PPROVED BY

ATLANTIC CROAKER TECHNICAL TASK FORCE MEETING MINUTES January 12 & 13, 2016 Panama City Beach, Florida

Moderator VanderKooy called the meeting to order at 8:30 a.m. on Tuesday, January 12th, at the Country Inn & Suites, Panama City Beach, Florida. The following were in attendance:

Chuck Adams, Florida Sea Grant, Gainesville, FL 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.*

Approval of Minutes

The minutes from the organizational meeting held September 22 and 23, 2015 in Gulfport, Mississippi, were reviewed and, on motion by **Reeder** and second by **Sempsrott**, the minutes were approved unanimously as written.

Housekeeping

S. VanderKooy, IJF Program Coordinator, opened the meeting and encouraged the group to review the membership roster for accuracy. He pointed out that Ed Swindell (commercial representative) has stepped down and we are looking for someone to take his place. **VanderKooy** has received a couple of suggestions of commercial guys who he will contact but he asked the TTF members to ask around and possibly make suggestions.

VanderKooy reviewed the Commission's travel policies. Any questions regarding travel should be addressed to Alyce Ryan, the Commission's travel coordinator and all travel should be turned in as quickly as possible following each meeting.

Election of Chair

On motion by **Reeder** and second by **Sempsrott**, the group voted unanimously to have **VanderKooy** serve as moderator rather than elect a chair for this task force.

Draft Reviews

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Some updated information has been added by **VanderKooy**, but the TOC has not changed much. It appears that there is a lot more available information than previously thought.

Chapter 2 - Introduction

VanderKooy explained that the Gulf Marine Fisheries Management Council (GMFMC) previously attempted to compose a document intended to regulate the groundfish fishery back in the 1970s-1980s. This plan was drafted and much research was done but it was never published due to confidentiality requirements at the time the document was drawing to a close. The groundfish fishery went away as a result of the closing of cat food plants. The information that had been gathered and never actually used is available and appropriate for this group to revitalize and expand upon. The GMFMC document will be referenced in general in this *Introduction* section.

VanderKooy pointed out that, in the event that people become interested in the croaker fishery again, this document will be the go-to as a background source.

Chapter 3 – Biology

VanderKooy pointed out that the GMFMC document has information to include in the *Genetics* section. Nancy Brown-Peterson may have some more recent research in her work. Mike Tringali (FWC) or Joel Anderson (TPWD) may also have some additional genetics studies. **Somerset** will follow up with these sources. She stated that much of this is combined with *Reproduction* and may be redundant.

Regarding the *Larvae* section, **Beckham** will change some of the text to a table (to include some description).

A discussion ensued regarding *Age and Growth* and the fact that this fishery used to be huge but there has not been a huge resurgence, which may indicate a shift in size at age. VanderKooy reported that there is a lot of good SEAMAP data which Jeff Rester (GSMFC) has examined in the past and may be worth looking at again. In addition, there is a lot of Fishery Independent Data to review. **Ferguson** is currently working on this.

VanderKooy met with Overstreet regarding *Parasites*. Overstreet has volumes of unpublished data regarding parasite work on croaker, offshore and inshore. He has a student who has an interest in parasites working with this data now as well as with life-history information. There is a possibility that this student may attend a future TTF meeting. **Ferguson** will contact Zack Olsen (TPWD) regarding isotope research he may have available.

Ferguson recognized that there is plenty of information regarding Feeding, Predator, and Prey

available to use from the GMFMC document.

Chapter 4 – Habitat

VanderKooy reminded everyone that Jeff Rester is developing a *Habitat Profile* which will be a stand-alone document for the Gulf of Mexico. Other than that, **Sempsrott** is taking care of this section. She will also research what the GMFMC document has to include. She will contact Mark Peterson at GCRL for input. There always is overlap between the *Biology* and *Habitat*.

Threats to Survival will be included in the boilerplate. This will now be a list of specific threats to this particular fish, i.e. water quality related to human discharge, medical waste, etc.

Chapter 5 – Enforcement

VanderKooy indicated that we are getting rid of the majority of the boilerplate and federal enforcement information. **Reeder** provided the state-by-state updates to **VanderKooy** who will combine them into the document and send them out to each state representative for review. It will be important for all representatives on this TTF to research their state histories regarding regulations. The state histories could possibly impact how landings are interpreted and may include shrimp bycatch regulations, net bans, etc.

Chapter 6 – Fisheries

This fishery has a lot of history but not much has been recorded. **VanderKooy** has attempted to pull the details together from the GMFMC document and interviews he has had with people who were around back when the groundfish fishery was much larger. **Adams** will contact Steve Atwell and several others regarding the Florida ALS *unclassified groundfish data* in the early 1970s and 1980s and try to figure out how much of these results were actually croaker landings and determine their final disposition (bait, food, etc.)

VanderKooy will talk with Bray (GSMFC) about whether or not trip ticket data includes shore vs boat designation or bait vs food. Hopefully some of this data can be teased out.

This fish has huge potential as a live bait fishery in the future all along the Gulf Coast. If there is information available about saltbox usage, this would be helpful. **VanderKooy** will contact Gary Graham from Texas SEAGRANT for some of this history.

Chapter 7 – Economics

VanderKooy pulled data from the NMFS website and reviewed it with the group. He will forward this data to Adams. The problem comes in figuring out the specified croaker from the not specified. Food fish, pet food, and bait all need to be separated with sub-headings under them. Adams stated that seafood consumption studies may be available but he will have to do some research as to what data is actually out there on this species. We know that recreational landings were high in the 1980s but we are not sure of the quality of that data. Adams will touch base with Sabrina Lovell and Gregg Bray for information. University of Arkansas Pine Bluff is doing some

interesting aqua/mariculture work. Adams will contact Eugene Raffield (Raffield's Fisheries, Port St. Joe) and Behzad Mahmoudi (FWC) regarding historical landings in Apalachicola, disposition of recent catch, and when the Apalachicola plant closed. There is also abundant SEAMAP data available.

The group agreed that all data will be cut off at 2014 year-end.

Beckham stated that, while there are landings of live bait in Alabama, there is no reporting. Gulfwide, the commercial industry is driven by Louisiana and Texas due to the lucrative live bait fisheries there.

Both commercial and recreational landings will be posted on the working website. Each state has a separate tab on the excel spreadsheet, so everyone needs to take a look. On the commercial side, there are several fisheries with most of the data being historical until the new bait fishery developed. **VanderKooy** asked everyone to make sure that the story makes sense for their state and put him in touch with anyone who could provide more information/data. The difficult part is dealing with the fisheries that are extinct now. In the event that a state wants to regulate this fishery eventually, this document will provide a basic background. If there is any eventual revision necessary, all of the history will already be completed.

All agreed to read through each section, keeping in mind that if a person comes to mind who should review this, it would be helpful. It is not necessarily time to edit this document yet though as it is in a very draft form.

Somerset will check historically how many people were reporting croaker on Mississippi's trip tickets. Perhaps there is a trend for a bait fishery starting in Mississippi. If so, this data would establish a valuable baseline.

Next Meeting

It was decided that mid-April would be a good time to schedule the next meeting, possibly in Baton Rouge. The meeting will probably last a day and a half – a total of 3 days with travel.

Other Business

VanderKooy pointed out that the Croaker profile information should all be gathered and finished up by the end of 2016 to present to the TCC in March of 2017.

With no further business, the meeting adjourned at 11:00 a.m. on Wednesday, January 13, 2016.



TRIPLETAIL TECHNICAL TASK FORCE MEETING SUMMARY February 23 & 24, 2016 New Orleans, Louisiana

Moderator VanderKooy called the meeting to order at 8:30 a.m. on Tuesday, February 23rd, with the following in attendance:

Chuck Adams, Florida Sea Grant, Gainesville, FL Krista Shipley, FWC, Tallahassee, FL Paul Mickle, MDMR, Biloxi, MS Josh Harper, TPWD, Palacios, TX Jim Franks, GCRL, Ocean Springs, MS Chris Kalinowsky, GDNR, Brunswick, GA Steve VanderKooy, GSMFC, Ocean Springs, MS Debbie McIntyre, GSMFC, Ocean Springs, MS

Call to Order

S. VanderKooy, IJF Program Coordinator and Task Force Moderator, opened the meeting and thanked all for attending.

Approval of Meeting Summary

The summary from the meeting held in Apalachicola December 9-10, 2015, was reviewed and, on motion by **Adams** and second by **Mickle**, the meeting summary was approved unanimously as written.

Review of TTF Membership

Introductions were made for the sake of the new member, Chris **Kalinowsky**, the Georgia DNR representative. The group welcomed **Kalinowsky** and each member explained their role in their respective agencies. **VanderKooy** encouraged the group to review the membership roster for accuracy and changes were submitted to **McIntyre**.

Housekeeping

VanderKooy reminded everyone to refer to the *GSMFC Travel Guidelines* for detailed information regarding 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.

Task Force Website

VanderKooy encouraged everyone to take advantage of the TTF website (<u>www.3tail.gsmfc.org</u>) to share literature, upload current drafts, and provide reviews of other sections when appropriate.

Overview of Georgia Tripletail

Kalinowsky provided the group with an overview of the tripletail fishery in Georgia. The fishery began about 15 years ago with a few people who were highly specialized. The GDNR began looking at where their fish were coming from and going. They borrowed receivers from the South Carolina DNR and purchased about 9 tags just to see if they could successfully tag fish and find them again. The \$2,000 in tags and supplies turned out to work very well, the fish recovered from surgery well that first year and the following year they worked on deployments of tagged fish. The fish they released mostly stayed in the area and the four receivers were pinging them in the estuary. The two fish that they lost may have had mortality and a few were caught by hook-and-line leaving about three or four fish through the summer. At the end of the year they disappeared and moved The VEMCO equipment is the same receivers that Florida uses along the Atlantic. off. Kalinowsky contacted the FWC and asked them to watch for their fish. Within two days they were picked up on the array in Florida around Canaveral. These fish move north and south seasonally between Georgia and central Florida. The fish tagged in an area have high site fidelity and return to the same estuary each year. A few fish overshot their home estuary but returned to the correct estuary after a few weeks.

Georgia has two fisheries, an April/May fishery around Jekyll Island. The fishermen sight fish as they come to the surface repeatedly. They are generally smaller fish so it's mostly a catch-and-release fishery. In late June, the fishery switches over to a structure fishery as the larger fish continue north and begin to frequent buoys, pilings, and other structure. The larger, inshore structure fishery is not necessarily a sight fishery. Kalinowsky notes that 90% of the fish he catches, he never sees. They move from structure to structure and assume that each has several fish throughout the water column. The mostly use live shrimp on a special rig but in the last couple years have gone to using cut bait. Most recreational anglers drive past each structure and only check the surface and miss many of the fish.

The GDNR tripletail tagging program lasted four years and successfully tagged 57 fish. They stopped tagging about 2 years ago when the information they were receiving became repetitive. **Kalinowsky** described the receiver arrays that they have set up and provided information on how they deploy and maintain their receivers. He provided an overview of how the units work and the various options they've used to anchor them around the coast. He reported on additional species that they were also having move in and out of their array originating from other areas along the Atlantic. The key for movement of tripletail moving out of Georgia is based on water temperatures. When the ambient water reaches 71°C, they disappear and head south following the warmer water. There is some salinity preference as tripletail in Georgia tend to stay along the shoreline at the mouths of the rivers where there is more mixing and less river water.

This may be the only telemetry data on tripletail and will likely be published in conjunction with a graduate student that is working on mortality estimates with **Kalinowsky**. The GCRL has published a huge number of tripletail but there is not a lot of information where they end up. They have a 9-10% recapture during the summer but no winter recaptures to indicate where they move. Parr had done a little microchemistry work along the Georgia coast for his thesis but he didn't take the research very far. The group consensus is that tripletail are probably migratory but don't have enough telemetry data to really nail down just how migratory they are. They may be like cobia

and may be offshore in deep water where the temperatures are more stable year-round but without a lot of people fishing during the winter, there isn't any anecdotal evidence of where they may be either.

General Discussion and Review

VanderKooy stated that the remainder of the meeting is intended to edit and discuss the information that has been gathered and drafted. Everyone should feel free to interject information as they think of it. The review is informal and tangential discussions are not discouraged.

Section 7 Economics

Adams explained that a survey was done by the state fish house samplers to try to get an idea of where our domestic tripletail production originates from and where it goes. This is a first pass to try to understand the market channel and demand for this fish. Adams shared the results of this survey which were based on trip tickets from 2014. Adams referred to the overview which was added to the section and explained the survey results. He noted that the information was insufficient to break down by state.

VanderKooy has done some investigating in other countries as well looking into imports. The majority of imported product seems to be coming through Miami and New York. Adams contacted the customs people in Miami and surmised that tripletail were not trackable because they do not have their own product code. It was suggested that we find out who the actual importers are in an attempt to learn more. Fish are primarily being brought in from Surname, Brazil, Panama, Costa Rica, and Ecuador. One to two thousand pounds per week are being imported to the United States by each of the five wholesalers with whom **VanderKooy** spoke to already. There is a definite potential for growth in our domestic fishery if demand is as high as it appears. The wholesalers indicated that all the fish they receive go primarily into the restaurant side for 'catch of the day' specials.

The discussion of imports will go into the *Economics* and the *Fisheries* sections. VanderKooy shared the reported landings of tripletail in South American countries, although much of the catch is actually unreported. VanderKooy will contact other countries as he can.

Adams reported that he had asked Sabrina Lovell (NMFS economist) for data on directed trips for tripletail but that she could locate only one, leaving us with zero information in this respect. Anecdotal information may be all that we get recreationally. The question is whether there is a way to get at a qualitative estimate of targeted effort. The group discussed the possibility of quantifying changes to the number of charters or guides offering 'tripletail trips'.

A "For-hire" task force has been organized in Mississippi and **Mickle** will approach that group for data regarding tripletail effort. It was suggested that a survey instrument for the for-hire fleet in each state would be helpful; however, GSMFC cannot conduct this using the FIN database. A survey instrument would have to be approved and implemented by individual states due to confidentiality issues. **VanderKooy** stated that he will work with Gregg Bray (GSMFC) to look at the possibility of developing a scannable survey document once the questions were derived. If

there are funds at the GSFMC to do this, **Adams** will come up with a sample survey to pass around to TTF members for review. All in-state licenses license holders will be surveyed. The intent of the survey would be to explore any potential increase in the for-hire fishery targeting tripletail as an alternative target for customers who are hearing more about the fish.

Adams indicated that he has restitution values from Texas and Mickle will provide Mississippi's. Kalinowsky will provide Georgia restitution. VanderKooy will work with Kalinowsky on getting Georgia's input on values, etc. for inclusion in the *Economics* section where needed.

Any additional landings and values data for Georgia will be added by Adams as needed.

Section 6 Fisheries

VanderKooy has drafted a broad description (Gulf states only) for both the commercial and recreational fisheries. He includes a narrative that compares total US production and Gulf production of tripletail to the other countries landings fish showing that overall, our landings are negligible.

The group has seen most of the Gulf and South Atlantic sections before which includes tripletail landings through 2014. There were a number of confidentiality issues when examining the Gulf on a state by state basis so **VanderKooy** has eliminated most of that information and provides more of a regional approach. **Mickle** needs to supply his update to the Mississippi commercial discussion. Louisiana has approved the work that **VanderKooy** did for their state and Texas has no commercial fishery. **Kalinowsky** will double check Georgia's information and provide any additional interpretation. In addition to the South Atlantic, **VanderKooy** has included the little data that exists for the landings from Puerto Rico only since there are no other records of tripletail from any other US territories in the Caribbean.

VanderKooy got a lot of information from Pete Cooper, a rec fishermen and sports writer from Louisiana, which makes up most of the fishing info in the *Recreational Fishery* section. This is broadly about angling and where effort takes place in the northern Gulf. He also summarized each state's paragraph and reiterated that each state representative is responsible for review and updates of these sections.

Individual state information includes an oral history from Florida's East Coast from an older red angler and some popular press articles from all the states. **Shipley** will review the Florida history and make necessary changes. The paragraph regarding FADs (fish attracting devices) may be moved once **Shipley** checks with her agency. If FADs are an issue in more states than Florida, this should probably be moved, perhaps to the *Threats to Abundance* section elsewhere in the document. It was noted again that the recreational landings in four states are reported in pounds where Texas reports in number of fish, so **VanderKooy** provided a comparison for Texas using numbers of fish which can be pulled from the NOAA website.

VanderKooy will check with **Aplin** on dealing with bias in MRIP. There is some material still outstanding.

Mickle stated that he should have the remaining recreational fishery for Mississippi shortly.

Texas does not have much of a recreational fishery but **Harper** gathered what was available and is included in the current draft. He has summarized the landings based on number of fish, trips, and effort.

The Georgia summary has been reviewed prior but **Kalinowsky** will double-check all of this information. It was agreed that **Kalinowsky's** Tagging information will be expanded in the *Biology* section along with the data from **Franks**.

The 'other country' summaries by country have been reviewed and approved by contacts in those regions. **VanderKooy** shared the information he has been researching and collecting from Brazil to Venezuela. The South American fisheries primarily occur during our winter which is their summer and based on the landings data he was provided, are significant compared to the US. He encouraged everyone to read through this section. It is a lot of very interesting information but can be shrunk or expanded accordingly.

VanderKooy indicated that *Bycatch* is only a first world issue and is not all bad because it tends to be subsistence fishing in other parts of the world. This language can be changed if there is concern from any of the agencies.

Mariculture, it was agreed, should be moved to *Biology* and will be based almost entirely on the lab work from **Franks** and a few others.

VanderKooy encouraged everyone to review ALL of the fishery section and provide comments on any of the sections including the international components.

Section 5 Enforcement

The *Enforcement* section has not changed much since our last meeting. VanderKooy did add MARPOL back in because it was decided that it may be important in the regulation of FADs (considering them as debris and potential dumping at sea). Shipley has made some changes but still needs to clarify some of the issues with her enforcement people.

No changes or additions to Alabama regulations have been made since last meeting.

Kalinowsky will get to work filling in Georgia's enforcement section. VanderKooy provided a template using one of the other states as an example. In addition, **VanderKooy** needs to add GDNR to Table 5.1 regarding state management institutions and will get specifics from **Kalinowsky**.

Mickle tweaked Mississippi's information and will double check changes in historical regulations.

Louisiana had no changes on what they had provided.

Texas had no changes or comments but Harper will check with Lance Robinson for final

approval.

Section 4 Habitat

VanderKooy reported that new information on *Currents* has been added by **Rester**. More detail has been added to the loop current, as well as the equatorial and Brazilian currents.

General Description of the Gulf refers back to the GSMFC's Habitat Profile which is in prep. **VanderKooy** added some *Habitat* descriptions under *South Atlantic* from his own experience but **Kalinowsky** and **Shipley** may want to add some more detail to their states' descriptions here. **VanderKooy** will add more components of the South American habitats as well which he's found while looking for information on tripletail fishing in general for that region.

There is an extensive section on *Sargassum* because there appears to be a connection between *Sargassum* and tripletail. Information about the use of FADs by the French may be added by **Franks** since they have very similar drift patterns to what we know about the mid-Atlantic *Sargassum*.

Spawning Habitat information is being gathered by **Harper** for juvenile and **Aplin** for adult. **VanderKooy** will touch base with **Aplin** and find out what information she has been working on. Those subsections may end up being combined if there are no differences by life history stage. **Harper** can pull temperatures from his Texas FID gill net data but there are no summer results. **Mickle** will try to come up with some recent Gulf-wide temperature trends based on state FID. **VanderKooy** will provide **Mickle** with the information that he has which is through 2011.

Regarding *Salinity and Temperature* in offshore pelagic waters, **VanderKooy** pointed out that, for the most part, salinity and dissolved oxygen don't seem to be that significant in driving tripletail distributions. **Harper** showed that, in Texas FID, tripletail are extremely euryhaline. It is likely that the temperature data may be the key for the annual abundance patterns for tripletail.

Factors Affecting Localized Abundance needs to be expanded upon, i.e., management, regulations, and media. These are the *Threats* and will be at the end of the section. Because this is an emerging fishery, this section needs some fleshing out in regard to issues related to FADs, inconsistent management, and interest derived from the media (fishing magazine articles). **Harper** volunteered to put something together for all to review. Each state will have a different perspective to report on *Factors Affecting Localized Abundance*. We don't really know much about this currently.

Shipley will provide a paragraph on Debris and FADs.

Section 3 Biology

VanderKooy indicated that there have been some changes to this section since last meeting. He reminded everyone that unpublished data and anecdotal reports are perfectly acceptable in a GSMFC document.

Based on the information so far, there may be multiple stocks of this species with a potential for

sub-populations regionally. This cannot, however, be addressed well without genetics work, but migration studies may add some helpful information. The telemetry data from Georgia seems to support this as well as the obvious spawning of fish within regions despite little information on actual locations. There seems to be similar 'resident' fish in other areas outside the Gulf as well.

Franks and **VanderKooy** spent significant time together prior to this meeting adding to the *Biological Description*. They did a lot of direct cut and paste into the sections on *Descriptions* and *Morphology*. It was discussed that it may be helpful to add a subsection describing the Pacific tripletail which could be confused with Atlantic tripletail. Placement of the *Lobotes pacificus* descriptions needs to be determined.

Aplin was not present at this meeting and has yet to provide any material regarding *Anomalies*. **Franks** provided her with the information regarding pugheaded tripletail and he showed the group a humpback fish as well. **VanderKooy** will follow-up with her after the meeting.

A lot of good information has been added in the *Age and Growth* section but a lot of work still needs to be done. The group discussed the possibility of a potential habitat shift taking place in this species at mid-life. Life span is based on the expectations in the *Age and Growth* data.

Kalinowsky will provide the *Reproduction* data he has from Georgia. It was agreed that an entire paragraph should be written on the fat deposits that **Franks** had mentioned in previous meetings. **Kalinowsky** found similar patterns and a potential tie to gonad development.

Fecundity is pretty straight forward and the available information seems to be there already.

Regarding tripletail Spawning, nothing has been published and this should be stated.

Larval Transport patterns were discussed. SEAMAP data revealed the largest occurrence of larvae in their ichthyoplankton samples was in the fall but there weren't a lot of individuals and overall the data appears pretty weak. It would be difficult to say much definitively on spawning. Based on potential spawning evidence, the larvae should not have long distances to move to inshore and therefore likely spawn in the coastal areas. Georgia has found evidence of recent spawning in females captured inshore.

Franks is still working on the *Aquaculture* section. He will ask Eric Saillant (GCRL) to review the *Genetics* section. It was pointed out that we need a tag recapture/migration overview for the northern Gulf and Georgia/Florida.

Aplin is also working on the *Parasites and Diseases* section. VanderKooy will check with her following the meeting.

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. There may be more in each states FID sampling data than they realize related to habitat and environmental conditions if there are specific sites that routinely have encountered tripletail.

VanderKooy will email everyone once he has a chance to rearrange and update the Biology section. He will ask everyone to evaluate the organization of this section.

Section 8 Research Priorities

The group provided a laundry list of items that need additional information based on the lack of information in the literature or from anecdotal reports. The list, so far, is as follows:

Behavior

Mimicry Color and form Sideways behavior? Predation/camouflage Free jumping behavior

Distribution

Northern boundaries? Range expansion? Temperature driven? Global?

Reproduction

Spawning location Larval transport Timing Fat Bodies Courtship Fecundity

Ageing Techniques Validation Interpretation Alternative structures

Genetics

surinamensis vs pacificus Regional subpopulations Natal waters/isotope work

Predation Interactions

Habitat

Juvenile habitats Winter habitat Migrations/preferred habitat Ontogenetic habitat shifts Hierarchical structuring by size? Physiochemical preference

Fishery

FADs and the sociology of FADs Release mortality Variability overall Recreational effort Spearfishing effort Expanded FID sampling

Stock Assessment

Feasibility Management units Mortality rates Abundance indices

Economics

Market channels Market prices Imports Recipes

Next Meeting and Timeline

It was agreed that the group would shoot for a meeting the last week in May in Savannah, Georgia. **Kalinowsky** will get back with **VanderKooy** regarding recommended places to stay and to meet.

VanderKooy will contact Manci regarding his desire to participate in the upcoming meeting and finishing up of this document.

At the beginning of April, all drafts should be turned in. We will go into the May meeting for finalization and clarification. Hopefully, there will be time to tour the GDNR facility and observe tripletail tagging.

With no further business to discuss, the meeting was adjourned at 12:30 p.m. on Wednesday, February 24th, 2016.

APPROVED BY:

JOINT GSMFC & ASMFC ARTIFICIAL REEF SUBCOMMITTEE MINUTES Monday, March 14, 2016 – Tuesday, March 15, 2016 San Antonio, TX

Chairman Newton called the meeting to order at 1:00 p.m. The meeting began with introductions of the members and guests. The following were in attendance:

ASMFC Members

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Hugh Carberry, NJ DWF, Port Republic, NJ Russell Dunn, NOAA Fisheries, St. Petersburg, FL Brad Ennis, FL FWCC, Tallahassee, FL Lisa Havel, ASMFC, Arlington, VA Christopher LaPorta, NYS DEC, East Setauket, NY (via phone) Bob Martore, SC DNR, Charleston, SC Keith Mille, FL FWCC, Tallahassee, FL January Murray, GA DNR, Brunswick, GA Alicia Nelson, VMRC, Newport News, VA Jason Peters, NC DMF, Morehead City, NC Mark Rousseau, MA DMR, Gloucester, MA Erik Zlokovitz, MD DNR, Annapolis, MD

GSMFC Members

James Ballard, GSMFC, Ocean Springs, MS Mike McDonough, LA DWF, Baton Rouge, LA Keith Mille, FL FWCC, Tallahassee, FL Craig Newton, AL DCNR, Dauphin Island, AL Douglas Peter, BSEE, New Orleans, LA Jimmy Sanders, MS DMR, Biloxi, MS Dale Shively, TPWD, Austin, TX

<u>Staff</u>

Ali Ryan, GSMFC, Ocean Springs, MS Jeff Rester, GSMFC, Ocean Springs, MS Joe Ferrer, GSMFC, Ocean Springs, MS

<u>Others</u>

Larry Beggs, Reef Innovations/Reef Ball Foundation, Sarasota, FL Jacoby Carter, USGS-WARC, Lafayette, LA (via phone) Ryan Easton, TPWD, Port O'Connor, TX Traci Floyd, MS DMR, Biloxi, MS George Frankel, Eternal Reefs, Sarasota, FL Crystal Hightower, USA/Dauphin Island Sea Lab, Dauphin Island, AL L. Scott Jackson, Univ. of FL Sea Grant, Panama City, FL Michael Lee, USGS, Conroe, TX Kelly Lucas, MS DMR, Biloxi, MS William Maxwell, NJ DFW, Port Republic, NJ Tim Mullane, Coleen Marine, Inc., Virginia Beach, VA

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Kazu Otani, Water Gremlin Company/Okabe, Tokyo, Japan Pua`ala Pascua, NOAA Fisheries, Silver Spring, MD Danielle Rioux, NOAA Fisheries, Silver Spring, MD Brooke Shipley, TPWD, Dickinson, TX Jeff Stephens, Water Gremlin Company/Okabe, White Bear Lake, MN Greg Stunz, Harte Institute/TX A&M, Corpus Christi, TX Kenta Suda, Okabe, Tokyo, Japan Tom TinHan, TX A&M, Galveston, TX Darin Topping, TPWD, Rockport, TX

Adoption of Agenda A motion was made to adopt the agenda, and the motion passed unanimously.

Approval of Minutes

The minutes from the meeting held on January 12-13, 2015 were presented for approval. The motion was seconded and the minutes were approved.

Water Quality Monitoring at Texas Artificial Reefs

Michael Lee gave a PowerPoint presentation entitled "Artificial Reef Water Quality Monitoring". Field parameters being collected include water temperature and specific conductance, dissolved oxygen concentration, turbidity, chlorophyll, blue-green algae, light intensity, pH and salinity.

One diving method used is with sonde. This allows readings to be taken at the exact sampling location consistently. There is comparative data is sonde is deployed at that location, and allows participation in other sampling efforts. There are no worries of entanglement. In-situ sample collection is also done. Diving allows for the sample containers to be rinsed with native water, and allows for consistency in location of sample collection. There is no down-line entanglement or fouling of equipment. Water quality readings can be taken at the same location as samples are being collected.

Deployment was done on July 7, 2015, and recovered on August 17, 2015. Twelve parameters were collected. Logging rate was every 30 minutes. There was a total of 23,712 data points. No corrections or shifts were required, and fouling was minimal.

Conclusions include: the small sample set made it difficult to draw major conclusions without a "smoking gun"; many results were at or below the detection limit; Concentrations seem generally consistent across the General Permit Area; long-term deployment was successful and indicates a longer feasible deployment; long-term deployment showed variability of conditions over time of deployment.

A better understanding of optimal environmental conditions for identification of future artificial reef locations is needed, as well as a foundation to determine the current status and establish long-term trends that can be used for future management of the resource. One of the best ways to address the concerns of the potential environmental effects of leaving rigs in place is to have the data to show what is actually happening.

Assessing Fish Populations at Artificial Reefs in the Northwestern GOM

Greg Stunz gave a PowerPoint presentation entitled "Surveying Artificial Reefs along the Texas Shelf: ROV and Other Methods". The goals are to provide best science to enhancing fisheries, diving and other recreational opportunities, and ecological performance. Standardized survey methods like stock assessment, ROV, VLL, or SCUBA will be developed.

There are challenges for standardized methods, such as water clarity/visibility; the variety of structure/habitat types and size; cryptic species vs. fisheries species; cost-effective, efficient data collection that is comparable across regions. Structure-specific methods are needed.

ROV methods for rigs-to-reef structures include depth interval transect/roving survey and roving transect. Calibration is also a visual survey method used.

A Tritech MicronNav USBL positioning system was used to allow real-time tracking of ROV and recordable GPS positions. The transponder fits into the ROV float block.

The next steps will be to evaluate Gulf regions for unique challenges and similarities. The most efficient, cost-effective methods of standardization will be determined. Groups will be brought together for detailed discussions for standardization across the Gulf.

ARIS Sonar Surveys of Fishes Associated with Artificial Reefs

Tom TinHan gave a PowerPoint presentation entitled "ARIS Sonar Surveys of Fishes Associated with Artificial Reefs". The objectives of the surveys are to quantify fish standing stock biomass, and to develop long-term monitoring framework for artificial reef surveys. Using an ARIS Explorer 1800, acoustic imaging is being done at nine sites, with three replicates per site. Each survey is done for five minutes.

ARIS is capable of producing high-resolution observations and data unbiased by variability in water clarity among sites. The next steps will be ground-truth biomass estimates to estimate absolute biomass rather than relative biomass among sites, and to optimize viewing angles and depth for improved image quality and to distinguish among body dimensions for more accurate biomass estimates.

Vertical Line Monitoring on Artificial Reefs in Texas

Brooke Shipley-Lozano gave a PowerPoint presentation entitled "Artificial Reef Program Biological Monitoring Update". The artificial reef program has over 4,800 acres, with 76 established reef sites and nine pending permit approval. The rigs-to-Reefs Program has contributed \$25.5 million to the Texas Artificial Reef Fund. From 1993 – present, biological monitoring has consisted of swimming diver surveys and REEF protocol. From 2012 – present, deep dives, lionfish removal, and water quality monitoring are being done. From 2013 – present, size estimation of fish, and vertical long lines are being done.

Vertical line methodology consists of three differing hook sizes fished per replicate, with three replicates per site.

SCUBA roving diver surveys are five-minute roving diver surveys on the top of the structure, and categorical data. Sighting frequencies were calculated for each species for all surveys.

Future directions of biological monitoring will consist of water quality correlations to red snapper abundance; comparisons between university sampling and TPWD; genetics sampling and familial comparison; variations of abundance by depth and location; material specific comparisons including volume of material to abundance.

Update on Florida's Artificial Reef Monitoring Efforts

Keith Mille gave a PowerPoint presentation entitled "Florida's Artificial Reef Monitoring Efforts". Monitoring goals include spot checking the performance of artificial reefs; monitoring permit compliance; and ensuring the reef is meeting its specific objectives.

Monitoring efforts of internal operations within DMFM are SCUBA assessments, side-scan sonar, and future drop and towable GoPro cameras. Project-specific contracted research efforts are: 141 grants funded since 1987; monitoring; research; and socio-economic. Contracted monitoring/citizen science efforts are: SCUBA assessments for structural measurements and visual fish assessments.

The acoustic mapping survey showed that habitats are highly variable by region. The Western Panhandle is mostly sand with artificial reefs throughout. In the Peninsula, large areas of mid-to-low relief hard bottom habitats and excavated areas.

For the 2016 Reef Fish Survey, there is a significant survey expansion, and multiple vessels to support operations. There are also key REEF Fish Survey procedural changes. Chevron traps have been eliminated; there will be exploratory work via hooked gear to collect gag and gray triggerfish life history samples; analysis of lighted cameras are ongoing for deep water sampling. Technology changes include new cameras, videos, and SeaGIS to count and measure.

There will be GOM SEDARs in 2016 to update gag and greater amberjack assessments, and stock ID for lane and gray snapper.

Update on Alabama's Artificial Reef Monitoring Efforts

Crystal Hightower gave a PowerPoint presentation entitled "Alabama Artificial Reefs Survey: A Multi Gear Approach". For the Fisheries Independent Ecosystem Survey, a multi-gear approach is being done using sidescan sonar, trawl, ROV vertical longline, and bottom longline.

The Outland 2000 is a remotely-operated ROV with single beam scanning SONAR that uses scaling lasers to measure fish lengths.

Downward-facing GoPros are attached to a vertical longline backbone, which is now part of standardized SEAMAP VL protocols.

Monitoring of species comp, abundance, distribution, size, and age comp of reef fishes on structured and unstructured environments inside and outside AL RPZ will continue.

Evaluation of alternative technologies to supplement traditional fisheries sampling and monitoring will continue.

New reefs being placed within and outside the AL RPZ will be monitored, and effects monitored.

Gulf Artificial Reef Monitoring and Assessment Program

James Ballard gave a PowerPoint presentation entitled "Sport Fish Restoration Program Update". The Gulf Artificial Reef Monitoring and Assessment Program (GARMAP) was developed due to the hurricanes in the Gulf over the last decade and the 2010 Deepwater Horizon oil spill disaster. These occurrences underlined the fact that baseline data on the vast array of artificial reef habitats in the Gulf of Mexico was needed. Collecting and analyzing the data enable states to be able to accurately predict how new artificial reefs will function over time, and characterize the spatial and temporal distribution of commercially and recreationally important species utilizing their artificial reef habitats. Also, states can compare how their artificial reef habitat from future natural and man-made disasters. A Standardized Monitoring and Assessment Protocol was prepared by **James Ballard**, Sport Fish Restoration Program Coordinator at Gulf States Marine Fisheries Commission (GSMFC).

Collected data, such as vertical line catches and chevron trap catches, is entered into the GSMFC online GARMAP website in the Data Entry Program. For the field sampling data form, the vessel name, team members, water quality, structure name/type, depth and clearance are entered. Vertical line catch data and Chevron trap data such as hook status, BioCode, weight, bio sample taken, status, and comments are also entered. There is also a GARMAP fish tag reporting section to report fish tags on fish caught on the reefs. The fish tags have a two-letter state code, followed by 5 numbers. All tags are printed with: "To report, please go to GARMAP.GSMFC.ORG." Tag ID, length, weight, location, latitude/longitude, reef site, and date caught are entered.

Update on ACFHP's Black Sea Bass Habitat Project

The ACFHP (Atlantic Coastal Fish Habitat Partnership) is an assembly of state, federal, tribal, and non-governmental groups whose mission is to conserve habitat for Atlantic coast diadromous, estuarine-dependent, and coastal fish species. ACFHP's area of focus extends from the headwaters of coastally draining rivers to the edge of the continental shelf from Maine to the Florida Keys, with a particular emphasis on estuarine environments. ACFHP addresses habitat threats with a broad and coordinated approach, leveraging resources from many agencies and organizations to make a difference for fish habitat.

Lisa Havel stated that the project is to address black sea bass habitat issues in the Mid-Atlantic region (from Long Island Sound to Cape Hatteras), with an emphasis on the use of natural and/or artificial reefs and their ability to maintain and enhance fishery productivity. Projects can range from 12 - 24 months in length, and should include guaranteed monitoring for at least three years. The maximum award for an individual project is \$225,000.

The ACFHP formed a subcommittee of ACFHP steering committee members and ASMFC artificial reef committee members in order to decide on their focus for how they want to approach this funding opportunity. The Mid-Atlantic Fisheries Council released its RFP, which was to manage natural and/or artificial reef research or restoration in mid-Atlantic blue water. ACFHP applied for funding. If funding was received, they planned to incorporate at least three years of monitoring into their RFP to look at more of a long-term effect of the project. In August, funding in the amount of \$225,000 was received. In November, they released their RFP, and it was closed in February 2016.

Bradley Stevens, Ph.D., a research scientist for the NOAA Living Marine Resources Cooperative Science Center (LMRCSC) at the University of Maryland Eastern Shore received a \$216,394 5

grant from the ACFHP. The funds will be used to study black sea bass habitat characteristics, fish abundance, and fish diets near Ocean City, Maryland. The project is titled, "Hab in the MAB: Characterizing Black Sea Bass Habitat in the Mid-Atlantic Bight." Six reef sites will be studied for comparisons - four natural reefs, and two artificial reefs.

Discussion about Future Monitoring Needs

Shipley stated that they need to do a better job reaching the public. Science-wise, they will be getting an ROV for the Parks & Wildlife Program, and possibly staff to run it. **Shively** stated that one of their main goals is to monitor the reefs, and to continue that. They are putting together long-term data sets and looking at different reef types, water quality, distance offshore, etc. They have spent a good deal of time looking at which equipment is best suitable for different reef environments. One of their goals is to go back and look at the different types of equipment, and standardize how they do things. They are still studying the "attraction versus production" question.

Stunz stated that there are some minor things that could be changed to make monitoring consistent throughout the Gulf. Standardization needs to be discussed, and useful methodologies decided on, particularly for stock assessment.

Ballard agreed, and said that an artificial reef ROV monitoring workshop could be set up to discuss standardization and compare data across states. Shively suggested creating an ad-hoc group.

Mille suggested focusing on stock assessment work that is being done, and having artificial reefs incorporated in habitats.

Other Business/Public Comment

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

Tuesday, March 15, 2016

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

The Rigs-to-Reefs Program in Louisiana

Mike McDonough gave a PowerPoint presentation entitled "The Louisiana Artificial Reef Program Fisheries Extension". There are 75 established offshore artificial reef sites. There are six permitted offshore reefs: four deep-water, and two SARS. There are 64 platforms for R2R: 41 permitted, and 23 in the permit process. Structures converted into artificial reefs include platform jackets, drill rig legs, armored personnel carriers, a jackup barge, a tugboat, and oil and gas structures.

Monitoring is done via vertical and horizontal ROV transects on toppled/towed vs. partially removed structures. Still cameras are used to capture images at specified depths along the widest width of the structure.

Overview of Offshore Oil & Gas Decommissioning Cost Estimation

Elena Kobrinski gave a PowerPoint presentation entitled "Overview of Offshore Oil & Gas Decommissioning Cost Estimation". Oil and gas leases in the Gulf of Mexico are administered in five-year program leasing cycles. The leasing contract with the federal government requires removal.

As of October 2015, for an estimated \$38.2 billion in decommissioning liabilities in the Gulf, Interior officials identified approximately \$2.3 billion in liabilities that may not be covered by financial assurances. The federal government remains at increased risk of incurring costs should lessees fail to decommission oil and gas infrastructure.

The Interior faces two key challenges managing potential decommissioning liabilities: BSEE (Bureau of Safety and Environmental Enforcement) does not have access to all relevant data from lessees on costs associated with decommissioning activities in the Gulf; BOEM's requirements for reporting the transfers of lease rights may impair its ability to manage decommissioning liabilities. The Interior may not have reasonable assurance that its cost estimates of decommissioning liabilities in the Gulf are accurate, or that it is requiring sufficient amounts of financial assurance based on these estimates.

What this means for artificial reef programs is that if the recommendations in the report and the final regulations requiring the reporting of data are successful, it could mean more transparency with actual decommissioning costs. Ultimately, it could mean more financial assurance for the artificial reef programs, and rigs-to-reef programs specifically.

Discussion of Rigs-to-Reef Efforts in Other States and Any Issues with the Program Newton stated that in Alabama, their official Rigs-to-Reef Program is rather new. Availability of rigs is an issue.

Peters stated that North Carolina does not have a Rigs-to-Reef Program. The Navy has large steel technical tower structures offshore, and approached DMF about cutting the structures and toppling them in place. The request was turned down, due to no data being available on stability of the structures and movement issues.

Murray stated that in Georgia, they have eight technical towers through the Department of Defense, and are working with the Department of the Navy to have the towers decommissioned. GA DNR holds the permits, and will take ownership of the towers once they are cut and toppled.

Shively stated that in Texas, the concrete pads that technical towers sit on will be used to form the base for future near-shore reef sites. In the last year, there has been a reduction in reefing due to some companies slowing their current reefing efforts.

Sanders stated that in Mississippi, the availability of rigs is an issue.

Peter stated that some companies have been reluctant to expend reefing efforts, due to falling oil prices. Donation numbers have fallen. Applications to decommission have recently slowed.

Update on the 2016 National Saltwater Artificial Reefs Workshop

Russell Dunn reported that the overall focus of the workshop, which will be held in Alexandria, VA on June 9-10, 2016, is to discuss the potential of artificial reefs as a tool to enhance and support recreational fisheries. The state focus of the workshop is to provide an overview of the current science and applied experience from the state program application of artificial reefs as a management tool instead of a mitigation or restoration tool.

There is a steering committee composed of ASMFC and GSMFC members, as well as state and Fish & Wildlife staff, and members of the fishing community who are setting up the workshop and creating the agenda. A facilitator has also been hired for the workshop. Invitations have been sent out. Approximately 70 people are expected to attend.

Discussion of Historical Preservation Office Requirements

Craig Newton reported that archaeological surveys are required for artificial reef deployments on areas that have previously had gas rigs sighted there. He asked the members what type of surveys they have to conduct for their reef permits. **Shively** stated that in Texas, it depends on whether it is in state or federal waters. For federal waters, the Army Corps of Engineers requires an archaeological survey. In state waters, TPWD works through the Texas Historic Commission, and their requirements are different than federal requirements. **McDonough** stated that in Louisiana, a joint application is sent to state permitting agencies, and they check their location data bases. No survey is required from DWF. **Sanders** stated that in MS, they also turn in a joint application. **Zlokovitz** stated that in MD federal waters, they provide the Maryland Historical Trust with the artificial reef site coordinates before deployments. The Trust does a point check for the sight, and if there are concerns, a metallurgic survey or sub-bottom survey is done. **Mille** stated that in Florida, their permit process goes through the Department of Environmental Protection in state waters. In federal waters, through the Army Corps of Engineers. There is a private master site file that is checked for the coordinates of historical sites.

Discussion of the SAFMC's Habitat Document: Artificial Reef Section

Bob Martore reported that the SAFMC (South Atlantic Fisheries Management Council) has a massive habitat document that describes various habitats that they manage, how they are managed, and what their plans are for them. The document is re-written every 5-10 years, and is currently in the process of being re-written. Reef managers in the four states involved in the SAFMC (North Carolina, South Carolina, Georgia, and Florida) are responsible for re-writing the artificial reef section.

Martore asked the members to read over the document and submit their suggestions to him within the next few weeks.

Update on NRDA/NFWF Artificial Reef Associated Projects

<u>Texas</u>

Shively reported that there are proposed artificial reef projects at Freeport Reef, Ship Reef, Matagorda Reef, and Corpus Reef. At the George Vancouver Nearshore Reef Site, between 800-950 pyramid reefs will be placed at the reefing area. This reef site is located six miles south of Freeport. At the Matagorda Nearshore Reef Site, 1,600 pyramid reefs will be placed in the reefing area. This site is located 10 miles southeast of Matagorda County. A proposed Ships-to-Reef site will be located 67 miles offshore of Galveston, using a 350 foot ship. At the Corpus

Christi Nearshore Reef Site, over 1,200 pyramid reefs will be placed, and 2,000 tons of concrete culverts will be deployed. This location is located 11 miles east of Packery Channel.

<u>Louisiana</u>

McDonough reported that all of their artificial reef projects are done through the Artificial Reef Trust Fund, which is funded by their Rigs-to-Reef Project.

<u>Mississippi</u>

Sanders reported that MS had one NRDA project that was completed in early 2014. Limestone was deployed onto 42 inshore reefs. One of the first parts of their NFWF project was to have all of Mississippi's permitted artificial reef sites multi-beamed and side-scanned. They recently received that data.

<u>Alabama</u>

Newton reported that they have approximately \$11 million in NFWF funding, and \$1 million in construction contingencies. They will spend \$2 million on twenty-five foot tall pyramids that will be placed in general permit reef zones. Approximately \$1 million will be spent building juvenile reefs, which will be productive for juvenile red snapper. In-shore reef construction is being done also.

<u>Florida</u>

Mille reported that they have NRDA artificial reef projects totaling \$11.4 million in five northwest Florida counties. The sites are located in state waters, and will have multiple modular designs for snorkeling and recreational fishing. RFPs will be advertised beginning in September 2016.

Overview and Function of Large Artificial Reefs and FADs in Japan

Kazu Otani gave a PowerPoint presentation entitled "Overview and Function of Large Artificial Reefs and FADs in Japan". Most Japanese artificial reefs have been developed by the budget of "Project of Equipment for Fisheries Environment" of the Ministry of Agriculture, Forestry and Fisheries.

Okabe Co., Ltd. is a company in Tokyo that has a marine business division that constructs artificial reefs. The artificial reefs are built using steel and concrete components. The steel reefs are precast modules and cast-in-place. They are large volume, sunk in deep to middle depth water, and are customer specific. These "AS" series reefs range between 13 feet high, and up to over 68 feet high. The modules are made in the factory, transported to a site, then arranged and welded together.

The company also builds FADs (fish aggregating devices). Some pelagic fishes congregate around FADs, such as tuna, bonitos, and mackerels. The types of FADs constructed are surface, float/sink, and submerged. The FADs are made at the factory and transported to the site, where floats and ropes are connected to them. They are then put on a ship, towed out to sea, and set on the site.

Guidelines for Marine Artificial Reef Materials Revision

Ballard reported that several revisions were made to the Second Edition. "Snorkel Reefs", "Memorial Reefs", and "Dedication" were added as Titles.

This edition is dedicated to the memory of the late Jim Francesconi, who passed away in July 2014. Jim worked with the NC Division of Marine Fisheries from 1987 until 2000. Jim's efforts with the program produced hundreds of enhancements throughout coastal NC, including the creation of an estuarine, two ocean reef sites, and the sinking of numerous vessels and aircraft as artificial reefs.

State/Federal Artificial Reef Program Updates

<u>Alabama:</u>

Newton reported that the Coastal Impact Assistance Program (CIAP) funded the deployment of 150 eight foot pyramids within the offshore general permit reef zones. Existing reefs were enhanced and new reef sites were created.

During August 2015, the MoBay gas platform located in Alabama waters of the Mississippi Sound was disassembled and taken offshore for reefing. Eleven individual reef sites were created from the platform and jacket.

Restoration monies from the BP oil spill are funding approximately \$11.5 million of habitat enhancement projects and monitoring.

Within Pelican Bay, a cultural resources survey of water bottoms was completed. The survey did not identify any archaeological artifacts, but some areas were identified that could possibly contain artifacts. Donated monies from CCA and Sportfish Restoration funds will be used to construct the 15.8 acre reef using anchored disc shaped reefs.

Delaware:

Mullane provided the report for Tinsman. In December 2015, Delaware and the DNREC's Division of Fish & Wildlife sank the former Army and Navy ship *Shearwater* onto the Del-Jersey-Land Reef site.

Florida:

Mille reported that there are 3,098 public artificial reefs in Florida as of March 2016. During 2015, 94 new deployments were completed state-wide.

Twenty-four pre-fabricated concrete reef modules were successfully deployed in federal waters within the Brevard County Lois Dubois permitted area in August 2015.

Within the Deerfield Shallow permitted area in federal waters off of Broward County, 500 tons of limestone boulders were deployed as one patch reef. Prior to this, the Broward County Artificial Reef Program had been largely inactive for five years with no deployments due to the lack of local funds.

In Franklin County, Carrabelle, 26 concrete and limestone pre-fabricated modular units were deployed to create three patch reefs.

Within the Deerfield Shallow permitted area, a 150-foot barge was sunk. The barge had 15 concrete sculptures of Easter Island heads (Moai statues) attached to the deck of the vessel. There were also sculptures of cave outcroppings attached. This art project was highly publicized

and fully funded by a private donor. Unfortunately, the vessel flipped during the sinking and landed upside down, crushing all of the cement structures.

In Nassau County, a total of 1,120 tons of concrete culverts, slabs, and other construction materials at a single pile patch reef within the Captain Daddy Artificial Reef permitted area. This deployment was the first deployment in Nassau County since 2006, and is the first deployment funded by the state since 1997.

In Bay County, the city of Mexico Beach and the Mexico Beach Artificial Reef Association deployed 42 pre-fabricated concrete modules, spread between three permitted sites in the Gulf of Mexico federal waters. Secondary-use steel cable reels and mounts from Oceaneering, a global oilfield provider of engineered services and products primarily to the offshore oil and gas industry, were also deployed.

Collier County was awarded \$1M by BP (RESTORE act funding) for artificial reef construction. During 2015, Collier County deployed 35 artificial reefs.

Okaloosa County and FWC partnered with the Eglin Airforce Base to construct two artificial reef complexes, using secondary-use concrete from the airforce base.

Palm Beach County deployed 735 tons of limestone boulders as a single patch reef, and 40 modules of prefabricated designed concrete within the Jupiter Inlet site.

FWC contracted with the University of South Florida to engage in a project utilizing passive acoustic listening devices to assess boating activity over and adjacent to three artificial reef sites and their paired natural reef sites. The final report from the acoustic dataset indicated that the artificial reef sites are receiving significantly higher boating visitation activity than the paired natural reef sites.

The Palm Beach County Reef Research Team, a non-profit group, was contracted to perform fish monitoring and mapping dives on 24 artificial and natural reefs during 2015, to complete year two of a two-year monitoring effort. A total of 145 fish species were recorded during the 26 point count surveys in 2015. Combination sites that had both natural hard bottom and artificial reef structures had the highest averages for species, family counts, and number of fish. Juvenile biomass average was highest for the combination reefs. Ships had the highest average for biomass.

Funding continued for the Reef Environmental Education Foundation by FWC for completion of year five of a five-year fish census monitoring effort of the General Hoyt Vandenburg, which was 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 site, and seven reference reef sites.

FWC funded the University of West Florida to conduct a two-year study beginning in 2014 to examine the effectiveness and ecological benefits of targeted lionfish removals at experimental Escambia East-Large Area Artificial Reef Site. Lionfish were removed from 17 of the selected sample sites via spearfishing in December 2013, and were periodically removed through May 2015. Both juvenile and adult lionfish quickly recruited to cleared reefs, and in less than a year,

they reached pre-clearance densities. Declines in several fish species were observed throughout the study, regardless of treatment.

The FWC and Escambia County continued sampling recreationally-targeted reef fish for PCB analysis on the ex-U.S.S. Oriskany, which was sunk as an artificial reef 22 miles off Pensacola Pass in 2006. A total of 438 reef fish collected on the Oriskany have been retained for PCB sampling from December 2006 through April 2015. Sampling and monitoring will continue until directed otherwise by EPA Region 4.

The FWC Artificial Reef Program held the 2015 Florida Artificial Reef Summit in January 2015 in Clearwater Beach, FL. There were over 190 attendees, and was the largest summit to date.

Jon Dodrill retired on December 31, 2015 after 23 years with the Florida Artificial Reef Program, and 33 years of service with the state of Florida.

Georgia:

Murray reported that during 2015, GA DNR conducted three offshore artificial reef enhancements at two reef sites through deployments of donated materials of opportunity. Project SCUBA divers conducted material and compliance inspections on 12 reefs.

The Offshore Artificial Reef Project covers approximately 116 square miles. The GA DNR is currently consulting the Department of Defense on deployment plans to fully submerge eight decommissioned Tactical Air Crew Training System Towers. Once deployed to the seafloor, the ownership of the towers will be transferred to the GA DNR.

During 2015, a GA DNR YouTube channel was created to house offshore artificial reef videos, which are also linked to the Georgia Outdoor Map website. Updates were made to the GA DNR artificial reef webpages and Georgia Outdoor Map webpages. A GA DNR Artificial Reef Strategic Plan, which was created in 2015, is currently under development.

The Inshore Artificial Reef Project conducted annual side-scan sonar surveys and aerial fly-overs to assess material integrity, stability, and position along permitted intertidal banks. An Inshore Artificial Reef Monitoring Plan and Coastal Use Survey were established in November 2015. Implementation is expected to begin in summer 2016.

GA DNR conducted multiple oyster reef deployment types in spring 2015 to provide substrate for oyster recruitment. Within Georgia's public shellfish harvest areas, enhancements were done to augment existing oyster habitats.

Monitoring is conducted at all oyster reef sites. A GA DNR Oyster Restoration Monitoring Plan was created in June 2015, and will be implemented in July and October 2015. Test plots were monitored to document changes in larval recruitment and sedimentation rates by observing variations in recruitment.

An Oyster Restoration Strategic Plan was developed in 2015 to forecast and prioritize sites and address actions that the GA DNR Habitat Restoration and Enhancement Unit can take to restore oyster reef habitats over the next five years.

Louisiana:

McDonough reported that there are now 27 established inshore reefs. Enhancements were done with additional material on two existing reef sites. Two current permits are held for additional inshore reefs, and one more permit has been applied for.

There are 75 established offshore reefs in Louisiana.

Approval of nearshore planning areas is in the final stages by the Artificial Reef Program. A final presentation to the LA Artificial Reef Council will be done for their approval.

Multi-beam surveys and high resolution video ROV surveys of selected reef sites continue.

Maryland:

Zlokovitz reported that annual deployment of concrete reef balls in upper Chesapeake Bay at Memorial Stadium Reef has been completed. More than 200 reef balls have been deployed since 2001 at the site.

The ten-year state wetlands license for 21 artificial reef sites in Chesapeake Bay, and the federal Corps permit both expired in 2015. DNR has obtained a state license renewal and water quality certification letter to continue work for an additional ten years. However, the ten-year federal permit has not yet been secured.

Monitoring and enhancements of existing reef sites continued in 2015. Construction of a private artificial oyster reef site in Horseshoe Bend in the St. Mary's River was completed.

A more statistically rigorous monitoring program that can be maintained with limited staff and budget is being developed. Analysis of the 2013 data indicated that no significant difference between the artificial reef and natural reef was seen.

The volunteer angler survey at artificial reef sites in bays and ocean continued in 2015. Data analysis has not been completed yet. Anglers are being recruited for a 2016 volunteer angler logbook study on several artificial reef sites. In May, the anglers will be trained during a webinar and conference call.

In the Atlantic Ocean off the coast of Maryland, deployment of concrete coral castle reef blocks, steel, and concrete pipe has been completed at various reef sites. Over 12,000 reef blocks have been deployed at numerous sites in recent years.

Massachusetts:

Rousseau reported that the MA Division of Marine Fisheries continues to administer the MA Artificial Reef Program on a part-time basis.

In 2015, funding was secured to deploy 1,000 cubic yards of concrete debris to a 10-acre site in Nantucket Sound. This will be the first new reef deployed in MA in 10 years, and will take place in March 2016.

Funding was received for a third consecutive year from the MA Marine Recreational Fisheries Development Fund for long-term support of reef monitoring and development activities.

A statewide GIS-based artificial reef site selection model targeting areas with limited hard bottom habitat was developed. The model is used to determine if a site is worth developing further, and to identify potential concerns that may need to be addressed at a given site during reef design.

DMF participated in a multi-agency working group of Federal, state, local, and non-profit resource agencies to identify potential suitable options for the beneficial reuse of dredge rock material expected to be removed from the Boston Harbor by the ACOE in 2016.

Work continued on a National Fish and Wildlife Foundation Hurricane Sandy Coastal Resiliency Competitive Grant Program to examine the role of artificial reefs as a "living shoreline" option for coastal protection in MA.

Mississippi:

Sanders reported that Artificial Reef Bureau (ARB) members used side scan equipment to map historical oyster beds in Pascagoula Bay and Graveline Bayou. Inshore and offshore artificial habitat continued to be side scanned to assess reef status and location. The offshore Fish Haven for the National Fish and Wildlife Foundation (NFWF) was mapped in December.

The ARB continued to monitor fish assemblages and physiochemical parameters at selected inshore reef sites during 2015. To assist small boaters in locating low-profile reefs, personnel periodically checked and re-marked inshore reefs in three coastal counties. For navigational safety, ARB installed new lights on Pass Key, Katrina, Square Handkerchief, and Jail House. Offshore reef sites were visited to check reef sustainability, fish community structure, and subsidence rates. The ARB participated in a joint sampling effort in December 2015 and January 2016 to collect water samples and hydrological data in the Mississippi Sound during the Harmful Algae Bloom event.

The ARB worked on securing and deploying more structure. Staff collaborated with Omega Protein in Moss Point, MS in June to deploy a 165 foot pogey boat in Fish Haven (FH) 13. From July-September, concrete material was deployed at several artificial reef sites.

During 2015, the ARB attended multiple outreach events and educational meetings.

The ARB assisted the Gulf Coast Research Laboratory hatchery with the Red Snapper Enhancement project. They assisted the hatchery to conduct four trips to release 7,000 juvenile Red Snapper on artificial habitat. One of the goals of red snapper enhancement is to have more fish enter the fishery and to help rebuild the stock before its estimated re-building date.

The ARB is currently preparing for and working on several projects. They are collaborating with the Coastal Conservation Association to deploy structure on Cat Island. They are also negotiating and organizing the Federal Emergency Management Agency project to restore the Keys to prehurricane Isaac conditions. For the Coastal Impact Assistance Program, the ARB will build and deploy small artificial habitats for juvenile reef fish. For monitoring projects, the ARB is working on the Mississippi Bight Lionfish Response project, the Gulf Artificial Reef Monitoring and Assessment Program, and the National Fish and Wildlife Foundation project.

New Jersey:

Carberry reported that funding is an issue. New Jersey's reef program is primarily funded by Sportfish Restoration funds in the annual amount of \$250,000. However, the Sportfish Restoration funding was discontinued in 2011 due to issues with commercial fishermen using artificial reefs as a primary source to set their fishing pots. Recreational anglers who paid the excise tax through the sportfish restoration program could not access the reefs because their fishing tackle became entangled in the fishing pot lines. The recreational fishermen complained constantly, and the funding was discontinued. A regulation has been instituted for two rigs in state waters. Small areas will be designated for commercial fishermen to set their pots, and 85% of the reef is open for recreational fishermen. Recently, petitioned the Mid Atlantic Fisheries Management Council for Special Management Zone Regulations. The procedure takes four years; after which, there will be a complete SMZ designation for their 13 reefs that are in federal waters.

New York:

LaPorta reported that in 2015, the Rockaway Delivery Lateral Northeast Connector Project was completed. A new reef permit was obtained for the site, and 450 sections of concrete-coated steel pipe were deployed in October on 16 targets.

The New York Reef Program holds valid permits for five existing reef sites. Two of the largest sites remain half improved, with opportunity to receive a large amount of material.

In 2015, local fishermen formed The New York Reef Building Foundation, a western Long Island not-for-profit organization. Another eastern Long Island-based not-for-profit foundation is being researched for future reef building sponsorship.

In 2015, Stony Brook University School of Marine and Atmospheric Sciences completed a \$175,000 biological reef monitoring study on the Atlantic Beach Reef & Hempstead Reef sites field work. The final report will be completed in mid-2016.

In 2015, the Aerial Reef Monitoring Survey was funded and continued.

Oceans & Great Lakes funds have been applied for two future reef projects, and to conduct a Supplemental Environmental Impact Statement to expand existing reef sites, and create new sites including deep water for potentially bigger projects.

North Carolina:

Peters reported that in the past year, they have merged the Oyster Sanctuary Program and the Artificial reef Program into one Artificial Reef Program. The Oyster Sanctuary Program serves as a considerable fisheries benefit. The programs are still funded separately.

Four reefs off of Wilmington have been enhanced as part of one of their Artificial Reef Association's grant projects.

There are 62 artificial reefs in NC. Plans are underway to add seven estuarine reefs.

Two vessels will be sunk next month at an intermediate artificial reef site as a memorial reef for the late Jim Francesconi.

Twenty low-relief oyster reefs will be created using 300,000 bushels of cultch material.

Rhode Island:

The RI Department of Environmental Management (RIDEM) Division of Fish & Wildlife and The Nature Conservancy held a hearing on February 10, 2015 by the RI Coastal Resources Management Council (RICRMC) after the last artificial reef subcommittee meeting for an assent to build three artificial reefs. The reefs will be made up of approximately 300 different-sized reef balls set in specific layouts in Narragansett Bay. Although certification permits were obtained, opposition was shown from RICRMC members regarding potential negative impacts of these reefs to Narragansett Bay. Also, three commercial fishermen testified against the proposed activity because of concern for the 1/2 acre buffer region that surrounded one of the reefs that one of them used occasionally for his whelk pots. Gear limitations in the buffer would prevent him from deploying whelk pots on the reef. Concerns were also expressed regarding the reef being near a proposed marina and condominium that would be built, and the potential to increase invasive species populations. The council also indicated that if eventual construction of the reef was allowed, it would be required that fund availability for removal of all reef materials within a specified time (six years) would have to be shown. It was voted that the application would have to be revised, the reef moved to areas where there would be no objections, and financial ability be shown to remove reefs after a specified time. The RIDEM withdrew the permit application, and the concept of putting reefs in the mid and lower Bay has been abandoned. RIDEM is now working with the The Nature Conservancy to assess the upper Narragansett Bay urban tidal areas for opportunities to enhance fish habitat and possible reef construction from oyster shell and cultch. The assessment will begin in summer 2016.

South Carolina

Martore reported that material deployments continue to be mostly surplus concrete structures. Recently, several small and mid-sized vessels (40-60 feet) have been found to sink. Steel lattice or radio towers have been welded to the decks to enhance some of the vessels, or by concrete culverts being placed vertically within holds.

The cooperative program with the South Carolina Army National Guard has been reestablished after a year's hiatus. This summer, 36 cleaned and prepared armored personnel carriers will be deployed on two reef sites. The program will be continued again next year on two more reef sites.

Program funding continues to be stable, due primarily to the consistency of funds generated by the state saltwater fishing license. Some organizations have suggested that the cost should be increased, provided that the funds go directly to DNR programs like the artificial reef program that benefit the use and management of marine resources.

An official request of the South Atlantic Fisheries Management Council by DNR has been made to declare their two unpublished experimental reefs as Type II Marine Protected Areas (MRAs). The final vote will be conducted later this year as part of the Council's Amendment 36 to the Snapper Grouper Fishery Management Plan, proposed Spawning Special Management Zones (SMZs).

The "Guide to South Carolina Marine Artificial Reefs" is being printed and will be distributed shortly. This is the fifth edition. The guide lists all reef sites and materials, along with GIS-generated maps of all South Carolina artificial reefs.

Texas:

Shively reported that there are 77 permitted reef sites, and over 4,000 permitted acres. Through the Rigs-to-Reef Program, \$25.2 million has been generated. There have been 149 platform R2R donations to date, and 30 platform R2R donations in progress.

TPWD oil and gas platform removal methods consist of 61% towed, 27% partial removal, and 12% topple.

Nearshore reefs and public reefs are made up of quarry rocks, concrete culverts, reef pyramids, reef balls, and bridges and causeways.

There is a proposed 160-acre Sabine nearshore reef site, which is 8.4 nm offshore. Another proposed reef site is the 160-acre Galveston nearshore reef site, located 6.55 nm offshore.

At the Freeport and Matagorda nearshore reefs, pyramids will be deployed in the summer of 2016. The projects are funded by NRDA.

Virginia:

Nelson reported that Mike Meier retired in January 2016. There are no longer dedicated staff members for the artificial reef program. **Nelson** and another staff member are handling that program, along with their other duties.

Some monitoring is being done. Instead of focusing on new reef sites, they are focusing on maintaining the 23 sites that they currently have. Eighteen sites are in-shore.

A large project has begun in 2016 in VA Beach. Bridge material was deployed on March 1, 2016, and will continue monthly.

BSEE:

Peter reported that so far there are no new major policy changes. There are approximately 2,300 fixed platforms still in the Gulf of Mexico. The rate of decommissioning applications has dropped over the last year.

Next Meeting/Other Business/Public Comment:

Mullane spoke on Aerospace & Marine International (AMI), a commercial weather service that uses available government and non-government resources to provide detailed hourly/daily weather information, wave conditions, swells, currents, water temperatures, etc. for reef deployments, by using reef site coordinates that are given to AMI in advance. They will provide the service for approximately \$60.00/day.

The next meeting location will be in Florida.

The next meeting date will be in January or February 2017.

Election of Officers

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GSMFC: Mille was elected as Chairman. Shively was elected as Vice-Chairman.

A motion was made to approve, it was seconded, and the motion passed.

ASMFC: Rousseau was elected as Chairman. Peters was elected as Vice-Chairman.

A motion was made to approve, it was seconded, and the motion passed.

There being no further business to discuss or public comments, Newton adjourned the meeting at 5:00 p.m.

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APPROVED BY: COMMITTEE CHAIRMAN

FISHERIES INFORMATION NETWORK (FIN) MINUTES March 14-15, 2016 San Antonio, TX

Chairman **M. Harden** called the meeting to order at 1:05 p.m. The following members, staff, and others were present:

Members

Chris Denson, AMRD, Gulf Shores, AL Matt Hill, MDMR, Biloxi, MS Michael Harden, LDWF, Baton Rouge, LA Thomas Sminkey, NOAA/ NMFS, Silver Spring, MD Richard Cody, FFWCC, St. Petersburg, FL Nicole Beckham, AMRD, Gulf Shores, AL Nicole Smith, LDWF, Baton Rouge, LA Daniel Matos, PRDNER, Mayaguez, PR John Froeschke, GMFMC, Tampa, FL Jessica Stephen, NOAA/SERO, St. Petersburg, FL Ken Brennan, NOAA/SEFSC, Beaufort, NC Dave Gloeckner, NOAA/SEFSC, Miami, FL Faye Grubbs, TPWD, Corpus Christi, TX Justin Esslinger, TPWD, Rockport, TX Paul Mickle, MDMR, Biloxi, MS

<u>Staff</u>

David Donaldson, GSMFC, Ocean Springs, MS Gregg Bray, GSMFC, Ocean Springs, MS Donna Bellais, GSMFC, Ocean Springs, MS Ashley Lott, GSMFC, Ocean Springs, MS Steve VanderKooy, GSMFC, Ocean Springs, MS

Others

Andrew Petersen, Bluefin Data, Prairieville, LA Geoff White, ACCSP, Arlington, VA Todd Phillips, Ocean Conservancy, Austin, TX Steve Turner, NMFS/SEFSC, Miami, FL Traci Floyd, MDMR, Biloxi, MS Joe Jewell, MDMR, Biloxi, MS Gordon Colvin, NOAA, Port Jefferson, NY Jackie Wilson, NMFS, Silver Spring, MD Evan Peths, TPWD, Rockport, TX Darrin Topping, TPWD, Rockport, TX Kelly Lucas, MDMR, Biloxi, MS

Approval of Agenda

G. Bray noted that an additional item had been added to the agenda, 17b – Discussion of impacts of current funding levels. **T. Sminkey** moved to approve the agenda. **C. Denson** seconded.

Approval of Minutes

The minutes of the Fisheries Information Network (FIN) meeting held on March 17, 2015 in Point Clear, AL were approved as presented.

Gulf MRIP Implementation Plan Development

The FIN Committee had a discussion regarding the MRIP Regional Implementation Plan Development. **G. Colvin** gave the committee some background information on the issues. MRIP is in the process of transitioning from pilot testing of new collection methodologies to implementation of new methods. MRIP's Executive Steering Committee (ESC) has adopted a strategy that establishes Regional MRIP Implementation Teams as the key entities for priority setting, decision-making on methods and goals, and for survey implementation. For those regions which have established Fishery Information Network (FIN) partnerships, the MRIP ESC identified the FINs as the Regional MRIP Implementation Teams. The plans should be focused on recreational data collection priorities for the next 3-5 years but can be revisited earlier if recreational priorities change.

After much discussion, the committee selected the following prioritized list as high priority for the Gulf Regional Implementation Plan:

- 1. Full Funding for MRIP General Survey at base sampling levels
- 2. MRIP Certified Specialized Landings Surveys
- 3. Redesigned Biological Sampling Program Integrated with Recreational Catch Sampling
- 4. For-Hire Electronic Logbook Implementation and Validation
- 5. Improving Accuracy and Timeliness of Saltwater License Frame
- 6. Improve Precision of Landings Estimates by Increasing Dockside Sampling Levels
- 7. Improve Recreational Discard/Release Data

Number 8 is a low priority, but is to be included in the implementation plan development discussion:

8. Changing from 2 Month Waves to Monthly Recreational Estimates

G. Bray stated that the next step is for the GSMFC to draft a skeleton of the plan and to work with the state and federal partners to flush out the details. For the high priority issues, a budget and a statement of work will be needed from each of the applicable states. The plan is to have a draft document by the end of the summer to send to the full FIN Committee for review and to deliver a finalized plan to MRIP by late fall/early winter 2016.

ACCSP Update

G. White gave a status update on the ACCSP Program. Current projects include: MRIP projects (PSE and For-Hire), APAIS Transition, SAFIS Tablet Reporting, Data Warehouse

Updates and Partner Projects. He noted that a For-Hire inventory update workshop is scheduled for May 5, 2016 for anyone who would like to attend. He stated cooperative agreements are in place for the APAIS transition and the initial field training has been completed. So far everything is going well. For the SAFIS tablet reporting, he stated that it is easy to use and most will run on phones but it was designed for tablets. **G. White** stated that the Discoverer interface is obsolete and unreliable and has been replaced with an APEX based query system. This new system will go on-line mid-April 2016. **G. Bray** noted that GulfFIN is working with ACCSP on development of a new end user query system and hopes to provide something for the Committee to review later in 2016.

MRIP Update

T. Sminkey gave a brief MRIP update. The biggest project they are currently working on is the Fishing Effort Survey (FES). He stated that they will be starting data comparative work between the mail and telephone surveys in the near future. For this year, the MRIP Operations Team received several pilot survey proposals for 2016 funding. The projects to be funded have been selected but, at this time, NOAA Fisheries does not know their final 2016 budget. Once they know, they will be informing the selected project leaders.

Unified Trip Ticket Program Issues

A. Petersen gave a status report on the Unified Trip Ticket Program. Since last November, ticket sections, compliance, setup process, import and export process and load testing have been done. The next steps for development will include manually adding licenses, flagging trips and working with each state for their customizations. A demonstration of the system designed specifically for Texas was given by A. Petersen. A compliance page was developed to help the dealer see the overview of their tickets, whether the dealer is in compliance or not, and the status of the dealer's tickets including: how many ticket were created, which ones have been submitted and which ones have not been not submitted. Two primary sections were developed for the trip ticket screen, fishing trip information and purchase information. This will assist Florida dealers in their business practices. The fishing trip section has depart date, state fisherman license, vessel registration number, fish time, and trip time. The Purchase information section contains the dealer license affiliated with the ticket, species, area, process (grade), quantity, unit, and price (per pound). The administrative functions were also demonstrated such as managing users, creating user accounts, granting access, granting roles, revoking access, revoking roles, and deleting user accounts. C. Denson asked who would have access to the administrative portion. A. Petersen stated it would be state specific as to whether the state agency has sole administrative functions. R. Cody asked if the non-web server version would sync automatically upon web server connection or have to manually sync it. A. Petersen stated there will be a button to manually sync. C. Denson asked if a dealer was connected to the server and working on a ticket but had not been submitted the ticket, who would have access to it. A. Petersen stated it would only be accessible by the dealer at that point. C. Denson asked how the official submission would work. A. Petersen stated the dealer would create a ticket and click the save button. The dealer can edit the ticket as many times and save as many times as they want until the dealer clicks the submit button. At that point the ticket is sent to the agency. N. Beckham asked if the dealers had to submit the tickets individually or could a group of tickets be submitted. A. Petersen stated it could be done either way. D. Gloeckner asked it the system checked for valid grade, condition and market combinations based on the species. A. Petersen stated the system filters the combinations available as each option is selected based on the valid state specific combinations.

A. Petersen and Bluefin Data are currently working with Texas and Florida on their state specific pages and are on track to bring a few dealers online to work with the new system. Once the bulk of testing is done and issues resolved, Bluefin Data will work with the rest of Gulf States and the federal partners on development of their specific pages.

Status of FIN Recreational Data Standards Document

G. Bray stated that the GulfFIN Recreational Technical Group had a conference call last spring to start working on revamping the Recreational Technical Data Standards. At this time, they are waiting on some documents from NOAA Fisheries SEFSC relating to data elements utilized in the stock assessment process. The Recreational Technical Workgroup will continue to work on this issue and provide updates to the FIN Committee when appropriate.

Status Report on Caribbean Commercial Fisheries Statistics Program

D. Matos provided the status on Puerto Rico's Commercial Fisheries Statistics Program (CFSP). Due to governmental financial issues in 2010 the program was reduced to four people to collect, enter, and edit data from 92 fishing centers. This resulted in a 1.5 year delay of the data entry process. In 2012 funds were received from NOAA Fisheries to contractually hire four biologists and a statistics clerk that assisted in data collection and data entry. As of 2015, the landings data entry is caught up and current. **D. Matos** reported there are 1,100 active commercial fishermen in Puerto Rico – 400 full time and 700 part time. In 2014 there were 1.5 million pounds of biomass harvested that resulted in 7 million dollars in wholesale and 21 million dollars in retail sales. The top 10 commercial species reported in 2014 were Spiny Lobsters, Queen Conch, Silk Snapper, Queen Snapper, Yellowtail Snapper, Lane Snapper, Dolphinfish, Queen Triggerfish, Hogfish and Ballyhoo. He stated the future goals of Puerto Rico's CFSP are to obtain funds to keep the five contractors, to study octopus biology and socioeconomics, to do a new commercial fishery census, improve landings data collection quality from commercial fishermen through a "Commercial Fishermen Education Program", to develop and establish a telephone application to report commercial landings and the most important goal to preserve the fisheries resources for future generations. T. Sminkey asked where the local markets for commercial fisheries are. D. Matos stated the South West and Eastern coasts of Puerto Rico are the main resources for local fish. The rest of the coast markets sell imported fish due to the geography.

Status of Biological Sampling and Analysis Activities

G. Bray provided a matrix of analysis activities for the biological sampling program. He stated that all states are up to date with providing biological sampling data. Florida has completed development on a system for providing electronic biological data directly to the FIN Data Management System. This has allowed Florida to eliminate a historical backlog of missing FIN sampling records. All states are working on ageing fish collected in 2015 and providing that data to FIN. **D. Donaldson** stated that discussions with NOAA Fisheries are ongoing regarding funding to support biological sampling through the end of 2016. Currently funds for sampling are set to run out in July 2016. GSMFC will keep the states informed if additional funds are obtained. **G. Bray** also stated that Louisiana has approached FIN about a shortage of space for warehousing historical age structures. FIN has researched using a centralized storage unit for storing historical
samples in the past. Much discussion revolved around how long historical samples should be kept. Most agencies are keeping all samples ever collected. GSMFC plans to find out how much space is required from each state before moving forward. Bray suggested that each state might need to budget for storage in their annual budgets as a centralized facility would only be a temporary fix as samples continue to accumulate.

Defining Partner Needs and Requirements

G. Bray stated that the recent FIN strategic planning session identified determining partner needs and requirements as a priority issue. **Bray** wondered if this could be accomplish through more frequent strategic planning sessions. Historically FIN has held strategic planning sessions every 5 years but often time's regional priorities have changed by years 4 or 5. Having strategic planning sessions every 3 years could be more beneficial for defining partner needs. Several committee members agreed that more frequent strategic planning would be beneficial if coupled with annual assessments of progress towards identified goals. **Bray** stated that he would start including those discussions in annual FIN Committee agendas to see if that process addresses this strategic initiative.

Ongoing Activities

Discussion of Confidential Roll-up Procedures

G. Bray stated last October at the Data Management Sub-Committee M. Lewis gave a presentation on confidential data roll-up procedures with the goal of preserving species totals in the Gulf but also protecting confidentiality. The objective is to have a method every region can agree upon and present commercial landings data in the same way. This would be accomplished through FOSS (Fishery One Stop Shop). The states wanted further information on this procedure and forwarded the topic to the Commercial Technical Workgroup (CTW). The CTW suggested a statistical spreadsheet with species landed in the Gulf and a roll-up flow chart be provided to the FIN committee members with confidential access to be further discussed. D. Bellais gave an overview of how commercial data is currently displayed to the public in the Gulf. D. Gloeckner went over the flowchart and explained the data would be rolled up to a regional level if it were deemed confidential at the state level. C. Denson voiced a concerned that the Gulf mainly operates at a state level species total and not a regional level. S. Turner stated there are two ways to handle the confidential data in the Gulf displayed to the public: The GulfFIN approach of removing confidential data which may hinder the Gulf Council for stock assessments at SEDARS and the FOSS regional roll-up approach. C. Denson stated out of about 40 federally managed species there are a small portion of those landed in the Gulf. This is what is driving the roll-up which causes the state of Alabama's species resolution to be lost. S. Turner went over the statistical spreadsheet on the top 20 species in the Gulf showing the differences between the two approaches over a five year span of data. After further discussion C. Denson made a recommendation that GulfFIN keep the current method for confidential commercial landings data when presented to the public and ask FOSS to adopt this same method for the Gulf of Mexico commercial data. N. Smith seconded and the motion passed without opposition.

Commercial Conversion Factor FIS Proposal

G. Bray stated this issue was discussed at the October meeting and a presentation was provided by **S. Brown** on work Florida did with ACCSP for the Atlantic Coast conversion factors.

The Gulf States have expressed an interest in continuing this research in the Gulf of Mexico. ACCSP has suggested that GSMFC could partner with ACCSP to submit a larger proposal to FIS. **G. Bray** suggested a priority species list be put together for the Gulf, possibly common species among the states. **C. Denson** asked if the factors should focus on the species level or the family level since most conversion factors were applied to the family level. **R. Cody** stated from the work that was done for the Atlantic there were regional differences between some species and it would depend on what level of resolution was wanted. **G. Bray** stated the committee may benefit in seeing the methods in the Atlantic report keeping in mind the report is not final and he would contact **M. Cahall** for this information. **J. Esslinger** stated Texas did a study on conversion factors for Black Drum and had write ups that could be provided. **G. Bray** suggested the Commercial Technical Workgroup would be appropriate for working on the proposal for funding and sampling.

Angler License Data Delivery Schedule

G. Bray stated NOAA fisheries partners asked to reiterate the need for license frame data by the 3rd of each month. They realize there are some issues due to data coming from different agencies within a state but this data needs to be up to date and as clean as possible as it is being used under the new effort survey approaches for their sampling frames. He also stated that NOAA has reiterated the potential for providing resources if that would assist the states in providing clean data under the current deadlines. **T. Sminkey** stated NOAA originally would fund the initial set up of a process to obtain and validate the monthly license data. Now there are one time funds available to make the current process(s) more efficient. **N. Smith** stated Louisiana has a current outreach project that was funded by MRIP to get the anglers to update their license information and we've gotten about 10% better data than what we had previously. **D. Bellais** stated the states were not getting the statistics reports from the NOAA's QA/QC of the data. **T. Sminkey** stated he would check with the staff about getting those reports to the states.

FIN Data Management System (DMS) 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 and provide any changes needed to her. A list of personnel with statements of non-disclosures with SEFSC was provided and any changes from this list to be sent to **D. Gloeckner**.

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 for the previous year. **C.** Denson asked if an upgrade to Discoverer was being made. **G.** Bray stated APEX would be used and the development would be partnered with ACCSP's re-design of their data warehouse query tool with hopes of beta testing this summer. **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 Angler 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 provided a presentation on the progress of metadata compilation. Data entry is up-to-date for fishery independent sampling programs, gulf economic programs, licenses and fees, annual reports, and research entities. Currently the metadata coordinator is working on fishing regulations, fisheries databases, meeting minutes, current press releases, and publications. The coordinator continues researching for new data sources to include and reviews all existing data entry for completion.

Review and Approval of 2015 FIN Annual Report

FIN Committee members were provided with copies of the draft 2015 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 April 29, 2016. **C. Denson** <u>moved</u> to accept the FIN 2015 Annual Report with pending editorial changes. J. Esslinger seconded and the motion passed unanimously.

Subcommittee and Work Group Reports

Otolith Processors Training Workshop

The Otolith Processors Training Workshop was held in May 2015 in St. Petersburg, Florida. It was a productive workshop with the normal otolith reading exercises. APE's remain low for most FIN priority species. There were also demonstrations on reading menhaden scales and staff from Beaufort Lab were in attendance to assist states in reading scales. P. Mickle <u>moved</u> to accept the report. D. Matos seconded and the motion passed unanimously.

Gulf Geographic Subcommittee

The Gulf of Mexico Geographic Subcommittee/TCC Data Management Subcommittee (DMS) met in November 2015. No significant motions or action items needed to be addressed at the FIN meeting. C. Denson <u>moved</u> to accept the report. J. Esslinger seconded and the motion passed unanimously.

Commercial Technical Workgroup

The workgroup met via conference call in February 2016 to discuss an alternative method for roll-up of confidential data. This was discussed in detail above and a recommendation was made to be presented to TCC. D. Matos <u>moved</u> to accept the report. J. Esslinger seconded and the motion passed unanimously.

Administrative Subcommittee

This subcommittee was convened and tasked with coming up with documents to provide to new FIN committee members that educates them on FIN and helps with the on-boarding process. The Subcommittee recommended that a welcome letter, the Framework Plan, current year Operations Plan, and Annual Report be the documents utilized for on-boarding new FIN Committee members. **M. Harden** stated the SEFSC statement of non-disclosure and GulfFIN confidential user request forms need to be added to the list of documents. **C. Denson** <u>moved</u> to revise the motion to include the statement of non-disclosure and FIN confidential user request forms to the above list. J. Esslinger seconded and the motion passed unanimously.

Operations Plan

Status of 2016 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. **D. Bellais** noted a couple of the highlighted areas to the Committee:

B9 - Evaluate Alternative Methods for Collecting Recreational Discards Data - GSMFC is still working with MRIP staff on holding a workshop in the future to evaluate alternative methods.

B11 - Establish an Approach for Validating Commercial Conversion Factors – This topic was discussed in detail above.

Review/approval of 2017 Operations Plan

The FIN Committee was asked to review the 2017 Operations Plan. **G. Bray** noted a couple of highlighted areas to the Committee:

B6 - Define Partner Needs and Requirements – This topic was described in detail above.

B7 - Evaluate Biological Sampling Strategies - Members of the Data Collection Plan Work Group along with other experts from state and federal partners will attend a face to face meeting scheduled for early to mid-2017 to revise the biological sampling protocols and methods for use by GulfFIN.

The Operations Plan is in preliminary form, pending edits and comments by the committee and will be finalized later this year when the State/Federal Fisheries Management Committee (S/FFMC) decides what activities will be funded in 2017. Any edits to the 2017 Operations Plan should be sent to GSMFC by April 29, 2016. T. Sminkey <u>moved</u> to accept the FIN 2014 Annual Report with pending editorial changes. N. Smith seconded and the motion passed unanimously.

Discussion of FIN Funding Issues

Discussion of impacts of current funding levels

G. Bray discussed that a request has been made to detail the impacts of level funding for the FIN program on state data collection efforts. **G. Bray** would like the states to describe how increasing costs of sampling have impacted their ability to accomplish program goals under the current level funding scenario. **C. Denson** asked how far back the states should consider in their descriptions. **D. Donaldson** stated that detailing impacts over the last 5 years would be sufficient. Bray will send some documentation out to the states and solicit their input by the middle of April.

2017 FIN Funding Priorities

Committee members were provided with a list of items for funding consideration in 2017. The final prioritized list will be forwarded to the S/FFMC for their meeting in August 2016. At that time, they will decide which items will be included in the 2017 FIN Cooperative Agreement. All items listed as high priority will require budgets and statements of work by July 1, 2016. C. Denson moved to list as high priority all ongoing activities with the understanding that items

can be added/removed by Committee vote prior to S/FFMC meeting. D. Matos seconded and the motion passed unanimously. The current list that will be presented to the S/FFMC is as follows:

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
- 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 Discussion

G. Bray discussed that having FIN Committee meetings in March and Data Management Subcommittee meetings in October is getting confusing to keep track of who the current officers are for each meeting. The suggestion was made that for the coming elections in October the officers selected would be the chairman and vice-chairman for both the FIN Committee and the Data Management Subcommittee. Those FIN Committee members that are not in attendance for the October Data Management Subcommittee can be included in the election process. There was also some discussion about consolidating the membership across both committees. A final decision will be made regarding this issue prior to the October meeting and will include input from the members of both committees.

There being no further business, the meeting was adjourned at 5:00pm.



S-FFMC MENHADEN ADVISORY COMMITTEE MINUTES Tuesday, March 15, 2016 San Antonio, Texas

Chairman Mroch called the meeting to order at 1:00 p.m. The following members, staff and others were present:

Members

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 Peter Himchak, Omega Protein, Tuckerton, NJ Matt Hill, MDMR, Biloxi, MS Scott Herbert, Daybrook Fisheries, New Orleans, LA Chris Blankenship (*proxy for John Mareska*), ADCNR/MRD, Gulf Shores, AL

Others

Charlie Melancon, LDWF, Baton Rouge, LA Borden Wallace, Westbank Fishing, LLC, Empire, LA Gavin Rhodes-Harrison, Daybrook Fisheries, New Orleans, LA Toby Gascon, LDWF, Baton Rouge, LA Robert Leaf, GCRL, Ocean Springs, MS Glenn Constant, USFWS, Lafayette, LA Kelly Lucas, MDMR, Biloxi, MS Traci Floyd, MDMR, Biloxi, MS Ben Landry, Omega Protein, Houston, TX Judy Jamison, Gulf and South Atlantic Fisheries Foundation, Tampa, FL Tabitha Lindley, Omega Protein, Inc., Houston, TX Lee Alexander, Daybrook Fisheries, Inc. Empire, LA Jeff Short, JWS Consulting, Juneau, AK Shane Treadaway, Westbank Fishing LLC, New Orleans, LA Ed Swindell, Marine Process Services LLC, Hammond, LA Carey Gelpi, TPWD, Port Arthur, TX Joel Anderson, TPWD, Palacios, TX

<u>Staff</u>

Dave Donaldson, Executive Director, Ocean Springs, MS Steve VanderKooy, Program Coordinator, Ocean Springs, MS

Introductions

Chairman Mroch welcomed everyone and began the introductions around the room.

Adoption of Agenda

Adriance pointed out that the LDWF presentation is not a 'forecast' and that agenda item 7 should

be entitled <u>Update of Indices of Abundance</u>. VanderKooy would make the correction in the future agendas. *Wallace moved to approve the agenda with the correction, Mambretti seconded, and the agenda was approved*.

Approval of Minutes

The MAC reviewed the draft minutes from the last annual meeting, November 4, 2015, in St. Augustine, Florida. **Himchak** pointed out a typographical error on the Atlantic update where the Virginia and New Jersey allocations were reversed. *Himchak moved to accept the minutes with the correction, Wallace seconded, and the minutes were accepted with the correction.*

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 and Forecast for 2016

Mroch reported that approximately 536K mt of Gulf menhaden were landed in 2015 which was up 37% over 2014 and 9% over the previous 5-yr average. Three plants operated in the Gulf utilizing 33 vessels (31 steamers, 1 run boat, and 1 bait boat) at Moss Point, Empire, and Abbeville. The age composition data from the commercial catch indicated that the age-2 fish dominated the catches to the west while age-1 fish to the east and around the River.

It was generally good weather during the 2015 season, resulting in very high landings from June through September. There were only two tropical systems that affected fishing: TS Bill in June and Hurricane Patricia in October. September landings were the highest on record since 1999. Despite the high landings, effort (in VTWs) was down 6% over the previous year.

It is anticipated that, with similar effort and fleet size in 2016, the projected landings should be around 467K mt. **Mroch** reported that all indicators so far this year seem to promote recruitment but he cautioned that it is an El Nino year and there are no guarantees during these patterns of weather extremes.

Update on the Atlantic Menhaden Fishery

Mroch also provided a short update on fishing in the Atlantic where only one plant is in operation in Reedville with 8 vessels unloading menhaden for reduction. In addition, two bait boats had minor landings at the plant as well for reduction. In 2015, a 10% increase was added to the TAC following the new benchmark assessment. The total Atlantic menhaden landings were around 143K mt which was just shy of the 144K mt allowance under the TAC.

Update of Indices of Abundance

Adriance provided an update of the abundance indices from the LDWF fishery-independent data. These were the sources for some of the data in the SEDAR assessment and included 16ft trawls, 50ft seines, and 750ft experimental gill nets. The comparisons included data as far back as 1967 to 2015. Generally most of the indices were down from previous years but 2009, 2010 and 2014 had very strong signals in the data.

Texas Cap for 2016

Mambretti reported on the Texas Cap. In 2015, the fleet landed just over 4M lbs of menhaden from Texas waters which was around 11% of the fish available in the cap (34M lbs). As a result, the additional 10% add-on for the underage will be available this coming year should the industry want to fish in Texas waters.

TPWD Gulf Menhaden Genetics Work

Joel **Anderson** (TPWD) provided an overview of his completed Gulf-wide genetics study which was summarized at the meeting last November. **Anderson** was able to compare samples collected in 2015 with similar samples from 2002/2003. He found no difference over the spatial or temporal distances for Gulf menhaden. His results strongly suggest a single genetic stock throughout its range and found diversity within the population as high as any other species he has worked with. In addition, they found no hybridization occurring among the other species of menhaden other than around the Florida panhandle between Perdido to Cedar Key. **Anderson** attempted to measure the effective population size for Gulf menhaden but was unable, suggesting a relatively large population.

Discussion of Port Sample Acquisition and Processing in 2016

VanderKooy noted that the 2016 Port Sampling funds provided through FIN were reduced for 2016 but that the MAC expects to continue sampling for the coming year with the help of industry. There is ongoing work to secure long-term funding for port sampling in the future and the industry reps on the MAC are continuing to address some possible options.

Assessment Update Schedule

VanderKooy reminded the MAC of the timeline for completion of the stock assessment update. He laid out the deadlines for getting data to **Dr. Schueller** and a series of conference call/webinars to review the base runs of the model. It is expected that, if everything proceeds on schedule, the MAC will have a completed report to review prior to the MAC meeting in October. As a reminder, this will be a 'turn-of-the-crank' update. The same model and configuration will be used. **Dr. Schueller** will include the fecundity data either as updated data or at least a sensitivity run to compare with the previous estimates.

Other Business

Wallace updated the group on the situation with Daybrook Fisheries. The company was recently sold and **Wallace** is now working for Westbank Fishing, LLC, who owns the vessels previously operated by Daybrook Fisheries while the new owners of Daybrook operate the dockside facilities. Since there are now two companies operating in Empire, it was requested of the MAC to add a seat for Westbank Fishing in addition to the seat currently held by Daybrook Fisheries.

At this time there are nine voting seats on the MAC as follows:

State Industry

1 TPWD

6 Omega Protein, Inc.

2 LDWF

7 Dorthools Fisheri

- 7 Daybook Fisheries
- 3 MDMR 8 Menhaden Advisory Council for the Gulf of Mexico
- 4 ADCNR/MRD
- 9 TBD Bait Industry

5 FWC

The request is for a new seat that would be added to the industry side. The recommendation was made by **Wallace** and seconded by **Mambretti**. After some discussion, the vote passed 5 to 1 to recommend that the State-Federal Fisheries Management Committee include an additional voting member on the Menhaden Advisory Committee to accommodate Westbank Fishing LLC.

The audience was offered an additional opportunity to provide any comment related to the agenda topics or anything else menhaden-related. There were no comments.

There being no further business, the meeting was adjourned at 3:45p.m.



TCC SEAMAP SUBCOMMITTEE MINUTES Tuesday, March 15, 2016 San Antonio, TX

Chairman T. Switzer called the meeting to order at 1:00 p.m. The following members, staff and others were present:

Members

John Mareska, 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

Eric Hoffmayer, NOAA/NMFS, Pascagoula, MS Darin Topping, TPWD, Rockport, TX Andre DeBose, NOAA/NMFS, Pascagoula, MS Chris Blankenship, ADCNR/MRD, Dauphin Island, AL Mark Lingo, TPWD, Austin, TX Ryan Easton, TPWD, Port O'Connor, TX Evan Pettis, TPWD, Rockport, TX Patrick Banks, LDWF, Baton Rouge, LA Crystal Hightower, University of South Alabama, Dauphin, Island, AL Judy Jamison, Gulf & South Atlantic, Tampa, FL Andre Garcia, TPWD, Brownsville, TX Jason Ferguson, TPWD, Brownsville, TX

<u>Staff</u>

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

R. Hendon moved to approve the agenda. F. Martinez seconded.

Approval of Minutes

R. Hendon <u>moved</u> to approve the SEAMAP minutes from the November 3, 2015 meeting as submitted. F. Martinez seconded and the motion passed.

Administrative Report

J. Rester reported that since the Subcommittee's last meeting in November, all of the 2015 surveys have been completed. **J. Rester** stated that he still needed 2015 data from some SEAMAP partners. He requested that everyone please get the data in as quickly as possible. Also, please

fill out your cruise reports and send them to him. SEAMAP will again be doing Real Time this summer, so please review the Real Time format before you begin the Summer Shrimp/Groundfish Survey. **J. Rester** will be sending out information for Real Time in early May. As for the Joint Meeting, **J. Rester** is not sure if we will be able to send the whole Subcommittee to the meeting this year. It will depend on where it is held and funding allocations. The Atlantic states are also still working on the Management Plan. We hope to see a draft fairly quickly to start the review process.

Future SEAMAP Funding

J. Rester noted that the SEAMAP partners discussed budget allocations last week on a conference call. At that time, they were not able to come to a final conclusion for 2016 funding. Approximately \$10,500 is still available. **C. Dean** stated that Louisiana can buy a side scanner for \$6,000. **F. Martinez** stated that Texas has the lowest percent of the budget and if you want them to follow all of the SEAMAP protocols, that money would give them back three days of sampling.

J. Mareska <u>moved</u> to give \$6,000 to Louisiana to buy a side scanner and the remaining amount (\$4,674) would be given to Texas to be used for sampling days. R. Hendon seconded and the motion passed.

J. Mareska <u>moved</u> to accept the 2016 SEAMAP budget. C. Dean seconded and the motion passed.

Congressional Discussions

D. Donaldson stated that he went to Washington D.C. in early February to meet with the Gulf Congressional delegation to discuss increasing funding for the Cooperative Gulf-Wide Programs. He met with two representatives from each of the five Gulf States in both the House and Senate. He felt that the meetings were positive and that the representatives understood that level funding over a long period of time was having a detrimental impact. We will not know what will happen until later this year, but he felt like they were sympathetic to our needs and seemed willing to help. **D. Donaldson** stated that he is cautiously optimistic that we will see some positive benefits from these meetings.

Gulf of Mexico Reef Fish Stock Assessment Funding

J. Mareska and **R. Hendon** attended a meeting in New Orleans to discuss the Gulf of Mexico Reef Fish Stock Assessment Funding. **J. Mareska** stated that most of the money will be used on large scale tagging projects. Another portion of the funds will be used on advanced technology work. Because this funding is through Sea Grant, a 50% match is required and all of the work needs to be done by the end of the year. **J. Mareska** stated that they have 45 days to get a plan together and then have an RFP or workshop. However, at this time, they have not heard anything regarding an RFP or workshop. **J. Rester** asked whether or not there is a role SEAMAP can play in using this funding or seeing any of the funds. **R. Hendon** thought the Commission could serve a role but not sure about SEAMAP. **J. Rester** asked that the Subcommittee be kept apprised of any updates on this issue.

NOAA RESTORE Act Science Program RFP

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J. Rester stated that the NOAA Restore Act Science Program is planning to announce its next funding competition between mid-April and mid-May. This competition will focus on two of the Science Programs ten long-term research priorities. The comprehensive understanding of living coastal and marine resources, food web dynamics, habitat utilization, protected areas and carbon flow best apply to SEAMAP. J. Rester wanted to know if the Subcommittee wanted to pursue this funding for fishery independent data collection. He stated that the total was for \$15-\$16 million up to three years of work. **T. Switzer** noted that he has several proposals ready to go. Spear fishing with a diet component is an example of one as well as surveys involving mapping data, video work, and diet. **R. Hendon** noted that a proposal involving gulf-wide habitat mapping is something that is important to all. It may be better to go with several smaller proposals instead of one large one. **J. Rester** just wanted to make the Subcommittee aware of this so that once the RFP comes out they can get a proposal submitted. Once the RFP is released, parties will have 45 days to send in a letter of intent with full proposals due 90 days after the RFP is released.

Summary of 2016 Reef Fish Video Survey Workshop

T. Switzer gave an overview of the recent Reef Fish Video Survey Workshop. Three groups (NOAA Pascagoula, NOAA Panama City, and Florida) are actively conducting reef fish video surveys in the Gulf of Mexico. The intent of these surveys is for physical analysis and to standardize how things are coded. A few concerns were brought up concerning the reef fish video surveys. They were different size compositions within the different surveys, differential trends through time and slightly different survey designs that each of the three groups are using. The objective of the workshop was to pull all of the information together for a peer review later this year and to hopefully use this approach for stock assessments in the future.

Discussions on Incorporating New Habitat Data into SEAMAP Survey Designs

T. Switzer had a question concerning how to handle reef habitat in the trawling surveys. He stated that in Florida they drop a site if a reef falls in that site. **J. Rester** stated that at this time, this issue mainly applies to Florida and does not affect the other states. He asked if Florida wanted him to rerun the sample sites for trawling stations through 2017 with this new information or just keep them the same and revisit this issue for the 2018 station selection. **T. Switzer** said to just keep the station selection the same for now and we will revisit the issue for the 2018 station selection.

Review of the Vertical Line Survey Sampling Universe

J. Rester stated that Texas, Louisiana, and Alabama would be participating in the Vertical Line Survey as a SEAMAP participant. The other states and NMFS are also conducting vertical line survey work, but not under SEAMAP. **J. Rester** worked with Texas, Louisiana, and Alabama to establish their 2016 survey sampling frame. Several questions came up concerning the survey that will need to be answered as well as standardized, including seasons, stations and how to handle presumed reefs. If you pull up to a presumed site and cannot find anything, what do you do? Would the site be dropped or replaced with another site with the same habitat type? **J. Rester** will set up a webinar with the Vertical Line Work Group to go over these and other issues before the season starts.

C. Dean went over Louisiana's gangion study. Two years ago they did a 12-inch vs 18-inch gangion study and found no substantial difference between the two. Last year they looked at single strand vs double strand and found significant differences. Louisiana will move to double strand gangions in the future. **C. Dean** proposed that Louisiana move from the 18 inch single strand to the 18 inch double strand to be in compliance with SEAMAP. No one had an issue with Louisiana doing this.

Final Review of the SEAMAP Trawl and Plankton Operations Manual

At the November meeting, the SEAMAP Trawl and Plankton Operations Manual was approved with a few changes. Those changes included clarifying tickler chain length, clarifying Chlorophyll language and adding the codes section back to the appendix.

R. Hendon <u>moved</u> to approve and finalize the SEAMAP Trawl and Plankton Operations Manual. J. Mareska seconded and the motion was passed.

Final Review of the SEAMAP Bottom Longline Operations Manual

At the November meeting, the SEAMAP Bottom Longline Operations Manual was reviewed and a question was raised as to how we know we are putting out a mile of longline. This was clarified in the gear deployment section. Also in the station selection process section, information and justification for a four mile buffer between stations was added.

J. Mareska <u>moved</u> to approve and finalize the SEAMAP Bottom Longline Operations Manual. R. Hendon seconded and the motion was passed.

Other Business

R. Hendon asked **B. Pellegrin** on the status of the new data management system. **B. Pellegrin** stated that they are working on one and hopefully will have a new FSCS system in the near future. **B. Pellegrin** stated that they would try to hold FSCS training in early May.

R. Hendon asked **E. Hoffmayer** on the status of the Atlantic on SEAMAP standardization. **E. Hoffmayer** stated that they are still working on it and are almost there.

E. Hoffmayer asked that he, **B. Pellegrin** and **A. DeBose** be kept in the loop of all SEAMAP discussion.

There being no further business, the meeting was adjourned at 4:43pm.

APPROVED BY:

COMMITTEE CHAIRMAN

GSMFC LAW ENFORCEMENT COMMITTEE/ GMFMC LAW ENFORCEMENT TECHNICAL COMMITTEE JOINT MEETING SUMMARY Wednesday, March 16, 2016 San Antonio, TX

LEC Chair Chad Hebert called the meeting to order at 8:30 a.m.

Adoption of Agenda/Approval of Minutes

The agenda, minutes of the November 4, 2015 ASFMC LEC/GSMFC LEC meeting, and minutes of the December 14, 2015 LETC webinar were approved as written.

GMFMC LAW ENFORCEMENT TECHNICAL COMMITTEE SESSION

Enforcement Implications of LA, MS, and AL 9-mile Reef Fish Boundary

Cynthia Fenyk reviewed the language in the 2016 appropriations bill that created the 9-mile reef fish boundary. The current boundary is only in effect for FY2016, but Senator Vitter has introduced an amendment to the Submerged Lands Act that would make it permanent. The boundary affects EEZ regulations are in effect, and it vessels that have permit conditions such as complying with the more restrictive of state or federal regulations when in state waters. Because the boundary only affects harvest of reef fish and not other species such as redfish, an education program will be needed to let fishermen know which species are affected by the boundary change It was noted that the boundary does not appear on nautical charts. Louisiana DWF and Alabama ADCNR have maps on their websites showing the approximate revised boundary (http://www.fishla.org/fishing/recreational-fishing-regulations/revised-gulfward-boundary/ and http://www.outdooralabama.com/sites/default/files/9%20Mile%20Limit%20Map%20on%20Nau tical%20Chart.pdf), but it was suggested that it would be inappropriate for NOS to include the boundary on its nautical charts because it is not a territorial line, and it does not affect resources other than reef fish.

Enforcement Implications of Offshore Aquaculture FMP

Cynthia Fenyk presented an overview of the features of the Aquaculture FMP while Jess Beck, Regional Aquaculture Coordinator, was available via phone to answer questions. The following issues were brought up.

- The regulations require that a vessel engaged in aquaculture operations must have a copy of its aquaculture permit on board, and it cannot commercially harvest fish while conducting aquaculture operations. Committee members felt that, for enforcement, while 0a vessel is engaged in aquaculture operations, must have a placard that is visible from a distance, and it should have no other permits on board.
- Restricted access zones around each aquaculture facility within which fishing or transit is not allowed are required to be marked on each corner by a buoy. However, there are no specifications for the buoy. Committee members felt that the buoys should be required to be visible (e.g., no milk jugs) with identifying markings. One suggestion was made to

require a standard color to be used to identify the region as a restricted access zone.

- There are no specifications on the final disposition of the brood stock. Some states have rules for disposition of broodstock from land-based facilities, but these may not be applicable to offshore aquaculture, or for aquaculture intended for food production as opposed to stock enhancement.
- Violation of permit terms or regulations may result in revocation or suspension of the aquaculture permit. However, unlike fishing vessels that can tie up at the dock and suspend operations, there would continue to be an active offshore facility and captive fish that must be tended. There are no provisions for continued tending or disposition of an offshore facility in the event of as permit suspension.

Protocol for Background Checks of AP Candidates for Violations in State Waters

Steven Atran reviewed the draft protocol. Although the Council had originally requested that background checks be only for violations regarding federally managed species, not all stated have the ability to separate violations by species. Therefore, the request would be for all marine fishery violations. Committee members felt that a person who violated state regulations would also be likely to violate federal regulations, therefore this background check would still be useful.

Committee members requested that the candidate's driver's license number (or state issued id number) be included in the application materials in order to be able to identify unique individuals.

Committee members reviewed the signature and checkbox section for the candidate to authorize a background check. They agreed that this was an acceptable way to obtain the candidate's permission, but felt that the permission needed to explicitly allow the results of a background check to be provided to the Council. They suggested the following language accompany the checkbox:

By checking this box, I consent to allow NOAA/State law enforcement to provide a marine fishery violation background check to be provided to the Gulf of Mexico Fishery Management Council.

Current GMFMC Amendments and Framework Actions

The Committee reviewed the following draft management actions for concerns relative to enforcement.

Draft Reef Fish Amendment 36A – Red Snapper IFQ Modifications

The Committee felt that hail-in/hail-out requirements should remain as is and not be expanded to all commercial reef fish vessels. Enforcement is already dealing with a large number of hail-in/hail-outs and expanding the requirement to all commercial reef fish vessels would be overwhelming. In addition, Committee members felt that the requirement would not be as effective for non-IFQ vessels. Non-IFQ vessels are not required to have VMS and have a larger number of possible landing locations, making enforcement more difficult.

On a side note, one Committee member expressed appreciation at having the LETC review the proposed actions at an early stage of development. He felt that this allowed the LETC to have more effective input when expressing enforcement concerns.

<u>Draft Reef Fish Amendment 43 – Hogfish Stock Definition, Status Determination Criteria, and</u> <u>Annual Catch Limit</u>

Under Action 1 (hogfish management boundary), the Committee supported the recommendation of Florida FWC (Alternative 2 - south of Cape Sable).

Under Action 5 (powerhead exemption for hogfish in the stressed area), the Committee felt that there should be consistency in the regulations, and therefore supported elimination of the exemption (Alternative 2).

For the remaining actions, the Committee felt that there were no enforcement concerns. Action 4 proposes a change in the hogfish size limit, but since there is already a size limit that needs to be enforced, there would be no change to enforcement.

Framework Action Addressing Circle Hook Requirement When Fishing for Yellowtail Snapper

With respect to the boundary, the Committee previously commented on a similar boundary action for Amendment 43, and had supported consistency with that amendment. Committee members noted that J-hooks are allowed for harvest of yellowtail snapper in the South Atlantic.

Draft Shrimp Amendment 17B – Optimum Yields, Number of Permits, Permit Pool, and Transit Provisions

Under Action 6 (transit provision for non-federally permitted vessels), Committee members noted that transit is allowed in other fisheries provided that the fishing gear is stowed. Committee members felt that under Alternative 2, which only requires that door and nets be out of the water, it would be difficult to enforce the prohibition on fishing in federal waters. The Committee supported Alternative 3, which requires that trawl doors (if present) must be disconnected from the trawl gear and must be secured.

For the remaining actions, the Committee felt that there were no enforcement concerns.

Review of Coral HAPC Proposals

The Committee did not support HAPC boundary revisions that would make the HAPCs irregular in shape. Such boundaries are more difficult to enforce than rectangular shaped areas. The Committee had no comments o the number of proposed HAPCs or on the proposed regulations.

<u>Draft Coastal Migratory Pelagics Amendment 26 – Reallocation of King Mackerel</u> The Committee had no enforcement concerns for any of the actions in this amendment.

Selection of Candidates for Officer of the Year Award

Each of the state representatives present reviewed the application for the candidate from his or her agency (the Florida representative was not present). After review, Committee members felt that, with only one candidate from each state agency, it would be unfair to eliminate two of the candidates, and agreed to forward all five candidates to the Council for consideration. However, some of the states may want to revise their candidate's written application before it is forwarded to the Council.

In the future, the Committee felt that it should forward one candidate from each agency. If an agency submits more than one candidate, the Committee will select one candidate from that agency to forward to the Council. Including NOAA Enforcement and the U.S. Coast Guard, which did not submit candidates, this means there could be up to seven candidates forwarded to the Council.

GSMFC LAW ENFORCEMENT COMMITTEE SESSION

IJF Program Activity

Steve VanderKooy and Brandi Reeder provided a short overview of the progress to date on the tripletail and croaker profiles. The Tripletail Profile should be completed this summer and hopefully approved this coming October by the Technical Coordinating Committee. The Georgia Department of Natural Resources has been added to the Task Force and is currently providing their enforcement information to merge with the Gulf's. The Atlantic Croaker Profile is likely to be completed sometime early 2017. Most of the enforcement material has been received and incorporated.

It is expected that the State/Federal Fisheries Management Committee will identify the next species to work on during the October meeting this coming fall and VanderKooy or McIntyre will provide the history of enforcement representation in anticipation of that Technical Task Force being formed.

Schedule of GSMFC Publications

Steve VanderKooy and Debbie McIntyre reminded the group of several of the annual documents related to state rules, regulations, and license sales and the requests for information which will be coming to the LEC and LETC over the next couple of months.

Mr. VanderKooy noted that the 4-year Strategic Plan and 2-year Operations Plan expire at the end of 2016 and requested both the LEC and LETC members to review the previous plans and determine if they need updating. He reminded them that the group typically has a joint work session to update the plans every four years, when needed, and that the meeting costs are split between the GSMFC and the GMFMC.

It was agreed that the LEC would request approval from the GSMFC to hold a work session in July or August in the northern Gulf to update the Strategic Plan and the Operations Plan, if they are determined to be in need of revision. It is expected that the meeting costs will be split between the Council and the Commission for this joint activity.

State Report Highlights

The Committee voted to forgo verbal state reports as they had been provided electronically in advance of the meeting.

OTHER BUSINESS – TED COMPLIANCE

Brandi Reeder (TPWD) brought attention to the TED compliance reports and the final draft policy being finalized by NOAA Protective Resources (attached). The policy, as written, measures TED compliance in the trawl fishery using the boarding reports developed by NOAA. In summary, if

TED compliance drops below 88% in an area, steps are supposed to be taken to bring compliance back up (outreach and education). In the event that it is not within the next 3-month cycle, actions may be taken to close an area that is found out of compliance.

One of the biggest concerns raised by the group is related to 'courtesy' inspections. A boarding form is filled out whenever a vessel captain contacts an agency and asks to have their gear checked before they go out. If they are found to have problems, the form reflects that, but any correction is not considered. These 'courtesy' infractions are counted against the fleet as though it were an at-sea infraction, potentially skewing the true compliance rate. In addition, these requests are often made by captains trying to be sure they are prepared and actually in compliance. The public relations of this situation are a potential nightmare to enforcement who have finally developed a good rapport with the fleet.

In addition, NOAA Protective Resources has not sufficiently addressed how a closure might take place, the extent of a closure, and how the closure can be lifted. Most infractions occur when dealing with a migratory fishing fleet. If a region is found to be out of compliance, a closure would affect that state and its residents despite the 'bad actors' leaving and returning to their own waters. These issues need to be addressed before the LETC and the LEC are satisfied with the TED policy.

The TED boarding form is a great tool; however, we have serious concerns with how data is going to be used. It was also brought to our attention that the NOAA mandatory observers are being asked to provide forms as well.

This issue was discussed at the Joint ASMFC/GSMFC meeting last November but not as the Council LETC. It was agreed that a letter should be sent to the NOAA Office of Protected Resources to have them address these concerns. The Committee was unsure of whom the letter should come from, and therefore the Committee's concerns are being presented to both the Council and the Commission.

This is clearly a federal species managed by the Council but the TED Boarding Forms and the Policy were not provided to the Council's Shrimp AP. The ramifications make it a potential Commission issue as well as a Council issue.

Any letter should request that courtesy inspections should either not be counted in the compliance rate or should be a Level I violation (minimum violation statistically). In addition, the NOAA Office of Protected Resources needs to clearly define the methodology for determining an area closure for non-compliance and provide some information on what that closure might look like, i.e. what is involved, how violators will be treated, and how it will be lifted.

There being no further business, the meeting was adjourned at 4:20 pm.

LETC Members in Attendance: Brandi L. Reeder, TPWD, Vice-chair Scott Bannon, ADMR Mark Kinsey, NOAA/OLE **LEC Members in Attendance:** Chad Hebert, LDWF, Chair Rusty Pittman, MDMR, Vice-chair Scott Bannon, ADMR Cynthia Fenyk, NOAA/GCES Chad Hebert, LDWF Rusty Pittman, MDMR Dan Ellinor, FWC (for Rama Shuster)

Others:

Doug Boyd, GMFMC member Ed Swindell, GMFMC member Judy Jamison, Gulf & South Atlantic Fisheries Foundation Jamie Miller, MS Dept. of Marine Resources Darin Topping, TPWD Toby Gascon, LDWF, GSMFC Commissioner Chris Blankenship, ADCRN/MRD, GSMFC Commissioner Joe Jewell, MDMR Jerry Mambretti, TPWD Jess Beck, NOAA Regional Aquaculture Coordinator, *via phone*

Mark Kinsey, NOAA/OLE Cynthia Fenyk, NOAA/GCES Brandi L. Reeder, TPWD Dan Ellinor, FWC (for Rama Shuster)

Staff:

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

TECHNICAL COORDINATING COMMITTEE MINUTES Wednesday, March 16, 2016 San Antonio, Texas

Chairman Joe Jewell called the meeting to order at 1:30 p.m. The following members, staff, and others were present:

Members

Patrick Banks, LDWF, Baton Rouge, LA Richard Cody, FWC/FWRI, St. Petersburg, FL Glenn Constant, U.S. FWS, Baton Rouge, LA Chris Denson, ADCNR/MRD, Gulf Shores, AL Dan Ellinor, FWC, Tallahassee, FL Matt Hill, MDMR, Biloxi, MS Joe Jewell, MDMR, Biloxi, MS Christopher Mace, TPWD, Rockport, TX John Mareska, ADCNR/MRD, Dauphin Island, AL Darin Topping, TPWD, Rockport, TX

<u>Staff</u>

James Ballard, GSMFC, Sport Fish/Aquatic Invasives Coordinator, Ocean Springs, MS Gregg Bray, GSMFC, FIN Data Program Manager, Ocean Springs, MS Dave Donaldson, GSMFC, Executive Director, Ocean Springs, MS, Joe Ferrer, GSMFC Systems Administrator, Ocean Springs, MS Ali Ryan, GSMFC, Sport Fish/Aquatic Invasives Staff Assistant, Ocean Springs, MS

Others

Jason Adriance, LDWF, New Orleans, LA Kristina Broussard, MDMR, Biloxi, MS Allan Brown, U.S. FWS, Atlanta, GA Kate Derner, NOAA, Chesapeake, VA Traci Floyd, MDMR, Biloxi, MS Carey Gelpi, TPWD, Port Arthur, TX Dwight Gledhill, NOAA, Silver Spring, MD Alex Harper, NOAA, Silver Spring, MD Katherine Hubbard, FWC FWRI, St. Petersburg, FL Barb Kirkpatrick, GCOOS, Sarasota, FL Mark Lingo, TPWD, Austin, TX Jerry Mambretti, TPWD, Dickenson, TX Keith Mille, FWC, Tallahassee, FL Jamie Miller, MDMR, Biloxi, MS Tom Sminkey, NOAA Fisheries, Silver Spring, MD Jim Tolan, TPWD, Corpus Christi, TX Steve Turner, NOAA SEFSC, Miami, FL

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 November 4, 2015 meeting was made by Christopher Mace and passed with no opposition.

Red Tide Discussion: Coordinating Activities for Future Red Tide Events

The Committee had a long discussion on the aspects that worked well during the red tide event that took place at the end of 2015 and beginning of this year, and where their programs and collaboration could be improved. It was the consensus of the group that given the rarity of the event, there was fairly good communication between the states of technical information about the bloom, and states were able to ramp up their capabilities to assess water samples and perform cell counts in-house relatively quickly. However, there was definitely room for improvements. Patrick **Banks** pointed out that if there was more funding available to address HABs, they would invest in the development of a lab that could process their samples more quickly. He asked the group what they would have done if they had more funding available to address this event. A lot of the responses to this question focused on increased monitoring and early detection capabilities; for example, the Flow CytoBot that is being implemented in Texas' program, as well as, increased availability of certified labs to process all the necessary samples, especially the mouse bioassay, in a timelier manner which would have allowed for quicker management decisions. As a first step to improving communication across the Gulf during future events, Joe Jewell suggested that the members compile a list of the appropriate points of contact in each state, and use that list to share any information about future blooms. Alex Nuñez also pointed out that Texas has a listserv that they can add the other states' points of contact to. This will allow the other states to receive notifications of any new events in Texas.

Ocean Acidification and its Potential Impacts on Gulf Fisheries

Dwight Gledhill provided an overview of ocean acidification and NOAA's Ocean Acidification Program. They have developed a Strategic Plan for Federal Research and Monitoring of Ocean Acidification which includes a vulnerability analysis of U.S. waters to acidification. Dwight explained that according to their models, the Gulf of Mexico may be a refuge from future ocean acidification; however, the model also shows that the Gulf of Mexico may experience some of the largest changes in aragonite saturation state, which is a condition that may lead to the reduced growth and survivability of calcifying species. Moreover, the effects of ocean acidification are compounded by hypoxia which could result in areas of the Gulf of Mexico being even more corrosive. Dwight also covered some examples of documented impacts of ocean acidification on the eastern oyster and cold water shrimp. These impacts seem to be most noticeable on the early life stages of the organisms, and include reduced growth, recruitment, survivability, etc. However, they have also found that some organisms have the adaptive capacity to adjust to the current environmental conditions and optimize these same traits, but it is unclear if organisms will be able to keep up with the current rate of acidification. He concluded by discussing NOAA's path forward with regard to ocean acidification, which includes more robust surveys, an ocean and coastal observing system throughout the Gulf of Mexico, and targeted experimental studies. They are also interested in starting up a Gulf Coast Acidification Network to bring together the appropriate people to address the issue of acidification in the Gulf. Joe Jewell asked what kind of effect the large HAB events, like the one that accrued at the end of 2015, will have on the long-term acidification of the Gulf of Mexico. **Dwight** stated that that is one of the major questions they have in regard to acidification, and some studies show that the toxicity level may be increased under increased CO^2 conditions; however, most of those effects will be localized and not Gulf-wide.

State Red Snapper Management Program Updates

Each state provided an overview of their red snapper management programs. States are continuing with their creel programs they have developed over the last few years, as well as their ongoing fisheries independent monitoring efforts, with a few adjustments to increase the accuracy of effort and catch estimates. Most states are also working on validating the individual components of their surveys and working through the process of getting the programs certified through NOAA Fisheries. **Darin Topping** asked how the mandatory reporting systems were working in states that have implemented them. **Matt Hill** stated that Mississippi's system struggled the first year it was implemented when it was not mandatory, but now they have reworked the system to make it a lot more user-friendly, and they are getting 70-75% compliance with the mandatory system. The first year the system was mandatory, law enforcement would issue a courtesy citation which gave the angler 24 hours to report their trip in the system. This year, regular citations are being issued for violators of the mandatory reporting system; however, with the state's increased outreach about the program, the number of violators is low.

Overview of the Red Snapper Workshop

Steve Turner stated Mississippi-Alabama Sea Grant hosted a Red Snapper Workshop in New Orleans, Louisiana on March 2-3, 2016. The purpose of the workshop was to consider research and data collection which might improve Gulf of Mexico red snapper stock assessment. Roughly fifty scientists, managers and representatives from industry and non-governmental organizations participated. The workshop reviewed research recommendations related to monitoring fish stocks near offshore structure, considered current research and new approaches to surveying red snapper near structure and reviewed the most recent assessment of Gulf of Mexico red snapper conducted by Southeast Data, Assessment and Review (SEDAR). The workshop considered that it would be useful to develop a fisheries independent mark-recapture based estimate of red snapper abundance which took into account habitat type. Such an estimate could be used to further improve stock assessment estimates.

Impacts of the Bonnet Carre Spillway Opening

<u>Mississippi</u>

Joe Jewell provided an overview of the last three openings of the Bonnet Carre Spillway (2008, 2011, and 2016) and the data collected during the 2016 opening. He also discussed the efforts of the MDMR's Oyster Restoration Program to develop an emergency relay program. The 3-day emergency relay resulted in 39,264 sacks of material being transferred to new reefs by 95 fishermen.

Louisiana

Patrick Banks pointed out that Louisiana took extra water samples in Lake Pontchartrain to monitor the movement of the freshwater plume, and continued sampling after it reached the oyster grounds. Louisiana did receive a request from their oyster industry to do a relay; however, their sampling indicated that the impacts would be minimal and the oyster resources in the area were

young, and LDWF didn't want to disturb the area if at all possible. The estimation of mortality derived from their sampling held true, and they had a less than 10% mortality rate which they feel the resource will rebound from quickly.

Update on The Gulf Coast Research Lab's Activities

Read Hendon provided an overview presentation of the activities of the Gulf Coast Research Lab (GCRL). The GCRL has four core research areas: coastal ecology & ecosystem processes; environmental & organismal health; fisheries & fisheries oceanography; and marine aquaculture. Read covered some of the activities conducted under their core areas, as well as some of the new programs they are involved with. These include: The Consortium for Oil Spill Exposure Pathways in Coastal River-Dominated Ecosystems, which is a multi-university team researching how the movement of water in coastal areas impacts ecosystem recovery from oil spills like the Deepwater Horizon release of 2010; the Mississippi Stock Assessment Panel; NFWF Reef Fish Assessment for Mississippi Coastal and Nearshore Gulf Waters; Mississippi Base RESTORE Act Center of Excellence; and Oyster Restoration and Assessment. They have recently added the R/V Jim Franks to their fleet which will be used for all SEAMAP sampling and for the Marine Education Center's summer field program. They are also in the process of rebuilding the Marine Education Center and their toxicology building, which were destroyed during Hurricane Katrina, at the Cedar Point Campus.

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 last update. He stated that the news ticker is now active. The web crawler program that was developed to find articles for the news ticker sends daily emails to James and he reviews those articles and adds any new relevant ones to the ticker. A new program was also developed that automatically pulls the most up-to-date landings data from NOAA Fisheries and update the data displayed on FINFO. This new program will ensure that the data being displayed on FINFO remains accurate.

Subcommittee Reports

<u>Data Management</u> – **Gregg Bray** stated that the Subcommittee identified recreational sampling priorities that would be the foundation of a Gulf of Mexico MRIP Regional Implementation Plan. MRIP is in the process of transitioning from pilot testing of new collection methodologies to implementation of new methods. MRIP's Executive Steering Committee (ESC) has adopted a strategy that establishes Regional MRIP Implementation Teams as the key entities for priority setting, decision-making on methods and goals, and for survey implementation. For those regions in which there are established Fishery Information Network (FIN) partnerships, the MRIP ESC identified the FINs as the Regional MRIP Implementation Teams. The plans should be focused on recreational priorities for the next 3-5 years, but can be revisited earlier if recreational priorities change.

After extensive discussions, the Subcommittee made a motion to identify the following prioritized areas of importance for the initial plan:

- 1. Full funding for MRIP General Survey at base sampling levels
- 2. MRIP certified specialized landings surveys
- 3. Redesigned biological sampling program integrated with recreational catch sampling

- 4. For-Hire electronic logbook implementation and validation
- 5. Improving timeliness and accuracy of saltwater license frames
- 6. Improve precision of landings estimates by increasing dockside sampling levels
- 7. Improve recreational discard/release data

The Motion was moved by Chris Denson and passed unanimously.

Gulf States will begin development of the Regional Implementation Plan with assistance from state and federal partners. States will need to provide costs for programs that match with the high priority areas of focus. GulfFIN hopes to provide their initial Implementation Plan in late 2016.

The Subcommittee received a presentation from Andrew Petersen with Bluefin Data regarding the continued development of a new unified electronic trip ticket system. Development is ongoing and Bluefin is beginning to work with the states of Texas and Florida on the setup and customization of their data screens. Bluefin hopes to get commercial dealers in those states on the system in the coming months for testing purposes. Bluefin will be contacting Mississippi, Alabama and Louisiana likely in the summer of 2016 to start this process with them.

Gregg Bray updated the Subcommittee on the biological sampling program. All states are essentially up to date on providing historical and current year sampling and age data. Florida has developed a system to deliver data electronically to GulfFIN and all backlogs have been eliminated. This will allow GulfFIN to provide data to SEDAR for stock assessments for all states using standardized formats. David Donaldson stated that funding is set to run out in June 2016 and discussions are ongoing to potentially obtain some funds to continue sampling through December 2016.

The Subcommittee had a discussion regarding a new method developed by NOAA Fisheries One Stop Shop (FOSS) for presenting commercial landings estimates. The current GulfFIN system removes data from queries that violates confidentiality rules resulting in total landings estimates that are less than the actual total. FOSS developed a proposed system where landings would be aggregated to produce a species total for the entire region and not display the individual state totals. Currently, all other regions have or will be adopting the FOSS method for presenting landings estimates to the public. Both systems would have to display data in the same manner to prevent users from determining the source of confidential landings. Several states were concerned about losing the ability to display state specific landings estimates under the new FOSS design and after extensive discussion, the GulfFIN Subcommittee recommended that FOSS adopt the current GulfFIN method for displaying commercial landings estimates.

The Subcommittee discussed identifying sources of funding to support research on commercial conversion factors in the Gulf of Mexico. The conversion factors currently used to convert pounds to numbers of fish are old and most have no documentation regarding how or when they were developed. ACCSP and Florida FWC did a pilot study in 2014 in the South Atlantic on this issue. The plan is to partner with ACCSP on and expanded study in the Atlantic and the Gulf of Mexico. Research priorities from NOAA Fisheries FIS program may align with this work and provide an option for a funding proposal for research that would start in 2017. The ultimate goal would be a

sampling program that allowed states to monitor conversion factors over a long period of time as opposed to once every 5 or 10 years.

The Subcommittee received a report from the GulfFIN Administrative subcommittee regarding a new process for on-boarding new committee members. This was an issue that was identified during GulfFIN strategic planning as important to educate new members on this history and role of GulfFIN and the current issues GulfFIN is working on.

After reviewing the proposed documentation, the Subcommittee made a motion that the appropriate documents to on-board new members are: a welcome letter, the GulfFIN Framework Plan, the current year Operations Plan, the current Annual Report, the statement of non-disclosure form, and GulfFIN confidential data user request form.

The Motion was moved by Darin Topping and passed with no opposition.

Finally, the Committee discussed GulfFIN funding priorities for 2017. Gregg Bray provided a list of ongoing projects, along with a list of potential new items that could be considered for funding in 2017. The Subcommittee identified all of the ongoing tasks as high priority items and did not choose to select any of the new items as high priority for a variety of reasons. The ongoing tasks are:

- 1) Coordination and Administration of FIN Activities
- 2) Collecting, Managing and Disseminating Marine Recreational Fisheries Data
- 3) Operation of FIN Data Management System
- 4) Trip Ticket Program Operations
- 5) Head Boat Port Sampling
- 6) Gulf Menhaden Port Sampling
- 7) Biological Sampling of Commercial and Recreational Catches

States will develop budgets and statements of work for each high priority task, and the State/Federal Fishery Management Committee will be convened in August to determine how funds will be utilized based on proposed costs and total available funding.

Chris Denson made a motion to accept the report as presented, and it passed unanimously.

<u>SEAMAP</u>

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Ted Switzer reported that the SEAMAP Subcommittee meeting began with a series of short and long-term budgetary discussions. The first order of business was finalizing the 2016 funding allotments. Despite level programmatic funding, the total amount available to the Gulf SEAMAP partners has decreased due to increasing administrative assessments, and most partners realized a budgetary shortfall for 2016, which may result in some reductions in sampling effort. Moving forward, David Donaldson provided a brief overview of recent meetings with congressmen from all five Gulf states on the need for additional funding for SEAMAP and several other programs. Although no funds are immediately forthcoming, the reception was positive, and as a next step the Gulf SEAMAP partners will be preparing a summary of effort that has been lost in recent years due to funding shortfalls. The subcommittee then discussed two potential sources of funding for SEAMAP-type work. The first, a \$10 million program designed to immediately improve Reef Fish Stock Assessments for red snapper, is less promising because a large portion of these funds

are likely being devoted to a red snapper tagging program and only a small portion of the funds will be devoted to advanced technologies. The second, the latest NOAA Restore Act RFP, appears to be more favorable, with an emphasis on improved understanding of trophodynamics, habitat dynamics, and habitat utilization of marine fishes. Accordingly, the subcommittee agreed to consider developing one or two proposals to support additional work in the region.

Programmatically, the subcommittee discussed recent efforts to combine data from several SEAMAP reef fish video surveys for stock assessment, and determined that new habitat data from ongoing mapping efforts should be incorporated annually to update survey sampling frames. The subcommittee discussed the vertical longline survey design, including refinements to sampling effort, sample allocation, and sampling season, although additional analyses of preliminary data were recommended before finalizing survey design. Finally, the subcommittee approved the finalized drafts of both the SEAMAP Trawl and Plankton Operations Manual and the SEAMAP Bottom Longline Operations Manual.

A motion to accept the report was moved by Chris Denson, and passed without opposition.

Artificial Reef

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Keith Mille stated that the Artificial Reef subcommittee dedicated the first half day of their meeting to presentations and discussions focused on the assessment of reef fish around artificial reefs through various monitoring programs. After a lengthy discussion about ways to standardize some of these efforts across the region, it was decided that smaller workgroups would be formed to start tackling individual gear types (e.g. ROVs) and assess if standardized methodologies can be developed.

The Subcommittee also had presentations and discussions focused on the Rigs-to-Reefs programs across the gulf. There has been a precipitous drop in the number of decommissioned structures over the last few years due to the drop in oil prices. The group heard a presentation from Elena Kobrinski on the cost estimation of oil and gas decommissioning which may have positive impacts on the amount of money that is donated to the states through the Rigs-to-Reefs program.

The Subcommittee discussed the update of the South Atlantic Fisheries Management Council's Habitat Document: Artificial Reef Section. The group agreed to review the section and provide feedback and updates.

Each of the Gulf states provided an overview of the artificial reef projects that they are conducting under NRDA and NFWF. Several of the states will be using these funding sources to develop new artificial reef habitat as well as expand on their current monitoring efforts to assess how their established reefs are functioning.

The subcommittee also heard a presentation on the use of Artificial Reefs and FADs in Japan from Kazu Otani who works for Okabe LTD. Okabe is interested in possibly expanding their business to the U.S. market and provided information on the types of artificial reef modules and FADs they produce. Some of the modules that Okabe produces are very large and complex structures made of concrete and steel. Currently reef modules like this are not available to our state reef programs and would be a great addition to the current market.

The Subcommittee elected Keith Mille as its Chair and Dale Shively as its Vice Chair.

Chris Denson asked if the Subcommittee discussed the permitting requirements for FADs and pointed out that in Alabama's reef plan FADs are prohibited. There was also concern raised by **Steve Turner** about the impact that the use of FADs would have on the stock assessments of Gulf fisheries. Following a brief discussion on these issues, the TCC suggested that the Subcommittee address these concerns at a future meeting.

Chris Denson made a motion to accept the report as presented, and it passed unanimously.

State/Federal Reports

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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, Joe Jewell 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, March 17, 2016.

Other Business

Steve VanderKooy provided a brief update on the IJF program activities. He stated that the triple tail biological profile is almost complete and the TCC should receive a copy of that document for their review by September. The plan is to have the TCC take final action on that document at their October meeting.

There being no further business, the meeting was adjourned at 5:00 pm.



COMMISSION BUSNIESS SESSION MINUTES Thursday, March 17, 2016 San Antonio, TX

Chairman Mark Lingo called the meeting to order at 9:00 a.m. with the following in attendance:

Commissioners

Mark Lingo, *Chairman*, TPWD, Austin TX (*Proxy for Carter Smith*) Jamie Miller, MSDMR, Biloxi, MS Kelly Lucas, MSDMR, Biloxi, MS (*Proxy for Jamie Miller*) Read Hendon, GCRL, Ocean Springs, MS (*Proxy for Joe Gill*) Dan Ellinor, FWC, Tallahassee, FL (*Proxy for Nick Wiley*) Chris Blankenship, ADCNR/MRD, Gulf Shores, AL (*Proxy for Gunter Guy*) Patrick Banks, LDWF, Baton Rouge, LA (*Proxy for Charles Melancon*) Toby Gascon, LDWF, Baton Rouge, LA (*Proxy for Charles Melancon*)

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 James Ballard, Sport Fish Restoration/Aquatic Invasives Coordinator, Ocean Springs, MS Ali Ryan, Staff Assistant, Ocean Springs, MS

Others

Glenn Constant, USFWS, Baton Rouge, LA Allan Brown, USFWS, Atlanta, GA Buck Sutter, GCERC, Leesburg, VA Steven Atran, GMFMC, Tampa, FL Steve Turner, NOAA Fisheries, Miami, FL Bill Balboa, TX Sea Grant, Bay City, TX Roy Crabtree, NOA Fisheries, St. Petersburg, FL Joe Jewell, MSDMR, Biloxi, MS Scott Bannon, ADCNR/MRD, Dauphin Island, AL Chad Hebert, LDWF, Baton Rouge, LA Betty Staugler, FL Sea Grant, Port Charlotte, FL Jessica Beck-Stimpert, NOAA Fisheries, St. Petersburg, FL Ed Swindell, Marine Process Services, LLC, Hammond, LA

Brief Overview of Commission Voting Procedures

D. Donaldson gave a brief overview of the Commission's voting procedures.

Adoption of Agenda

C. Blankenship <u>moved</u> to adopt the agenda as submitted. R. Hendon seconded and the agenda was adopted as submitted.

Approval of Minutes

There were no changes to the Minutes. The minutes were approved as submitted.

Public Comment

There was no public comment.

GSMFC Standing Committee Reports

Law Enforcement Committee

C. Hebert reported the Gulf Council's Law Enforcement Technical Committee (LECT) and the Commission's Law Enforcement Committee (LEC) met in joint session all day yesterday. He said they have one request for action by the Commission and an issue which came up under other business for the Commission's consideration and potential action. Detailed information on the Law Enforcement Committee meeting is in the Law Enforcement Committee section of the minutes.

C. Hebert said the group is reviewing the last 4-year Strategic Plan and 2-year Operations Plan. It is expected that the group will update both documents. *Therefore, the LEC requests approval* from the GSMFC to hold a work session in July or August in the northern Gulf to update the Strategic Plan and the Operations Plan if it is determined they are in need of revision. It is expected that the meeting costs will be split between the Council and the Commission for this joint activity.

C. Hebert reported Under Other Business, **Brandi Reeder** (TPWD) brought attention to the TED compliance reports and the final draft policy being finalized by NOAA Protective Resources and stated their concerns with the TED courtesy inspections. They request the Commission to write a letter stating the concerns and ask them to address the issues.

C. Blankenship moved the Commission fund half of the expenses if the LEC/LETC has a work session in July or August to update the 4-Year Strategic Plan and the 2-Year Operations Plan. K. Lucas seconded the motion and it passed.

K. Lucas moved for the Chairmen of the LEC/LECT Committees to send a letter (on GSMFC Letterhead) to NOAA PR expressing their concerns with the TED courtesy inspections. D. Ellinor seconded and the motion passed.

Technical Coordinating Committee

Joe Jewell reported the TCC met yesterday with a very aggressive agenda. He said the Data Management Committee requested action on two issues. Detailed information on the presentations and discussion during the TCC is under the TCC section of these minutes.

J. Jewell reported G. Bray reported for the Data Management Subcommittee. He started by identifying recreational sampling priorities that would be the foundation of a Gulf of Mexico MRIP

Regional Implementation Plan. MRIP is in the process of transitioning from pilot testing of new collection methodologies to implementation of new methods. The plans should be focused on recreational priorities for the next 3-5 years but can be revisited earlier if recreational priorities change. A motion was passed to identify the following prioritized areas of importance for the MRIP Regional Implementation Plan: full funding for MRIP General Survey at base sampling levels; MRIP certified specialized landings surveys; redesigned biological sampling program integrated with recreational catch sampling; For-Hire electronic logbook implementation and validation; improve timeliness and accuracy of saltwater license frames; improve precision of landings estimates by increasing dockside sampling levels; and improve recreational discard/release data.

C. Blankenship moved to accept the motion. K. Lucas seconded and the motion passed.

J. Jewell reported the Committee received a report from the GulfFIN Administrative subcommittee regarding a new process for on-boarding new committee members. This was an issue that was identified during GulfFIN strategic planning as important to educate new members on this history and role of GulfFIN and the current issues GulfFIN is working. A motion was passed that the appropriate documents to on-board new members would be a welcome letter, the GulfFIN Framework Plan, the current year Operations Plan, the current Annual Report, the statement of non-disclosure form, and GulfFIN confidential data user request form.

K. Lucas moved to accept the motion for on-boarding new committee members. D. Ellinor seconded the motion and it passed.

C. Blankenship moved to accept the TCC Report. K. Lucas seconded the motion and it passed.

State-Federal Fisheries Management Committee

Menhaden Advisory Panel (MAC)

S. VanderKooy reported the MAC met Tuesday afternoon and has one recommendation for consideration. Detailed information on the meeting is under the MAC section of the minutes.

West Bank Fishing, LLC now owns the vessels previously operated by Daybrook Fisheries. Daybrook Fisheries now operates the dockside facilities only. With this change, the MAC recommends the Commission add another industry seat to the MAC to accommodate West Bank Fishing.

K. Lucas asked if the bait industry representative has been participating on the Committee. **S.** VanderKooy said the bait company has not appointed a representative or participated on the Committee.

K. Lucas moved for the Commission to allow a seat for the West Bank Fishing representative but to eliminate the bait industry seat until the industry shows an interest in serving on the Committee. C. Blankenship seconded the motion and it passed.

Discussion of Commercial/Recreational Fisheries Advisory Panel

S. VanderKooy informed the Commission that the CRFAP has not met in the last few years and when they have, they did not have a quorum. He stated travel funds are budgeted to have these meetings and asked if the Commission would like to dissolve the Panel and use the funding for other Committees.

The Commission decided no action should be taken at this time and directed Staff to contact the states to see if they would like to change the representatives on the Panel.

Sea Grant Fisheries Extension Meeting Report

Bill Balboa reported Sea Grant met yesterday with Sea Grant representatives from Florida, Mississippi, Alabama and Texas. The Louisiana representative, the Chair, was not present due to having a baby. Three topics were discussed - the value of fisheries extension networking, seafood marketing efforts in each state, and oyster and hard clam culture along the Gulf Coast. Presentations were also given from each state on their current activities. The detailed minutes from this meeting are under the Sea Grant Fisheries Extension section of the minutes.

NOAA Fisheries Southeast Regional Office Comments

R. Crabtree reported that one of the goals of the NOAA Fisheries SRO Strategic Plan distributed to the Commission recently, was to improve communications with the states, councils, Commissions, and others by obtaining input on the annual programmatic and science priorities for NOAA Fisheries. Once priorities are set, they will ask for comments and then decide if the list needs to be amended. He stated that several years ago they had hearings on possibly requiring TEDs in skimmer trawls but during the rule making process new data was obtained that indicated that the size turtles that were being taken in skimmer trawls were very small, saucer size, mostly Kemp Ridley's and it appeared that most of those turtles would go through the bars on any of the TEDs that were available at the time. So that requirement was pulled back until a TED could be developed that could deal with the smaller turtles. They have been through that process and will start looking at the requirement again. He said they expect to have an EIS sometime over the next year and after public comment, if they decide to go forward with the requirement for TEDs in skimmer trawls, it will probably be implemented sometime in 2017. He said if they do start requiring TEDs in the skimmer trawls they will have to take into consideration how long it would take the net shops to build all the TEDs needed.

R. Crabtree reported the Gulf Council approved Shrimp Amendment 17A at their January 2016 meeting and if that is approved by NOAA Fisheries, this would extend the moratorium on federal shrimp permits for another 10 years. He said the Gulf Council also passed Amendment 28 which would increase the amount of red snapper harvest allocated to the recreational sector from 49 percent to 51.5 percent. The reallocation is based on changes in recreational survey data incorporated into a 2014 red snapper update assessment. He said they are in the public comment process and their goal is to get through the rule making and approval process and if it is approved, the shift in allocation can occur before the June 1 opening of the Federal Season. He also noted that if the state waters off Louisiana, Mississippi, and Alabama are extended out to nine miles, they will have to determine what impacts that would have on catch rates and landings to the Plan. They should have some preliminary projections on that for the April Gulf Council meeting. He stated they have completed the process of implementing the Gulf Council's offshore Aquaculture

FMP and this authorizes up to 20 permits over a 10 year period. A more detailed report is in the briefing book under Tab A.

D. Ellinor asked why there are no meetings scheduled in Florida on TEDs for the skimmer trawls. He said there is not a skimmer trawl fishery in Florida but he thought that included wingnuts and push nets. **R. Crabtree** said at this time, they are not considering a TED requirement for those nets.

USFWS Region 4 Office Comments

G. Constant updated the Commission on the USFWS Region 4 Program. He said J. Ballard has been working with the ranking prioritizations committee for the Aquatic Nuisance Species Program. The program received an increase, so the states that have approved invasive species management plans will now be getting roughly \$47K year. He said they are working on a "Next Steps Document" to identify species of interest. This document will go out for review and he stated he would like the Commission's TCC to review the document and provide input.

Discussion of Legislative Issues and Actions

D. Donaldson referred to Tab B and C in the briefing book, H.R. 2029 Consolidated Appropriations Act, 2016 and C S. 659 Bipartisan Sportsmen's Act of 2015. He said the appropriations bill has been passed and the most important items concerning the Commission is the 9 mile extension for Mississippi, Alabama, and Louisiana, and the \$10 M for data collection and the non-NOAA stock assessment which R. Crabtree discussed on an earlier agenda item. He stated the other item, Senate Bill 659, the Bipartisan Sportsmen's Act of 2015 is similar to previous versions and said if there are any questions, he will try to answer. He stated he was contacted by Senator Vitter's staff to add language about the Commission providing a report about the extension of the 9 miles and the impacts of the economies of the states, law enforcement, data collection, etc. and provide a funding estimate for compiling a report. This is still in committee but he wanted to make the Commission aware of this. **D. Donaldson** stated that as other legislative issues come up he will keep the Commission apprised

NOAA Fisheries Budget Update

R. Crabtree reported a workshop was held in March to discuss how to commit the \$10M in the appropriations bill for red snapper research. He stated \$5M will go to NMFS and \$5M will go to Sea Grant. He said that it was decided at the workshop that they needed a large coordinated gulf-wide project to come up with an independent estimate of absolute abundance of red snapper in the Gulf of Mexico. He said they could then take that independent estimate of abundance and compare it to the abundance estimated in the stock assessment. He said if the estimates match then everything would be great, but if they are different, then the stock assessment can be tuned in order to match that.

He said they agreed that a large gulf-wide tag recapture program than can be used to estimate abundance of red snapper would be the best way to estimate abundance. This would be a 2-phase approach to the problem. In Phase 1 MS-AL Sea Grant (MASGC) would release a request for proposals to submit an experimental design on how to conduct a gulf-wide mark recapture tagging program. Then they would appoint a technical review panel to select the proposals to be awarded to a maximum of \$50K per proposal. The institutions that receive awards would then develop the

scientific design for the program. The Phase 2 portion would be once the experimental design is selected by the review panel, they would put out a second RFP with the sampling design and ask for proposals to actually do the work.

Briefing on Red Tide Symposium

J. Ballard briefed the Commission on the Red Tide Symposium. Texas has been using Imaging FlowCytobot (IFCB) which continually monitors the water and sends out reports to the state agencies on any potential red tide events. There was discussion in the TCC for all the states to possibly start using this monitoring system. This may not be possible because of the high cost of purchase and maintenance. There was also discussion about the backlog of data collected during the red tide event because there are very few Labs certified to run the Mouse Bioassay test. **K. Lucas** stated MS DMR requested the Gulf Coast Research Laboratory seek certification to process this data and to be available for any future red tide events. **The Commission asked staff to research the actual cost of purchase and maintenance of Cytobots**.

Discussion of GSMFC Rules and Regulations Document

Discussion and Approval of Financial Disclosure Form.

At the previous meeting, the Commission decided to modify the ASMFC financial disclosure form to fit the Gulf needs. It was decided that any financial interest should be reported and all Commissioners should submit the form. The Commission reviewed the finalized form. *C. Blankenship moved to accept the Financial Disclosure Form reviewed at this meeting, and to distribute it to all Commissioners to submit. D. Ellinor seconded and the motion passed.*

Discussion of Proxies for Legislative Appointee

The Commission discussed updating the proxy language in the Rules and Regulations document to be more specific. This would allow the Legislative and Governor Appointee to designate a proxy if they cannot attend the meeting. It was noted that some states do not allow for these positions to designate a proxy. *K. Lucas moved to adopt the proxy language reviewed at the meeting. D. Ellinor seconded and the motion passed.*

The Financial Disclosure Form and the Proxy Form will be made available on the Commission's website on the Commissioner's page.

Discussion of Increasing State Dues to Pay for Committee Travel

D. Donaldson reminded the Commissioners that at the last Executive Committee meeting, it was suggested to possibly raise state dues to help pay travel to the annual meetings for Commissioners, State Directors and TCC Members. He mentioned the dues have not increased since 1993. He reviewed three different scenarios on increasing state dues. *After discussion, C. Blankenship moved to increase state dues to \$30,000 to help pay for travel costs for Commissioners and the TCC members. D. Ellinor seconded. After further discussion, most states stated they could not support an increase in dues at this time due to financial constraints they are already facing. C. Blankenship, withdrew the motion.*

D. Donaldson informed the Commissioners about the travel agreement between the Commission and Texas in that the Commission processes travel for Deepwater Horizon travel. He stated if any of the other states would be interested in similar agreements to help process travel, to contact him.

<u>Presentation of Fishery Management Plan for Regulating Offshore Marine Aquaculture in</u> <u>the Gulf of Mexico</u>

Jessica Beck-Stimpert, the Regional Coordinator for Aquaculture for NOAA Fisheries in the Southeast, gave a presentation on the NOAA Fisheries Gulf Aquaculture PERMIT (GAP) Program for Federal Waters of the Gulf of Mexico. She gave an overview on the background and the final rule details. The final rule became effective on February 12, 2016 and stated up to 20 permits can be issued over a 10 year period. She said this is just a starting point and once the industry starts to develop, they may make changes in the permit limits and rules. The website link with information on the permitting process and some of the other documents that will help guide through the permitting process is http://sero.nmfs.noaa.gov/sustainable_fisheries/gulf_fisheries/aquaculture/. The complete presentation may be obtained at the GSMFC office upon request.

K. Lucas asked what the estimated cost of the permitting process would be for the applicant. **J. Simpert** said there is a \$10,000 permit cost for application fee and then it would depend on what they are proposing to do. It is expensive but she said those that are in the industry are aware of the costs of the permitting process.

K. Lucas said some of the Gulf States may be interested in coordinated efforts across the Gulf for shellfish aquaculture and asked for suggestions on obtaining the permits. **J. Stimpert** suggested someone could present at a Commission meeting or they could have a conference call with all who would be involved including the Army COE to discuss this.

Presentation of Gulf Coast Ecosystem Restoration Council (GCERC)

B. Sutter gave a presentation on the GCERC. He reviewed the history of the Council and the allocations of the trust fund. He stated the Council is to restore the Gulf "without regard to the geographic location." He reviewed the goals of the initial comprehensive plan which are restore and conserve habitat; restore water quality, replenish and protect living coastal and marine resources, enhance community resilience, and restore and revitalize the Gulf economy. The first funds received focused on the first two goals and he reviewed the projects funded and future projects that will be funded. He provided a listing of the state and federal contacts of the Council. A copy of the presentation is available upon request from the Commission office.

C. Blankenship asked what is the plan for the \$1.2B for blue water and who will handle that. **B. Sutter** stated that has not been resolved yet but it most likely will be a federally led project.

Presentation of Southeast Regional Action Plan Regarding Climate Change

Sunny Snider gave a GoTo meeting overview on the draft Climate Science Regional Action Plan for the Southeast. She stated the NOAA Fisheries National Climate Science strategy was developed to help the agency meet the growing need for climate information to use in management decisions. The science strategy called for regional action plans that would be created by the science centers and regional offices in each of the NOAA Fisheries regions. Each of the regions will face different climate related challenges and have different capabilities and needs, so they want to be able to customize and tailor the regional action plans for climate challenges in each of the regions. She stated that here in the southeast there are three large marine ecosystems - the Gulf of Mexico, the Caribbean, and the South Atlantic. She reviewed the draft action items and asked all to review the action items and provide input when the public comment period begins. She said public comment should begin this summer and expects to complete and finalize the regional plan by October 2016. A copy of the presentation may be obtained from the Commission office upon request.

GSMFC Program Reports

Interjurisdictional Fisheries Program

S. VanderKooy reported the Croaker TTF met in January to go through the draft biology, enforcement, and fisheries chapters. He said the groundfish fishery is well documented but the foodfish fishery is less so. The TTF will continue to draft the state fisheries sections for the more recent history and should have a comprehensive document later this year. It is anticipated that the profile could be ready for review by the first of 2017.

The Otolith Work Group, the IJF staff, and the Atlantic States Marine Fisheries Commission (ASMFC) staff continue to revise the Otolith age and growth manual, *A Practical Handbook for Determining the Ages of Gulf of Mexico and Atlantic Coast Fishes*. As there is no dedicated funding for the project, it is being completed via email and conference calls as time permits. It is expected that this effort will continue into the summer and perhaps be complete sometime later this year.

He stated as the IJF Coordinator, he continues to serve on the Audubon Nature Institute's G.U.L.F. (Gulf United for Lasting Fisheries) Project's Technical Advisory Committee (TAC), helping develop a new standard against which the fisheries in the region can be assessed. The certification standard has been tentatively approved for accreditation and the TAC is currently wrapping up the support documents. It is intended that the G.U.L.F. standard will be available to the various certification bodies for consideration when assessing Gulf of Mexico fisheries and the individual states' existing fishery management framework in the future.

The Tripletail Technical Task Force (TTF) met in December and again in February to work on various sections of the profile. Additional material has been included in the habitat chapter to expand understanding of the various currents that drive the movement and passage of tripletail throughout the Caribbean and Gulf. Edits have been completed on the state fisheries sections and a draft description of the South American fisheries has been completed. It is anticipated that the Biological Profile for Tripletail will be complete in time for review and final action by the TCC in October.

S. VanderKooy showed the current list of FMPs and Profiles. He said upon completion of the Triple Tail Profile, they will be starting another profile and asked the Commission to be considering what they would like to do next. He stated there is an interest in eels.

SEAMAP

J. Rester reported that since the last Commission meeting, the SEAMAP Subcommittee has pursued additional funding and funding sources for fishery independent data collection in the Gulf

of Mexico. The SEAMAP Subcommittee developed a two page document explaining SEAMAP, the uses of SEAMAP data in stock assessments, and the need for additional funding. The document was distributed to Congressional staffers in February. The SEAMAP Subcommittee will pursue funding made available in the Gulf of Mexico reef fish stock assessments language of the 2016 Appropriations Bill. The SEAMAP Subcommittee will also pursue funding for fishery independent data collection through the NOAA RESTORE Act Science Program's next funding competition that should be held in April or May. The funding competition will focus on comprehensive understanding of living coastal and marine resources, food web dynamics, habitat utilization, protected areas, and carbon flow.

SEAMAP continues to work on standardizing station selection in the Vertical Line Survey. Stations will be selected in three depth zones (10-20m, 20-40m, and 40-150m) across the entire Gulf of Mexico. The new station selection method will be utilized in 2016.

SEAMAP has recently completed an update of the Bottom Longline Operations Manual to include new standardized methodology and station selection. SEAMAP has also recently completed an update of the Trawling, Plankton, and Environmental Operations Manual.

All three SEAMAP components (Gulf, South Atlantic, and Caribbean) continue to edit and update the SEAMAP 2016-2020 Management Plan. While the Management Plan revisions have taken longer than expected, progress is being made and SEAMAP will soon begin the process of having the SEAMAP oversight committees review and approve the document.

The Commission continues to manage SEAMAP data and distribute the data to interested parties. The Commission has fulfilled 10 SEAMAP data requests since November. SEAMAP databases were downloaded 100 times during this time period.

Sportfish Restoration Program

J. Ballard reported he will be conducting a pilot study of the Gulf Artificial Reef Monitoring and Assessment Program (GARMAP) with the state of Mississippi in 2016 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. All necessary gear that will be utilized in the project has been purchased and/or built; and a data entry program that will be used to collect and distribute all the sample data back to GSMFC where it will be housed, has been developed. They are waiting for the state boat to be outfitted with the necessary equipment to carry out the sampling. 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 stated he is exploring funding opportunities to support the full implementation of the GARMAP.
J. Ballard said he is continuing to maintain and update the FINFO website. The new news crawler has been added to the site and a new program has been developed by the GSMFC's Computer System Administrator that automatically updates the catch data on the site so it stays consistent with the data provided on NOAA's website.

J. Ballard reported he is serving on the Steering Committee for the 2016 National Saltwater Artificial Reefs Workshop that is being hosted by NOAA Fisheries and the Atlantic States Marine Fisheries Commission in June.

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". Once all revisions are received, a complete revised draft will be compiled by him and distributed back to both Subcommittees for a final review with the goal of having the document complete 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. The next Joint Meeting will be held in January/February of 2017 in Florida and the Atlantic states will host.

Fisheries Information Network

G. Bray gave a presentation focusing on the major accomplishments of the FIN Program in 2015. He stated that on the recreational catch/effort side they conducted almost 46,000 MRIP angler interviews through the MRIP survey in Florida, Alabama, Mississippi and Louisiana. MRIP has been providing funding for increased dockside sampling to improve the fishery landings estimates. There are now commercial trip ticket programs implemented in all 5 Gulf States. Part of that is Gulf States Marine Fisheries Commission assisting with the development and implementation of an electronic trip ticket program. They work with dealers in all five states to provide this electronic reporting system. The electronic reporting system is a more efficient way of producing clean data. There are currently 916 dealers on-line and that represents about half the dealers. The FIN data management system is a data repository which has over 30 million records loaded into the system. They are currently working with ACCSP on developing new end user query tools to make it more user friendly for scientists and the public that are coming to the site to access fishery independent data. In that system there is historical and current trip ticket data, biological length and age data, along with recreational catch and effort data. That system has been on-line since July 2002 and allows for non-confidential and confidential user access. There are currently 44 users who have confidential access. The states collected over 36,000 ageing structures for almost 20 species in 2015 for the biological sampling program. The GulfFIN Program prioritizes 15 species of importance the states try to target but they also opportunistically get some additional species that are not on the list.

G. Bray then reviewed the funding activities for 2016 and stated they are only funding ongoing activities and are not able to fund FIN biological sampling. He said the state and federal partners are interested in some potential research to look at commercial conversion factors in the Gulf of Mexico. The states brought to the Commission's attention they are concerned with the accuracy of the current conversion factors as most have no documentation associated with them and they are not sure when or how they were developed. **G. Bray** stated ACCSP along with FWC has done some recent research on conversion factors in the South Atlantic and GulfFIN would like to partner with them to expand that similar methodology into the Gulf. They will probably partner on a

proposal to submit to NOAA FIS to obtain funding to start a sampling program. He then stated the complete FIN report is under TAB L of the Briefing Book.

Aquatic Nuisance Species Program

J. Ballard reported the Gulf and South Atlantic Regional Panel (GSARP) held its fall meeting on October 6-7, 2015 in Myrtle Beach, South Carolina. He took over administration of the Region 4 USFWS Small Grants Program in 2014. All but two of the eleven projects that were selected for funding in 2014 have been completed, with the remaining two projects slated to finish this year. In 2015, a total of 41 proposals were received, totaling about \$1 million in requested funds. Eight projects were selected for funding, totaling \$185,182. He worked with the new USFWS Region 4 AIS Program Coordinator on the 2016 RFP, and it was sent out by the USFWS's regional office in February. The regional office is pleased with how smoothly this new partnership is working, and plans to continue it in subsequent years if funding allows. The Invasive Species Traveling Trunks were made available in July of 2012. They have been utilized for a total of 895 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 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. The USFWS received an additional \$1 million to support state plans in 2016. This effectively doubles the amount previously available; however, only brings the total appropriated funds to half of the amount allocated. The GSARP's Spring Meeting is scheduled for April 5-6 in Alabama. The Spring Aquatic Nuisance Species Task Force meeting will be held on May 4-6 in Traverse City, Michigan.

Lyles-Simpson Award Recipient Selection for 2016

M. Lingo nominated Mike Ray as the Lyles-Simpson Award recipient. C. Blankenship seconded the motion and it passed.

State Directors' Reports

Each state gave a very brief report on their state's activities. The complete reports are under Attachment I.

Future Meetings

N. Marcellus stated the October meeting will be a week later than the normal schedule due to the Gulf Council scheduling their meeting the week the Commission normally meets. She has not been able to secure a location in New Orleans but will contact the Commission when a contract is signed. She said the March 2017 meeting will be in Mississippi and it is usually in the Biloxi/Gulfport area, but if there are other suggestions on a location for the meeting, to contact her.

Review of Committee Listings by State

D. Donaldson stated several years ago it was suggested that a list of committee members by state be distributed each year. This will now be a standing agenda item for the March meeting. He asked for the Commission to review their state's representatives on the Committees and send any changes to the office.

Publications List and Web Statistics (Informational Only) D. Donaldson referred to Tab Q and R and stated this information is provided for their review and informational purposes only.

There being no further business, the meeting adjourned at 3:45 pm.

ATTACHMENT I

Commission Business Session State Reports

Gulf States Marine Fisheries Commission 66th Annual Spring Meeting Technical Coordinating Committee Wednesday, 16th March 2016 San Antonio, Texas

TEXAS REPORT

REGULATORY ISSUES

2016-2017 Coastal Fisheries Scoping Items

January 2016 - The Texas Parks and Wildlife Department will begin accepting public comment on proposed clarifications to the maximum length limit for black drum, and increasing the minimum length limit for Greater Amberjack. Last year, the department eliminated an awkward tabular format for establishing bag, possession, and length limits. In the process, the 30-inch maximum length limit for Black Drum was inadvertently eliminated. The proposed amendment would correct that oversight. For Greater Amberjack, an amendment is proposed that increases the recreational minimum size limit from 34 inches to 38 inches (total length). The National Marine Fisheries Service (NMFS) recently issued regulations to implement management measures in the Fishery Management Plan for the Reef Fish Resources of the Gulf of Mexico, one of which was to increase the recreational minimum size limit for amberjack to 34 inches (fork length). The change is intended to provide an opportunity for a greater number of sexually mature greater amberjack to spawn, which could assist in efforts to end overfishing and rebuild stock. The department has determined that the federal action is consistent with sound fisheries management principles and that making the state regulation identical to the federal regulation will help achieve management goals, be beneficial to the resource, and prevent angler confusion. The proposals will be considered for adoption by the Texas Parks and Wildlife Commission at its March 24 public hearing.

COASTAL FISHERIES PROGRAMS & PROJECTS

Texas Marine Sport-Harvest Monitoring Program

During the Texas Parks and Wildlife Department's 2014-15 creel survey year (15 May 2014 through 14 May 2015), 1,052 surveys were conducted at boat-access sites along the coast.

For private-boat bay-pass anglers, an estimated 4,704,500 man-hours were expended to harvest an estimated 1,272,300 fishes. Staff conducted 10,811 target interviews involving 27,270 anglers. Spotted Seatrout, Red Drum, Sand Seatrout, and Atlantic Croaker were the most frequently landed species. Mean party size was 2.5 people and mean trip length was 5.4 hours. Staff observed 34,125 fishes and measured the length for 24,830 of them.

For private-boat Texas Territorial Sea anglers, an estimated 145,900 man-hours were expended to harvest an estimated 47,300 fishes. Staff conducted 340 target interviews involving 1,037 anglers. Red Snapper, King Mackerel, and Spotted Seatrout were the most frequently landed species. Mean

party size was 3.0 people and mean trip length was 6.2 hours. Staff observed 1,594 fishes and measured the length for 1,068 of them.

For private-boat Exclusive Economic Zone anglers, an estimated 80,600 man-hours were expended to harvest an estimated 20,900 fishes. Staff conducted 140 target interviews involving 489 anglers. Red Snapper, King Mackerel, and Dolphinfish were the most frequently landed species. Mean party size was 3.5 people and mean trip length was 7.8 hours. Staff observed 926 fishes and measured the length for 621 of them.

Fisheries Enhancement Program (Hatcheries)

	25,520,311	Total fingerlings stocked			
	114,329	Southern Flounder fingerlings			
	10,705,228	Spotted Sea Trout fingerlings			
	14,700,754	Red Drum fingerling			
2	2015 Fish Stocking Totals				

Southern Flounder production has been continuing with plans to stock within the next few months.

Artificial Reef Program (September 2015 – February 2016)

- **RIGS-TO-REEFS:** Two Fieldwood Energy platforms were reefed. MI-681JA (8-pile) was reefed in place and generated \$35,100 in donations. MI-683B (6-pile) was towed to TPWD reef site MI-703 and generated \$50,000 in donations. Both sites are offshore of Corpus Christi. Due to shallow water depths, which complicates cutting to meet clearance requirements and other issues, these two donations were lower than usual, but it was important to capture the platforms for marine habitat versus losing them to scrapping.
- There are a number of Rigs-to-Reefs projects in process, we well as the anticipated NRDA/Restore Act reefings in 2016.
- NEARSHORE REEFS: A proposal was submitted for a Coastal Management Program grant (CMP) for reefing at the newly proposed Rio Grande Valley Nearshore Site (RGVNS). The Artificial Reef Program has requested \$400,000 from the CMP grant committee with a \$400,000 match to construct and deploy both low and mid relief structures at the RGVNS. This reef site will be the largest reef site in the program (1650 acres) and will provide a unique opportunity to create juvenile and sub-adult red snapper habitat in state waters. The CMP grant was approved and funds will be released by October 2016 with reefing events to occur in 2017.
- Eternal Reefs deployed six reef balls in federal waters off Galveston at Barr's Reef on November 11, 2015.

Permit Status for New Nearshore Reefs:

REEF	USACOE Permit	TX GLO Surface Lease	USCG Clearance	BUOY REQUIRED
HI-20 Sabine	Projected – APR 2016	Routed for CF Director Signature	30ft - Approved	No
HI-54 Sabine	Projected – APR 2016	Projected – FEB 2016	Request submitted	?
GA-220 Big Man, Galveston	Received	Routed for CF Director Signature	30ft - Approved	No
MI-562 Port O'Connor	Received	Routed for CF Director Signature	30ft - Approved	No
PS-106 Rio Grande Valley	Projected – MAY 2016	Projected – FEB 2016	30ft - Approved	Yes; 2.5s flashing

Natural Resources Damage Assessment (NRDA):

The program has 3 projects slated through Deepwater Horizon (BP) funds, totaling \$6.6m:

- Ship Reef (HI-A-424): The Ship Reef 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). The ship reef RFP went out for bid on 10 December 2015 and was placed out for rebid in early February, now closing on 1 March 2016.
- Freeport Artificial Reef (Brazoria County): This 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.
- Matagorda Artificial Reef (Matagorda County): This project will create a new artificial reef site approximately 10 miles offshore of Matagorda County, Texas, through deployment of concrete pyramids (artificial reef materials) at a water depth of 60 feet. Funding: \$3.6 million.

Biological Monitoring: Contracts for biological and water quality monitoring of the TPWD Artificial Reef sites have been approved for another two years. Texas A&M University – Galveston, Texas A&M University – Corpus Christi, the University of Texas – Rio Grande Valley, and the United States Geological Services will continue to monitor and provide data for the reef sites in their regions.

Perry R. Bass Marine Fisheries Research Station - Life History Research

The GSMFC funded FIN-Biological Sampling project for otolith collection and processing for various marine species was continued, sample collection, processing, and analysis; and data entry into the FIN biosampling database are ongoing.

PRB staff assisted the TPWD Inland Fisheries division by sectioning Red Drum otoliths collected from a freshwater power plant cooling reservoir for the purpose of estimating ages of the collected fish.

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 is ongoing.

Additional samples of Alligator Gar from selected drainages have been requested from the TPWD Inland Fisheries division to better characterize genetic diversity of alligator gar from freshwater and estuarine areas.

License Buyback Program

November 2015 - TPWD opened a new round of the commercial license buyback program for crab, finfish, and shrimp. The application deadline was January 31, 2016.

Oyster Fishery

TPWD continues to finalize a proposal for an expansion of oyster aquaculture in Texas bays through an incentive-based program that would also provide some enhancement to public oyster reefs. Public meetings with various constituent groups and legislators are being planned over the next two months. The final proposal will be presented to the TPW Commission in May 2016.

Working with the Texas commercial oyster industry (through the Oyster Advisory Workgroup) TPWD has implemented a precautionary management approach for the public oyster fishery whereby index-based reference points are being used determine when areas should be closed to harvest. Once closed, a higher threshold for these reference points are used to determine when best to reopen the area. Currently 127,418 acres (14%) of Approved or Conditionally Approved harvest waters are closed for resource management issues.

SPECIAL EFFORTS, STUDIES, AND TOPICS SEAMAP

Future (2016) vertical and bottom longline sampling efforts are currently being planned for spring through fall.

Red Tide

2009 to 2015 Red Tide Summary

On October14, 2009, Texas Parks and Wildlife Department-Kills and Spills Team (TPWD-KAST) investigated a fish kill along the Gulf coast that ranged from the Southern Jetty of Port Aransas to the U.S./Mexico Border associated with a *Karenia brevis* bloom. Investigations also included Corpus Christi Bay along the southern shoreline and the shoreline of Indian Point. Other investigations were along the shores of Ward Island in Oso Bay, Fulton Channel in Nueces Bay, Corpus Christi Inner Harbor, and Packery Channel. Fish kills investigated within the Lower Laguna Madre included in Brazos Santiago Pass and Mansfield Pass, Port Mansfield Harbor, the southern shoreline between Laguna Vista and Port Isabel, Shrimp Boat Basin and the Brownsville Ship Channel.

Fish kill distribution: Gulf of Mexico shoreline from Southern Jetty of Port Aransas to the U.S./Mexico Border, Nueces Estuary, and Lower Laguna Madre. Estimated total kill: 3.7 million fish (valued at \$4.8 million)

On September 9, 2011, Texas Parks and Wildlife Department-Kills and Spills Team (TPWDKAST) received notification from TPWD – Brownsville management staff regarding stressed fish at the surface inside Brazos-Santiago Pass, but no discolored water. On September 11, 2011, a red tide event was positively identified and spreading up the coast of Texas to Galveston Bay. This event killed over 4.4 million fish which comprised over 90% non-recreational/noncommercial species (Striped Mullet, Scaled Sardines, Atlantic Bumper, Pinfish, Ladyfish, Spot, Hardhead Catfish, and Gulf Menhaden). Gulf Whiting made up 8% of the mortality and other recreational and commercial species comprised less than 1%. Shellfish harvesting was impacted with Galveston Bay being closed October 5, 2011 to commercial oyster lease harvest. The other bay systems were closed from November 1, 2011 to January 27th, 2012. Economic losses (exvessel value) through the end of January were projected to be in excess of \$7.5 million (e.g., loss in landings in excess of 650,000 pounds meat weight; a loss of 52% of the seasonal production. Note: Estimates are based on the average monthly landings and values for the years 2007-2010).

Fish kill distribution: Gulf of Mexico, Galveston Bay System (West Bay), Brazos River Tidal, Matagorda Bay System (East Matagorda Bay, Tres Palacios Bay/Turtle Bay, Carancahua Bay, Keller Bay, Cox Bay, Lavaca Bay/Chocolate Bay, Matagorda Bay/Powderhorn Lake), San Antonio Bay System (Espiritu Santo Bay, San Antonio Bay/Ayers Bay/Hynes Bay/Guadalupe Bay), Aransas Bay System (Mesquite Bay/Carlos Bay/Copano Bay/Aransas Bay) Corpus Christi Bay System (Corpus Christi Bay, Nueces Bay, Redfish Bay), Upper Laguna Madre, Lower Laguna Madre System (Lower Laguna Madre and Brownsville Ship Channel) Estimated total kill: 4.4 million fish (valued at \$6.2 million).

On August 10, 2012, TPWD received a report of a fish kill near the mouth of the Colorado River in Matagorda County. Dead fish began washing ashore in the Freeport and Galveston area a day

later, and progressed northward in the near shore Gulf of Mexico to Bolivar Peninsula. Though no reports of discolored water or aerosol affects typical of a red tide bloom were received, a harmful algal bloom was suspected due to the extent of area and numbers of fish being impacted. Texas Department of State Health Services (DSHS) closed Galveston Bay to shellfish harvesting on August 13th. Most of the fish being impacted were Gulf Menhaden; however, Gafftopsail and Hardhead Catfish were also present in lower numbers. On August 16th, TPWD conducted an aerial survey of the entire coast including the Gulf beaches and all major/minor bays. No visible red tide and no new fish kills were observed anywhere along the coast. DSHS continued to find red tide cells in concentrations too low to cause fish kills in their samples until late August. Fish kill distribution: Northern Gulf of Mexico

Estimated total kill: 3.5 million fish (valued at \$545,000)

On August 27, 2013, TPWD received a report of Gulf Menhaden swimming erratically in the River's End community near the confluence of the San Bernard River and the ICWW. The following day, TPWD - Kills and Spills Team conducted a site visit, no dead fish or erratically swimming fish were observed, and a water sample was collected at the site to check for red tide organisms. The sample confirmed the presence of *K. brevis*. On August 29, 2013, DSHS closed the Galveston Bay oyster fishery to harvesting due to presence of red tide organisms.

Government agencies and researchers began collecting red tide samples along the Texas coast and found low to moderate *K. brevis* counts from Galveston to Padre Island National Seashore (PINS). The highest concentrations of 142 cells per milliliter were found at Surfside Beach on the upper coast and 200 cells per milliliter at PINS on the lower coast. However, TPWD did not receive any reports of aerosol effects or discolored water during the event. While on a site visit to Bay Harbor Island on September 5, 2013, National Marine Fisheries Service personnel observed many dead and what appeared to be injured wading and diving birds (e.g. terns, gulls and pelicans) on the island and in the water. TPWD staff collected eight specimens (5 royal terns, 2 laughing gulls and 1 brown pelican) from the island on September 6th and transported them to The Wildlife Center of Texas in Houston. Two terns died and were sent to Dr. Paul Zimba at TAMUCC, where one of the birds was tested for brevetoxin. Dr. Zimba recorded a lethal concentration of 84 ng brevetoxin per g of liver tissue. This concentration is within the range known to kill wading and shorebirds. Stormy weather dissipated the bloom and no elevated cell counts were detected in Gulf or bay samples after September 16, 2013. No other impacts were reported for this event.

On September 13, 2015, Texas Parks and Wildlife Department received notification of a fish kill and confirmation of a *K. brevis* bloom around the Port Aransas jetties. The bloom quickly expanded along the Texas coast, impacting the Gulf shoreline from Quintana Beach south to Boca Chica beach. Fish kills were also observed in Matagorda Bay, San Antonia Bay, Corpus Christi Bay, Upper and Lower Laguna Madre systems. This event killed over 4.3 million fish, dominated (90%) by Shrimp Eel, Pinfish, Striped Mullet, Spot, Gulf Whiting, Ladyfish, Gulf Menhaden, Ghost Shrimp, Gulf Toadfish, and Bay Anchovy.

Fish kill distribution: Gulf of Mexico (Quintana beach, Sargent beach, St. Jose Island, Mustang Island, Padre Island, South Padre Island, Boca Chica Beach), Matagorda Bay System (Powderhorn Lake, Matagorda Bay), San Antonio Bay System (Espiritu Santo Bay, San Antonio Bay), Corpus Christi Bay System (Corpus Christi Bay, Nueces Bay), Upper Laguna Madre, Lower Laguna Madre. Estimated total kill: 4.3 million fish (Impact cost pending PRISM finalization)

Cold-Stunned Turtle Update

The numbers of cold stunned sea turtles found to date (15th January 2016) during the 2015-2016 cold stunning season in Texas are as follows:

All were green turtles.

Area	Total
Galveston Area/ Inshore	1
Lavaca/San Antonio Bay	0
Copano Bay	0
San Jose Island	0
Mustang Island/Aransas Pass	2
Upper Laguna Madre/Corpus Christi Bay	4
Padre Island National Seashore Gulf Beach	0
Lower Laguna Madre	4
Boca Chica Beach	0
TOTAL	11

Condition	Total
Alive	7
Dead	4
TOTAL	11

Gulf States Marine Fisheries Commission 66th Annual Spring Meeting Technical Coordinating Committee March 2016

LOUISIANA STATE REPORT

Resource Management

LA Creel

Through the La Creel program, 5,568 recreational fishing trips, constituting 13,154 individual anglers, were surveyed during the period of September 2015 to February 2016. Fifty-eight different interviewers working 773 assignments during that time period were used during that period. A total of 51,189 finfish were recorded as harvested of which 35,475 (69%) were seen and counted by trained staff (i.e. Observation type 1) with the balance being reported by the angler (Observation type 2).

While conducting this benchmark with NOAA's MRIP, LA Creel is also going through a peer review process with several consultants and NOAA participants. During this time period the peer review process was completed. Changes were recommended to how we calculate ROLP effort and compliance rates. Those recommendations have been implemented.

Stock Assessments:

Stock assessments of black drum, sheepshead, southern flounder, and striped mullet were completed and presented to the LWFC for transmittal to the Louisiana Legislature in February 2015. An update stock assessment of striped mullet was completed and presented to the LWFC for transmittal to the Louisiana Legislature in February 2016. These assessments use statistical catch at age models to estimate annual time-series of spawning stock biomass and fishing morality rates. Current status of each stock is determined with estimates of reproductive potential. Based on results of these assessments, no overfishing is occurring and no stock is considered overfished. Final reports are available (citations in Reports section below).

An update stock assessment of blue crab will be conducted in early 2016. This assessment update will use a stage-structured model to estimate annual time-series of spawning stock biomass and fishing mortality rates.

LA Creel

The stock assessment section continued to provide biweekly recreational landings estimates from the LA Creel Survey to marine fishery manager. The LA Creel Survey statistical protocol is available (citation in Reports section below).

Reports

Beck, S. G. Decossas, J. Shepard. 2014. Recreational Statistics Program: LA Creel Landing Statistics. Louisiana Department of Wildlife and Fisheries.

Davis, D., J. West, J. Adriance, and J.E. Powers. 2015. Assessment of Black Drum Pogonias cromis in Louisiana Waters - 2015 Report. Report to the Louisiana Legislature by the Wildlife and Fisheries Commission.

Davis, D., J. West, J. Adriance, and J.E. Powers. 2015. Assessment of Southern Flounder Paralichthys lethostigma in Louisiana Waters - 2015 Report. Report to the Louisiana Legislature by the Wildlife and Fisheries Commission.

West, J. and J.E. Powers. 2015. Update Assessment of Striped Mullet Mugil cephalus in Louisiana Waters - 2015 Report. Report to the Louisiana Legislature by the Wildlife and Fisheries Commission.

West, J. and J.E. Powers. 2016. Update Assessment of Striped Mullet Mugil cephalus in Louisiana Waters - 2016 Report. Report to the Louisiana Legislature by the Wildlife and Fisheries Commission.

West, J., D. Davis, S. Beck, J. Adriance, and J.E. Powers. 2015. Assessment of Sheepshead Archosargus probatocephalus in Louisiana Waters - 2015 Report. Report to the Louisiana Legislature by the Wildlife and Fisheries Commission

Marine Mammal and Sea Turtle Monitoring:

The LDWF Marine Mammal and Sea Turtle Stranding and Rescue Program is the first responder to all marine mammal and sea turtle strandings in Louisiana. The Office of Fisheries continues to receive and investigate all reports of live and dead marine mammals and sea turtles. Between October 2015 and March 2016, 33 marine mammal strandings, including 2 live animals, and 9 sea turtle strandings, have been covered. One of the live dolphins was rescued on Grand Isle Beach when the outer bands of once Hurricane Patricia were pounding the Gulf Coast. A member of the public happened to find the dolphin and LDWF Staff responded to begin the rescue efforts. This animal is currently undergoing rehabilitation at a facility in Louisiana and is slated for release around Grand Isle in the coming months. On Martin Luther King, Jr. Day, 1/18/16, LDWF Biologists and Enforcement Agents responded to a report from the public regarding a live dolphin that was observed in a shallow-water duck pond on the east side of Golden Meadow. Staff worked with the member of the public to successfully tag the dolphin and aid it in traveling through a narrow cut to return to the nearby bay.

Data Management:

LDWF continues to processes requests for trip ticket landings to assist with commercial fishermen's claims related to the Deepwater Horizon oil spill. For the time period of July 1, 2015 to December 31, 2015 LDWF has processed 26 data requests for commercial fisherman. From January 1, 2016 to March 15, 2016 LDWF has processed 20 data requests for commercial fisherman.

Age and Growth:

From the beginning of the second quarter of 2015 to the end of August the Age and Growth lab in Baton Rouge has received 6,313 otoliths and 2 Gray Triggerfish spines; out of that otolith and spine total, 5,437 have been aged. Within that total 546 of those otoliths are from the fresh water species. Spotted seatrout is the most collected species for this time period and has been the most

frequently collected marine species the past four years. The totals for each species are: Black Crappie-0; Black Drum-629; Gray Snapper-125; Greater Amberjack-50; Gray Triggerfish-2; King Mackerel-0; Largemouth Bass-546; Red Drum-896; Red Snapper-1072; Sheepshead-200; Southern Flounder-207; Spotted Seatrout-2,555; Striped Mullet-0; Tripletail-1; Vermilion Snapper-33; White Crappie-0; Yellowfin Tuna-126.

Fisheries Research Lab

The Grand Isle Fisheries Research Lab (GI-FRL) is the base for offshore fisheries independent monitoring and research projects conducted by the Fisheries Management Section. GI-FRL also performs a significant outreach capacity, as the Lab serves as a point of contact for the public, visiting researchers, and educational programs.

Southeastern Monitoring and Assessment Program (SEAMAP)

Louisiana SEAMAP is coordinated from the FRL. LDWF staff conduct Vertical Line, Bottom Longline, Ichthyoplankton, and Shrimp/Groundfish Trawl Surveys following SEAMAP protocols. SEAMAP 2015 surveys were completed in October 2015. Final data, annual reports, and grant progress reports were submitted to Gulf States Fisheries Management Council during the reporting period. SEAMAP 2016 sampling is scheduled to begin in early April 2016.

Research and Monitoring Projects

Fisheries Management staff worked on several research and monitoring projects during the current reporting period. The Louisiana component of the EPA National Coastal Condition Assessment was completed in November 2015 by LDWF staff. Studies on the reproductive biology of both spotted seatrout and greater amberjack are currently under way. Yellowfin tuna ageing and tagging results from LDWF research projects were submitted to the US delegation to ICCAT and presented at the Yellowfin Tuna Stock Assessment Data Scoping meeting.

Grand Isle Oyster Hatchery

During the winter of 2015-2016, the Michael C. Voisin Oyster Hatchery's Louisiana Department of Wildlife and Fisheries and Sea Grant staff completed maintenance for hatchery systems and performed preparations for the 2016 hatchery season. Maintenance tasks included replacing seawater intake lines, cleaning filtration units, and reconfiguring the Cold Broodstock Holding System. Oyster farm maintenance was also completed and all hatchery broodstock, grown in an Adjustable Longline System at the Sea Grant Oyster Research Farm, were cleaned and culled. In the Algal Production Room (APR), the algal bag system, which supplies live algal feed for hatchery-produced larvae, was improved by adding a transgential flow filtration (TFF) unit. The TFF removes particulates in the hatchery seawater down to 0.1 micron. This amount of filtration will further improve the water quality entering algal bags. At the end of January, five different species of algal stock cultures were started in the Algal Stock Room. At the beginning of February, approximately 200 of each diploid and tetraploid broodstock were removed from the farm and conditioned in the Warm Broodstock Holding System. Conditioning broodstock allows the hatchery to extend its larval production season by ripening oysters when wild production does not exist or is minimal. Algal bag production and larval production is expected to begin in late March.

Shrimp Program:

The 2015 fall inshore shrimp season opened state-wide at 6:00 a.m. on August 17, 2015. The 2015 fall inshore shrimp season closed at official sunset on December 21, 2015 with the exception of Lake Pontchartrain, Lake Borgne, a portion of Mississippi Sound, Chandeleur Sound and Breton Sound. These areas closed on January 25, 2016.

State outside waters from south 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 Atchafalaya River opened at 6:00 a.m. April 22, 2015. These outside waters closed at official sunset on January 25, 2016.

State outside waters extending a distance of 3 nautical miles seaward of the inside/outside shrimp line from the Atchafalaya River westward to Freshwater Bayou Canal at -92 degrees 18 minutes 33 seconds west longitude opened at 6:00 a.m. May 18, 2015. These outside waters closed at official sunset on January 25, 2016.

Shrimp Landings:

Preliminary statewide shrimp landings (all species combined/heads-off weight) for 2015 totaled 95.9 million pounds with a dockside value of \$120 million (Source: LDWF Trip Ticket Data). The dockside prices for shrimp were low and the 2015 spring shrimp season was one of the shortest on record (31 days).

Louisiana Shrimp Fishery Management Plan:

LDWF completed development of a Louisiana Shrimp Fishery Management Plan in May 2015 and the current plan can be viewed on the LDWF website at: http://www.wlf.louisiana.gov/sites/default/files/pdf/page/37762-fishery-management-

plansmarine/shrimpfmp7-27-15.pdf.

Crab Program

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 terrapin) and to collect and analyze blue crab sex, stage and size frequency distribution. From December 2012 through June 2015, a total of 8,496 trap sets were made. There were 1,732 individuals captured representing 37 different species. Sea Catfish (*Arius felis*) was the most caught species with 1,021 individuals caught. Only 12 Diamondback Terrapins (*Malaclemys terrapin*) were captured during the entire survey.

Louisiana Department of Wildlife and Fisheries closed three different areas to allow the removal of derelict crab traps in early 2016. The first closure area was the eastern portion of Lake Pontchartrain and the whole of Lake St. Catherine and took place from 6:00 a.m. February 12 to 6:00 a.m. February 21, 2016. The volunteer day, February 13, for this area yielded 554 derelict traps collected by volunteers. Work in this area continued during the closure period and an additional 832 were removed by workers for the Lake Pontchartrain Basin Foundation and LDWF employees. That brought the grand total of 1,386 abandoned traps removed from the Pontchartrain basin.

The second closure area was in the northern section of the Barataria basin and included the areas known as "The Pen", Bayou Perot, Bayou Rigolets and portions of Little Lake from 6:00 a.m. February 19 to 6:00 a.m. February 28, 2016. The volunteer day, February 20, for this area yielded 874 derlict traps collected by volunteers. Work in this area continued during the closure period and an additional 320 were removed by workers for the Barataria-Terrebonne National Estuary Program and LDWF employees. That brought the grand total of 1,194 abandonded traps removed from the upper Barataria basin.

The third closure area was in the Louisiana waters of Lake Sabine at the request of Texas Parks and Wildlife. The closure here coincided with the closure in Texas and took place from 6:00 a.m. February 19 to 6:00 a.m. February 28, 2016. There was no directed cleanup effort for Louisiana in this area. The closure was done to assist TPW with their closure and to avoid confusion with the shared waters of Lake Sabine.

Crab Legislation:

The Louisiana Wildlife and Fisheries Commission (LWFC) took action at the November 2015 meeting to suspend entry into the Louisiana Fisheries Forward Commercial Crab Gear Requirements program at the request of the Blue Crab Task Force (BCTF). The LWFC continued that suspension at their March 2016 meeting while the BCTF continues to work on legislation to increase the robustness of the LFF program. The BCTF also is working on legislation to increase license fees as well as tightening the restrictions on the grandfathering of people who can obtain a crab trap gear license.

Louisiana Blue Crab Landings:

Preliminary LDWF trip ticket for 2015 indicates that approximately 41.3 million pounds of blue crab have been landed in Louisiana with a dockside value of \$58.2 million.

Oyster Program: Oyster

Season

The table below contains a summary of the 2015-2016 oyster season as of March 16th, 2016 for major production areas.

Area	Season	Season	Seed Harvest	Market
	Opening	Closure	(bbls)	Harvest
				(sacks)
CSA-1N	Oct. 19	Dec. 7 (full)	75,265	79,586
CSA-1S	Oct. 19	Dec. 11 (seed)	11,628,	7,323
Hackberry	Oct. 19	Nov. 9 (full)	9,359	2,038
Bay				
Lake Chien	Oct. 19	Nov. 30 (full)	0	760
Sister Lake	Oct. 19	Nov. 13 (full)	38,308	48,522
CSA-6	Sept. 9	Open	20	175
Calcasieu	Nov. 1	Repeated-	0	16,288
Lake		DHH		
		Total:	134,580	154,692

Stock Assessment

Sampling for the 2016 oyster stock assessment is scheduled for July 2016.

Cultch Plants

The three cultch plants in Calcasieu Lake appear to have been successful. October 2015 dredge samples on the Commissary Point and West Cove plants are showing over 100 spat and 50 seed oysters per dredge, with the Lambert's plant slightly less productive. No cultch plants are scheduled for 2016.

Remote setting

Construction continues on the Oyster Remote Setting Program (RSP) facility in Buras, construction delays have postponed the anticipated completion date to May 2015. Pumps, shell washer, and other equipment expected to be purchased and installed by June 2016. It is anticipated to be operational and producing large volumes of spat-on-shell by September 2016, as typical low spring/summer salinities on site may impede production.

Finfish Program:

LDWF conducts biological monitoring statewide in the coastal, nearshore, and offshore areas of Louisiana for finfish.

On September 8, 2015, LDWF closed state waters to the recreational harvest of red snapper. On November 20, 2015, LDWF re-opened state waters to the recreational harvest of red snapper.

At its December 3, 2015 meeting, the Louisiana Wildlife and Fisheries Commission (LWFC) passed a Notice of Intent to modify commercial large coastal shark harvest regulations. The proposed Notice of Intent increases the daily harvest and possession limit from 36 to the federal limit, currently 45 large coastal sharks. The Notice of Intent further allows the Secretary of the Department to modify the daily harvest limit within a range of 0-55 if notified by NMFS that the daily commercial harvest limit has been modified. Public comment was taken on the Notice of Intent until March 3, 2016. In a related action, the LWFC passed a Declaration of emergency to increase the daily harvest and possession limit of commercially harvested large coastal sharks to the federal limit for the 2016 season.

On January 1, 2016, the LDWF closed state waters to the recreational harvest of red snapper.

On January 7, 2016, the LDWF closed state waters to the commercial harvest of king mackerel.

At its January 7, 2016 meeting, the LWFC set the season for the commercial harvest of king mackerel in state waters to begin on July 1, 2016.

On January 8, 2016, the LDWF opened state waters to the recreational harvest of red snapper.

The annual stock assessment for striped mullet in Louisiana waters was presented to the LWFC at its February 4, 2016 meeting. The stock is neither overfished nor is undergoing overfishing.

At its February 4, 2016 meeting the LWFC passed a Notice of Intent to modify recreational and commercial harvest regulations for greater amberjack. The Notice of Intent would increase

recreational size limits to 34 inches fork length and decrease commercial trip limits to 1,500 pounds whole weight. Comments are being accepted on the proposed Notice of Intent until April 7, 2016.

At its February 4, 2016 meeting the LWFC passed a resolution to clarify the effects of the extension of the state water boundary from three to nine nautical miles for reef fish management purposes, as established by the 2016 Consolidated Appropriations Act. The resolution states that fishing gear used by the reef fish fishermen in the commercial and recreational sectors will not change within these new boundary waters. The fishermen of Louisiana will have the benefit of Louisiana's reef fish management to 9 nautical miles, but there will be no change to the method of take or gear restrictions.

At its March 3, 2016 meeting, the LWFC passed a Notice of Intent, per Act 205 of the 2015 Louisiana Regular Legislative Session which provided the LWFC with this authority. The proposed new management benchmarks for black drum, sheepshead, and southern flounder would be based upon sustainable biomass and sustainable fishing mortality rates as demonstrated by the stocks history in the most recent assessment of that stock. Comments on the Notice of Intent will be taken until May 5, 2016.

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 2 new structures. There are 41 structures that are permitted for deployment as permanent artificial reefs. Permitting of an additional 23 structures is currently underway. Multibeam surveying of the program's offshore reefs has been completed and is available on the program's website.

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 completed two inshore reef enhancements at Independence Island and Redfish Point. These reefs were enhanced with over 10,000 tons of limestone. Furthermore, permits were submitted for a new inshore reef site near the south shore of Lake Pontchartrain in conjunction with a planned fishing pier. Proposed nearshore planning areas, to facilitate the creation of additional nearshore reefs, were presented to user groups in order to solicit feedback to guide future actions.

Boating and Non-Boating Access Projects

There are currently two boating access projects under construction and four boating access projects in the planning and design phase. One fishing access project is in the planning and design phase.

Boating Access Projects - Construction Phase

- Bonnabel Boat Launch Construction is currently underway to renovate the existing four land boat ramp and mooring piers. The project is expected to be complete this spring and will provide improved boating access on the south shore of Lake Pontchartrain.
- Port O'Bistineau Landing Construction is currently underway to extend the existing boat ramp by 60 feet to provide convenient access to Lake Bistineau during times of low water

levels. The project also includes the addition of handicapped accessible restrooms, a mooring pier, shoreline seawall and improved parking areas. Recent flood events have delayed construction activities.

Boating Access Projects – Planning Phase

- Forsythe Point Public Boat Ramp This project is currently in the design phase. The project includes replacement of existing floating dock and gangway, installation of pavilion with fish cleaning stations and an improved parking area. These improvements will provide boaters secure access to the Ouachita River near the City of Monroe.
- West End-Breakwater Drive Boat Launch This project is currently in the design phase. The project includes renovating the existing two lane boat ramp and parking area and will provide improved boating access on the south shore of Lake Pontchartrain.
- Slidell Municipal Marina, Boating Infrastructure Grant Program (BIG P), Tier II This project is currently in the design phase and includes the renovation of existing bulkhead, construction of floating docks and shelter and the addition of pedestals to supply electricity and water to transient boaters. This project is designed to provide accommodations for transient boaters within the City of Slidell.
- Venice Marina Fuel Pumps and Pedestal Improvements, Boating Infrastructure Grant Program (BIG P), Tier I – This project is currently in the grant approval phase and includes the renovation of existing fuel pumps and electrical upgrades and addition of water supply at existing pedestals. This project is designed to provide accommodations for transient boaters traveling in the Gulf of Mexico.

Fishing Access Projects - Design Phase

St. Tammany Fishing Pier Phase II – This project is currently in the design phase and the designs have been approved for bid. The project includes additional wooden crossovers connecting two pier structures, construction of restrooms, pavilions, benches, lighting and fish cleaning stations. This project is designed to provide fishing access opportunities on the eastern shore of Lake Pontchartrain.

Commercial Seafood Programs

Professionalism:

From October 2015 to March 2016, Louisiana Department of Wildlife and Fisheries and Louisiana SeaGrant continued to execute Phase II of Louisiana Fisheries Forward; mainly, the production and post-production of the training videos as noted below.

Phase I training videos are available on http://lafisheriesforward.org.

Phase II training videos are (not available – in post-production):

Best Practices for Oyster Fisherman Best Practices for Shrimp Fisherman Best Practices for Finfish Fisherman Fisheries Management and the Regulatory Process In early March 2016, the Louisiana Fisheries Forward Summit was held in Kenner, Louisiana. Attended by approximately 350 participants, the 1-day summit offered comprehensive education and training for the commercial fishing industry through informative presentations and materials, as well as a 41 booth trade show and an array of hands-on workshops. Additionally, the summit was host to 6 universities/colleges, 12 academic/scientific student posters, 8 state agencies and numerous Louisiana chefs. The 2016 Louisiana Fisheries Forward Summit news story is available on: https://www.youtube.com/watch?v=RLQPyYwFtTo.

By June 2016, Phase III of Louisiana Fisheries Forward should be underway. Within phase III, videos may be produced with corresponding fact sheets, several hands-on workshops will be offered to include new and trending topics and the Louisiana Fisheries Forward Refrigeration Demo Unit will travel the state, a 6,500 lb. unit that consists of a brine freezer, plate freezer and chilled water system. Additionally, within phase III, training models may be developed and launched for the commercial oyster and crab fisheries.

Sustainability:

The Louisiana blue crab fishery will conduct its fourth and final Marine Stewardship Council sustainability audit in April 2016. LDWF will provide additional evidence on the sustainability of the fishery and the agency's responsible management practices to close out remaining conditions, including data on fishery bycatch.

The Office of Fisheries has been developing a Gulf-centric sustainability certification system in partnership with the Audubon Nature Institute. The Audubon standard was recognized in fall 2015 by an ISO-affiliated body. The blue crab and oyster fisheries are currently undergoing certification assessment.

LDWF is directly engaging the United Nations FAO and other regional and international partners to develop best management practices for small-scale, warm-water coastal fisheries. This work was presented to the United Nations FAO in the June 2015 and February 2016.

In May 2015, LDWF closed out a five-year Sustainable Fisheries Partnership fishery improvement plan for the shrimp fishery.

At the same time, LDWF participated in discussions about the shrimp fishery with local, regional, and national stakeholders to develop a new marine advancement plan under Audubon leadership. In January 2016, new sustainability pre-assessments were conducted according to the MSC and Audubon certification standards. In February 2016, local stakeholders convened to begin the new plan.

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 June 9, LDWF re-opened the last portion of closed waters due to oiling from the 2010 Deepwater Horizon oil spill. The last closed area, a 100-yard buffer from any shoreline in a portion of the upper Barataria Basin centered near Bay Jimmy and Bay Batiste, is now open.

News releases announcing our opening with a map may be viewed at: http://www.wlf.louisiana.gov/news/39225

Aquatic Plant Control

Invasive aquatic weeds continue to threaten access and recreational activities throughout Louisiana. Surveys conducted in October 2015 revealed an estimated 286,773 acres of nuisance aquatic plant coverage. That total was mostly composed of water hyacinth (81,361 acres) and giant salvinia (57,877 acres). In 2015, LDWF applied EPA-approved herbicides to 52,157 acres of nuisance vegetation across the state. The majority of plant control efforts focused on water hyacinth and giant salvinia, with 23,026 and 18,076 acres being treated that year, respectively. A major area of focus was the Terrebonne Basin which suffers from a chronic water hyacinth infestation. Approximately 11,294 acres of hyacinth in the Terrebonne marsh were treated by LDWF in 2015.

Winter temperatures and isolated flood events continue to be major factors in determining the severity of aquatic weed impacts, especially giant salvinia, in Louisiana. The winter of 20152016 was mild and short, especially in the coastal areas of the state. Effects of the cooler temperatures on aquatic weeds are expected to be minimal and short lived. However, major flooding in north Louisiana experienced in early March 2016 may provide some additional plant control. Several impoundments experienced record high water levels which should serve to flush giant salvinia into areas where it can be treated, or even out of the lakes. As the high waters recede, floating aquatic plants should be stranded on the banks of these impoundments, similar to the effect of drawdowns that are conducted for nuisance plant control.

Mississippi Department of Marine Resources (MDMR) Activity Report: September 1, 2015 – January 31, 2016 Gulf States Marine Fisheries Commission (GSMFC) 66th Annual Spring Meeting - San Antonio, Texas March 14 – March 18, 2016

Shrimp and Crab Bureau

Mississippi territorial waters north of the Intracoastal Waterway closed to shrimping at 12:00 a.m. on January 1, 2016. Shrimping will remain open south of the Inter-Coastal Waterway until April 30, 2016. Preliminary reports for 2015 show 9.1 million pounds of shrimp (all species head-on) landed in Mississippi with a dockside value of \$14.25 million. Shrimp landings increased from the 2014 season (7.8 million lbs.); however, value continues to drop due to the increase in foreign imports saturating the market. Preliminary Blue Crab landings for 2015 were \$16,000 pounds, an increase from the 2014 season (580,000 lbs.) with a dockside value of \$1.24 million.

MDMR continues to monitor derelict crab traps in coastal areas and utilizing staff effort, removed 78 derelict traps in 2015. Over 19,000 derelict traps have been removed and recycled through commercial fishermen and volunteers since 1999. There are plans to have a cleanup involving Mississippi resident commercial crab fishermen in 2016 applying funds from the 2011 NOAA Bonnet Carré Fisheries Disaster Grant.

Long term fishery independent trawl sampling continued in conjunction with the NOAA Project "Monitoring and Assessment of Mississippi's Interjurisdictional Marine Resources."

Cooperation with the Gulf Coast Research Laboratory (GCRL) on commercial and recreational Blue Crab Catch per Unit Effort projects is also ongoing. Bureau personnel 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 Camps and vessels 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. Staff also monitored offshore reefs by setting fish traps. Juvenile fish on these reefs were measured, tagged and released at the site of capture. During December 2015 and January 2016, the ARB also participated in a joint sampling effort to collect water samples and hydrological data in the Mississippi sound during the Harmful Algae Bloom event (HAB).

In addition to conducting biological sampling, the ARB planned to secure and deploy more structure. During December and January the ARB secured approximately 700 concrete culverts. This material will be stockpiled at the Gulfport staging site for future offshore deployments.

Artificial Reef Bureau members also used side scan equipment to map oyster beds in Harrison County. In November, ARB personnel used side scan equipment to assist Marine Patrol. In December, the mapping of the offshore Fish Havens for the National Fish and Wildlife Foundation (NFWF) project was completed. The ARB contributed to multiple outreach and education events. In October, personnel took a school group to Fish Haven three to release a surface drifter as part of NOAA's Global Drifter Program. In November, the ARB attended the Gulf States Marine Fisheries Commission meeting in St. Augustine, Florida. In December, staff assisted the Institute for Marine Mammal Studies with a juvenile Bottle Nose Dolphin rescue.

Lastly, the ARB is currently preparing for and working on several projects. The Coastal Conservation Association and the ARB are collaborating together to deploy structure at Cat Island. ARB personnel are also negotiating and organizing the Federal Emergency Management Agency project to restore the Keys to pre-hurricane Isaac conditions. The ARB will also build and deploy small artificial habitats for juvenile reef fish for the Coastal Impact Assistance Program. In addition to future deployments, the ARB is working on monitoring projects. These projects include the Gulf Artificial Reef Monitoring and Assessment Program, the NFWF project, and the Mississippi Bight Lionfish Response project.

Finfish Bureau

The Finfish Bureau (FB) continued to oversee the Marine Recreational Information Program. Assignments from March through August were obtained, reviewed and processed before being sent to the GSMFC office. A total of 166 assignments and 543 surveys were completed 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 design. The for-hire vessel frame was evaluated and edited to better reflect our most recent and updated state license file. This will allow FB staff to develop a more comprehensive and accurate active vessel frame to more precisely estimate for-hire effort.

Long term fishery independent sampling continued in conjunction with the NOAA Project "Monitoring and Assessment of Mississippi's Interjurisdictional Marine Resources." With cooperation with the GCRL a total of 211 otoliths were collected September 1, 2015 through January 31, 2016. 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 Gulf States Marine Fisheries Commission (GSMFC).

Otolith reference sets including: Southern Flounder, Red Drum, Spotted Seatrout, Striped Mullet, Red Snapper, Gulf Menhaden, and Sheepshead have been read and sent to their prospective locations. Recreational collected otoliths have been extracted and mounted which are currently being processed in accordance to the target list provided by GSMFC.

FB staff continued to target Red Drum in Mississippi coastal waters as part of an ongoing research project aimed at filling in age and size information gaps of Red Drum in Mississippi waters. The Red Drum project began in February 2014 and targeted fish of sizes of 20-30 inches, however Red Drum collected from past and current monitoring projects have not captured this size range. 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 deployed 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 opened in Mississippi state waters beginning July 16, 2015 and closed October 31, 2015. Anglers targeting Red Snapper were required to report trip details via a reporting program called "Tailsnscales" which can be completed by a website, phone App, or call in system. 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 validate reported trips, as well as, collect lengths and weights of Red Snapper being landed. The results from this reporting will allow MDMR to determine effort levels, harvest levels, landing sites, and additional metrics for future stock assessments.

One recreational fishing record for conventional and fly tackle was accepted for state records between September 1, 2015 and January 31, 2016.

Angler Catch Date Common Name Scientific Name Weight (lbs, oz) TL (in) FL (in) Tackle

John J. Bullock 7/11/2015 Gray Snapper *Lutjanus griseus* 15 7.79 29.5 29.0 Conventional

Shellfish Bureau

The Shellfish Bureau opened their 2016 Oyster Season with a special season for Mississippi dredgers on November 3, 2015 and ran through November 9, 2015. During this time, dredgers were allowed an unlimited sack limit, under the terms that all cultch materials would be submitted to shellfish staff for data collection and analysis. Only a single fisherman participated in this event. The regular 2016 Mississippi Oyster Season officially opened at legal sunrise on November 10, 2015 for all commercial and recreational oyster harvesters. The sack limit was set at 10 for commercial dredgers and seven for commercial tongers.

In December, the Shellfish Bureau responded to a rare red tide event that was observed in coastal waters of Mississippi. As a result, the MDMR ordered the temporary close of the 2016 Oyster Season on December 23, 2015. The Mississippi Commission on Marine Resources held a special meeting on Wednesday December 23 2015 to provide an update on the HAB and Mississippi's oyster season. The last day the season was open for harvest was December 11, 2015. To date, 13,530 sacks of oysters have been harvested from Area I and II during the FY 2016 harvest season. In response to the HAB event, MDMR's HAB specialist completed a total of 75 *Karenia brevis* cell counts, 91 plankton net tows and multiple surface grab samples. Oyster meat samples were also collected for ELISA testing in preparation for the reopening of the 2016 harvest season. The 2016 Mississippi Oyster Season is scheduled to open when the current management criteria indicate applicable conditions.

In January, the MDMR officially began their oyster transplant project in response to the opening of the Bonnet Carré Spillway moving oysters from Area IB to the following areas: 2E, 2F and a

previously chosen location within Area 5. Approximately 39,264 sacks were successfully transplanted within the three day duration of the project. An estimated 95 Mississippi oyster fishermen participated in the project, in addition to the support of state personnel from various offices including Marine Patrol, Administration, Artificial Reef and the Grand Bay NEER.

The Shellfish Bureau deployed datasondes in the Western Mississippi Sound to monitor hydrology for the 2016 Bonnet Carré spillway opening, in addition to collecting bacteriological water samples and environmental parameters. The collection of data from these datasondes has been established and will continue until further notice. One minute dredge tows on all major reefs in the Western Sound were also performed to establish a baseline for monitoring the effects of the Bonnet Carré Spillway's opening.

The U.S. Army Corps of Engineers completed closing the Bonnet Carré Spillway on Monday February 1, 2016. The spillway was open for a total of three weeks since its opening to create an outlet from the cresting Mississippi River. The river rose to 16.5 feet at the Carrollton gauge on January 25, 2016. In all, 210 of the spillway's 350 bays were opened, allowing nearly 200,000 feet per second of water to flow into Lake Pontchartrain.

The MDMR was found and reported to be in compliance with all FDA shellfish growing water and *Vibrio vulnificus* management plans criteria for the FY15 season. Shellfish management personnel attended the 2016 Interstate Shellfish Sanitation (ISSC) Conference in Salt Lake City, Utah.

Seafood Technology Bureau

The Seafood Technology Bureau (STB) certified 10 new seafood dealers. The required bi-annual water quality sampling for seafood processing facilities for September was completed with a total of 55 samples taken. Due to noncompliance during required quarterly inspections, one certification was suspended. Due to improper identification, STB staff confiscated and destroyed 13 sacks of oysters.

STB announced a recall of Korean oysters; no Mississippi companies were involved in this recall. STB created a timeline for the recall and prepared a final report. In response to HAB events, STB staff informed the oyster industry of a voluntary embargo of oysters harvested December 11, 2015. STB and other fisheries Bureaus worked with FDA officials who ultimately determined that no recall of product would be necessary; STB staff informed the industry of the decision.

In an effort to maintain customer service to the growing population of certified dealers the STB mailed out a processor survey to update facility information for all processors. STB also announced two Hazard Analysis Critical Control Point (HACCP) workshops and two Sanitation Control Procedures (SCP) workshops offered free of charge for Mississippi residents. The HACCP/SCP workshops were made possible through a grant from the Mississippi Tidelands Trust Fund Program FY 2009 which is administered by the Mississippi Secretary of State's Office and the MDMR.

STB staff provided technical assistance to the MDMR licensing office; additionally, providing consultation, education and assistance to all new seafood dealers. Staff assisted the Mississippi Department of Health in conducting regulatory inspections on shrimp and crab processors' HACCP program implementation. Staff provided technical assistance to several retailers assisting

with newly implemented FDA retail HACCP regulations. STB staff members assisted in the oyster relay instituted by the MDMR in response to the Bonnet Carre Spillway opening.

STB completed primary processor HACCP plan and dealer records review for the *Vibrio vulnificus* FDA program element evaluation. FDA evaluators included FDA Southeast Region Shellfish Specialist John Veazey and FDA Southeast Region Shellfish Specialist Earnest "Buddy" Levins. The Mississippi *Vibrio* Risk Management Program was found in conformity with National Shellfish Sanitation Program (NSSP) requirements.

Staff attended the annual ISSC in October. Staff member serves on four committees pertaining to; education, plant sanitation, traceability, and time and temperature handling of oysters.

STB in collaboration with the Mississippi State University and FDA conducted two HACCP/SCP workshops. A total of 34 students attended HACCP and 22 attended SCP. STB held four separate training sessions on *Vibrio vulnificus* for Marine Patrol officers.

MDMR staff participated in the Jackson County Fair to disseminate educational information and answer questions from the public for a week.

Marine Patrol

Marine Patrol Regular Patrol:

Marine Patrol officers spent 20,169 man hours and 3,474.5 vessel hours conducting checks on 14,633 persons during this time period. A total of 323 citations were issued for various violations. In addition, implemented in June 2015, the courtesy citation program resulted in 218 courtesy citations being issued, giving the violator a chance to correct the violation before being subjected to fines and penalties through the court system.

Training:

Marine Patrol attended several training classes and seminars during this time including, but not limited to, Dive Training, Wetlands Violations Training, Basic Computer Training for Officers, Tactical Combat Casualty Care, Crime Lab Evidence Packing, Simulation Training-Felony Stop and Approach, Firearms Qualifications, National Crime Information Center in-house training and Blood borne Pathogens/Vibrio/Communicable Disease Awareness.

Outreach:

Marine Patrol outreach activities included presentations for the following Safety days: Old Navy Safety Day, MDMR Lunch and Learn-Boating Safety, Biloxi PD Safety Day, JZ94.5 Kids' Safety Day, and Pass Road Elementary Safety Day. They also gave presentations at Jackson County's Conservation Day, MS Gulf Coast Coliseum Career Day and Pass Rd. Elementary Pathways to Possibilities.

Alabama State Report to the Gulf States Marine Fisheries Commission Spring 2016 Fisheries Section

Construction activities funded through the Coastal Impact Assistance Program (CIAP) will begin in April of 2016 to renovate property in south Mobile County to serve as an additional oyster management station, ADA compliant kayak launch and fishing pier, and public boat launch site.

An oyster management station was utilized to monitor the commercial harvest of oysters from public reefs on November 16, 2015. The Alabama Department of Public Health closed all of Alabama waters to shellfish harvest on November 17, 2015 due to red tide blooms. To ensure public safety, all harvested oysters were reclaimed by Alabama Marine Resources Division (AMRD) and placed back on the public reefs. Elevated cell counts persisted in state waters until January 4, 2016. Tissue samples were collected and sent to a lab per reopening procedures; however, prolonged elevated river stages have kept all reefs closed to harvest. The public reef in Alabama opened on February 22, 2016

AMRD completed the first year of National Fish and Wildlife Foundation (NFWF) projects and have proceeded with year two of the projects. A red snapper tagging project was added in year two to provide an alternate estimate of fishing pressure on Alabama's reef permit zone.

During the NFWF offshore reef project surveys were completed at 100 vertical line stations, 54 bottom longline stations and 53 trawl stations from May through October out to the 90-meter contour. Concurrent side scan work surveyed 89 1.5 square kilometer grids. Work was conducted within and outside Alabama's reef permit zone. Over 1,000 gut samples were obtained and processed from data poor species and lionfish. Otoliths are currently being processed for age determination.

Ninety-three red drum were tagged with acoustic transmitters and released throughout the Mobile Bay system using NFWF funds. Movements have been detected from 49 of the fish and two were reported as harvested. Five hundred red drum spawned at AMRD's Claude-Peteet Mariculture Center (CPMC) in Gulf Shores will be tagged using passive and/or acoustic tags once obtaining 14-15 inches in total length. Florida pompano were collected and quarantined for future use as brood stock and efforts to spawn Southern flounder are under way. AMRD staff released two size classes of red drum and Florida pompano reared at CPMC.

AMRD biologists have participated in NFWF funded observer trips of commercial blue crab harvesting vessels working in upper Mobile Bay, Perdido Bay and Wolf Bay systems. During the sampling trips, crabbers ran a total of 1,812 crab traps of which AMRD sampled 807 traps (44.5) and 4,242 crabs were measured and sexed.

AMRD is currently maintaining five continuous water quality stations to provide benthic conditions in the deeper areas of mid-Mobile Bay using NFWF funds. Results have indicated hypoxic conditions exist from several hours to several days during summer months. NFWF projects related to baitfish, skimmer trawl and at-sea data collections were delayed by logistical and/or cooperative limitations.

NFWF funded a comparative analysis of state to federal red snapper stock assessment information to determine the feasibility of conducting an assessment of red snapper off Alabama from fishery-independent and dependent data streams. Results of the Alabama catch-at-age assessment were comparable with the National Marine Fisheries Service results for the Eastern Gulf of Mexico.

AMRD has successfully scanned and processed all inshore artificial reef sites located in Perdido Bay, Mobile Bay, Bon Secour Bay, Weeks Bay, and Mississippi Sound using NFWF and CIAP funding. These sites, comprising a total of 30 existing reefs, were side scanned, geo-referenced images were obtained, and images were compiled into GIS database. Additionally, four inshore sites proposed for reef development were scanned and processed. Images from the existing reef sites were used to develop plans for a-reef restoration projects recently bid by AMRD. Once the projects are completed the 4 sites will be rescanned to evaluate restoration activities and monitored periodically to detect change. AMRD scanned approximately four square nautical miles of nearshore water bottoms south of Dauphin Island and approximately 1.5 square nautical miles of nearshore water bottoms south of Baldwin County for possible new artificial reef areas.

AMRD and NOAA MRIP staff met in December of 2015 to discuss the mandatory recreational red snapper reporting program as part of a certification process for this method of data collection. Feedback from the meeting included using a different estimator to account to improve estimation of statistical precision, simplification of the Snapper Check app and field validation sheet, increasing outreach efforts, and refining the validation assignment draw process. AMRD staff will continue communication with MRIP staff with plans to certify the program in 2016.

The SEAMAP fall trawl was completed as scheduled. SEAMAP is wrapping up a five-year funding cycle. AMRD has submitted a budget for the next five-year grant cycle and is awaiting the award of funds. Sampling activities for 2016 are scheduled to begin in May.

The Biological Sampling Program, funded by the Gulf States Marine Fisheries Commission, was restarted in 2015 and will continue into 2016. From October 1, 2015 through January 31, 2016, a total of 90 otoliths with three additional measurements from recreationally caught fish and 387 otoliths with three additional measurements from commercially caught fish were collected by AMRD staff. Some targets for primary species such as gray triggerfish and greater amberjack may not be met due to fishery closures, and recreational catches of southern flounder have not been readily available due to reduced abundance of this species.

From October 1, 2015 through January 31, 2016, a total of 459 Access-Point Angler Intercept Survey interviews were collected in all modes combined. During this period, samplers completed a total of 165 assignments. One new sampler in Mobile County was hired and trained, and one sampler from Baldwin County retired. Throughout this time period, samplers received fish identification training and testing, ongoing survey training and malfunctioning/missing field equipment was replaced. Training for new "mixed-mode" sampling which began in January 2016, and for the 2016 Socio-Economic Add-On Survey was given to all samplers.

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.

Limestone aggregate was deployed at two inshore reef sites in Bon Secour Bay during January 2016. A total of 2,750 tons of #4 limestone aggregate were deployed at Shellbank Reef and Bayou Cour Reef received 3,998 tons of #4 limestone aggregate. A total of 99 limestone pyramid reefs were deployed throughout Alabama's offshore permitted reef zones in 2015 and an additional 51 pyramid reefs will be deployed by March 2016. Funding for these projects was provided through the Coastal Impact and Assistance Program (CIAP).

Four additional inshore reefs are scheduled to be created in 2016. Reefs within Pelican Bay and the Mississippi Sound will be constructed with anchored concrete/limestone modules that extend upwards to approximately +4' above the seabed. A reef near Point Clear and one in lower Mobile Bay will be created with 3"- 6" limestone gabion. A combination of NFWF, Sportfish Restoration Funds, and donation funds will be used to complete the projects.

AMRD provided educational information on marine resources, signed up participants for the Adopt-a-Reef program, and information related to current laws and regulations at the annual Mobile Boat Show.

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 <u>www.eatalabamaseafood.com</u> 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 Director Chris Blankenship.

Enforcement Section

From October 1, 2015 to February 1, 2016, AMRD enforcement officers conducted 1,208 commercial fishermen intercepts, 4,503 recreational fishermen intercepts, 4,435 patrol hours, and 2,140 vessel boardings.

AMRD officers continue to participate in joint investigations with NOAA/OLE regarding Gulf of Mexico reef fish. Additionally, they are conducting joint patrols with the uniformed NOAA Enforcement Officer.

AMRD Enforcement entered into the 14th Joint Enforcement Agreement with NOAA/OLE. The JEA provides equipment and funding for officers to enforce federal laws and regulations. One of the unique aspects of this contract is creation of a canine program. Two Eco-dogs were purchased and trained to assist officers in locating fish and fish filets that have been hidden on vessels. Auburn University provided training for the dogs and handlers through the Canine Performance Sciences Program. There is a team assigned to each of the two counties that border the saltwater jurisdiction. CEO Lena Phillips and K9 Morgan, an English Springer Spaniel, are located in Mobile County.

CEO Chris Cox and K9 Gaines, an English Working Cocker Spaniel, are located in Baldwin County.

AMRD officers continued their partnership with Bryant High School in Bayou La Batre and Baker High School in Mobile–in their Career Academy programs. The programs are designed to introduce students to different career opportunities in the marine community.

GULF & SOUTH ATLANTIC REGIONAL PANEL ON AQUATIC INVASIVE SPECIES MINUTES Tuesday, April 5, 2016 & Wednesday, April 6, 2016 Orange Beach, AL

On Tuesday, April 5, 2016 Chairman **Kristen Sommers** 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 (via conference call) David Britton, US FWS, Arlington, TX Rick Burris, MS DMR, Biloxi, MS Paul Carangelo, Port Authority, Corpus Christi, TX Rob Emens, NC DEQ, Raleigh, NC Lisa Gonzalez, HARC, The Woodlands, TX V Chuck Jacoby, Indian River Lagoon National Estuary Program, Palatka, FL Peter Kingsley-Smith, SC DNR, Charleston, SC Herb Kumpf, At-Large Member, Stuart, FL (via conference call) Jon Lane, USACE, Jacksonville, FL Adriana Leiva, TPWD, Corpus Christi, TX Robert McMahon, UT Arlington, Arlington, TX Roberto Mendoza, Univ. Of Nuevo Leon, Mexico Craig Newton, AL DCNR, Dauphin Island, AL Matt Neilson, USGS, Gainesville, FL Matt Phillips, FWC, Tallahassee, FL Bobby Reed, LDWF, Lake Charles, LA (via conference call) Dennis Riecke, MS DWFP, Jackson, MS Kristen Sommers, FL FWC, Tallahassee, FL Lindsey Staszak, NC DENR-DMF, Elizabeth City, NC Timothy Strakosh, USFWS, Atlanta, GA John Teem, FL DOA, Tallahassee, FL Anna Toline, NPS, Fort Collins, CO

Staff

Ali Ryan, GSMFC, Ocean Springs, MS Joe Ferrer, GSMFC, Ocean Springs, MS

Others

Mark Albins, USA, Dauphin Island, AL Nathan Aycock, MDWFP, Rosedale, MS Jacoby Carter, USGS, Lafayette, LA (via conference call) Dan Thayer, USGS, Gainesville, FL William Wayman, USFWS, Warm Springs, GA

Public Comment

Chairman **Sommers** provided the opportunity for public comment. No public comments were received.

Adoption of Agenda

After two minor changes, a motion to adopt the agenda was made, and passed unanimously.

Approval of Minutes

The minutes of the October 6-7, 2015 meeting in Myrtle Beach, S.C. were presented for approval.

A motion was made to approve the minutes. The motion was seconded, and the motion passed.

Invasive Pacific Lionfish: A Threat to Northeastern Gulf of Mexico Reef Fish Communities?

Mark Albins gave a PowerPoint Presentation entitled "Invasive Pacific Red Lionfish: A Threat to Northern Gulf of Mexico Reef Fish Communities?" The reasons for concern for lionfish include: their high growth rates, rapid spread, deadly predatory freshwater fish invasions, potential large invasion range, and few natural controls of them. They are reproductively mature at less than one year of age, and females can produce two million eggs a year. There is a 67% population growth rate per year.

Local mitigation can be done through focused removals. The Biscayne National Park Lionfish Removal Program was initiated in 2010, and includes all patch reefs, artificial reefs, continuous reefs, and channels in the Biscayne National Park. There have been over 1,400 removal dives. Over 4,000 lionfish have been removed, but the BNPLRP has not kept up with the lionfish invasion in some habitats.

To effectively reduce local lionfish populations and mitigate their effects in a two-year period, bi-monthly monitoring of lionfish and native fishes would need to be done in the first year. In year two, removal treatments would be done, and the change to the populations monitored.

Effective removal strategies include involvement by the public through tournaments and derbies, and commercial fishing by creating stakeholders with a vested interest. Focused, ongoing, intensive removals by managers is needed.

<u>Regional Lionfish Abundance, Habitat Use, and Impact Utilizing an Existing Fisheries</u> <u>Monitoring Survey</u>

Kingsley-Smith gave a PowerPoint Presentation entitled "Regional Lionfish Abundance, Habitat Use, and Impact Utilizing an Existing Fisheries Monitoring Survey". The Southeast Reef Fish Survey (SERFS) is a long-term regional fisheries-independent monitoring program. The main goal is to monitor long-term changes in relative abundance, age composition, and length frequencies of reef fish found on hard bottom habitats.

Sampling locations are located from Cape Hatteras, NC to St. Lucie Inlet, FL, with known live bottom, ranging from 9m to 109m in depth. Video cameras were mounted on chevron traps, and 20 minutes of video was read. Forty-one frames per video were read. Habitat was characterized, and the total lionfish seen in the forty-one frames was determined, along with the most lionfish seen in any frame.

The objectives of the lionfish data is to develop an index of abundance using video data, and to determine their effects on native fish assemblages. A zero-inflated negative binomial model was used to determine the relative abundance of lionfish. The best model was chosen using Bayesian Information Criterion (BIC) values, and this model was used to determine a relative abundance index. The video data for federally managed species showed the presence of mostly large species, such as snapper, grouper, and jacks. There was no significant differences between the presence/absence of lionfish in the video alone. The chevron trap data showed smaller, forage species. Few lionfish were caught.

This was the first large-scale study of lionfish abundance and distribution in this region. There is an increase in the number of sites with lionfish. Based on hybrid video/trap data, lionfish presence correlates with species assemblage differences on a region-wide level. Potentially susceptible species have been identified to guide future monitoring efforts to look for lionfish abundance-related impacts.

Update on the Alabama Adopt-a-Reef Program

Newton gave a PowerPoint Presentation entitled "Alabama Adopt-a-Reef Program". The Mississippi Bight Lionfish Response Unit (MBLRU) was created in a partnership agreement with MS Department of Marine Resources, US Fish & Wildlife, Gulf Islands National Seashore, and AL Marine Resources Division. Funding was provided by the Gulf States Marine Fisheries Commission through two sub-awards.

Adopt-a-Reef Program information is on the AL Department of Conservation & Natural Resources Marine Resources Division "Outdoor Alabama" website. Participants are needed to identify, quantify, and remove items which could affect reef productivity. A Voluntary Reef Survey Form is available for people to fill out and submit to AMRD. Requested information includes: reef location, reef type, reef material, structural integrity, degree of debris fouling, and debris material description and if it was removed. Also, if lionfish were observed, number of lionfish, and percentage of site covered with lionfish. A report map is available on the site that shows reef information, locations, and number of lionfish reported.

Adopt-a-Reef T-shirts, visors, stickers, and brochures are available. Booths are set up at numerous outreach events.

Maculata Apple Snail Research along the Northern Gulf of Mexico Coast

Jacoby Carter provided a PowerPoint Presentation entitled "USGS Maculata Apple Snail Research along the Northern Gulf of Mexico Coast". Maculata apple snails demonstrate risk for rice agriculture and aquatic macrophytes in forested wetland systems. They are easy to detect, but hard to estimate their densities and even harder to control. Experimental lab data indicates that apple snails can better tolerate low temperatures than previously thought.

Biological control and chemical control experiments using tea tree extract and niclosamide were performed at USGS. Flooding was used to test its effect on egg masses. At the Jean Lafitte National Park Barataria Preserve, Van Dyke's Snail Traps were used, but discontinued due to by-catch issues, low capture rates, handling time, and cost. Snail telemetry was attempted, but only one transmitter has been deployed. The snail's location was checked every two weeks for six weeks, until the snail was found depredated. The distance between relocations varied between seven and 20 meters.

Currently, the only approved treatment is copper sulfate, but this will have only limited application. Other options are being explored. Recent discussions with the EPA indicate that the molluscide Metaldehyde has recently been approved for use in Hawaiian taro fields.

Currently, research is being done on population size, predation, movement, and impact at the Jean Lafitte National Park Barataria Preserve and study sites near Houma, LA. Experimental attempts to control egg mass survivorship is also being done.

<u>Distribution, Demographics, and Impacts of the Island Applesnail (Pomacea maculata) in</u> <u>South Carolina: Past, Present, and Future Research Efforts</u>

Kingsley-Smith gave a PowerPoint Presentation entitled "Distribution, Demographics, and Impacts of the Island Applesnail (*Pomacea maculata*) in South Carolina: Past, Present, and Future Research Efforts". The island applesnail is native to parts of South America, and was first reported in the U.S. in Florida in 2002. It is now found throughout much of the Gulf and South Atlantic region. It was first reported near Myrtle Beach, S.C. in 2008. There are currently three populations of applesnails in S.C.

Applesnails are agricultural pests. They consume a wide variety of aquatic vegetation, and compete with native snail species. They have higher rates of feeding and growth than most native freshwater snails. Females deposit at least one egg mass per week from April – September, and each egg mass contains over 200 eggs, each yielding 10-140 snails. Potential mechanisms for spread include storm-water pond connectivity, predators, new human introductions, and flooding.

There is a human health concern with applesnails. They can serve as an intermediate host for the rat lung worm parasite. Humans become infected through food containing third-stage (infective) larvae. This causes eosinophilic meningitis or eosinophilic enteritis.

To determine distribution, 100 ponds were randomly selected throughout coastal S.C. and surveyed for additional populations of applesnails outside of the three known areas, the seasonality of snail capture, and reproductive activity. The pond perimeters were surveyed for snails and egg masses, which were then counted. All snails were collected, and all accessible egg masses were destroyed. Water quality data (temperature and conductivity) was also collected. No new applesnail populations were found in the ponds. However, four other invasive freshwater snail species were found on Hilton Head Island.

In March 2016, an applesnail was collected from the Waccamaw River by SC Department of Natural Resources Diadromous Research Section.

New research is being done to determine the presence of *Angiostrongylus cantonensis* in applesnails collected in SC. Initial efforts focused on microscopy, but qPCR techniques are now being used to detect the parasite. Determination of snail sex ratios is also being researched. Reproductive maturity, size-at-age, and mark-recapture studies are also being discussed. Improvement in abilities to capture snails in ponds is needed.

Zebrafish: A Model System for Developing a Gene Drive to Eradicate Invasive Fish

Teem gave a PowerPoint Presentation entitled "Zebrafish as a Model System for Developing a Gene Drive to Eradicate Invasive Fish". There are benefits to gene drive development. It is species-specific; self-perpetuating; is feasible for most organisms that reproduce sexually; can be used to produce a "daughterless" eradication strategy; eradication is possible in large systems. There are also risks involved. Once started, it cannot be stopped; it cannot be limited geographically; it could endanger invasive species in their native range.

It must be determined if a gene drive can be set up in a fish to study the dynamics of the system; if the gene drive can be constructed as an inducible system to limit the environmental risk; and if a prototype for an inducible gene drive can be produced based upon the daughterless carp eradication strategy.

The gene drive fish is produced at twice the rate of normal males and females. Eventually the gene drive fish fills the carrying capacity and females go to zero. A single gene drive fish can cause the target population to go to extinction. Can the parameters be changed in some way to prevent extinction? Reducing the viability of the gene drive fish increases the time required for extinction, but does not prevent extinction. Reducing the viability of the gene drive fish are added. Would it be possible to stop the gene drive after a fixed number of generations? Future experiments would consist of shortening telomeres (chromosome ends) to see if it would stop the gene drive after a fixed number of generations. As repeating DNA units. The telomeres length is reduced by one unit at each cell division. As repeats are eliminated, viability is progressively reduced.

Long-term efforts include making telomerase conditionally expressed in zebrafish; determining the number of generations that fish can attain in the absence of telomerase; determining whether telomerase expression can be manipulated to control telomere length in a gene drive fish, allowing regulation of a gene drive.

The USFWS' Grass Carp Certification Program

Bill Wayman gave a PowerPoint Presentation entitled "National Triploid Grass Carp Inspection and Certification Program (NTGCICP) Overview". The USFWS offers a triploid grass carp inspection service for natural resource agencies in the U.S. and other countries to help them protect their aquatic habitats. The inspection program is to provide assurance to these agencies, and others concerned about protecting aquatic resources, that shipments of grass carp alleged to be all triploid do not, within the confidence limits of the inspection program, contain diploids.

A workshop was held in 2008 with USFWS inspectors and TGC producers and states. The objectives discussed were state regulations and issues; review of NTGCICP; Memorandum of Agreement (MOA) with TGC producers. Triploid grass carp producers want assurance that the NTGCICP would provide assistance to law enforcement and prosecute violators; set standards for states and shippers; eliminate dishonest producers.

USFWS will inspect and certify triploid grass carp, but only if the producer follows prescribed QA/QC. The program has standards for triploid inspectors, grass carp producers, collection of fees, penalties/fees for program non-conformance, and a checklist for inspectors and triploid grass carp producers.

The top five states for NTGCICP certified triploid grass carp distributions (in order) are Florida, Texas, Arizona, Ohio, and North Carolina.

An untested group of grass carp (90+% triploid) is harvested from a Production pond and transferred into a holding house. The triploid grass carp producer must individually test every grass carp, and remove all diploids prior to any USFWS inspection of that population. Untested grass carp are tranquilized and sized prior to initial blood testing at farm site. Each fish has a blood sample drawn. Each blood sample is placed into a separate accuvette of diluent in a coded accuvette tray. Particle sizing equipment is used to read reference standards. Coulter Counter displays graph of channelized grass carp blood standards. If a diploid fish is identified, the accuvette position on the tray is marked, and the identified diploid fish is removed. Tanks of producer-tested alleged 100% triploid grass carp must be maintained in strict compliance with national standards. A USFWS inspector checks fish and supervises the selection of 120 alleged 100% triploid grass carp to be inspected. The channelization of blood samples to verify the ploidy readings is then supervised, and if all fish pass inspection, the inspector issues certificates for shipments of "USFWS-Certified" triploid grass carp. Each certificate is numbered, and their signature is embossed on the original certificate that is also signed and dated by the producer. A copy is made for the producer and inspector. After all fish are loaded for shipment, the customer/hauler receives an invoice and the original embossed USFWS certificate for legal transport. The inspector formally contacts the receiving state's triploid grass carp coordinator. The certificate expires six calendar days from the date of inspection, and fish must enter the receiving state prior to expiration.

USFWS is in the process of developing a set of federal rules to oversee the NTGCICP. This will give the USFWS better legal standing when dealing with violators.
Update on the Efforts to Switch all States Over to Triploid Grass Carp

Riecke gave a PowerPoint Presentation entitled "Update on the Efforts to Switch all States Over to Triploid Grass Carp". The Asian Carp Working Group created the *Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States.* There are 131 recommendations. Recommendation 3.1.6.1 states that the USFWS should seek an independent scientific review and evaluation of the Triploid Grass Carp Inspection and Certification Program.

The Mississippi Interstate Cooperative Resource Association (MICRA) is working on some priority recommendations in the management plan, such as expanding the scope of the independent scientific review of the grass carp inspection program to cover legal use of diploid grass carp, producers, shippers, distributors, and federal and state law enforcement efforts to touch all aspects of the grass carp stocking industry. The USFWS hired MICRA as a contractor to produce a report. MICRA hired a private contractor to do the field work and produce a report. MICRA revised and submitted the report, with eight recommendations, to USFWS in February 2015.

MICRA hosted a meeting of diploid states in July 2015 in Colorado to present the grass carp program report, summarize current regulations, discuss identifying difficulties to have 100% triploid use, and to discuss strategies to address those difficulties. All of the diploid states are taking steps to eliminate the use of diploid grass carp for state activities.

Impacts of Asian Carp on Sport Fish Populations in Delta Lakes

Nathan Aycock gave a PowerPoint presentation entitled "Effects of Silver Carp Introductions on White Crappie and Largemouth Bass in Floodplain Lakes of the Yazoo River Basin, MS".

Crappie CPUE, growth rate, and weight decreased after a flood in 2011 in lakes where silver carp were introduced. Crappie CPUE increased in lakes where silver carp were not introduced. Weight increased or stayed the same.

Largemouth bass CPUE and weight decreased after a flood in 2011 in lakes where silver carp were introduced. Largemouth bass weight increased after flood in lakes where silver carp were not introduced. The CPUE was similar.

Silver carp introduction has negatively affected largemouth bass and crappie populations. Silver carp are highly efficient planktivores, and compete directly with juvenile bass and crappie for zooplankton. There is a high dietary overlap between silver carp and both gizzard shad and bluegill sunfish.

Future work includes finding better ways to estimate silver carp abundance, recording shad abundance, and to continue sampling lakes and monitoring trends. MDWFP is monitoring carp populations, researching the effects of carp, educating the public, working to stop further expansion, encouraging harvest, and working to establish markers.

Asian Carp Distribution in the Tenn-Tom Waterway

Riecke gave a PowerPoint Presentation entitled "Asian Carp Distribution on the Tennessee-Tombigbee Waterway, Mississippi". The first known silver carp was seen in Pickwick Lake in 2012 in Bear Creek. MDWFP was notified by commercial anglers in July of their catch. Catch rates have steadily increased, and distribution has widened to include most of the lake. Silver carp have been seen as a seasonal fishery from April through October in MS waters. Currently, laws in Alabama do not allow for commercial angling with the use of nets in their waters. Presumably, silver carp over-winter in Alabama.

In 2015, eDNA sampling was conducted in Bay Springs Lake and Lock E on the TTW and Bear Creek in Mississippi by USFWS and MDWFP personnel.

A telemetry project was initiated in 2015. The objectives are to determine if there is any evidence of the inter-basin transfer from the Tennessee River drainage into the Tombigbee River drainage via the Tenn-Tom waterway; determine the seasonal movements of silver carp in MS waters of Pickwick Lake; determine population size and structure. Sampling is being conducted with experimental gill nets, with 2-5 hour soak times. Electrofishing is periodically being conducted to determine presence of Young of Year (YOY) silver carp. Commercial anglers are also providing assistance when available. Each silver carp will be measured, weighed, implanted, jaw tagged, and released. Tracking will be done with the use of receivers and transmitters, and data will be analyzed. Currently, two other silver carp telemetry studies are being planned for Pickwick Lake, and will begin in 2016.

In the future, various barriers on the Tenn-Tom will be potentially used as pilot studies. Effects of silver carp on sportfish populations will be monitored. Other funding sources to increase telemetry will be determined, and there will be further collaborations with neighboring agencies and other government entities.

Update on the USGS Invasive Plant Program

Dan Thayer gave a PowerPoint Presentation entitled "USGS Update on Invasive Aquatic Plant Program". *Myriophyllum spicatum* (Eurasian watermilfoil) is native to Europe, Asia, and northern Africa. Long-distance dispersal has been linked to the aquarium and aquatic nursery trade. Transport on boating equipment plays the largest role in introducing fragments to new waterbodies. It can be found throughout the U.S. in lakes, ponds, shallow reservoirs, lakes, streams, canals, and drainages. It competes aggressively to displace and reduce the diversity of native aquatic plants.

Hydrilla verticillata is native to the Indian subcontinent. It was imported to the U.S. in the 1950s for use in aquariums. It is mainly introduced to new waters on recreational boats and boat trailers. It is found in freshwater lakes, ponds, rivers, impoundments, and canals. It grows aggressively and competitively, and forms thick mats in surface waters that block sunlight penetration to native plants below. Dense beds affect water flow and water use.

Eichhornia crassipes (floating waterhyacinth) is native to South America. It is sold as an ornamental plant for fish ponds, and is accidently or intentionally introduced to water bodies. It can develop into dense floating mats of substantial biomass. The free-floating nature of the plant only exacerbates its problematic standing because the populations can move with water flow and wind. Recreational use of waters infested with this plant are greatly reduced. It can also impede drainage, creating backwater flooding conditions. Water quality and wildlife habitat can be

greatly affected, reducing dissolved oxygen levels under mats and covering the water surface with an impenetrable barrier. These dense surface mats shade out desirable submersed aquatic plants and create a safe breeding environment for mosquitoes.

Salvinia molesta (giant salvinia) is native to southeast Brazil. The species is used as an aquarium and water garden plant. It has been recorded in the U.S. since 1995, where it was discovered in a small pond in Colleton County, South Carolina. Once established in a new region, the plant is likely spread as a hitchhiker on boats, trailers and other recreational gear. Spread will continue through natural drainage and flow in river and stream systems. In lakes and large water bodies, leaves are effectively dispersed by wind and currents to infest new coves.

Trapa natans (water chestnut) is native to Europe, Asia, and Africa. It was introduced by aquarium release, hitchhiking on waterfowl, or intentional plantings. It spreads either by the rosettes detaching from their stems and floating to another area, or by the nuts being swept by currents or waves to other parts of a lake or river. It is a fierce competitor in shallow waters. It creates nearly impenetrable mats across wide areas of water. As immature water chestnut plants mature to the diameter of dinner plates over the growing season, dense packing and stacking of rosettes can occur, causing mats to be as much as a foot thick on top of the water column.

Alternanthera philoxeroides (alligatorweed) is native to South America. It is believed to have been contaminants in ship ballast water. After its introduction into the U.S., it quickly spread throughout the Southeast creating problems similar to those described for *Eichhornia crassipes*. In 1964, the USDA began releasing imported insects from South America as a biocontrol. The insects have been successful in managing this pest plant. The Aquatic Plant Control Program staff with the USACE Jacksonville District, upon request, annually coordinates the shipment of flea beetles collected in the St. Johns River in Florida to areas of the country where the flea beetles do not overwinter and alligatorweed persists.

Rotala rotundifolia (roundleaf toothcup) originates from southeast Asia, southern India, and Japan. It is used in the water garden trade. It was first reported as introduced to North America in 1996 in Coral Springs, Florida. It has since been found in southern Florida, northern Alabama, and southern Mississippi. It can produce extremely dense submersed communities and large thick floating mats, creating conditions that shade other submersed aquatic plants and restrict navigation and water flow in drainage and irrigation canals. Plants that break loose can build up at downstream structures, including bridge pilings.

Nymphoides cristata (crested floating-heart) is native to Asia, India, Sri Lanka, Taiwan and China. It is commonly used as an ornamental species for ponds and aquariums. It has been released into lakes, canals and other waters, and forms mats of overlapping floating leaves that shade the water column while impeding water flow and aeration. It may displace native plants and alter communities.

Aquatic plants have been reinstated to the Nonindigenous Aquatic Species Information System (NAS). This change was funded through reprogramming of current funds in combination with new funds received in FY2015.

Developing a qPCR Tool to Detect the Invasive Nematode Parasite (*Anguillicoloides* <u>crassus</u>**) Kingsley-Smith** gave a PowerPoint Presentation entitled "Developing a qPCR Tool to Detect the Invasive Nematode Parasite (Anguillicoloides crassus)". This invasive nematode parasite, endemic to East Asia, infects swimbladder lumen of anguillis eels. It has been spread rapidly beyond its endemic range - infecting eel species in Europe, N. America, S. Africa, and N. America through the commercial movement of live eels. The first report of *A. Crassus* in wild populations of the American eel *A. rostrata* came from Winyah Bay, SC in 1995. The damage to the eel's swimbladder is irreversible. It affects buoyancy control, and compromises swimming efficiency. This leads to mortality under stressful conditions.

Research attention turned to investigating the potential for detecting the parasite using genetic/molecular tools as an EDRR approach. A 2014-2015 USFWS Southeast Regional ANS small grants-funded project involved testing a qPCR method to detect and quantify *A. crassus* in the environment. Testing revealed that the tool was not unequivocally species-specific for *A. crassus*; non-quantitative; and based on a PCR product that is too large for qPCR. A new approach involved developing a species-specific qPCR protocol to detect and quantify *A. crassus*. A 2015-2016 USFWS southeast regional ANS small grants-funded project tested for environmental inhibition by spiking field samples with known amounts of *A. crassus* DNA and comparing the qPCR responses to positive laboratory controls. A specific probe was used to the qPCR protocol to increase its sensitivity and specificity. Limits of detection were established for the qPCR assay with the infective L3 larval stage using copepods cultured in the laboratory.

Field samples were tested for reaction inhibition. No inhibition was seen with any of the field samples. When field samples were spiked with *A. crassus* DNA, positive results were seen with similar cycle threshold values to the positive control samples. When L2 and L3 standard curves were compared, it was difficult to differentiate which life-stage is present in a sample, and interindividual variation in DNA content appears high. Results from 2015 field samples revealed positive hits from plankton samples. No positive hits were observed in other sample types.

This newly-developed qPCR protocol is species-specific, quantitative, and ready to be used for testing field samples to detect the presence of *A. crassus*. In the future, the qPCR tool will be applied in the field. Temporal sampling will be done at a site of known infection to see if *A. crassus* is present year-round. Spatio-tempural sampling will be done across other habitats in SC to find out the distribution of *A. crassus* in SC, how localized infectious habitats are, and how the prevalence varies by location.

Samples from 2015 were re-run to verify the specificity of the primer-probe pair. No amplification was observed from closely-related philometrids, uninfected *A. rosata* swim bladders, or *A. rosata* fin clips. The probe makes the reaction more specific to *A. crassus*, enabling differentiation.

Update on New Aquatic Nuisance Species Introductions

Neilson gave a PowerPoint Presentation entitled "New Species Occurrences". Since October 2015, new groups of aquatic nuisance species have been observed in FL, TX, LA, GA, and MS: four fish, six mollusks, two plants, and three reptiles. These include African jewelfish, blackchin

tilapia, red-rim melania, giant applesnail, bighead carp, silver carp, green anaconda, and zebra mussel.

Discussion about the Use of Incentive Programs to Control AIS in the Region

Sommers asked the panel members how they administer incentive programs for their states. **Sommers** stated that last year, one of their Commissioners asked that they look into a program called "Lobster for Lionfish". Commercial lobstermen that brought in lionfish could harvest an extra lobster per person that they normally would not be able to do. They are also reaching out to hunting groups to assist with python control in wildlife management areas. A non-native fish roundup is also being held. A pet amnesty day is regularly held for people to turn in their unwanted pets, and potential adopters of these pets are available. They are also looking into other incentive programs.

Jacoby Carter stated that they have tour groups that view their AIS, and participants are instructed that they should not release any native or non-native species into the wild once it has been held in captivity. Barataria Terrebonne Estuary Program has an invasive roundup. Louisiana has an incentive program for nutria.

Leiva stated that in Texas, there is a feral hog problem, and a \$5.00 per hog bounty was implemented. Ranchers and land owners assisted.

McMahon stated that Texas has a "Hello Zebra Mussels – Goodbye Texas Lakes" Program to make boaters aware of the danger of unintentionally transporting zebra mussels to un-infested water bodies. Signs are also posted at marinas and boat ramps. There is a fine imposed to boaters of up to \$500.00 if their boat or trailer has zebra mussels attached when leaving a boat launch. Also, the boat must be drained of all water before leaving boat launches.

Update on the 2016 USFWS Region 4 AIS Small Grants Program

Ballard reported that in 2014, they were able to fund 11 projects, and all but two are finished. The other two will be finished this year. Last year, eight projects were funded.

The RFP for 2016 went out last week. The deadline is April 30th. The budget this year is lower than last year. Proposals will be ranked and combined by the individual reviewers. The list will be given to Fish & Wildlife for their consideration. The top-ranked proposals will receive funding. It is anticipated that funding will increase in coming years.

Wednesday, April 6, 2016

The meeting reconvened at 8:30 a.m. The Chairman again provided the opportunity for public comment. No comments were received.

Development of Fact Sheets, New Brochures, Outreach Materials for the Region

Ballard asked the panel members if they felt there was a need to develop any new outreach materials, such as a fact sheet that is an informational overview, and region-specific. The "Help Stop Aquatic Hitchhikers" brochure that was previously done could also be updated. **Kingsley-Smith** spoke on the Southeastern Regional Taxonomic Center (SERTC), which is located in the

Marine Resources Research Institute at the South Carolina Department of Natural Resources in Charleston, SC. The Center is staffed by SCDNR employees with a background in taxonomy and serves as a clearinghouse, training facility, specimen repository, and a venue for a taxonomic library. They produce outreach materials that are available to schools, etc., and could possibly design posters of invasive species for GSARP. A poster could also be included in the Traveling Trunk for use by the school or other facility after use of the trunk.

As an Action Item, it was decided that a library clearinghouse of outreach materials would be set up on the Gulf States Marine Fisheries Commission GSARP website. **Ballard** asked the panel members to send him their state PDFs of outreach materials so they can be put in the clearinghouse.

Update on Ballast Water Treatment Technologies and Standards

Carangelo gave a PowerPoint Presentation entitled "Ballast Water Considerations". The 3rd Ballast Water Management Summit was held in February in Long Beach, CA. Topics related to ballast water, treatment technology, standards, and implementation were discussed.

There are 58 International Maritime Organization (IMO) treatment systems approved. The USCG has none, as of March 2016. Dockyard and classification societies could encounter a bottleneck in 2020, as numerous ship owners have decided to complete their International Oil Pollution Prevention Renewal Survey due to uncertainties on Ballast Water Management Convention of the IMO. However, the convention still has amendments that need to be agreed on, prior to its entry force, which are expected to near finalization during the two meetings in April and October 2016.

The U.S. Court of Appeals for the Second Circuit issued an amended version of its October 5, 2015 decision regarding the challenge to the Environmental Protection Agency (EPA) ballast water management provisions of its Vessel General Permit (VGP) program. The result remains the same, but allowed to remain in effect until new provisions can be promulgated.

Update on USFWS Region 4 Aquatic Nuisance Species Activities

Strakosh gave a PowerPoint Presentation entitled "Conceptual Framework for AIS Surveillance & Monitoring in Great Lakes". USFWS AIS early detection and monitoring in the Great Lakes Basin uses an assemblage-based approach, and can be applied for single species. The assemblage-based approach is applicable across waterbodies, and maximizes sampling efficiency/detection probability. The sampling effort can be focused from large to fine scale.

The mode of introduction is determined by identifying all potential pathways and vectors for water bodies. Areas of highest risk for potential introduction areas are identified. Physio-Geographic/Hydrographic landscapes such as harbors, coves, tributaries, currents, etc. are looked at. Spatiotemportal sampling/unique habitats are defined, and the sampling should merge spatial risk gradient and habitat extent. Methods and gear are selected to effectively cover habitat types. The effort is determined based on area, habitat availability, and targeted detection probability. The species with the highest probability of introduction from the Risk Assessments are identified.

Update on Aquatic Nuisance Species Activities in Mexico

Mendoza gave a PowerPoint Presentation entitled "Risk Assessment of the Ornamental Fish Trade in Mexico: Analysis of Freshwater Species and Effectiveness of the FISK (Fish Invasiveness Screening Kit)". There are 545 native freshwater fish species. The number of exotic species has increased from 55 in the 80s to 115 at the present, of which 67 have already become established.

The Fish Invasiveness Scoring Kit (FISK) was developed as a screening tool to access potential invasiveness of non-native freshwater fishes. The method was adapted from the Weed Risk Assessment (WRA) model. The method is semi-quantitative and provides a scoring framework for biogeographical, historical, biological, and ecological information on a species. Higher scores indicate higher risk and threshold values are established to categorize species as low, medium, or high risk. FISK can be applied to new imports and species currently in trade to reduce the probability that new invasive fishes will become established.

Recent improvements to FISK have provided a means of identifying potentially invasive nonnative freshwater fishes in virtually all climate zones. The Fish Invasiveness Screening Kit (FISK) v2 was developed in a collaboration between University of Florida Fisheries and Aquatic Sciences, CEFAS, and the Florida Fish and Wildlife Conservation Commission.

Seven hundred freshwater fish species regularly traded in Mexico were filtered for synonyms and varieties, and 368 ornamental species were taxonomically validated. They were submitted to revision for previous establishment or other invasive reports. All species were ranked according to their number of reports, and the top 30 species were subjected to analysis using FISK v2. Two modeling algorithms were used for each species to evaluate climate match. After FISK analysis, species were classified into *invasive* or *non-invasive* for Mexico. Calibration was done using a Receiver Operating Characteristic (ROC) curve. Youden's index (J) was established to determine the best threshold for high-risk species. Seventeen species were classified into the high-risk category.

The First International Workshop on the Environmental Risk Evaluation for Transgenic Fish in Mexico was held on September 10-11, 2015.

In an effort to detect and monitor the spread of African jewelfish, eDNA markers were established for the species.

An alert has been issued as cobia spreads in the Pacific Ocean. The native range of Cobia includes the Atlantic and Indo-west Pacific Oceans, but not the eastern two-thirds of the Pacific Ocean. They have the potential to disrupt the area's ecosystems. They are highly migratory and cannibalistic. They adapt quickly to different water temperatures and salinity, sometimes being found in estuaries and mangrove swamps. The effects of a cobia population in the east Pacific likely will take many years to become fully evident.

Aquatic Nuisance Species Task Force Update

Strakosh reported that the next ANSTF meeting will be held jointly with the Great Lakes Panel on May 4-6, 2016 in Travers City, Michigan. The agenda and meeting details will be posted on

the website soon. Focus sessions will include the Great Lakes Restoration Initiative Project updates and inter-basin transfer of aquatic invasive species.

Invasive Species Traveling Trunk Update and Discussion

Ballard gave a PowerPoint Presentation entitled "Traveling Trunk Update July 2012 – March 2016". The traveling trunk has been utilized by organizations, schools, universities, wildlife departments, etc. Several schools regularly request the trunk now as part of their curriculum. In 2016, there has been a drastic increase of requests for the trunks. There have been instances when not enough trunks were available for requests.

When the traveling trunk was first created in 2012, it consisted of five invasive plants and six invasive animals. The contents of the trunk have not been updated since its release. **Ballard** will update the USGS distribution maps. The trunk will be updated, and new invasive species added. Other suggestions include more acrylic-imbedded specimens, a multiple-choice questionnaire for people to fill out after utilizing the trunk, hands-on activities and games to use in K-12 classrooms to illustrate the effects of invasives, a banner that can be used at public events to draw attention to the display, and a DVD and poster created or purchased that people could keep. **Ballard** suggested tailoring the trunks to the requester's needs by having a checklist to select what they want in their trunk.

Ballard asked for volunteers to help update the traveling trunk. Akins and McMahon volunteered to help.

The Education and Outreach Workgroup will have a conference call in a few weeks to discuss the updates.

Discussion about Panel Membership

Ballard stated that Earl Chilton, Don Schmitz, and Steven Rider are no longer serving on the Panel. The Sea Grant seat and Tribal seat are also open. New members for these seats will be sought. Other groups have expressed interest in sitting on the Panel; however, the budget may not support this. Panel members expressed interest in having someone from the pet industry sit on the Panel.

Establishment of a GSARP Distinguished Service Award

The panel members agreed to have an annual GSARP Distinguished Service Award. The award would not be limited to only a person - agencies/organizations would also be considered. Criteria for selection will be decided upon. A call for nominations from the Panel Members would be done annually. The award would be given at the GSMFC Annual Fall Meeting.

Ballard will create a draft of nominees from submissions by Panel members. He will then send the nominee list to the Panel members for their vote. An application form will also be created. **Ballard** will also find samples of an award that the Panel can choose on to be presented to the recipient.

A GSARP Distinguished Service Award Committee will be formed. Kingsley-Smith, Gonzalez, and McMahon volunteered to serve on the committee. Other Panel members will likely be added.

The service award will be further discussed at the next GSARP meeting.

Review and Approval of the GSARP Standard Operating Procedures

Ballard stated that a change was made to the GSARP SOP. Under Item IV. (Officers), the Panel Chair will serve a two-year term, after which time the Vice-chair will assume the role of Panel Chair through a formal Motion by the Panel.

It was also pointed out that under Item I. (Regional Panel), the wording should be changed from "The Gulf of Mexico Regional Panel on Aquatic Invasive Species", to "<u>The Gulf and South</u> <u>Atlantic Regional Panel</u> on Aquatic Invasive Species".

Ballard revised Meeting Attendance in Item II. (Membership). Any Standing or Non-standing Member that misses two consecutive meetings will be contacted by the Panel Chair or Program Coordinator to assess their intent to participate in future Panel Meetings. If it is determined that the member's participation will continue to be low, then the following actions will be taken.

Standing Member: the member's agency will be contacted and asked to provide a new representative that will be able to actively participate in Panel activities.

Non-Standing Members: the member's agency will be contacted and asked to provide a new representative that will be able to actively participate in Panel activities. If a new representative is not named, then the seat will be dissolved.

Kingsley-Smith made a Motion to accept the revised SOP. The Motion was seconded, and the Motion passed.

State Reports/ Members Forum

<u>Alabama</u>

Newton reported that the Asian tiger shrimp has been a species of concern since 2006, when it was first observed in Alabama inshore waters. Captures have continued to increase, and the tiger shrimp is now found in all of Alabama's primary estuary basins. There have been fewer validated commercial shrimping tiger shrimp reports; however, communications between AMRD personnel and commercial shrimpers indicate a significant abundance of tiger shrimp within Alabama waters. Other invasive species documented in Alabama coastal waters include Bocourt swimming crab, tessellated blenny, Australian spotted jellyfish, Asian green mussel, and red lionfish.

In December 2012, AMRD received a grant from the Gulf States Marine Fisheries Commission to monitor reef communities in the Gulf of Mexico, dispatch red lionfish when encountered during SCUBA surveys, increase public awareness about the lionfish invasion, and streamline the general coordination between state agencies, federal agencies, and the public. Additional funding was received from GSMFC to continue the monitoring in 2014, and continue increasing public awareness. AMRD conducted SCUBA surveys at 18 reef sites in 2014, and created an Adopt-a-Reef Program that emphasizes the reporting and capture of lionfish. The program features a web-based application that allows for the submission and viewing of reports submitted by Adopt-a-Reef participants.

<u>Florida</u>

Sommers reported on the standardized electrofishing survey for non-native freshwater fish. The program was designed to monitor native and non-native fish populations in southeast Florida urban canals. Since 1997, the FWC has performed 213 surveys from 39 canals. In October 2015, six "core" urban canals in metropolitan Miami-West Palm Beach were sampled. Over 2,000 fish were collected from the canals. Eighteen species of native freshwater fish comprised the total catch, and 15 species of non-native freshwater fish comprised the remainder of the total catch. African jewelfish, spotted tilapia, butterfly peacock, and Mayan cichlid were the principal non-native fish species collected. A non-native fish new to the eastern portion of the West Palm Beach canal is the blackbelt cichlid. They are already present in the western section of this canal. FWC plans to monitor the distribution and abundance of blackbelt cichlids through angler reports and standardized electrofishing.

During a two-day mini lobster season last year, people harvesting 10 lionfish per day were allowed to harvest one lobster per day over the bag limit in an effort to increase lionfish removals. FWC staff are currently drafting a Lionfish Control and Action Plan that will address the specific needs of various regions within the state. Lionfish have recently been added to FWC's State Record Program. Divers and anglers can submit lionfish to qualify for records for largest, smallest, and heaviest lionfish. A south Florida congressman has introduced the "Finding Innovative Lionfish Elimination Technologies", or FILET Act. This bill would provide \$1.5 million in competitive grants to universities and agencies to develop traps and other gear that would catch lionfish with minimal environmental impact.

The FWC was recently allocated additional funding to expand the Reef Rangers Program. Two dedicated FWC staff will now address statewide lionfish issues. Total funding for lionfish management for FY2016/2017 will be over \$500,000.

In March 2016, a bullseye snakehead was recovered from the West Palm Beach canal. Now bullseye snakeheads have access to an extensive canal system connected to Lake Okeechobee to the north, federal and state lands to the southwest, and a large urban drainage system to the southeast.

The quilted melania is a non-native thiarid snail threatening single-spring systems in Florida. Once the snails begin reproducing in a new area, they migrate upstream and downstream. Efforts are underway to prevent the introduction of this snail into new spring systems and to learn more about their biology and ecology to minimize their potential impact on imperiled native snail species.

During February 2014 – December 2015, FWC has examined 412 American eels for *Anguilla rostrata*, a non-native species of nematode. The eels were collected by electrofishing from nearly

50 freshwater systems in Florida. The St. John's River had the highest incidence of infection. Of the 172 eels collected, approximately 56% contained active infections. Preliminary data suggests that the average number of nematodes and the percent of American eels with active infections were lowest in summer months (July-September). Additional samples will be processed in coming months, and final results and report will be completed by fall 2016.

Four sightings of green anaconda in Collier, Osceola, and Brevard counties have been verified. Two snakes were removed by FWC law enforcement. This snake is listed as a Conditional Species, and personal possession is no longer permitted.

The FWC recently completed a month-long 2016 Python ChallengeTM in February. The primary goals of this event were to raise awareness, educate and engage the public on non-native species issued in Florida, focusing on the Burmese python. During the event, 106 pythons were removed by participants. As part of the 2016 Python ChallengeTM, an Invasive Species Awareness Festival was held in Miami in January. A variety of educational exhibitors, vendors and presentations were featured at the festival. To promote consumptive use of non-native species, a chef prepared bullseye snakehead, lionfish, and green iguana to serve to attendees.

Planning is underway for the 2nd Annual Lionfish Removal and Awareness Day scheduled for May 14-15, 2016, which will be held in Pensacola. Satellite festivals will be held in Sebastian and Panama City. These sites will host a tournament, lionfish tastings, and educational conservation exhibitors and vendors.

Phillips reported on invasive plant management activities. Invasive, non-native plants were reported in 97% of Florida's 457 surveyed public lakes and rivers. Floating water hyacinth and water lettuce covered approximately 125,000 acres of Florida public waters. Managers spent approximately \$5.6 million controlling over 45,000 acres of floating invasive plants in Florida public lakes and rivers during FY2014/2015. Hydrilla was reported in 181 public waters in 2015. During FY2014/2015, managers spent \$5.49 million applying herbicides to 9,000 acres of hydrilla in Florida public lakes and rivers. During FY2014/2015, \$5.99 million was spent managing over 20,000 acres of aquatic plants other than hydrilla and floating plants.

Georgia

Bonvechio reported on the Satilla River Flathead Catfish Removal Project. Despite efforts to remove flathead catfish from the Satilla River, the number and size of the catfish continues to increase. At present, the project funds two positions focused on long-term population control through direct removal of flathead catfish. During the 2015 sampling season, over 8,000 pounds of catfish were removed. Suppression of the flathead catfish population in the Satilla River has been demonstrated through measured changes in biomass, size, and age-structure. Ongoing intensive harvest will be required to prevent the flathead population from rebuilding.

Asian carp continue to move up the Tennessee River system in Alabama. Special seining/castnetting closures on TN drainage streams may be warranted in the future. The most likely vectors for the spread of Asian carp into GA waters seems to be inter-basin transfer via angler bait buckets. Year-of-young Asian carp can be easily mistaken for gizzard shad, and can be inadvertently collected while cast-netting for bait, and then brought back to GA. The movement of Asian carp up the TN River system is being continuously monitored.

Several patches of water hyacinth were found in August 2015 below Shriners Lake and the downstream creek one mile from the main stem of the Satilla River. In February 2016, a site visit revealed that a frost had killed 95% of the standing water hyacinth.

In January 2015, giant salivinia was discovered in a pond in Evans County. The contamination originated from an upstream pond, which had 100% coverage of giant salvinia. The infested areas were treated with herbicides, and complete control was achieved within 90 days. These areas will be monitored and retreated as necessary.

The GA DNR 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 water. From November 2014 – April 2015, 10 grass carp were captured from public small impoundments and public rivers and submitted for triploid testing. All 10 of the fish tested positive as triploids.

<u>Louisiana</u>

Reed reported that Asian carp are invading LA rivers, streams, and reservoirs. A recent 2013/2014 study indicated they are now successfully reproducing in the Atchafalaya, Ouachita, and Red Rivers of LA. LDWF is continuing to monitor the status and spread in state waters.

Apple snails have colonized the waters of southeastern and south central LA in the lower Atchafalaya and MS River basins during the past decade, and appear to be spreading more rapidly and distant in 2015. They have now been observed in 19 of the state's 64 parishes. LDWF and other entities will continue to research and monitor for apple snails, and public educational outreach through several media outlets is currently being conducted.

LDWF received 94 tiger shrimp reports in 2015 from commercial and recreational fishermen along the LA coastline. Almost all of the sightings were in nearshore/bay areas during the months of August and September.

Commercial divers performing 24 platform structure inspections on oil and gas platforms reported 191 lionfish sightings in 2014. Depths of sightings ranged between 40'-181'.

Alex Perret provided a LDWF Aquatic Plant Control Program report. For FY2013/2014, over 79,000 acres of aquatic plants were treated using chemical, mechanical, and biological methods. Trials were done from September 2013 – July 2014 on giant salvinia with alternative herbicides and mixes to determine if new mixes are as effective as the glyphosate/diquat mix, and to determine if the mixes are affected by season. Results of the trials revealed that glyphosate plus low rates of flumioxazin or carfentrazone provided control and rapid visual markers, and are compatible tank mix partners. There were minimal surfactant differences, and all combinations were more effective in the spring than the fall - especially endothall + flumioxazin. Carfentrazone alone or in combination with glyphosate provided 72 – 99% control. Recent and current trials were done in august 2014 and January 2015. Effective herbicide mixes in large

scale field trials will be evaluated. Other combinations and different surfactants will also be evaluated.

Mississippi

Burris reported that four giant apple snail egg masses were destroyed in Robinson Bayou in the Pascagoula River during weekly, warm-season apple snail control missions. Compared to last year, the number of egg masses has greatly decreased. Three live snails were captured and tested for rat lung worm parasite, and all tested negative.

Following a heavy rainfall event in March, a large amount of common salvinia and alligatorweed was observed exiting the mouth of the Pearl River and flowing into the Mississippi Sound. A new infestation of giant salvinia in an early stage was discovered in Hancock County. It is undergoing treatment.

MDMR personnel worked with MS Habitat Stewards to kill 350 Chinese tallow trees in the DeLisle Costal Preserve.

MDMR personnel attended a regional wild hog summit meeting held to increase legislative awareness of the environmental and economic impacts of this invasive species.

Riecke provided the freshwater report. The first meeting of the Mississippi Aquatic Invasive Species Council to guide implementation of the activities specified in *the Mississippi State Plan for Aquatic Invasive Species* is scheduled for April 14, 2016.

The proposal to use federal ANS funds for Asian Carp telemetry study in the Tenn-Tom Waterway, budget, and contract documents have been submitted to MDEQ.

Giant salvinia, hydrilla, alligatorweed, and water hyacinth have all been chemically treated in various water bodies around the state.

Receivers and sonic tags have been purchased to tag and track silver carp in the Tenn-Tombigbee Waterway. Receivers have been deployed in various locations on Pickwick Lake on December 10, 2015.

Silver carp were recently caught in the Pearl River below Ross Barnett Reservoir.

Links to the MS 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 MDWFP website.

Special harvest permits continue to be issued to Moon River Foods to use gear that is otherwise illegal, to harvest Asian carp in lakes and rivers. Monitoring is being done on harvest, numbers, and pounds of carp harvested. A notice was placed on the MDWFP website that Moon River Foods was buying Asian carp. The company has shipped over 500,000 pounds of carp to China.

Freshwater fishing live bait regulations are being composed to specify what live bait can be legally sold, possessed, transported, and used in Mississippi. Legislation approval is being sought to initiate licensing of retail bait outlets that sell live freshwater fishing bait.

North Carolina

Emens reported that since September 2014, NC WRC biologists have documented new biological threats to salmonids within the state. Gill lice have been found on brook trout and rainbow trout populations. Taxonomic and molecular analyses of copepod collections are ongoing. Anglers have been asked to report observations of gill lice, and NC WRC will continue sampling brook trout populations to document the distribution and status of gill lice.

The Chinese mystery snail is found in numerous water bodies in NC. Inland Fisheries staff will continue to monitor for this species, and is in the process of planning educational seminars for the public.

Whirling disease was confirmed in rainbow trout in July 2015 collected from the Watauga River. It has also been identified in the Elk River. NC WRC personnel collected *Tubifex tubifex*, the worm host of the parasite, to test for the presence of *Myxobolus cerebralis*, the parasite that causes whirling disease. The *T. tubifex* from Mill Creek and the Watauga River tested positive. The NC WRC initiated testing of self-sustaining wild trout populations in spring 2016 for the presence of *Myxobolus cerebralis* and whirling disease.

The funding mechanism for the Aquatic Weed Control Program is the Shallow Draft Navigation Channel Dredging and Lake Maintenance Fund, of which up to \$500K can be used for aquatic weed control. Money comes from a percentage of the motor fuel tax and a portion of money collected from boat titles and registration. The funds are specific to "waters of the state located within lakes". At this time, no funding is available for projects at rivers, creeks, canals, bays, sounds, marshes, etc. Hydrilla has been treated at Lake Waccamaw, Lake Gaston, Eno River, Albemarle Sound, and Chowan River. The Albemarle-Pamlico National Estuary Partnership is forming a Hydrilla Technical Advisory Group, and the group will draft an action plan on how to monitor and manage hydrilla.

Blue catfish have recently become a topic of concern again in some parts of NC. Their range has been expanding over the years, and commercial landings have been increasing. Much of the concern is centered on HR 2419 (The Farm Bill) and a provision intended to impact imported aquaculture-raised fish. Cost of inspection will hinder the management of this invasive species.

The NC Aquatic Nuisance Species Management Plan has been finalized by the working group, and has been signed by all three departments. There is currently no plan for submission to the National ANS Task Force for approval.

South Carolina

Kingsley-Smith reported that researchers have visited two ponds in West Ashley with an established island apple snail population since May 2015 on a bi-weekly basis to determine seasonal patterns of abundance and size-frequency distribution of juvenile and adult snails, as well as egg mass production, and the relationships with physical parameters associated with

these ponds. All snails and accessible egg masses were destroyed. Over 1,500 live apple snails have been removed from the two ponds, and 4,850 egg masses have been observed. The accessible masses were destroyed. Additional surveys were done to determine the extent of the spread. Between May and September 2015, 100 stormwater ponds were surveyed from across the five coastal SC counties. During sampling, an additional invasive freshwater snail, *Melanoides tuberculata*, was discovered. The survey was expanded, and three additional invasive freshwater snail species were discovered. *Bellamya japonica* and *Biomphalaria havanensis* had previously been observed in SC; however, *M. tuberculata* and *Pyrgophorus parvulus* had never been reported in SC.

SCDNR will examine apple snails for the presence of rat lung worm parasite in 2016. Lung and mantle tissue from 100 snails from each infected pond system will be examined microscopically, and with qPCR techniques. In addition, sex is determined for the sex ratio in each area.

Researchers at the Marine Resources Research Institute want to learn the current status of efforts by the USGS researchers to use genetic approaches to try to identify the geographic origins of Asian tiger shrimp established on the Gulf and Atlantic coasts. It is hoped that answers will be answered regarding the status of their establishment, the number of releases, and the population structure in its introduced range.

Researchers at the SCDNR recently found that at least 45% of American eels are infected in the estuaries of SC with *Anguillicoloides crassus*, a nematode of Asian origin that infects the swimbladder. Young glass eels become heavily infected within months of recruiting to the Goose Creek Reservoir. Genetic tools that enable scientists to assess whether different habitats harbor the parasite will assist managers in monitoring and reducing the spread of the parasite in North America. Previous USFWS funding during FY2015 enabled SCDNR researchers to successfully develop a species-specific qPCR assay for *A. crassus*. Through continued funding from USFWS in FY2016, this research team was able to further refine the qPCR technique. This improved molecular detection tool has now been applied in a ield setting to test whether it could be used to detect *A. crassus* in different types of samples acquired from the Goose Creek Reservoir.

Texas

McMahon reported that they have been focusing on zebra mussel infestations in Lake Texoma, Ray Roberts Lake, and Lake Belton. It has been observed that the zebra mussels grow faster and have shorter life spans in Texas than anywhere else. Also observed is that within 2-3 years after initial reports of zebra mussel maximum densities, all of the populations collapse. It is believed that they eventually starve themselves out. When water temperatures rise above 25 degrees, they cannot feed mechanically by filtering fast enough to support their metabolic rates and go into a negative energy balance. A long-term study is being done on this situation.

<u>HARC</u>

Gonzalez reported that the Texas Lionfish Symposium was held in February 2016 in Corpus Christi, TX. A public forum was held at the Texas State Aquarium. Presentations on lionfish were given for the public. Approximately 50-60 people attended.

For the first time since 2009, the Galveston Bay Estuary Program held a symposium in Galveston, TX. The invasive species panel was very well attended.

REEF

Akins reported that REEF has an online reporting format for people to report sightings of nonnative fish. Over 200 lionfish reports are received yearly. In January 2016, reports were received of an orbiculate batfish and sailfin tang near Ft. Lauderdale. Efforts to locate the fish for removal were unsuccessful.

Regal damsel fish have been sighted in Vera Cruz, Mexico. Approximately one month later, they were also reported 200 miles north of the previous range. This species is expanding faster than previously thought.

Funding has been received again for the "Don't Release Me" program, and 10,000 aquarium bags will be printed. Informational brochures are included with the bags.

The iPhone Regional Lionfish Sightings app is available for download. Sightings of lionfish by region for the last 30 days can also be viewed.

The second edition of the lionfish cookbook has been released. The first edition sold out. This edition contains 16 additional recipes from celebrity chefs all around the Caribbean.

REEF has organized four lionfish derbies this year. The Palm Beach derby will hold a lionfish culinary competition. The winner will receive a golden ticket to the world culinary competition.

Acoustic tagging of lionfish will be done this year in the USVI to observe movement between different patch reefs.

USACE

Lane reported that DMMAs (Dredge Management Material Areas) are infested with invasive species in Florida. Funding is being received for management of DMMAs in Tampa and Jacksonville.

The biocontrol project for the everglades restoration is in operational phase. Insects have been released onto melaluca, lygodium, schinus, and casuarina. Implementation and monitoring efforts are projected for 25 years.

Funding was allocated for the USACE 2016 budget for aquatic invasive species protection under the 2014 Water Resources Reform and Development Act, which was passed into law in June 2014. That law requires the money to be cost-shared with the four Northwest states in a 50/50 partnership. The money will help pay for new watercraft inspection stations in the Columbia River basin in the eradication effort against quagga mussels, zebra mussels, and other aquatic invasive plant and animal species.

Grass carp will be used to control hydrilla in the Strom Thurman Reservoir.

The University of Florida is assisting with the development of chemicals for invasive aquatic grasses. Initial trials have shown that it is a good management tool for grasses in aquatic systems.

<u>USGS</u>

Neilson reported that they have recently re-done their point map page to make it more userfriendly. They have also re-formatted their reporting page to be more mobile-friendly.

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 mad a Motion to accept the Recommendation. The Motion was seconded, and passed.

Have the ANSTF host an international symposium on the use of CRISPR, including gene drives, as a control tool for AIS. Teem made a Motion to accept the Recommendation. The Motion was seconded, and passed.

Other Business

Emens discussed the Mid Atlantic meeting. The Chesapeake Bay Nutria Eradication Project has been successful. In the Chesapeake Bay, nutria are primarily limited to the Delmarva Peninsula, where they have been found in six Maryland counties and portions of Delaware and Virginia. The project has successfully reduced the original population. To date over 13,000 nutria have been removed. Population delineation surveys determined that an additional 100,000 wetland acres were nutria-free.

Asian water buffalo calves have been used to remove aquatic invasive vegetation, specifically canary grass. The buffalo were allowed to graze daily, then removed in the evenings. They consumed approximately 50 lbs. of vegetation daily in 50 days. Native plant species then began to re-emerge.

Snakehead in the Potomac are being monitored by USFWS. The population continues to expand into various water bodies.

Next Meeting Time and Place

The location of the next meeting will be Lafayette, Louisiana.

The next meeting will take place the first week in October.

Public Comment

Kristin Sommers 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.

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ATLANTIC CROAKER TECHNICAL TASK FORCE MEETING MINUTES April 19, 20, and 21, 2016 Baton Rouge, Louisiana

Moderator VanderKooy called the meeting to order at 1:00 p.m. on Tuesday, April 19th at the Crowne Plaza, Baton Rouge, Louisiana. The following were in attendance:

Chuck Adams, Florida Sea Grant, Gainesville, FL Michelle Sempsrott, FWC, Panama City, FL Nicole Beckham, AMRD, Gulf Shores, AL Jason Ferguson, TPWD, Brownsville, TX Carly Somerset, MDMR, Biloxi, MS Ralph Hode, Ocean Springs, MS Josh Parks, LDWF, Lake Charles, LA Grant Adams, USM/GCRL, Ocean Springs, MS Ed Swindell, Marine Process Services, Hammond, LA Steve VanderKooy, GSMFC, Ocean Springs, MS Debbie McIntyre, GSMFC, Ocean Springs, MS

Adoption of Agenda

The agenda was reviewed by the TTF members. *C. Adams made a motion to accept the agenda as written; it was seconded by Sempsrott and passed unanimously.*

Approval of Minutes

The minutes from the meeting held January 12 and 13, 2016, in Panama City Beach, Florida, were reviewed and, on motion by **Sempsrott** and second by **C.** Adams, the minutes were approved unanimously as written.

Introductions and Housekeeping

S. VanderKooy, IJF Program Coordinator, opened the meeting and encouraged the group to review the membership roster for accuracy. He welcomed back Ed **Swindell** (commercial representative) to the TTF membership. Josh **Parks** was introduced as the new Louisiana representative from the LDWF out of Lake Charles, Louisiana. **VanderKooy** also introduced Grant Adams, a grad student at USM, and explained that G. Adams is working on SEAMAP data (back to 1982) and is trying to glean some information for his work from our croaker studies.

For the benefit of new attendees, **VanderKooy** reviewed the Commission's travel policies. Any questions regarding travel should be addressed to Alyce Ryan, the Commission's travel coordinator and all travel should be turned in as quickly as possible following each meeting.

Draft Reviews

VanderKooy informed the new attendees that the Gulf of Mexico Fisheries Management Council (GMFMC) previously attempted to compose a document intended to regulate the groundfish fishery back in the 1970s-1980s. This plan was drafted and much research was done, but it was never published due to confidentiality requirements at the time the document was drawing to a close. The groundfish fishery went away as a result of the closing of cat food plants. The information that had been gathered and never actually used is available and appropriate for this group to revitalize and expand upon. The GMFMC document will be referenced in general in the *Introduction* section. **VanderKooy** pointed out that, in the event that people become interested in the croaker fishery again, this document will be the go-to as a background source.

Chapter 9 – Research Priorities

The purpose of this chapter is to identify data gaps. The background information regarding the commercial fishery needs to be expanded on. **VanderKooy** asked the TTF members, as they draft sections, to make a bullet list of those items that are dated, incomplete, or needed for adding to the research list. This chapter essentially provides direction for anyone interested in research ideas for a species.

Chapter 8 – Sociology

The subject of whether or not to include a *Sociology* chapter was again discussed. It was agreed that it would be beneficial to have demographic data to compare to like data in 10 years. Such information would indicate how the fishery has changed on the personal side. It is possible that the *Sociology* chapter from the Commission's *Flounder Profile* could be recreated to fit the *Croaker Profile*.

Social characteristics of the recreational angler would be hard to distinguish from other anglers especially since not many people focus on croaker the way they used to. Speculation is that fewer folks are actively pursuing croaker because the croaker are so much smaller that in years past.

There is significant historical information regarding this fishery changing over time; however, there is not much current information. Is this valuable info if we could gather it?

It was decided that at least a minimal *Sociology* chapter should be included. Another option would be to combine this section with *Economics* in a *Socioeconomics* chapter.

VanderKooy will work on this section and check with Alex Miller (economist) for input. VanderKooy and Parks will check with Jason Adriance for suggestions as well.

Chapter 7 – Economics

C. Adams will contact Steve Brown regarding questionable landings in Florida (from trip ticket data).

C. Adams is going to attend a round table discussion in Key West and he will ask some croaker survey-type questions to dealers, etc. at the conference. It would be interesting, if a survey is

conducted, to find out if the size of croaker has changed over the past number of years, and if there has been an increase or decrease in the number of fish being harvested.

C. Adams will run numbers, look at the data, and see what they all mean. He asked that each state tease out what information they can individually. He reminded everyone that all data should be updated to 2015 year-end.

Chapter 6 – Fisheries

Each TTF member should review the information provided before starting individual state writeups. **VanderKooy** provided a brief history of how this species was being harvested at the beginning of the commercial fishery – individual plants, locations, and how long they operated.

G. Adams reported that there has been a general decline in the mean length of croaker from 1982 to present per the SEAMAP data. Length frequency fluctuated greatly over the years according to NOAA trawl data. All SEAMAP trawls are being included in his research. Decline was steady but, in recent years, has been much steeper. **G.** Adams pointed out that croaker may be a harbinger of things to come, essentially the canary in the coal mine (i.e. dead zones, temperature shifts, genetic changes, etc.) The impact of the genetic structure of blue crabs has been suggested (growth overfishing). Has croaker balance been affected similarly, such that they have been selected to a smaller size?

Per **Swindell**, large croaker come from a mid-water trawl, not from bottom trawling. Bottom trawling may have started because, back in the day, they were avoiding the large fish for processing, and preferred the small fish off the bottom. For that reason, they forced the trawls to the bottom. SEAMAP data is from bottom trawling only.

It appears that people lost interest in this fish commercially and recreationally in the mid 1980s. Perhaps this coincided with the shift to interest in reef fish. **Swindell** pointed out that charter boat captains take people out who want to catch big fish or plenty of speckled trout, not croaker. Even at fish markets, people do not seem to want to buy croaker today, so it may not be a population decline as much as a shift in preference to other species for consumption.

VanderKooy stated that he needs each state representative to provide him with a supplement regarding the reasons in history that landings fluctuated in that state. Remember to update everything to 2015 year-end. Spikes and dips in landings often have management as their cause.

C. Adams suggested moving up the baitfish component to be a part of the overall commercial introductory discussion. That same kind of breakout will be in the *Economics* chapter .

Florida's portion has been fleshed out somewhat. **Sempsrott** received some new data and will, therefore, have to go back and update what **VanderKooy** originally put in this section.

Harper is working on the live bait subject for Texas.

Parks will begin work on putting the Louisiana section together.

Beckham stated that there is a live bait fishery in Alabama but they have no information because bait is not required to be reported as bait on trip tickets. **Somerset** noted a similar situation in Mississippi. A live bait fisherman must purchase a live bait license along with a vessel license but is not required to fill out a trip ticket for bait.

VanderKooy advised everyone to go through individual state data to glean out bait fishery information. Even if by telephone, find out if this data refers to a bait market or food market. Getting an idea of the number of bait outlets is important. It was decided that the bait fishery should be reported as a Gulf-wide fishery rather than state-by-state. These real numbers will be something we can use to compare to 10 years from now. **Hode** will cold call bait shops around the region to quantify the extent of croaker availability.

VanderKooy reminded all to try not to cut and paste. There are resources available on the Commission website as well as on Google Scholar. Everyone needs to provide whatever graphics help tell the story of each state. **VanderKooy** will make them all match. Also, everyone needs to provide original Excel spreadsheets. All landings and values data must match what has been given to **C. Adams**.

On the recreational side, there will not be much to put on paper except to say that state by state, these are the reported landings and that, in proportion, is minimal. An estimated number of participants may come from license sales and/or from NMFS data. We should report what kind of gear was used and what kind of approach; also, if a recreational harvest was for some other purpose. Again, all data must match what **C. Adams** uses.

VanderKooy will put together a section regarding the introduction of BRDs and TEDs and the effect on recreational and commercial shrimping.

Chapter 5 – Enforcement

All information regarding this section has been previously provided by **Reeder** who was not present at the meeting. **VanderKooy** pointed out that, at this point, all state representatives should review his/her state's specific input for accuracy. Be sure to inspect the historical regulations/changes specific to your state and make sure that croaker is the reflected species. The state histories could possibly impact how landings are interpreted and may include shrimp bycatch regulations, net bans, etc. Forward any updated or state-specific information to **Reeder** for inclusion.

Chapter 4 – Habitat

VanderKooy reminded everyone that Jeff Rester has developed a *Habitat Profile* which will serve as a stand-alone document for the Gulf of Mexico. **Sempsrott** has contributed a lot of information here but, because she is leaving, **VanderKooy** pointed out that this TTF will need to divvy up her responsibilities. **G. Adams** offered to take over where **Sempsrott** is leaving off.

After a brief discussion, there was a motion by Sempsrott, seconded by Ferguson, that a member

be added to this committee as a *Habitat* representative. It was then agreed that **G. Adams** should be added to this TTF in that role.

Regarding *Threats to Survival*, everyone agreed to think about the various issues that could cause long-term problems to this species. Also there may be state-specific issues that would be a threat.

The states' FID on croaker should be sent to **G. Adams** to compile and see if there are any trends in where the various life stages prefer to inhabit. This should be a quick perusal of general information and trends but no analyses or anything real specific. It should include the occurrence of juveniles, the time of year, if they are moving around, etc.

Chapter 3 - Biology

The introduction to this chapter needs some work. **Beckham** will reword the choppy sentences in the *Biological Description*.

Ferguson and **VanderKooy** will collaborate on *Age & Growth* which, so far, is cut and pasted from the GMFMC document. Additions will be made to reflect more recent information.

Under *Reproduction*, **Somerset** provided some information here for *Genetics* and she is working on *Spawning*. She will flesh this out, keeping in mind to focus on the population genetics. She explained that Joel Anderson from Texas is doing a population genetics study which should be available by fall of 2016. She and **Ferguson** will ask Anderson to incorporate croaker genetics into this study. There is some YOY unpublished data from Matt Hill regarding very small croaker and their sexual maturity that may be helpful.

Ferguson is working on *Migration*, *Larval Transport*, *Fecundity*, and *Incubation*. He is also working on *Feeding*, *Prey*, *and Predators* and will include the GMFMC plan but will also try to contact a student who is doing a study on pollution and the effect of contaminants on croaker using microchemistry for some additional input.

Beckham indicated that she needs some papers from VanderKooy regarding *Parasites and Disease*.

G. Adams will coordinate with Robert Leaf's other graduate student project. He pointed out that Matthew Altenritter from Texas A & M is doing a study on otolith microchemistry for migration and may be able to provide additional information for the *Habitat* section as well.

Swindell asked state representatives for help and suggestions so that he can gather more commercial information. He is willing to make the phone calls and ask the questions, particularly involving food fish and ground fish follow-up. The group suggested that **Swindell** contact Chris Nelson, Philip Horn, and Bob Jones.

Commercial data will not be final until October 2016. LA and TX creel surveys only record fish that are kept. **Parks** will get the LA creel data and provide to **VanderKooy**. **Ferguson** will get Texas recreational data from Lee Green.

C. Adams will wait until June to call commercial data final. All 2015 commercial data should be double checked and available for **C. Adams** by June.

Next Meeting

VanderKooy stated that he expects to have a fairly complete draft by mid to late fall of this year with this group's last meeting and final edit taking place before the end of 2016. He emphasized that much more material needs to me completed before we meet again. The expectation is that this profile will be complete, reviewed, and approved by TCC, at the Commission's next annual meeting in March 2016.

After discussion, the concensus of the group was the next meeting will likely be held in Pt. Clear, Alabama (Grand Hotel) or Gulf Shores at the end of July or early August. **VanderKooy** will send out a Doodle poll to confirm everyone's availability.

There being no further business to discuss, this meeting adjourned at 10:00 a.m. Thursday, April 21, 2016.



TCC SEAMAP SUBCOMMITTEE MINUTES

St. Simon's Island, Georgia July 26, 2016

Chairman Ted Switzer called the meeting to order at 1:05 p.m. The following members and others were present:

Members

Jill 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 Butch Pellegrin, NMFS, Pascagoula, MS

Others

Kelly Donnelly, NMFS, St. Petersburg, FL André DeBose, NMFS, Pascagoula, MS Eric Hoffmayer, NMFS, Pascagoula, MS

<u>Staff</u>

Jeff Rester, GSMFC, Ocean Springs, MS

Adoption of Agenda

J. Mareska <u>moved</u> to adopt the agenda as submitted. B. Pellegrin seconded and the motion passed.

Approval of Minutes

The minutes of the March 15, 2016 SEAMAP Subcommittee meeting were approved as submitted.

Administrative Report

J. Rester stated that since the last Subcommittee meeting in March, SEAMAP has completed the Spring Plankton Survey and the Summer Shrimp/Groundfish Survey. The Vertical Line Survey and Bottom Longline Survey are currently ongoing. The Fall Plankton Survey is scheduled to begin at the end of August. J. Rester asked everyone to send data and cruise reports for all SEAMAP related activity to him. He stated that he still needed 2015 cruise reports from some SEAMAP partners. J. Rester stated that while SEAMAP has been stressing the need to standardize everything as much as possible, it seems that everyone has not been communicating changes to their staff who do the sampling. He requested that everyone please make sure to have your sampling staff read over the operations manuals before every survey. Also make sure that you provide them with any updates that you receive to the operations manuals and delete or throw away

any old operations manuals once approved updates have been distributed. J. Rester also stressed the need to communicate among partners when sampling so that every station gets sampled and that no stations get double sampled. J. Rester stated that the SEAMAP Vertical Line Work Group met on June 28 to review the draft operations manual, review 2016 vertical line sampling, and possible ways to standardize NFWF and SEAMAP vertical line sampling.

In April, SEAMAP sent an 8-page document to Paul Doremus the Deputy Acting Administrator for Operations at NOAA Fisheries detailing how SEAMAP level funding and increased taxes have led to lost days at sea. Dr. Doremus had shown an interest in how SEAMAP had been impacted by level funding. J. Rester reported that Dr. Doremus sent a letter that stated that from the funding amount provided in NOAA Fisheries annual appropriation, there are mandatory reductions, enacted in the appropriations bill that must be included, such as rescissions for prior year deobligations and the rescission for the Hollings Scholarship. Exact amounts for these rescissions will vary from year to year since the de-obligation amount is based on the amount determined in the congressional appropriation Bill, and the Hollings Scholarship is 0.1% of total enacted funding for most budget lines. After these mandatory rescissions are applied, there is also a potential for a reprogramming request sponsored by the Administration that can alter funding amounts for specific programs. Reprogramming requests must be approved by Congress. After these mandatory reductions are accounted for, NOAA costs must also be factored in before arriving at the final available funding for program activity. NOAA costs generally consist of three major elements: management and administrative costs (M&A), common services, and program support costs that include full time permanent staff and contractual obligations that are essential to NOAA Fisheries management of its work to support the specific program.

In FY2016, SEAMAP was appropriated \$5,125,000. Below are the breakdowns of the money taken from SEAMAP's appropriation.

Reprogram (Proposed)	\$22,398
Mandatory Rescissions	\$31,071
HQ Management and Administrative Costs (M&A)	\$205,128
HQ Common Services	\$83,537
Regional M&A	\$469,798

Approximately 15.8% (\$811,932) of the original SEAMAP appropriation was lost due to these cuts. This left a total of \$4,313,068 for fishery independent data collection in FY2016.

Survey Activities and Budget Needs for FY2017

Florida – T. Switzer stated that to fund the Ichthyoplankton Archiving Center, half of the Reef Fish Survey and half of the Summer Shrimp/Groundfish Survey that Florida would need \$480,950. To fully fund all of Florida's participation in SEAMAP sampling, T. Switzer stated that Florida would need \$600,000.

Alabama – J. Mareska stated that to fully fund Alabama's participation in SEAMAP sampling that they would need \$190,000.

Mississippi – J. Hendon reported that GCRL would need \$432,000 to fully fund their 2017 SEAMAP sampling, but they would make do with their current \$367,654.

Louisiana – C. Dean sated that Louisiana needed \$470,000 for Louisiana's 2017 SEAMAP sampling.

Texas – F. Martinez reported that Texas needed \$140,000 for their current participation in the SEAMAP Bottom Longline and Vertical Line Surveys.

GSMFC – J. Rester stated that the Commission needed \$250,000 for coordinating SEAMAP activities, travel to meetings, and data management. He stated that they could survive with their current \$223,000 allocation, but he may not be able to pay for everyone's travel to the joint meeting next year.

NMFS – B. Pellegrin stated that SEAMAP does not come close to paying for NOAA Fisheries' participation in SEAMAP sampling. He stated that they would like to receive their FY2012 level of funding at \$973,000, but they would make do with their current allocation percentage.

Review of the Vertical Line Operations Manual

J. Rester stated that the Vertical Line Work Group met in June to review the draft vertical line operations manual. He stated that work group members were concerned about the use of 10 lb. weights to anchor the lines and the use of a three way swivel midway down the line. There was also concern about gangion construction with a crimp. J. Hendon stated that Mississippi was trained by NOAA personnel and that the 18 inch gangions were measured from the eye of the hook all the way to the knot. Her interpretation from the manual was that the mono line was 18 inches in length. J. Hendon showed a video on how Mississippi makes their gangions. J. Hendon stated that she would rather see SEAMAP use a knot instead of a crimp.

T. Switzer stated that Florida was concerned about the use of 10 lb. weights. He felt that it was too much weight and could be affecting catchability of some grouper. J. Mareska stated that he would check into why Alabama originally started using 10 lbs. of weight.

C. Dean asked about where exactly they needed to sample if given coordinates for a grid cell that was classified as hard bottom. T. Switzer that you could search surrounding areas for some relief to sample. The Subcommittee agreed to add the following language to the operations manual. If the location for a habitat of the same type is not known, survey the neighboring grids from 30 minutes to no more than 1 hour to find a target location of the needed habitat type. If no habitat of the same type is found within the 1 hour search time, the station should be dropped.

Final Review of the 2016-2020 SEAMAP Management Plan

Several suggested edits were made to the draft 2016-2020 SEAMAP Management Plan. J. Rester stated that he would compile the comments and pass them along to the South Atlantic for inclusion in the final draft of the management plan. He also stated that all three SEAMAP components would be reviewing the document tomorrow at the joint meeting and for anyone with additional

comments to bring them up at the joint meeting.

<u>RESTORE Act Proposal Development</u>

J. Rester stated that he submitted a letter of intent for the life history proposal and trophodynamics proposal on July 8. He stated that he appreciated the work that everyone had done to prepare the letters for submission. Assuming that both projects would be selected to submit a full proposal, the group now needed to develop the full proposals. J. Rester stated that the Commission could serve whatever role the group deemed necessary. He stated that they could help coordinate the projects and well as serve as data managers and data distributers for the project.

T. Switzer stated that the life history proposal was fairly straight forward, but the trophodynamics proposal was fairly complicated. The trophodynamics study would involve a couple of years of data collection and a year of analysis. T. Switzer reported that Will Patterson had students that could help collect gut contents for the analysis. Other researchers would help with bar coding to identify stomach contents. The proposal also included money for collecting specimens that were not normally encountered during current SEAMAP surveys.

J. Rester stated that he soon should be hearing whether the two projects were invited to submit a full proposal. He stated that he would let everyone know as soon as he was notified.

Status Report on the 2016 Vertical Line Survey

Alabama – J. Mareska reported that they had completed 25 of the 29 stations for the first half of their SEAMAP vertical line sampling. He noted that 4 of the 5 stations within the 10-20 m depth zone had no catch. J. Mareska asked about interactions with dolphins. He stated that the cruise report did not mention a dolphin interaction, but the station sheet mentioned that there were dolphins within the area. J. Mareska wanted clarification on when to record dolphins. E. Hoffmayer stated that Protected Resources was still trying to finalize rules concerning dealing with marine mammals. J. Hendon stated that it was imperative to take photos if the gear interacts with dolphins. J. Mareska stated that they would sample another 29 stations in the coming weeks.

Florida – T. Switzer stated that Florida had completed approximately 40% of their stations for NFWF. T. Switzer stated that the vertical line did not catch as many fish as they expected. The time drop sampling did catch fish, so there were fish at these stations.

Mississippi – J. Hendon stated that NFWF was paying for their vertical line sampling. J. Hendon stated that they were sampling 10-20m, 20-40m, and 40-150m depth strata. NFWF was funding monthly sampling off Mississippi. Mississippi is sampling 27 stations per month.

Louisiana – C. Dean stated that Louisiana had completed 45 of their 100 stations for the Vertical Line Survey. She reported that LDWF was using a smaller vessel to reduce costs. They were trailering the vessel and launching it from the western portion of the state to reduce costs in reaching their stations on the western side of the state. She stated that they should finish their vertical line sampling by the end of August.

Texas – F. Martinez stated that Texas had an internal meeting with the field stations that would be participating in the SEAMAP Vertical Line Survey. He stated that there was concern over the number of stations that were classified as presumed reef since these areas might not have accurate coordinates and personnel may be forced to search for the reef structure to fish. They decided to buy five Garmin sonar units for approximately \$6,000 a piece that would help locate structure to sample in these presumed reef areas. F. Martinez stated that as of July 26, 2016, Texas had not started vertical line sampling yet, but they may be starting in early August. He also stated that Texas would only be able to sample 30 stations of the original 125 that were assigned for 2016 sampling.

F. Martinez stated that Texas would only be sampling stations that would be within 2 hours (approximately 30 miles) of their field stations. J. Rester stated that he was concerned that Texas was already not following the SEAMAP Vertical Line Survey protocol by only sampling two depth strata (10-20 m and 20-40 m). He stated that Texas was not assigned any stations in the 40-150m depth strata since Texas stated they would not be able to sample in those depths. J. Rester stated that he was not sure how any data collected would be used in a stock assessment since Texas would not be sampling all stations and would only sample stations that were within 30 miles of their field labs. He suggested that Texas use whatever 2016 funds were available to buy a winch for their vessel so Texas could perform bottom longline sampling in statistical zone 21. He suggested that Texas hold off on vertical line sampling in 2016 and try to start again in 2017.

F. Martinez stated that the Texas vessels were not designed to run that far offshore and stay overnight. Texas would be limited on how far out they could vertical line sample in the future with their own vessels, but they could not contract with anyone to go further offshore without additional SEAMAP funds.

E. Hoffmayer stated that Texas' SEAMAP statement of work had 18 days dedicated to vertical line sampling. Fernando Martinez stated that Texas had to cut that back to 16 days. F. Martinez stated that they would only be able to sample roughly 2 stations per day. He stated that they usually left the dock at 6:30 or 7:00 a.m. and it took time to get to the stations. J. Hendon stated that they usually left around 3:00 a.m. to be on station at sunrise.

J. Rester asked if Texas would be able to sample in all three depth zones in 2017. He suggested that Texas use the remaining 2016 funds to buy a winch for the new Texas vessel and fully implement the Bottom Longline Survey through statistical zone 21. F. Martinez stated that they would only be able to sample within 30 miles of their field stations. T. Switzer stated that only sampling within 30 miles of their field stations would bias their sampling since fishermen would also be fishing as close to port as possible and that the fish would not be representative of the waters off Texas.

E. Hoffmayer asked if F. Martinez had discussed with his superiors that sampling only within 30 miles of port does not follow SEAMAP protocol and this restriction would force the SEAMAP Subcommittee to stop funding vertical line sampling in Texas since they would not be following agreed upon SEAMAP vertical line protocols. E. Hoffmayer asked if Texas could help collect additional bottom longline samples in statistical zone 17 off western Louisiana. F. Martinez stated that they had sampled a couple of stations off Louisiana already this year and may be able to do

that again in the future.

J. Hendon asked if Texas could charter a vessel that would have the ability to stay out overnight. F. Martinez stated that Texas A&M Galveston had contacted him about how they could help collect SEAMAP data. Texas A&M Galveston has a large vessel that could stay out for several days at a time. T. Switzer stated that Texas might want to investigate chartering a commercial fishing vessel. T. Switzer stated that Florida has chartered vessels for approximately \$2,000 per day. J. Mareska stated that Alabama has chartered vessels for \$3,000 per day. These vessels could stay out for several days and sample from dusk until dawn. F. Martinez stated that they only have \$60,000 budgeted for vertical line sampling. Ted Switzer suggested investigating charter vessels. He also stated that if Texas can only sample within 30 miles of port that the SEAMAP funds be used elsewhere. J. Rester suggested that the 2016 funds could be used to help Louisiana sample in statistical zone 17 during the fall portion of the Bottom Longline Survey and any remaining funds be used to buy a winch so that Texas could sample statistical zone 21 starting in 2017.

T. Switzer asked if Texas could conduct the Vertical Line Survey every other year. This would be a full survey that covered all three depth strata across the entire Texas coast. T. Switzer stated that you might not need an annual survey. E. Hoffmayer stated that SEAMAP partners were not allowed to intentionally carry money over from year to year for a biannual survey.

J. Rester also asked if Texas A&M Galveston could sample all three depth strata in statistical zones 18 and 19. It would not be across the entire Texas coast, but would extend SEAMAP coverage to all depth zones off parts of Texas. F. Martinez stated that Texas A&M Galveston charter costs were approximately \$10,000 per day. Several Subcommittee members stated that those costs were extremely high for a vessel that size.

F. Martinez stated that the Texas Artificial Reef Program was conducting vertical line sampling in deeper waters by chartering vessels. He stated that he would talk with them on their vessel rates. E. Hoffmayer again suggested that F. Martinez investigate chartering a commercial vessel to collect as many vertical line stations as possible.

J. Rester asked if F. Martinez wanted to develop a contingency plan for the rest of the year if they were not able to charter a vessel. F. Martinez stated it was difficult to justify using \$126,000 for bottom longline sampling only. He stated that he would explore chartering vessels for vertical line sampling. F. Martinez stated that it would cost \$25,000-30,000 for a bottom longline winch. J. Rester again stated that buying a winch and helping sample some fall bottom longline stations in statistical zone 17 would be a good use of the remaining funds.

Other Business

E. Hoffmayer stated that there was a wide range of staff time hours in all SEAMAP partners' statements of work. He reported that some partners had more money dedicated to staff time than he felt was necessary. He stated that he would like to discuss this at the October Subcommittee meeting. He requested that this discussion item be added to the October Subcommittee meeting agenda.

There being no further business the meeting adjourned at 5:50 p.m.

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ATLANTIC CROAKER TECHNICAL TASK FORCE MEETING SUMMARY July 27-29, 2016 Biloxi, Mississippi

Moderator VanderKooy called the meeting to order at 1:00 p.m. on Wednesday, July 27 at the Courtyard Marriott, Gulfport, MS. The following were in attendance:

Chuck Adams, Florida Sea Grant, Gainesville, FL Nicole Beckham, AMRD, Gulf Shores, AL Jason Ferguson, TPWD, Brownsville, TX Carly Somerset, MDMR, Biloxi, MS Ralph Hode, Ocean Springs, MS Josh Parks, LDWF, Lake Charles, LA Grant Adams, USM/GCRL, Ocean Springs, MS Ed Swindell, Marine Process Services, Hammond, LA Steve VanderKooy, GSMFC, Ocean Springs, MS

VanderKooy highlighted a few of the items in the agenda and got right into the material at hand.

Section 3

The group went through the entire section with each rep reporting on their progress. Most of the previously 'cut-and-pasted' language from the Council's Draft Groundfish FMP was revised and incorporated with new research and updated material. There were a number of new references which were provided to the group electronically and **VanderKooy** indicated he would post the new draft on the working website following the meeting.

Section 4

VanderKooy noted that the background habitat overview (general Gulf of Mexico) was shortened considerably from the older boilerplate material. **Jeff Rester** had provided some new maps and language where needed.

The general habitat info for Atlantic croaker specifically was still very draft with a lot of material still coming. The section was rearranged slightly to make better use of the overlapping life history information. In other words, larval and juvenile habitats were combined as well as subadult and adult. Each state would review their fishery-independent data to fill in the environmental information related to each life history stage.

Threats to survival is very short as is the 'areas for future research'. Both provide a brief narrative of what we know and don't know and may need to move to the back of the document depending on how much additional information is found.

Section 5

The enforcement committee has fully fleshed out the background materials. The individual state reps should review the current draft to be sure all the necessary information is included especially the history of regulations affecting croaker.

Section 6

VanderKooy noted that he had pretty much completed most of the commercial history and present day fishery information by state. The bait section is still in need of some work and the recreational fishing history and overview by state is reasonably complete. The mariculture section is still in a very rough draft form. **VanderKooy** will spend some time fleshing it out over the next few months.

Section 7

Adams has most of the commercial fishery information updated in the economics section. There are still questions regarding food fish vs bait fish however. The recreational section will be minimal since very few people target croaker these days. There may be some information available of restitution and each state rep should check on whether croaker are listed in the state code.

Other Materials

VanderKooy will continue to look at the possibility of developing a socio-demographic section. It's unclear if there is much information specific to croaker in recent years but the majority of harvest is from trawls which have been well characterized. Also, the historic croaker fishery was very well documented and **VanderKooy** may be able to lift some information from the Council's Draft Groundfish FMP for material.

Finally, there is a lot of information which is out-of-date or absent on the current croaker population in the Gulf of Mexico. A thorough 'data needs' section will obviously be the last step in completing the profile.

Schedule for Completion and Next Meeting

VanderKooy was pleased that the TTF could meet several times early in the year to keep the momentum going to draft the profile. It is anticipated that the staff time commitment to the Tripletail Profile may delay some of the progress over the next few months however. **VanderKooy** noted that the next meeting wouldn't probably occur until after the first of the year 2017. He will keep the croaker TTF posted on his progress and continue to update the working website as he receives new drafts.

With no further business, the meeting adjourned at 11:45am.

Gulf States Marine Fisheries Commission

State Directors Meeting Portland, Oregon September 26-29, 2016

Participants

Dan Ellinor - FWC Chris Blankenship – ADCNR/MRD Jamie Miller - MDMR Kelly Lucas - MDMR Mark Lingo - TPWD Patrick Banks – LDWF Dave Donaldson - GSMFC Steve VanderKooy – GSMFC Roy Crabtree – NOAA Fisheries SERO Paul Doremus - NOAA Fisheries HQ

Agenda

- 1. Timing of Annual FIN Budget Discussion Meeting (SFFMC) Donaldson
- 2. NOAA Stock Assessment Costs All (conference call option)
- 3. NOAA Fisheries Comments Ponwith, Crabtree, Doremus
- 4. NOAA-GSMFC Cooperative Agreement All
 - a. NOAA Aquaculture Small Grants Program
 - b. Gulf Seafood Farming Roundtable
 - c. Other Supplementals
 - i. Ageing Manual Workshops
 - ii. FIN Strategic Planning
- 5. Gulf Menhaden Port Samplers Donaldson, VanderKooy
- 6. GSMFC's Commercial/Recreational Fisheries Advisory Panel All
- 7. Future Gulf State Directors' Meetings
- 8. Other
 - a. Seafood Watch
 - b. Recommendation letters

APPROVED BY: Autor Sminero COMMITTEE CHAIRMAN

GULF & SOUTH ATLANTIC REGIONAL PANEL ON AQUATIC INVASIVE SPECIES MINUTES Tuesday, October 4, 2016 - Wednesday, October 5, 2016 Lafayette, LA

On Tuesday, October 4, 2016 Chairman Kristen Sommers 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

Bob James Ballard, GSMFC, Ocean Springs, MS Tim Bonvechio, GA DNR, Waycross, GA Rick Burris, MS DMR, Biloxi, MS Paul Carangelo, Port Authority, Corpus Christi, TX Mark Ford, NPS, New Orleans, LA. Pam Fuller, USGS, Gainesville, FL Lisa Gonzalez, HARC, The Woodlands, TX Leslie Hartman, TPWD, Palacios, TX Chuck Jacoby, Indian River Lagoon National Estuary Program, Palatka, FL Peter Kingsley-Smith, SC DNR, Charleston, SC Herb Kumpf, At-Large Member, Stuart, FL (via conference call) Monica McGarrity, TPWD, Austin, TX Robert McMahon, UT Arlington, Arlington, TX Matt Neilson, USGS, Gainesville, FL Matt Phillips, FWC, Tallahassee, FL Bobby Reed, LDWF, Lake Charles, LA Dennis Riecke, MS DWFP, Jackson, MS Wilfredo Robles, Univ. of Puerto Rico, Corozal, PR Kristen Sommers, FL FWC, Tallahassee, FL Jessica Spencer, USACE, Jacksonville, FL Timothy Strakosh, USFWS, Atlanta, GA (via conference call)

Staff

Ali Ryan, GSMFC, Ocean Springs, MS Joe Ferrer, GSMFC, Ocean Springs, MS

Others

Jacoby Carter, USGS, Lafayette, LA Lee Eisenberg, Greater Caddo Lake Assoc., Karnack, TX Eric Hoffman, UCF, Orlando, FL Olivia LaMaster, SFASU, Nacogdoches, TX Shiyou Li, Stephen F. Austin State Univ., Nacogdoches, TX Justin Murdock, TN Tech Univ., Cookeville, TN Ping Wang, SFASU, Nacogdoches, TX Lihong Zhao, Univ. of LA, Lafayette, LA

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Public Comment

Chairman **Sommers** 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 April 5-6, 2016 meeting in Orange Beach, AL were presented for approval.

A motion was made to approve the minutes. The motion was seconded, and the motion passed.

Field Testing the Use of Food Grade Oils to Suppress Apple Snail Reproduction

Jacoby Carter gave a PowerPoint presentation entitled "Field Testing the Use of Food Grade Oils to Suppress Apple Snail Reproduction". Reasons to use food grade oils are that that they may be exempt from EPA oversight since they are already approved as inert ingredients, and they are already considered safe for human consumption. They are also inexpensive and easily obtained. The mode of action is physical, not chemical. The oil suffocates the egg mass. The use of spray may have advantages over physical destruction of the egg masses.

Pam cooking spray, which is mostly canola oil and emulsifiers, was used at a study site in Langan Municipal Park in Mobile, AL. Also, undiluted coconut oil was applied to egg masses with a hand-pumped agricultural sprayer. A control was not sprayed. Egg masses were observed for a minimum of three weeks, after which the percentage of hatching was evaluated. From May through July 2016, 235 egg masses were entered into the field study. A modified Braun-Blanquet Index was used to record percent hatching at the end of three weeks.

Both oil applications significantly reduced overall hatching (between 70-80%), as compared to control. The longer the egg mass, the greater the likelihood of hatching, but the effect was small. Pam cooking spray was cost-effective. One can sprayed over 80 egg masses. However, its effective range is short, whereas a conventional sprayer can spray at a distance.

Population Modeling of Maculata Apple Snails: One Model Does Not Fit All

Lihong Zhao gave a PowerPoint presentation entitled "Population Modeling of *maculata* Apple Snails: One Model Does No Fit All". Little has been quantified regarding their life cycle. To measure the growth of snails at various stages of development, several growth experiments were conducted. The goal of the experiment was to build a mathematical model, calibrate it to make accurate population projections, and quantify the environmental and economic impact. Measurements were taken weekly for 13 weeks. Snails were individually marked by gluing tags to their shells. Weight, operculum length, shell length, sex, identification, and date were recorded. A population-level approach was done.

Females are generally larger than males. Females and males may have different growth dynamics. Smaller snails generally appear to grow faster than larger ones. Single-stage growth function is not suitable for males or females. Snail hatchlings reached reproductive maturity in 73-83 days, which is much earlier than other researchers observed.
Future work will involve quantifying local populations, and predicting long-term population dynamics and impacts.

Managing ANS in the Southwest Louisiana National Wildlife Refuges

Billy Leonard gave a PowerPoint presentation entitled "Management of Invasive Aquatic Nuisance Species at Refuges in Western Louisiana: Problems, approaches, Needs". The three newest aquatic plants are giant salvinia, Peruvian water grass, and Cuban bullrush. Water hyacinth, Cuban bullrush, and giant salvinia re combining together to form thick mats, which can impede water access to many areas of the refuge.

Only approved herbicides can be used. Herbicide is supplied to the LA Department of Wildlife and Fisheries spray crew, but there are constraints due to the amounts of chemical that can be sprayed, the budget, and the list of approved chemicals. Most invasive plants can be managed by using chemicals. There is no strategy yet for apple snails. Numbers are rising again for nutria and *Myocastor coypus*.

Funding, support, and more research are needed for the most problematic aquatic species.

Update on the Invasive Plant Program in Louisiana

Jill Day gave a PowerPoint presentation entitled "LDWF Aquatic Plant Control Program Update". In 2015 and 2016, over 50,000 acres have been treated by LDWF. Control methods include integrated pest management, chemical, mechanical, and biological. Trials are being done on giant salvinia to determine the effectiveness of alternative surfactants.

Containment booms limits plant movement and allows containment for herbicide application. Drawdowns target shoreline plants, affects the entire waterbody, and can removes large quantities at low cost. Weevils and triploid grass carp are used as species-specific control.

Three giant salvinia weevil rearing ponds have been established on LSU AgCenter property. There is high winter mortality of adult weevils due to freezing temperatures, and failure to establish north of 32° N in the U.S. There is a quest for cold-tolerant weevils.

Current Distribution of the Invasive Asian Carps in Louisiana

Bobby Reed gave a PowerPoint presentation entitled "Determining Asian Carp Expansion in Louisiana Waters through Larval Fish Sampling". LDWF received a small ANS grant in 2013 and 2014 from USFWS to sample for larval Asian carp in Louisiana waters. The primary objective was to determine the degree of Asian carp invasion, and define the leading edge of reproductive expansion. The targeted species included silver, bighead, grass, black, and common carps. The secondary objective was to determine if water quality may influence the reproductive success of Asian carp. Asian carp larvae were sampled in selected waters throughout Louisiana to test the theory that low alkalinity may inhibit Asian carp reproduction.

In summary, Asian carp appear to be reproducing in only the largest rivers with relatively high alkalinity compared to the smaller adjacent gulf coast drainages. May was peak spawning for bighead and silver carps in LA. The study should be repeated in five years.

Detection of Feral Hog Impacts to Water Quality and Wildlife

Michael Kaller gave a PowerPoint presentation entitled "Detection of Feral Hog Impacts on Water Quality". Feral hogs negatively impact native wildlife and native vegetation. Water samples were taken at West Bay and Ft. Polk wildlife management areas, and tested for water quality. Excessive fecal coliforms (*E. coli*) were found in 8 of 20 samples. Pathogens identified include: *Aeromonas, Enterococcus, Staphlococcus aureus*, and *Shigella*. In the Kisatchie National Forest, excessive fecal coliforms (*E. coli*) were found at 17 of 31 sites. *Leptospira* and *Klebsiella* were found at 19 of 31 sites. *Salmonella* was found at 8 of 31 sites. *Yersinia* was found at 6 of 31 sites.

Preliminary implications revealed that human and wildlife pathogens were present and associated with feral hogs. DNA fingerprinting at 22 of 40 sites detected individual and/or matrilineal connection (i.e. same sounder) in 12 of 39 hogs.

The Spread of Zebra Mussels in Texas

Monica McGarrity gave a PowerPoint presentation entitled "The Spread of Zebra Mussels in Texas". Five lakes are infested with zebra mussels: Lake Lavon, Lake Livingston, Lake Waco, Lake Worth, and Fishing Hole Lake. In May 2016, hundreds of veligers were found in Eagle Mountain Lake, and an adult zebra mussel was confirmed in June 2016. In July 2016, they were confirmed in Stillhouse Hollow Lake.

Coordinated monitoring efforts have been undertaken, and boater inspections have been done on over 1,900 boats in 2016. A marina outreach is being done to build partnerships, provide updates, and give advice. In 2016, 87 marinas and 63 repair shops have been visited. A public awareness campaign is ongoing. Regulations have been established to make it illegal to possess zebra mussels or other prohibited species – live or dead.

Giant Salvinia Extracts as an Endocode to Control Giant Salvinia

Shiyou Li reported that field trials are being done to control giant salvinia. Salvinia is damaged by cold weather, but can survive under water and on soils for weeks. Swamps and creeks serve as salvinia nurseries of lakes and rivers.

Large Scale Giant Salvinia Weevil Production on Caddo Lake

Lee Eisenberg gave a PowerPoint presentation entitled "Large Scale Giant Salvinia Weevil Production at Caddo Lake". Successful biocontrol of salvinia at Caddo Lake has limitations. There are cold winters, and a short growing season. Salvinia is cold hardy, and overwinters.

A weevil production greenhouse was built where greater numbers of weevils are produced in less time. The greenhouse has an efficient floor plan and is climate controlled. The weevils are sheltered from unusually cold weather. Lake water is used for the tanks. Weevils are released in sheltered areas with minimal drift, and unlikely to be sprayed. Production and effects on salvinia are quantified, and production space required to mitigate an infestation of a given size is extrapolated. In the first year, 165,000 adults were produced, and 85,000 so far this year. Over 20,000 weevils were introduced at a 200-acre release site in Willowson Woodyard which is heavily infested with salvinia. The population survived through the mild winter, and has caused extensive damage in a six inch thick mat.

Effects of Didymosphenia geminata Invasion on Riverine Food Webs

Justin Murdock gave a PowerPoint presentation entitled "*Didymosphenia geminata* Effects on River Food Webs". *Didymosphenia geminata* changes physical habitats by homogenizing habitats, changing near-bed velocities and macroinvertebrate structures, and impacting fish.

A study was done in 2014-2015 on three rivers (tailwaters) with varying coverage. Three sites per river were studied for macroinvertebrate composition, habitat, and water quality. Two sites per river were studied for food web stable isotope and lipids. Brown trout and rainbow trout were studied for yearly abundance and condition data at each river.

Macroinvertebrate conclusions found food resources switching with mat coverage over 50%. Lipids had same trend as isotopes, and did not assimilate didymo cells or stalks. There was less reliance on diatoms in general. Effects were less severe in "patches" than "blankets".

Trout conclusions found browns and rainbows primarily assimilating flatworms, amphipods, and didymo stalk at high and low didymo sites. Stalks increase chironomid midge and oligochaete worm abundance, but the strongest isotopic signatures came from turbellarians and amphipods, which are typically found outside of mats.

Update on the 2016 USFWS Region 4 AIS Small Grants Program

Ballard gave a PowerPoint presentation entitled "U.S. Fish & Wildlife Service Region 4 AIS Program Small Grants Program". In 2016, seven grants were awarded. Next year, the RFP will possibly be revised for 2017 to narrow the scope of proposed projects. The membership on the Review Committee could possibly be expanded. How the findings from the funded completed projects are displayed will also be decided on.

Update on African Clawed Frogs in Florida

Sommers gave a PowerPoint presentation entitled "African Clawed Frog Removal Effort". In 2016 in Riverview, FL, two adults were removed from a in a mobile home park pond by a homeowner. Thousands of tadpoles were found in the pond. In July, 17 water bodies were surveyed, and tadpoles and froglets were discovered in the pond. Approximately 13,000 tadpoles and froglets were removed. Frogs and native amphibians were tested for chytrid fungus. Hydrated lime was spread in the pond and around the barrier. Frogs and froglets trying to escape were euthanized. The mobile home park was canvassed with public information sheets. Follow-up was done on the pond, and 8 juvenile frogs were caught by a landowner in August. In September, staff returned and found lots of frogs in the pond. A follow-up is planned for November. Partnership between agencies and researchers is crucial to conduct EDRR. Follow up will need to be continual until eradication or control goals are met.

Update on AIS Prevention and Control Efforts in Puerto Rico

Robles gave a PowerPoint presentation entitled "Update on AIS Prevention and Control Efforts in Puerto Rico". The Grupo Antillano de Especies Invasoras (Antillean Group for Invasive Species) (GAEI) is a multidiscipline group from the College of Agricultural Sciences in Puerto Rico, in collaboration with scientists from Mississippi State University. The main goals are to prevent invasive species introduction and spread using a regional-focused EDRR program, and to raise citizen awareness regarding the importance of invasive species on ecosystems. Their objectives are to develop hands-on training workshops for the general public, and to develop a web-based information and monitoring system available for general public. There are seven target plant species, and six target insect species.

One-day training workshops were held at many locations throughout the island. Over 200 attendees attended. They had no general knowledge of invasive species.

The Atlas de Especies Invasoras de PR is a web-based monitoring and information system launched in 2011, currently in Spanish language, that includes fact sheets, invasive species distribution maps, blogs and updated news articles, and outreach materials. There have been over 12,000 hits per year.

In 2013, water hyacinth was present at Laguna San Jose in the San Juan Bay Estuary. Effects on water quality and aquatic insects was studied. Efficacy of mechanical and chemical control was also studied.

Invasive Crayfishes: Impacts, Pathways, Detection, and Prevalence

Susie Adams gave a PowerPoint presentation entitled "Invasive Crayfishes: Impacts, Pathways, Detection, and Prevalence". Crayfish are among the most notorious invasive aquatic species in freshwater ecosystems and have been reported not only to displace indigenous crayfish, but also to impact a number of other aquatic organisms. They reduce fish growth, compete for shelter, and have negative population effects. They also deter breeding in CA newts, and alter terrestrial food webs. They displace or reduce abundance of native crayfishes, and harbor diseases and parasites.

Introduction pathways include via live bait; pet/ornamental trade; as a food source; aquaculture; and schools. Wisconsin and Pennsylvania have outlawed the use of live crayfishes as bait after devastating invasions by *Orconectes rusticus*. Fish stocking needs to be examined as a possible pathway.

Large water bodies have been under-sampled for invasive crayfishes. Knowledge of their native ranges is incomplete, and more must be learned about pathways of introductions.

Using Genetics to Understand the Invasion Dynamics of Megabalanus coccopoma

Eric Hoffman gave a PowerPoint presentation entitled "Using Genetics to Understand the Invasion Dynamics of *Megabalanus coccopoma* (Titan Acorn Barnacle)". The native range is from Mexico to Panama. The first invaded report in the Caribbean was in 2001, and in the Atlantic in 2006. There is an unknown number of species in the genus, so all samples collected might not be *M. coccopoma*.

Samples were collected at numerous locations, and molecular analysis was done. Results indicated that there are multiple genetic lineages invading the Florida coast. Most samples were *M. coccopoma*. It was not possible to determine where the invasion originated from. There were no statistical differences between native and invasive populations for measures of genetic diversity – no evidence of admixture.

Ongoing and future research include further study of species complex, temporal differentiation comparison within non-native populations, and the use of microsatellites to investigate genetic structure using faster evolving markers.

Wednesday, October 5, 2016

The meeting reconvened at 8:30 a.m. The Chairman again provided the opportunity for public comment. No comments were received.

Overview of the Texas Lionfish Symposium and Future Plans

Hartman reported that initial hurdles of the symposium were interest, funding, and expectations. Sixty invitations were sent out to federal, state, and non-governmental agencies, universities, and public corporations. There were 39 attendees, with varied expertise. The 3-day symposium consisted of presentations, public outreach, and facilitated break-out topics.

The next symposium will be held February 15-16, 2017 at the NOAA Galveston Laboratory. The goal will be a multi-pronged approach to mitigate lionfish impacts on ecology and economy, and to use lionfish as a 'poster child' for what not to do. Long-term plans for the symposium are to hold it every 2-3 years.

Overview of the USGS ANS Database Updates

Neilson reported that NAS Database Program updates include a mobile reporting app, and a new point map interface.

Update on New Aquatic Nuisance Species Introductions

Neilson reported that NAS alerts are generated when a species is new to one or more geographic levels in a country, state, drainage, or county, and observed within the last six months. Since April 2016, there have been 29 fish, 22 mollusks, and 15 plants. There have been nine fish, eight mollusks, two plants, and two frogs in Florida, Texas, South Carolina, Georgia, and Mississippi.

Aquatic Nuisance Species Task Force Update

Strakosh reported that they are working on an additional invasive species to list, which will take approximately two years. There is a possibility that lionfish will be listed as an injurious species.

The use of using foreign sand for beach reconstruction and habitat projects has come up. If no source of domestic sand was available to a municipality, foreign sand could be used instead. The concern was that possible invasive species can be in the sand. However, after researching this, it was found that that practice is regulated.

Ballard reported that there will be no increased panel funding in the foreseeable future from the ANSTF.

The ANSTF will not host an international symposium on the use of CRISPR, but the subject will be incorporated into the innovation summit that NIMFS will be holding on December 5, 2016.

Mexico will be added as a standing seat to the SOP.

Discussion about Panel and Work Group Membership

Ballard reported that he will be contacting people for possible membership for the panel's tribal seat. A representative for aquaculture will also be sought.

Sommers is the new Chairman for the Pathways/Prevention Work Group. Strakosh was added to this work group. Bonvechio and McMahon are the new Chairmen for the Eradication/Control/Restoration Work Group. McGarrity was added to this work group. McGarrity and Ballard were added to the Research/Development Work Group. Kingsley-Smith was added to the Education/Outreach Work Group.

Ballard stated that as an Action Item, the EDRR Plan will be redone.

Update on USFWS Region 4 Aquatic Nuisance Species Activities

Strakosh reported that there will be a one-half percent decrease from the FY2016 budget for the Small Grants Program. Funding for FY2016 was less than anticipated, and money was pulled from other programs to support projects.

A rapid response task team will be created in the future to determine what resources, personnel, supplies, etc. are available to respond to partners' needs in the event of detection.

An eDNA trailer will be obtained from Region 3 that can be staffed and deployed throughout the southeast region to assist with partners' needs.

Update on the Invasive Species Traveling Trunk Revisions

Gonzalez reported that she is gathering information on adding feral hogs to the traveling trunk.

Ballard reported that a replica of an Asian carp will be added to the trunk. He is also attempting to obtain a replica of a lionfish. A poster will also be created for teachers to keep in their classrooms after utilizing the trunk. The PowerPoint presentation will also be updated. No new invasive plant species will be added to the trunk at this time. An elementary school invasive species interaction game will be created in the future.

Kingsley-Smith reported that he obtained two apple snail shells, and an egg mass encased in rubber for the trunk, which were passed around at the meeting for the panel members to see.

Kumpf stated that he will update the notebook that is included in the traveling trunk.

Update on the Establishment of a GSARP Distinguished Service Award

Ballard reported that he has researched how other agencies and organizations handle their awards, and found that most turn in nomination letters. **Ballard** created a standard format template for an online GSARP Distinguished Service Award nomination form that will be put on the GSARP website. When nominations are opened, a link will be provided to the nomination form. Nominees will be compiled and reviewed by the review committee. The Chairmen and Co-Chairs of the Work Groups will decide who the award will be presented to. The award will pertain to aquatic invasive species in the GSARP region.

It was decided that the style of the award will be a wall plaque.

It was decided that the name of the award will be changed to "GSARP Distinguished Achievement Award".

Update on the Clearinghouse of Outreach Materials

Ballard stated that if anyone has any pdf outreach materials they want placed in the clearinghouse, to get them to him, along with the appropriate contact person and their information. The clearinghouse will be on the GSMFC website in the spring.

A clearinghouse for completed risk assessments will also be put on the website.

State Reports/ Members Forum

<u>Florida</u>

Sommers reported on the Panhandle Pilot Program, which is a year-long program that focuses on seven Florida panhandle counties. For every 100 lionfish tails submitted to a checkpoint, participants are eligible to receive either a red grouper or cobia tag for harvest over the bag limit in state waters. Individuals or groups that harvest 500 or more lionfish are eligible to name an artificial reef. To date, over 6,000 lionfish have been submitted to the program. The program ends on May 20, 2017.

The 2nd Annual Lionfish Removal and Awareness Day was held May 14-15, 2016. During this event, over 14,000 lionfish were removed from state waters. Multiple local celebrity chefs prepared and served lionfish dishes to demonstrate the ease of preparing lionfish, and to encourage consumption. The event also served as the kickoff for two new lionfish incentive programs: the state-wide Lionfish Challenge, and the Panhandle Pilot Program.

The Lionfish Challenge ran from May 14 – September 30, 2016. Participants have collectively submitted 11,800 lionfish. The participant who harvests the most lionfish before the conclusion of the program was crowned the Lionfish King/Queen. Raffle prizes were also awarded.

Staff attended 18 lionfish outreach and education events around the state. These events were attended by over 3,000 people.

The Loxahatchee Slough and Loxahatchee River in Palm Beach County were electrofished to assess fish community structure, including the presence and relative abundance of non-native species in natural waters. The non-native species found in two natural areas were tilapia, spotted tilapia, and sailfin catfish. Of interest was the large number of sailfin catfish observed spawning along the banks in some areas of the Loxahatchee River. Their burrows exacerbate shoreline erosion, and could be damaging in streams and rivers during high water flow. All of the sailfin catfish and most of the other non-native species were removed.

On April 16, 2016, the 7th Annual Everglades Cooperative Invasive Species Management Area (ECISMA) Nonnative Fish Round Up was held. The primary objectives of the event are to promote consumptive use of non-native fishes and to increase public awareness on non-native

fish issues. Approximately 1,000 fish comprised of 14 different species were submitted during the one-day event. The primary species removed include Mayan cichlid, oscars, blue tilapia, and sailfin catfish.

The Bullseye Snakehead Round-Up 2016 tournament season ended September 17th. Over 380 bullseye snakehead were caught. The largest weighed 11.2 pounds.

The 2nd Annual 2016 Nonnative Fish Catch, Click and Report Contest was held in April and sponsored by FWC. The objectives of this state-wide contest are to document non-native fish species in areas not commonly sampled by biologists, to increase public awareness of non-native fish issues, and to promote consumptive use of non-native fish. A total of 131 non-native fish reports were submitted by 44 participants, and 29 Instagram reports were submitted. A total of 22 non-native fish species were reported. Mayan cichlid, blue tilapia, and spotted tilapia were the most common.

USGS and FWC hosted a Fish Chat in May for biologists in south Florida studying non-native fish. Participants collected non-native fish from a variety of locations not routinely sampled by FWC. Twenty non-native fish species were collected, and 42 lots of 248 voucher specimens were given to the Florida Museum of Natural History.

A large population of African clawed froglets and tadpoles were discovered in a small retention pond in a mobile home park in Riverview, FL by biologists from the University of Florida's Tropical Aquaculture Laboratory (UFTAL). UF notified FWC, and 13,000 tadpoles were removed from the pond. FWC decided to renovate the pond as a control effort due to the concern of ACFs being an effective carrier of *Batrachochytrium dendrobatidis* (Bd), a chytrid fungus which has been linked to global declines in amphibian populations. A siltation drift fence was installed as a migration barrier. Hydrated lime was chosen as the preferred option to renovate the pond, which is environmentally friendlier than rotenone and less likely to cause a fish kill in the event of an accidental spill. In August, 150 pounds of lime was applied to the pond, and 50 pounds was spread in the area between the water line and the siltation fence. Any froglets or adults attempting to escape the pond were captured and euthanized. Follow-up visits yielded no surviving froglets or tadpoles.

<u>Georgia</u>

Bonvechio reported on the Satilla River Flathead Catfish Removal Project. During the current 2016 sampling season, over 5,000 flathead catfish have been removed. Since 2007, over 60,000 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. Ongoing intensive harvest is required to prevent the population from rebuilding.

In 2016, over 160 blue catfish were harvested. The increase in observed blue catfish is a concern, and continued monitoring and removal of the species will occur.

Asian carp continue to move up the Tennessee River system in Alabama. There are many potential vectors for the spread of Asian carp into Georgia waters, such as inter-basin transfer via angler bait bucket. Their movement is continuously monitored by GA DNR.

Giant salvinia is one of the top species of concern in the Georgia Aquatic Nuisance Species Management Plan. A treatment program was developed to ensure that the plant does not spread. All herbicide treatments and monitoring are conducted by Fisheries Management personnel. In June 2016, six Asian swamp eels were collected in Cobb County.

In April 2016, a koi (Cyprinus carpio carpio) was collected in the Coosa River.

Three red bellied pacu were caught in the Alcovy River in June 2016.

A yellow perch was caught in the Oconee River in May 2016.

From November 2014 until August 2016, 15 wild grass carp were captured and submitted for triploid testing in Warm Springs. All 15 fish tested positive as triploids.

The GA WRD website has been revamped. Input was received from several regions. Aquatic nuisance species examples and potential future threats were summarized. Also addressed were major diseases and epidemics with neighboring states trout populations, aquatic vegetation issues, and other non-game invasives.

<u>Louisiana</u>

Reed reported that four species of carp (grass, bighead, black, and silver) are invading Louisiana's rivers, streams, and reservoirs. Ongoing research includes impacts the carp may be having on native fishes of similar trophic level.

Apple snails have colonized the waters of southeastern and south central Louisiana in the lower Atchafalaya and Mississippi River basins during the past decade. They are spreading more rapidly and distant than in previous years.

LDWF has received 31 reports of tiger shrimp in 2016 from commercial and recreational fisherman catches along the Louisiana coastline from the Texas state line to the Mississippi River.

Two reports of land crabs have come from the Grand Isle-Grand Terre area of lower Barataria Basin, where they have been found inhabiting the mangrove trees.

<u>Mississippi</u>

Burris reported on outreach activities. The inaugural meeting of the Mississippi Aquatic Invasive Species Task Force (MAISC) was organized and attended by DMR. At the Mid-South Aquatic Plant Management Society meeting, DMR gave a presentation about their aquatic vegetation control efforts. At the Celebrate the Gulf Marine Education Festival, DMR displayed and distributed invasive species outreach materials, including items from GSARP's Traveling Trunk, as part of an interactive outreach exhibit.

As part of their early detection/rapid response activities, DMR conducted an aerial survey, two ground surveys, and 66 boat surveys for early detection of AIS and monitoring of existing infestations. A program of integrated pest management using salvinia weevils and limited spot

herbicide application was used to treat existing populations of common salvinia and giant salvinia. In Robinson Bayou in the Pascagoula River, 3,485 giant apple snail egg masses were destroyed, and 35 live snails were removed.

A report of lionfish on one of Mississippi's offshore artificial reef sites was received and confirmed. Four confirmed reports of Asian tiger shrimp were also received.

Riecke provided the freshwater report. Their aquatic plant control activities included chemically treating several water bodies for invasive plants.

The first meeting of the Mississippi Aquatic Invasive Species Council was held to guide implementation of the activities specified in the *Mississippi State Management Plan for Aquatic Invasive Species*.

DWFP is continuing to work with Chef Philippe Parola and Moon River Foods to promote the harvest of Asian carp. Special Harvest permits were issued to Moon River Foods for the use of special gear.

There are new detections of black carp in the Mississippi River near Greenville, and Brazilian elodea and giant salvinia in the Ross Barnett Reservoir.

Links to the Mississippi 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.

Distribution continues of "Stop Aquatic Hitchhikers" cards along with all boat registrations or renewals that are mailed out.

Future activities include: composing freshwater fishing bait regulations to specify what bait can be legally sold, possessed, transported, and used in Mississippi; seeking approval of legislation required to initiate licensing of retail bait outlets selling live freshwater fishing bait; adopt 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; establishing an EDRR monitoring program comprised of state and federal personnel who sample aquatic species in Mississippi public waterways on a routine basis.

North Carolina

A new sighting of Chinese mystery snail was reported from the Cape Fear basin, and identification will be confirmed soon.

Flathead catfish are moving upstream in several watersheds in the Tar River and Neuse River basins. This is likely the cause for the decline of Carolina Madtoms.

Gill lice have been found on brook trout and rainbow trout populations. Anglers have been asked to report observations of gill lice, and NCWRC will continue to sample brook trout and rainbow

trout populations across the mountains of North Carolina to document the distribution and status of gill lice.

Whirling disease was confirmed in rainbow trout collected from the Watauga River in July 2016. This is the first occurrence of the disease in North Carolina. It was also identified in the Elk River. The NCWRC initiated testing of self-sustaining wild trout populations in spring 2016 for the presence of *Myxobolus cerebralis* and whirling disease. Approximately 1,500 trout from 36 localities were examined. Four collections from three major basins were infected with *Myxobolus cerebrali*.

In the Tuckasegee River, *Didymosphenia geminata* (Didymo) was documented for the first time in North Carolina. Additional research is needed to determine its prevalence in the Tuckasegee River and throughout the state.

Lionfish continue to thrive off the North Carolina coast. NOAA is working to address lionfish ecological impacts, control strategies, and various commercial harvesting methods.

In Lake Waccamaw, hydrilla has been completely suppressed by fluridone treatments in 2016. Tuber densities have declined within the treatment area since 2012, but remain at detectable levels. Continued management is needed to fully deplete the tuber bank in the infested area.

A large section of the Eno River was treated with fluridone in 2015 and 2016 to control hydrilla. This was the second year of a two-year pilot project with the objective to demonstrate the effectiveness of an herbicide treatment (fluridone) to control hydrilla in a riverine system. Preliminary survey results suggest there was significant control of hydrilla, with minimal to no impact to non-target plant and animal species.

Additional localities of hydrilla have been confirmed in the Cape Fear Basin. In August 2016, a small area at a public boat access in Lake Rim was discovered, and then treated with herbicide in September 2016. NCWRC staff are working towards a plan to identify the extent of hydrilla occurrence in the upper half of the Cape Fear basin, with potential survey expansion into other vital rare aquatic species habitats in the Chowan and Neuse basins.

In some parts of North Carolina, blue catfish have become a topic of concern. Their range has been expanding over the years, and commercial landings have increased. Much of the concern is centered on HR 2419 (The Farm Bill) and a provision intended to impact imported aquaculture-raised fish.

The North Carolina Aquatic Nuisance Species Management Plan has been finalized by the working group, and has been signed by all three departments. There is currently no plan for submission to the national ANS Task Force for approval.

Puerto Rico

Robles reported that they are continuing to survey the islands. They are better able to reach more countries since they have provided information in Spanish on the website. Data has been

uploaded as well. Iguanas are a large problem in PR. The airport has had to be shut down for several hours due to so many iguanas being on the tarmac that airplanes were unable to land.

South Carolina

Kingsley-Smith provided an update on island apple snails. MRRI researchers completed additional surveys of ponds in three locations that have an established population to determine the extent of *P. maculata* spread. SCDNR researchers completed a survey of 100 stormwater ponds between May and September 2015 across the five eastern South Carolina counties. An additional invasive freshwater snail, *Melanoides tuberculata*, was discovered. The survey was expanded, and three additional invasive freshwater snail species were discovered – *Bellamya japonica*, *Biomphalaria havanensis*, and *Pyrgophorus parvulus*. In June 2016, the sites with *M. tuberculata* and/or *P. parvulus* were revisited. Snails were collected and brought back to the MRRI, identified, and measured. In total, 8,388 *M. tuberculata* specimens were collected, and 1,099 *P. parvulus* specimens were collected.

SCDNR researchers continue conducting research on Asian tiger shrimp. When specimens are donated to the MRRI, in addition to measuring and sexing them, the first three pairs of pleopods are collected. These samples are held in a tissue repository in Beaufort, NC. MRRI researchers want to learn the status of efforts by USGS researchers to use genetic approaches to identify the geographic origins of P. monodon living along the Gulf and Atlantic coasts of the U.S, and the population structure of the shrimp in its introduced range.

The charrua mussel, native to Central and South America, appears to be expanding northward in South Carolina. The mussel has the potential to heavily foul structures that are submerged in seawater. It is believed that their arrival was most likely via transport in ballast water or in the fouling community on hulls of vessels arriving from South America. Recreational vessels from areas where the mussel is already established provides an additional potential vector of introduction.

<u>Texas</u>

McMahon reported that funding for 2016-2017 was increased. To address statewide management of aquatic invasive species, \$6.3 million was received, an increase from \$1.1 million in the previous two-year funding cycle.

In February, the first Lone Star Lionfish Symposium was held at the Texas State Aquarium. A public forum was held, and attending experts answered questions about lionfish threats and management. A draft management plan is being developed based on priorities identified during this symposium.

TPWD is sponsoring a study by researchers at Texas Tech University that seeks to delimit the range of Bigheaded Carp in north Texas rivers by using traditional electrofishing and eDNA-based detection technologies. The results of this study will help to refine preventive regulations restricting live bait transfer, and target outreach signage to reduce the risk of transfer to new areas.

Zebra mussels have spread from Lake Texoma to 12 additional water bodies in three river basins. Of these, eight can be classified as fully infested with zebra mussels. In 2016, fully established infestations were detected in two new lakes. Zebra mussels and/or their larvae were also detected repeatedly in two other new lakes. In 2015, TPWD initiated a marina outreach program to help prevent contaminated boats from entering non-infested waters. In 2016, TPWD teams visited nearly 80 marinas to further develop these partnerships.

Estimated cumulative state-wide spread of giant salvinia in public waters has increased since it was first found in Toledo Bend Reservoir in 1999. Twenty-five water bodies have had giant salvinia. It has been eradicated in eight water bodies. However, certain water bodies have frequent re-introductions that have periodically required rapid response to contain and eradicate. In 2016, TPWD has chemically treated over 7,000 acres on several lakes. Also, over 580,000 adult giant salvinia weevils have been released on Toledo Bend and Caddo Lake to help manage infestations. Research is being done on development of endocides, which show great promise as a new tool for giant salvinia management.

TPWD has purchased a mobile rapid response unit consisting of a fully-enclosed cargo trailer containing 1,300 feet of floating containment/oil spill boom. Two additional trailers may be purchased in fiscal year 2017.

The two most problematic riparian invasive plants in Texas are salt cedar and arundo. Increased funding has allowed substantial expansion of control efforts.

Hartman reported that they will be updating their marketing division to increase media outlets and other campaigns.

HARC

Gonzalez reported that they received funding from TPWD and will be working to update species profiles on their website, and add additional species. Also, the pocket guide of invasive species that was created several years ago will be updated as well.

USACE

Spencer reported that lyngbya algae was found in Bankhead Lake. Attempts are being made to contain it and address the problem. At Lake Seminole, herbicides and grass carp are being used to control hydrilla. In the Savannah district, hydrilla is an issue and has been found to carry AVM. There is a proposal to do integrated management using herbicides and grass carp there as well. There is a concern though of how this might affect native vegetation. The USACE has funded control measures for iguanas near Lake Okeechobee. There is concern of their burrowing which degrades roadbeds and terrain. The USACE's UAV (unmanned aerial vehicle) program is working with the USDA biocontrol class to do biocontrol releases with the drones to target harder to reach areas.

Port of Corpus Christi

Carangelo reported that they are attempting to remove Brazilian pepper from national and state areas. Beetles continue to be released onto salt cedar trees.

National Estuary Programs

Jacoby reported that better linkages are being created for the Florida estuary program.

Discussion of ANSTF Recommendations

Increase funding to the panels that they can utilize to support annual meetings, coordination, and panel activities. A Motion was made to accept the Recommendation. The Motion was seconded, and passed.

Provide feedback on the Panel's concerns to pursue amending the Lacey Act to prohibit intrastate transport. A Motion was made to accept the Recommendation. The Motion was seconded, and passed.

Other Business

Next Meeting Time and Place

The location of the next meeting will be in Savannah, Georgia.

The next meeting will take place the second week of May 2017.

Public Comment

Kristen Sommers 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.



TCC SEAMAP SUBCOMMITTEE MINUTES Wednesday, October 12, 2016 New Orleans, LA

Chairman T. Switzer called the meeting to order at 8:30 a.m. The following members and others were present:

Members

John Mareska, ADCNR/MRD, Gulf Shores, AL Jill 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

Eric Hoffmayer, NOAA/NMFS, Pascagoula, MS Darin Topping, TPWD, Rockport, TX Myron Fischer, LDWF, Grand Isle, LA Christian Jones, NOAA/NMFS, Pascagoula, MS Mark Lingo, TPWD, Austin, TX Travis Williams, MDMR, Biloxi, MS Harry Blanchet, LDWF, Baton Rouge, LA Andy Fischer, LDWF, Baton Rouge, LA

<u>Staff</u>

Jeff Rester, SEAMAP/Habitat Program Coordinator, GSMFC, Ocean Springs, MS Dave Donaldson, Executive Director, GSMFC, Ocean Springs, MS James Ballard, Sport Fish Restoration/ANS Coordinator, GSMFC, Ocean Springs, MS Ashley Lott, Staff Assistant, GSMFC, Ocean Springs, MS

Adoption of Agenda

J. Rester noted a change to the Agenda. Item #5, Final Approval of the 2016-2020 SEAMAP Management Plan is removed. The final edits are still being worked on. In its place, **J. Rester** would like to add a discussion of the Vertical Line Sampling Universe. **J. Mareska** <u>moved</u> to accept the agenda as modified. C. Dean seconded and the motion passed.

Approval of Minutes

F. Martinez had a correction to the SEAMAP minutes from July 26, 2016. Under Status Report on the 2016 Vertical Line Survey, he noted that it should state that Texas decided to buy one (1) Garmin sonar unit instead of five (5). **C. Dean <u>moved</u> to approve the SEAMAP minutes from the July 26, 2016 meeting as corrected. J. Mareska seconded and the motion passed.**

Administrative Report

J. Rester reported that since the Committee's last meeting in July, SEAMAP has completed the Vertical Line Survey, Bottom Longline Survey, and the Fall Plankton Survey. The Fall Shrimp/Groundfish Survey began last week and is currently ongoing. **J. Rester** asked the subcommittee to please remember to send to him the data and cruise reports for all SEAMAP related activity. The Subcommittee discussed SEAMAP taxes at the July meeting. D. Donaldson asked Dr. Paul Doremus additional questions related to SEAMAP funding at the end of September. One question was why SEAMAP was paying a 15.8% tax rate while other programs were paying a lower percentage. Dr. Doremus stated that all programs were paying the same management and administrative costs at the headquarters level. The differences arose as to the rate of M&A at the regional level. Other questions included a breakdown of these "taxes" moving backward in time? Is NMFS anticipating further increases in these leverages? What is the maximum percentage NOAA can assess a funding source? Who sets that percentage? When was it established? NMFS foreseeing any assistance to offset the increase in survey cost as a result of this FLSA mandate? Dr. Doremus will hopefully respond to these questions in the near future.

The SEAMAP Subcommittee and other PIs submitted two proposals to the latest NOAA Science Program's funding opportunity. The trophodynamics (\$2.66 million over 3 years) and life history (\$1.98 million over 2 years) proposals were submitted September 27. Approximately 270 letters of intent were originally submitted. Dr. Julien Lartigue stated that they received approximately 140 full proposals. Not all of these proposals were submitted under the competition's research priority to increase our understanding of living coastal and marine resources and their habitats in the Gulf of Mexico. The NOAA RESTORE Act Science Program was looking to spend \$12 million on 5-10 projects under this research priority.

Review of the Draft Vertical Line Survey Operations Manual

At the July meeting, the Vertical Line Survey Operations Manual was discussed. A couple of items were left in question and they need to be cleared up. The first deals with the 3-way swivel midway down the backbone. **T. Switzer** stated that Florida has no strong feelings either way about it. M. Fischer stated that Louisiana was trained by commercial fisherman and based on their advice, they use it for economical reasons and it helps with sharks. Louisiana would like to keep the 3-way swivel. Texas does not see a need for it. J. Hendon stated that Mississippi does not use it but is not opposed to it if it is beneficial to others. Since the 3-way swivel has some benefit to some members of the subcommittee without any drawbacks, it was decided to keep it in the manual. The next issue deals with weights, 5lb vs. 10lb. It was discussed that the different weights were used based on the types of conditions. NMFS uses the 5lb, but uses 10 if the currents are really ripping through the area. E. Hoffmayer asked if it was worth switching over to a spectre line? J. Hendon stated that they are working on a different project and they are using a spectre line. J. Rester asked if she could pull some data/information together about the spectre line and present it to the subcommittee at the March meeting. She will work on it. Louisiana, Alabama and Texas all stated that they use 10lbs. Florida stated that they use 5lbs unless the current gets high, then they use the 10lb. T. Switzer stated that to keep things simple for now, keep the weight at 10lbs and then the subcommittee will reassess this issue in March after J. Hendon presents the information on the spectre line. J. Rester stated that once the Vertical Line Survey Operations

Manual is finalized, the video J. Hendon shot on how gangions are made, will be embedded in the manual for reference.

J. Hendon <u>moved</u> to approve and finalize the Vertical Line Survey Operations Manual. F. Martinez seconded and the motion was passed.

Vertical Line Sampling Universe

It was noted at the meeting in July that the states were having issues finding some of the artificial and presumed reefs. J. Mareska stated that Alabama did not find four artificial reefs during the May sampling. Louisiana had some oil and gas platforms missing as well. F. Martinez stated that Texas is only finding about 1/3 of their presumed/artificial reefs. J. Rester asked if the states would have any issues deleting those wrecks/obstructions from the database because they are gone, missing or wrong coordinates. Trying to get away from going out and wasting time trying to find reefs. E. Hoffmayer suggested having a secondary site selected, restricted to the same habitat type, within a buffer zone. It was decided that J. Rester will give out the primary targets to the states and also give out a list of alternates within a five (5) mile buffer zone. J. Rester will work on this and get it out to the states early next year.

TPWD Perspectives on SEAMAP Surveys

M. Lingo presented a power point presentation on how Texas is handling the Vertical Long Line Sampling and the constraints they are faced with. Texas wants to continue working with SEAMAP, but they can only do so much based on their funding and capabilities. **J. Rester** asked if someone else from SEAMAP contracted out boats for Texas to stay out overnight, would they be able to do that? M Lingo will look into it, but the staff on the boat is still responsible for their other sampling duties and they must be paid for the time they are out on the boat. **T. Switzer** noted that for at least one year, Texas needs to get the deeper water stations. **M. Lingo** again stated that they want to participate in SEAMAP, but they can only do what their funds allow them to do.

Shrimp/Groundfish Station Future Allocations

Since SEAMAP has been allocating stations for the shrimp/groundfish surveys, there has been a reduction in the number of stations set for the survey. So the problem we have run into is how do we allocate the stations amongst the various partners. For the fall of 2016, there were only ten (10) stations that fell off of Alabama and Mississippi. The Alabama boat broke down, but Mississippi was able to cover the majority of the stations. Florida was not able to do the fall survey because of budget cuts. **T. Switzer** stated that he believes Florida will be able to do the survey every other year, so they should be able to do the survey for fall 2017. B. Pellegrin asked if Florida had money for one full survey, could they do half a survey in the summer and half in the fall? **T**. Switzer stated they have no problem with doing half and half, and once they have the funds, will do the full summer and full fall surveys. **J. Hendon** stated that Mississippi can help out by picking up some of the stations in the Florida panhandle. J. Mareska stated that Alabama can help out as well, but the stations need to be in a fairly close range to the Alabama stations. J. Rester stated that when we have limited funding, we need to optimize the use of our time as much as possible to get the most out of our vessels for the surveys. E. Hoffmayer suggested that the subcommittee revisit this topic at the March meeting. T Switzer will have a better idea of what money he has left over and what Florida can do for the summer and fall 2017 surveys.

Staff Time Needed for SEAMAP Surveys

E. Hoffmayer stated that this topic came about because labor estimates are varied across the states for the statements of work. If possible, he would like to get to a standardized time frame as to what it takes to get the work done. His intent is to just look at time at sea. How many people go, how long does it take to load, unload the boat. How many hours are spent in the lab. Since the states approached this in different ways, he would like each of the states to look at their time and revise so all are on the same page. He asked each state to look at the number of stations, number of man hours per station and total hours at sea (this is to include prep time, load, unload boat time and lab time). Then add the total number of hours together and divide by the number of stations to equal number of hours per station. Is this time reasonable/realistic.

Election of Chairman

J. Mareska <u>moved</u> to nominate T. Switzer for Chairman and R. Hendon for Vice-Chairman. C. Dean seconded and the motion passed.

Other Business

It was noted that this is the last meeting that Butch Pellegrin will be attending. He is retiring at the end of the year. Dr. Christian Jones will be taking his place on the committee.

There being no further business, the meeting was adjourned at 11:53 a.m.

S-FFMC MENHADEN ADVISORY COMMITTEE MINUTES October 12, 2016 New Orleans, Louisiana

APPROVED COMMITTEE CHAIRMAN

Chairman Mroch called the meeting to order at 1:06 p.m. with the following in attendance:

Members

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, Dickinson, TX Peter Himchak, Omega Protein, Tuckerton, NJ Matt Hill, MDMR, Biloxi, MS Scott Herbert, Daybrook Fisheries, New Orleans, LA John Mareska, ADCNR/MRD, Gulf Shores, AL Borden Wallace, Westbank Fishing, LLC, Empire, LA

Others

Amy Schueller, NOAA Beaufort Lab, Beaufort, NC Gavin Rhodes-Harrison, Daybrook Fisheries, New Orleans, LA Toby Gascon, LDWF, Baton Rouge, LA Glenn Constant, USFWS, Lafayette, LA Kelly Lucas, MDMR, Biloxi, MS Ben Landry, Omega Protein, Houston, TX Tabitha Lindley, Omega Protein, Inc., Houston, TX Lee Alexander, Daybrook Fisheries, Inc. Empire, LA Jeff Short, JWS Consulting, Juneau, AK Shane Treadaway, Westbank Fishing LLC, New Orleans, LA Ed Swindell, Marine Process Services LLC, Hammond, LA Carly Somerset, MDMR, Biloxi, MS Dalton Berry, Daybrook Fisheries, Empire, LA Monty Deihl, Omega Protein, Reedville, VA Denise Kinsey, LDWF, Baton Rouge, LA Carolina Bourque, LDWF, Baton Rouge, LA Travis Williams, MDMR, Biloxi, MS Ty Lindsey, LDWF, Baton Rouge, LA Sean Jackson, LDWF, Baton Rouge, LA Chris Schieble, LDWF, New Orleans, LA Christian Winslow, LDWF, Baton Rouge, LA Harry Blanchet, LDWF, Baton Rouge, LA Corky Perret, Poplarville, MS Tommy Williams, Daybrook Fisheries, Baton Rouge, LA Steven Bodiford, LDWF, New Iberia, LA Jimmy Sanders, MDMR, Biloxi, MS

Staff

Dave Donaldson, Executive Director, Ocean Springs, MS Steve VanderKooy, Program Coordinator, Ocean Springs, MS James Ballard, Program Coordinator, Ocean Springs, MS Jeff Rester, Program Coordinator, Ocean Springs, MS

Introductions

Chairman Mroch welcomed everyone and began the introductions around the room.

Adoption of Agenda

Wallace moved to approve the agenda, Adriance seconded, and the agenda was approved.

Approval of Minutes

The MAC reviewed the draft minutes from the last annual meeting, March 15, 2016 in San Antonio, Texas. *Herbert moved to accept the minutes as written, Wallace seconded, and the minutes were accepted*.

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 2016 Gulf Menhaden Season and Forecast for 2017

Mroch reported that through the end of September, the landings in the Gulf have been around 432,000 mt which is a 7.4% decrease from 2015 and 4.6% decrease from previous 5-yr average. He noted that this past winter was warm and wet suggesting that recruitment may be good this year. The season started strongly with high landings in June while July reported the lowest landings since 2010 which may be related to several regular storms and Tropical Storm Colin disrupting fishing. In August, a non-tropical system caused significant flooding in Louisiana, further disrupting fishing. This no-name storm dumped more water in Louisiana than all the tropical systems in recent history. Landings since July have been close to the 5-yr average.

Age samples are being worked up a little slow due to a back log resulting from new processor at NOAA but with about a third of the samples processed, age-1s dominate the catch in Empire and Moss Point, with age-2s and age-3s showing up more strongly in the western portion of Louisiana. **Mroch** reported that 30 vessels landed fish for reduction with one full time run boat and one bait boat which occasionally landed at Abbeville. The fishing effort for 2016 measured in vessel-ton-weeks or VTWs was 238,707 VTWs, which is down from 2015. Based on the previous year's average landings, we predict a total of 493,000 mt will be landed in 2016, a decrease from 2015 and the 5-yr average. The preliminary forecast, based on the 2016 effort, projected landings, and expected participation, is estimated to be around 492,000 mt to be landed in 2017. The 2016 season was about 6% higher than the projection **Mroch** made in March.

Update on the Atlantic Menhaden Fishery

Mroch also provided a short update on fishing in the Atlantic where only one plant is in operation in Reedville with 8 vessels unloading menhaden for reduction. In addition, one bait boat had minor landings at the plant for reduction. An additional 5 purse boats fished for bait on the Atlantic this season as well. Through September 30, the total landings along the Atlantic were just over 113,000 mt, which was down 12% from last year and 9% from the 5-yr average. The total TAC for Atlantic menhaden in 2016 is right at 186,000 mt of which 77% or around 143,000 mt goes to the reduction fishery.

Mroch updated the group on some recent work NOAA has been involved with related to the use of Unmanned Aerial Systems (UAS) to estimate menhaden biomass. They are utilizing both a PUMA aircraft to fly transects to locate schools off the Atlantic and then release a hexacopter to fly over the school to provide additional photographs. The school will be measured underwater using hydroacoustics to generate a 3-dimensional estimate of the school. Additional data includes the ability to measure individual fish to estimate the total biomass. This is a pilot study to look at the potential for the technology. There are lot of issues to overcome before this is available for a wider study.

Texas Cap for 2016

Mambretti reported on the Texas cap for this past season, and it is estimated that the industry only fished two days in Texas waters and landed about 3% of the available TAC at around 1M lbs. **Mambretti** also indicated that despite a large population of young menhaden inshore again this year, the harbor pilots were prepped and the impingement was not a problem. They even expanded their warnings to vessels in Sabine Lake so they could avoid overheating issues with impingement. Since the westernmost plant closed in Cameron, the fleet has not traveled as far west in search of fish from Texas.

Review of Port Sample Acquisition and Processing in 2016 and Discussion of 2017 Sampling

VanderKooy reported on the sampling this past season. Despite having some issues last year, the port samplers seem to be paced well to meet the sampling goals of about 300 samples per plant by year end. **Mroch** indicated that new reader, Amanda, who replaced Ethel is getting caught up and learning how to process the scales for the age comps. **VanderKooy** anticipates a continuation of sampling next season without any problem and the goal again will be for 900 total samples. If the landings are up by mid-year, we may need to reassess the weighting of sampling toward a plant that is getting higher pumpouts. Additional samples (over the 900) will require additional funds, which may not be available.

Additional samples are being aged from the state fishery-independent data. Mississippi, Alabama, and Louisiana are providing menhaden from state survey to Dr. Robert Leaf's (USM/GCRL) graduate student, who has been ageing fish. Mississippi is working on expanding the size classes that are included for ageing. It is hoped that if we have a couple years data we could include them in the stock assessment process in 2018. **Dr. Schueller** noted that ideally we would have a longer-term dataset, beyond the duration of a graduate student project. The other component of Leaf's project is to help define what amount of sampling would be required to adequately assess the age composition of the independent samples. **VanderKooy** reminded the MAC that the scale training is included in the current FIN training each year. It is hoped that the states will continue to collect biological data on menhaden and that they

will be able to share samples and continue to cross train. The group also hopes to get the bait fishery included in standard port sampling so they can be included in the assessment as well.

Gulf Menhaden Assessment Update

Dr. Schueller provided a short presentation on the updated assessment. The data used for this update included the life history data (maturity, natural mortality, and growth) and updated landings data from the three available sectors; reduction, recreational, and bait landings. We include some additional bait landings that had been excluded from the previous assessments because of confusing gear codes but we believe these may actually be truly bait and not just unloaded for reduction, which would have been double counted. They are minimal but are included now. As in the benchmark assessment, age comps from the commercial harvest were used as well as recruitment and adult indices from the various state fishery-independent data programs and length comps from the adult gillnet index.

The base run was configured the same as the benchmark from 2013 using the BAM model. In general, recruitment has been increasing with some very strong year classes in the later part of the time series. Those same year classes contributed to the overall biomass observed in the model outputs as well. Sensitivity runs were made to characterize uncertainty similar to the benchmark. There were some additional sensitivities which were included related to exploring steepness, selectivity, indices, landings, fecundity, and maturity. The retrospective analysis was completed removing terminal years 2014-2011. Bootstrapping was conducted to further address the uncertainty in components such as the landings, age compositions, indices, length compositions, and fixed parameters.

Dr. Schueller reviewed the reference points, which had been adopted following the SEDAR benchmark, of threshold = $SPR_{30\%}$ and target = $SPR_{35\%}$. The update indicates that the stock status is unlikely to be overfishing and the population is unlikely to be overfished. The model indicates that fishing mortality rates decreased during the 1990s and have remained at a low level through today. Additionally, spawning stock biomass (measured as fecundity) has increased steadily since the 1990s and remains at a high level.

Based on the update, some additional items should be considered for the next benchmark assessment. There should be some sampling from the bait industry to look at the age comps. Brown-Peterson et al. has worked on updated fecundity estimates and should have more data by the time of the next assessment. The biological data being collected from the states' fishery-independent data and being processed by GCRL needs to be examined and potentially included. Finally, the additional genetic data, which is being collected from Texas and the rest of the Gulf, needs to be evaluated for inclusion. The recommendation by **Dr. Schueller** is to conduct the next benchmark in 2018. **VanderKooy** indicated that the SEDAR schedule already has Gulf menhaden listed at this time.

Following the update and discussion, the MAC moved to accept the assessment update for use by the states to manage the Gulf menhaden fishery. The motion passed unanimously.

Election of Chair

Finally, the rotation of chair went back to the industry and **Scott Herbert** (Daybrook) was elected chair for the coming year.

Other Business

Mroch gave the audience an opportunity once again to provide any public comment. There was none.

With no further business, the meeting adjourned at 2:30pm.

TEE CHAIRMAN

SEA GRANT FISHERIES EXTENSION ADVISORY COMMITTEE MINUTES Thursday, October 13, 2016 New Orleans, LA

Chairman J. Lively called the meeting to order at 1:35 p.m.

Introduction of committee and guests

Members Present

Scott Jackson- FL Sea Grant Peter Nguyen- MS/AL Sea Grant Bill Balboa – TX Sea Grant Gary Graham- TX Sea Grant Tony Reisinger- TX Sea Grant Julie Lively– LA Sea Grant Rusty Gaude – LA Sea Grant John Supan – LA Sea Grant Thomas Hymel – LA Sea Grant

Guests

Bill Richardson – MS DNR Chris Nelson – Bon Secour Seafood/GOIC Laura Picariello – Audubon G.U.L.F. Ashford Rosenberg - Audubon G.U.L.F. Michael A Rice – Rhode Island Cooperative Extension/Sea Grant Denise Kinsey - LDWF

Approval of Minutes

One change was recommended by **Lively**. **Reisinger** moved to approve the minutes with recommended change and **Jackson** seconded the motion to approve.

Bylaws

Lively lead discussion on Sea Grant Extension Committee Bylaws. According to the bylaws each state should be represented by two Sea Grant Extension staff (Reisinger/Balboa – TX, Lively/Bui – LA, Jackson/Staugler FL, and Nguyen/vacancy – MS/AL). Nguyen discusses hiring status of positions that may fill the vacancy left by Dave Burrage formerly MS/AL. Lively discusses term limits for officers and extension committee members and recommends further evaluation and discussion of bylaws by the committee, at a later date.

Next meeting (spring) will be March 14-16, 2017 in Mississippi at location yet to be determined, and the fall 2017 meeting will be in Fairhope, Alabama October 17-19, 2017.

Discussion: Problematic algae, bacteria, and amoebas

Reisinger discussed the status of red tide along the mid and lower Texas coast. The bloom was first reported off Port Aransas and moved southward to the Lower Laguna Madre but did not persist. A subsequent bloom, possibly related to the Port Aransas bloom, has been reported in Corpus Christi Bay with some reports of isolated fish kills. However, this bloom has not resulted in as many public complaints of respiratory irritation from aerosol toxins as blooms in previous years. Detection methods like satellite and UAV are being employed and refined allowing better prediction and understanding of blooms. **Jackson** reported that HABs and other algal blooms seem to be getting more common in the Tampa Bay area. **Reisinger** believed blooms are nutrient driven and originate in or around the Bay of Campeche and move northward along the Texas coast. **Richardson** MS DNR reported a few algal blooms that impacted the oyster fishery in Mississippi in the past year or so but that recently a bloom of the organism responsible for ciguatera poisoning in Mississippi near Pass Christian. Christine Broussard is Mississippi's HAB expert and submitted

samples to FL for testing.

The group discussed the effects of HABs on oysters and oyster fisheries. Oyster fisheries are generally closed during documented red tide occurrences due to human health risks. **Supan** suggested oysters are sometimes affected by low dissolved oxygen and/or possibly high levels of HAB toxins resulting from the density of blooms and bloom die-offs.

Richardson asked about reporting repositories for HABs, and **Reisinger** said NOAA maintains an HAB site that is generally considered an accepted site for reporting HABs and for HAB info etc.

Lively initiated discussion on Vibrio and "brain eating amoeba. Supan believed it was important that people understand that temperature control standards implemented by the Gulf oyster fishery have reduced the numbers per capita of oyster consumption related illness in the U.S. The group discussed the importance of rapid response when a possible Vibrio infection is suspected. **Richardson** and others reported folks were afraid to visit coastal areas and get near the water due to possible sensationalist reporting of cases by media sources. **Nelson** suggested the group try to address misinformation that wound infection by Vibrio is on the increase in coastal areas when, in fact, it is not.

Jackson wrote an article on Vibrio and risks to beachgoers in FL. **Reisinger** and others discussed the need for some type of Sea Grant educational brochure to provide a better understanding regarding underlying risks to infections and information on response to suspected infections. **Supan** close discussion with a recommendation that this type of info is best left to each state's respective health and human services departments.

Presentation: Audubon G.U.L.F. United for Lasting Fisheries Update - Rosenberg

Rosenberg provided updated information and new information on **Audubon G.U.L.F** efforts in certification etc. and discussed a new effort in the skimmer trawl fishery to identify ways to engage the fishers when TED design and implementation was finalized.

Turtle Excluding Devices

Graham began a discussion on skimmer trawl TED implementation and challenges with early implementation and bad TED design that caused unrest and confusion in the industry. He clarified that bar spacing on TED's changed due to concerns of smaller Kemp's Ridley sea turtles in nearshore waters passing through wider bar spacing on offshore TEDs. Ashford commented that NMFS is reviewing the necessity of requiring the narrower bar spacing in inshore otter trawls as well. **Graham** said NMFS will likely provide the new TED's to fishermen impacted by the rule. He said there are two big issues facing the implementation of this rule 1) much of the fishery being evaluated is a very shallow water fishery that renders the TED's ineffective and 2) and the issue with fouling of the narrow bar spacing with Sauer kraut and sargassum.

Graham discussed evaluation of a new "flat bar" TED design that will likely be tested on a few Texas offshore vessels. Sharks tearing the flaps on top-shooting TED's, commonly used by the Vietnamese fleet, are creating the potential for increased TED violations if proper repairs are not made. A new chafing gear with a wire core and a repellent extracted from dogfish shark livers are being evaluated to reduce shark damage to trawl gear.

The NMFS gear monitoring team will be placing more staff in the field to do TED compliance inspections at Gulf coast seaports. There is an increasing demand for dockside certification of trawl gear, BRD's and TED's as growing numbers of wholesale and retail buyers request proof of sustainable harvest.

The "hummer line" is currently being evaluated as a possible BRD. **Graham** reports some success in sea trials of the new gear.

Gulf Sea Grant Fisheries Extension Updates

MS/AL-Nguyen

MS/AL Sea Grant has received applications for extension and seafood specialist position vacancies. They hope to have these positions filled within in the next several months.

MS/AL Sea Grant staff gave presentations of recent research publications at -I need Peter Nguyen to fill in the blanks here. I was not able to capture the entire title nor was I able to get authors/presenters.

"Aquaculture disease prevention....South Africa"

"Economic Impact of Bonne Caree..."

"Gulf Coast resilience Steve Sempier"

<u>FL – Jackson</u>

FL Sea Grant is working to reinvigorate the barotrauma education and is focusing efforts on charter and for hire fishers. Communications staff are working on new recreational fishing web page and includes updated info on barotrauma, circle hook use etc. In an effort to understand grouper population dynamics staff submitted a grant proposal to fund a tagging study. The 2017 national AFS meeting will be held August 20 -24 in Tampa and FL Sea Grant is hoping to moderate sessions on Artificial Reefs, Fisheries Extension and Cooperative research. FL Sea Grant will host a live broadcast of a regional Art Reef webinar on You Tube. A recent requirement that state historical surveys be conducted at art reef sites has resulted in delays and increased project costs for NRDA funded artificial reef projects off the Florida coast.

Texas – Reisinger

Graham, Reisinger and Dale Stevens of NMFS conducted TED inspection and certification training at three locations along the Texas coast. The program taught several Sea Grant Texas staff how to inspect TED's and TED installation on bay and Gulf trawlers. The ultimate goal of the program is to train shrimpers to conduct "self-checks" of fishing gear using NMFS protocols and standards.

Graham worked with the Flower Garden Banks National Marine Sanctuary staff to identify potential fisheries conflicts in a proposed expansion of the current protected areas around the reefs.

Landings reports from the offshore brown shrimp fleets indicate low production but higher prices at the dock. According to Reisinger white shrimp are selling for a lower price per unit than similar size brown shrimp; an interesting reversal of historic shrimp valuation. Historically, white shrimp were preferred by consumers and commanded a higher price than browns.

After a long history as an independent entity, the Brownsville-Port Isabel Shrimp Association merged with the Texas Shrimp Association.

Shrimp aquaculture facilities in Texas are experiencing production problems. Poor survival of PL's in ponds is the suspected cause but there is no documentation to support the assertion. Texas Sea Grant is in the process of reviewing applications for a new extension coordinator.

<u>Louisiana – Lively</u>

Louisiana Sea Grant is filling vacant Fisheries Agent, Communications Specials and Seafood Specialist positions.

RESTORE Act funds are coming in but most are being administered through the State Coastal Master Plan. Sea Grant hosted a town hall meeting to discuss the disposition of the funds.

Louisiana's blue crab fishery is MSC certified as sustainable but the stocks are considered overfished. In an effort to address overfishing the state is implementing seasonal closures and banning retention of immature females.

LDWF recently submitted a request to extend funding for the Louisiana Fisheries Forward program for 3 additional years and would like to see the traditionally marine fisheries program include freshwater fisheries, as well. The Louisiana Fisheries Forward is a multidimensional educational and training web tool deployed by LA Sea Grant to provide information to commercial fisheries producers, wholesalers, retail buyers and consumers.

Hymel discussed the Louisiana Shrimp Quality Initiative and the mobile education platform that demonstrates plate freezing techniques that dramatically improve shrimp quality and direct marketing efforts like Vermillion Bay Sweet shrimp, and others, that net participating producers greater returns from the sale of their products.

Supan discussed ongoing efforts with oyster hatchery and innovative aquaculture techniques, like triploid oyster production, that can produce high quality oysters year-round.

Other Business

Discussion: Lively discussed the use of the Google Drobox tool created by Scott Jackson.

Guest Reports –**Rice** with Rhode Island Cooperative Extension and Sea Grant extended an open invitation to any committee members that would like to visit and tour the state's oyster aquaculture facilities.

Graham moved to adjourn the meeting and is seconded by Reisinger.

There being no further business, the meeting was adjourned at 4:47 p.m.

APPROVED BY:

TECHNICAL COORDINATING COMMITTEE MINUTES Thursday, October 13, 2016 New Orleans, LA

Chairman Joe Jewell called the meeting to order at 1:30 p.m. The following members, staff, and others were present:

Members

Mark Schexnayder, LDWF, New Orleans, LA Richard Cody, FWC/FWRI, St. Petersburg, FL Glenn Constant, U.S. FWS, Baton Rouge, LA Joe Jewell, MDMR, Biloxi, MS Christopher Mace, TPWD, Rockport, TX John Mareska, ADCNR/MRD, Dauphin Island, AL Darin Topping, TPWD, Rockport, TX

Staff

James Ballard, GSMFC, Sport Fish/Aquatic Invasives Coordinator, Ocean Springs, MS Donna Bellais, GSMFC, ComFIN Programmer, Ocean Springs, MS Joe Ferrer, GSMFC Systems Administrator, Ocean Springs, MS Ali Ryan, GSMFC, Sport Fish/Aquatic Invasives Staff Assistant, Ocean Springs, MS Jeff Rester, SEAMAP Coordinator, Ocean Springs, MS Dave Donaldson, GSMFC, Executive Director, Ocean Springs, MS Steve VanderKooy, GSMFC, IJF Coordinator, Ocean Springs, MS

Others

Shane Bonnot, CCA, Houston, TX Travis Williams, MDMR, Biloxi, MS Corky Perret, Public, Poplarville, MS Jimmy Sanders, MDMR, Biloxi, MS Erik Broussard, MDMR, Biloxi, MS Rick Burris, MDMR, Biloxi, MS Carly Somerset, MDMR, Biloxi, MS Nicole Beckham, ADCNR/MRD, Gulf Shores, AL Brittany Chudzik, MDMR, Biloxi, MS Krista Shipley, FWC, Tallahassee, FL

Joe Jewell conducted a rollcall of the voting members of the TCC and stated for the record that a majority of the voting members were present at the meeting. Joe also made it known for the record that the concurrent scheduling of the TCC meeting and the State/Federal Management Committee meeting is very difficult for TCC members that also sit on the State/Federal Committee.

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 16, 2016 meeting was made by Richard Cody and passed with no opposition.

MRIP or State Fisheries Dependent Sampling Program Updates

Brittany Chudzik provided an overview of Mississippi's MRIP Program including the changes that have been made to the program over the last 3.5 years. Brittany addressed the improvements they have observed in the program both in design and data, improvements that are still needed including electronic reporting that would make data available in a timelier manner, as well as other challenges that are still facing MRIP like how the recent changes to the methodologies may affect how the data is used in stock assessments.

Following Brittany's presentation, each of the other state members provided an overview of their fisheries dependent monitoring programs. John Mareska stated that Alabama continues to be funded under MRIP to carry out monitoring efforts and plans to continue those efforts in the future. Mark Schexnayder stated that Louisiana does not participate in MRIP and will be continuing with their LA Creel program. Richard Cody stated that they are still participating in MRIP and they have some of the same concerns that were outlined in Brittany's presentation. Richard pointed out that they had some concerns after the 2013 season because there was a drop in the number of angler intercepts, but this problem has been corrected by some of the recent changes that NOAA has made and now they are collecting around 33,000 intercepts/year. They also tailored their draw into eight different regions and instituted an offshore stratum. Darin Topping stated that Texas does not participate in MRIP and is continuing with their Texas survey. They have tailored their program to collect more information on red snapper by adding "Gulf only" sites (sites with a high number of offshore fishing trips and focused effort on offshore boats). They have also increased their work with *iSnapper* and have increased their Gulf only sites to get more validation for the data that is being collected in *iSnapper*.

Update on Red Snapper State and Federal Season

Carly Somerset provided a presentation on Mississippi's state red snapper season and the tools that they use to make their management decisions. Carly stated that the MS state season ran from May 27^{th} – September 5^{th} and the federal season was open from June $1^{\text{st}} - 11^{\text{th}}$ for private anglers and from June 1^{st} – July 16^{th} for the federal for-hire fleet. She also pointed out that they are continuing to use their Tails n' Scales mandatory reporting program to assess the number of red snapper that are being harvested and provided and overview of the program and the data that was collected during the 2016 season. They started the MRIP certification process of their Tails n' Scales program in June and are receiving positive feedback on the methods and have some suggested changes to update estimators.

Following Carly's presentation, each of the other state members provided a brief overview of their state red snapper seasons and the management tools that they use to inform their decisions. John Mareska stated that they are continuing with the MRIP certification of their program. The Alabama's state red snapper season was open from May 27^{th} – July 31^{st} . Richard Cody pointed out that the state red snapper season was open Saturdays and Sundays starting May 7^{th} , open continuously from May 28^{th} – July 10^{th} , September 2^{nd} – 5^{th} , and November 5^{th} – 6^{th} , 11^{th} – 12^{th} ,

 $25^{\text{th}} - 27^{\text{th}}$ which presented some sampling challenges. They are in the process of refining their Gulf reef fish survey which is based on a subscription that you get when you renew your fishing license that allows you to participate in the survey. They are hoping to be able to present their program to the MRIP consultants for certification by the end of the year. **Mark Schexnayder** stated that their state season closed on September 5th, but the landing estimates from their LA Creel program allowed them to reopen from October 7th – Early December for weekends only. **Darin Topping** pointed out that their state season is open year-round and they are focusing their efforts on validating the data collected through the *iSnapper* program that is administered by Texas A&M. Texas A&M conducted a survey for the entire federal red snapper season to collect more validation data for their *iSnapper* program.

Update on Restoration Funds Involving Living Marine Resources

Eric Broussard provided an overview of an oyster program that Mississippi is planning to start first thing next year utilizing NFWF funding. This project will involve benthic habitat mapping of approximately 14,000 acres and identification of a 45-acre site for experimental cultch, experimental cultch deployments in each of six 7.5 acre blocks within the 45-acre site creating both high and low relief reefs, annual monitoring of the experimental sites utilizing side-scan sonar and square meter surveys, and oyster gardening utilizing members of the public.

Travis Williams provided a presentation on Mississippi's reef fish assessment for coastal and nearshore gulf waters that is also being funded through NFWF. This project is a joint effort between MDMR and the GCRL and covers a sample area of 7,095 km² encompassing artificial reefs, oil/gas structures, and natural bottom habitats. The project began in the fall of 2015 with benthic habitat mapping of all artificial reef areas which provided the baseline habitat characterization for the vertical line sampling. In the spring of 2016 field sampling of the reef fish and ecosystem metrics began utilizing vertical line sampling, and water quality / environmental sampling.

John Mareska also provided a presentation on Alabama's restoration activities. They conducted oyster restoration activities including material deployments in 2014, 2015, and 2016 which encompassed approximately 1,000 acres that was funded under NRDA and NFWF. They conducted several artificial reef developments and enhancements both in the inshore and offshore environment and are surveying the area between the three and nine-mile line to assess for future reef deployments. This work is being funded under CIAP and NFWF. Finally, they have a multifaceted fisheries projects in offshore and estuarine waters and on an ecosystem level which involves fisheries-independent monitoring utilizing SEAMAP protocols, a large-scale tagging study, at-sea observations aboard charter boats, offshore finfish movement utilizing tagged red drum and an acoustic array, a baitfish survey, a comparison study between skimmer trawls and otter trawls, and an observer survey of the blue crab fishery.

Following these presentations, the other state members provided an overview of their restoration projects funded with restoration funding. **Richard Cody** stated that Florida's Gulf Reef Fish Survey, that he discussed earlier, is supported by NFWF. For their fisheries-independent monitoring, they utilized NFWF funding to expand their SEAMAP sampling and for fisheries-dependent monitoring, they are supporting five projects. These include expanded commercial sampling, the Gulf Reef Fish Survey catch component, effort survey component, at-sea

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component, and the development of a mobile app. NFWF is also supporting artificial reef deployments in the panhandle of Florida to enhance the reef fish fishery. **Mark Schexnayder** pointed out that their NFWF funding went to barrier island and diversion structure work. **Christopher Mace** indicated that Texas is using NRDA funds to carry out three artificial reef projects including the cleaning and reefing of a 370' ship, the M/V KRAKEN, off the coast of Galveston; as well as the enhancement of the Freeport Artificial Reef and development of the Matagorda artificial Reef with 2,400 concrete pyramids.

Glenn Constant pointed out that the TCC or the Commission may be a good starting point to coordinate large-scale gulf-wide restoration projects and/or the large-scale monitoring projects that accompany those restoration projects in upcoming restoration funding opportunities.

Presentation and Action on the Tripletail Profile

Krista Shipley provided an overview of the tripletail profile that covers the gulf and the south Atlantic. She stated that there is little published information on the reproduction, age and growth, seasonal movements, migration or on the genetics of different populations of tripletail; however, some tagging research out of Georgia and Mississippi shows a high site fidelity. Tripletail have a broad global distribution and a strong association with *Sargassum* and can commonly be found floating on their sides near the surface around *Sargassum* mats or other floating objects or structures. Krista also pointed out that in the process of developing this profile they determined that there has been a recent increase in the use of FADs to target tripletail, which may help to explain some of the spike in the recreational harvest over the last few years. The profile outlines several research needs, both critical and secondary, that are necessary to fill science gaps to better understand and manage this species.

Following Krista's presentation, the Committee had a long discussion on whether they were ready to approve the profile. Following the discussion, it was the consensus of the group to delay action on the profile until November 1st to provide the members with two more weeks to review the document. At the beginning of November, Steve VanderKooy will conduct the final approval vote via email.

Discussion about the Use of FADS in Each State and Current State Regulations

Jimmy Sanders provided a presentation on fish aggregating devices (FADs) including the potential impacts they could have on the marine environment, marine organisms, and other used groups. He also covered all of the federal and state regulations that would pertain to FADs and the types of FADs that have been observed in different Gulf States.

Following Jimmy's presentation, the other state members provided a brief overview of the FADs that they are experiencing and the regulations that they have that could address the problem. Most of the states pointed out that it would be considered littering; however, it would be very hard to enforce. **Joe Jewell** pointed out that from the discussion, it sounds like none of the Gulf States have regulations that specifically address FADs and even though aspects of the use of FADs may be addressed by other state and federal regulations, FADs in general would not be considered illegal.

Update on Gulf FINFO

James Ballard provided a brief update on the status of the Gulf FINFO website and the activities that have taken place since the last meeting. He also expressed the importance of the states keeping their sections of the site up-to-date so that members of the public that are using the site are not receiving false information about state fisheries.

Subcommittee Reports

Data Management

Nicole Beckham stated that Andrew Peterson gave a presentation on the status of the commercial electronic reporting and unified trip ticket program. He identified problems, user feedback, and future progress. Steps to be completed by the first of the year include: import dealer historical data, develop an implementation plan for existing users, add the federal fields and requirements, and finally export tickets and negative reports. Peterson plans to work closely with the state and federal partners over the coming months to customize each state system to meet their needs.

Julie Defilippi Simpson gave a presentation on an end-user tool for data queries that is being developed by ACCSP. This system will allow public and confidential access to data. ACCSP has offered to share the program with GSMFC. Once the software is installed at GSMFC, the program will be modified to fit the user needs in the Gulf. The GulfFIN Data Management Workgroup will review the tool first and provide comments to the FIN Committee for their March 2017 meeting.

The committee discussed the need for accurate conversions factors to be developed. Each state has identified a priority list of species and conditions that need conversions. The committee agreed that shrimp would be the first species included in the data collection plan. The Commercial Technical Work Group will develop a design plan and obtain budgets from each state and report back to the TCC Data Management Subcommittee for further action.

During the afternoon session, representatives reviewed the commercial landings data from their state. No major problems were identified, but state representatives will update data to correct minor coding problems and resend to GSMFC.

Mark Schexnayder made a motion to accept the report as presented, and it passed unanimously.

<u>Crab</u>

Rick Burris reported that the Subcommittee discussed the upcoming national meeting of the Diamondback Terrapin Workgroup taking place in Point Clear, Alabama in a couple of weeks. Mississippi is attending with two staff members providing presentations. The issue that most of the states are facing is the negative approach most of the terrapin people take regarding the commercial crab trap fishery. In summary, the major sources contributing to the decline in terrapins over the last fifty years in the Gulf is related to the loss of nesting areas due to human encroachment and predation of turtles nests from raccoons, again due in part to human encroachment. A few terrapins get captured in commercial crab traps, but they are in very isolated areas and in a narrow range of water depths/proximity to shore. There are a number of studies and fishery-independent data which provided support for the limited encounters with traps, but that has

become the first source that most people talk about because fishermen are easier to 'manage' than homeowners, developers, municipalities, and terrestrial predators.

The subcommittee plans to continue working on improving communication with the terrapin research community and work to change the narrative and approach to recovery. One such measure will be to request a special session during the next October meeting of the Commission to bring gulf crab biologists and the regional terrapins workgroups together to begin to change the tone regarding turtle/trap interactions. The subcommittee will work to get the existing research from the state agencies out into the literature so that more of the terrapin community will have access to our work.

Dr. Zach Darnell (GCRL) presented the current status of the Blue Crab tagging efforts in the Gulf of Mexico. Most of the state agencies are coordinating with Darnell and his students to place wire tags on the backs of emigrating mature female crabs to examine the temporal and spatial dynamics of the Gulf of Mexico spawning stock. The study examines large-scale movements of spawning female blue crabs within and among estuaries and offshore waters of the Gulf of Mexico. To date, they have tagged and released about 5,000 crabs and have seen a recapture rate of about 16%, most coming from the commercial trap fishery. They plan to continue tagging through 2017 using state agency staff and cooperating commercial crabbers from LA, MS, AL, and FL.

Harriet Perry (GCRL) provided information on the effects of BP Oil Disaster on Blue Crabs. The early work found evidence of oil and dispersant within the carapaces of larval blue crab captured in and around the disaster area in 2010. Special techniques using an open-beam mass spectrometer were successful in identifying the material that was found in the larvae as being linked to the BP disaster.

The states each provided short overviews of their derelict traps cleanup efforts. LDWF held a cleanup two weekends this past February and removed a total of 1,194 traps. MDMR's 2016 Derelict Crab Trap Removal, which was held April 12-14, removed and recycled a total of 2,530 derelict crab traps. The AMRD has been awarded a grant from NOAA under the Community Based – Marine Debris Removal Program to conduct three volunteer-aided blue crab derelict crab trap removal events through spring 2019. Florida has gone to an alternating coast cycle for crab trap removals and 2016 focused on the Atlantic. They removed 602 traps this past year for a total of 5,580 since 2010.

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

SEAMAP

Jeff Rester reported that since March, SEAMAP has completed the Spring Plankton Survey, the Summer Shrimp/Groundfish Survey, the Bottom Longline Survey, the Vertical Line Survey, and the Fall Plankton Survey. The Fall Shrimp/Groundfish Survey began at the beginning of October.

All three SEAMAP components (Gulf, South Atlantic, and Caribbean) met in July to discuss the proposed activities and budget needs for FY2017. Even though the Congressional appropriation for SEAMAP has increased or remained level for the last four years, the actual money available to the SEAMAP components to conduct fishery independent sampling has decreased. In FY2016,

SEAMAP lost 15.8% (\$811,932) due to rescissions, NMFS HQ management and administrative costs, NMFS HQ common services, and regional management and administrative costs.

Also at the joint meeting, all three SEAMAP components approved the SEAMAP 2016-2020 Management Plan. The SEAMAP 2016-2020 Management Plan provides a statement of current goals, management policies, procedures, and priorities for all SEAMAP components and partnerships.

The SEAMAP Subcommittee and other PIs submitted two proposals to the latest NOAA Science Program's funding opportunity. The trophodynamics (\$2.66 million over 3 years) and life history (\$1.98 million over 2 years) proposals were submitted on September 27. The trophodynamics proposal would collect and analyze gut contents from fish caught during SEAMAP surveys as well as refine ecosystem models for the eastern Gulf and develop a model for the western Gulf. The life history proposal would collect and analyze otoliths from fish caught during SEAMAP surveys.

The Subcommittee approved the SEAMAP Vertical Line Survey Operations Manual at the meeting this week. They also discussed the vertical line survey sample universe and ways to improve the possible sampling universe.

Mark Schexnayder made a motion to accept the report as presented, and it passed unanimously.

Artificial Reef

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James Ballard stated that the GSMFC's and ASMFC's Artificial Reef Subcommittees have completed the preliminary revision of their 2004 publication of "Guidelines for Marine Artificial Reef Materials: Second Edition". Currently, he is working on pulling together all of the revised sections into a new draft that will be distributed back to both Subcommittees for a final review. 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. James also pointed out that he served on the Steering Committee for the 2016 National Saltwater Artificial Reefs Workshop that was hosted by NOAA Fisheries and the Atlantic States Marine Fisheries Commission on June 9-10, in Alexandria, VA and that the Workshop Summary Report is now available online at:

(http://www.nmfs.noaa.gov/sfa/management/recreational/documents/natl-artificial-reef-workshop-june2016.pdf).

State/Federal Reports

Joe Jewell stated that written reports were provided to the TCC members prior to the meeting for their review, and hard copies were incorporated in the meeting folders and if there is no objections, by acclamation he would like to have them placed in the record and forgo reading them into the record. The committee had no objections. To see the full reports that were provided to the TCC, please see the minutes from the Commission Business meeting held on Friday, October 14, 2016.

Election of Officers

Joe Jewell was re-elected as Chair, and Richard Cody was re-elected as Vice Chair.

Other Business

James Ballard stated that the "Overview of Harmful Algal Bloom (HAB) Programs in the Gulf of Mexico with Relevant Points of Contact" document, which was an action item from the last meeting, had been completed and a copy was provided in their meeting folders.

There being no further business, the meeting was adjourned at 5:00 p.m.


Friday, October 14, 2016 Commission Business Meeting 8:30am – 5:00pm

Chairman Mark Lingo called the meeting to order at 8:30 a.m. and asked the Commissioners to introduce themselves.

The following Commissioners and/or Proxies were present:

Mark Lingo, *Chairman*, TPWD, Austin, TX (*Proxy for Carter Smith*) Senator Brett Allain, Jeanerette, LA John Roussel, Zachary, Louisiana Toby Gascon, LDWF, Baton Rouge, LA (*Proxy for Charles Melancon*) Joe Gill, Jr., Joe Gill Consulting, LLC, Ocean Springs, MS Chris Nelson, Bon Secour Fisheries, Bon Secour, AL Jamie Miller, MSDMR, Biloxi, MS Chris Blankenship, ADCNR/MRD, Gulf Shores, AL (*Proxy for Gunter Guy*) Troy Williamson, Corpus Christi, TX Representative Wayne Faircloth, Galveston, TX Dan Ellinor, FWC, Tallahassee, FL (*Proxy for Nick Wiley*)

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 James Ballard, Sport Fish Restoration/Aquatic Invasives Coordinator, Ocean Springs, MS Ali Ryan, Staff Assistant, Ocean Springs, MS Angie Rabideau, Senior Accountant, Ocean Springs, MS

Others

Kelly Lucas, MSDMR, Biloxi, MS Glenn Constant, USFWS, Baton Rouge, LA Roy Crabtree, NOAA Fisheries, St. Petersburg, FL Laura Picariello, Audubon Nature Institute, New Orleans, LA Shane Bonnot, CCA Texas, Houston, TX Julie Lively, Louisiana Sea Grant, Baton Rouge, Louisiana Ray Mroch, NOAA Fisheries, Beaufort, NC Amy Shueller, NOAA Fisheries, Beaufort, NC Joe Jewell, MSDMR, Biloxi, MS Rusty Pittman, MSDMR, Biloxi, MS Steve Turner, NOAA Fisheries, Miami, FL Harry Blanchet, LDWF, Baton Rouge, Louisiana Chad Hebert, LDWF, Baton Rouge, LA Gordon Colvin, ECS-Federal, Inc., Port Jefferson, NY Tom Sminkey, NOAA Fisheries, Silver Spring, MD Paul Doremus, NOAA Fisheries, Silver Spring, MD Danielle Rioux, NOAA Fisheries, Silver Spring, MD Patrick O'Shaughnessy, NOAA-OLE, St. Petersburg, FL John Fallon, Audubon Nature Institute, New Orleans,

Brief Overview of Commission Voting Procedures

D. Donaldson gave a brief overview of the Commission's voting procedures.

Adoption of Agenda

J. Gill <u>moved</u> to adopt the agenda as submitted. W. Faircloth seconded the motion and the agenda was adopted as submitted.

Approval of Minutes

J. Gill <u>moved</u> to approve the minutes as submitted. W. Faircloth seconded the motion and the minutes were approved as submitted.

Public Comment

There was no public comment.

GSMFC Standing Committee Reports

Law Enforcement Committee

Chad Hebert reported the Council's Law Enforcement Technical Committee (LETC) and the Commission's Law Enforcement Committee (LEC) met jointly yesterday. He said the two committees have always had different chairmen and discussed changing this to have the same Chair and Vice-Chair for both Committees. They also discussed if the NOAA OLE, USFWS and Coast Guard members on the LEC are voting members. S. VanderKooy will research old minutes to see if there is a reason to have different Chairs/Vice-Chairs for the Committees and if the NOAA OLE, USFWS and Coast Guard are voting members. He will report his findings to the Committees. They covered other topics which are discussed in the LEC minutes section of this minute book. **S. VanderKooy** stated the LEC revised the Strategic and Operations Plans for the coming years and asked for the Commission's approval for the documents.

C. Blankenship <u>moved</u> to approve the Law Enforcement Committee's Strategic and Operations Plans. J. Gill seconded and the motion passed.

Technical Coordinating Committee (TCC)

Joe Jewell reported the TCC met and discussed a variety of topics including MRIP or State Fisheries Dependent Sampling Program Updates; Red Snapper State and Federal Season Updates; Restoration Funds Involving Living Marine Resources Updates, Tripletail Profile Update; discussion of the Use of FADs in each state and current state regulations, Gulf FINFO Update, and Subcommittee Reports. Joe Jewell was re-elected Chairman and Richard Cody was re-elected Vice Chairman. Detailed reports of each of these items are in the TCC section of the minute books. **J. Jewell** asked that, on behalf of the TCC, the Commission not schedule future TCC and S/FFMC meetings at the same time. **D. Donaldson** stated staff will not schedule the meetings simultaneously again.

K. Lucas moved to accept the TCC Report. J. Gill seconded and the motion passed.

State-Federal Fisheries Management Committee (S/FFMC)

Kelly Lucas reported the Committee discussed the funding for the GulfFIN activities for 2017. She said G. Bray outlined the status of the 2017 funding for data collection and management activities (details under S/FFMC minutes) and the preliminary numbers show the GulfFIN line item at \$4.14 M and the RecFIN line item at \$3.47 M. The Gulf portion of the RecFIN line item is approximately \$1.071 M and there is an additional \$855 K provided by NOAA OST to allow for large base sampling allocations for MRIP dockside surveys. With administrative fees removed, the amount available for FIN funding in 2017 totals \$5.50 M. The original amount proposed for 2017 for all the jobs proposed was approximately \$7.083 M, which means there is a deficit approximately \$1.560 M (-22.4%).

K. Lucas stated after considerable discussion a motion was passed to fund Job 1 (Coordination and Administration of FIN Activities), Job 2 (Collecting, Managing, and Disseminating Marine Recreational Fisheries Data), Job 4 (Operation of FIN Data Management System), and Job 5 (Trip Ticket Program Implementation and Operation).

K. Lucas reported the committee motion still resulted in a funding deficit of 12.56% and the committee agreed that the deficit would be applied equally to all agencies. GSMFC staff will work with the states to obtain revised budgets that reflect the reduced totals for 2017.

Menhaden Advisory Committee (MAC)

Ray Mroch reported Dr. Amy Shueller gave a presentation on the 2016 Gulf Menhaden Stock Assessment Update and stated she will give the presentation to the Commissioners after his report. He said the MAC passed a motion to accept the assessment update for use by the states to manage the fishery, and asked the Commission to approve. He also provided an update on the 2016 fishing season to date. He stated TPWD reported on the Texas cap for this past season and it is estimated that the industry only fished two days in Texas waters and have landed about 3% of the available TAC. Scott Herbert was elected Chairman. Dr. Shueller then gave the presentation which can be obtained from the Commission office upon request.

K. Lucas <u>moved</u> to accept the Stock Assessment for Menhaden. C. Nelson seconded the motion and it passed.

J. Gill moved to accept the State/Federal Fisheries Management Committee motion and report. D. Ellinor seconded and the motion passed.

Sea Grant Fisheries Extension Meeting Report

Julie Lively reported each Gulf State gave an update/presentation on their current activities. She said the theme for this meeting was harmful algal blooms and they had group discussions on the topic and discussed how to better educate the public about the blooms through outreach programs. There was also discussion on TED implementation for skimmer trawls and how Sea Grant can help the fishermen with compliance inspections for the different gears. Detailed minutes from Sea Grant is under the Sea Grant Fisheries Extension Meeting Report of these minutes.

NOAA Fisheries Southeast Regional Office Comments -

Roy Crabtree stated a detailed report was submitted to the Commission and is in the Briefing Book under Tab E. He briefed the Commission on the Strategic Planning efforts in the Southeast Regional Office. He then reviewed the status of the Council's current actions and Amendments that are under development. He said they are continuing to work with the Army Corps of Engineers on sediment diversion alternatives in Louisiana.

Brett Allain asked R. Crabtree about the two letters that were sent to Secretary Melancon from Ms. Sobeck stating that if HR3094 is passed, NOAA will no longer provide stock assessments to the states. **R. Crabtree** stated if red snapper is no longer federally managed, it would no longer be a priority species so that would be possible. He also mentioned the Gray's amendment that precludes them from spending federal funds in support of the Gulf States Management authority the bill would create. He said there is also the issue of confidential data that can be provided to the states under a fishery management plan, but if they are no longer managing the fishery, this data may not be provided. **B. Allain** asked if anyone is working to clarify the language of the bill and to address these concerns. **R. Crabtree** said they have had internal discussions on the language of the bill.

USFWS Region 4 Office Comments

Glenn Constant thanked the Commission from the regional office, on the administration of the invasive species small grants program which J. Ballard will report on more extensively on a later agenda item. He then reported that under the Gulf Spill Restoration Program there is an Open Ocean Trustee Implementation Group (TIG) which reviews proposals and decides which ones should be funded and asked if the Commission would like to be involved in this process, possibly through the TCC. More information on the TIG is available on the Gulf Spill Restoration website. He then discussed water flow issues, Gulf Sturgeon and the need to collect better information to define critical habitat. After discussion, the Commission agreed the TCC will work with USFWS to identify priorities for the Open Ocean Trustee Implementation Group.

NOAA Fisheries Budget Update

Paul Doremus gave a presentation on the NOAA Fisheries Budget covering the funding to states and grant programs, the cost of stock assessments in the Gulf of Mexico, and the NOAA budget outlook. He said they are currently operating under a Continuing Resolution (CR) and expects to stay under the CR until the new administration is in office. The complete presentation can be obtained from the Commission office upon request.

Discussion of Legislative Issues and Actions

D. Donaldson said there has not been any movement on the Magnuson reauthorization or H.R. 3094 granting Gulf States Red Snapper Management to the states. He said no action is expected on either issue until after the election. A copy of H.R. 3094 is in the briefing book.

Discussion of NOAA Fisheries Supplemental Funding

D. Donaldson reported last year the Commission entered into an agreement with NOAA Fisheries to establish a cooperative agreement to provide funding for state/federal cooperation, coordination, and administrative activities. He said they received funds last year to host the bi-annual National State Directors' Meeting in New Orleans. This year they have received approximately \$560 K for 5 major projects which include an Oyster Aquaculture RFP, Aquaculture Roundtable to discuss challenges of offshore aquaculture in both finfish and shellfish, a joint ageing manual and standardized protocols for ageing fishes in the Gulf of Mexico and Atlantic, a strategic planning session for GulfFIN, and the GSMFC annual state directors meeting. Details of each of the projects are under Tab G of the briefing book.

Briefing on Oyster Symposium

S. VanderKooy reported several experts were invited to speak on the status of oysters in the Gulf of Mexico, the oyster stock assessment techniques, ocean acidification and changing environments, and the history of oyster aquaculture in Rhode Island.

S. VanderKooy said Ms. Ira Gimenez provided an overview on Ocean Acidification (OA) and the effects on oysters in the Pacific Northeast. She explained the practical reality of what the increase of dissolved CO2 in the ocean has done to oysters in Oregon and Washington. She warned of potentials of additional problems in the Gulf especially as it is tied to the algal blooms and hypoxia. Also, Dr. Michael Rice presented a brief history of oyster aquaculture in Rhode Island and summarized the legislative actions over the last two decades which have led to the greatest expansion period of oyster culture in Rhode Island. The major contributors were developing "Onestop" permitting with lead agency and Aquaculture Coordinator responsible for coordinating interagency review, the recognition of aquaculture as a form of agriculture under tax codes, the exemption of aquaculture livestock from Fish and Game laws, and simplified leasing and DEM water quality certification procedures. Since around 2000, the value of cultured oysters in Rhode Island have risen from about \$300 K to almost \$7 M annually.

S. VanderKooy reported all of the states provided overviews and status updates on their current oyster fisheries, presented on the general fishery, the current public/private harvest, and identified what the issues are currently in each state related to the environment and the potential changes to come. The group talked broadly about the potential for aquaculture of oysters in each of the states and the major hurdles they are facing. He said Dr. John Supan served as the facilitator for the session and Sea Grant will be developing a proceedings from the session which will be distributed to the Commission.

D. Donaldson mentioned the general sessions have been informative and well attended and the Commission will continue to host general sessions at either the Spring, Annual or both meetings. He said an interest has been expressed to have a session on Terrapin turtles and stated if anyone else has a suggestion for a topic for discussion, to contact the Commission office.

Update on Marine Recreational Information Program (MRIP) -

Gordon Colvin gave an update on current MRIP activities and priorities including survey improvement methodologies, the comprehensive review by the National Academies of Sciences, regional implementation plans, and the government accountability office review. He stated GulfFIN will be the first to implement their regional plan and they expect to early next week. The Caribbean is working on their plan and the Pacific Islands is close to having a group in place. He then reviewed other MRIP priorities including continuing executing the FES transition plan, working with the FIN partners to certify for-hire electronic trip reporting methods, testing, reviewing and potentially certifying supplemental surveys, and having 2017 Gulf workshops.

Presentation of Gulf_United for Lasting Fisheries (G.U.L.F.)

J. Fallon reported the G.U.L.F. is a sustainable seafood program under the Audubon Nature Institute that was founded in 2012. He and **L. Picariello** gave an update/presentation on their certification, fishery improvement projects and outreach and education programs. The complete presentation can be obtained upon request to the Commission office.

GSMFC Program Reports

Interjurisdictional Fisheries Program (IJF) -

S. VanderKooy stated the complete IJF report is under Tab H of the briefing book. He said most of the IJF activities have already been covered in previous agenda items so he will not give a full report. He stated the Tripletail Biological Profile is currently being reviewed by the TCC and they are scheduled to vote on approval of the Profile November 1st. He said they are still working on the Atlantic Croaker Biological Profile and expects it to be ready for review before the next TCC meeting in March 2017. **S. VanderKooy** will distribute the list of priority species to the S/FFMC for their consideration for a new FMP/Profile after the March 2017 meeting. He said staff is currently working on the Sixty-sixth annual report and it should be ready for printing in a few weeks.

SEAMAP

J. Rester reported all three SEAMAP components (Gulf, South Atlantic, and Caribbean) met in July to discuss the proposed activities and budget needs for FY2017. Even though the Congressional appropriation for SEAMAP has increased or remained level for the last four years, the actual money available to the SEAMAP components to conduct fishery independent sampling has decreased. In FY2016, SEAMAP lost 15.8% (\$811,932) due to rescissions, NMFS HQ management and administrative costs, NMFS HQ common services, and regional management and administrative costs. Florida has been using NFWF funds to participate in Shrimp/Groundfish Those NFWF funds are running out and the SEAMAP Summer and Fall Surveys. Shrimp/Groundfish Surveys will be severely impacted in 2017 unless additional funds are acquired. Also at the joint meeting, all three SEAMAP components approved the SEAMAP 2016-2020 Management Plan. The SEAMAP 2016-2020 Management Plan provides a statement of current goals, management policies, procedures, and priorities for all SEAMAP components and partnerships. The plan also serves as a reference on SEAMAP history and accomplishments, as well as detailing priorities for future activities. Since the last Commission meeting, the SEAMAP Subcommittee has pursued additional funding for fishery independent data collection in the Gulf of Mexico. The SEAMAP Subcommittee submitted two proposals to the NOAA RESTORE Act

Science Program's funding initiative that focused on comprehensive understanding of living coastal and marine resources, food web dynamics, habitat utilization, protected areas, and carbon flow. One proposal would collect and analyze gut contents from fish caught during SEAMAP surveys. The other proposal would collect and analyze otoliths from fish caught during SEAMAP surveys. Since March, SEAMAP has completed the Spring Plankton Survey, the Summer Shrimp/Groundfish Survey, the Bottom Longline Survey, and Fall Plankton Survey. The Fall Shrimp/Groundfish Survey and Vertical Line Survey are currently underway. More information on all SEAMAP sampling can be found in the SEAMAP Annual Report to the Technical Coordinating Committee (distributed). The Commission continues to manage SEAMAP data and distribute the data to interested parties. The Commission has fulfilled 12 SEAMAP data requests since March 2016.

Sportfish Restoration Program (SFRP)

J. Ballard stated the complete report is under Tab J of the briefing book. He then gave a power point presentation on the Primary Science Gaps from the National Artificial Reef Workshop and Technical Committee Establishment; the Gulf-wide Artificial Reef Demonstration Project, the Guidelines for Marine Artificial Reef Materials Document – Third Edition, and the Gulf Artificial Reef Monitoring and Assessment Program (GARMAP). The Power Point Presentation can be obtained from the Commission Office upon request.

Fisheries Information Network (FIN) -

G. Bray stated the complete report is under Tab K in the briefing book. He stated typically at the October meeting, he presents the funding priorities for the next calendar year but Dr. Lucas provided that in the S/FFMC report. He said he does not have anything new to bring before the Commission at this time. He said everything is going well with FIN and would like to thank all the state directors for providing staff that helped develop the MRIP Regional Implementation Plan that will be submitted to NOAA Fisheries next week. He believes it is a very strong document due to the expertise given from the states. He said he will report in March on this year's data collections and findings.

Aquatic Nuisance Species Program (ANS) -

J. Ballard stated all ANS information is under Tab L of the briefing book then he gave a brief Power Point Presentation on the Traveling Trunk and the 2016 AIS Small Grants Program. The Power Point Presentation can be obtained upon request to the Commission office. **D. Ellinor** stated his office will supply Lion Fish for the Traveling Trunks.

Executive Committee Report

M. Lingo stated the following Executive Committee Report was submitted and distributed to the Commission:

Discussion of GSMFC Audit (Tab M Briefing Book)

A. Rabideau reviewed the 12/31/15 Audit with the Committee and stated the Commission has received an unqualified opinion. An unqualified opinion means that the financial statements were fairly presented in all material aspects. Page 30 of the audit report outlines the schedule of findings and questioned costs. *K. Lucas <u>moved</u> to accept the audit report. The motion was seconded by M. Lingo and passed unanimously.*

Financial Report

A. Rabideau noted that the commissioners receive the financial report every month by email. She said the only difference with the financial report was the changed name of the NOAA Administration and Coordination grant. It is no longer called the National State Director's grant since that was a single occurrence.

Presentation of 2017 Budget (Tab N Briefing Book)

A Rabideau reviewed the 2017 budget. She stated the commission is down to mostly base programs and will be approximately the same as last year's budget. The total budget for fiscal year 2017 is \$6,636,182. Since final numbers haven't been established for IJF and SEAMAP, and the FIN budget was based on last year's contractual funds, the total budget is going to change. GSMFC may also receive additional funding through the NOAA Administration and Coordination grant depending on their unobligated funds in the spring. *K. Lucas moved to accept the 2017 budget. The motion was seconded by T. Gascon and passed unanimously.*

Staff Compensation

D. Donaldson recommended the following regarding staff compensation:

• 3.5% or a minimum of a \$1,000.00 raise for all.

T. Gascon <u>moved</u> to accept these recommendations. The motion was seconded by C. Blankenship and passed four to one.

Being no further business, the meeting was adjourned at 8:00 a.m.

J. Gill <u>moved</u> to accept the Executive Committee Report and all motions and recommendations. D. Ellinor seconded the motion and it passed.

State Directors' Reports

K. Lucas <u>moved</u> to forego reading the state directors' reports and accept as submitted. J. Gill seconded the motion and it passed. The reports will be included in the minutes (Attachment I).

Future Meetings

N. Marcellus stated the next meeting will be March 14-16, 2017 and Mississippi will be the host state. She has one proposal from the Courtyard Marriott where previous meetings have been held. She asked the Mississippi Commissioners if they have other suggestions on where to meet to contact her. The October 17-19, 2017 will be hosted by Alabama and asked the Alabama Commissioners for suggestions for the meeting site.

Publications List and Web Statistics

D. Donaldson stated the current publication list is under Tab R of the Briefing Book. **J. Ferrer** and **J. Ballard** gave presentations on the GSMFC Web Site, FINFO Web Site and the *EatGulfSeafood* Web Site. **J. Ballard** stated the Commission is currently maintaining the *EatGulfSeafood* Web Site and **D. Donaldson** asked if the Commissioners would like to continue maintaining this site. The Commissioners agreed the Commission should continue maintaining the *EatGulfSeafood*. Web Site.

Election of Officers

D. Donaldson reviewed the Chairman rotation.

M. Lingo <u>moved</u> to elect Chris Blankenship Chairman. K. Lucas seconded and the motion passed.

J. Gill <u>moved</u> to elect Kelly Lucas First Vice-Chairman. D. Ellinor seconded and the motion passed.

T. Gascon <u>moved</u> to elect Senator Brett Allain Second Vice-Chairman. J. Gill seconded and the motion passed.

Other Business

J. Gill stated Mississippi DMR are proposing to change the bag size/limit for speckled trout and <u>moved</u> the Commission send a letter supporting their decision. W. Faircloth seconded the motion. After discussion, it was decided the Commission does not take a stand on specific state regulations. J. Gill withdrew the motion. W. Faircloth withdrew the second to the motion.

There being no further business, the meeting Adjourned at 1:33p.m.

ATTACHMENT I

STATE DIRECTORS' REPORTS

Gulf States Marine Fisheries Commission 67th Annual Fall Meeting Technical Coordinating Committee Thursday, 13th October 2016 New Orleans, Louisiana

TEXAS REPORT

REGULATORY CHANGES

The recreational maximum total length limit for Black Drum has been clarified in the regulations as 30 inches. This was inadvertently left off of the 2015-16 printed regulations.

There was an increase in the recreational minimum size limit for Greater Amberjack from 34 inches to 38 inches (total length). The change is intended to provide an opportunity for a greater number of sexually mature Greater Amberjack to spawn, which could assist in efforts to end overfishing and rebuild the stock. The Texas Department of Wildlife Department (TPWD) determined that matching the federal regulation will help achieve management goals, be beneficial to the resource, and prevent angler confusion.

The following clarification was added to the regulation that prohibits filleting of fish before landing: "For sharks, only the head may be removed. The remainder of the carcass (including the tail) must remain intact and may not be filleted." The regulation serves to aid in identification of species and length and to prohibit shark finning.

2016-2017 Coastal Fisheries Scoping Items

The Texas Parks and Wildlife Department's Coastal Fisheries Division held Regulatory Hearings to receive public comments on proposals for regulation changes in the commercial oyster fishery. These proposals included:

- Temporary closure of four areas (28 acres total) in Galveston Bay for cultch planting projects and extension of the temporary closure of Half-Moon Reef (54 acres) in Matagorda Bay.
- Reduction in daily sack limit from 50 sacks to 40 sacks.
- Closure of Sundays to oyster harvest.

COASTAL FISHERIES PROGRAMS & PROJECTS

Oyster Fishery

At the direction of the Parks and Wildlife Commission, TPWD has temporarily withdrawn the proposal that would allow for an expansion of the oyster lease program, instead, focusing on the renewal of existing leases which are scheduled to expire at the end of February 2017. A proposal to renew existing leases while incorporating cost-recovery elements and active use criteria into the program was approved for consideration for rulemaking. Under the proposal, annual rent fees would increase from \$6/acre/year to \$60/acre/year. Active Use Criteria would require a minimal planting of cultch per acre, and is to be accomplished within the first five years of the lease term. Beginning in year six and continuing annually for the remainder of the 15-year term, leaseholders would be required to plant approved cultch materials upon areas designated by the Department. The amount of cultch planted would be based on the percentage (by volume) of oysters harvested from the lease during the immediately preceding harvest

season. Several alternative proposals/recommendations have been submitted by industry and are being evaluated. The Parks and Wildlife Commission will take final action on the proposal during their November 2017 meeting in Austin, TX.

During their August meeting, the Parks and Wildlife Commission approved temporary two year closures of four areas in Galveston Bay in order for the TPWD to conduct oyster restoration cultch plantings and to continue post-construction monitoring by The Nature Conservancy of Half-Moon Reef in Matagorda Bay. Additionally, the Commission lowered the daily sack limit for oysters from 50 sacks per day to 40 and removed Sunday as a legal fishing day for oysters. These new regulations go into effect on November 1, 2016.

Texas Marine Sport-Harvest Monitoring Program

During the Texas Parks and Wildlife Department's 2015-16 creel survey year (15 May 2015 through 14 May 2016), 1,120 surveys were conducted at boat-access sites along the coast.

For private-boat bay-pass anglers, an estimated 5,225,300 man-hours were expended to harvest an estimated 1,601,500 fishes. Staff conducted 11,757 target interviews involving 29,156 anglers. Of the 86 species encountered, Spotted Seatrout, Atlantic Croaker, Red Drum, and Sand Seatrout were the most frequently landed species. Mean party size was 2.5 people and mean trip length was 5.5 hours. Staff observed 41,176 fishes and measured the length for 29,593 of them.

For private-boat Texas Territorial Sea anglers, an estimated 174,400 man-hours were expended to harvest an estimated 82,500 fishes. Staff conducted 602 target interviews involving 1,877 anglers. Of the 55 species encountered, Red Snapper, Atlantic Spadefish, Spotted Seatrout, and King Mackerel were the most frequently landed species. Mean party size was 3.1 people and mean trip length was 6.4 hours. Staff observed 3,461 fishes and measured the length for 1,973 of them.

For private-boat Exclusive Economic Zone anglers, an estimated 99,100 man-hours were expended to harvest an estimated 22,700 fishes. Staff conducted 254 target interviews involving 830 anglers. Of the 49 species encountered, Red Snapper, King Mackerel, and Atlantic Spadefish were the most frequently landed species. Mean party size was 3.3 people and mean trip length was 7.5 hours. Staff observed 1,235 fishes and measured the length for 886 of them.

Fisheries Enhancement Program (Hatcheries)

2016 Fish Stocking Totals

8,707,431 Red Drum fingerling

- 8,043,538 Spotted Seatrout fingerlings
- 78,716 Southern Flounder fingerlings

16,829,685 Total fingerlings stocked

Production will continue over the next few months to the end of the year, so final numbers will be higher than currently reported.

Artificial Reef Program

<u>Natural Resources Damage Assessment (NRDA)</u> - The program has three projects slated through Deepwater Horizon (BP) funds, totaling \$6.6m:

 The Ship Reef project will deploy a ship approximately 67 miles offshore of Galveston. TPWD has acquired the 371 ft. cargo carrier M/V SCM Fedora. It was renamed the M/V KRAKEN in order to secure the new title. The M/V KRAKEN arrived in Brownsville, TX in May 2016 and is in the process of being cleaned before reefing.

- 2) Freeport Artificial Reef (Brazoria County): This project will increase the amount of reef materials in the currently permitted George Vancouver (Liberty Ship) Artificial Reef site which is approximately six miles from Freeport. Concrete pyramids (artificial reef materials) will be placed at a water depth of 55 feet.
- 3) Matagorda Artificial Reef (Matagorda County): This project will create a new artificial reef site approximately 10 miles offshore of Matagorda County, through deployment of concrete pyramids (artificial reef materials) at a water depth of 60 feet.

Callan Marine has completed the original production of 2400 pyramids (as of September 2016, there were less than 100 pyramids left to build). They are now planning for deployment of pyramids at the Freeport (Vancouver) and Matagorda reefs this fall.

Nearshore Reefs

Port Isabel, TX: TPWD continued to work with the USCG to get the shrimp boat (Gulf Explorer) and tug boat (Sting) inspected and approved to be the first structures placed in the Rio Grande Valley Nearshore Reef by end of October. This reefing area is the largest to date, measuring 1,650 acres.

Port O'Connor, TX: A donation of \$600,000 was made by the TPWD Foundation, CCA, and Shell Oil for the Port O'Connor nearshore reef. This will be matched with \$400,000 from the reef donation account in a project known as "Keep it Wild Reef." Callan Marine has been awarded a contract to produce and reef 500 concrete pyramids at the site in spring 2017.

Rigs to Reefs

Artificial Reef staff met with the US Army Corps of Engineers (Corps) in Galveston to discuss new permitting requirements. The Corps is finalizing a plan to pull all of our reef sites into an overall General Permit (GP) that will cover all of Texas waters. The old GP expired in December 2015. The new permit will cover waters from the shoreline out to the 300m contour. If a new reef site does not meet qualifications for a general permit, we will still submit it as an Individual permit (IP). Supposedly, this will help stream-line the permitting process. The down side is our permits expire after each reefing event (i.e. once a platform is towed to an existing reef site, the permit expires; therefore a new reefing event several months later in the same spot would require a "new" construction permit.

TPWD discussed several Rigs-to-Reefs future projects with WT Offshore and Montco Company to include HI-370A and five structures around the Flower Gardens Banks National Marine Sanctuary. There are a number of Rigs-to-Reefs projects in process, as well as the anticipated NRDA/Restore Act reefings in 2016-2017.

Biological Monitoring

The Artificial Reef Dive Team completed their monitoring season with the successful deployment of three sondes that will collect data for three months, new snapper data from vertical line surveys, and abundance estimates from diver surveys on reef structures.

Contracts for biological and water quality monitoring of the TPWD Artificial Reef sites will expire in August 2017. Texas A&M University – Galveston, Texas A&M University – Corpus Christi, the University of Texas – Rio Grande Valley, and the United States Geological Services will continue to monitor and provide data for the reef sites in their regions through the term of these contracts.

Artificial Reef staff participated in ROV training in August 2016 to prepare for use of their new ROV to conduct reef surveys. The ROV is an Outland 2000 and has integrated multibeam sonar, positioning system, and stereo lasers that allow for replication of diver survey protocols.

Perry R. Bass Marine Fisheries Research Station

Life History Research

Routine otolith collections from gill net samples were continued, as was processing and ageing of otoliths collected in previous years. Black Drum and Spotted Seatrout were targeted for this study.

The GSMFC-funded FIN-Biological Sampling project for otolith collection and processing for various marine species was renewed. Otolith sample collection, processing, analysis, and data entry into the FIN biosampling database are ongoing. A statement of work (SOW) for August 1, 2016 through March 31, 2017 was approved by GSMFC, and an additional SOW for April 1, 2017 through December 31, 2017 was submitted to GSMFC.

A meristic-based method of differentiating Alligator Gar sex was improved using discriminate analysis and an online application using the analysis was developed for field use.

Genetics Research

A genetic survey of inshore Black Drum populations is ongoing.

Additional samples of Alligator Gar from selected drainages have been requested from the TPWD Inland Fisheries Division to better characterize genetic diversity of Alligator Gar from freshwater and estuarine areas.

A genomic survey for Atlantic Croaker was initiated using Illumina platform based high-throughput genetic processing and analysis techniques.

Dollars	License Types	Original licenses	Purchased	Retired	# of rounds	
13.4 mill	Shrimp	3231	2174	67%	34	
1.4 mill	Finfish	549	247	45%	22	
0.4 mill	Crabs	287	66	23%	19	
15.2 mill		4067	2463	61%		

License Buyback Program

<u>Shrimp</u>

Buyback Round 34

- Application period closed January 31, 2016 (opened approximately 60 days)
- 23 individual bids were received
- 10 (5 bay and 5 bait) would be accepted with 10% ED rule and an additional 6 licenses (3 bay and 3 bait), to meet match requirements for State Wildlife Grant funding for sea turtle restoration
- Proposed total Cost would be \$150,000 at an average price \$9,375 (if all accepted)
- Accepted range would be \$6,000 to \$10,000
- Purchased a total of 10 (6 bay and 4 bait)
- Total purchase price of \$92,500
- Avg. purchase price was \$9,250 (actual range \$6,000 to \$10,000)

<u>Finfish</u>

Buyback Round 22

- Application period closed January 31, 2015 (open approximately 60 days)
- 4 applications received
- 2 licenses accepted for purchase
- 1 license was purchased
- Total cost \$9,400

<u>Crab</u>

Buyback Round 19

- Application period closed January 31, 2016
- 2 applications received
- 1 license accepted for purchase
- 1 license was purchased
- Total cost \$8,500

Ecosystem Resources Program (ERP)

Oyster habitat

Pilot study to build sanctuary reefs (NFWF) - Partnering with Texas Nature Conservancy in 2016 to restore a minimum of 40 acres of degraded Galveston Bay oyster reefs using a reef design criteria intended to increase the sustainability and resilience of the restored reef habitats. The project will apply high vertical relief, optimal reef patch size design, and spatial configuration concepts to create conditions optimal for oyster larval production, settlement, survival, and enhanced adult oyster growth. Design will use smaller reef sanctuary totaling 15 acres and construction and restoration of a nearby commercially harvestable reef complex of 25 acres.

Pepper Grove/Middle Reef Restoration (NFWF, GBEF) - Restored 30 acres on Pepper Grove and 10 acres on Middle Reef.

Sabine Lake oyster restoration (NFWF/Shell Oil) - Restored approximately 25.8 acres of oyster reefs in Sabine Lake. Project constructs a network of small patch reefs to mimic the nearby natural reefs. Monitoring is ongoing for this area.

East Galveston Bay Oyster restoration Project (CIAP-GLO, CCA) - The primary purpose of this project is to restore 180 acres of previously productive oyster habitat in East Galveston Bay. The Sub-recipient will also commission an engineering study of the feasibility of restoring Galveston Bay's oyster reefs to their pre-Hurricane Ike acreage; conduct side scan sonar surveys of oyster habitat in West Galveston Bay; and educate the public on the important role of oyster reefs in estuarine ecosystems and the need to conserve and restore these valuable habitats. If funding allows, cultch may be added to South Redfish Reef, which is in the vicinity of East Galveston Bay. Shell recovery funds are being utilized to enhance existing oyster beds on Todd's Dump Reef.

Additional oyster projects

Oyster restoration/habitat and fishing opportunity creation includes Texas City Reef (areas identified by TPWD, funded through Texas City funds).

Mapping bays waters > 1 m depth for habitat (utilizing various disaster and recovery funds, plus USFWS funds to equip program for data collection and habitat assessment).

• Initially for oysters and Hurricane Rita/Ike impact in Galveston (last year, about 18,000 acres were added for a total of about 35,000 acres scanned).

• Utilizing current data gathering for Coastal Marine Spatial Planning tool for strategic areas for future work.

Areas Mapped.

- Copano Bay (39,290 acres total).
- Sabine lake Oyster Reef (1,600 acres total).
- Galveston Bay Complex (35,000 acres total West Galveston Bay) ongoing in other parts of system.

Currently funded State Wildlife Grants

- Mapping of San Antonio Bay oyster habitat currently in process.
- Aerial imagery and ground-truthing for seagrass and other habitat to identify areas for restoration and protection, and to assess impacts from regulation to not uproot seagrasses.
- Habitat assessment pilot study working in parallel with fishery independent resource monitoring.

Restoration, conservation and acquisition projects

Goal is to work toward larger and landscape scale initiatives and connectivity versus small isolated projects.

Galveston Bay Blue Print - Working as a partner and with other partners (e.g., Galveston Bay Estuary Program) to restore over 20,000 acres. Areas being restored/protected currently around West Galveston Bay shoreline, nearby the State Park.

Follet's Island Initiative (NFWF, NRDA, and others) - Acquisition of ~2,000 acres (500 acres to date) of barrier Island land from various land holders would conserve and protect an area from the Gulf of Mexico, landward across Christmas Bay Coastal Preserve into Federal lands (NWR).

Powderhorn Ranch Acquisition (NFWF) - 10,000 acres of coastal habitat acquired. Future work to acquire additional funds (CEPRA, USFWS, etc.) to enhance existing habitats, prevent ongoing shoreline erosion and sea level rise impacts, and provide recreational opportunity.

Matagorda Peninsula Acquisition (USFWS, CMP, CEPRA, CCA, NRG) - Purchase of over 6,000 acres into conservation along the Golden Crescent area. Final efforts of acquisition have occurred during the past two years.

Dickinson Watershed Marsh Restoration (USFWS, CMP, CEPRA, CCA, NRG) - in an area of high erosion, protects over 20 acres of marsh, creating 10 acres of habitat.

Dagger/Ransom Island Initiative (mitigation funds, NRDA, NOAA RESTORE) - protect erosion of seagrass, tidal flats, shoreline habitat from large ship wakes.

SPECIAL EFFORTS, STUDIES, AND TOPICS

iSnapper Project

The National Fish and Wildlife Foundation has agreed to fund the joint *iSnapper* project between Texas A&M University–Corpus Christi (TAMU-CC) and TPWD for two more years starting in 2017. This project encourages recreational anglers to use *iSnapper* to report their offshore fishing trip information with validation done through TPWD creel surveys and targeted creel surveys done by TAMU-CC. The targeted creels were directed at high pressure ramps and covered most days of the 11 day season. The results from the current year of the project are being validated and analyzed to extrapolate to total estimated landings (Table 1).

2016 Method	Number of Trips	Total Anglers	Total Red Snapper Harvested	Total Red Snapper / trip	Private / For-Hire
TPWD creel	50	273	517	10.3	81.5 / 18.5 %
TAMU-CC creel	252	1110	2297	9.1	81.0 / 19.0 %
iSnapper	120	616	1238	10.3	79.2 / 20.8 %

Table 1. Preliminary survey results from the 2016 federal recreational season (June 1-11).

SEAMAP

Bottom longlines have been completed for spring, summer, and fall. TPWD is currently conducting vertical longline sampling at various artificial and natural reef sites. We are also continuing to update our sampling universe list, as our initial list contains many "presumed reef" sites that have not been found. Additional sites not on the original list are being identified and will be included for selection in the following years.

Red Tide

Texas Parks and Wildlife Department is working with other agencies to monitor a red tide event along the southern Texas coast. On August 24, 2016, the Image Flow Cytobot (IFCB), located at the University of Texas Marine Science Institute in Port Aransas initiated notification of the possible presence of *Karenia brevis*. Water samples collected at Bob Hall Pier (North Padre Island) by staff at the Texas A&M - Corpus Christi, Center for Coastal Studies and South Padre Island by the University of Texas – Rio Grande Valley, Coastal Studies Lab confirmed very low cell ions of *K. brevis*. As of September 16th, there have been several localized fish kills (mostly whiting and shrimp eels at 1-5 fish per 10 feet) along the Gulf of Mexico shoreline and away from the coast, mainly in NOAA statistical zone 21.

Gulf States Marine Fisheries Commission 67th Annual Fall Meeting Technical Coordinating Committee October 2016

LOUISIANA STATE REPORT

Resource Management:

LA Creel

Through the La Creel program 11,389 recreational fishing trips, constituting 29,184 individual anglers, were surveyed during the period of September 1, 2015 to August 31, 2016. Fifty-six different interviewers working 1,584 assignments during that time period were used during that period. A total of 81,299 finfish were seen and counted by trained staff (i.e. Observation type 1) and 33,784 finfish were reported by the angler (Observation type 2). In May 2016 La Creel began capturing discard data during all dockside surveys. This was done at the request of NMFS to assist in their estimates. Discarded finfish are grouped into three categories: 1) undersize, 2) used as bait, and 3) all other reasons.

In June 2016 NMFS granted provisional certification of the dockside and charter effort survey components of La Creel. Private effort methodology will continue to be evaluated.

Stock Assessments

An update stock assessment of blue crab was completed and presented to the LWFC in June 2016. This assessment uses a stage-structured model to estimate annual time-series of spawning stock biomass and fishing mortality rates. Based on results of this assessment, the stock is currently considered overfished.

Data Management

LDWF continues to processes requests for trip ticket landings to assist with commercial fishermen's claims related to the Deepwater Horizon oil spill. For the time period of July 1, 2015 to December 31, 2015 LDWF has processed 26 data requests for commercial fisherman. From January 1, 2016 to August 31, 2016 LDWF has processed 30 data requests for commercial fisherman.

Age and Growth

From the beginning of the second quarter of 2016 to the end of August the Age and Growth lab in Baton Rouge has received 6,303 otoliths and 2 Gray Triggerfish spines. From that otolith and spine total, 4,873 have been aged. Of those, 492 otoliths are Largemouth Bass. The Age and Growth lab should receive Black and White Crappie otoliths in a couple of months, after Inland Fall sampling. Spotted Seatrout is the most collected species for this time period and has been the most frequently collected marine species the past five years. Striped Mullet season is also approaching soon. The totals for each species are: Black Crappie-0; Black Drum-567; Gray Snapper-106; Greater Amberjack-21; Gray Triggerfish-2; King Mackerel-1; Largemouth Bass-492; Red Drum-767; Red Snapper-1,072; Sheepshead-240; Southern Flounder-185; Spotted Seatrout-2,675; Striped Mullet-0; Tripletail-0; Vermilion Snapper-48; White Crappie-0; Yellowfin Tuna-128.

Fisheries Research Lab:

The Grand Isle Fisheries Research Lab (GI-FRL) is the base for offshore fisheries independent monitoring and research projects conducted by the Fisheries Management Section. GI-FRL also performs a significant outreach capacity, as the Lab serves as a point of contact for the public, visiting researchers, and educational programs.

Southeastern Monitoring and Assessment Program (SEAMAP)

Louisiana SEAMAP is conducted by LDWF in coordination with NOAA and GSMFC from the FRL. LDWF staff conduct Vertical Line (VL), Bottom Longline (BLL), Ichthyoplankton, and Shrimp/Groundfish Trawl Surveys following SEAMAP protocols. SEAMAP 2016 began in early April with Vertical Line and Bottom Longline surveys. LDWF is assigned 100 VL sites for the year and 90 BLL sites in three seasons (spring, summer, and fall) statewide. The summer Shrimp/Groundfish cruise was completed in June 2016 aboard LUMCON's R/V Point Sur and the remaining Shrimp/Groundfish and Plankton surveys will be completed in fall on LUMCON's R/V Pelican and LDWF's R/V Defender, respectively.

Research and Monitoring Projects

Fisheries Management staff worked on several research and monitoring projects during the current reporting period. Investigations were continued into the age, growth, and reproductive biology of several important management species, including spotted seatrout, yellowfin and blackfin tunas, wahoo, and tripletail. Sampling and processing has been completed for year one of a MARFIN amberjack project in cooperation with the University of Florida. A total of 479 greater amberjack were collected for this project from January to June, 2016. Frozen samples were delivered to the UF Lab for processing and gonad samples were processed in the Histology Lab at GI-FRL. Additional projects on yellowfin tuna, blacktip sharks, and snowy and Warsaw groupers were initiated in cooperation with other institutions.

Grand Isle Oyster Hatchery

The Michael C. Voisin Oyster Hatchery on Grand Isle, LA is operated by both LDWF and Louisiana Sea Grant staff for the purpose of producing larvae for restoration, research, or industry purposes. During the winter of 2015-2016, hatchery staff completed maintenance for hatchery systems and performed preparations for the 2016 hatchery season. Maintenance tasks included replacing seawater intake lines, and cleaning filtration units. Oyster farm maintenance was also completed and all hatchery broodstock, grown in an Adjustable Longline System at the Sea Grant Oyster Research Farm, were cleaned and culled. At the beginning of February, approximately 200 of each diploid and tetraploid broodstock were removed from the farm and conditioned in the Warm Broodstock Holding System. Conditioning broodstock allows the

hatchery to extend its larval production season by ripening oysters when wild production does not exist or is minimal.

Improvements in the Algal Production Room (APR) included the addition of a transgential flow filtration (TFF) unit, which removes particulates in the hatchery seawater down to 0.1 micron. Thus, improving the water quality entering algal bags. Algal production in the Algal Stock Room began at the end of January, with five different species of algae being grown. This mixed algal diet is used for raising hatchery-produced larvae.

Larval production began in April and will continue through October. As of August 2016, production included approximately 178.9 million diploid, triploid, and tetraploid larvae and were harvested at various larval stages. Some of the hatchery-produced diploid larvae were deployed east of the Mississippi River as part of a LDWF alternative public oyster reef restoration effort. Future hatchery-produced diploid larvae will be delivered to a new remote setting facility in Buras, LA for large scale spat-on-shell production. Spat-on-shell will then be deployed on LA public oyster reefs.

Marine Mammal and Sea Turtle Monitoring:

Between March 1, 2016 and August 31, 2016, 23 marine mammal strandings (2 alive), and 85 sea turtle strandings (3 alive and 2 additional incidental captures), have been covered. The two live incidentally captured sea turtles were both Kemp's, one of which is still undergoing rehabilitation at Audubon Nature Institute. An interesting stranding to note is a dead leatherback in Lake Pontchartrain.

LDWF Office of Fisheries Staff continued to perform necropsies on carcasses and completed evidence, sample and carcass transfers to NOAA for marine mammals during this period. Five marine mammal necropsies have been performed, one of which was a melonheaded whale in western LA on 8/31/16.

Beginning in December 2014, LDWF partnered with researchers from the United States Geological Survey (USGS) to initiate a long term mark recapture survey of live sea turtles in Louisiana. Capture efforts were deployed as part of this effort in December of 2014, May of 2015, December of 2015, and May of 2016. During these efforts a total of 89 turtles were captured, with 78 first-time captures and 11 recaptures. All captures were green sea turtles other than a one-time capture sub-adult loggerhead sea turtle. Three LDWF Staff members traveled to Charleston, SC to participate in sea turtle trawling training with SCDNR this summer.

LDWF staff performed post-release monitoring associated with a conditional release of a dolphin that was rescued live from Grand Isle Beach at the end of October, 2015. Following some time at rehab at Audubon Nature Institute, NOAA deemed that this animal could be conditionally released with post release follow-up monitoring outlined by Southeast Region

Staff. Following communications and planning with NOAA, the animal was released on April 28, 2016 and was monitored routinely as weather allowed through the end of May 2016.

In July, LDWF hosted researchers from across the country for dolphin health assessments being conducted in Barataria Bay. Staff participated in and assisted with capture efforts led by the National Marine Mammal Foundation and NOAA/NOS which resulted in a total of 38 dolphins captured during a two week effort.

Shrimp Program:

The 2016 spring inshore shrimp season opened state-wide at 6:00 a.m. on Monday, May 23 2016. The spring inshore shrimp season closed on July 3, 2016 at 6:00 p.m. from the Louisiana/Mississippi state line westward to the western shore of Freshwater Bayou Canal except in Mississippi, Breton and Chandeleur sounds. The spring inshore shrimp season closed on July 15, 2016 at 6:00 p.m. from the Freshwater Bayou Canal westward to the Louisiana/Texas state line. The open portion of Mississippi Sound closed on August 1, 2016 at 6 p.m.

State outside waters southward three nautical miles from the inside/outside shrimp line from the northwest shore of Caillou Boca at -90 degrees 50 minutes 27 seconds west longitude westward to the Atchafalaya River opened at 6:00 a.m. on April 22, 2016.

State outside waters southward three nautical miles from the inside/outside shrimp line from the Atchafalaya River westward to the western shore of Freshwater Bayou at -92 degrees 18 minutes 33 seconds west longitude opened at 6:00 a.m. on May 23, 2016.

The 2016 fall inshore shrimp season opened at 6:00 p.m. on August 15, 2016 from the Louisiana/Mississippi state line westward to the Atchafalaya River. The 2016 fall inshore shrimp season opened at 6:00 a.m. on August 22, 2016 from the Atchafalaya River westward to the Louisiana/Texas state line.

Shrimp Landings

Statewide shrimp landings (all species combined/heads-off weight) for 2015 totaled 97.5 million pounds with a dockside value of \$121.9 million (Source: LDWF Trip Ticket Data).

Crab Program:

Louisiana Department of Wildlife and Fisheries was awarded a grant from NOAA's Marine Debris Removal Program during July 2015. As part of that grant, LDWF was required to have derelict crab trap cleanups in both the Pontchartrain Basin and the Barataria/Terrebonne Basins. LDWF is also currently collecting derelict traps in both of these areas using side scan sonar and also collecting bycatch data for each trap. As a part of the Marine Debris grant, Louisiana Department of Wildlife and Fisheries closed three different areas to allow the removal of derelict crab traps in early 2016. The first closure area was the eastern portion of Lake Pontchartrain and the whole of Lake St. Catherine and took place from 6:00 a.m. February 12 to 6:00 a.m. February 21, 2016. The volunteer day, February 13, for this area yielded 554 derelict traps collected by volunteers. Work in this area continued during the closure period and an additional 832 were removed by workers for the Lake Pontchartrain Basin Foundation and LDWF employees. That brought the grand total of 1,386 abandoned traps removed from the Pontchartrain basin.

The second closure area was in the northern section of the Barataria basin and included the areas known as "The Pen", Bayou Perot, Bayou Rigolets and portions of Little Lake from 6:00 a.m. February 19 to 6:00 a.m. February 28, 2016. The volunteer day, February 20, for this area yielded 874 derelict traps collected by volunteers. Work in this area continued during the closure period and an additional 320 were removed by workers for the Barataria-Terrebonne National Estuary Program and LDWF employees. That brought the grand total of 1,194 abandoned traps removed from the upper Barataria basin.

The third closure area was in the Louisiana waters of Lake Sabine at the request of Texas Parks and Wildlife. The closure here coincided with the closure in Texas and took place from 6:00 a.m. February 19 to 6:00 a.m. February 28, 2016. There was no directed cleanup effort for Louisiana in this area. The closure was done to assist TPW with their closure and to avoid confusion with the shared waters of Lake Sabine.

Crab Legislation

The Louisiana Wildlife and Fisheries Commission (LWFC) took action at the November 2015 meeting to suspend entry into the Louisiana Fisheries Forward Commercial Crab Gear Requirements program at the request of the Blue Crab Task Force (BCTF). The LWFC continued that suspension at their March 2016 meeting while the BCTF continued to work on legislation to increase the robustness of the LFF program. The BCTF was also working on legislation to increase license fees as well as tighten the restrictions on the grandfathering of people who could obtain a crab trap gear license. All of the actions that were brought before the state legislature were rejected and subsequently entry to the Louisiana Fisheries Forward Commercial Crab Gear Requirements program resumed on July 1, 2016.

According to the 2016 Louisiana Blue Crab stock assessment, the Louisiana stock of blue crab had crossed the overfished benchmark and was very close to crossing the overfishing benchmark. In order to remain in good standing with the Marine Stewardship Council Sustainability Certification, the LWFC took action at its July 2016 meeting to establish a closed season on the commercial harvest of blue crabs and to restrict the harvest of immature female crabs. For the years 2017, 2018 and 2019, the commercial harvest and use of crab traps will be prohibited in Louisiana waters for 30 days beginning on the third Monday in February. During those same

years, the commercial harvest of immature female blue crabs will be prohibited except for sale as soft shell crabs.

Louisiana Blue Crab Landings

Statewide crab landings for 2015 totaled 41.4 million pounds with a dockside value of \$58.4 million (Source: LDWF Trip Ticket Data).

Oyster Program:

Oyster Season

The table below contains a summary of the 2015-2016 oyster season for major production areas (data derived from boarding runs, not LDWF Trip Tickets).

Area	Season Opening	Season Closure	Seed Harvest (bbls)	Market Harvest (sacks)	
CSA-1N	Oct. 19	Dec. 7 (full)	70 122	80.072	
Transplant	Apr. 1	Apr. 14 (seed)	79,155	09,972	
CSA-1S	Oct. 19	Apr. 30 (full)	11,628	7,323	
Hackberry Bay	Oct. 19	Nov. 9 (full)	9,359	2,038	
Lake Chien	Oct. 19	Nov. 30 (full)	0	760	
Sister Lake	Oct. 19	Nov. 13 (full)	28 208	65,147	
Spring Season	Apr. 4	Apr. 14 (market)	38,308		
CSA-6	Sept. 9	Open	20	175	
Calcasieu Lake	Nov. 1	Repeated-DHH	0	25,268	
		Total:	138,448	187,683	

Oyster Stock Assessment

Sampling for the 2016 oyster stock assessment was completed for July 2016. The statewide estimate of seed and sack oyster stock size is 899,799 barrels of oysters, down 19% from the 2015 assessment and well below long-term averages. Oyster populations in CSA-1N and Hackberry Bay are near long-term averages and are supported by good spatfall, with populations near historic lows in CSA-1S, Sister Lake, and Calcasieu Lake. The oyster populations in Sabine Lake suffered extensive freshwater mortality in the summer of 2015, and the 2016 assessment showed signs of a strong recovery despite a smaller freshwater mortality event in the summer of 2016.

Cultch Plants

The three cultch plants in Calcasieu Lake appear to have been successful and currently support a total of 44,704 sacks of seed oysters, but no oysters have grown to market size (West Cove: 16,861 sacks, Commissary Point: 14,892 sacks, Lambert's Bayou: 12,950). No cultch plants will be conducted in 2016, but planning has begun to determine the possibility of conducting cultch plants in 2017.

Remote setting

Construction continues on the Oyster Remote Setting Program (RSP) facility in Buras, construction delays have postponed the anticipated completion date to December 2016. Pumps, shell washer, and other equipment expected to be purchased and installed by May 2017. It is anticipated to be operational and producing large volumes of spat-on-shell by September 2017.

Finfish Program:

LDWF conducts biological monitoring statewide in the coastal, nearshore, and offshore areas of Louisiana for finfish.

At its May 5, 2016 meeting, the Louisiana Wildlife and Fisheries Commission (LWFC) passed a Notice of Intent to modify recreational gag and black grouper season and size regulations. The proposed Notice of Intent increases the minimum recreational size limit for gag and black grouper to 24 inches total length. The proposed rules also modified the recreational season for the harvest of gag to be closed from January 1 through May 31 of each year. Public comment was taken on the Notice of Intent until August 4, 2016. In a related action, the LWFC passed a Declaration of emergency to increase the minimum size limits of gag and black grouper effective immediately and to open the recreational season for the harvest of gag on June 1.

Louisiana closed the season for the commercial harvest of greater amberjack on July 17, 2016 concurrent with a closure in federal waters.

Louisiana closed the season for the recreational harvest of greater amberjack on August 1, 2016 concurrent with a closure in federal waters.

Louisiana closed the season for the recreational harvest of gray triggerfish on August 1, 2016 concurrent with a closure in federal waters.

Louisiana closed the state waters season for the recreational harvest of red snapper on September 5, 2016 at 11:59 p.m. after preliminary LA Creel landings data indicated the state's self-imposed quota was projected to be met at that date.

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 7 new structures. There are 43 structures that are permitted for deployment as permanent artificial reefs. Permitting of an additional 21 structures is currently underway. Multibeam surveying of the program's offshore reefs has been completed and is available on the program's website. Efforts to create an offshore monitoring program with remotely-operated vehicle (ROV) surveys are ongoing.

The Program has identified areas suitable for nearshore reef development and vetted these "planning areas" with user groups. The shrimping community did raise a few concerns; but the program was able to address these concerns to their satisfaction, per another round of public meetings. The final step is to present the proposed planning areas and public comment to the Artificial Reef Council for approval. Proposed Nearshore Artificial Reef Planning Areas are available on: http://www.lafisheriesforward.org/artificialreef/

The Program has completed two inshore reef enhancements at Independence Island and Redfish Point. These reefs were enhanced with over 10,000 tons of limestone. Furthermore, permits were submitted for a new inshore reef site near the south shore of Lake Pontchartrain in conjunction with a planned fishing pier.

Boating and Non-Boating Access Projects

There are currently two boating access projects under construction and four boating access projects in the planning and design phase. One fishing access project is in the planning and design phase.

Commercial Seafood Programs:

Professionalism

From March 2016 to October 2016, Louisiana Department of Wildlife and Fisheries and Louisiana SeaGrant continued to execute Phase II of Louisiana Fisheries Forward; mainly, the production and post-production of the training videos as noted below.

Phase I training videos are available on http://lafisheriesforward.org.

Phase II training videos are (not available – in post-production):

Best Practices for Oyster Fisherman Best Practices for Shrimp Fisherman Best Practices for Finfish Fisherman

Fisheries Management and the Regulatory Process

In early March 2016, the Louisiana Fisheries Forward Summit was held in Kenner, Louisiana. Attended by approximately 350 participants, the 1-day summit offered comprehensive education and training for the commercial fishing industry through informative presentations and materials, as well as a 41 booth trade show and an array of hands-on workshops. Additionally, the summit was host to 6 universities/colleges, 12 academic/scientific student posters, 8 state agencies and numerous Louisiana chefs. The 2016 Louisiana Fisheries Forward Summit news story is available on: https://www.youtube.com/watch?v=RLQPyYwFtTo.

In May of 2016, Louisiana Fisheries Forward started the process of preparing for and developing two, possible, required commercial oyster fisheries trainings (Louisiana-2016-HB303, Act 276 And Act 291). Acts 276 and Acts 291, as referenced above, are now required trainings. In August 2016, Louisiana Fisheries Forward launched a Commercial Oyster Fisheries "communications plan" at the August 23rd Oyster Task Force meeting. The "communications plan" is being launched statewide.

Commercial Oyster Fisheries Trainings are available on: http://tinyurl.com/oysterbrochure

By December 2016, Phase III of Louisiana Fisheries Forward should be underway. Within phase III, videos may be produced with corresponding fact sheets, several hands-on workshops will be offered to include new and trending topics and the Louisiana Fisheries Forward Refrigeration Demo Unit will travel the state, a 6,500 lb. unit that consists of a brine freezer, plate freezer and chilled water system. Additionally, within phase III, training models may be developed and launched for the commercial freshwater fisheries and charter fisheries

Sustainability

The Louisiana blue crab fishery underwent assessment in April 2016 for the fourth and final Marine Stewardship Council sustainability certification audit. The blue crab fishery was awarded continued certification. Discussions are currently being held to transfer the certificate from LDWF to private-sector fishery participants.

The Office of Fisheries has been developing a Responsible Fisheries Management certification program in partnership with the Audubon Nature Institute. The blue crab and oyster fisheries underwent on-site assessments in June 2016. Final determinations for certification are expected in August 2016 for blue crab and September 2016 for oyster. The Audubon GULF RFM standard was recognized by an ISO-affiliated body in fall 2015. The Audubon GULF RFM technical advisory committee me in July 2016 to conclude discussions on the certification guidelines. Full recognition of the Audubon GULF Responsible Fisheries Management program by the ISO is expected in Fall 2016. When the Audubon GULF RFM certification program is complete, it will

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be made available to any and all Gulf seafood supplier to meet third-party sustainability assurance requirements.

LDWF is engaging Gulf of Mexico fisheries scientists and managers, the United Nations FAO, and other regional and international partners to develop best management practices for small-scale, warm-water coastal fisheries. This work is on-going.

LDWF continues to participate in discussions with local, regional, and national stakeholders about a fishery improvement plan / marine advancement plan for the Louisiana shrimp fishery led by the Audubon Nature Institute. This fisheries improvement plan / marine advancement plan is expected to be launched in Fall 2016.

LDWF staff participated in the 2016 Food Marketing Institute / Grocery Manufacturer's Association Global Sustainability Summit in August 2016. LDWF participated on a panel on responsible fishery management and sustainable seafood with the Audubon Nature Institute and Paul Piazza & Sons, Inc.

Aquatic Plant Control:

Invasive aquatic weeds continue to threaten access and recreational activities throughout Louisiana. Spring surveys conducted in April/May 2016 revealed an estimated 249,823 acres of nuisance aquatic plant coverage. That total was mostly composed of water hyacinth (71,291 acres) and giant salvinia (44,109 acres). The spring surveys are conducted at the beginning of the growing season, and usually yield lower acreage of coverage than the fall estimates conducted at the end of the growing season. In 2016, LDWF applied EPA-approved herbicides to 27,158 acres of nuisance vegetation across the state. The majority of plant control efforts focused on water hyacinth and giant salvinia, with 12,529 and 8,745 acres being treated this year, respectively. A major area of focus was the Terrebonne Basin which suffers from a chronic water hyacinth infestation. Approximately 5,399 acres of hyacinth in the Terrebonne marsh have been treated by LDWF in 2016.

Winter temperatures and isolated flood events continue to be major factors in determining the severity of aquatic weed impacts, especially giant salvinia, in Louisiana. The winter of 2015-2016 was mild and short, especially in the coastal areas of the state. Effects of the cooler temperatures on aquatic weeds are expected to be minimal and short lived. However, major flooding in north Louisiana experienced in early March 2016 provided some additional plant control. Several impoundments experienced record high water levels which served to flush giant salvinia into areas where it could be treated, or even out of the lakes. As the high waters receded, some floating aquatic plants were stranded on the banks of these impoundments, similar to the effect of drawdowns that are conducted for nuisance plant control.

Mississippi Department of Marine Resources (MDMR) Activity Report: February 1, 2016 – June 30, 2016 Gulf States Marine Fisheries Commission (GSMFC) 66th Annual Fall Meeting – New Orleans, LA October 11 – October 14, 2016

Shrimp and Crab Bureau

Mississippi territorial waters opened to shrimping at 6:00 a.m. on June 6, 2016. An aerial survey counted 255 boats trawling in the Mississippi Sound on opening day. Preliminary data through June 2016 show approximately 3.2 million pounds of shrimp landed, a slight increase from the 3 million pounds recorded during the same time period in 2015. Blue Crab landings through June 2016 were 311,553 pounds a slight decrease from the 342,184 pounds recorded through June 2015. Live Bait Shrimp inspections for the 2016-2017 license season were completed. Overall 13 live bait dealers, 11 live bait vessels and 7 live bait transport vehicles were licensed and inspected.

During the 2016 Mississippi Derelict Crab Trap Cleanup, a total of 2,530 traps were removed from the environment by Mississippi resident commercial crab fishermen and later recycled at a scrap-metal facility. The cleanup was held April 12-14, 2016 and funded through the 2011 NOAA Bonnet Carré Fisheries Disaster Grant.

Long term fishery independent trawl sampling continued in conjunction with the NOAA Project "Monitoring and Assessment of Mississippi's Interjurisdictional Marine Resources." Cooperation with the Gulf Coast Research Laboratory (GCRL) on commercial and recreational Blue Crab Catch per Unit Effort projects is also ongoing. Bureau personnel 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 Camps and vessels 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 21 inshore reefs in the three coastal counties (Hancock, Harrison and Jackson) to assist small boaters in locating the low-profile reefs. ARB staff also assisted the Finfish Bureau with collecting samples for the NFWF project.

In addition to monitoring artificial reefs, the ARB worked on securing and deploying more structure. During February and March the ARB secured approximately 400 concrete culverts. This material will be stockpiled at the Gulfport staging site for future offshore deployments. During May and June the ARB deployed 222 juvenile reef fish habitat boxes in FH-3, FH-13,

and FH-14 for the Coastal Impact Assistance Program. ARB members also used side scan equipment for in house applications and to assist the Shellfish Bureau. Mapping to monitor deployed clutch material was completed in April for the Mississippi Oyster Cultch Early Restoration Project. Staff continue to side scan inshore and offshore artificial habitat to assess reef status and location.

Since January, the ARB contributed to multiple outreach events and educational meetings. In March, ARB staff attended the Gulf States Joint Artificial Reef meeting in San Antonio, TX. In June, ARB staff also attended the Artificial Reef workshop in Alexandria, VA. Personnel represented the Bureau and MDMR at several outreach events including the Biloxi Boat Show in Biloxi, MS, Capital Day, and the Wildlife Expo in Jackson. In May, staff assisted the Institute for Marine Mammal Studies with a juvenile Bottle Nose Dolphin rescue.

Lastly, the ARB is currently preparing for and working on several projects. The Coastal Conservation Association and the ARB are collaborating to deploy structure at Cat Island. In addition to future deployments, the ARB is working on monitoring projects. These projects include the Gulf Artificial Reef Monitoring and Assessment Program, the National Fish and Wildlife Foundation project, and the Mississippi Bight Lionfish Response project.

Finfish Bureau

The Finfish Bureau (FB) continued to oversee the Marine Recreational Information Program. Assignments from March through August were obtained, reviewed, and processed before being sent to the GSMFC office. A total of 206 assignments and 1015 surveys were completed February 1, 2016 through June 30, 2016 in Jackson, Harrison, and Hancock Counties. Survey site validations to update the site registry for 2016 and state-wide site effort estimates continued to be refined in an effort to improve the accuracy of the survey design. The for-hire vessel frame was evaluated and edited to better reflect our most recent and updated state license file. This will allow FB staff to develop a more comprehensive and accurate active vessel frame to estimate more precisely for-hire effort.

Long term fishery independent sampling continued in conjunction with the NOAA Project "Monitoring and Assessment of Mississippi's Interjurisdictional Marine Resources." With cooperation from the GCRL a total of 521 otoliths were collected February 1, 2016 through June 30, 2016. Samples were collected from ten different species: Atlantic Croaker, Black Drum, Gray Snapper, Red Drum, Sheepshead, Southern Flounder, Southern Kingfish, Spanish Mackerel, Spotted Seatrout and Striped Mullet. Additionally, 214 samples were collected and processed as part of the MDMR biological sampling program from eight species: Atlantic Croaker, Black Drum, Red Drum, Red Snapper, Southern Flounder, Southern Kingfish, Spotted Seatrout, and Tripletail. The data collected through these programs will aid in management decisions for our state and are submitted to the GSMFC. Otolith reference sets including: Red Drum, Spotted Seatrout, Striped Mullet, Red Snapper, Gulf Menhaden, and Sheepshead have been read and sent to their prospective locations.

FB staff continued to target Red Drum in Mississippi coastal waters as part of an ongoing research project aimed at filling in age and size information gaps of Red Drum in Mississippi waters. The Red Drum project began in February 2014 and targeted fish of sizes of 20-30 inches, however Red Drum collected from past and current monitoring projects have not captured this size range. 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 deployed only during select months in fall and spring. In addition, samples have been collected on a voluntary basis from recreational fishermen (discuss for hire sampling). These samples will be used to enhance existing data sets in order to complete a Red Drum stock assessment currently underway.

The Red Snapper reporting system *Tails n' Scales* completed a successful landings program for the opening of the state Red Snapper season on May 27th and the Federal season June 1st which opened on June 1st for both private and Federal For-Hire recreational anglers. A summary will be available on the next GSMFC activity report as the seasons were not completed in this activity window of February 1, 2016-June 30, 2016.

Four recreational fishing records for conventional tackle was accepted for state records between February 1, 2016 and June 30, 2016.

		Common							
Angler	Catch Date	Name	Scientific Name	Weigh	t (lbs, oz)	TL (in)	FL (in)	Tackle	
Antonio Ruio	5/26/2016	Red Drum	Sciaenops ocellatus	52	2.40	43.75	43.75	Conv.	
Todd Rosetti	5/01/2016	Smooth Puffer	Lagocephalus laevigat	us 6	6.40	24.52	23.10	Conv.	
Jimmy Taylor	5/30/2016	Keeltail Pomfre	t Taractes rubescens	14	24.52	34.00	27.88	Conv.	
David Floyd	5/13/2016	Striped Burrfish	Chilomycterus schoepf	ii 1	9.65	11.13	11.13	Conv.	

Shellfish Bureau

The Shellfish Bureau (SB) officially closed their regular 2016 Oyster Season on May 13th at 4 p.m. for all commercial and recreational oyster harvesters. A total of 2,337 trips were harvested, yielding 40,347 sacks. In addition, only one of the two lease holders harvested any oysters off leased Mississippi oyster reefs totaling 30 sacks from L-91. The MDMR have reclassified the growing waters of Area 5 Biloxi Bay to Approved and Conditionally Approved status. The 2016-2017opening of Biloxi Bay for harvest is expected during the month of October 2016.

SB staff ceased collecting water quality and parameter data due to the opening of the Bonnet Carré spillway on February 17, 2016. One-minute dredge tows on all major reefs in the Western Sound were also performed in February as a continuation of reef monitoring due to the opening of the spillway. The Shellfish Bureau collected the ex-datasondes in the Western Sound which

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were previously deployed to monitor hydrology for the 2016 Bonnet Carré spillway opening. Surface and bottom phytoplankton water samples collected from the 2015/2016 Harmful Algal Bloom event were submitted to the GCRL for molecular PCR analysis.

Square meter dives for cultch monitoring and evaluation of the Mississippi Department of Environmental Quality, Early Restoration and Natural Resource Damage Assessment sites began during the month of May and continued through June. A total of 244 dives will be completed before the opening of the FY17 oyster season to ensure proper management of Mississippi's oyster reefs.

A total of 2,338 water samples were collected from all eight shellfish growing area waters during FY16 which ended on June 30, 2016.

The Growing Water and *Vibrio vulnificus* FDA evaluation of the MS shellfish was found in compliance for the FY16 season.

Seafood Technology Bureau

The Seafood Technology Bureau (STB) issued 65 re-certifications for the 2016-2017 inspection year. STB has certified three new seafood dealers since that time. The required bi-annual water quality sampling for seafood processing facilities for March was completed with a total of 47 samples taken. Due to improper identification, STB staff confiscated and destroyed 10 sacks of oysters.

STB reported the FDA recalls of Louisiana and Oregon oyster products; no Mississippi companies were involved in these recalls. Recall timelines and final reports were prepared. In March, in response to reports from the Food and Drug Administration (FDA) an illness investigation was conducted on tagged and marked Louisiana products.

To ensure constant traceability capabilities, Seafood Officers conducted hands-on mock recalls with processors during re-certification inspections. Seafood Officers also assisted several processors in updating in-plant validation studies to support Hazard Analysis Critical Control Point (HACCP) systems. STB is currently in the process of digitalizing all dealer files dating back to 2005. STB staff are compiling data to create an interactive map of the seafood industry in Mississippi to be made available on the MDMR website.

In an effort to maintain customer service to the growing population of certified dealers the STB completed a processor survey to update facility information for all processors. A total of 42 processors completed the facility survey showing an increase in the current number of units inspected. In response to requests from the seafood industry STB conducted employee wage surveys of shrimp and oyster processing businesses. STB provided education to all certified

processors to meet FDA training requirements stated in the National Shellfish Sanitation Program (NSSP) model ordinance.

STB staff provided technical assistance to the MDMR licensing office; additionally, providing consultation, education and assistance to all new seafood dealers. In response to an increase of inquiries related to the seafood dealer's license, STB developed a "Frequency asked Questions on Mississippi's Seafood Dealer's License." Staff assisted the Mississippi Department of Health in conducting regulatory inspections on some of the shrimp and crab processors' included in the Federal Seafood HACCP program implementation. Staff provided technical assistance to several retailers assisting with newly implemented FDA retail HACCP regulations.

In March, the FDA Molluscan Shellfish Compliance Program conducted a Program Element Evaluation Review (PEER) of the Mississippi Shellfish Sanitation Program. In May and June, the FDA conducted the field inspections and evaluations of state's Vibrio risk management plan. To be certified to participate in the interstate commerce of buying and selling oysters, full compliance of rules and regulations under the requirements of the Mississippi *Vibrio vulnificus Risk Management Program* is necessary in the shellfish processing and shipping of oysters. FDA evaluators included FDA Southeast Regional Shellfish Specialists John Veazey and Earnest "Buddy" Levins came to conduct the evaluations.

STB staff member attended the annual Gulf and South Atlantic Southern Shellfish Conference (GSASSC) in New Orleans, LA in June. In May all the STB staff attended Cardiac Pulmonary Resuscitation (CPR) class updating their certifications for the next two years.

STB in collaboration with the Mississippi State University and FDA, conducted three HACCP workshops. The workshops were held free of charge for Mississippi residents. The HACCP workshops were made possible through a grant from the Mississippi Tidelands Trust Fund Program FY 2009 which is administered by the Mississippi Secretary of State's Office and the MDMR. A total of 32 students attended HACCP.

STB in collaboration with the Mississippi State University assisted in gathering survey data for the A MAFES Technical Bulletin 1219 published in May 2016 "Survey of Seafood Products Handled by Mississippi Restaurants", a project partially funded by the Gulf States Marine Fisheries Commission through the MDMR under grant award number 11-040-11010066.

Marine Patrol

Marine Patrol officers spent 28,421 man hours and 4421 vessel hours conducting checks on 17,685 persons during this time period. A total of 473 citations were issued for various violations. In addition, the courtesy citation program resulted in 305 courtesy citations being issued, giving the violator a chance to correct the violation before being subjected to fines and penalties through the court system.

Training: Marine Patrol attended several training classes and seminars during this time including, but not limited to, Blood Borne Pathogens/Vibrio Awareness, Prisoner Transport, BUI, FTO, Train the Trainer, Active Shooter, Sonar Training, NECI Suicide Calls, NECI Crimes in Progress, Firearms/Use of Force, dive, ASP training, AG Legal Updates, Domestic Violence and Human Trafficking, Performance Development, Case Law Legal Updates, CPR, and Boating Instructor Course

Outreach: Marine Patrol outreach activities included presentations for the following Safety days: Career Days at St. Martin High School, North Woolmarket and North Bay Elementary, Safety Day at Lizana Elementary, Vancleave Middle School, Academy Sports Gulfport, Academy Sports D'Iberville, and six other locations, boating safety outreach presentations, Field Day at Gorenflo Elementary and Biloxi Shucker's Day.

Alabama State Report to the Gulf States Marine Fisheries Commission Fall 2016

Fisheries Section

Coastal Impact Assistance Program (CIAP) funds were used to renovate property in south Mobile County to serve as an oyster management station and public access for recreational activities. Site will have an ADA accessible fishing pier and kayak launch in addition to boat ramp and docks. This project is expected to be completed during the fall of 2016.

An oyster management station was utilized to monitor the commercial harvest of oysters from public reefs beginning on November 16, 2015. Unfortunately, a continuous series of natural events including two red tide events, multiple high river stage closures, and a wastewater treatment plant outflow issue led to extensive closures of Alabama's public oyster reefs this harvest season. The Alabama Department of Public Health closed all public reefs to harvest four times throughout the public reef harvest season which ended on April 30, 2016. Out of a total of 167 days during this season, Alabama waters were closed to harvest for 142 days and opened to harvest for only 25 days with an average of 6 harvesters per day. Of the 25 days of opening only 17 days occurred during the work week when public oyster reefs were eligible for harvest. A total of 369 sacks of oysters were harvested.

AMRD has completed the final cultch planting of the National Fish and Wildlife Federation (NFWF) project entitled "Restoration and Enhancement of Oyster Reefs in Alabama". A total of 21,554 cubic yards of cultch (15,906.7 c.y. oyster shell and 5,647.3 c.y. #4 limestone) were planted on four designated sites on Cedar Point oyster reef between May 9 and May 25, 2016. The combined areas of the four planted sites totaled 318.71 acres. A project total of 60,510 cubic yards of cultch material were deployed on Alabama's public oyster reefs during the spring and fall 2014 and the spring of 2016 exceeding the project goal of 50,000 cubic yards. The additional material was planted within the budget designated for this project.

AMRD amended the scope of work, project budget, and duration of the NFWF project entitled "Restoration and Enhancement of Oyster Reefs in Alabama" to include the remote setting of oysters. The construction and setup of remote setting tanks and oyster shell cages has been completed; AMRD has received oyster larvae from the Auburn Shellfish Laboratory (AUSL). The first larval setting process was anticipated to occur in June 2016 but was delayed due to unforeseen issues causing high mortality of oyster larvae during the spawning and larval growth phases at AUSL. After several spawning attempts, which resulted in high mortality and a failure to successfully enter a recruitment phase, oyster larvae were spawned again on July 19 and introduced to the remote set tanks on August 5. Larval production at AUSL is still at a much lower level than desired. Additional larvae have been added to the tanks to increase the density of settled oysters. AUSL is diligently trying to determine the cause of the larval mortality issues and remedy the situation.

AMRD has completed annual quadrat surveys of oyster reefs planted with cultch in between 2009 and 2016, as well as, on comparative unplanted reef areas. SCUBA quadrat surveys occurred between July 15 and August 15, 2016. The AMRD conducted 28 dives on oyster reefs and

collected 560 samples during these surveys. The results of the reef data are being evaluated and will be used to aide in management decisions regarding the commercial oyster season beginning in the fall of 2016.

AMRD is continuing the fisheries sampling tasks as funded by NFWF. Tasks include offshore vertical line (VL), bottom long line (BLL), trawling, fish movements, gut content analysis and side scanning of habitats. Twenty-seven BLL stations and 50 VL stations were completed for the first half of this year with red snapper being the most frequently caught species for both gears. Fish movement will continue to monitor red drum migrations from the rivers into the bay and nearshore environments. Additional wild and hatchery-reared fish were tagged and released. This was the initial year for a red snapper tagging task that was implemented to estimate fishing pressure on the stocks off Alabama's coast. Results of this effort are to be completed by the year's end. Inshore tasks continued with the a bait fish survey, skimmer trawl, water quality monitoring, and commercial blue crab observer trips.

AMRD biologists participated in eight observer trips on five different commercial blue crab harvesting vessels working in upper Mobile Bay, Portersville Bay, and the Perdido and Wolf Bay waterways between May 25, 2016 and July 27, 2016. All trips combined, 715 crab traps were sampled with a total of 1,815 traps fished and 3,874 individual blue crabs sexed and measured. External parasites and any abnormalities found were documented; bycatch was also recorded. Twenty crabs were randomly selected and retained during each trip for a total of 160 crabs. Selected crabs were placed on ice and later measured, weighed, and examined to verify sexual maturity and presence of internal, external parasites, or other abnormalities.

AMRD began surveying historical oyster reef locations in Mobile Bay using sidescan sonar to determine possible locations for active oyster reefs. Several areas of potential hard substrate have been identified and ground-truthing is planned to verify if oysters exist in this area or it is just a remnant of a past reef. The four areas of Cedar Point Reef planted during 2016 were scanned post-planting to evaluate the successful coverage of the planting.

Hatchery activities continued at the Claude Peteet Mariculture Center (Gulf Shores) with work pertaining to red drum, Florida pompano, and southern flounder. An estimated 25,000 one inch long red drum were released; 1,700 two and a half inch long red drum were stocked in hatchery ponds to allow additional growth prior to release. Hatchery reared red drum were implanted with acoustic tags and released in Dog and Fowl Rivers in Mobile County as part of the NFWF Fish Movement Monitoring Study. Cooperative work concerning Florida pompano with Auburn University continues.

SEAMAP activities began in April with BLL survey completing 8 stations for spring and summer seasons. Fifteen different species were collected with Atlantic sharpnose shark being the most abundant. Vertical line completed twenty-five stations during spring sampling events with four species being collected. Red snapper was the most frequent species encountered. The summer trawl cruise completed four stations in statistical zone 11.

The Biological Sampling Program, funded by the Gulf States Marine Fisheries Commission, was restarted in 2015 and will continue into 2016. From February 1, 2016 through August 31, 2016,

a total of 838 otoliths from recreationally caught fish were collected representing twenty-two species and 260 otoliths from commercially caught fish representing seven species were collected by AMRD staff.

From February 1, 2016 through August 31, 2016, a total of 1,811 Access-Point Angler Intercept Survey interviews were collected (all modes combined). During this period, samplers completed a total of 376 assignments. Training and fish tests will be given in the fall.

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 has submitted an U.S. Army Corps of Engineers (USACE) permit application to construct 3 circalittoral reefs immediately offshore of Gulf Shores and Orange Beach. The reefs will be constructed with concrete/limestone circular discs anchored into the seabed using a 10" fiberglass piling.

A gas platform located in the outer continental shelf lease block MP-255 was reefed in AMRD's Rigs-to-Reefs program. The platform was removed and taken onshore while the jacket was cut at 95 feet below sea level. The top portion of the jacket was placed adjacent to the base in approximately 333 feet water depth. The reef provides approximately 243 feet of vertical relief and is approximately 54 nautical miles offshore of Dauphin Island, AL. AMRD received a \$248,178 donation from Fieldwood Energy for accepting the structure into the State of Alabama Rigs-to-Reefs program.

AMRD has surveyed 8.2 acres of bottom in Mississippi Sound and 15.8 acres of bottom in Pelican Bay to satisfy USACE cultural resources requirements for artificial reef construction permits. Similarly, AMRD has surveyed 236 linear nautical miles of water bottoms for USACE cultural resource requirements for permitting approximately 80 km² of water bottoms between 6 and 9 miles offshore of Alabama.

AMRD has deployed fifty 25 feet tall concrete/limestone rock pyramid reef modules in the reef permit zones approximately 12 to 40 nautical miles offshore of Alabama. These modules were used to enhance existing reef sites and create new reef sites. Additionally, 125 low relief juvenile recruitment reefs were deployed approximately 3 nautical miles offshore of Baldwin County within the R.V. Minton Nearshore Reef Zones. Repurposed concrete culverts, manholes and pipes were deployed at 11 sites from approximately 12 to 30 nautical miles offshore to enhance reefs that were near the end of their usable life; one new expansive reef site was created. The cost of these reefing projects totaled \$1,162,000 and were funded by NFWF funds and donations.

AMRD has awarded a contract to enhance 14 existing inshore reefs and construct 2 new reefs within Mobile Bay using 41,660 tons of 3" X 6" limestone gabion and 9,402 tons of #1 coarse limestone aggregate. The project cost is \$2,197,922 and is funded by NFWF funds.
New members have enrolled in AMRD's Adopt-a-Reef program and 34 reports have been submitted on the online database. Adopt-a-Reef volunteers receive a tee shirt or a visor each time a report is submitted. Reports include information such as subsidence, structural integrity, lionfish abundance, and degree of anthropogenic fouling.

AMRD hired seven students from local high schools to work for 2-7 week internships to introduce them to different career opportunities within Alabama's Marine Resources Division.

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 <u>www.eatalabamaseafood.com</u> 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 Director Chris Blankenship.

Enforcement Section

From February 1, 2016 – July 31, 2016 AMRD enforcement officers conducted 1,108 commercial fishermen intercepts; 13,188 recreational fishermen intercepts; 6,902 patrol hours, and 4,337 vessel boardings.

Two Eco-dogs were purchased and trained to assist officers in locating fish and fish filets that have been hidden on vessels. This program was funded through the Joint Enforcement Agreement with NOAA/OLE and other private organizations. Auburn University provided training for the dogs and handlers through the Canine Performance Sciences Program. There is a team assigned to each of the two counties that border the saltwater jurisdiction. The K9 teams became active in February and participated in the Mobile Boat Show as well as other outreach events in addition to the hours they have spent on patrol. The K9 teams have proven to be a valuable tool in changing illegal behavior. Complaints for anglers hiding and fileting fish dropped dramatically since the teams hit the docks.

AMRD officers continued their partnership with Bryant High School in Bayou La Batre and Baker High School in Mobile-in their Career Academy programs. The programs are designed to introduce students to different career opportunities in the marine community. 3 students from each school were provided opportunities to work part over the summer with AMRD. Their time was split between the enforcement and biological sections learning the aspects of the jobs and what education routes would lead them in the right direction if they were to choose one of the career fields. FLORIDA FISH & WILDLIFE CONSERVATION COMMISSION Nick Wiley, Executive Director

DIVISION OF MARINE FISHERIES MANAGEMENT Director: Jessica McCawley



Fishery Dependent Data

Commercial

The Fisheries Dependent Monitoring subsection of Marine Fisheries Research has completed a move from Oracle to SQL Server for the State Trip Ticket database. The migration included development of a completely new Marine Fisheries Information System (MFIS) application, which also included a query tool for compiling non-confidential harvest and effort estimates at the County, coast and state levels. The migration also includes closer ties to the licensing system and direct access to MFIS by licensing staff so that landings queries and license issuances can more efficiently linked. A new query system is also being developed that would allow license holders to view their landings for the purpose of requalification or license renewal.

Florida is working with Bluefin Data to test the new web-based trip ticket application to eventually replace the desktop version currently used by Seafood wholesale dealers throughout the Gulf and built using MS Visual Basic. FWC is interested in integrating technologies that will allow electronic initiation of a trip ticket using encoded saltwater license cards and currently Marine Fisheries is working with licensing to upgrade the current Saltwater Products License (SPL) licensing system to allow the license cards to be swiped (RFID or magnetic) to initiate a trip ticket.

Recreational

FWC completed its first year of data collection for the Gulf Reef Fish Survey (GRFS). Survey methodology is being evaluated and expected to be presented for MRIP certification in the near future. The survey is comprised of complementary catch and effort components and is closely allied to the MRIP survey in that its sample is derived from the offshore stratum for the MRIP Access Point Angler Intercept Survey (APAIS). The Fisheries Dependent Monitoring group worked with NOAA Fisheries Office of Science and Technology to develop the sample draw and estimation methods. Similar to the NOAA MRIP Fishing Effort Survey, the effort component of the GRFS is a mail survey. The survey mailed 78,847 surveys to angling households for the period July 2015-June 2016 (State FY) and has a response rate of approximately 20%. The Catch survey added an additional 9,149 angler intercepts to those offshore angler interviews already being collected through MRIP, thereby allowing a separate estimate for offshore stratum using GRFS and MRIP catch information and the effort estimates generated through the GRFS effort survey. The GRFS has been in place for more than one year and has more than 340,000 angler subscribers. Anglers (including those exempted from obtaining a fishing license) planning to fish for any of 10 reef associated species, are required by law to participate in the GRFS. Anglers subscribe when they purchase or renew a fishing license.

A study recently completed by the University of South Florida's Water Institute examined the FWC saltwater recreational license database structure for accuracy and content and provided

important demographic information to the agency to facilitate assessment of the database in terms of compliance with requirements of the National Saltwater Angler Registry (NSAR).

MRIP sampling produced 32,242 angler intercepts in FY15 which is a little less than the number produced previously for the period under the MRFSS. However, preliminary analysis reveals that biostatistical information for some rarer species has improved. We are working with NOAA to better allocate personnel resources to optimize sampler productivity.

The fishery dependent Biological Sampling Database underwent a complete redesign and data were migrated to a new SQL Server database. The move included a consolidation of length and age information into a single database which finally allowed data to be included in the FIN database without wholesale changes to basic data structures. The new database should allow more efficient data queries, transfer of data to the FIN database and a more comprehensive set of pre- and post-edit quality assurance checks.

Otolith Work Group Meeting Summary November 29-30, 2016 Panama City, Florida

VanderKooy opened the meeting and webinar at 8:30 am Tuesday with the following in attendance:

Isis Longo, LDWF, Baton Rouge, LA Jaime Miller, AMRD, Dauphin Island, AL Debra Murie, Univ of FL Jessica Carroll, FWRI, St. Petersburg, FL (Via GoToMeeting) Chris Kalinowsky, GADNR, Savannah, GA Joe Cowan, SCDNR, Columbia, SC Adam Lytton, SCDNR, Columbia, SC Joseph Evans, SCDNR, Columbia, SC Zachary Brooker, SCDNR, Columbia, SC Jeff Kipp, ASMFC, Arlington, VA Scott Elzey, MADMF, Gloucester, MA Nicole Lengyel, RI DEM DFW, Jamestown, RI Jessica Gilmore, CQFE, ODU, Norfolk, VA Donna McDowell, GADNR, Brunswick, GA Chris Palmer, NOAA Fisheries, Panama City, FL Robert Allman, NOAA Fisheries, Panama City, FL Steve VanderKooy, GSMFC, Ocean Springs, MS

Introductions

VanderKooy and Kipp welcomed everyone and introductions were made. VanderKooy gave a short update on the draft document to date.

General Discussion

The group started by reviewing introductory sections (overview, imaging, age determination) and general sections for hardparts regularly aged for species which are commonly aged by the meeting participants (otoliths, spines and rays). Topics of significant discussion for each section were:

<u>Chapter 2 Overview</u> – Several comments were added to the margins related to better explanation and definitions of annuli. We use several terms for the same structures interchangeably throughout the various chapter and sections (annuli, rings, opaque or translucent zones). Not sure about consistency or if it's necessary.

Consensus was that the additional techniques section for age validation (tag-recapture, otolith microchemistry) needs to be beefed up. **VanderKooy** and **Kipp** will try to draft something for tagging work and the use of isotope signatures for validation of annual migration patterns. We need to define validation versus verification. **Lytton** offered to provide some additional information for the C14 discussion.

<u>Chapter 3 Otoliths</u> – It was agreed to clarify which otoliths are best and how this can differ by taxonomic groups (e.g., sagitta for many, lapilli for catfishes). Additional comments have been added throughout the chapter.

Breaking and burning should be split, as breaking is a preparation technique and should stay in Chapter 3 and burning is an enhancement technique which needs to be included in Chapter 8.

Elzey agreed to develop a section on 'otolith condition' in Chapter 3. The section will include when and when not to attempt to age an otolith. It will include examples of 'bad' unique otoliths (crystalized, discolored, etc.).

Considerable rearranging was done throughout the section to place things together chronologically (removal, preparation, sectioning, reading and enhancing).

The term 'production' was determined to be confusing. For the purposes of the various sectioning discussions in the manual, we will replace production with 'multiblade or high volume sectioning'.

The long-term benefits of storage section needs to be expanded by someone. The utility of saving biologic materials should be included but no one has volunteered to draft this yet.

<u>Chapter 6 Spines and Rays</u> – **Murie** has made significant edits and additions to this section. She and **Carroll** would finish it up over the next month or so and have a final draft ready for review on the FTP. There are still a number of comments included in the draft but they should be addressed very soon. As in the other chapters, there will be a section on bad sections and how to prevent them as well as any issues related to long-term storage of spines and rays both pre and post sectioning.

<u>Chapter 8 Imaging</u> – Enhancements need to be further divided into physical (polishing, dyes, etc.) and visual enhancements (filters, polarizers, etc.). **Evans** agreed to take a run at the overall enhancement chapter and reduce the focus on otoliths primarily. Additional narrative needs to be provided for the renamed 'Visual Enhancement' which will include things like clearing, tilting, lighting, etc.

<u>Chapter 9 Age Determination</u> – Margin codes and the differences in how Gulf vs. Atlantic agers provide age data to assessment scientists needs to be explained in the document. Though the Atlantic contingent don't provide margin codes and there are no established margin codes for structures aged almost exclusively by Atlantic folks (scales, opercs), they agreed that the methodology is consistent with that described for otoliths by the Gulf contingent.

There was considerable discussion regarding scale margin codes as well as the other structures. Consensus was to stick with the four codes (1-4) for everything. The scale margin code narrative has a note that not all the codes are practical but could be used. Each subsequent hardpart should provide the same type of caveat.

The group also revisited discussions about otolith ratings and noted that there are differences between quality and confidence codes. These differences should be described. For example, a reader may be confident about an age estimate from a poor quality hard part and vice versa.

A list (below) was made of the non-shark species which are aged using vertebrae and it was suggested that these should be added in and referenced both in Chapter 7 Vertebrae and in Chapter 9 when interpreting them. Everything here so far is shark related.

- Potts and Allman Triggerfish
- **Robillard** (Woods Hole) Monkfish
- Lytton and Evans Sturgeon

Finally, it was determined that some discussion related to regional and latitudinal shifting in birthdates needed to be included. **Gregg**, although unable to attend, was 'volunteered' to look at the section.

<u>Chapter 10 Species Accounts</u> - The group then reviewed combined species accounts for the groupers, mackerels, snappers, tunas, amberjacks, tripletail, mullets, and triggerfish. It was agreed by all that tuna was still too difficult to age and it should be dropped until such time as the techniques are more widely used. The chapter leads need to confirm that each recommended item (see TOC for list) for species accounts are included for the chapter.

Three additional species of grouper (yellowedge, scamp, and snowy grouper) will be included in the grouper section and the representatives from South Carolina (**Cowan, Brooker, Lytton**, and **Evans**) will add the information for these species. **VanderKooy** already has radiographs for the three additional species and will forward to SCDNR.

It was agreed by all that some sort of scale needs to be included with the various otolith images throughout the document as it is difficult to judge relative size since they are all enlarged to the same relative size.

There will be no other in-person meeting to cover the species accounts covered during this meeting, so all follow-up work and final drafts of each of these sections need to be completed via emails and/or phone calls coordinated by the chapter leads.

<u>Appendices</u> - The group also reviewed the appendices that need updating by all ageing labs. These include the consumables and equipment appendices. **Carroll** provided (via email) an updated list of supplies and suppliers based on current internet availability. It was noted that we still need updates from most labs for these appendices, especially for the species each body works on and the description of the various imaging systems each lab/agency uses with some pros and cons. It was noted that there may be some beneficial additions to the ageing applications appendix (natural mortality, catch-at-age) if it is to be included in the manual.

Timeline for Completion

VanderKooy reviewed the draft agenda for the two remaining meetings (Beaufort NC in February and Woods Hole MA in March/April). The list of topics and potential participants was adjusted slightly to allow for overlapping species and techniques to be covered in the most appropriate region.

With no further discussion, the meeting adjourned at 4:00 pm.