

FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY

Sanctuary Advisory Council Draft Meeting Minutes September 20, 2017

Meeting Attendance Roster:

Jimi Mack	Recreational Diving	Present
Jesse Cancelmo	Recreational Diving	Present
Natalie [Hall] Davis	Diving Operations	Present
Randy Widaman	Diving Operations	Absent
James Wiseman	Oil and Gas Industry	Present
Clint Moore	Oil and Gas Industry	Present
Scott Hickman	Fishing - Recreational	Present
John Blaha	Fishing - Recreational	Absent
Shane Cantrell	Fishing - Commercial	Present
Buddy Guindon	Fishing - Commercial	Present
Adrienne Simoes Correa	Research	Absent
Larry McKinney	Research	Present
Brian Shmaefsky	Education	Present
Jacqui Stanley	Education	Absent
Joanie Steinhaus	Conservation	Present
Jake Emmert	Conservation	Present
James Sinclair	BSEE (non-voting)	Present
Mark Belter	BOEM (non-voting)	Present (webinar)
Stacy McNeer	U.S. Coast Guard (non-voting)	Present
Rusty Swafford	NOAA Fisheries (non-voting)	Present
Charles Tyer	NOAA OLE (non-voting)	Absent
Barbara Keeler	EPA (non-voting)	Absent
G.P. Schmahl	Sanctuary Superintendent (non-voting)	Present

Total voting member attendance: 12 of 16 of voting members

Others in Attendance:

Leslie Clift, Kelly Drinnen, Michelle Johnston, Shelley Du Puy, Emma Hickerson, Bill Kiene,

Jimmy MacMillan, John Embesi, Dustin Picard, Dan Dorfman, Bill Jones, Marsh Armitage, Kris Benson, Steve Gittings, John Armor, Jeb Adame, Erin Adame, Evelyn Adame, Janie Adame, Nova Adame, Sharon McBreen, and Buck Buchanan.

9:25 Meeting called to order by Clint Moore.

9:25 Welcome and Announcements – G.P. Schmahl

Today's meeting is being run through a webinar, and with a sound system.

The Sanctuary Advisory Council (SAC) and guests were invited to the R/V *Manta* after the meeting.

9:28 Administrative Business – Clint Moore

Adoption of Agenda –no discussion, all in favor, motion approved.

Approval of May Minutes – motion from Natalie Hall, second from Shane Cantrell, no discussion, all in favor, motion approved.

9:29 Council Constituent Updates & Agency Reports

This agenda item affords each Council member the opportunity to briefly update the SAC on his/her constituents with regards to FGBNMS (Flower Garden Banks National Marine Sanctuary).

Scott Hickman – reported his constituents continue to ask questions about Geyer Bank with regards to breath-holding spearfishing.

Stacy McNeer – new to the Council, Coast Guard representative.

James Wiseman – oil & gas industry in the Gulf of Mexico has been sluggish. New blocks in the Yucatan area are being leased.

Brian Shmaefsky – has been educating/outreaching to school groups and churches. His campus was significantly impacted by Hurricane Harvey and will be closed for many months.

Natalie [Hall] Davis – was working on visitor use permit for FGBNMS.

Jimmie Mack – goes into schools and gives educational talks in schools about FGBNMS.

Joanie Steinhaus – Kemp's Ridley Sea Turtles had 353 nests on Texas coasts (a state record), and Mexico had 25,000 nests. Sea turtle nests (i.e., eggs) on Galveston are relocated to south Texas, but Joanie is hoping to establish a turtle corral on Galveston instead. Turtle Island Restoration Network (TIRN) partnered with National Marine Sanctuary Foundation (NMSF) to accept a grant last year to create the sea turtle mural on a building at Galveston's Menard Park. She added this year's NMSF grant application was for a microplastic project.

Jake Emmert – Moody Gardens' divers supported 10 missions with FGBNMS and Texas Parks and Wildlife (TPWD). He recently visited Thunder Bay National Marine Sanctuary for the

American Academy of Science symposium, and was able to go diving at the sanctuary. Jake offered to set up a tour for the SAC at Moody Gardens Aquarium after the November SAC meeting.

Jesse Cancelmo – shared updates on how he solicits feedback on FGBNMS via emails with the local dive and underwater photography clubs, and by attending monthly meetings. Jesse briefed the Council on the new Moody Gardens exhibits that showcase the offshore platforms, with photography of HIA389A by Frank Burek and others. Jesse was invited in June for an interview on PBS to highlight his new book on the Gulf of Mexico.

Clint Moore – co-chair on the Boundary Expansion Working Group. Clint also mentioned comments and concerns from his oil & gas industry's trade groups on the eventual boundary expansion boundaries and renewal of the NPDES permit.

Shane Cantrell – co-chair on the Boundary Expansion Working Group. In partnership with NOAA, Charter Fishermen's Association hosted a Gear Workshop to inform commercial fishermen on new and upcoming regulations and gear types. He also worked on the visitor use permit for FGBNMS.

Rusty Swafford – introduced himself

Buddy Guindon – introduced himself

James Sinclair – introduced himself and said the annual funding from BSEE for the FGBNMS Stetson Bank long-term monitoring and ROV (remotely operated vehicle) work recently came through.

Larry McKinney – reported the Harte Research Institute did not have damage from Hurricane Harvey, but is now housing University of Texas' Marine Science Institute researchers, staff, and students that was significantly impacted. Research institutes he worked with closely in Cuba were significantly impacted, and some damage occurred to his colleagues and their organizations in the Florida Keys. Two members of the Texas One Gulf consortium launched gliders to measure offshore freshwater plumes. Houston Bay water hit the south Texas coasts last week. His big concern is a potential freshwater plume at FGBNMS.

Jacqui Stanley (via email to Leslie) – in March, Jacqui spoke on station KYND about FGBNMS. She also presented at several schools and conferences, and hopes to use the Ocean Discovery Day mural activity to raise funds for Hurricane Harvey relief. With the SEEDS students, she hopes to return to Lone Star College again soon.

10:00 Sanctuary Updates – G.P. Schmahl

Opened his presentation with Hurricane Harvey which made landfall on the south Texas coast in late August. FGBNMS' R/V *Manta* was used to assist NOAA's Navigation Response Team with post-hurricane recovery efforts in the Houston Ship Channel. Offshore, waves at Stetson Bank were estimated at 26-29 feet. A rapid assessment was conducted last weekend to survey impacts from the hurricane. No obvious physical damage, though small "waves" in sand channels, were observed at East Flower Garden Bank (EFGB). FGBNMS is watching for the coastal runoff at FGBNMS. A "Liquid Robotics" glider was deployed on September 8 for 60 days, which will assist in tracking the freshwater runoff.

Moody Gardens Aquarium installed an exhibit specific to FGBNMS. Moody donated \$3,000 to NMSF, accepted at an event in May 2017 by Emma Hickerson and G.P. Schmahl. "Get Into Your Sanctuary" Day occurred at Moody Gardens on August 12, 2017, with 3D goggles of images of FGBNMS.

FGBNMS traveling exhibit was recently moved to the City by the Sea Museum in Palacios, Texas. It did not incur any impacts from Hurricane Harvey.

One of the first live Facebook events that FGBNMS did was a lionfish dissection in late summer 2017.

Scott Hickman was invited to give testimony on National Marine Sanctuaries at a Senate Subcommittee on Oceans, Atmosphere, Fisheries and Coast Guard hearing on June 27, 2017.

The long-term monitoring report for the East and West FGB, 2013-2015, was recently released. Reports will start on an annual basis now. The 2016 report will be available soon. Links to these reports will be on the FGBNMS website.

G.P. displayed an extensive list of the cruises completed since the May 2017 SAC meeting.

- A mooring buoy installation cruise funded by NMSF was conducted in June 2017, including training for hydraulic drilling. Jake added Moody Gardens' divers now have reciprocity and status as working divers, who can assist FGBNMS with mooring buoy installations.
- Instrumentation for ocean acidification was installed and retrieved at EFGB in May and July 2017, respectively.
- The 2016 EFGB mortality site was revisited in July 2017. No recovery has occurred. Coral recruits and decades are needed for recovery. FGBNMS staff Dr. Michelle Johnston updated the SAC on response cruise information and data analyses for the mortality event. Results show surface salinity difference between EFGB and West Flower Garden Bank (WFGB), and remote sensing data agree with the *in situ* samples. Over 300 coral, sponge, and sediment samples were collected for genetic barcoding, histology, and virology analyses. Reef fish stationary surveys were compared inside vs. outside of the mortality areas, with data analyses showing significant differences. Benthic photo transects vs. diver mortality estimates were analyzed. With additional data analyses, the extent of mortality may be larger than what was visually estimated at the time. No clear, single cause is apparent, and is most likely a combination of stressors. Partners are currently working on micro-organism community analyses. A mini-symposium will be held at the FGBNMS office in early Spring 2018, with partners who were and continue to be involved with sampling and analysis. Michelle briefed the SAC on a similar mortality event in a bay in Panama.
- Through funding from BSEE, FGBNMS conducted a platform monitoring survey at HIA389A in July 2017. Through funding from BOEM, an additional monitoring station was installed in July 2017 at a deep coral reef station (100-130 feet). Deeper reefs experienced less coral bleaching in the 2016 coral bleaching event, and these sites may serve as sites of resilience.
- Steton Bank long term monitoring cruise was conducted in July 2017. Divers observed green water with low visibility most likely associated with heavy rains in April and May in Texas. Abundant jellyfish, ctenophores, and pelagic tunicates were observed.
- Coral spawning was documented on August 14, 2017, at EFGB, but weather (Hurricane Harvey) ended the cruise short.

- Four ROV cruises are scheduled September 22 through October 15: 3 in the Northern Gulf of Mexico and 1 at Stetson Bank to survey the mesophotic, long term monitoring sites.

A PSBF (potentially sensitive biological feature) study was conducted in the last few years that showed high mesophotic coral density at the proposed banks in the expansion areas. The "coral garden" concept has been used in other areas of the world and published in scientific literature, and by those criteria, the communities FGBNMS has observed qualifies or is in excess of the "coral garden" definition. G.P. then demonstrated, using a display model, of what 25 coral species in a square meter looks like, which is representative of what is observed from the ROV transects in some areas of the proposed banks. Jake asked about what is being learned about mesophotic communities, and what is still unknown. G.P. said he is confident the scientific community is knowledgeable on the mesophotic community down to 1,000 meters, though FGBNMS continues to discover organisms new to science.

G.P. mentioned the Executive Orders (EO) released this year and their relevancy to FGBNMS, and John Armor will address this item during his presentation.

11:27 National Update for FGBNMS Advisory Council – John Armor

John introduced himself and shared his background and experience, commended the SAC and the FGBNMS staff, as well as all NMS staff and advisory councils.

Response to Irma – NMS facilities in the Keys were not significantly impacted, though the R/V *Peter Gladding* sustained some damage. NMS staff are just now returning to the Keys, and several live in Big Pine Key where Hurricane Irma made landfall, and were significantly impacted.

John shared a personnel update from NMS, including a new superintendent for the Florida Keys (Sarah Fangman), and current vacancies for several important positions, including the Deputy Director, Maritime Heritage Director, and superintendent positions at Grays Reef, Stellwagen Bank, and Hawai'iian Islands Humpback Whale NMS. ONMS is experiencing a big transition in staffing.

With regards to the ONMS budget update, John said the FY18 President's request was \$48.9 million, FY18 Senate Mark was \$51 million, and FY18 House Mark was \$52 million.

Two Executive Orders (EO) were signed in late April 2017: EOs 13972 and 13975. EO 13972 was for the Secretary of the Department of the Interior (DOI) to review certain national monuments that were designated under the Antiquities Act, and to make recommendations to the President. One part of EO 13975, entitled Implementing an America-First Offshore Energy Strategy, requires a retrospective review of 11 NMS and marine national monument (MNM) designations and expansions since April 28, 2007, primarily looking at the impact of said designations and expansions on potential offshore energy and mineral exploration and production on the Outer Continental Shelf. A report will be given to the President in October. Opportunities for public comment were available for both EOs. For EO 13975, NOAA received over 182,000 comments, not including individual signatures on petitions. Previously, the next highest number of comments for a single action in the National Marine Sanctuary System (NMSS) was 18,000. The majority of the comments (99.96%) were in support of NMS and MNM and/or maintaining current prohibitions on potential energy and mineral development. Another part of EO 13975 requires a prospective review that DOC/NOAA engage with DOI in order to

conduct a full accounting of any energy or mineral potential (e.g., oil and gas, wind, etc.) for future NMS designations and expansions before any can be designated or expanded.

John then introduced the newly published Strategic Plan, "Our Vision for America's Treasured Ocean Places." As identified in the plan, the 5 main goals for the ONMS for the future are:

1. Ensure thriving sanctuaries and other ocean parks.
2. Safeguard more underwater treasures as national marine sanctuaries.
3. Increase support for sanctuaries.
4. Deepen our understanding of sanctuaries.
5. Ensure the Office of National Marine Sanctuaries is a great place to work.

ONMS is engaging anglers, including through a recreational fishing summit held in December 2016 by the National Marine Sanctuary Foundation, ONMS and the National Marine Fisheries Service (NMFS). A draft plan resulted from the workshop, with strategies for implementation.

Wisconsin-Lake Michigan and Mallo Bay have been formally proposed to be designated as NMSs, and would be the first NMS to be added to the system in 20 years. Public comments have been received and are being analyzed. John said these NMSs can show what we can do in parts of the country where we've never had that opportunity before, and can showcase the bipartisan nature of their designations. Early 2018 is the expected completion date for both designation processes. Both proposed designations focus only on the protection of shipwrecks and associated maritime cultural heritage resources. Wisconsin and Maryland comprehensively manage fishing in state waters.

The last Advisory Council Chairs summit was held in January 2016. John praised the SACs across the NMSS. He recognizes it has not always been easy. Across the NMSS and particularly here [FGBNMS], there have been some challenges about roles, timing, and communication. Some of that has come from challenges in the federal regulatory system where the role of the advisory council is to provide advice, and then the agency goes into a "black box" that could be years and you have no idea what's going on, and then it pops out on the other end. Recognizing this happens, we are working with NOAA's Office of the General Counsel on some guidance to help ensure that those kinds of surprises do not happen. Advisory Councils are involved in the front end of NMS processes, but what we need is more knowledge and more awareness later in the process as ONMS leads up to taking a formal action.

Discussion followed. Clint shared his perspective of the lack of coordination/input from the SAC during 15 months of the FGBNMS DEIS process. He shared Billy Causey's original idea of hiring Council members as federal contractors, under a confidentiality agreement, so that they can be involved throughout the entire process. Clint added he is concerned the FEIS will also be another "black box" hidden from the SAC, and that the advice of the SAC is not valued. John responded that he hopes Clint's specific mechanism will not be necessary and that he thinks it would create a whole host of other problems. John added that he always values the advice from SACs, though they may not feel like it is valued. Other factors come into play that are part of the context of when these final decisions are made. However, we are evaluating improved ways we can come back to and potentially involve the SAC during the process. Clint responded the SAC was told, under NEPA, that SAC members were not allowed to be involved in the DEIS process during those 15 months, yet academic and other government agencies were consulted and included in the Alternative considerations. He asked John what his ideas were for involving SAC input in the future FEIS phase. John responded this issue has also come up at other NMSs. Once the agency starts writing a proposed rule or writing a NEPA document, there are restrictions on who can be involved due to legal reasons. John suggested that, before a formal

action becomes public, a presentation, discussion, summary, and/or document may be able to be shared with the SAC. However, a Freedom of Information Act request for that information, in whatever form in which it was presented, could result in its broader dissemination and waive the document's confidential privileges allowed by law. John added that we are looking into possible ways SACs would not be surprised during the process, as occurred in the DEIS released last year. James Wiseman said he would like ONMS to directly ask the SACs for specific advice more often. Scott Hickman added he would like more weight given to the advice and decisions SACs provide. Jesse asked if periodic reviews could occur at appropriate points in a sanctuary expansion process by the SAC working group, and if staff meeting minutes could be distributed to the SACs. John answered that a formal action is a deliberate, step-by-step process that involves various legal and leadership clearances, with several factors that could cause things to decelerate or pause due to things such as political factors, budget, or changes in an administration. There are things ONMS could do better so that the "black box" is instead less opaque. John added he could look around through the NMSS, and suggested Leslie poll other SAC coordinators, to see if other sites share their meeting notes with advisory councils. Jesse suggested pieces of a formal action, such as scope or boundaries, could be presented to the SAC before it is released to the public. Natalie asked if verbal information could be shared with the SAC during the process. John answered yes, though the SAC meetings are open to the public. Clint ended saying the fundamental basis of the concern is the SAC wants to be more valued for their advice.

12:35 Break for Lunch

12:46 HIA389A Update – GP Schmahl and Marsh Armitage

G.P. reviewed the history of HIA389A, located within the FGBNMS boundaries. In October 1993, Mobil Oil notified NOAA that HIA389A could be decommissioned as early as 1995. In 1995, FGBNMS recommendations included 3 options: 1) Leave structure in place and use as a research platform. (Would require outside entity to own and manage the platform – considered “unlikely” due to cost and liability considerations.); 2) top of the platform be removed to a depth of 85 feet, and the base be left in place; and 3) removal of entire structure. The platform removal/reef permit involved BSEE approval, NOAA FGBNMS authorization, and TPWD agreement. G.P. showed a flow diagram of the platform decommissioning process within a NMS, and then a decommissioning timeline of HIA389A, beginning in July 2011, when the W&T Offshore lease OCS-G-02759 expired. Some of the delay (approximately a year) was because a general permit under TPWD was issued, when a general permit was not allowed because it was a NMS. Once the Army Corps of Engineers (ACOE) issued a reef permit to TPWD, the process went quicker. Scott Hickman asked if the permit could be amended to add additional structures at some point in the future to this artificial reef site. G.P. responded that the permit can not be amended to add additional structures. The top of the structure will be taken to shore for disposal. Scott added this site will be a big benefit to fishers and divers. Discussion turned to future decommissioning of platforms located within sanctuary expansion areas. Joanie Steinhaus voiced concern over the platforms serving as vectors for invasive species. G.P. shared pictures of Tubastrea, an invasive species, observed at the natural reefs of the nearby FGB. The concern is that Tubastrea could outcompete the native species for habitat space. Jake asked if FGBNMS had considered a removal project, and G.P. answered that they once removed 200 colonies, but they were back the following year. Tubastrea are difficult to remove, and thus, removal projects might not be effective, especially since they are adept at recolonizing even after removal.

Marsh Armitage with W&T Offshore updated the SAC on the decommissioning including history/background, well plugging and casing removal, pipeline abandonment, platform preparation for removal, platform removal, topsides removal, upper jacket removal, and post structure removal activities.

The last HIA389A well stopped producing in 2010, and in 2012, the platform equipment was flushed and Phase 1 well plugging began. The first permit application was filed in July 2012 to remove the structure. In July 2014, the project was sanctioned by W& T Offshore for partial removal. The footprint on the seafloor bottom measures approximately 200 feet by 300 feet, and weighs 4,000+ tons. Post structure removal activities include setting a navigation buoy, conducting site clearance verification, and submitting completion reports to BSEE. Jesse asked if the removal would be completed by the end of 2017. Marsh responded the contractors are reluctant during the winter months when the waves/weather are not good. Leslie Clift asked why W&T Offshore chose to take the upper portion back to shore instead of reefing at an established artificial reef site. Marsh and Larry McKinney responded the portion above water (topside facilities) is seldom reefed, but always brought back into shore, due to all the production equipment contained on it. Marsh added W&T Offshore did not receive a preference from TPWD on the fate of the portion above 65 feet (not including the platform), and so it will be brought back to shore. Larry added the cost of cleaning production equipment from that portion of the structure may have factored into the decision. Scott Hickman asked how long it will take for the structure to deteriorate, and Larry responded 200-300 years. Clint asked about the plans for the navigation buoy. G.P. responded the navigation buoy will remain in place for the length of the ACOE permit (5 years), and FGBNMS will look at options to maximize the access. The SAC thanked Marsh, W&T Offshore, Jesse Cancelmo, Frank Burek, and Dale Shively (TWPD) for their work on this project.

2:00 Public Comment and Q&A Period

Frank Burek - shared the history, life, and passing of Dick Zingula, who, among many things, was a founding member of Sea Space, founding member of Houston Underwater Photographic Society, and founding member of Texas Gulf Coast Scholarship program, and was on the first SAC for FGBNMS (2005-2007). He received many awards and distinctions. After his public comment, Steve Gittings added Dick was in the working group before the sanctuary advisory council was established, and shared his thoughts on the tremendous help, advice, and generosity Dick offered to Steve and the FGB.

Buck Buchanan – professor of geology at Lone Star College and is on a year long sabbatical called At Water's Edge, to visit all of the NMS. His project is a narrative of photo essays of people who work, live, and recreate in the NMS.

Larry McKinney mentioned the Consortium for Ocean Leadership on October 24, 2017 with a focus on Rigs to Reality (how rigs around the world can be transformed into a place of recreational activity).

2:19 Boundary Expansion Working Group (BEWG) Update – Clint Moore/Shane Cantrell

Clint shared the history of the BEWG, starting in April 2016, with the 11th meeting to convene in October 2017.

8th meeting – Tuesday, May 23, 2017

Discussion of SAC referral of submerged cypress forest off Alabama – and decision to not

include in boundary expansion. Group also discussed detailed assessment matrix analysis of banks, and current oil & gas drilling muds and drilling systems, with their smaller input into the environment.

9th meeting – Thursday, June 29, 2017

Kickoff discussion of NCCOS analysis. NCCOS budget was approved and personnel were assigned. The BEWG reviewed newly acquired multi-beam bathymetry data on Elvers and Parker banks. The group further defined the framework of regulatory options and further discussed stakeholder preferences.

10th meeting – Wednesday, September 13, 2017

(rescheduled from August 29 due to Hurricane Harvey)

NCCOS presented previous projects at FKNMS and CINMS, applicable to FGBNMS. The group had a preliminary discussion on datasets received already, and identified additional datasets to gather.

The 11th meeting is scheduled for mid-October, prior to the next SAC meeting in November. The group will focus on the mapping project with NCCOS.

The Projected NCCOS final report is expected in Jan-Feb 2018 at the SAC meeting. The BEWG projects to have its final report by April-May 2018, in time for the May SAC meeting. The SAC could then vote on the BEWG report at its April-May 2018 meeting.

2:30 Flower Garden Banks Expansion Decision Support Project - National Centers for Coastal Ocean Science (NCCOS), Dan Dorfman

Dan explained he is a contractor with NCCOS. In short, the purpose of the NCCOS project is to support the boundary expansion analysis, and will use a decision support tool to evaluate proposed recommendations and to generate new options. Their first step is to collect information on biology and ecology, but also on social and economic uses, and to integrate them into a common geographic system format. The NCCOS process is transparent and will be shared. Dan reviewed the working group processes that NCCOS has engaged with at other NMS. With the working groups, NCCOS identified ecologically important areas and then developed a set of goals. NCCOS will use Marxan, which is a software tool which supports the use of a systematic optimization algorithm. It has been used to support the design of marine and terrestrial reserves world-wide. It is designed to find efficient solutions to complex problems and can incorporate spatial considerations.

Joanie Steinhaus asked what the study area will be that NCCOS will analyze. Dan responded the entire northern Gulf of Mexico, which will give context to the proposed areas for expansion. Steve Gittings asked if there will be a connection between their process and the criteria percentages that the BEWG developed. Emma asked how categories that can't be quantified, such as conservation values, are incorporated into the Marxan software. Dan answered ecological representation criteria will be proposed by the BEWG which will incorporate different conservation values.

2:55 Performance, Benefits, and Testing Needs for New Lionfish Trap Designs – Dr. Steve Gittings

Deep water lionfish control options include market solution (eating them) and Fish Attraction Device (FAD)-based attraction. Steve wanted a trap that would 1) minimize bycatch, 2) prevent

ghost fishing, 3) is transportable, and 4) has easy deployment and retrieval. Steve shared the trap/FAD evolution as he developed the different types of lionfish traps. His current purse trap, nicknamed by some as “taco trap”, descends in the water column folded up, opens when on the seafloor bottom, attracts lionfish, and folds up when ascending through the water column to the surface for retrieval. During his trials in Pensacola, lionfish arrived at the trap within 15 minutes. Between 30-60% of lionfish that were on other lionfish traps (chicken coops) migrated instead to the purse traps. Ideally, the soak time for the purse traps is one week, to maximize the attraction for lionfish. Steve displayed a map showing 735,000 km² area of dive-able depths around the Gulf of Mexico, Caribbean, and Atlantic coasts where these lionfish traps can be deployed. Over 136,000 red grouper solution holes were identified at Pulley Ridge. These solution holes hold dozens of lionfish, where the traps could be deployed.

The next steps are to receive professional help from fishers for information on the variety of habitats, gear modifications (materials, design), fishing approaches, and observations (effectiveness, bycatch, habitat impacts, entanglement, and ghost-fishing). Additionally, Steve wants to conduct commercial trials to assess catch per unit effort (CPUE) and bycatch, and to assess any modifications needed for the purse trap and FAD. International trials in Mexico, Belize, Curacao, Aruba, Caymans, Bermuda, and BVI have started. Steve has entered discussions with NMFS with their priorities, obtained a letter of acknowledgement from them, and developed exempted fishing permits.

Steve is looking at ways to improve captures including FADs, sound, light, trap capacity, and behavior (resting vs. hunting).

Scott Hickman shared Bill Kelley (Florida Keys) information that 2 fishers in the Keys have caught more lionfish as bycatch in their lobster traps than the entire catch in a lionfish derby. He also added NMFS observation check-lists do not currently have a box to check by observers for lionfish.

3:34 New Business

Bill Kiene shared a 4-minute Cousteau video.

3:48 Meeting Adjourned - All in favor. Approved.

Next SAC Meeting scheduled for November 15, 2017.