

FLORIDA KEYS NATIONAL MARINE SANCTUARY ADVISORY COUNCIL
Ocean Reef Cultural Center
Key Largo, FL 33037
October 18 2016
FINAL MINUTES

The Florida Keys National Marine Sanctuary Advisory Council met on Tuesday, October 18, 2016 in Key Largo, Florida. Public Categories and government agencies were present as indicated:

Council Members

Conservation and Environment: Ken Nedimyer (Chair)
Conservation and Environment: Chris Bergh (Vice Chair)
Boating Industry: Bruce Popham
Citizen at Large – Lower Keys: Mimi Stafford
Citizen at Large – Middle Keys: David Vanden Bosch (absent)
Citizen at Large – Upper Keys: David Makepeace
Diving – Lower Keys: Don Kincaid
Diving – Upper Keys: Rob Mitchell (absent)
Education and Outreach: Martin Moe
Elected County Official: George R. Neugent (absent)
Fishing – Charter Fishing Flats Guide: Tad Burke (absent)
Fishing – Charter Sports Fishing: Steven Leopold
Fishing – Commercial – Marine/Tropical: Ben Daughtry
Fishing – Commercial – Shell/Scale: Justin Bruland (absent)
Fishing – Recreational: Jack Curlett
Research and Monitoring: David Vaughan
South Florida Ecosystem Restoration: Pete Frezza
Submerged Cultural Resources: Corey Malcom
Tourism – Lower Keys: Clinton Barras
Tourism – Upper Keys: Andy Newman

Council alternates (present)

Boating Industry: Kenneth Reda
Diving – Upper Keys: Elena Rodriguez
Citizen at Large – Upper Keys: Suzy Roebling
Diving – Lower Keys: Bob Smith
Fishing – Charter Fishing Flats Guide: William Benson
Fishing – Recreational: Bruce Frerer
Research and Monitoring: Shelly Krueger
Tourism – Lower Keys: Joe Weatherby
Tourism – Upper Keys: Lisa Mongelia

Local Elected Officials (present)

Village of Islamorada –Mayor Deb Gillis

Agency Representatives (present)

Florida Department of Environmental Protection: Joanna Walczak
NOAA National Marine Fisheries Service: Heather Blough
NOAA Office of Law Enforcement: Kenneth Blackburn
Dry Tortugas and Everglades National Park: Christopher Kavanagh

U.S. Coast Guard (USCG): Mark King BOSN4
U.S. Navy: Ed Barham

Agency Alternates (present)

Florida Department of Environmental Protection: Karen Bohnsack
Everglades and Dry Tortugas National Parks: Meaghan Johnson

**I. CALL TO ORDER, ROLL CALL, AND MEETING MINUTES APPROVAL OF 8/16/16
DRAFT MEETING NOTES**

Pledge of Allegiance

Roll Call

Chairperson Nedimyer called the meeting to order.

MOTIONS (Passed)

A motion was made by Cory Malcom to accept the minutes from the August 2016 meeting. The motion was seconded by Dave Makepeace. With the consent of the council, some slight changes in the order of presentations were made to the meeting agenda.

Chairperson's Comments

Chairperson Nedimyer thanked Clinton Barras for broadcasting the meeting live on fla-keys.com and for providing a video archive.

Advisory council applications were accepted for seven open seats. These applications have been reviewed and an announcement of the members will be made soon.

Council Recognition

Chairperson Nedimyer recognized two members whose terms have expired. Rob Mitchell, Keys Diver, served as the Upper Keys _Dive member for many years. Mr. Jack Curlett has held the recreational fishing seat for 12 years. Mr. Curlett gave a few remarks about working with the sanctuary and with Biscayne National Park on their marine reserve and fishery management plan. He reminded everyone of the importance of taking actions now in the interest of future generations.

Acting Superintendent Lindelof presented a NOAA plaque to Mr. Curlett for his dedication to serving on the advisory council. Acting Superintendent Lindelof recognized the leadership Mr. Curlett showed for marine protected areas and marine conservation. Mr. Mitchell was not present to receive his plaque.

Deputy Superintendent for Science and Policy Beth Dieveney recognized Mr. Curlett's leadership on the advisory council. He served as the chair for the Shallow Water Wildlife and Habitat Protection Working Group, which made recommendations that will advance protections for shallow water habitats. Ms. Dieveney noted that Jack's position as president of the Ocean Reef's Conservation Association has led to the donation of hundreds of thousands of dollars to advance ocean conservation, including mooring buoy protections.

II. PHOTO-MOSAIC CORAL BLEACHING ANALYSIS AT CHEECA ROCKS

Ms. Brooke Gintert, University of Miami Rosenstiel School of Marine and Atmospheric Sciences, gave a presentation about using the photo-mosaic technique to analyze coral bleaching at Cheeca Rocks in the Florida Keys. To view this presentation, visit <http://floridakeys.noaa.gov/sac/othermaterials/20161018cheeca.pdf>.

The goal of this monitoring program is to document the species at the reef over time using images collected using a photo-mosaic technique. To document an area, divers take photos and then analysis takes place in the laboratory where the images are used to determine species present, percent cover, colony size, distances, etc. This technology is flexible in answering different research/management questions and can be applied at different spatial scales. The main benefit of this method is being able to track changes in species size/composition and other parameters over time.

As part of NOAA's National Coral Reef and Monitoring Program (NCRMP), Ms. Gintert and her colleagues have been studying six sites at Cheeca Rocks to look at bleaching and recovery. Cheeca Rocks is also a sentinel monitoring site for ocean acidification. The project, which began in 2012, captured bleaching in the summers of 2014 and 2015 and used these data to develop a time series of images showing change over time. This method provides a record of health of the reef for carbonate analysis, considers past history evaluates which species, if any, are more or less resilient to bleaching/disease. This method was also used to track the response of the different forms of symbiotic algae that live within the coral species (called Clades) to thermal stress and other factors.

This project is answering questions about resistance and resilience over time. During the 2014 bleaching event, bleaching in corals ranged from 50% to over 84%. Certain species were more resilient than others. Recovery was also documented with 99% of the affected species showing survivorship into 2015. An analysis showed that not all bleached corals were equally susceptible to partial mortality. Corals that had experienced partial mortality prior to 2014 were much more likely to exhibit mortality in 2014. In 2015, coral response to thermal stress was more muted than in 2014. This resistance may be related to changes in the types (Clades) of algal symbionts (zooxanthellae) that were observed in affected corals from 2014 to 2015.

This technology allows a comparison of the effects of bleaching and other disturbances in a side by side view of different time periods for the same reef location and helps answer questions about resilience and resistant corals.

Discussion/Questions

- Questions were asked about resilience and exposure to bleaching and stress events. It was explained that in this experiment exposure toughened some corals while others became weaker with additional stresses. This work will allow scientists to identify which corals have resisted bleaching and other stresses and which can be candidates for genetic work.
- In response to a question about processing time, Ms. Gintert explained that the technology to convert images into data is fairly automated so that it is efficient in terms of time. The processing of images requires oversight by a knowledgeable individual and intensive computer skills. They have worked on improving the efficiency over time.
- This technology was recognized by council members as being innovative and promising.
- In response to a question about using citizen science to collect images, Ms. Gintert stated that she thought citizen scientists could most definitely be used in this project. Her team could consider processing photos from fellow scientists as well.
- In response to a question about using older archived images, Ms. Gintert indicated that this technique could be applied to older photographs. In this case, features that overlap can be matched to begin to build an archive.

III. FLORIDA REEF RESILIENCE PROGRAM OUTCOMES

Mr. Chris Bergh, South Florida Conservation Director of The Nature Conservancy, gave a presentation about the Florida Reef Resilience Program (FRRP). This presentation may be available by visiting: <http://floridakeys.noaa.gov/sac/othermaterials/20161018frfp.pdf>.

Vice Chair Chris Bergh provided an overview of FRRP, which is designed to identify corals and reef locations resilient and resistant to bleaching and other disturbances and to provide this information and guidance to marine resource managers. The FRRP involves a large number of agency and NGO partners and covers the area from the Dry Tortugas to St. Lucie Inlet. Sub-regions have been carved out of the larger geographic area and bio-zones (inshore, middle reef, etc.) have been identified. The FRRP Bleaching Response Plan involves four response steps, including impact assessment. Surveys monitor reef condition during and after bleaching and follow-up surveys are conducted after moderate/severe bleaching years. This field methodology is designed to allow for statistical analysis of the entire reef tract rather than a close examination of one area over time. This fairly rapid survey effort takes place during the hottest part of the year and involves sampling random sites. From 2005 to the present, over 2500 surveys have been completed. Quick-Look Reports are produced and available at www.frrp.org.

The 2014 bleaching event was the most severe bleaching recorded by this program, which began in 2005. The presentation reviewed the 2014 bleaching results, 2014 disease results, post-bleaching results and 2015 mortality results. The patterns from these data indicate that corals can recover from bleaching and from disease, but are more likely to suffer mortality when diseased. The surveys detected the beginning of a very widespread coral disease outbreak that began off Miami and is still underway in the Upper Keys. The FRRP 2015 winter mortality survey found that corals that were still living in the winter had generally recovered from the summer bleaching event. Some disease and recent mortality was observed in that survey (inshore Upper Keys and off Broward and Miami).

A winter post-bleaching 2015 FRRP survey was conducted to determine the status of corals that had bleached in the summer of 2014. This survey involved sampling 25 fixed sites in the FWC Coral Reef Evaluation and Monitoring Program (CREMP) and comparing the results with data collected in 2014 from the same sites. This analysis has not been completed at this time, but tracking the condition of corals at fixed sites could help reveal how bleaching and disease affect mortality.

FRRP documented widespread bleaching along the reef tract again in the summer of 2015. The 2015 summer bleaching and disease results and 2016 winter results indicated that most of the corals that had survived were no longer bleached and that disease and mortality were relatively minimal.

The FRRP requires and depends on participation from many partner agencies and funding from the National Coral Reef Conservation Program. Mr. Bergh recognized the efforts of Meaghan Johnson who ran this program for TNC and recently joined the National Park Service. TNC makes an effort to provide the information in QuickLook Reports. He thanked everyone for their support and contributions; the program would not be possible without everyone's efforts.

Discussion/Questions

- In response to a question about training for collecting these data, Mr. Bergh explained that they are drawing from a pool of academic, government and NGO marine biologists and their graduate students to conduct the surveys. Everyone participates in a quality assurance training

every year and in-water quality assurance cross trainings are offered.

IV. COMMUNITY OBSERVATIONS IN THE FLORIDA KEYS: BLEACHWATCH

Ms. Cory Walters, Mote Marine Laboratory, gave a presentation on the community based observation program called BleachWatch. To view this presentation, visit <http://floridakeys.noaa.gov/sac/othermaterials/20161018bleachwatch.pdf>.

BleachWatch is an early warning network that involves the community in monitoring coral reef health and provides the FKNMS with current conditions on the reef through summaries of community reports and environmental conditions. Early warning alerts also go to the FRRP so conditions can be monitored. Environmental conditions are assessed using existing data from NOAA's in-situ monitoring ICON stations along the reef line and in the Marquesas and satellite imagery such as the Coral Bleaching Thermal Stress Outlook. This outlook was not so severe during the summer of 2016. NOAA's Coral Reef Watch Program uses satellite imagery to identify thermal hotspots and satellite alert areas and to calculate satellite degree heating weeks. This information is part of the environmental analysis that is provided in the summary report. The program began in 2004-05 and is funded by FKNMS and Florida's Protect Our Reefs License plate.

BleachWatch has the goal of getting observers in the water early in the summer before the bleaching begins. Volunteers participate in a BleachWatch training that reviews the differences between bleaching, disease and predation and explains how to complete a data form for a bleaching event. Next year, the program may begin an in the water training similar to the Southeast Florida Action Network (SEAFAN). Current Conditions reports are sent out on a monthly basis and archived on their website. When conditions dictate, the reports are issued every two weeks. BleachWatch has published observer data and maintains a Facebook page. Over 500 volunteers have been trained and about 300 reports are received during the bleaching season. The 2016 season is ending with temperatures dropping recently. Compared to 2015 and 2014, less bleaching was observed in 2016.

Discussion/Questions

- In response to a question about paling in corals, Ms. Walters explained that paling corals have been observed to bounce back, but now after two years of stressful conditions, disease is being observed. This pattern seems to be similar to the one observed in the 1997-98.
- Ms. Walters stated that some of the BleachWatch volunteers take their own photos/videos of the same reef over time and she would like to work with Ms. Gintert on possibly applying the photo-mosaic technique to these videos/photos.

V. COMMUNITY OBSERVATIONS IN THE FLORIDA KEYS: C-OCEAN

Ms. Cory Walters, Mote Marine Laboratory, gave a presentation about the community observation program known as C-OCEAN. To view this presentation, visit <http://floridakeys.noaa.gov/sac/othermaterials/20161018c-ocean.pdf>.

C-Ocean is a community-based observation network that is funded by the Protect Our Reefs License plate and is conducted in coordination with the FKNMS. The program, which began in 1997, provides early detection, rapid response and assessment of events affecting the Florida Keys and surrounding ecosystems. Ms. Walters provided a timeline of the program. C-OCEAN helps protect the reefs through citizen science, community outreach and communicating about these events. The program provides rapid feedback to managers because it involves many eyes on the water. Anyone can provide a report to C-OCEAN; it requires no training or membership. Reports are provided to the sanctuary

and available on their website. Unusual sightings include coral bleaching, diseased fish, algal blooms, etc. When a report is received, that information is evaluated and provided to the right agency to respond to that event. When appropriate, Mote responds to the incident, tracks the incident and assists in ongoing research and response efforts. Many projects have been assisted through this program. A mass bleaching event involving clinoid sponges was recently documented. Event reports are issued monthly on the C-OCEAN website. Outreach efforts involve education on red tides, coral bleaching and disease and fish kills. Reports of disease have been coming in for the Upper Keys. Reports are from research scientists, state and federal agency partners, dive shops, marine educators and eco-tourism groups.

Discussion/Questions

- A question was asked about the frequency of reporting of oil sheens. Ms. Walters stated they usually receive a few oil sheen reports per year and respond to them immediately by calling the US Coast Guard.
- A question was asked about coordinating all the wonderful monitoring programs in the sanctuary that are archiving data and using citizen scientists. Beth Dieveney, FKNMS Deputy Superintendent for Science and Policy, explained that coordination is a goal that would be carried out by a Research Coordinator, which is vacant position at this time. Superintendent Lindelof added that the sanctuary is committed to filling this important position. In the meantime, Dr. George Sedberry, who is at the regional level, is acting as FKNMS Research Coordinator.

Lunch

VI. BOATER EDUCATION IN THE FLORIDA KEYS

Acting Superintendent Ed Lindelof provided some remarks regarding boater education in the FKNMS, which was discussed at the last advisory council meeting. The Shallow Water Wildlife and Habitat Protection Working Group addressed this topic in their discussions and pointed to the need for additional boater education in their recommendation. The FKNMS is interested in identifying where the sanctuary can have value added to existing boater education programs. This would pertain to voluntary programs. The DEIS can present the different options and evaluate whether going beyond a voluntary program is warranted.

Discussion/Comments

- Vice Chair Chris Bergh expressed his support for this commitment to analyze the pros and cons of mandatory boater education in the FKNMS via the DEIS. Everglades National Park has taken this step. Whether this action would be right for the sanctuary is not known, but this will provide information on that topic for decision-making purposes.
- Mr. Jack Curlett asked why not have a mandatory program when mandatory education is being implemented at Everglades National Park through their General Management Plan and included in Biscayne National Park's Fisheries Management Plan. He suggests that the FKNMS study the park's plans carefully.
- Acting Superintendent Lindelof stated that the question will be whether or not mandatory boater education fits the geography and politics of the Florida Keys. The EIS process can be used to get a better sense as to what is feasible for the sanctuary under the statutory requirements that are in place.
- Mr. Bruce Popham pointed out that people on the council are volunteers; he doesn't agree with the idea that voluntary participation doesn't work. A voluntary program could eventually

become a mandatory one.

- Mr. Martin Moe stated that he understands that the parks have a mandatory program also have a terrestrial base from which they can control things. This is not true for the sanctuary, which has jurisdiction to the high tide mark and doesn't own land. He asked how that fact would affect a mandatory program.
- Acting Superintendent Lindelof noted that not having a land base/entrance poses a major challenge for implementing mandatory boater education in the FKNMS. Controlling access in and out of the Florida Keys is very different from other areas/parks.
- Chairperson Nedimyer pointed out that marine sanctuaries are very different from national parks and this analysis is a first step.

VII. UPDATE AND NEXT STEPS ON ADVISORY COUNCIL WORKING GROUP TO DEVELOP A VOLUNTARY EDUCATION AND RECOGNITION PROGRAM FOR CHARTER FISHING OPERATORS

Florida Keys National Marine Sanctuary Program Coordinator Nicole Uibel gave an update on the voluntary education and recognition program for charter fishing operators. To view this presentation, visit <http://floridakeys.noaa.gov/sac/othermaterials/20161018blueangler.pdf>.

Ms. Uibel explained that at the last council meeting a resolution was passed to create a charter fishing working group to guide the development of a voluntary charter boat operator program. To view this resolution, visit <http://floridakeys.noaa.gov/sac/othermaterials/20160816recfishwgmotion.pdf>. The program would recognize charter fishing operators who met set criteria to educate their customers in conservation practices and increase awareness and stewardship of the sanctuary. Membership including local stakeholder member groups such as guides and angler associations, format and schedule of working group meetings were discussed at the last meeting and updates presented at this meeting. The schedule includes an initial working group workshop followed by a series of evening public information and input meetings will be held throughout the Keys for the public. A final workshop will be held for the working group to discuss and make final recommendations. Ms. Uibel noted that after selecting a working group chair, the schedule will be finalized and distributed.

MOTION (passed)

Ms. Uibel asked for nominations for the working group chair position. Council Member Jack Curlett nominated fellow member Will Benson. The nomination was seconded by Chairperson Ken Nedimyer. There were no objections; the motion passed.

VIII. WATER QUALITY PROTECTION PROGRAM—UPDATE ON ACTIVITIES

Vice Chair Chris Bergh, FKNMS Advisory Council Representative to the Water Quality Protection Program (WQPP), gave an update on the activities conducted by the WQPP. Vice Chair Bergh explained that the WQPP is called for in the act that created FKNMS. Just as the sanctuary is co-managed by NOAA and the Florida Department of Environmental Protection (FDEP), the WQPP is a joint effort co-chaired by FDEP and the US Environmental Protection Agency. The WQPP is statutory in nature and has specific goals to restore water quality and reduce pollution impacts. The program is guided by a Steering Committee, which consists of agencies, NGOs, and stakeholders. Vice Chair Bergh explained that he sits on the steering committee in his capacity with The Nature Conservancy and as an advisory council member; he is reporting out today as an advisory council member.

The WQPP has had a focus on wastewater and has worked with the county and municipalities to replace the antiquated wastewater systems in the Florida Keys. The program has also been involved in securing funding from different sources. This effort to sewer the Keys is nearing completion. Monitoring has been associated with upgrades in the sewer system to evaluate changes in nearshore waters. Improvements may take time since it takes time to process the existing nutrients out of the system before changes are observed.

Stormwater from roads, homes, businesses, etc. is also an area being addressed. New homes and roads have stricter stormwater restrictions compared to homes in the past. The program is also addressing canals, with the county taking the lead role. Many canals, which are part of the sanctuary, have poor water quality. A study was completed to assess canal condition. The county has taken the lead of determining the cause of degraded waters, whether it is from seaweed floating in and decomposing or from land-based leaf litter and other debris. Because some canals have dead-ends and are stagnant, nutrients in the water deplete dissolved oxygen in the water column, which makes the canal inhospitable to fish and other marine life. The county is implementing a series of demonstration projects that use a variety of methods to restore canal water quality. Some of these methods involve weed gates to prevent seaweed, therefore nutrients, from entering canals. Other methods involve bringing in clean fill to raise canals dredged too deep and removing the organic muck that has built up over the years on the canal bottom. EPA is funding monitoring in these canals to determine how the different methods affect the dissolved oxygen levels, chlorophyll levels and benthic community. EPA also funds the data management for long-term water quality, seagrass and coral reef monitoring programs that are part of the WQPP. Early in the WQPP, an active Technical Advisory Committee (TAC) advised the agencies and Steering Committee regarding program priorities and funding. In recent years, after being somewhat dormant, the TAC has been revised. TAC members provide expertise on a wide range of topics.

Vice Chair Bergh noted that disappointment was expressed by a member of the public about the level of participation of the sanctuary with Everglades restoration projects, which is critical to sanctuary water quality and community water supply. The WQPP focuses on the proximal sources of pollution and the corrective actions that can be taken at the local level, which doesn't mean that this body and others shouldn't pass motions to support the completion of Everglades restoration. The FKNMS is interested in what is taking place outside its boundaries and wants to see other areas improve.

Discussion/Questions

- Mayor Gillis added that the work of the WQPP is very important. In canal restoration, Islamorada is partnering with private individuals willing to contribute funding. She explained that the Village decided they would like to do some testing of the canal water to make sure that they know what they are doing before proceeding with canal restoration. They are already seeing the rewards of sewerage and are trying to move ahead with the funds. Each community or group has to determine how to make the most out of the money put toward this effort. Funds from the Stewardship Act will be available to the Keys and when funds trickle down, projects have to be in place to receive funding.
- Mr. Bruce Popham commended Islamorada for what they are doing. He lives in Duck Key, which is in the county and has individuals that have privately raised money for some maintenance on canals. The county has a regulation that restricts dredging. He advocates for changing this rule to make maintenance on canals easier to accomplish.
- In some canals, aerators have been used to create air curtain weed barriers at the canal entrance and to add dissolved oxygen to the water column. Aerators/weed curtains do not

always work to keep the floating weed out of the canal.

- An update was given to the advisory council by county staff working on the canal restoration at a previous advisory council meeting. That presentation can be viewed here: <http://floridakeys.noaa.gov/sac/othermaterials/20150812canaldemo.pdf>.
- A video about canal restoration in Islamorada and the county was produced and is available at <https://www.youtube.com/watch?v=zzPzuU79W74>. This video is geared toward homeowners and is very helpful.

Note: The FKNMS has a prohibition on dredging (except in federally managed channels such as the Key West Harbor) and on altering the seabed.

IX. AGENCY REPORTS: SUPERINTENDENT'S REPORT, REGIONAL DIRECTOR'S REPORT AND AGENCY REPORT HIGHLIGHTS: DEP, FWC-FWRI, FWC-LE, NOAA NMFS Southeast Region, NOAA OGCES, NOAA OLE, EPA, NPS, USCG, USEPA, USFWS, and U.S. Navy

Florida Keys National Marine Sanctuary, Acting Superintendent Lindelof

- John Armor is the new Director for the Office of National Marine Sanctuaries (ONMS). John is an exceptional person who is very astute and has very good judgement. He is the kind of leader that brings people together and is a very good selection.
- The inquiry into sanctuary management is still ongoing. A final resolution is not expected until the end of the year.
- The Joint Enforcement Agreement (JEA) was signed several weeks ago. A meeting will be held in the near future with FWC regarding enforcement.
- A sanctuary mooring buoy was found in northern Norway as part of a coastal cleanup. Pictures taken of the buoy were shared. The buoy was thought to be lost 2 to 3 years ago, but that is yet to be confirmed. Additional photos have been requested.

Florida Department of Environmental Protection, Joanna Walczak

- DEP State Parks staff organized a Resource Management Team project in August to conduct seagrass restoration in Lignumvitae State Park. Staff from the District office in Hobe Sound as well as staff from three other parks participated in the workday. As part of the restoration, the team installed 178 bird stakes at three restoration sites, bringing the total number of restoration sites to forty-seven. They will be finishing up with bird stake installation at one of these sites on Wednesday the 19th with Representative Holly Raschein and her staff, who have expressed an interest in seagrass restoration.
- The coral disease outbreak continues across the Florida Reef Tract. DEP's Florida Coastal Office will continue to host coordination calls for reef managers, researchers, and other interested parties to share information on new observations, ongoing response efforts, etc. The state is submitting a request for capacity assistance from the USGS National Wildlife Health Center (NWHC) based in Madison, WI. NWHC's specific directive is to provide resources and capacity assistance to areas that have wildlife disease outbreaks, and they have worked on coral disease in Hawaii in the past. DEP is also coordinating with partners to understand the types of data that are being collected about the disease outbreak and associated environmental factors. These data will be given to staff at NWHC to help us understand all of the variables and factors associated with the disease, including the conditions when the disease started in Miami in mid to late 2014.
- DEP's Florida Coastal Office was invited to participate in the NOAA Coral Reef Conservation Program (CRCP) Ecosystem Science Review as stakeholders who use the science that is paid for by NOAA CRCP. Presentations were given on the science funded by NOAA, and those

researchers also had the opportunity to hear about management needs. The goal of these conversations is to encourage better coordination between the researchers who collect scientific data and the managers who need that information to meet management needs. Researchers need to know what the management questions are so that they can design projects to fulfill those needs, and managers need to better communicate the questions that need to be answered to better protect resources. DEP hopes to initiate regular conversations with all of the coral reef managers in Florida to figure out the management questions and ensure the data we're collecting (e.g., through the WQPP, etc.) are sufficient to answer those questions. To this end, DEP's Coral Reef Conservation Program is planning a learning exchange in southeast Florida to better understand the research coming out of local Universities. Eventually these types of exchanges will also include NGO's, NOAA researches etc. Another challenge is getting information back to the managers in the format that is easily understood and communicated.

National Marine Fisheries Service, Heather Blough

- The South Atlantic Council approved a proposed rebuilding plan for the Florida Keys hogfish stock. It's a 10-year plan designed to reduce commercial and recreational catch limits 75-87% by increasing commercial and recreational minimum size limit, reducing recreational bag limit, and setting commercial trip limit and 6-month recreational fishing season. NMFS is requesting comments on the plan through December 6 and will soon announce a separate public comment period on proposed implementing regulations.
- During its December meeting in Atlantic Beach, the South Atlantic Council:
 - Is tentatively scheduled to approve new mutton snapper regulations (current preferred alternative are consistent with the regulations FWC adopted for state waters) and new electronic reporting requirements for the charter sector;
 - Will discuss whether to move forward in considering limiting access to the for-hire fisheries for coastal migratory pelagic, dolphin wahoo, and snapper grouper species (they've set a control date of June 15, 2016, which could be used to determine eligibility in such a program if adopted).
- The South Atlantic Council continues to explore potential new allocation methodologies for dolphin and yellowtail snapper, as well as possible changes to shallow-water and deep water grouper regulations, including alternatives previously explored in the draft South Florida amendment, based on input received in response to their visioning initiative.
- The Gulf Council continues to consider alternative catch share programs for the charter and headboat fleets. The headboat discussion is much more evolved at this time and the Council is expected to approve this week in Biloxi criteria that will determine who is eligible to vote in a referendum we'll conduct sometime next year to gauge interest in the Council's preferred headboat management strategy.
- The Gulf Council also is considering regulatory changes for mutton snapper and for gag that would make regulations more consistent throughout South Florida and simplify management of those species.
- NOAA Fisheries is developing proposed critical habitat designations for the green sea turtle population segments we listed earlier this year and for our newly listed coral species. We expect the turtle rule to publish within the next few months and hope to publish the coral rule sometime early next year.

NOAA Office of Law Enforcement, Kenneth Blackburn

- Operation Rock Bottom, which focused on the marine life industry, led to convictions and sentencing for Phil and Leah Gould for illegal harvesting and exporting of sharks (without the proper permits). Each party received five months of probation, 150 days of electronic monitoring and a fine of \$5,000. They also lost their shark incidental harvester permit and shark wholesale

dealers license.

- Over a year ago, the president of the Idaho Aquarium, Ammon Covino, was sentenced for buying illegally harvested animals for his aquarium. Recently, he was caught setting up additional aquariums across the country, which was in violation of his probation. He could now be ordered to serve out the remainder of his sentence, which is up to five years in prison.

US FWS National Wildlife Refuges, Officer Blackburn reported for USFWS

- The screwworm is being dealt with at the Key Deer NWR. Deer slow down very quickly once infected by this maggot. The rut causes more fighting amongst male deer, which makes wounds that open the deer to infection by the fly. So far, about 90 animals have been euthanized, mostly deer. Population estimates for the deer were about 1,000. Federal and state partners, including the USDA, are involved in the response. Sterile male flies are being released to eradicate the infected flies.
- Officer Blackburn is now working out of the refuge office in Big Pine in addition to the FKNMS office in Key West.

Everglades National Park, Chris Kavanagh

- Dry Tortugas National Park welcomed Meaghan Johnson as their new chief fisheries scientist. Meaghan has a strong background in research in the Florida Keys.
- The South Florida Natural Resources Center for Dry Tortugas and Everglades National Parks is celebrating their 40th anniversary this Saturday at the Poe Visitor Center at the entrance to Everglades National Park. The event is open to the public.
- ENP is rolling out the management changes in the 2015 GMP for the park. This will continue over the next few months into next year. Some of the changes include opening of Joe Bay to nonmotorized access, poll and troll zones extended, new markers and transit corridors, boater education program and boater permit program.
- Some new seagrass growth (vegetative and by seed germination) was observed in the seagrass dieoff zone of Florida Bay in the summer of 2016. However, in September, green water was observed and confirmed in the central bay basins. Water Quality samples have been collected from 40 sites to determine the extent and level of chlorophyll-a in those basins. At the same time, NOAA was independently sampling baywide and found corroborating results. They identified a dominant blue green algal component in Twin Key, Craig Key, Rabbit Key basins. This body of green water is very consistent and has a very distinct boundary. FWRI has confirmed the identification of a blue green algal component in the Twin Key basin area. Chlorophyll values in this area are 20--30 times higher than normal. The park will be sampling the benthos; some loss of sponges was observed during the bloom sampling. The bloom is thought to be result from the nutrients released from the decaying seagrass that died last year.

US Navy, Ed Barham

- The Navy is coordinating with USFWS as they begin the process of remediating an old skeet range on their property on north Boca Chica.
- They are half-way through with a comprehensive survey for birds, plants and rare, threatened and endangered species on all NAS Key West properties. This survey is conducted every five years.
- NAS Key West supported National Public Lands Day on Sept 24 with a shoreline clean-up on Boca Chica Road. Approx. 20 volunteers removed about 500 pounds of trash.
- An annual meeting to review the NAS natural resource program was held recently by the Navy. They are required to meet with USFWS and FKNMS and other agencies to discuss their projects.

US Coast Guard, Chiefs Eric Rocklage MSTC, Mark King BOSN4

- Since the last FKNMS meeting in August, Sector Key West has received 26 National Response

Center reports that resulted in 04 federalized cases (05 migrant vessels). The responses resulted in the opening of the OSLTF fund for \$9,000 total.

Discussion/Questions

- Council Member Mimi Stafford asked about funding for removal of the chugs in other areas along the coast (not in the Marquesas where a project is underway). She has observed an increase in the number of boats scattered along the Lower Keys. These boats deteriorate and fall apart and cause environmental degradation.
- Chief Rocklage explained that the USCG is still working on chugs in the Marquesas and are doing so in conjunction with Monroe County. The money the USCG has only pays for removal of the pollution from those vessels, not removal of the vessel itself. Monroe County Marine Resources is funding the chug disposal.
- Deputy Superintendent for Science and Policy Beth Dieveney explained that FKNMS Enforcement and Emergency Response Coordinator Stephen Werndli is working closely with the agencies on removal in the Marquesas. This project will serve as a case study or test as to how to accomplish debris removal collaboratively in other areas in the future.

X. PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA

Ms. Nicole Vasilaros, National Marine Manufacturers Association

Ms. Vasilaros stated that she is happy to come before the council. NMMA is the largest marine recreational trade association in the world and represents about 1500 manufacturers that produce boat engines, accessories, etc. She is before the council to provide the industry's perspective on one of the agenda items earlier in the day regarding boater education. She has come before the advisory council before on this issue and thought it was important to inform everyone where the industry stands on mandatory versus voluntary boater education. The industry fully supports mandatory education at the state level. They feel that it is important part of boating behavior. It is not only important to have classroom training, but to have hands-on skill training. They have taken the initiative to offer hands-on skill training at the various boat shows they manage throughout the country to make sure there is that component as well. They do think, though, that mandatory boater education belongs at the state level just as driver's licenses and other required licenses. The state has the ability to manage and distribute the licenses and to work with stakeholder partners. The NMMA did work with Everglades National Park on their recent initiative. They learned from this experience and think the council should know the lessons learned. The park was great at reaching out to stakeholders. The NMMA has been participating in the advisory council meetings for several years and plans to continue doing so. The industry doesn't want see a framework where people have to get a license or get an extra education certificate (or be on a computer for an hour) for each park or other jurisdiction, particularly down in the Keys where a person could travel only a few miles and need another license. They consider this to be a barrier to access and it doesn't necessarily spawn better behavior. The industry is willing and happy to work with the advisory council or sanctuary staff on other ways to educate people. It is not just about classroom education or getting out on the water; it's about making sure the areas are mapped and marked properly so that people know where they can and cannot go. They believe education can come in all forms and information is only one of them. They encourage the advisory council to consider all of the options regarding providing the boater with the best available voluntary options.

Discussion/Questions

- Mr. Andy Newman asked Ms. Vasilaros whether NMMA supported Everglades National Park's mandatory requirements. Ms. Vasilaros explained that after working with the park they came to understand the efforts that the park was making because of the unique habitat. They worked with the park and shared their concerns about the app and extra increase in fees. At the end of the day, they did not oppose the park, but they don't believe that such a program has to be replicated in all parks, sanctuaries and other areas. The uniqueness of Florida Bay made it more appropriate in this

area. She indicated that their objections stem from cost, time and access issues that are created when a particular jurisdiction has its own requirements on top of a state requirement. This reduces the feasibility of people, especially visitors, of getting out on the water.

- Mr. Popham expressed his appreciation of the NMMA's participation in this process. He pointed out that the NMMA represents manufacturers, not boat dealers, boaters or boat builder and repair associations. Mr. Popham added that a few months ago he was invited to participate in an ad hoc committee called by some advisory council chairs to discuss enforcement. This committee has held two meetings so far. At one meeting, they learned that NOAA Office of Law Enforcement's role will be expanding here and throughout the country, which is important in the Keys where diminished funds are available for enforcement. The committee will probably draft a letter, which will be sent to the different advisory councils for their approval.

Mr. Glenn Clyatt, Yacht Broker for HMI and Charter Boat Fisherman

Mr. Clyatt is heavily invested in the marine business. Someone called him just a few hours ago to ask him to raise awareness about the mahi mahi issue. Mahi mahi catch has been in severe decline in the past four years. Basically, this is a federal problem because they believe that the declines are due to the long line fleet on the eastern seaboard (from Daytona to North Carolina). The long line fishermen have figured out that they can make more money and be less regulated if they fish mahi mahi. They are setting the long lines out in the migratory route and wiping these fish out in record numbers. In the past three years, 95% of caught fish have been caught on long lines. The state fishermen have been gathering information on this practice, which has never been seen before and is not regulated. More people are getting in the business and creating more issues. The trickle-down effect is that dolphin fishing the summer is deteriorating and has been for the last five years. Because the fish are being wiped out during their migration, they are not getting back to the Keys where they can be fished for catch and release or for food. Charter businesses are supporting families and tied to restaurants and other services. He knows that this is not the primary job of the council, but appreciates the opportunity to share the information and wants to keep this topic on the radar. He added that he appreciates what the council members do.

Discussion/Comments

Ms. Heather Blough stated that she would provide an update on the action of the South Atlantic Fisheries Management Council regarding mahi mahi fishing practices.

XI. CLOSING REMARKS

MOTION (passed)

Chairperson Nedimyer initiated a discussion about cancelling the December 2016 advisory meeting. Mr. Jack Curlett made a motion to cancel the meeting. There were no objections to the motion. The meeting was cancelled.

Chairperson Nedimyer announced that John Armor is now the Director of Office of National Marine Sanctuaries. He welcomed him and expressed his support. In December, Chairperson Nedimyer will be attending a coral reef restoration workshop in Ft. Lauderdale.

ADJOURN