (Figure 2). Total landings for 2014 were 580,197 pounds with a dockside value of \$954,977. The price of crabs continues to rise with a historically high average of \$1.83/lb. through August 2015, up from \$1.64/lb. for all of 2014. Since 2004, the average landings and value, excluding 2010 (Deepwater Horizon Oil Spill) are 627,856 pounds and \$626.845 respectively.

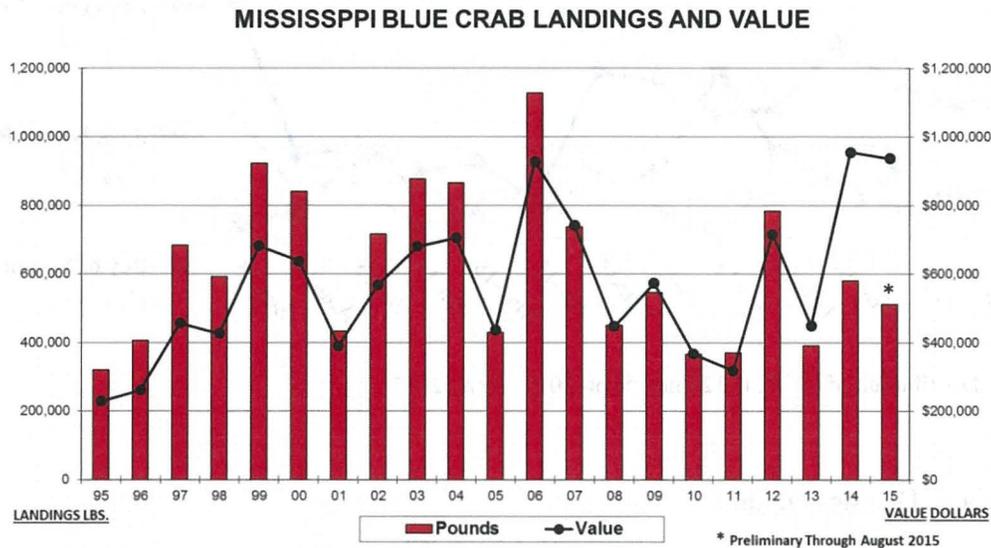


Figure 2. Mississippi Blue Crab Landings and Value

Derelict Crab Traps

MDMR continues to monitor derelict crab traps in coastal areas and utilizing staff effort, has removed 72 derelict traps through 2015. There are plans to have a cleanup involving Mississippi resident commercial crab fishermen in early 2016 applying funds from the NOAA Bonnet Carré Fisheries Disaster Grant. Over 19,000 derelict traps have been removed and recycled through commercial fishermen and volunteers since 1999.

Recreational Fishery Independent CPUE Project

To assess the overall health of the Blue Crab stock in Mississippi, the Office of Marine Fisheries is currently conducting a multi-year fishery independent survey to gather data in the recreational zones of Mississippi's three major bay systems: The Pascagoula River system, the Back Bay of Biloxi, and the Bay of St. Louis.

Preliminary results of the data collected for the period September 2014 to September 2015 were analyzed for harvestable crabs (carapace width > 125mm and not sponged). Total CPUE varied throughout the year with the Pascagoula River systems yielding a higher average CPUE and the Bay of St. Louis producing the lowest average CUPE (Figure 3). As expected, the sexual composition in these lower salinity areas ranged from 64-85% male with very few sponged females noted in the samples.

FISHERY INDEPENDANT BLUE CRAB CPUE

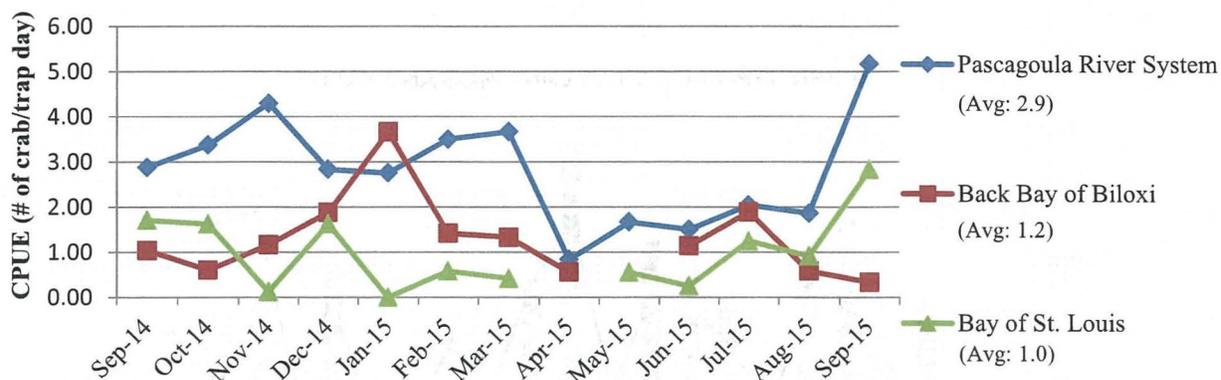


Figure 3. Distribution of CPUE (>125mm) Sept. 2014 - Sept. 2015

Bonnet Carré Disaster Funding

In May of 2015, the MDMR was awarded a \$10.9 million NOAA Fishereis Disaster Grant entitled *Mississippi Bonnet Carré Fisheries Disaster Recovery Program for the Oyster and Blue Crab Fisheries*. The projects desginated for the blue crab fishery will be carried out by the MDMR Office of Marine Fisheries, the Gulf Coast Research Lab (GCRL), and the assistance of Mississipi's commerial crab fishermen.

Projects include:

- A) *The Commercial and Recreational Blue Crab CPUE*. These projects will examine the factors influencing Blue Crab production and will provide stock assessment information necessary for evaluation of the overall status of the stocks and management of the Blue Crab fishery in Mississippi.
- B) *Red Drum Predation on Juvenile Blue Crabs*. Some past restoration efforts have focused on habitat loss, but in order to fully restore the fishery, all aspects need to be addressed, including emerging predation patterns. It has been well documented that decapod crustaceans are a primary food source for fishes from the drum family, Sciaenadae, including Red Drum (*Scieanops ocellatus*). The project will aim to provide data on the current foraging habits, as related to blue crabs, of these fishes in the Mississippi Sound and associated tributaries.
- C) *Blue Crab Life History – Recruitment and Habitat Needs*. Through placing emphasis on early life history stages, this project will provide needed information on recruitment dynamics of this important species and will supply information on habitat requirements through expanded current cooperative transect sampling.
- D) *Shorelines Initiative to Enhance Crab Habitat*. This project will coordinate with Mississippi resident commercial crab fishermen to collect marine debris (including derelict crab traps) to enhance crab nursery habitat, evaluate invasive species abundance, and assist in various shoreline enhancement projects.
- E) *Crab Trap Bycatch Reduction Voluntary Program*. The MDMR plans to target recreational crabbers by distributing Terrapin Excluder Devices (TEDs) free of charge at the point of contact where licenses are sold. Escape rings and TEDs will also be available to commercial fishermen as needed.

Texas State Report – TCC Crab Subcommittee November 2015

- 1) **Commercial landings for 2015** (so far this year) equal 2,097,611 pounds. This hasn't exceeded last year's 2,234,447 pounds yet, but we are expecting it to given the large amount of rainfall seen this year. The average ex-vessel price reported by dealers this year was \$1.71 per pound, up slightly from last year's all time high of \$1.69.
- 2) **Commercial Crab Fishermen License** buybacks continued, but only one license was bought back during this 2014-15 license year. This leaves 177 active commercial crab licenses available in the fishery, a 38% reduction in licenses since Limited Entry began in 1999.
- 3) **Fishery Independent Monitoring** bay trawl catch per hour of blue crabs for the months January through July shows an almost doubling of abundance in 2015 over the previous year. Catch rates rose from 4.21 per hour in 2014 to 8.01 in 2015 (Figure 1).
- 4) **Abandoned Crab Trap Removal Program** is tentatively planned for February 19-28, 2016, during which the fishery will be closed for 10 days.
- 5) **Blue crab research** (Olsen et al., in press) logistic regression revealed that coastwide size at maturity was negatively impacted by salinity and positively impacted by temperature. More specifically the model revealed that at 25°C, size at 50% maturity was 129 mm at 0 ppt, 118 mm at 10 ppt, 108 mm at 20 ppt, and 97 mm at 30 ppt. At 20 ppt, size at 50 % maturity was 102 mm at 10°C, 106 at 20°C, and 109 at 30°C. Size at maturity was found to vary substantially among bay systems in addition to the relationship between environmental parameters and highly plastic in terms of size at maturity. Coupled with regional decadal declines in Blue Crab populations, these results should justify conservative regulation by state management agencies in terms of spawner protection whether by increased minimum size, spatial and temporal fishery closures, or other means.
- 6) **Proposed regulation changes** to protect female crabs were again introduced at the Annual Regulation and Coastal Fisheries Biologist meeting this year by Art Morris. However, action to move forward on any proposals was tabled due to there being insufficient data and research to support the viability of these measures. To address this, Coastal Fisheries biologists (Glen Sutton, Tom Wagner, and Zach Olsen) are putting together an Ecopath model to assess the feasibility of various proposed management actions. This type of modeling exercise is well suited for testing management options because it includes predator prey interactions and environmental effects. The proposed regulatory options being analyzed are as follows:
 - Prohibit take of mature females seasonally (April – June)
 - Increase escape ring size from $2\frac{3}{8}$ " to $2\frac{7}{16}$ "
 - Seasonal Area Closures (April – June/areas to be determined)
 - Reduce trap limit to 150
 - Increase size limit on females to 5 ½ inches (for females)

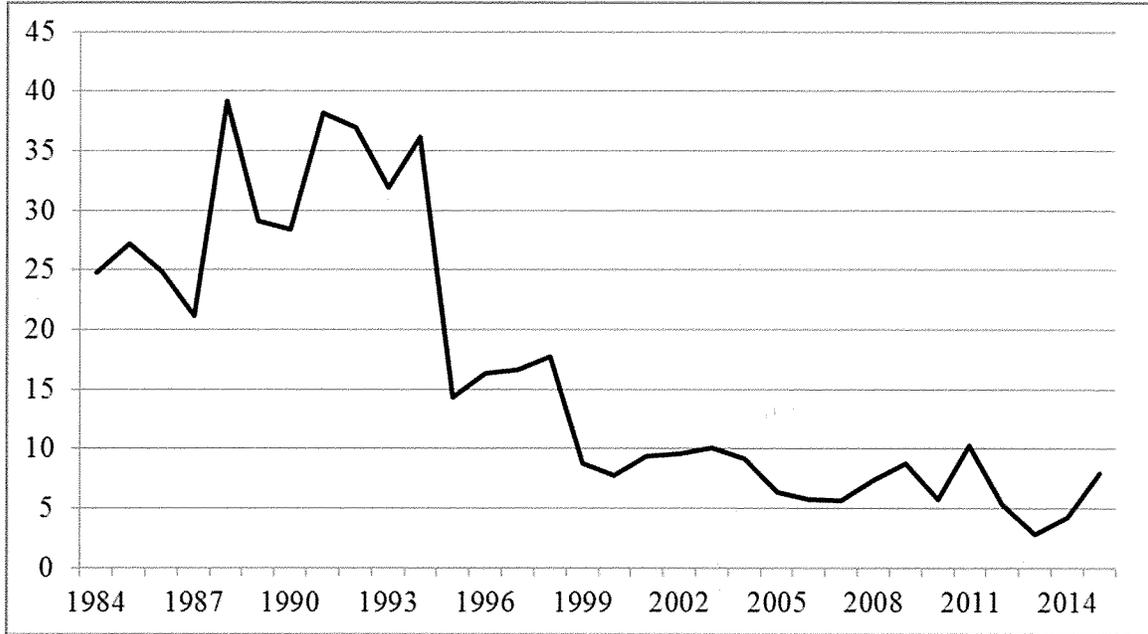


Figure 1: Coastwide trawl catch-per-hour of blue crabs in Texas for the months January through July each year.

Citation:

Regional and Temporal Variation in Size at Maturity of Female Blue Crabs (*Callinectes sapidus*) in Texas Coastal Waters (Olsen, Z, Wagner, T, and Sutton G. In press)

Alabama Derelict Crab Trap Recovery

Upon visual inspection of the main derelict crab trap removal sites, initial counts of derelict traps may warrant organizing a volunteer removal program in the Spring of 2016. As of the date of this report, a volunteer removal event has not been finalized. Additional counts will be made to make the final determination. Our last removal occurred in March of 2010.

Report Prepared by:

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Alabama Marine Resources Division
(251) 861-2882
jason.herrmann@dcnr.alabama.gov



Figure 2: Blue Crab Surveys, Upper Mobile Bay, June 16 and September 11, 2015

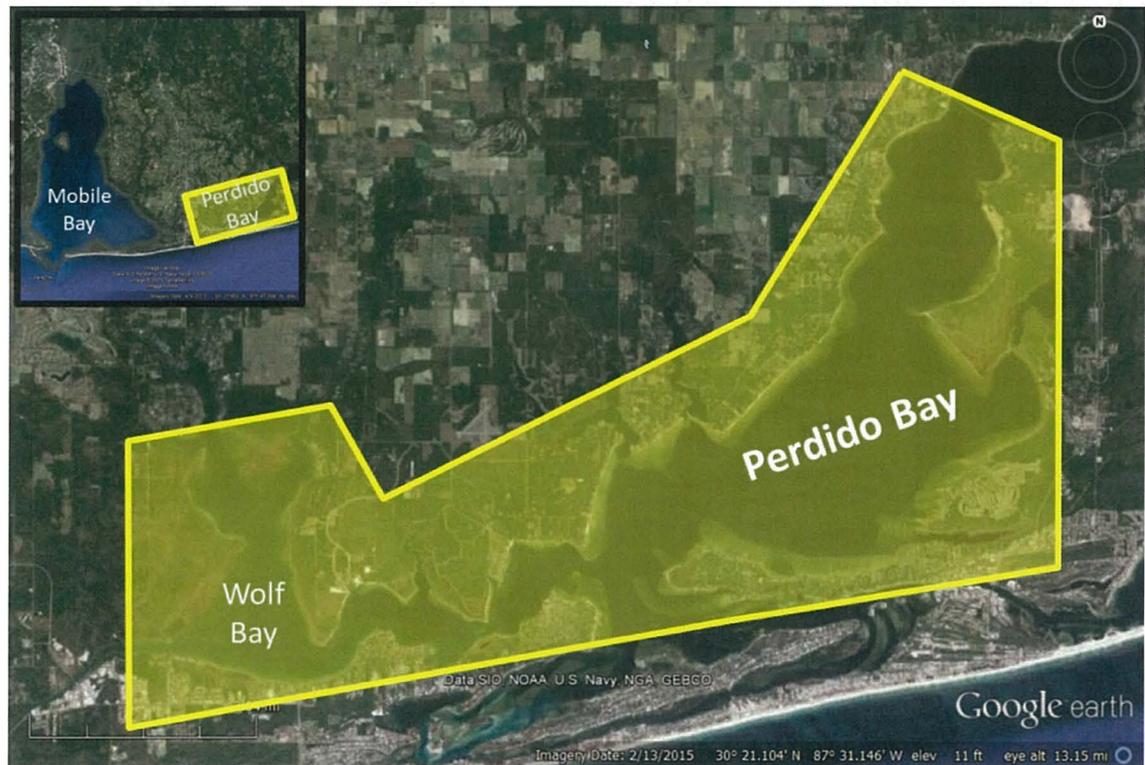


Figure 3. Blue Crab Surveys, Perdido to Wolf Bay, July 15, August 8, and September 25, 2015

Alabama Blue Crab Report

Update October 2015

Alabama Blue Crab Landings and Values

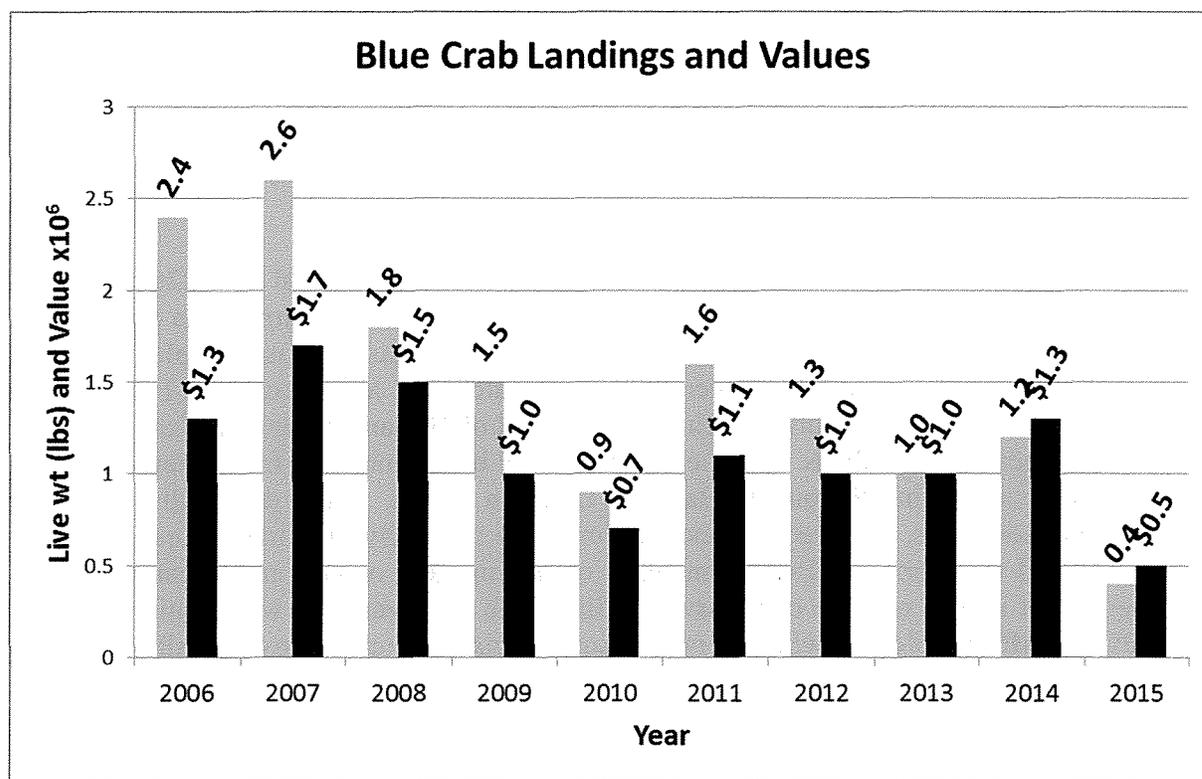


Figure 1. Alabama Commercial Blue Crab Landings from 2006-2015 for all Gear Types Reported via the Alabama Trip Ticket Program
2014 and 2015 Data is Preliminary & Subject to Change

Table 1. Number of Commercial Crabbing Trips made 2006 – 2015
 Reported via the Alabama Trip Ticket Program
2014 and 2015 Data is Preliminary & Subject to Change

| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Number of Trips | 3,050 | 6,459 | 6,037 | 4,418 | 2,265 | 3,785 | 3,038 | 3,263 | 4,040 | 1,678 |

NFWF Fisheries and Ecosystem Monitoring Program: Commercial Blue Crab Surveys

With funding from the National Fish and Wildlife Foundation as part of a multifaceted fisheries and ecosystem monitoring program, the Alabama Marine Resources Division has begun collecting commercial blue crab catch data. AMRD biologists have participated in five observer trips on commercial blue crab harvesting vessels working in upper Mobile Bay and the Perdido and Wolf Bay waterways between June 16, and September 25, 2015.

All trips combined, 545 crab traps were sampled of a total of 1,226 fished and 3,038 individual blue crabs were sexed and measured. Use of escape rings and/or turtle excluder devices was recorded for each trap fished as well as on those sampled. External parasites and any abnormalities were noted. Bycatch was also recorded. Twenty crabs were randomly selected during each trip for a total of 100 and retained frozen for further measurement and analysis. These samples will be maintained frozen until they are processed at Marine Resources Base on Dauphin Island. This data will be used to generate sex ratios, size frequencies, crab maturity ratios, bycatch impact, catch per unit effort, and to determine if different types of fishing gear or gear modifications have a significant impact on blue crab harvest. Blue Crab observer trips will continue through 2019. AMRD biologist, will observe 24 commercial blue crab trips annually beginning in 2016.

Table 2. Blue Crab Observer Trips Summarized

| Date | Location | Traps Sampled | Traps Fished | Crabs Sampled |
|-------------|------------------|----------------------|---------------------|----------------------|
| 6/16/2015 | Upper Mobile Bay | 132 | 345 | 762 |
| 7/15/2015 | Perdido/Wolf Bay | 95 | 173 | 392 |
| 8/28/2015 | Perdido/Wolf Bay | 125 | 140 | 425 |
| 9/11/2015 | Upper Mobile Bay | 65 | 423 | 900 |
| 9/25/2015 | Perdido/Wolf Bay | 128 | 145 | 560 |

APPROVED BY:

COMMITTEE CHAIRMAN

**TCC SEAMAP SUBCOMMITTEE
MINUTES
Tuesday, November 3, 2015
St. Augustine, FL**

Chairman J. Mareska called the meeting to order at 1:00 p.m. The following members and others were present:

Members

John Mareska, *Chairman*, ADCNR/MRD, Gulf Shores, AL
Read Hendon, USM/GCRL, Ocean Springs, MS
Ted Switzer, FWC/FWRI, St. Petersburg, FL
Chloe Dean, LDWF, Grand Isle, LA
Fernando Martinez, TPWD, Corpus Christi, TX
Butch Pellegrin, NOAA Fisheries, Pascagoula, MS

Others

Chris Stafford, FWC/FWRI, St. Petersburg, FL
Darin Topping, TPWD, Rockport, TX
Myron Fischer, LDWF, Grand Isle, LA
Karyl Brewster-Geisz, NMFS, Silver Spring, MD
Rick Burris, MDMR, Biloxi, MS
Jimmy Sanders, MDMR, Biloxi, MS
Tom O'Gnnell, NOAA Fisheries, Silver Spring, MD

Staff

Jeff Rester, *SEAMAP/Habitat Program Coordinator*, GSMFC, Ocean Springs, MS
Dave Donaldson, *Executive Director*, GSMFC, Ocean Springs, MS
Ashley Lott, *Staff Assistant*, GSMFC, Ocean Springs, MS

Adoption of Agenda

J. Mareska moved to approve the agenda with the exception of moving agenda item number five, Review of the SEAMAP Management Plan 2016-2020 down to agenda item number nine, and moving everything else up. There were no objections.

Approval of Minutes

R. Hendon moved to approve the SEAMAP minutes from the March 17, 2015 meeting as submitted. B. Pellegrin seconded and the motion was passed.

Administrative Report

J. Rester reported that the Committee last met in August 2015 jointly with the South Atlantic and the Caribbean to discuss the SEAMAP Management Plan 2016-2020. Survey wise, the Bottom Longline Survey and the Vertical Line Survey are completed. The Fall Plankton Survey took place from August 24, 2015 to September 10, 2015. Unfortunately, this survey was impacted by some mechanical breakdowns and Louisiana was not able to participate. It looks like this survey will not be used. Currently, we are doing the Fall Groundfish Survey and hope to finish this survey up

in the next few weeks. As for the budget, we still do not know anything. They are still trying to get a continuing resolution passed but not sure how this will impact SEAMAP. A copy of the SEAMAP TCC report has been provided and it details everything done in FY15.

Review of the SEAMAP Management Plan 2016-2020

SEAMAP is in the process of updating its Management Plan. It was first looked at in August at the Joint Meeting with the South Atlantic and Caribbean. Everyone is in consensus that it is too long and needs to be shortened. The current plan consists of three tiers: I. Maintain Existing Programs at Current Level and Develop to Full Utilization; II. Expand Current Projects to Collect Additional Data on Existing Platforms; and III. Develop New Fishery Independent Data Collection Programs. **J. Rester** asked the group if they would like to continue with these tiers or change them. Per **J. Mareska**, let's continue to use the three tiers.

For the first tier, Maintain Existing Programs at Current Level and Develop to Full Utilization, the committee went through the current surveys and made edits and got ball park estimates from each state to put in the management plan.

For the second tier, Expand Current Projects to Collect Additional Data on Existing Platforms, **T. Switzer** and **R. Hendon** will work on updating the language in the Dietary section. **R. Hendon** will also work on the Reproductive Histology section.

For the third tier, Develop New Fishery Independent Data Collection Programs, the following were presented:

1. Repetitive Time Drop Hooked Gear Survey – **T. Switzer** will work on a description.
2. Habitat Mapping – **J. Mareska** will provide a description.
3. Life History Surveys – collect information on winter spawning species similar to what was done for ESA (Expanded Stock Assessment Survey) – **T. Switzer** will develop a paragraph for this.
4. Acoustic and Video Survey – **R. Hendon** will develop a paragraph for this.
5. Prey Species Survey – **J. Rester** will work with **S. VanderKooy** on this.

R. Hendon stated that he does not see the full Management Plan as a means to funding. He feels that a better use of the committee's time would be to develop a one to two page summary that could be brought to Congress for funding. **J. Rester** agreed stating that this is what has been done in the past. For now, please develop you respective descriptions/paragraphs and any other edits/changes you would like to make to the Management Plan, and get them to **J. Rester** by November 30, 2015.

Review of the Vertical Line Survey Sampling Universe

J. Rester stated that this topic was discussed in August at a Vertical Line Meeting. At that meeting, the committee proposed to gather as much data as possible for the proposed sampling design and sampling universe. We are looking at three different depth zones across the Gulf of Mexico: 10-20m, 20-40m and 40-150m. What we had proposed to do would be to develop a grid system across that was 150m x 150m. These grid cells would then be classified into one of five categories: unknown habitat, known natural reef, presumed reef (natural or artificial), an oil and

gas platform or an artificial reef. At this point, more clarification is needed on how to classify these grids. Some of the grid sites will have multiple targets within a single grid. What do the partners need to sample these sites? Does more information about the grid need to be provided. Do the partners want to know length, width and height? All of this information will impact how the data base is built. Per **C. Dean**, Louisiana needs a known universe to sample. **J. Rester** has gone through most of the information provided to him from the partners and he should be able to get everything together in the next few months to share with the committee.

J. Rester then asked the group if missing a few areas would be a problem. He took the bathymetry lines and smoothed them out and drew grids but he was not able to do half grids which will mean missing a few areas. **J. Mareska** stated that this would not be a problem. **J. Mareska** asked how many classifications are within a grid. **J. Rester** stated that potentially all five, but based off the samples he has run, he only saw a few with multiple classifications. **T. Switzer** asked if he should dumb down his data on classifications or keep it more detailed. **J. Rester** stated that it is better to provide more information and he can filter it down if need be. **F. Martinez** had a question on how to handle the case if two adjacent rigs are chosen to be sampled. **T. Switzer** stated that they handle it by sampling on two different days. **F. Martinez** stated that he would prefer to go with a minimum distance between stations. **J. Rester** stated that in one of his programs they can do buffer zones so this is something that can be looked at. **J. Rester** has what he needs for now. He plans on getting the final design out to the committee by the end of the year for review prior to sampling which begins in March/April.

Final Review of the SEAMAP Trawl and Plankton Operations Manual

J. Rester sent out the latest updated version of the SEAMAP Trawl and Plankton Operations Manual to the committee several weeks ago for a final review. **T. Switzer** was the only one to report back with comments/edits to the manual. These were addressed in the meeting. **C. Dean** noted that a section dealing with codes was in the 2012 manual but not in the 2013 manual. **J. Rester** stated that he will add that section back in.

R. Hendon made a **Motion** that the subcommittee approve this draft of the SEAMAP Trawl and Plankton Operations Manual pending the above corrections. **T. Switzer** seconded the **Motion**. The **Motion** passed. It was also noted that this is a living document.

Review of the Bottom Longline Operations Manual

The Bottom Longline workgroup met in July and made extensive revisions and modifications to the Bottom Longline Operations Manual. From the workgroups perspective, they have finalized the manual and would like to present it to the subcommittee to either review again, accept or send back to the workgroup. **J. Mareska** had a question concerning the deployment guidelines on page five regarding the spacing and actual distance of the bottom longline. Is the group using GPS or when the weights go overboard? After some discussion, **R. Hendon** suggested that this section in the manual should be highlighted and sent back to the Bottom Longline workgroup to address. **J. Rester** noted that this can be handled over a webinar and this will be brought back up to the committee at the March 2016 meeting.

Review of the 2015 Bottom Longline Survey

SEAMAP recently completed its first year of standardized sampling during the Bottom Longline Survey. Were there any problems or concerns? Are there any recommendations to improve things for next year? **C. Dean** stated that Louisiana agreed to do 30 stations. However, due to time and weather issues, was not able to do all 30 stations. In the future, would like to reduce the number of stations. Maybe Texas can get some of Louisiana's western stations. **F. Martinez** stated that Texas had similar issues. They had poor weather and it was hard to reach some of the stations. They were not able to do zone 21 at all. **M. Lingo** stated that Texas is in the process of getting a new vessel for Brownsville that will be able to cover zone 21 but that will not happen for next year. **J. Mareska** stated that Alabama was able to do eight out of the nine stations they were assigned. No real issues. **R. Hendon** stated that Mississippi completed all of its stations. There were some higher costs associated with 48 hour trips but no really big issues. For 2016, **J. Mareska** recommended sampling zones 10-20 and removing zone 21 for next year and hopefully be able to pick it back up in 2017. **J. Rester** will run station sites for 2016 and put them on the website so the states can start planning for the 2016 survey. Also, if Texas could get a few stations in zone 16 to help Louisiana that would be great to help complete the survey as designed.

Election of Chair

T. Switzer was nominated as Chairman by **B. Pellegin** and seconded by **R. Hendon**. **R. Hendon** was nominated as Vice Chairman by **T. Switzer** and seconded by **C. Dean**. Motion passed.

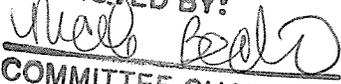
Other Business

B. Pellegin asked how states were handling the identification of bat fish. **C. Dean** stated that she will get with him to discuss. **B. Pellegin** stated that he will distribute to the committee a paper concerning bat fish.

There being no further business, the meeting was adjourned at 4:48 p.m.

**TCC DATA MANAGEMENT SUBCOMMITTEE
MINUTES**

**Tuesday, November 3, 2015
St. Augustine, FL**

APPROVED BY:

COMMITTEE CHAIRMAN

Chairman Vince Cefalu called the meeting to order at 8:35 a.m. The following members and others were present:

Members

Chris Denson, AMRD, Gulf Shores, AL
Nicole Beckham, AMRD, Gulf Shores, AL
Richard Cody, FWC, Saint Petersburg, FL
Cindy Bohannon, TPWD, Dickinson, TX
Vince Cefalu, LDWF, Baton Rouge, LA
John Froeschke, GMFMC, Tampa, FL
Bill Richardson, MDMR, Biloxi, MS
Paul Mickle (proxy for Brittany Chudzik), MDMR, Biloxi, MS
Dave Gloeckner, NOAA SEFSC, Miami, FL

Staff

David Donaldson, Executive Director, Ocean Springs, MS
Gregg Bray, FIN Program Manager, Ocean Springs, MS
Donna Bellais, ComFIN Programmer, Ocean Springs, MS
Ashley Lott, Administrative Assistant, Ocean Springs, MS

Others

Steve Turner, NOAA SEFSC, Miami, FL
Steve Brown, FWC, Saint Petersburg, FL
Chris Wright, NOAA Fisheries, Silver Spring, MD
Karyl Brewster-Geiss, NOAA Fisheries, Silver Spring, MD
Jackie Wilson, NOAA Fisheries, Silver Spring, MD
Joe Jewell, MDMR, Biloxi, MS
John Fallon, Audubon Nature Institute, New Orleans, LA
Gordon Colvin, ECS Federal for NOAA Fisheries, Port Jefferson, NY
Tom Sminkey, NOAA Fisheries, Silver Spring, MD
Mark Alexander, CT Deep MFD, Old Lyme, CT
Elizabeth Wyatt, ACCSP, Arlington, VA
Kellie Ralston, American Sportfishing Assoc., Tallahassee, FL
Matt Hill, MDMR, Biloxi, MS
Chris Blankenship, ALDCNR, Dauphin Island, AL
Mike Cahall, ACCSP, Arlington, VA
Darin Topping, TPWD, Rockport, TX
Kelly Lucas, MDMR, Biloxi, MS
Jason Brand, USCG, New Orleans, LA
Myron Fischer, LDWF, Grand Isle, LA

Adoption of Agenda

The agenda was approved as written.

Approval of Minutes

The minutes of the Data Management Subcommittee (DMS) meeting held on October 12th, 2014 in Gulfport, MS were approved as written.

Discussion of Commercial Electronic Reporting/Unified Trip Ticket

Andrew Petersen from Bluefin Data gave a presentation updating the subcommittee on the progress of development of the new unified trip ticket program. Development is ongoing for both the database and the end user interfaces. **Petersen** stated that they are developing a web interface for users permanently connected to the internet and a Google Chrome application that will allow users without a permanent internet connection to enter data locally before uploading it to the server. **Petersen** presented multi-state reporting functionality to make it easier for dealers that report landings for multiple states. **Chris Denson** asked to have the state logos on each form so dealers will know which state they are reporting to. The management tool capability was demonstrated where each agency can manage users, customize labels, maintain species and license lists pertaining to their agency and see reports in list or map views such as a list or map of non-compliant dealers for a certain timeframe. **Petersen** showed reports at the dealer level for negative reports, tickets that have been submitted and tickets still needing to be submitted. **Vince Cefalu** asked for functionality that allows dealers to report with a date range for negative reports. The functionality of license validation for states that provide license data was demonstrated by **Petersen** and the possibility of fishermen swipe cards for use in license validation and starting a trip ticket. Bluefin is providing more flexibility for the states to manage their electronic reporting system and is working towards having some dealers testing the new system in early 2016.

Discussion of Methods for Evaluating and Updating Commercial Conversion Factors

Steve Brown provided a presentation on the research done with ACCSP in evaluating the commercial conversion factors on the Atlantic Coast. With SEDAR and stock assessments, the question arose whether to use gutted weight or whole weight, numbers or gallons for final landings in the assessments and the validity of those conversions. Agencies involved in the research were NEFSC, SEFSC, FL, NC, SC, and GA. Analysis was done using SEFSC observer data and samples brought back were in whole condition. The sampling was done at dockside and from cold storage. **Brown** stated the final report has not been completed and preliminary results indicate that some historical conversion factors may be inaccurate. The subcommittee discussed the possibility of using similar methods for evaluating pertinent species in the Gulf of Mexico. They also discussed the potential for writing a joint proposal with ACCSP targeting FIS funds in 2016. If the proposal is funded, it could support research efforts in 2017. It was also suggested that GulfFIN could focus on a smaller suite of priority species as a first step. GulfFIN will address this approach in more detail at the March 2016 annual meeting.

Confidential Data Roll-Up Procedures Demonstration

Michael Lewis gave a presentation regarding a new method for displaying species specific commercial landings data that do not violate confidentiality rules. The new method would aggregate data instead of removing confidential data and allow for regional aggregated total

landings data being presented in Fisheries One Stop Shop (FOSS). For FOSS to implement this method in the Gulf, GulfFIN and state systems would have to implement a similar reporting method to prevent users from determining confidential landings data due to differences in the aggregate methods between the two systems. **Denson** stated if this regional aggregated method is implemented, some state partners will be burdened with possible increased data requests for species at the state level. The concern was voiced by the states that displaying data at the aggregated regional level will lead to data requesters contacting individual states in the Gulf for data and being able to derive the confidential data. After further discussion, the subcommittee decided to task the Commercial Technical Workgroup (CTW) to determine the best aggregate method to meet GulfFIN partner needs. The CTW will work on this issue and have a recommendation for the FIN Committee at the March 2016 meeting.

MRIP Update

Tom Sminkey provided an update on changes to MRIP Access Point Angler Intercept Survey in 2016. Sampling will allow for surveying of all anglers at selected sampling sites regardless of the mode they are fishing in. Exit counts of anglers not interviewed have been simplified removing the need for categorizing them as confirmed or unconfirmed anglers. NOAA is also implementing the dockside expenditure add-on survey in 2016. It's essentially the same form as was used in 2011 and GSMFC has already provided training materials to MRIP states. The expenditure survey will start January 1, 2016 and field sampling will run for 12 months.

Gordon Colvin also mentioned that MRIP is progressing on the fundamental survey design changes in the Access Point Angler Intercept Survey (APAIS) and the new Fishing Effort Survey (FES) transition. MRIP is now more focused on making implementation decisions utilizing design changes that have been developed over the last several years of research. MRIP will work with the regional FIN programs on developing regional implementation plans that describe regional data needs and priorities. MRIP is asking each regional FIN program to provide a plan outlining recreational sampling priorities with corresponding budgets for the next 2-3 years. This will allow them to try to address regional priorities and also lobby Congress for additional money to help support all the regional priorities. NOAA is also waiting for the final report from a Government Accountability Office (GAO) review of the federal recreational data collection program. The report should be delivered by the end of 2015 and NOAA is expecting a recommendation that centers on enhancing their strategic planning. **Colvin** stated that the regional implementation plans developed by the FIN partners will help NOAA with long term strategic planning. NOAA is also seeking a new National Research Council (NRC) review of MRIP assessing the degree of responsiveness and satisfaction of the previous review. They are also looking to obtain additional recommendations for additional survey improvements. NOAA hopes to have the review process completed in 2016 and report sometime in 2017.

iTAG Discussion

Gregg Bray stated that iTAG has approached GulfFIN and asked to potentially assist with housing databases and web interfaces for end users at GSMFC. Bray asked the state partners if they had any concerns about assisting iTAG if they determined GSMFC could provide assistance. State partners had many questions regarding what level of access and what quantity of data was being proposed to be stored at GSMFC. Bray stated he would be talking with the iTAG steering

committee members in the coming weeks to get answers to some of these questions and determine if GSMFC has a role to play in this process.

Status of Biological Sampling Activities

Bray provided an update on processing and data entry of biological sampling activities for 2015. He reminded everyone that 2015 sampling began in July due to funding shortfalls at the start of 2015. Most states have not been delivering 2015 sample data and need to start the process of entering data into the FIN DMS. Bray also stated that FFWC and GSMFC have finalized a process for Florida delivering biological sampling data directly to GulfFIN for loading into the FIN Data Management System. This will prevent Florida from key entering data into two systems. We are working to load many years of historical data and Florida will be able to provide current data in a timely manner.

Metadata Update

Bray provided a presentation from Ralf Riedel on the progress of metadata compilation. Riedel has completed entering data on fishing regulations, economic surveys, fisheries dependent and independent sampling programs, and licenses and fees. He is currently working on annual reports and other fisheries databases. Future work will be focused on meeting minutes, press releases, and publications.

Election of Officers

Bray provided a list detailing the history of Data Management Subcommittee chairpersons. Nicole Beckham was elected as the new Chairman and Justin Esslinger was elected as the Vice Chairman.

Other Business

Bray discussed the desire to meet for an extra day in March to discuss the MRIP Implementation Plan. MRIP is moving towards funding less pilot research and more implementation work. MRIP is requesting that GulfFIN provide a plan that outlines funding priorities for the Gulf region for the next 2-3 years. The priorities could include but are not limited to certified specialized surveys for species not covered well by the general surveys, increasing the timeliness of estimates, increasing precision of estimates, improved discard data, and census based methods for the for-hire sector. **Bray** would like to spend an additional day at the March FIN Committee meeting to determine our regional priorities and determine what additional information will need to be provided to develop the MRIP Implementation Plan.

Bray also discussed plans for a 2016 workshop focusing on potential new methods for collecting recreational discard data. The issue of the accuracy of discard data is an issue that was identified in the 2006 NRC report and MRIP has yet to fully explore the accuracy of current self-reported methods. GulfFIN has money to support travel for participants from the Gulf States. MRIP has approved spending to support other regions and has also agreed to provide consultant support. **Bray** plans to work with MRIP to develop a steering committee and a terms of reference for this workshop. The goal is to attempt to develop alternate methods for collecting discard data that could be pilot tested in 2016 or 2017.

Bray also stated that the tentative Gulf of Mexico SEDAR schedule was provided to each

committee member. SEDAR has struggled in recent years to recruit state participants from the Gulf of Mexico. If states are interested in sending a representative to future workshops SEDAR has provided funding assistance for travel in the past.

Review of 2014 Commercial Data

Each state provided feedback based on a review of the spreadsheets **Donna Bellais** sent out prior to the meeting. The States mentioned that the FIN DMS numbers were very close to their state totals and the slight differences likely indicated that they collected some additional data that has yet to be delivered to GSMFC. States representatives also mentioned that there were a few coding errors on their part. All necessary corrections to the 2014 data will be made at the state data level and submitted to GSMFC for loading into the FIN DMS. Upon reviewing the 2014 data, there was a concern of how each state defines Whole/Live Pounds, Landed Pounds and Reported Quantity for commercial landings especially shrimp and shellfish. The subcommittee tasked the Commercial Technical Workgroup to determine the definition and use of the above mentioned data fields and if needed, have GSMFC update the GulfFIN manual based on the outcome. **Bellais** presented a possible solution to better define the unknown areas in the East and West Gulf of Mexico. Alabama and Louisiana were concerned that these codes were being developed for areas far offshore that had very limited fishing trips and changing the entire coding system was too much trouble for the benefit gained. The subcommittee decided to table this issue until a later date.

Being no further business, the meeting was adjourned at 4:45 p.m.

APPROVED BY:

COMMITTEE CHAIRMAN

APPROVED BY: *Hebert*
Capt. Chad Hebert

COMMITTEE CHAIRMAN

Joint GSMFC/ASMFC Law Enforcement Committee Meeting Summary
St. Augustine, Florida
November 4, 2015

GSMFC LEC Members

Chad Hebert, LA, Chair
Rusty Pittman, MS, Vice-Chair
Scott Bannon, AL
Brandi Reeder, TX
Jason Brand, USCG
Cynthia Fenyk, NOAA OGC-ES
Tracy Dunn, NOAA OLE

ASMFC LEC Members

Michael Eastman, NH, Chair
Steve Anthony, NC, Vice-Chair
Kyle Overturf, CT
Doug Messeck, DE
Rama Shuster, FL
Bob Lynn, GA
Rene Cloutier, ME
Pat Moran, MA
Tim Huss, NY
Jason Snellbaker, NJ
Larry Furlong, PA
Kurt Blanchard, RI
Rob Kersey, MD
Jamie Green, VA
Bob Hogan, NOAA GC
Colby Schlaht, USCG
Wynn Carney, NOAA OLE

Staff

Mark Robson, ASMFC
Mike Waine, ASMFC
Kirby Rootes-Murdy, ASMFC
Steve VanderKooy, GSMFC
Debbie McIntyre, GSMFC

Others

Andrew Aloise, USFWS
Joe Gill, MS
Pat Keliher, ME
John Fallon, LA

Bryan Lee, FL
Christopher Colon, FL
William Martin, FL
Chuck Adams, FL
Lou Goodreau, MA
Tom O'Connell, MD
Chris Blankenship, AL
Troy Williamson, TX
Bruce Buckson, FL
Roy Crabtree, FL

The Gulf States Marine Fisheries Commission (GSMFC) Law Enforcement Committee (LEC) met in joint session with the Atlantic States Marine Fisheries Commission (ASMFC) LEC on Wednesday, November 4, 2015, in conjunction with the annual meetings of the ASMFC and GSMFC.

ASMFC LEC Business

Draft minutes of the May 5-6, 2015 meeting of the LEC were approved.

Mark Robson briefed the LEC on the proposed changes to the ASMFC Action Plan, and reviewed changes and additions to Goal 3. This goal specifically addresses enforcement issues. Members were presented with key tasks that need to be accomplished in 2016. While many tasks are ongoing from year to year, there were additional items to consider, including the addition of a new task to review enforcement needs for the offshore American lobster fishery, particularly in LCMA 3. Other action plan items include providing enforcement advice regarding compliance with new or changed regulations for Atlantic striped bass, tautog, American eel, and Jonah crab.

Members discussed the recent results of the enforcement matrix incorporated into the latest ASMFC Enforceability Guidelines prepared by the LEC. Members discussed the low ratings for "airborne" enforcement and considered changes to that category which reflects the value of airborne assets when used in conjunction with land or water-based patrol or electronic surveillance systems. Mark Robson reported on the notation that was added to the document at the suggestion of the ASMFC Policy Board. This notation reflects that airborne enforcement provides a unique capability when other means are not available.

ASMFC Species Issues

Mark Robson briefed LEC members on a request from ASMFC staff to compile and provide information from their respective states or agencies regarding general understanding of and compliance with changes to Atlantic striped bass bag regulation changes. A subcommittee of the LEC will compile information for the compliance report on the 2015 fishing year.

Jason Snellbaker presented information on the recent work of the tautog enforcement subcommittee. In follow-up, the enforcement subcommittee will continue to work on suggested details for implementing a tag system for harvested tautog. The LEC will also review and prepare written recommendations regarding regional management options for tautog to be considered in an upcoming addendum.

Mike Waine from ASMFC staff asked future input from the LEC to help document and report on any ongoing enforcement issues with the glass eel fishery. Members reported on the success of the Maine swipe card system in reducing illegal activity, but cautioned that continued vigilance will be necessary to suppress illegal harvest and export of glass eels. New Hampshire recently criminalized illegal harvest activity and went from 22 arrests to only 1, indicative of improvement. There was additional discussion of CITES Appendix II listing and the impact of that on export controls to limit illegal activity.

Kirby Rootes-Murdy from ASMFC staff provided a management overview of the horseshoe crab fishery. The report included information associated with biomedical harvest fishery in the Gulf of Mexico. The group discussed the current permitting requirements for biomedical harvest, including outside concerns that there may not be adequate controls on permitted harvest. For example, there is no fishery management plan for horseshoe crab in the Gulf of Mexico. There is not a total limit set for this harvest, only a daily limit. Permittees are allowed to take crabs from either the Gulf or the Atlantic. There was also discussion of the bait harvest in the Atlantic, and recent efforts to reduce impacts of imported crabs, which may affect the native horseshoe crab population.

GSMFC LEC Issues

Approval of Minutes: *On motion by Reeder, seconded by Bannon, the Joint LEAP/LEC meeting minutes from March 17, 2015 were approved.*

Hebert read an email from Charlene Ponce regarding nominations for the “Officer of the Year Award” for 2016 and advised that nominations should be returned to the Gulf Council.

Joint Meeting with GSMFC LEC

Because of the unique opportunity presented by the annual meeting in Florida, the LECs of both the ASMFC and GSMFC met in joint session. The meeting was productive and informative and members appreciated the opportunity afforded to share information. This meeting also meets several objectives of the ASMFC LEC to encourage information exchange among state and federal enforcement partners. There was also opportunity to coordinate areas of enforcement for consistency. Following are some of the joint topics that generated considerable discussion:

- *Aerial Enforcement needs and benefits.* The Gulf LEC members addressed the use and need for aerial assets in JEA patrols but there is an inability to reimburse for them under the existing contract. Tracy **Dunn** of NOAA OLE discussed current reimbursement issues, and indicated that JEA reimbursement is adequate for aerial work in offshore closed areas.

There is a discrepancy in dollar reimbursement between aerial patrol and boat patrol, something that needs to be worked on with budget officials. Discussion included agreement on the value of aerial patrol and its cost effectiveness when compared with offshore vessels working in similar areas. Additional discussion centered on the need for use of aircraft in conjunction with vessels to ensure solid enforcement cases where the vessel operator can be identified with certainty. ASMFC LEC members discussed issues with the current Enforceability Guidelines and the need to show a ratings column for the combined use of aerial and other assets. The ASMFC LEC passed a motion to re-visit this section of the guidelines for possible clarification and maybe re-scoring. A subcommittee was formed within the Atlantic states' LEC to look into this issue in their region. The subcommittee will be made up of Steve Anthony, Rama Shuster, Jamie Green and Kyle Overturf.

- TED enforcement checks and coordination with NOAA OLE reporting needs. **Reeder** explained the TED Boarding Form and the reasons that some of the state agencies in the Gulf are concerned about NOAA's requirements for reporting on TED violations and overall compliance estimates. She reviewed the Kemp's Ridley nests information and reported that the population is recovering and doing well. The overall shrimp effort in Texas has declined. While no shrimping is allowed during the month of June in that state, the number of turtle strandings reported during that month are often above those months when shrimping is occurring. **Shuster** and **Reeder** indicated that penalizing the fishermen by closing various areas to shrimping erodes the relationship between law enforcement and the fishermen while causing an economic impact on the state and the fishery from the closures. **Dr. Crabtree** stated that the goal is to keep this fishery open but protection must be provided for the turtles. The use of TEDs has allowed this trawl fishery to stay open. Further, there seems to be improved compliance with TED requirements which may be tied in with enforcement and outreach efforts. He is able to point to this improvement to prevent closures of shrimping areas. NOAA would work with Protected Resources to see if some adjustments could be made to the reporting requirements. **Dr. Crabtree** indicated that he would like to see this policy finalized by year-end.
- Enforcement of licensing in federal waters. There was considerable discussion regarding the issue of state licenses and the saltwater registry when fishing in federal waters. **Fenyk** shared a portion of the Magnuson Act with the group, explaining that the national registry is a statutory provision. There is no equivalent prohibition for not having a state license but there is a management measure. Members reported that individual states had differing provisions for enforcement of a recreational fishing license in federal waters. An unresolved question was how a fisherman would be cited by a state officer if they were found fishing in federal waters without a state license or federal registry license. While the Joint Enforcement Agreement with the state may govern prosecution, some states reported that they are not able to write a violation while that vessel is in federal waters. It was decided that a single point of contact would be helpful to get some guidance from NOAA. **Robson** will summarize exactly what the current issues are and whether more consistent enforcement and citation is needed for anglers fishing in federal waters without a license.
- Review of state and federal policies regarding recruitment, hiring, and retention of officers. The joint group reviewed the results of a survey conducted prior to the meeting related to

officer recruitment, hiring, and retention. Each state provided its own perspective on finding and training potential candidates for fisheries enforcement. Many had similar issues stemming from a reliable source for recruits and keeping them under existing salary scenarios. In the case of North Carolina, there is not an established academy for training, and they rely on field training officers, who are being reduced in number, partly because of lack of compensation. Members discussed the value of training academies for recruitment and replacement of officers. Additional training through the National Association of Conservation Law Enforcement Chiefs was discussed, and the need to address recruitment and training nationally.

- Illegal, under-reported and unreported (IUU) fishing issues in the Gulf of Mexico at the U.S./Mexico border. **Brand** (U.S. Coast Guard) reported on illegal, under-reported fishing by the Mexican lanchas. Gulf enforcement officers have had a problem with this threat for over 25 years. More resources and efforts have been dedicated to stopping this activity in the past four years during which time 38-39 boats have been seized per year. There are 1,130 lanchas incursions per year with a typical catch for one lancha of 800-1200 pounds per day. **Brand** explained that this issue is not a problem for Texas only but, with the allowable catch limits being factored in, the entire nation is being affected. These lanchas are taking about 10% of the national catch. Illegal catch actually exceeded the U.S. 2014 recreational catch. It was suggested that this situation would appear like a simple Lacey Act case but it was explained that, in federal waters, prosecution is not that clear cut. The IUU Enforcement Act of 2015 is currently in Congress. Enforcement is still short on resources and can use help.
- Atlantic states policies regarding safe-harbor provisions and offloading of multi-state quotas. The ASMFC presented issues associated with Safe Harbor (bad weather or mechanical breakdowns) by boats seeking shelter in out-of-state ports. Currently there are increasing numbers of safe harbor requests coming from commercial vessels out of North Carolina, affecting states such as Massachusetts and New Jersey. Most of the requests are legitimate, but difficulties arise from requests to offload catches, and whether the home state will agree to count those offloads against its own quota. Managing the requests and inspecting the vessels and catches is becoming a manpower drain for enforcement. The Gulf states do not utilize a Safe Harbor policy. **Bannon** explained the Gulf contingent's use of IFQs and VMS systems to avoid a derby-type fishery.

In general, the meeting went very well and there was great communication between the nearly 25 Gulf and Atlantic states and federal agencies from multiple regions who attended.

Adjourn

There being no further business to discuss, the meeting was adjourned at 5:10 p.m.

APPROVED BY:

COMMITTEE CHAIRMAN

**S-FFMC MENHADEN ADVISORY COMMITTEE
MINUTES
November 4, 2015
St. Augustine, FL**

Chairman J. Mareska called the meeting to order at 1:40 p.m. The following members and others were present:

Members

John Mareska, ADCNR/MRD, Dauphin Island, AL
Rick Schillaci, Menhaden Advisory Council for the Gulf of Mexico, Moss Point, MS
Jason Adriance, LDWF, New Orleans, LA
Ray Mroch, NOAA Beaufort Lab, Beaufort, NC
Jerry Mambretti, TPWD, Port Arthur, TX
Ron Lukens, Omega Protein, Inc., Gainesville, FL
Borden Wallace, Daybrook Fisheries, Inc., Empire, LA
Matt Hill, MDMR, Biloxi, MS
Joe O'Hop, FWC, St. Petersburg, FL

Others

Amy Schueller, NOAA Beaufort Lab, Beaufort, NC
Robert Leaf, GCRL, Ocean Springs, MS
Nancy Brown-Peterson, GCRL, Ocean Springs, MS– *via GoToMeeting*
Jeff Short, JWS Consulting LLC, Juneau, AK
Drew Minkiewicz, Kelley Drye & Warren LLP, Washington DC
Glenn Constant, USFWS, Lafayette, LA
Steve Brown, FWC, St. Petersburg, FL
Kellie Ralston, American Sportfishing Institute, Tallahassee, FL
Traci Floyd, MDMR, Biloxi, MS
Joe Jewell, MDMR, Biloxi, MS
Jimmy Sanders, MDMR, Biloxi, MS
Rick Burris, MDMR, Biloxi, MS
Paul Mickle, MDMR, Biloxi, MS
Harry Blanchet, LDWF, Baton Rouge, LA – *via GoToMeeting*
Fernando Martinez, TPWD, Austin, TX
Chad Hanson, Pew Charitable Trust, Crawfordville, FL
Laura Picariello, Audubon Nature Institute, New Orleans, LA
Tommy Williams, Daybrook Fisheries, Baton Rouge, LA
Ben Landry, Omega Protein, Houston, TX
Scott Herbert, Daybrook Fisheries, New Orleans, LA
Peter Himchak, Omega Protein, Tuckerton, NJ
Chris Lirette, Daybrook Fisheries, Empire, LA
Dalton Berry, Daybrook Fisheries, Inc., Empire, LA
Tabitha Lindley, Omega Protein, Inc., Houston, TX
Lee Alexander, Daybrook Fisheries, Inc. Empire, LA

Staff

Dave Donaldson, Executive Director, Ocean Springs, MS
Steve VanderKooy, Program Coordinator, Ocean Springs, MS
Debbie McIntyre, Staff Assistant, Ocean Springs, MS
Donna Bellais, ComFIN Programmer, Ocean Springs, MS
Ralph Hode, Program Coordinator, Ocean Springs, MS
Gregg Bray, Program Coordinator, Ocean Springs, MS

Adoption of Agenda

Mambretti moved to approve the agenda, Wallace seconded, and the agenda was approved as written.

Approval of Minutes

The MAC reviewed the draft minutes from the last annual meeting, March 17, 2015 in Point Clear, Alabama. Lukens moved to accept the minutes as written, Mambretti seconded, and the minutes were accepted as written.

Public Comment

The audience was offered the chance to provide any comment related to the agenda topics or anything else menhaden. There were no comments.

Review of 2015 Gulf Menhaden Season

Ray Mroch (NOAA) provided a report on the 2015 season to date. As of September 30, the landings were nearly 467K mt, a 42% increase over the previous year and 12% over the 5-year average for the equivalent time. **Mroch** noted that it was a cold, wet winter in 2014/2015 with high river discharge. The season started slow but picked up in July and August under fair weather. There were no tropical events in the Gulf through late summer and the September landings were the highest since 1999.

The ageing data from the port sample through August suggests a large number of two-year olds in the West around Abbeville and higher numbers of age-1 closer to the River in Empire and Moss Point suggesting good recruitment in 2014. In addition, there were more age-3 fish taken to the West as well. Three plants and 31 vessels operated in 2015. Nominal fishing effort through August was around 206K vessel-ton-weeks, a 5% increase over the previous year for the same time period.

Mroch reported the final landings based on previous seasons are projected to around 525K mt. This is a 34% increase over last year and 33% over the NOAA forecasted landings provided this past spring which were projected to be around 401K mt. **Mroch** also provided a preliminary forecast for 2016 based on the current effort and landings and suggested that 2016 should come in around 466K mt.

Lukens wondered if based on Guillory's work, recruitment shouldn't be good under the cold, wet conditions we saw this past winter. Guillory's model suggested a cold dry winter was ideal. The previous winter (2013/2014) was also cold and wet yet there are a large number of age-1 fish again. **Wallace** noted that even though 2014/2015 was cold and wet, there were a number of large number

of quick frontal passages which seem to be the driving factor for recruitment and we saw a very large juvenile index in Texas and Louisiana. **Mambretti** validated the Young-of-Year abundances reporting that the problems encountered in the Houston Ship Channel this past spring with menhaden plugging up the large ship's impeller screens in the port were all age-0 fish as well. This was also a high flood year which displaced a lot of the organisms in their bays were pushed further out.

Atlantic Menhaden Fishery Update

Mroch also provided a short update on the Atlantic season and some management actions on the part of the ASMFC's AMMB. Only one reduction plant operated in 2015 in Reedville and has landed a 129K mt through September. This is up 15% from the previous year and 2% over the 5-yr average. Preliminary results from the end of the October suggest that landings are up 13.3% from last year, but 3.6% below 5-year average. **Mroch** explained that the 1% 'episodic set-aside' of the total allowable catch (TAC) (about 7,000 mt) was not used this year and reallocated to the fishery by the AMMB, so the fleet may still be fishing on the Atlantic at this time.

Eight purse vessels unloaded at Reedville in 2015 for reduction. In addition, there were two Virginia bait vessels which unloaded a small amount of fish for reduction as well. Five or six additional bait only boats purse-seined and reported bait landings in 2015. Generally, effort and landings continue to decline since 1990. Because the fishery has been managed using a TAC in recent years, landings are less likely to be representative of abundance than before management efforts were put in place.

The 2014 benchmark assessment resulted in no overfishing or an overfished status for Atlantic menhaden so early this year, the TAC was increased by 10% raising the TAC to almost 188K mt which are split by the various east coast states. Virginia continues to get the largest share of 77% intended for reduction. Virginia and New Jersey also share the largest component of the bait allocation (14K mt and 19K mt respectively).

Texas 'Cap' for 2015

Mambretti reported that the Gulf fleet fished in Texas waters again this year (71 sets) and to date have landed just over 4M lbs which was about 12% of the available cap of 31.5M lbs.

Port Sample Acquisition and Processing in 2016

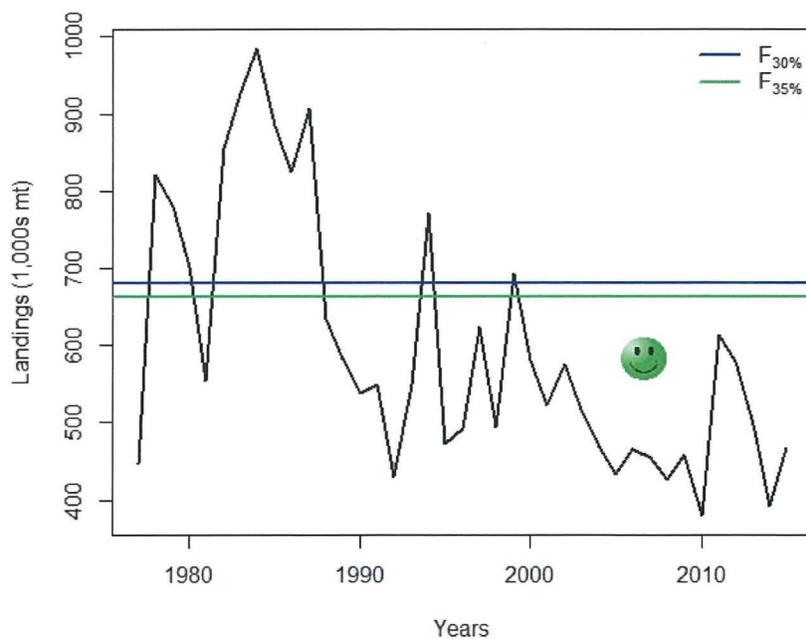
VanderKooy noted that the 2016 Port Sampling funds provided through FIN were reduced for 2016 but that they should be able to continue sampling for the coming year. There is still a need to find a long-term solution to the funding and the industry reps on the MAC are working to address this.

Evaluation of Landings and Forecast to Assessment Benchmarks

At previous meetings, the MAC discussed the need to evaluate where the annual landings were in relation to the target and thresholds established following the stock assessment in the FMP. **VanderKooy** summarized the previous discussions with the MAC and NOAA to examine a relative idea of where the industry was fishing in comparison to the accepted benchmarks and recruitment similar to the phase-plot generated in the previous assessments. **Dr. Amy Schueller** provided a very simple approach to look at the recent landings in contrast to the benchmarks of

F_{30%} and F_{35%} which were based on the equilibrium landings.

Overall the figure is helpful for seeing where the landings are annually. **Lukens** noted that this should be more like a trigger that allows for higher fishing in years with higher abundance. These limits are static but we need to have an assessment update available if we pass the target and threshold. **VanderKoooy** pointed out that these are not implying control measures, these benchmarks are based on the long-term averages. **Wallace** pointed out that if the benchmarks are approached, the MAC could evaluate the conditions and general trends in abundance and if the harvest was potentially harming the population. **Mambretti** wondered what would happen if we saw landings approaching or passing the benchmarks. Would the industry consciously reduced effort and landings? **VanderKoooy** noted that while these are currently static, with the update of the assessment, the benchmarks could be adjusted based on the population health. **Hill** indicated that the trend over time is more important than a single years point on a graph. This approach does seem to allow for monitoring. All agreed that some sort of recruitment index needs to be developed that can be reviewed prior to the season as well which would contribute to the 'trends' you are seeing. In combination, it should provide a good indication of any trends related to expected population size and help the industry plan for coming seasons.



Assessment Update

In an effort to get ready for the assessment update scheduled for next summer, the MAC reviewed a series of potential data elements and ongoing research related to menhaden. VanderKoooy invited Dr. Robert Leaf and Nancy Brown-Peterson to present work they had been conducting as well as collaborative research between GCRL and Dr. Schueller.

Expected Availability of 2015 FID

VanderKooy asked all the state representatives to estimate when their various fishery-independent data for 2015 would be final and available for use in the update. All reported that by March and April, the data should be entered and proofed and available to **Dr. Schueller** to begin working with for the various abundance indices. **Mroch** reported that although they were still trying to hire a replacement for Mrs. Ethel Hall, the long-term reader who had recently retired from NOAA, they were confident that by summer, the port samples should be aged and final for inclusion in the update.

Ageing of FID by States

VanderKooy reminded the MAC that the GSMFC had conducted an ageing workshop at the NOAA Beaufort Lab late in 2014 to train state biologists to read scales for ageing purposes. The intent was to allow the state agencies to potentially age their own independent samples of Gulf menhaden. A reference set has been developed which has been traveling to the various agencies over the last year and training sets were included in the FIN Biological Sampler training which takes place every May. At this time, none of the states have begun ageing fish from their monitoring programs but a few were increasing the detail in their data collection related to menhaden and both Mississippi and Alabama plan to age fish in the near future. This was a recommendation that came out of the SEDAR32A assessment when the reviewers suggested an evaluation of the nearshore menhaden populations outside the traditional fishing grounds. This will not be data available for the assessment update but might be by the 2019 benchmark.

Genetics of Menhaden

Mambretti provided a short overview of the ongoing genetics work being conducted by the TPWD's Joel Anderson in relation to Gulf menhaden populations. Again, this research originated from a recommendation that came out of SEDAR32A. The reviewers suggested development of menhaden specific nuclear DNA markers and reassessment of Gulf menhaden throughout their range using a larger, more informative genetic panel of markers to determine if a single stock does in fact exist. Anderson indicated that there are no local differentiations and a single genetic stock of Gulf menhaden from Texas to Florida. He found genetic variability is highest in areas around the center of distribution of the species in the northern Gulf between Galveston Bay and the Mississippi River. To date, Anderson's result suggest that Gulf menhaden genetic variability follows the pattern that would be expected in an unexploited wild stock not that of a highly exploited population; no genetic bottleneck exists in the population.

Methods for Forecasting Gulf Menhaden Condition Using Environmental Determinants

Dr. Robert Leaf (University of Southern Mississippi) presented the work he, **Nancy Brown-Peterson**, and Dr. Frank Hernandez are conducting to look at predictors of oil yield in Gulf menhaden. They examined the annual oil content Guillory had described in his 1983 paper and developed a model to reconstruct the content trend over time. Environmental parameters such as chlorophyll, sea surface temperatures, Mississippi River discharge and an ENSO oceanographic index were included as potential predictors. **Leaf** also borrowed several parameters from the SEDAR32A stock assessment such as growth parameters, weight at length, etc. The model fit well to the historical data from Guillory. The predicted yield since 1979 matched reasonably well with the total annual landings but they will need the actual oil production data to be able to truth the model. **Leaf** hopes to get cooperation from the industry to fill in the oil yield data since Guillory's

work. **Leaf** also looked at the condition factor derived from the assessment and compared to the lipid content over the course of the year to see intra-annual patterns of oil density validating that oil increases as the season progresses in anticipation of spawning in the fall and winter. The primary determinant for predicting oil yield is spring river discharge in the northern Gulf. With more data, this could be validated and make the model a useful tool to estimate what oil yields may be prior to the fishing season.

Leaf noted that while spring discharge seems to be driving oil production, it could be related to the meteorologic events Wallace had noted earlier in the day specific to the frequency and duration of weather front.

Improving Assessment of a Keystone Species in the Gulf of Mexico: Gulf Menhaden, *Brevoortia patronus*

Leaf and **Schueller** have received funding to conduct two years' worth of funding to age fish from the state agencies fishery-independent sampling. The study should be able to tie into any state data streams if and when the agencies begin to develop their own menhaden ageing programs. **Leaf** and **Schueller** will work with each agency to determine what level of collection effort must be conducted to facilitate this work. They will supply all the materials needed by each agency including storage, freezers, and will have funds to travel to the various locations to pick up the samples through the study period. This will help the states determine the amount and frequency of sampling required to adequately represent the population if and when they implement their own ageing programs.

Menhaden Fecundity

Nancy Brown-Peterson (GCRL) presented her and **Leaf's** recent fecundity work which revises the estimates originally provided by Lewis and Roithmayr in 1981. The intentions were to sample the population through the spawning season to improve the egg production estimates. Samples were obtained from the Moss Point plant from August until October and from April to June. The LDWF provided samples from January to March from their independent sampling program. However, there was not a source for fish during November and December so the current data does not encompass one full spawning season.

The results of her work indicates that size at maturity for Gulf menhaden is actually between 125 and 150mm FL which was theorized in the literature but never validated. Spawning seasonality is confirmed to be from mid-October to mid-march which also corresponds with the literature. Histology of the female fish indicate that Gulf menhaden are asynchronous batch spawners, potentially spawning every seven days over a roughly five month spawning season which means a single female may spawn up to 25 times in a single season. **Peterson** also explained that her work indicates that Gulf menhaden have determinate fecundity which means that prior to the spawning season, they produce all the eggs they will spawn that year. Her total fecundity estimate suggests egg production is about ten times higher than the value used in the benchmark assessment increasing total fecundity from around 37K to over 387K eggs annually per female. It is anticipated that this data will be included in some fashion in the assessment update.

Ecosystem Modeling in Single Species Stock Assessments

O'Hop provided an overview of the use of ecosystem models and work being conducted in Florida

related to examining their use in assessments. FWC is looking at genetics to better define populations. Disease epidemics may be incorporated to improve estimates of natural mortality. Likewise, unusual events like red tides or cold kills can be utilized in the mortality estimates. Finally, freshwater inflow/river discharge and climate changes are already being incorporated into the models such as was done in the Gulf menhaden and blue crab stock assessments. This information is essentially used as an index which is related to population abundance which may affect single or multiple life history stages.

O'Hop also discussed some of the efforts underway by the FWC to analyze fish guts. They have catalogued a number of prey items from the stomachs of predators in all inshore and offshore waters. The FWC is not looking at menhaden specifically but as they show up in diets of predators, they may be encountered. Prey in the guts are difficult to identify as they are often mostly digested but there are some hardparts that last longer in the stomach. The catalogue is beginning to add a number of these parts like jaw bones, otoliths, carapaces, shells, chelicerae and may help identify the prey in finer detail in the future. Currently, most 'fish' are unidentified but some are identifiable to at least the family or genus level. These data may be more useful in the future as more prey items are identified and incorporated into the predator/prey database.

Potential Modifications for Update

VanderKooy summarized the presentations and specifically noted the importance of getting a reasonable timeline to complete the update in 2016. Based on the agency data availability, the states will try to have their 2015 FID available to **Dr. Schueller** by June 2016. There will likely be a conference call/webinar to review the various indices in July or August and **Dr. Schueller** will present the update by the October 2016 MAC meeting in Louisiana. As a 'turn-of-the-crank' type of update, the inclusion of any 'new' data is probably not likely however, **Dr. Schueller** will include the fecundity data either as updated data or at least a sensitivity run to compare with the previous estimates. **Brown-Peterson** is continuing to collect some fish to fill in the gaps but have a more complete picture by the time the assessment is started.

Election of Chair

Wallace, the keeper of the chairman list, noted that the rotation of chair returns to the Federal partner and **Mroch** was nominated and elected without opposition.

Other Business

The roster and MAC membership was reviewed. To date, a 'bait' representative has not yet been provided to fill the position.

Lukens noted that he was retiring at the end of this year from Omega Protein, Inc and has been replaced by **Mr. Peter Himchak** who will be serving on the MAC in the future. He has enjoyed working with the MAC for the last several years and appreciates the time he has spent working in the fishery.

As a follow-up to the start of the meeting the audience was once again allowed opportunity to provide comment on anything related to the agenda or any other menhaden related item. There was no comment offered.

There being no further business, *Lukens moved to adjourn, seconded by Mambretti and the meeting adjourned at 4:25 p.m.*

**SEA GRANT FISHERIES EXTENSION ADVISORY PANEL
MINUTES**

Wednesday, November 4, 2015

St. Augustine, FL

Chairman J. Lively called the meeting to order at 1:55 p.m. The following members and others were present:

Members

Joy Hazel- FL Sea Grant
Chuck Adams- FL Sea Grant
Peter Nguyen- MS/AL Sea Grant
Dave Burrage – MS/AL Sea Grant
Julie Lively- LA Sea Grant
Tony Reisinger- TX Sea Grant

Guests

Judy Jamison, Gulf and South Atlantic Fisheries Foundation
Gary Graham, Gulf and South Atlantic Fisheries Foundation and TX Sea Grant
Laura Picariello, GULF Audubon
John Fallon, GULF Audubon

Guests were introduced. **Burrage** made the motion to accept the minutes from the March meeting. **Reisinger** seconded the motion. The minutes were approved.

Julie Lively was nominated to be Chair by **Reisinger**. **Burrage** seconded the nomination. The nomination was approved.

All active members were discussed for the Vice Chair position: TX—Tony Reisinger and Bill Balboa, LA—Julie Lively and Thu Bui, MS/AL—Dave Burrage and Peter Nguyen, and for FL—Betty Staugler and a replacement for Bryan Fluech. As several eligible members were not present, Bill Balboa was nominated by **Graham** to be the Vice Chairman. **Reisinger** seconded the motion. The vote was unanimous. **Balboa** will probably serve as acting chair in March as Chairmen Lively will be unlikely to attend.

Human Dimension Topics:

Texas: **Reisinger** stated that Texas and Florida have harmful algal blooms right now. They are increasing in frequency and there is an increase in aerosol issues. This year during mid September a large fish kill and aerosol issue event occurred at Bob Hall Pier. The toxin, Breve toxin, is killing coyote, ground squirrels and dogs. Shellfish harvesting restrictions are due to red tide. The origin has been tracked to off of Mexico and moving up the coast offshore, then moving back down the TX/ Mexico coastline. Red Tide Ranger volunteers track the blooms. NOAA publishes satellite images groundtruthed by the RTRs.

Chuck states that Red Tide is not increasing in Florida but still is impacting the fish and shellfish populations

DRSA 616



Reisinger suggests trying some unmanned drones to map and study. At 100,00 c/ml it can be seen it in the water. Ghost shrimp, mole crabs, hermit crabs and shrimp died off this year. Testing is still in the works, but perhaps this year something was worse. There are some reports of lionfish dying in Florida.

Louisiana: **Lively** states that the LFF- summit will be 3/1/2016 in New Orleans, and she provided several Coast Guard updates (from Bui via email) including an advisory seat will soon be open as her term is up. Additionally, they are looking for mooring guidance relative to abandoned vessels likely to become derelict in a storm. FL and TX thought they had resources on their websites. Also she reminded about new regulations that are coming soon that will impact the fishing industry. Lauren Land's app- WAVE is almost out. Waterway information for vessels is available at <http://wave.laseagrant.org/>.

Mississippi: Burrage is working with several universities in order to find a best way to engage the Vietnamese-American community. Economists, religious personnel, and sociologists are all part of the group. This is currently not working. An attempt was made by paying \$10/ head. It was determined that you have to go to them and advertise in nail salons, restaurants, and convenience stores so women know about it. They would like to see some focus on the artisanal and subsistence fishery.

Florida: Hazel discussed stakeholder driven fisheries forums which were a monthly meeting with and increase in attendance due to rumors of closures. The goal is to get ideas to improve the area and issues and to get these ideas up the chain to see change in the community. They have had about 60 attendees with a max of 20 commercial. They are slightly stuck as the snowbirds that retired have a different view than the local charter guys. Right now they have 3-4 main issues and are trying to prioritize. They are surveying all license holders to get a broader perspective.

Extension Reports:

Mississippi: Burrage is working to also prep fishermen on the new C.G safety regulations. **Graham** brought up new building requirements with the fear that no one will be able to afford new boat. **Burrage** suggested that safety items like winch guards should be included. Also, Fish Biz (a topic from the last meeting) is now up and running

Florida: Adams explained that the Barotrauma work and survey is still going. Citizen science is still being used for the bay scallop search, and the Goliath grouper count is now partially contributing to stock assessment. **Graham** mentioned Goliath grouper are believed to be bending the TEDS on some shrimp boats. Another FL project is marine fisheries management workshops. The audience is marina owners, bait shop owners, park rangers, etc. with the idea to train the trainer. FL is continuing for-hire sector workshops. They submitted an SK grant for a professionalism program similar to LA's, and some new agents have been hired.

Texas: Reisinger stated that Brown shrimp is having a really good season; white shrimp was lower. Rains knocked out most of oyster season. Master Naturalists (Coastal Naturalists) are 1st responders to Marine Mammal strandings and red tide. Some barotrauma work has continued with SeaQualizer. Another issue is H2B visa workers as there are not enough visas getting out. Mississippi, Alabama, Louisiana, and Texas Sea Grants are all getting many calls about it. Ben

Posadas is doing a wage survey out of Mississippi to get “seafood worker” wage. **Reisinger** explained that they might also have to pay room and board and travel. Additionally, the oyster industry is running into issue as a navigation group is claiming the bottom. The legal battle is ongoing.

Graham discussed TED and bycatch work (the foundation and Sea Grant collaboration with NMFS for outreach). NMFS wants an 88% exclusion rate. There are four levels of violations. Level one is unlikely to kill a turtle, while a four is a major violation. A perfect TED is considered 97% effective. Shark bites in TED flaps is on the increase. Education is needed that while 11/50 were not compliant, many of these may be a level 1. Also in 2014 - only 12-15 boats were inspected. State reports are not included, and the states argue that they often target the problem children, which would bias the data. http://sero.nmfs.noaa.gov/protected_resources/sea_turtle_protection_and_shrimp_fisheries/index.html. **Reisinger** and **Graham** are providing a compliance inspection form for retailers and buyers. Foundation had TED enforcement workshop to get consistent enforcement and violations. In terms of bycatch in the shrimp industry, sawfish and sturgeon were listed in the 2014 Biological Opinion. Fisheye BRDs are the most common but lose more shrimp than TEDS. Hammer line monofilament with streamers seem to scare fish out, but the data is limited (5% lower croaker). If under 88% TED compliance (84%- 88%) in two quarters then there will be an enforcement pulse. If below 84% then could be state and federal closure.

Louisiana: **Lively** stated that the Blue crabs stock and management is chaos. LA is moving to a blue crab license moratorium and an increase in fees to support enforcement. Two large scale diversions moved to planning and engineering. A national fisheries meeting is on hold, but they might try to hold a session at Sea Grant Week. Crab shedding documents will soon be updated. Coral reef habitat could lead to potential future pressures.

Guests: **Picariello** and **Fallon** provided a quick overview on what they have done and intended to do. There have been five Sea to Table events with Whole Foods. The new TED in skimmers rule is expected in Spring 2016. They have held two skimmer fleet working group meetings. **Picariello** is now Gulf-wide focused on evaluating fisheries for sustainability. The skimmer fleet is still red-listed by Seafood Watch because of the lack of TEDs. A focus of her work is on shrimp, and a Gulf-standard certification. They are working on getting ISO certification to be recognized as an international sustainability certification. Louisiana blue crab is almost done, and oyster will be in 2016. Even though GSMFC funding has ended, they want to stay integrated with all the states.

The next topic will be emailed at a later date.

Reisinger moved to adjourn the meeting. **Lively** seconded.

The meeting was adjourned.

APPROVED BY:
Joe D. Jewell
COMMITTEE CHAIRMAN

**TECHNICAL COORDINATING COMMITTEE
MINUTES**

**Wednesday, November 4, 2015
St. Augustine, FL**

Chairman Chris Denson called the meeting to order at 1:45 p.m. The following members, staff, and others were present:

Members

Jason Adriance, LDWF, New Orleans, LA
Richard Cody, FWC/FWRI, St. Petersburg, FL
Chris Denson, ADCNR/MRD, Gulf Shores, AL
Dan Ellinor, FWC, Tallahassee, FL
Joe Jewell, MDMR, Biloxi, MS
Christopher Mace, TPWD, Rockport, TX
Darin Topping, TPWD, Rockport, TX
John Mareska, ADCNR/MRD, Dauphin Island, AL
Glenn Constant, U.S. FWS, Baton Rouge, LA

Staff

James Ballard, GSMFC, Sport Fish/Aquatic Invasives Coordinator, Ocean Springs, MS
Gregg Bray, GSMFC, FIN Data Program Manager, Ocean Springs, MS
Ali Ryan, GSMFC, Sport Fish/Aquatic Invasives Staff Assistant, Ocean Springs, MS
Joe Ferrer, GSMFC, Systems Administrator, Ocean Springs, MS
Ralph Hode, GSMFC, EDRP Coordinator, Ocean Springs, MS
Dave Donaldson, GSMFC, Executive Director, Ocean Springs, MS

Others

Steve Brown, FWC/FWRI, St. Petersburg, FL
Frank Courtney, FWC/FWRI, St. Petersburg, FL
Jerry Mambretti, TPWD, Dickenson, TX
Kellie Ralston, American Sportfishing Association, Tallahassee, FL
Traci Floyd, MDMR, Biloxi, MS
Myron Fischer, LDWF, Grand Isle, LA
Mark Lingo, TPWD, Austin, TX
Tom Sminkey, NOAA Fisheries, Silver Spring, MD
Monica Wilson, FL Sea Grant, St. Petersburg, FL
Vincent Cefalu, LDWF, Baton Rouge, LA

Adoption of Agenda

A motion to adopt the agenda was made by John Mareska and passed unanimously.

Approval of Minutes

A motion to approve the minutes as written for the March 18, 2015 meeting was made by Joe Jewell and passed with no opposition.

Integrating Oil Spill Science into Fisheries Management

Monica Wilson with Florida Sea Grant provided an overview of the Sea Grant Oil Spill Science Outreach Team's activities. This group reviews and summarized the results of peer-reviewed, published research, funded by the Gulf of Mexico Research Institute and other organizations that are assessing the impacts of the oil spill on Gulf ecosystems. They then disseminate this information to coastal audiences through outreach publications and science seminars. Some of this research is looking at the impacts of the oil spill on the ecosystem at three different levels (community/ecosystem, population, and organism/individual) utilizing the CYP1A gene as an indicator of exposure to PAHs. These studies aim to tackle various questions about direct and indirect impacts and how those impacts transfer throughout the ecosystem, such as transfer of toxins through food webs, trophic cascade effects, exposure of toxins from the environment (like contaminated sediment), or other means of toxin transfer. Monica also shared two of the outreach team's recent publications ("Fisheries Landings and Disasters in the Gulf of Mexico", and "The Deepwater Horizon Oil Spill's Impact on Gulf Seafood") that are available on their website and summarize a lot of the studies covered in her presentation. She also stated that they have three more publications that will be released soon dealing with the impacts of the dispersants used during the oil spill response.

Overview of the First Annual Lionfish Removal and Awareness Day

Dan Ellinor shared two videos with the group that were produced to summarize the event that was held in May of this year in Pensacola and to raise awareness of the event for subsequent years. He then gave a presentation on the event which was held to increase interest in and awareness of the impacts that invasive lionfish are having on Florida's marine environment and to encourage the public to take a larger role in controlling the lionfish population through removals. The event had over 3,000 attendees at the main event in Pensacola and there were also thirteen lionfish removal events held simultaneously statewide. Over forty partners sponsored this event including Guy Harvey who personally attended the event. Dan also discussed ways to possibly expand the event in the future to incorporate more states and cover a larger portion of the invaded range.

Lionfish Diet Studies in the State of Florida: What Species are at Risk

Dan Ellinor provided a presentation on the lionfish invasion in Florida and the potential impacts it will have on the native marine environment. He provided a general overview of the invasive lionfish's ecology and invasive history in the Atlantic, Gulf of Mexico, and Caribbean waters. He also summarized the impacts that this invasive species is having on ecologically-important marine species including several cleaner and grazer species as well as economically-important ones in Florida comprising numerous species of grouper and snapper.

Update on Gulf FINFO

James Ballard provided an update on the status of the Gulf FINFO website and the activities that have taken place since the Commission took delivery of the site at the end of June. He also summarized how much the site is being used by the public using Google Analytics and expressed the importance of the states keeping their information on the site up-to-date so that it remains a useful tool for the public to utilize. James also stated that he will keep a Gulf FINFO update as a permanent TCC agenda item to remind the state partners about this importance.

Subcommittee Reports

Data Management – **Vince Cefalu** reported that during the subcommittee’s meeting on Tuesday, Andrew Petersen from Bluefin Data gave a presentation updating the subcommittee on the development of the new unified trip ticket program. Development is ongoing for both the database and the end user interfaces. Petersen demonstrated how some of the screens will look and the functionality for dealers that report tickets for multiple states. Bluefin is providing more flexibility for the states to manage their electronic reporting system and is working towards having some dealers testing the new system in early 2016.

Steve Brown provided a presentation overviewing research done with ACCSP regarding evaluating commercial conversion factors on the Atlantic Coast. Preliminary results indicate that some historical conversion factors may be inaccurate. The committee discussed the potential for using similar methods for evaluating pertinent species in the Gulf of Mexico.

Michael Lewis gave a presentation regarding a new method for displaying species-specific commercial landings estimates that do not violate confidentiality rules. The new method would aggregate data instead of removing confidential data, and allow for regional aggregated total landings estimates being presented in FOSS. For FOSS to implement this method in the Gulf, GulfFIN would need to implement a similar reporting method to prevent users from determining confidential landings results due to differences in reporting methods between the two systems.

Tom Sminkey provided an update on the changes to the MRIP Access Point Angler Intercept Survey that will take place in 2016. Sampling will allow for surveying of all anglers at selected sampling sites regardless of the mode they are fishing in, and exit counts of anglers not interviewed have been simplified, removing the need for categorizing them as confirmed or unconfirmed anglers. NOAA is also implementing the dockside expenditure add-on survey in 2016. It’s essentially the same form as was used in 2011 and GSMFC has already provided training materials to MRIP states.

Gregg Bray discussed plans for a 2016 workshop focusing on potential new methods for collecting recreational discard data. The issue of the accuracy of discard data is an issue that was identified in the 2006 NRC report and MRIP has yet to fully explore the accuracy of current self-reported methods. The goal is to attempt to develop alternate methods for collecting discard data that could be pilot tested in 2016 or 2017.

Finally, during the review of the 2014 commercial data, each state provided feedback based on a review of the spreadsheets that Donna Bellais sent out prior to the meeting. The States mentioned that the FIN DMS numbers were very close to their state totals and the slight differences likely indicated that they collected some additional data that has yet to be delivered to GSMFC. All necessary corrections to the 2014 data will be made at the state data level and submitted to GSMFC for loading into the FIN DMS.

John Mareska made a motion to accept the report as presented, and it passed unanimously.

SEAMAP - **John Mareska** stated that SEAMAP partners have completed most surveys for 2015. The fall groundfish survey should be completed by all partners by the end of November. The

budget for FY2016 has not been appropriated and the request is for level funding at the 2015 amounts.

The subcommittee is working to standardize the vertical line survey through a station selection procedure. The subcommittee's plan is to classify areas between 10 and 140m based on habitat type and quantify each habitat type. The goal is to be able to estimate the abundance of the different habitat types by depth strata. Stations will then be randomly selected based upon habitat type. Additional mapping activities will be undertaken to expand the sampling universe, but these mapping activities are not currently funded by SEAMAP.

The subcommittee reviewed, made additional edits, and approved the trawl and plankton operations manual.

The subcommittee discussed the bottom longline operations manual which has one area related to quantifying the actual length of mainline deployed that needs to be clarified. The subcommittee is expected to approve this manual at their next meeting. SEAMAP partners were able to complete the majority of their BLL stations, however, logistical issues such as mechanical, weather and vessel limitations prevented some stations from being sampled. In 2016 Florida will not be able to use NFWF funds to sample SEAMAP bottom longline stations and Texas is in the process of acquiring a vessel with greater range to sample the southernmost statistical zone. Therefore, in 2016, zones sampled will range from (statistical zone 10 to 20) FL/AL border to southern Texas.

The subcommittee is continuing to update the 2016-2020 Management Plan. Modifications from this meeting included maintaining all existing surveys for VL, BLL, trawl, and plankton and adding some additional surveys (funding-dependent) to address SEDAR needs for age, gut contents, and updating reproductive capabilities.

Ted Switzer (FL) will serve as the Chair in 2016 and Read Hendon (MS) as Vice-Chair.

A motion to accept the report was moved by Dan Ellinor, and passed without opposition.

Crab - **Steve VanderKooy** stated that the TCC Crab Subcommittee met in conjunction with the ASMFC's SEAMAP Crustacean Workgroup on Tuesday. The two groups shared information regarding options that are available for conducting a stock assessment of blue crabs. The Gulf provided an overview of the 2012 assessment conducted for the five Gulf states and a number of data and other modeling issues were presented for consideration by the Southeast member states. With funding issues, the Atlantic states are considering a 'stop light' approach similar to the one currently used in North Carolina.

The ASMFC provided an overview of the horseshoe crab fishery along the east coast and Florida reported on the recent developments related to a biomedical 'bleeding' operation which was beginning to harvest in their waters. Everyone reviewed the letter from the International Union for the Conservation of Nature warning the Gulf states of potential interest in horseshoe crabs in the Gulf of Mexico and agreed that for now, it is a state issue to be addressed if the interest is generated.

Finally, the Atlantic states made a presentation regarding ongoing terrapin research. The Gulf noted their participation in the Gulf Terrapin Workgroup meeting this past spring and relayed their plans to attend the National Terrapin Workgroup meeting scheduled for early 2016 in Mississippi.

Dr. Ryan Gandy was elected Chair for a second two-year term.

Joe Jewell made a motion to accept the report as presented, and it passed unanimously.

Artificial Reef - **James Ballard** pointed out that the subcommittee had not met since the previous report, however, the GSMFC's and ASMFC's Artificial Reef Subcommittees are continuing to revise their 2004 publication of "Guidelines for Marine Artificial Reef Materials: Second Edition" and hope to have that revised document completed in 2016. James also stated that he is starting to set up the next joint meeting with the ASMFC's Artificial Reef Subcommittee which they are planning to hold during the GSMFC's March 2016 meeting in TX.

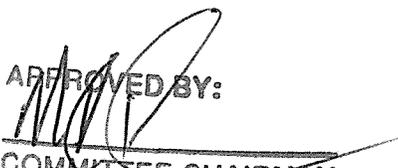
State/Federal Reports

Written reports were provided to the TCC members the week prior to the meeting for their review, and hard copies were incorporated in the meeting folders. During the meeting, Chris Denson asked the committee if they had any questions regarding the reports. With no questions, the committee decided to forgo reviewing the reports during the meeting. To see the full reports that were provided to the TCC, please see the minutes from the Commission Business meeting held on Thursday, November 5, 2015.

Election of Officers

Joe Jewell was elected as Chair, and Richard Cody was elected as Vice Chair.

There being no further business to discuss, Chris Denson adjourned the meeting at 3:50 p.m.

APPROVED BY:

COMMITTEE CHAIRMAN

**COMMISSION BUSINESS MEETING
MINUTES
Thursday, November 5, 2015
St. Augustine, FL**

Chairman **Dan Ellinor** called the meeting to order at 8:39 a.m.

The following Commissioners and/or Proxies were present:

Commissioners

Dan Ellinor, *Chairman*, FWC, Tallahassee, FL (*Proxy for Nick Wiley*)
Michael Hansen, Tallahassee, FL
Mark Lingo, TPWD, Austin TX (*Proxy for Carter Smith*)
Myron Fischer, LDWF, Baton Rouge, LA (*Proxy for Robert Barham*)
Brett Allain, Jeanerette, Louisiana
Chris Blankenship, ADCNR/MRD, Gulf Shores, AL (*Proxy for Gunter Guy*)
Jamie Miller, MSDMR, Biloxi, MS
Joe Gill, Jr., Joe Gill Consulting, LLC, Ocean Springs, MS Ocean Springs, MS

Staff

Dave Donaldson, *Executive Director*, Ocean Springs, MS
Nancy Marcellus, *Administrative Officer*, Ocean Springs, MS
Chery Noble, *Administrative Assistant*, Ocean Springs, MS
Steve VanderKooy, *IJF Program Coordinator*, Ocean Springs, MS
Jeff Rester, *SEAMAP/Habitat Coordinator*, Ocean Springs, MS
Gregg Bray, *FIN Program Manager*, Ocean Springs, MS
Joe Ferrer, *Systems Administrator*, Ocean Springs, MS
Ralph Hode, *Fisheries Disaster Recovery Coordinator*, Ocean Springs, MS
James Ballard, *Sport Fish Restoration/Aquatic Invasives Coordinator*, Ocean Springs, MS
Angie Rabideau, *Staff Accountant*, Ocean Springs, MS
Ali Ryan, *Staff Assistant*, Ocean Springs, MS

Others

Kelly Lucas, MSDMR, Biloxi
Joe Jewell, MSDMR, Biloxi
Roy Crabtree, NOAA Fisheries/SERO, St. Petersburg, FL
Glenn Constant, USFWS, Baton Rouge, LA
Allan Brown, USFWS, Atlanta, GA
Tony Reisinger, Texas Sea Grant Program, San Benito, TX
John Fallon, Audubon Nature Institute, GULF, New Orleans, Louisiana
Laura Picariello, Audubon Nature Institute, GULF, New Orleans, Louisiana
Chad Hebert, LDWF, Baton Rouge, LA

Brief Overview of Commission Voting Procedures

D. Donaldson reviewed the Commission's voting procedures. He stated that for informational purposes, the Atlantic States Marine Fisheries Commission (ASMFC) uses the One-Page Robert's Rules of Order that is in the Briefing Book. He then reviewed the Proxy Form used by ASMFC. He asked if the Commission would like to develop a similar form to be used for the meetings. *The Commissioners agreed to adopt a similar proxy form to be used for future meetings. The form will be available on the Commission website. The proxy form will be for a permanent proxy ongoing or specified for each particular meeting.*

Adoption of Agenda

J. Gill moved to adopt the agenda as submitted. **M. Hansen** seconded and the agenda was adopted as submitted.

Approval of Minutes

M. Fischer stated the date (year) on the State/Federal Fisheries Management Committee minutes and the link to the FINFO website were incorrect. **J. Gill** moved to approve the State/Federal Fisheries Management Committee minutes with these changes. **M. Hansen** seconded and the minutes were approved with changes.

C. Blankenship moved to approve the minutes of the Commission Business Session held on March 19, 2015. **T. Williams** seconded the motion and the minutes were approved.

Public Comment

There was no public comment.

GSMFC Standing Committee Reports

Law Enforcement Committee (LEC)

C. Hebert reported there were no action items resulting for the joint meeting which took place Wednesday, November 4, 2015. He said all state reports for both ASMFC and GSMFC were provided electronically in advance and any of the state highlights that were noted will likely be addressed in the state directors' reports later in this Commission Meeting.

The combined enforcement group discussed several topics including Joint Enforcement Agreements (JEAs), illegal and unreported fishing (IUU), and several fishery issues that have potential to effect the Gulf, and others that may affect the Atlantic.

There were two Gulf related issues under the JEA discussion. Specifically, discussing the use and need for aerial assets in JEA patrols, but an inability to reimburse for them. A subcommittee was formed within the Atlantic States LEC to look into this issue in their region. The other issue was related to NOAA's requirements for reporting on TED violations and overall compliance estimates.

The Coast Guard reported on illegal, under-reported fishing by the Mexican launches. The Atlantic was surprised to hear of such an issue and would make inquiries into their own domestic IUU issues. It was suggested that this situation was a simple Lacey Act case but it was explained

that in Federal waters, prosecution is not that clear cut. The IUU Enforcement Act of 2015 is currently in Congress. Enforcement is still short on resources and can use help on this issue.

The Atlantic states presented issues associated with Safe Harbor (bad weather or mechanical breakdowns) by boats seeking shelter in out-of-state ports. The Safe Harbor program was implemented for safety at sea but over time has become a way for fishermen to land fish in other states with different regulations, or to stage near fishing grounds outside their home state which operate under a derby system. The Gulf States do not utilize a Safe Harbor but rather rely on the IFQs and VMS systems to avoid a derby type fishery.

The Atlantic states provided short overviews of two fisheries which have the potential to become issues in the Gulf - the horseshoe crab fishery and the glass eel fishery. While there are major management and enforcement issues along the Atlantic associated with these fisheries, they have not yet become viable fisheries in the Gulf. However, there is considerable interest along the Atlantic to locate and harvest resources from the Gulf.

Finally, the joint group reviewed the results of a survey conducted prior to the meeting related to officer recruitment, hiring, and retention. Each state provided their own perspective on finding and training potential candidates for fisheries enforcement. Many had similar issues stemming from a reliable source for recruits and keeping them under existing salary scenarios.

In general, the meeting went very well and there was great communication between the nearly 25 Gulf and Atlantic states and federal agencies from multiple regions that attended.

J. Gill moved to accept the Law Enforcement Committee report. M. Lingo seconded the motion and it passed.

Technical Coordinating Committee (TCC)

J. Ballard reported Monica Wilson with Florida Sea Grant provided an overview of the Sea Grant Oil Spill Science Outreach Team's activities. This group reviewed and summarized the results of research assessing the impacts of the oil spill on Gulf ecosystems. They then disseminated this information to coastal audiences through outreach publications and science seminars. Some of this research is evaluating the impacts of the oil spill on the ecosystem at three different levels (community/ecosystem, population, and organism/individual) utilizing the CYP1A gene as an indicator of exposure to PAHs. These studies aim to tackle various questions about direct and indirect impacts and how those impacts transfer throughout the ecosystem, such as transfer of toxins through food webs, trophic cascade effects, exposure of toxins from the environment (like contaminated sediment), or other means of toxin transfer. Monica Wilson also shared two of the outreach team's recent publications, "Fisheries Landings and Disasters in the Gulf of Mexico," and "The Deepwater Horizon Oil Spill's Impact on Gulf Seafood" which are available, along with other publications, on their website.

J. Ballard reported Dan Ellinor gave an overview of the first Annual Lionfish Removal and Awareness Day that was held in Florida this year, and discussed ways to possibly expand the event in the future to incorporate more states and cover a larger portion of the invaded range. Dan Ellinor also provided a presentation on the lionfish invasion in Florida and the potential impacts it will

have on the native environment. He stated he provided an update on the Gulf FINFO website and expressed the importance of the states keeping their information on the site up-to-date.

Joe Jewell was elected Chair for TCC and Richard Cody was elected Vice Chair.

Subcommittee Reports

Data Management

J. Ballard reported Andrew Petersen from Bluefin Data gave a presentation updating the subcommittee on the development of the new unified trip ticket program. Development is ongoing for both the database and the end user interfaces. Steve Brown provided a presentation regarding research done with ACCSP regarding evaluating commercial conversion factors on the Atlantic Coast. Preliminary results indicate that some historical conversion factors may be inaccurate. The committee discussed the potential for using similar methods for evaluating pertinent species in the Gulf of Mexico. Michael Lewis gave a presentation regarding a new method for displaying species-specific commercial landings estimates that do not violate confidentiality rules. The new method would aggregate data instead of removing confidential data, and allow for regional aggregated total landings estimates being presented in FOSS. For FOSS to implement this method in the Gulf, GulfFIN would need to implement a similar reporting method to prevent users from determining confidential landings results due to differences in reporting methods between the two systems. Tom Sminkey provided an update on the changes to the MRIP Access Point Angler Intercept Survey that will take place in 2016. Sampling will allow for surveying of all anglers at selected sampling sites regardless of the mode they are fishing in, and exit counts of anglers not interviewed have been simplified, removing the need for categorizing them as confirmed or unconfirmed anglers. NOAA is also implementing the dockside expenditure add-on survey in 2016. It is essentially the same form that was used in 2011 and GSMFC has already provided training materials to MRIP states. Gregg Bray discussed plans for a 2016 workshop focusing on potential new methods for collecting recreational discard data. The issue of the accuracy of discard data is an issue that was identified in the 2006 NRC report and MRIP has yet to fully explore the accuracy of current self-reported methods.

SEAMAP

J. Ballard reported the SEAMAP partners have completed most surveys for 2015. The fall groundfish survey should be completed by all partners by the end of November. The budget for FY2016 has not been appropriated and level funding at the 2015 amounts has been requested. The subcommittee is working to standardize the vertical line survey through a station selection procedure. The plan is to classify areas between 10 and 140m based on habitat type and quantify each habitat type. The goal is to be able to estimate the abundance of the different habitat types by depth strata. The subcommittee reviewed, made additional edits, and approved the trawl and plankton operations manual. The subcommittee is continuing to update the 2016-2020 Management Plan. Modifications from this meeting included maintaining all existing surveys for VL, BLL, trawl and plankton and adding some additional surveys (funding dependent) to address SEDAR needs for age, gut contents, and updating reproductive capabilities. Ted Switzer (FL) was elected Chair for 2016 and Read Hendon (MS) was elected Vice-Chair.

Crab

J. Ballard reported the Subcommittee met in conjunction with the ASMFC's SEAMAP Crustacean Workgroup Meeting this week. The two groups shared information regarding options that are available for conducting a stock assessment of blue crabs. The ASMFC provided an overview of the horseshoe crab fishery along the east coast and Florida. They reported on the recent developments related to a biomedical 'bleeding' operation which was beginning to harvest in their waters. Ryan Gandy was elected Chair for a second two-year term.

M. Hansen moved to accept the *Technical Coordinating Committee report*. **J. Gill** seconded and the motion passed.

State-Federal Fisheries Management Committee (S/FFMC)

Menhaden Advisory Committee –

S. VanderKooy reported the Menhaden Advisory Committee met Wednesday, November 4, 2015 but there were no action items to report. Ray Mroch (NOAA) provided a report on the 2015 season to date. He said as of last week, the landings were 466K mt, a 36.7% increase over last year and 9% over the 5-year average. He noted that it was a cold, wet winter with high river discharge which traditionally is good for recruitment. The port sample ageing data through August suggests a large number of two-year olds in the West around Abbeville and higher numbers of age-1 closer to the River in Empire and Moss Point. Three plants and 31 vessels operated in 2015. The final landings are projected to be around 525K mt. This is a 34% increase over last year and 33% over the NOAA forecasted landings provided this past spring. NOAA provided a preliminary forecast for 2016 based on the current effort and landings to be around 466K mt.

S. VanderKooy reported R. Mroch also provided a short update on the Atlantic season and some management actions on the part of the ASMFC's AMMB. Only one reduction plant operated in 2015 in Reedville and has landed a 129K mt through September. This is up 15% from the previous year and 2% over the 5-yr average. The 2014 benchmark assessment resulted in no overfishing or an overfished status for Atlantic menhaden, so early this year, the TAC was increased by 10% raising the total allowable catch to almost 188k mt which are split by the various east coast states. Virginia continues to get the largest share, 77% intended for reduction.

S. VanderKooy stated Jerry Mambretti reported the Gulf fleet fished in Texas waters again this year and to date have landed just over 4M lbs which was about 12% of the available cap of 31.5 M lbs. **S. VanderKooy** noted that the 2016 port sampling funds provided through FIN were reduced for 2016 but that they should be able to continue sampling for the coming year. There is still a need to find a long-term solution to the funding and the industry representatives on the MAC are working to address this.

S. VanderKooy reported the MAC discussed the need to evaluate where the annual landings were in relation to the target and thresholds established following the stock assessment in the FMP. Dr. Amy Schueller provided a very simple approach to look at the recent landings in contrast to the benchmarks. All agreed that some sort of recruitment index needs to be developed that can be reviewed prior to the season as well. In combination, it should provide a good indication of any trends related to expected population size and help the industry plan for upcoming seasons.

S. VanderKooy reported the group reviewed a series of potential data elements and ongoing research related to menhaden for consideration prior to the assessment update in 2016. The states all provided their timelines for having independent data finalized as well as NOAA's estimate on data entry of the CDFRs and ageing data through 2015. Several presentations were made which included the genetics work in Texas, Florida's ecosystem modeling and diet lab, GCRL's oil yield forecasting model, and the ageing of fishery-independent menhaden data which will be conducted by Dr. Leaf (GCRL) and Dr. Schueller over the next couple years. In addition, Nancy Peterson (GCRL) presented her recent fecundity work which revises the estimates originally provided by Lewis and Roithmayr in 1981. The results of her work indicates that Gulf menhaden are asynchronous batch spawners, potentially spawning every 7 days over a 5+ month season. She explained that they have determinate fecundity which means that prior to the spawning season, they produce all the eggs they will spawn that year. Her total fecundity estimate suggests egg production is 10X higher than the value used in the benchmark assessment increasing total fecundity from around 16K to over 380K annually per female. It is anticipated that this data will be included in some fashion in the assessment update. The MAC plans to have the state FID available to Dr. Schueller by June 2016. There will likely be a conference call/webinar to review the various indices in July or August and Dr. Schueller will present the update by the October 2016 MAC meeting in Louisiana.

The rotation of chair returned to the Federal partner and Ray Mroch was elected chair.

T. Williamson moved to accept the *S/FFMC Menhaden Advisory Committee report*. **J. Gill** seconded and the motion passed.

Sea Grant Fisheries Extension Meeting Report

T. Reisinger gave the Sea Grant Fisheries Extension Meeting Report. He stated Julie Lively was elected the new Chair and Bill Balboa Vice-Chair. He reported the topic for this meeting was human dimensions and each component gave a report on the topic and their other Extension activities. The next topic has not been decided but will be emailed to each component at a later date. Complete details of the Sea Grant meeting are in the Sea Grant Fisheries Extension section of the minute book.

NOAA Fisheries Southeast Regional Office Comments

R. Crabtree reported the Regional Office finalized a strategic plan this fall that will help guide the activities from 2016-2020. It is posted on their website. He stated there has been a moratorium on shrimp permits for about a decade and that expired in October 2015. The Council is working on Shrimp Amendment 17A which has alternatives to extend the moratorium and final action will probably be taken at the January or April meeting. He said he expects they will start a series of scoping meetings to revisit the issue of requiring TEDs in skimmer trawls. He reported the TAC for Red Snapper this past season was set at 14.3 million pounds which is the highest it has been. The Council took final action on Amendment 28 this year which made revisions to the allocation of red snapper. That has been submitted to the Secretary then it will go through the review process and public comment. It would basically shift the allocation from 49% recreational to 51.5%. The council also approved a framework amendment which would allow NOAA to withhold 352 thousand pounds of the commercial quota this fall so that it would not be released into the IFQ

fishery. That would allow time to go through the review process of Amendment 28 and if Amendment 28 is approved, then that 352 thousand pounds would be added to the recreational fishery before the season opens in June. The next Gulf Council meeting is in June and the big remaining item with respect to red snapper is Amendment 39 which looks at regional management options for the recreational fishery. The Council could take final action on this in January. The state by state allocation has not been agreed upon and whether federally permitted charter boats should be included in the regional management has not been decided.

There was a new stock assessment on gray triggerfish and the Council is going to move forward on a new rebuilding plan for gray triggerfish. Ending overfishing of triggerfish has been successful but the recruitments have continued to be at very low levels and the stock has continued to decline as a result of those low recruitments. There has been discussions between the science center, the council staff, and some representatives of the council's SSC requesting additional information and there probably will be another SSC meeting to reveal all of that before the January Council meeting. The Council also approved a framework amendment which would reduce the allowable harvest of greater amberjack, approximately 60 thousand pounds for 2015.

R. Crabtree said as far as Habitat Issues, NOAA is working with the Army COE which is in the process of completing a feasibility study on sediment diversion from the Mississippi River. NOAA is a cooperating agency and has provided comments on that regarding the impacts of the diversion project on listed species such as turtles, sturgeon and marine mammals. NOAA is also involved in the environmental compliance documents for the Restore Act funds that have come out of the Deepwater Horizon for restoration. A draft environmental impact statement was released on October 5th and it is in the public comment phase which will run through December 4th.

USFWS Region 4 Office Comments

G. Constant reported A. Brown is very satisfied with the reconnection with their office and the Commission and states since D. Frugé left the Gulf Coordination Office. He stated there are three funding opportunities he would like to share with the states. There is funding available for states that deal with fish passage; ideals for projects for fish habitat, which is part of the national fish habitat partnership program southeast aquatic resource partnership; and aquatic nuisance species funding which the Commission is already administering a small grants program. J. Ballard will report on that during another agenda item. He said DOI is developing work groups to coordinate concepts and ideals that might morph into proposals. The topics they would like input on are invasive species, fire, coastal birds, coastal resilience through restoration, blue water offshore projects, land conservation, water, and coastal stewardship in connecting with nature. He said if anybody is interested in being a part of the work groups, to contact him.

NOAA Fisheries Budget Update

D. Donaldson stated Tab F in the Briefing Book highlights the FY2016 budget. The budget has passed in the House and Senate. He said there is a slight increase from 2015 due to NMFS consolidating items into fewer categories called PPAs. By consolidating, it actually makes it a little more difficult to determine what kind of impact it is going to have on the line items that the Commission is interested in such as expanding stock assessments, fisheries statistics, the FINs, and regional studies (SEAMAP). There are some changes in the House and Senate for the fisheries data collections surveys and assessments. It is actually down in both the House and the Senate.

The regional councils and fisheries commissions were level funded in the House and slightly increased in the Senate. IJF was zeroed out in the House but increased in the Senate, and enforcement was level in the House but had a slight increase in the Senate.

D. Donaldson reported that in Tab G, the Senate Appropriations Bill, there is information on the red snapper stock assessment that allocated \$5 million to develop and implement an independent system from NOAA. There is information about the MRIP and there is concern about the program and that no funding is provided to implement the transition from the fishery. There was language on the electronic monitoring and reporting and continuation of some funds they provided last year. There is some information about oyster reef restoration encouraging NMFS to work with the states to support a shell recycling program via the external funding programs such as SK and MARFIN. There was also that gave \$5 million to Sea Grant to develop alternative approaches for recreational data collection including a tag system. Once there is a finalized budget, hopefully there will be more detail on what kind of impacts it will have on IJF, SEAMAP, and GulfFIN. **D. Donaldson** stated the Commission is struggling with level funding and they are going to continue to work to get more funding for these programs.

Discussion of Legislative Issues and Actions

D. Donaldson stated the main issue is the reauthorization of the Magnuson-Stevens Act. He said it does not appear that it will happen soon, if at all. It was mentioned that it probably will not be reauthorized into the new administration is in office. He reviewed new bills (Tab I and J) that were not out last meeting, HR1335 and HR3094. He said there were recent hearings on the bills and Secretary Barham and Executive Director Nick Wiley provided testimony. **T. Williams** stated he would like to go on record to say that both Secretary Barham and Director Wiley did an excellent job in representing their position.

Review and Approval of GSMFC Administrative Documents

D. Donaldson reviewed the two documents that need to have final approval. Under the Rules and Regulations Document, the Financial Disclosure Form and the composition of the Executive Committee need to be decided. He also stated the Administrative Manual has been updated and asked for approval.

The Commissioners discussed the examples of the Financial Disclosure forms and decided to use a form similar to what ASMFC uses and modify it to fit the Gulf needs. It was decided that any financial interest should be reported and suggested all Commissioners should submit the form. There should also be a deadline date for submission on the form. **D. Donaldson** will modify the form and distribute it to the Commissioners for further comment and action will be taken at the next meeting.

D. Donaldson stated that it has been suggested that the Executive Committee consist of the Five State Directors and the Chair, if the Chair was not a State Director. There was discussion that this has not been an issue in the past so there is not a need to change it. Some were concerned that the Executive Committee makes decisions that could have impacts on the states and the state should have a representative on the committee. It was pointed out that the Executive Committee only makes suggestions to the Commission, that the full Commission must approve any action approved by the Executive Committee. *After more discussion, J. Gill moved to leave the composition of*

the Executive Committee as is and to not discuss this issue again for another year. After further discussion, J. Gill withdrew the motion. There was never a formal motion to change the composition of the Executive Committee, so there was no need for a motion because the Commission agreed to no action on this item.

D. Donaldson stated that the auditors had suggested changes to the Administrative Manual and after further review, it was realized the entire manual needed updating. He stated the Manual was distributed to the Commission for review and asked if anyone had any changes/additions to the Manual.

J. Gill moved to accept the updated version of the Commission's Administrative manual. M. Lingo seconded and the motion passed with no opposition.

Discussion of Marketing Opportunities for FINFO –

D. Donaldson stated that at a recent State Director's meeting it was identified that the Commission needs to take advantage of the FINFO website. He said J. Ballard has been charged with the maintenance and upkeep of the site. **J. Ballard** gave a presentation on the FINFO website. After the presentation, he asked that all the states add links to their webpages linking back to FINFO. He asked the Commission for their permission to purchase the News Ticker for the site and to keep maintaining and updating the site. The Commission agreed to purchase the News Ticker and for the Commission to keep maintaining the website. **C. Blankenship** asked J. Ballard to email the Tool Kit to all of the states so they may share this on social media.

Discussion and Action of Restore Act Aquatic Invasive Species Proposal

J. Ballard gave a presentation on the Aquatic Invasive Species proposal requesting RESTORE Act funding. The Commission agreed to move forward with requesting funding. **D. Ellinor** will take the proposal to the ANS staff in his state and ask them to send it through the proper channels to the Governor, who sits on the Gulf Coast Ecosystem Restoration Council, which decides which proposals will be funded through the RESTORE Act. If this is not possible, the Commission will then request FWS take the lead to request funding for the proposal.

Demonstration of the New GSMFC Website

D. Donaldson stated staff was charged with updating the Commission web site. **J. Ferrer** gave a presentation on the new site and asked for suggestions or comments to help improve the site. The Commissioners were pleased with the new site and stated he had done a great job updating the site.

Interjurisdictional Fisheries Program Report

S. VanderKooy stated the *Gulf and Southern Flounder Management Profile* was modified into the new format and has completed the 30-day public comment period, with no further comment, and asked for final approval by the Commission. **S. VanderKooy** asked that the future Management and Biological Profiles be reviewed and approved by the TCC only, to speed up the review process. He said Fishery Management Plans would continue to be reviewed by the full Commission.

C. Blankenship moved to approve the Gulf and Southern Flounder Management Profile and to approve the new review process for future profiles. J. Gill seconded and the motion passed with no opposition.

S. VanderKooy stated that the rest of the report in the Briefing Book gives an overview of the other program activities. He said they have started a biological profile for Atlantic tripletail and have initiated the Atlantic croaker biological profile as well. They have had one meeting with the Atlantic croaker group. He said they continue to work with the Atlantic States on the Age and Growth Manual. They had to reschedule a meeting for the first week of December because of inclement weather during the timeframe the meeting was to convene.

SEAMAP Program Report

J. Rester reported that since the last Commission meeting, SEAMAP has completed the Spring Plankton Survey, Summer Shrimp/Groundfish Survey, Bottom Longline Survey, Vertical Line Survey, Fall Plankton Survey, and in the process of completing the Fall Shrimp/Groundfish Survey. Detailed information on this year's surveys can be found in the SEAMAP Annual Report to the Technical Coordinating Committee.

The SEAMAP Subcommittee continues to work towards standardizing gears, station selection, protocols, and techniques as much as possible. The Bottom Longline Survey recently completed the first season of using a standardized station selection protocol. The Bottom Longline Survey has always used standardized gears, protocols, and techniques, but after quite a bit of work now has a standardized station selection protocol. Texas, Louisiana, Mississippi, and Alabama all sampled waters off their coasts in 3-10m during three time periods (Spring (April-May), Summer (June-July), and Fall (August-September)).

SEAMAP is now trying to standardize station selection in the Vertical Line Survey. A Vertical Line Work Group meeting was held in August to discuss station selection and how to develop a standardized sampling universe when most of the bottom type around the Gulf of Mexico is unknown. The Work Group decided to divide the Gulf of Mexico into three depth zones (10-20m, 20-40m, and 40-150m) and develop 150m x 150m grids in these water depths. Each grid would be classified as unknown habitat, known natural reef, presumed reef (natural or artificial), an oil/gas platform within the grid or an artificial reef within the grid. Station selection will be proportionally allocated based upon habitat type.

The Commission continues to manage SEAMAP data and distribute the data to interested parties. The Commission has fulfilled 16 SEAMAP data requests since March.

Sportfish Restoration Program

J. Ballard referred to the Sportfish Restoration Program report in the Briefing Book and reported they will be conducting a pilot study of the Gulf Artificial Reef Monitoring and Assessment Program (GARMAP) with the state of Mississippi utilizing a draft standardized monitoring protocol that incorporates vertical line, side-scan/multibeam sonar, Chevron traps with GoPro cameras, and water quality sampling. He gave a presentation/overview on the protocol, gear types, and data entry of the program. **J. Ballard** stated he is exploring funding opportunities to support the full implementation of GARMAP.

J. Ballard then reported the GSMFC's and ASMFC's Artificial Reef Subcommittees are continuing to revise their 2004 publication of "Guidelines for Marine Artificial Reef Materials: Second Edition." Once all revisions are received, a complete revised draft will be compiled and distributed back to both Subcommittees for a final review with the goal of having the document completed and ready for publication by the summer of 2016. The new third edition will include updates to the reef materials covered in the second edition, as well as cover new materials that have been implemented in recent years. He is planning to hold the next joint meeting in conjunction with the Commission's March meeting in Texas.

Fisheries Information Network Program Report

G. Bray referred to Tab T in the Briefing Book and stated the first page gives background information on the scope, the mission and the organizational structure of the FIN program and the second page gives a list of items that will be submitted for funding in the 2016 cooperative agreement. He said the FIN Committee meets annually during the March Commission meeting to identify high priority funding items. Those items are then given to the S/FFMC to decide which items will be funded. He stated the proposed work was approximately \$1 million over the expected budget they will receive. The activities listed in the Briefing Book for 2016 FIN was decided by the S/FFMC – Coordination and Administration of FIN Activities; Collecting, Managing and Disseminating Marine Recreational Fisheries Data; Gulf Menhaden Port Sampling; Operations of FIN Data Management System; Trip Ticket Program Development and Operation; and Biological Sampling of Commercial and Recreational Catches totaling \$5,518,000.00. They had to eliminate biological sampling due to funding shortfalls but the current funding scenario has biological sampling funded through June 2016 because the funds were received late in 2015, so they did not get started until part way through the year. The goal is to identify funds that will help continue that program through the remainder of 2016. The statement of work and budget will be submitted to NOAA in November and then sub-awards will be sent to the states as soon as possible. That will likely be in mid-2016 based on recent timelines on when funding is available. The biggest struggle for the FIN program is being level funded. The program has been level funded since the early 2000s and the cost of sampling continues to rise. They will try to find resources to continue biological sampling long term and to fortify the base landing programs to ensure high quality data.

Habitat Program Report

J. Rester reported that he attended a meeting of the RESTORE Act Science Advisory Panel Work Group in June which discussed metrics as far as how the restore act science program would measure success, and ways they could coordinate that program with other programs that are currently ongoing. In May, the NOAA RESTORE Act Science Program released the final version of their science plan. The plan establishes ten long term research priorities which will guide how the program invests its funds and explains how prior needs assessments for the Gulf of Mexico region and earlier stakeholder input were used to determine these areas of investment.

In September, the NOAA RESTORE Act Science Program completed its first funding competition and awarded approximately \$2.7 million for seven research projects. Each project will address one or more of the Science Program's short-term priorities which focus on assessing ecosystem modeling, evaluating indicators for ecosystem conditions, and assessing and developing recommendations for monitoring and observing in the Gulf of Mexico. These projects will synthesize current scientific understanding and management needs and inform the future direction

of the NOAA RESTORE Act Science Program as well as the other science and restoration initiatives in the region. The results from these projects will also inform the development of management strategies to support the sustainability of the Gulf of Mexico ecosystem, including its fisheries.

On July 2, 2015, an agreement in principle was reached to settle for \$18.732 billion all federal and state claims against BP arising from the Deepwater Horizon oil spill. This includes \$7.332 billion for natural resource damages, \$5.5 billion (\$4.4 billion will flow through the RESTORE Act) for Clean Water Act civil penalties, and \$5.9 million for economic claims.

On October 5th of this year the terms were announced and a Consent Decree came out along with separate agreements with the local government entities. These settlements total about \$20.8 billion. There were several different pots of money and the Consent Decree is for \$14.9 billion with different levels. BP has agreed to pay \$8.8 billion for natural resource damages. This includes \$1 billion early restoration funding as well as up to \$700 million for unknown injuries and adaptive management that may occur at later date. **J. Rester** showed the breakdown of the funding amongst the different states and what it will be used for. BP has also agreed to pay \$5.5 billion in Clean Water Act civil penalties and J. Rester reviewed the breakdown. **J. Rester** reported starting one year after the consent decree is finalized, BP will start to pay approximately \$900 million a year until 2031. In 2018, BP will pay approximately \$500 million. The public can comment on the proposed consent decree. The deadline for submitting comments is December 4, 2015. The public can also comment on the Deepwater Horizon Oil Spill Draft Programmatic Damage Assessment and Restoration Plan and Draft Programmatic Environmental Impact Statement (PDARP/PEIS). Public comment will be accepted until December 4, 2015 also.

The PDARP/PEIS considers programmatic alternatives to restore natural resources, ecological services, and recreational use services injured or lost as a result of the Deepwater Horizon oil spill. The Deepwater Horizon oil spill Natural Resource Trustees (states/federal agencies) have developed restoration alternatives, comprised of various restoration types, to address injuries to natural resources and resource services resulting from the Deepwater Horizon oil spill. The PDARP/PEIS also evaluates the environmental consequences of the restoration alternatives under NEPA. Under the settlement, BP would pay up to \$8.8 billion for restoration. Based on a thorough assessment of impacts to the Gulf's natural resources, the Natural Resource Trustees have determined that the best method for addressing the injuries is a comprehensive, integrated, ecosystem restoration plan. The draft plan would allocate funds from the settlement for restoration over the next 15 years. That draft plan, and information on the proposed settlement with BP can be found at <http://www.gulfspillrestoration.noaa.gov/restoration-planning/gulf-plan/>.

J. Rester stated the NRDA data that has been collected over the last 5 years are now available at <https://dwhdiver.orr.noaa.gov/> and <http://gomex.erma.noaa.gov/erma.html>. The Gulf Coast Ecosystem Restoration Council released a draft Initial Funded Priorities List in August using funds from the settlement with Transocean Deepwater Inc. The Council is seeking to provide near-term, on-the-ground ecosystem benefits, while also conducting planning activities designed to build a foundation for future success as additional funds become available from other parties. The Council is proposing to focus on 10 key watersheds across the Gulf in order to concentrate and leverage funds to address critical ecosystem needs in high priority locations. The 10 key watersheds are

the Laguna Madre, Matagorda Bay, Galveston Bay, Mississippi River Delta, Mississippi Sound, Mobile Bay, Pensacola Bay, Apalachicola Bay, Suwannee Watershed, and Tampa Bay.

In September, NOAA Fisheries released a draft Ecosystem Based Fisheries Management (EBFM) policy. The policy seeks to better inform decisions and help achieve and optimize the benefits from marine fisheries by evaluating tradeoffs among and between fisheries (commercial, recreational, and subsistence), aquaculture, protected species, biodiversity, and habitats, while maintaining resilient and productive ecosystems. NOAA Fisheries is accepting comments on their proposed EBFM policy until December 16, 2015.

J. Rester stated he continues to monitor Army Corps of Engineers public notices, environmental impact statements, and other sites for projects that may impact marine fish habitat throughout the Gulf of Mexico.

Aquatic Nuisance Species Program Report

J. Ballard reported on the Region 4 USFWS ANS small grants program: He took over administration of the small grants program in 2014. The eleven projects that were selected for funding in 2014 are all progressing well. The majority of the field work associated with those projects took place in the spring/summer of this year and about half of the projects have been closed out. He has worked with the USFWS on the 2015 funding opportunity. In December the RFP for 2015 was revised by the review committee made up of GSARP members and the Coordinator and provided to the USFWS for distribution. A total of 41 proposals were received totaling about \$1 million in requested funds. The review committee ranked all the proposals and he provided the final averaged rankings to the USFWS. Eight projects were selected for funding totaling \$185,182. The regional office of the USFWS is pleased in how smoothly this new partnership is working and plans to continue it in subsequent years if funding allows.

J. Ballard stated the Invasive Lionfish Control Ad-Hoc Committee (ILCAC) finished development of the “National Invasive Lionfish Prevention and Management Plan (NILPMP),” and he presented the final draft to the ANSTF at their fall 2014 meeting. Following that meeting, the NILPMP was placed in the Federal Register for a 45-day public review, and all comments were forwarded. Approximately 50 comments were received from 16 different entities. All the received comments were addressed by the ILCAC, and the revised NILPMP was provided to the ANSTF prior to their spring 2015 meeting for review. At that meeting, the ANSTF voted to approve the plan and it is now available on their website (http://anstaskforce.gov/Documents/Lionfish_Plan-Final_Approved.pdf).

The Invasive Species Traveling Trunks were made available in July of 2012. They have been utilized for a total of 720 days by over 30 different organizations ranging from federal and state agencies, universities, schools, and NGOs that have presented the enclosed material to thousands of people across the U.S. To date, the reviews received have all been very positive, and the few suggested changes have been incorporated. These trunks are provided to the borrower at no cost, with the ANS program covering the shipping to and from the borrower’s location.

J. Ballard gave an overview of the Mississippi Bight Lionfish Response Unit Project. He stated this is a cooperative project between Mississippi, Alabama, the National Parks Service and the

Commission funded by Region 4 of the USFWS. This is a partnership to assess lionfish stocks in the northern Gulf. He then reviewed each component's activities. All information is available in the Briefing Book.

Oil Disaster Recovery Program

D. Donaldson and the Commission expressed their gratitude to R. Hode for the fantastic job he has done for the Commission. R. Hode will retire at the end of the year.

R. Hode reported the Oil Disaster Recovery Program grant ended September 30, 2015. All of the contracts have been completed and mostly kept within the scope of work. He said in summary the goal of the program was to try to change the perception of Gulf seafood in the aftermath of the Deep Horizon oil spill and they did that through public relations and outreach. He briefly reviewed each component of the program. The complete summary is in the Briefing Book and is available upon request to the Commission office.

Executive Committee Report

The Executive Committee submitted the following report to the Commission for approval:

The meeting was called to order at 7:00 a.m. with the following members and others present:

Members

Myron Fischer, LDWF, Baton Rouge, LA
Dan Ellinor, FFWC, Tallahassee, FL
Mark Lingo, Austin, TX
Kelly Lucas, MDMR, Biloxi, MS
Jamie Miller, MDMR, Biloxi, MS
Chris Blankenship, AMRD, Gulf Shores, AL

Staff

David Donaldson, GSMFC Executive Director, Ocean Springs, MS
Nancy Marcellus, Administrative Officer, Ocean Springs, MS
Angie Rabideau, Senior Accountant, Ocean Springs, MS

C. Blankenship made a motion to adopt the agenda.

Discussion of 12/31/14 Audit

A. Rabideau reviewed the 12/31/14 Audit with the Committee. An unqualified opinion was received. There were no findings or deficiencies in the financial data. It was determined that the financial statements had been fairly presented. **A motion was made by M. Lingo to receive the 2014 Financial Audit. It was seconded by K. Lucas and passed unanimously.**

Financial Status Report as of 09/30/15

A Rabideau briefly went over the 9/30/15 Financial Statements with the Committee. **A. Rabideau** mentioned that the Financial Statements are electronically sent out once a month. The committee members should have received a copy by email. She pointed out that the cash account was elevated, as in every year during September, due to the ASAP shutdown and the estimate of expenses from September 17, 2015 through October 1, 2015. **C. Blankenship** asked how the end

of the ODRP grant would affect the financial statements. **A. Rabideau** stated that FIN would absorb the majority of the commission's administrative expenses. **D. Donaldson** stated that prior to disaster funding, FIN has historically absorbed these expenses.

Presentation of 2016 Budget

A. Rabideau reviewed the 2016 budget. The budgeted amount for 2016 is \$6,511,493. **D. Donaldson** pointed out the new fund "210" which would support the National State Directors meeting held in February 2016. The 2016 budget was slightly less than the 2015 budget due to the end of ODRP. **J. Miller** pointed out that health insurance costs had decreased from the previous year. **A. Rabideau** stated that it was due to personnel changes. **N. Marcellus** discussed the anticipated change in the way health premiums will be charged. **M. Fischer** asked about the stability of FIN funding. **D. Donaldson** assured that FIN funding was stable as it had not changed much over the years. **K. Lucas** pointed out that MRIP funding may be affected by legislation in the near future. **J. Miller** asked when the last time the state membership dues was increased. **D. Donaldson** stated that it had not been increased for approximately 20 years. **D. Donaldson** suggested that increasing state membership dues may be something to consider in the near future but would not increase them this year. **A motion was made by J. Miller to adopt the 2016 GSMFC budget for the amount of \$6,511,493. It was seconded by C. Blankenship and passed unanimously.**

Salary discussions

The Committee recommended the GSMFC staff receive a 3% raise or at least \$1,000.00 – whichever is higher – for all employees. In addition, the following employees receive additional raises:

| | |
|-----------------|---------|
| James Ballard | \$3,600 |
| Angie Rabideau | \$2,400 |
| Debbie McIntyre | \$1,200 |
| Ali Ryan | \$1,200 |
| Ashley Lott | \$1,200 |

M. Fischer noted that he has had to lay off several LDWF employees recently and he cannot support recommending raises for GSMFC employees. After some discussion, **a motion was made by J. Miller to accept these recommendations. It was seconded by D. Ellinor and passed 4 – 1 with Louisiana against.**

Other Business

D. Donaldson noted that the Gulf Council has hired Dave Whaley to track Congressional bills related to fisheries issues and wondered if the Commission would be interested in hiring him to do the same for the organization. The Committee decided to observe how the relationship works with the Gulf Council to determine if the Commission wants to hire him.

D. Donaldson stated that he's beginning to plan the Congressional Gulf Delegation trip in early 2016. He will put together a list of issues to discuss and send out a Doodle poll to determine the best dates for the meeting.

The Committee discussed continuing to move forward with the Legislative Committee. **D. Donaldson** stated that he has attempted to set up several calls with the group but has been unsuccessful. The group asked **D. Donaldson** to continue working with the group.

M. Fischer stated that traveling to the Commission meeting under state travel is difficult and would like to explore the possibility of the Commission paying for the TCC and/or the State Directors. **D. Donaldson** noted that without additional funding, it would be difficult to increase the travel. It was suggested that the states could increase their dues to the Commission to pay for this travel. The group asked that the discussion of an increase in state dues be added to the November 2015 Executive Committee call.

C. Blankenship noted that on the last item of the report, the group will discuss increasing state dues during the November 2016 conference call, should be changed to November 2015.

J. Gill moved to accept the Executive Committee Report with this change. M. Lingo seconded the motion and it passed with no opposition.

State Directors' Reports

The Commissioners agreed that no reports will be given at this meeting but to include all state reports in the minutes. **D. Ellinor** asked if the state reports have not been sent to the Commission office, to please do so as soon as possible. The State Reports are in Attachment I of the minutes.

Future Meetings

N. Marcellus informed the Commission the March meeting will be held in Texas. She is having a problem booking a hotel in the previously suggested locations due to Spring Break. She will work with the Texas Commissioners to decide on accommodations for the meeting and will send out the meeting notice as soon as a contract is signed with a hotel.

N. Marcellus stated the Gulf Council has scheduled their meeting for the week the Commission usually holds their meeting in October 2016. She stated the Commission meeting will meet the week of October 24, 2016 probably in the New Orleans area.

Publications List (Informational Only)

D. Donaldson stated the current Publication List is in the Briefing Book and all publications are available on the Commission website.

Election of Officers

State-Federal Fisheries Management Committee – Kelly Lucas was elected Chair and Chris Blankenship was elected Vice Chair.

Commission – Mark Lingo was elected Chair, Chris Blankenship was elected 1st Vice Chair; and Kelly Lucas was elected 2nd Vice Chair.

Other Business

D. Donaldson stated NMFS is planning a National State Directors' meeting for the week of February 29, 2015 in the Gulf Region. He will inform the Commission of the exact place and time when he receives the information.

There being no further business, the meeting adjourned at 1:30 pm.

APPROVED BY:

COMMITTEE CHAIRMAN

**Otolith Work Group Meeting Summary
December 1-2, 2015
Woods Hole, Massachusetts**

VanderKooy opened the meeting at 1:00 p.m. Tuesday afternoon, December 1, 2015 after the group had toured the Woods Hole Lab. The following were in attendance:

Gary Gray, GCRL, Ocean Springs, MS
Isis Longo, LDWF, Baton Rouge, LA
Jaime Miller, AMRD, Dauphin Island, AL
Jessica Carroll, FWRI, St. Petersburg, FL
Carly Somerset, MDMR, Biloxi, MS
Jeff Kipp, ASMFC, Arlington, VA
Eric Robillard, NOAA, Woods Hole, MA
Scott Elzey, MADMF, Gloucester, MA
Nicole Lengyel, RI DEM DFW, Jamestown, RI
Jessica Gilmore, CQFE, ODU, Norfolk, VA
Aris-Aja Horsey, ODU, Norfolk, VA
Donna McDowell, GADNR, Brunswick, GA
Jennifer Potts, NOAA, Beaufort, NC
Kristen Anstead, ASMFC, Arlington, VA
Cheri Patterson, NHF&GD, Durham, NH
Steve VanderKooy, GSMFC, Ocean Springs, MS
Debbie McIntyre, GSMFC, Ocean Springs, MS

Kipp welcomed everyone and introductions were made. He gave a short update on the draft document to date.

VanderKooy pointed out that at this point, any 'new' techniques should already be included in the various sections. We need to provide those edits or the current ones will remain as final. **VanderKooy** encouraged all to be as critical as necessary to make these sections correct and inclusive of all options. A lot of material submitted is intended to provide the user all the options available to process hard parts and force them to think about what else can be done with these hard parts down the road potentially.

The focus of this meeting will be on the overall chapters but a lot of time outside the meeting will still need to be dedicated to the various species accounts.

Section Reviews

List of Contributors

VanderKooy suggested that **everyone** keep adding people to this list. Let him know of anyone who should be added. There is a lot of history in this document so the list will be long, but we

want to include everyone who has contributed both past and present. If affiliations or status have changed and need to be updated, please provide those directly to **Kipp** or **VanderKooy** for inclusion.

Table of Contents

VanderKooy pointed out that this has been rearranged but we can still combine and delete as necessary. He hopes it is a little less confusing than it was. In summary, Section 3 tells how to get to something to read. Section 4 describes how to interpret the processed materials to derive an age and Section 5 highlights the nuances of the species or similar species by group. The Appendices should be filled in on a lab-by-lab basis. **Everyone** should contribute details on what their lab is using of cameras and scopes and some of the pros and cons of the various systems and any associated software. Any insight into these systems can be valuable to another lab looking to purchase new equipment or set up a system. In addition, the sources of the various supplies and manufacturers are of great value to the reader as well.

VanderKooy explained that the manual revision will be electronic and only available as a PDF file. The intention is that a lab will print out and have a physical copy on the shelf as well as have the document available online on either of the Commission's websites.

Acknowledgements

VanderKooy indicated that anyone who may have helped although not necessarily written a component of the material should be recognized in the acknowledgements.

Section 1 Introduction

While this material is much more elementary in describing the various hardparts and how we use them, a number of 'new' biologist as well as students find this information useful. A number of members noted they have used this section to describe 'what they do' when they have guests tour their facilities.

Section 2

VanderKooy stated that a lot of this is carried over from the previous document. **Potts** suggested that validation studies may need to be referred to in a more general manner. This is addressed more fully in Section 4. Discussion ensued regarding the necessity of all of the details of physiology in an ageing manual. It was decided to leave everything for now.

Some of the generalizations regarding the various uses of hard parts in science may be too scattered throughout the document. It was suggested that it could all be gathered in one stand-alone section. **VanderKooy** cut and pasted the other uses section and added to microchemistry in Section 1.0.

All agreed that there needed to be more consolidation in Section 2 when introducing each hard part.

There is a serious need to standardize and define the terms we use. For example, we interchange growth zones, rings, and bands. Whatever we agree to use needs to be consistent and included in the glossary. For the sake of time, terms that need to be standardized will be addressed through emails rather than at this meeting. **VanderKooy** asked **everyone** to go through and review the sections and highlight those terms that need to be standardized. Email these directly to **VanderKooy**.

There is still some expanding necessary in Section 2 regarding the overview of a few hard parts. The vertebrae section should be reviewed by **Panama City (Carlson)** and **Robillard**. **Potts** has done some work on vertebrae on triggerfish and may have some additional material. Spines and Rays will be expanded by **Carroll** and **Murie**. There may be additional material from **Potts**.

Patterson noted that there is work on the Atlantic ageing shrimp from hard parts. It was discussed if any marine resources other than fish should be included in the manual. The group considered the addition of an invertebrate chapter, maybe as a species account. There are other inverts which have ageing protocols underway (lobster, blue crabs, etc.). It was also suggested that if we include inverts, it might be worth adding some info as a species account on mollusks in general. A number of labs are ageing shells. If this is agreed upon, **VanderKooy** will check with Steve Geiger at FWC and **Robillard** may be able to add their info on surf clams. **Patterson** will put together the shrimp this winter with pictures later when the season opens. She will also look into whether or not lobster is being aged with her staff. If this happens, the title of document will need to be changed along with some of the Introduction.

Section 3

Elzey had provided a number of comments prior to the meeting so the group reviewed that version. There were a number of sections previously described which now made more sense being described by the contributors directly. Some additional editing is needed throughout but the basic material seemed to be comprehensive.

The group discussed the organization of this section and, while the original document was much simpler and primarily focused on otoliths, so much additional information related to the other hard parts has made this confusing. It was agreed that **VanderKooy** would split all the various hard parts into individual chapters. A reader would now be able to go directly to all the info for scales, or opercles rather than chasing the steps randomly through a combined chapter. **VanderKooy** will reorganize the entire Section 3 and redistribute to the group after the first of the year.

General editing

Labeling of specimens: Barcoding is an option and it makes sense now that we have seen it. A precise description must go here.

Marking the core: This section should be simplified somewhat. Images of a marked core will be included in each section, species-specific.

Embedding: Combine embedding into one paragraph, there is not a need to go through the same details in multiple applications. Pictures of the silicon baking and ice trays to be added. **Potts** will provide this information from the Beaufort Lab. Details on silicon release spray will be added. **Robillard** will provide information regarding the use of wax for embedding.

Common Mistakes in Sectioning: It was agreed that this information should stay but it may be moved to the end of the section or Appendix for 'troubleshooting'.

General 'Saw' Preparations: Each person needs to add notes regarding startup and blade prep, etc. according to each machine/system used in individual labs.

It seems that the term "whole otolith" has been misused throughout. More important is embedded vs not embedded... we embed the whole otolith but don't need to describe it that way. Most of the 'whole otolith' work involves NOT embedding. We either read the otolith directly without sectioning or we freehand cut the otolith as part of the Hilquist process, it's not whole any longer...

Carroll agreed to evaluate the various techniques and generalize the saw sections.

Hilquist Protocols: LSU's protocol needs to be more generalized. **Miller** will work on this.

Benetec: **Robillard** will take care of this section and generalize the fundamentals of the machine. He will coordinate with **Palmer**.

Mounting sections: It was suggested that the instruments (tongue depressors, micro spatulas, wooden stir sticks, etc.) being used should be explained more fully.

Sectioning techniques: **Potts** to address this section on quality vs quantity by saw type or 'production' options.

Break and Burn/Bake: It was generally agreed that this entire description should be moved to enhancements. Breaking is an alternative to burning. **VanderKooy** adjusted this accordingly and added to section enhancement.

Scales: Once **VanderKooy** has this separated out, **everyone** who works on scales should read through this section to check for accuracy. There are some additional caveats that need to be explained such as knowing which side of the scale to use for impression, materials for pressing, and fundamentals of the presses themselves.

Scale Handling: Make sure the preferred method of handling is covered and clear somewhere in this document. There are a variety of methods for removing and storing scales prior to processing that need to be included. **Elzey** will take a look at this issue. This should include proper cleaning procedures of equipment between samples to ensure no contamination of scales from previous fish.

Opercle Section: **VanderKooy** accepted all changes in this section. He pointed out that this will be combined in another stand-alone section. Connecticut developed much of this section and will need to review the revised chapter when it's available.

Spines and Finrays: **VanderKooy** reminded that anything different from the generalized technique that is more 'Gulf' should be 'Atlantic-ized'.

Sectioning spines: **VanderKooy** clarified the language regarding thin sectioning. This needs to be more Atlantic-ized as well.

High/Low speed: There was some debate over whether the Hilquist should be used for sectioning spines. It was believed that the Hilquist can cause interpretation problems. **VanderKooy** noted that most of the Gulf's triggerfish reference set was developed using the Hilquist so **Potts** agreed to review and see if the reference set would benefit from a different technique. **Potts** will provide some pictures of melting the dorsal spine with multiple blades.

Sectioning Finrays: **Murie** and **Carroll** need to modify the sectioning description if Finrays need to be selected from middle of the fin rather than the outer margins for sectioning. This may be a problem in grunts but may apply to more species using this technique.

Vertebrae: **Robillard** and the Woods Hole staff will review this section when it's revised and make sure it is accurate. **Robillard** may have images to fill in the gaps and **VanderKooy** will run the draft past Eric Hoffmeyer at the Pascagoula NOAA lab as well as Carlson at Panama City. When section, generalization is needed here. This material was generated by Panama City entirely. "Do not let them dry" needs to be explained and/or made more general. **Robillard** will work on this.

Section Enhancement: It was suggested that while the discussion is specific to staining vertebrae, it should be included with the general discussion of enhancement. The entire section may be moved to its own chapter as well.

Long term storage: This section is true for ALL hard parts before and after processing. **VanderKooy** will find a place for this to be combined. Panama City noted that when storing slides with mounted otolith sections, foil is used in-between the slides to prevent sticking. There is a huge variety of storage options between labs and may include cardboard slide boxes, coin envelopes, and Tupperware tubs. Climate control may be critical to include as well... dependent on what each lab has available. It was discussed that this section may be over-thought. **Everyone** needs to review and see if it just needs to be simplified once the document has been

rearranged.

4.0 Age Determination

VanderKooy noted that the intent of this section is to encourage the user to determine exactly what data you need to collect for the assessment scientists or other end user. Not every state agency assigns ages, so it all depends on who the processing is being done for. In the Gulf, often only ring counts and margin codes are provided. In some cases, ages or year-class are provided. Therefore, the examples include everything (data) that might be needed in the future. It was agreed that an additional data element should be added for condition (quality) of the otolith or scale, etc., should be included. Many labs will exclude certain specimens based on the readability of the sample using these codes. There may be a need to look at the various lab protocols and summarize them in the overall section. **Potts** will send the NOAA codes for quality to **VanderKooy**.

Again, terminology is important. In general, Section 4 utilizes transmitted light but the descriptions of 'light' and 'dark' rings is also used. Regardless of light type, opaque and translucent zones, rings, etc, are more specific. We need to come up with consistent usage.

Margin Codes: Consensus was that we do not need a description on measuring if increments. Very few labs in the Gulf measure increments although Texas uses their software to determine ring counts by marking on the image; this does offer a 'measurement'. **Potts** reported that every scale aged from the menhaden fisheries is 'measured' via the software. **VanderKooy** asked if anyone else used margin codes other than for otoliths. All agreed that while they may not record a margin condition, the margin is considered when assigning an age. It doesn't hurt to provide a code should someone want or need to record the margin. The 1, 2, 4 setup seemed to work for all. As a side note, **Potts** will check with Ethel to make sure the margin code interpretation for menhaden scales is clear and accurate.

Opercle Annuli Enumeration: **Kipp** checking into the source of the tautog ageing figures. **VanderKooy** will remove the *yr-11* in this figure. A quality code is assigned by **Robillard's** group and one is also assigned at Beaufort. These codes are very subjective. **Robillard** will address this explanation. So does Panama City.

Spines and Rays: **Potts** reported that the margin codes are designated with +/- which would translate into a margin code 1 or 4 in grey triggerfish. **Carroll** and **Murie** need to get together again on this.

Vertebrae: Still being addressed but the 1-4 codes may work here as well.

Assignment of age/age determination:

Biological age: There needs to be a discussion specifically addressing the regional/latitudinal variation in assigning birthdates – **Kipp** will get Jameson Gregg at VIMS to do this. The ASMFC is

proposing to use a single ageing timeline in each species account for the Atlantic which will include a temperature-type color code for annulus deposition and spawning period differences from north to south (a red to blue/hot to cold scale). **VanderKooy** was not sure how assigning a theoretical birthdate might work but it was suggested that a month or so difference for advancing may not be an issue.

Validation: It had been agreed that this needed to be moved to an earlier section. It is currently being considered for the introduction so that the user knows the importance of proving increments are actually formed on an annual basis and can be used for ageing purposes.

Other parameters and their usefulness: Given to us by Robert Leaf to give an idea of the value of other parameters, i.e., weight of otoliths, back calculations, and growth models. It was agreed that this material is useful in understanding how the age data is used but should be moved into an Appendix.

Section 5 - Species Accounts

VanderKooy reviewed a couple of the 'group' descriptions. All agreed that the current organization of the species seemed to work well. He pointed out that some of the descriptions were incomplete however. If they couldn't be completed by March 1, they would be dropped from the revision. The timelines were still lacking for some species; **Kipp** and **VanderKooy** would identify those which needed updating as well using the new template.

It was suggested that some new species should be included. The ASMFC had focused originally on state managed fisheries and not federal. The Gulf included many federal species and it was decided that if it would help with future assessments to add additional Atlantic descriptions, we would.

Other additions include the following:

- Invertebrates (whelk, conch & shrimp) - **Elzey** and **Patterson**
- Mollusks (surf clam & oysters) - **Lengyel** and **Robillard**
- Red porgy – **Potts**
- White grunt - **Potts** and **Murie**
- Atlantic spadefish – **Gilmore**
- Spot - **Gilmore**

To have a complete species account, we need timeline, radiographs, photographs, and any validation that exists. **VanderKooy** will help where he can. Again, any partially complete species account that cannot be fully completed by March 1, 2016 will be dropped.

All were encouraged to continue to use the shared Dropbox folder as they can and **VanderKooy** would notify everyone whenever material was posted or revised. In addition, **Kipp** will try to keep the ASMFC's FTP site updated with the most current material. It may end up being easier

to use the FTP site completely rather than Dropbox. **Kipp** and **VanderKooy** will figure this out and provide any necessary login info if we decide to use the FTP exclusively.

Finally, **VanderKooy** requested that everyone please reply to emails even just as an acknowledgement of receipt. Often broad distributions are considered spam by some email systems and **VanderKooy** is never sure that messages get through without some sort of reply.

The joint workgroup will not meet again in person but may have conference calls specific to techniques or hard parts and those directly involved with the subject will be asked to participate. **Kipp** and **VanderKooy** will try to coordinate well between both groups and all emails will be to the combined group in the future. Fortunately there is no deadline for a final product since it's generally an unfunded effort but **VanderKooy** would like to have the draft finalized sometime by summer 2016 since the layout of the finished document will take considerable effort and time.

The meeting adjourned at 4:30pm.

APPROVED BY:

COMMITTEE CHAIRMAN

(Moderator)

**TRIPLETAIL TECHNICAL TASK FORCE
MEETING SUMMARY
December 9-10, 2015
Apalachicola, Florida**

Moderator VanderKooy called the meeting to order at 8:20 a.m. on Wednesday, December 9th, with the following in attendance:

Chuck Adams, Florida Sea Grant, Gainesville, FL
Krista Shipley, FWC, Tallahassee, FL
Carly Somerset, MDMR, Biloxi, MS
Josh Harper, TPWD, Palacios, TX
Jim Franks, GCRL, Ocean Springs, MS
Steve VanderKooy, GSMFC, Ocean Springs, MS
Debbie McIntyre, GSMFC, Ocean Springs, MS

Call to Order

S. VanderKooy, IJF Program Coordinator, opened the meeting and thanked all for attending, pointing out that there has been increased interest in tripletail in the Gulf since starting this profile.

Approval of Meeting Summary

The summary from the meeting held in Galveston August 11-12, 2015, was reviewed and, on motion by **Franks** and second by **Aplin**, the meeting summary was approved unanimously as written.

Review of TTF Membership

VanderKooy encouraged the group to review the membership roster for accuracy.

After some discussion, it was decided that input from a representative in the state of Georgia would be very helpful to this task force. The consensus of the group was that, since Georgia is the lead state involved in the massive tagging program and they share a large portion of the total recreational landings, **VanderKooy** should go through the proper channels and contact Spud Woodward (Georgia) regarding this idea and ask him to appoint someone to serve on this task force. It was pointed out that we would then need an enforcement section added for Georgia as well.

Aplin suggested Alabama fisherman, William Mancini, to serve on the committee in the commercial/recreational representative position which was vacated by Zales. She will run this up the chain of command to make sure this selection is okay and, if so, will approach Mancini about serving. **VanderKooy** also reminded everyone that **Rester** (GSMFC) continues to work on a species profile for Habitat in the Gulf of Mexico which will be referenced and incorporated into the Tripletail profile.

Housekeeping

VanderKooy reminded everyone to refer to the *GSMFC Travel Guidelines* for detailed information regarding their travel. Any questions should be addressed to Alyce Ryan, the GSMFC's travel processor. All were encouraged to submit their Travel Expense Reports as soon as possible after this meeting as the GSMFC office will not be fully staffed for the last two weeks of December.

Task Force Website

VanderKooy encouraged everyone to take advantage of the TTF website (www.3tail.gsmfc.org) to share literature, upload current drafts, and provide reviews of other sections when appropriate.

Meetings, conference calls, and webinars to-date are posted on the working website. When anything is added to this website, TTF members will receive an email. The document repository was again pointed out. Members were instructed to upload what they are working on into the appropriate sub-section so that everyone else can see it. Downloads and changes can be made but everyone MUST send back to original author with track changes. He reminded everyone that the author will re-upload the changed information and label it with a new date.

General Discussion and Review

VanderKooy stated that the purpose of this meeting is to edit and discuss the information that this group has gathered so far on this fishery.

Although this publication will not be printed and distributed, the artwork for the cover was viewed. It is a gyotaku fish print which was made by Connie Lovell from Texas and is provided to the GSMFC for this use only.

VanderKooy stated that this document will include a *List of Contributors* and reminded everyone to make note of those to give "special thanks" to. The *Preface* will be boilerplate. The *Abbreviations* section will be reviewed and updated once the document is put together. The *Introduction* will serve as an overview of the profile as an abstract.

VanderKooy stated that the new streamlined format seems to be well-liked. This presentation is a different look than we are accustomed to, but the stylized hierarchy appears to be a better way to address the chapters and make the document more similar to a book rather than to one of GSMFC's old Fishery Management Plans.

At their November 2015 Annual Meeting, the GSMFC commissioners approved **VanderKooy's** recommendation that the biologists who actually provide the input into the document and the Technical Coordinating Committee (TCC) members will be the only two entities that need to approve a biological or management profile. This will make the entire process easier and faster for documents that are not full management plans.

Chapter 3 Biology

In the *Biology* section, there will not be a subsection for every component in the template Table of Contents. **VanderKooy** reviewed comments and additions made since last meeting. He reminded everyone that unpublished data and anecdotal reports are perfectly acceptable in a GSMFC document. He advised that cutting and pasting using quotation marks to make a direct quote is usually the best approach rather than trying to summarize someone else's work and risk plagiarism.

It was decided that **Aplin** would write an introductory paragraph, stating that the "morphology" of this species has been extensively described over the years and those descriptions are accumulated here under one source. Under *Anomalies*, **Franks** will provide pughead information and also improve on his unpublished data contribution. **VanderKooy** fine-tuned this section with input from **Franks** and **Aplin**. *Morphology* will need to be blended and *Description* should be split out by life stage.

Shipley provided the details in the *Age and Growth* section. She stated that the most research she found was on *how* to age. She will provide a table with size and age data from the published literature.

Franks had not realized that one of his assignments was *Reproduction* (along with **Mickle**). **Franks** will contact **Mickle** to further this section along.

It was decided that if there is not enough information to supply for the *Spawning and Season* section, that will simply be stated. **Franks** is working on this section and will make this decision.

Franks stated that he has a lot of information for the *Migration* section, including a summary of Mississippi's tripletail tagging (which included almost 4,000 fish). The recapture rate for this study was about 10%. The state of Georgia is also tagging tripletail but their research includes acoustic studies. If the state of Georgia does not come on board this task force, **Shipley** stated that she has most of Georgia's tagging information for our use.

Franks has done the lion's share of research on the subject of *Fecundity*. **Mickle** had started work on this section but **Franks** and **VanderKooy** will take over the task from here.

Kevin Anson (Alabama) reviewed the *Genetics* section and introduced some changes/additions here restating distribution.

Franks will get with **Aplin** regarding where the tripletail in Biloxi are coming from and **Aplin** will find out from the fish house in Foley where theirs are coming from. These fish may be *pacificus* and may be useful for some planned genetics work at DISL and GCRL.

Franks discussed the fact that French Guiana (bordering Brazil) has astronomical tripletail landings. **Franks** visited there and observed tripletail on the menus wherever he went. **Franks** has contacts from Brazil and will further discuss this fishery with these contacts to obtain additional data. **Franks** stated that access to fish from other areas would also be helpful for the genetics work.

Aplin is working on the *Parasites and Diseases* section. **Franks** shared some valuable information with the group for use by **Aplin** on this section. **Franks** stated that he also has some other unpublished parasites literature for inclusion which he will provide to **Aplin**.

Kevin Anson (Alabama) provided some comments to the section *Feeding, Prey, and Predators* which **Shipley** is working on. **Shipley** will look further to see if there is more research available regarding what eats tripletail. There will be overlap between habitat and physiologic requirements of these animals.

VanderKooy encouraged everyone to review all of the information in Chapter 3 and see if they have any age, growth, or diet data that could contribute, even unpublished.

Chapter 4 Habitat

VanderKooy reported that **Rester** will provide more information on *Gulf Circulation Patterns* and currents. A lot of the *Estuaries* detail will be covered in the *Habitat profile*.

The group identified several *Threats to Survival*: FADs, Propagation of *Sargassum*, post-disaster, fluctuating habitats (increase and decrease), debris, macroalgae, pollution, and climate change which will need to be expanded upon.

Franks has some information regarding *Sargassum* that he will share with **Rester**. **Franks** is not sure of the ground-truthing involved in the old research which is cited (Gower and King) regarding movement of *Sargassum*. **Franks** will read through the vast amount of *Sargassum* information that has been provided by **Rester** and work with it.

Spawning Habitat is still being compiled by **Harper** and **Aplin**. It was suggested that some information for *Embryo and Larval Habitat* may be derived from the SEAMAP data. **Franks** and **VanderKooy** will work together on this.

Regarding *Salinity and Temperature* in offshore pelagic waters, **VanderKooy** pointed out that any fishery-independent data, not published, may be useful. He instructed everyone to do their due diligence in each individual state to locate new observations of dissolved oxygen.

Each state will have a different perspective to report on *Factors Affecting Localized Abundance*. We don't really know much about this currently.

VanderKooy reviewed the FID tripletail records he had and pointed out that when going through FID, break down sizes of what you have gotten...line trawls, BPLs, seine hauls, etc. This may help explain some habitat preferences if they exist.

Section 5 Enforcement

The *Regional Fishery Management Councils* information has previously been discussed by Chad **Hebert** and Scott **Bannon**. **VanderKooy** stated that he is still concerned about that loophole of people having no regulations in federal waters but having them in state waters.

The question came up as to whether or not FADs are considered marine pollution. It was the consensus that this may need to be added back in. MARPOL could be important in regulating FADs.

Florida's portion of *Enforcement* is sufficient. **Aplin** is checking with Bannon concerning the accuracy of Alabama's contribution. **Somerset** is working on the format as well as the history of Mississippi's portion, i.e. gears and TEDs.

Chapter 6 Description of the Fishery

VanderKooy put this section together initially and the group went through to review the electronic changes. Each state representative went through his/her state specifics and fine-tuned these sections. To date, all data is updated through the year 2013 but 2014 numbers will be added before this project is complete. In the meantime, data should only reflect numbers through 2013.

Somerset must get some clear answers from **Mickle** regarding Mississippi's section. The plan is that **Somerset** and **Mickle** will sit down together with **VanderKooy** very soon. **VanderKooy** will also contact Luis Barbieri from Florida regarding contacts in Brazil.

The only information that we have regarding *Mariculture* is what our group has gathered and what **Franks** has experienced. **Shipley** will include information regarding tripletail "defecation" in her section. **Franks** pointed out facts regarding fat in this fish which he believes helps the tripletail to float.

Chapter 7 Economics

Adams explained that he incorporated a new formatting in this section. He stated that his data covers 1950 - 2013. He still has to cite his sources and clarify confidentiality rules. "Annual Dockside" characterizes the data for the region. The South Atlantic region is covered for the same time period 1950 - 2013. **Adams** asked all to review this information and noted that, should the state of Georgia join the task force, there will be more data to add.

Next he covered dockside value by state. He found it necessary to lump some of the states' data together to pick up on the major trends. Therefore both sides of Florida are combined together and the states of Louisiana, Alabama, Mississippi, and Texas are combined together. North Carolina, South Carolina, and Georgia are also combined as one.

Next **Adams** broke the data down on a monthly basis. Beginning in 2000, there was more workable data available so he started then, rather than in 1950. Annual ex-vessel prices and regional ex-vessel prices are limited by confidentiality and availability. He pointed out that trends and raw nominal prices are interesting. He will add units throughout. Prices by state are not broken out but are described in an overview.

Harvesting by gear type: Landings and dockside value have not been shown before so he just shows prices \$/lb. He pointed out that spear fishing is missing.

The results of the processing and marketing surveys were discussed. **Adams** will database all of these results. It was decided that another set of questions should be compiled, specifically regarding volume and sources. Once a set of questions is decided upon, phone calls will be made by **Adams** to Florida sources; **VanderKooy/Franks** will contact Quality Seafood in Biloxi, Mississippi; **Aplin** will contact Alabama sources; and **Harper** will work on obtaining information from the Texas Asian markets regarding sources of tripletail.

Because no information at all has been obtained for the economics component of the recreational sector, many questions remain. Are tripletail target charters trending now and are they a value industry? How many are happening now? Spearfishing? This may be happening because of other fish being less available to catch. Perhaps a Survey Monkey could be done. **Adams** will contact Sabrina Lovell (NMFS economist) to see what data she has.

Regarding civil restitution, **Adams** accessed Florida's and Louisiana's statutes in an attempt to break data down state-by-state. He was not sure about Mississippi, Alabama, and Texas statutes. **Mickle, Aplin, and Harper** will check to find out about these statutes in their respective states. If non-existent, that will be stated.

Section 8 Sociology

It was agreed that this fishery does not warrant a *Sociology* section because there is literally no information available on this subject.

Next Meeting and Timeline

VanderKooy pointed out that at this task force's next meeting, only NEW material will be reviewed. The next meeting will NOT be for review of the information we currently have. This meeting may take place the last week of February or the first week of March. Perhaps after that, a Georgia representative may be included and the group could meet either in Georgia or Jacksonville possibly in July, 2016. The best case scenario would have this profile finished in October of 2016. A draft would need to be provided to the TCC one month prior.

With no further business to discuss, the meeting adjourned at 4:45 p.m. on Thursday, December 10th, 2015.