

FLORIDA KEYS NATIONAL MARINE SANCTUARY ADVISORY COUNCIL

**Hyatt Place
1996 Overseas Highway
Marathon, FL 33050
Tuesday April 16, 2019**

FINAL MINUTES

***SANCTUARY ADVISORY COUNCIL MISSION STATEMENT
(adopted unanimously, December 6, 2005)***

Council Members

Boating Industry: Bruce Popham (Chair)
Tourism – Lower Keys: Clint Barras (Vice-Chair)
Citizen at Large – Lower Keys: Mimi Stafford
Citizen at Large – Middle Keys: George Garrett (absent)
Citizen at Large – Upper Keys: David Makepeace
Conservation and Environment: Ken Nedimyer
Conservation and Environment: Chris Bergh
Diving – Lower Keys: Joe Weatherby
Diving – Upper Keys: Elena Rodriguez
Education and Outreach: Jessica Dockery
Elected County Official: Michelle Coldiron
Fishing – Charter Fishing Flats Guide: Will Benson
Fishing – Charter Sports Fishing: Steven Leopold
Fishing – Commercial – Marine/Tropical: Ben Daughtry
Fishing – Commercial – Shell/Scale: Justin Bruland (absent)
Fishing – Recreational: Ken Reda
Research and Monitoring: David Vaughan
South Florida Ecosystem Restoration: Jerry Lorenz
Submerged Cultural Resources: Corey Malcom
Tourism – Upper Keys: Andy Newman (absent)

Council alternates (present)

Boating Industry: Karen Thurman
Citizen at Large – Lower Keys: Stephen Patten
Citizen at Large – Middle Keys: Rachel Bowman
Citizen at Large – Upper Keys: Suzy Roebing
Conservation and Environment: Caroline McLaughlin
Fishing – Charter Fishing Flats Guide: Dale Bishop
Research and Monitoring: Shelly Krueger
South Florida Ecosystem Restoration: Elizabeth Jolin
Submerged Cultural Resources: Diane Silva
Tourism – Upper Keys: Lisa Mongelia

Agency Representatives (present)

Florida Department of Environmental Protection: Joanna Walczak
FWC Division of Law Enforcement: Captain Dave Dipre
FWC Fish and Wildlife Research Institute: John Hunt
National Park Service, Everglades: Christopher Kavanagh
U.S. Coast Guard (USCG): Phil Goodman (Auxiliary)
U.S. Navy Naval Air Station Key West: Ed Barham

Municipalities

City of Layton: Hon. Bruce Hale

I. CALL TO ORDER, ROLL CALL, AND MEETING MINUTES APPROVAL OF DECEMBER DRAFT MEETING NOTES

MOTION (passed)

A motion to approve the February 19, 2019 minutes was made by Ken Nedimyer and seconded by Chris Bergh. The minutes were approved. A motion to adopt the agenda was made by Suzy Roebling and seconded by Dave Vaughan. The agenda was adopted without change.

Chairperson’s Comments

Chairperson Popham thanked Clint Barras for chairing the February meeting, and acknowledged sanctuary staff for putting together this agenda.

To view the presentations given by speakers at this meeting, visit <https://floridakeys.noaa.gov/sac/meetings.html?s=sac>.

II. MARINE PROTECTED AREA DESIGN AND CONSIDERATIONS IN A CHANGING CLIMATE

Mark Carr, MPA Federal Advisory Council Member and U.C. Santa Cruz

Dr. Carr focused on the ecological foundation of marine protected area (MPA) purpose and design, ecological resilience to environmental change, and climate change. One of the first uses of MPAs was to sustain and enhance fisheries; later, MPAs were created to accomplish ecosystem based fisheries management and to protect the ecosystem and its biodiversity. Today, MPAs can be tools to mitigate climate change and can function in other ways such as protection and fisheries enhancement, and the design of the MPA should reflect the goals of the MPA or MPA network.

The ecological foundation of MPAs is based on the role of habitats as a foundation for ecosystems and biodiversity, population and community connectivity, and movement of adults and juveniles in the ecosystem. If the goal is to protect biodiversity, then the MPA/MPA network should protect different habitats. By protecting certain habitats, MPAs can also function to protect population connectivity, which is the movement of organisms from one population to another. Because some organisms produce larvae that are carried far away, MPAs may benefit by being spaced appropriately to allow for larvae dispersal to other protected areas within the MPA network. These MPA networks contribute to the replenishment among and outside the protected areas.

MPAs should seek to preserve not only the genetic diversity in the species, but also within communities. Genetic diversity in communities is important because some organisms will be more resistant than others to changing environmental conditions. Community connectivity is the movement of multiple species between communities. Not all species have the same dispersal capabilities and such differences should be taken into account in MPA design.

MPAs should be large enough to ensure a large portion of the population or community is protected. Many times, this means larger MPAs protect more species, due to the different home ranges of adults and juveniles in different stages of their life histories. One goal is to encompass multiple ecosystems within an MPA in order to protect the foraging movements that take place in different species as they move between different habitats. Finally, another goal is to preserve ecosystem connectivity, which involves the movement of nutrients, materials and organisms between ecosystems.

Dr. Carr recently participated in a working group that examined whether MPAs impart or enhance resistance or resilience of species populations, communities and ecosystems to natural or human-caused disturbance and to determine what design features and management approaches contribute to this resilience. To measure this, scientists can monitor populations long-term and determine if the system remains resilient to a disturbance. In a shorter time frame, scientists can observe mechanisms or patterns of productivity and use those to infer the efficacy of the MPA. The working group examined many of these patterns and determined that MPAs enhance resistance and resilience of populations, though the need for direct observations is evident. Design features which contribute to successful MPAs include high compliance, including multiple ecosystems, and long standing boundaries. These traits can lead to increased resistance and resilience of MPAs. For additional information, please visit: <https://marineprotectedareas.noaa.gov/fac/products/>

MPAs can provide a tool for mitigating climate change to avoid cascading ecological impacts due to species specific reactions to changing conditions. By creating population buffers, protecting refuge populations and genetic diversity, facilitating shifts in species ranges, strengthening ecosystem connectivity, and monitoring sentinel sites, marine protected areas can provide resource managers with a tool to mitigate changing climates.

Discussion

- Areas such as the Great Barrier Reef Marine Park, National Marine Sanctuaries, and the marine protected areas off the West Coast of the United States are all great examples of MPA networks. These models are being used to design an MPA network off the coast of Canada.
- A member asked if success could be determined based on an individual MPA versus the network. Dr. Carr explained that success within an individual MPA indicates success of the system itself, and of the fisheries management of the areas outside of the network.
- MPAs can be created to target a specific species, such as yellow tang, but may end up enhancing the populations of other species that use that habitat.
- Socioeconomic monitoring of MPA communities has demonstrated that both commercial and recreational fisheries may initially decrease, but ultimately the industry will likely increase.

III. MARINE ZONING AND REGULATORY REVIEW: HIGHLIGHTS OF SANCTUARY ADVISORY COUNCIL MARINE ZONE RECOMMENDATIONS FOR AGENCY ANALYSIS

Beth Dieveney, Florida Keys National Marine Sanctuary

Throughout the regulatory review process, the sanctuary advisory council set goals for the new Restoration Blueprint, including to reduce stress from human activities, protect large habitats, minimize conflicts of users, and achieve an ecologically sustainable ecosystem. From these goals, nine priority issues were brought forward, and three of those priorities were parsed out through working groups: Shallow Water Wildlife and Habitat Protection, Coral Reef Ecosystem Restoration, and Ecosystem Protection: Ecological Reserves, Preservation Areas and Wildlife Protection. Each of these working groups had specific objectives including reviewing zone level protection, evaluate marine salvage issues, and identifying regulatory challenges.

The current zoning scheme includes ecological reserves, sanctuary preservation areas, wildlife management areas, existing management areas, and special use areas. The sanctuary also enforces an area to be avoided for large ships to avoid contact with the reef line.

The sanctuary advisory council working groups provided recommendations to the sanctuary including modification of these zones, changes to regulations, and prioritizing sites for restoration. Each of these working groups' recommendations are available at <https://floridakeys.noaa.gov/review/workgroups.html>.

Discussion

- Many presentations which were provided to the working groups are also housed on the sanctuary website and can be accessed by members of the public.
- Sanctuary staff are in the process of analyzing these recommendations from the advisory council to be released as a suite of alternatives in the Restoration Blueprint. This document will also include the environmental and economic analysis of these alternatives.

Break

IV. SHALLOW WATER HABITATS AND THEIR ECOLOGICAL IMPORTANCE

John Hunt, Florida Fish and Wildlife Conservation Commission

Mr. Hunt provided an update about shallow water habitats in the Florida Keys. These habitats are important to everyone, including divers, anglers and conservationists. Shallow water habitats include beaches, seagrass beds and nearshore hardbottom.

Coastal beach ecosystems are comprised of sand and seagrass habitats. Both habitats provide important settlement cues for more than 120 species, including snapper and permit. By monitoring these areas monthly, research has demonstrated a recruitment pulse in the late summer and fall, aligning with the spawning season in the spring and summer. Specifically, young snapper and grunt are known to recruit to seagrass beds in the middle Keys. Seagrass beds also contain a variety of invertebrate life.

Species density/composition varies between seagrass and sand habitat with permit and bonefish found more commonly in sand and snapper and grunt more commonly in grass beds. This demonstrates the importance of protecting multiple habitats to preserve diversity. Seagrass bed

habitats found in slightly deeper areas of the Atlantic and Gulf, and provide critical juvenile habitats for many fish and invertebrates.

Nearshore hardbottom habitats are rocky bottom areas that are relatively expansive on the bayside. These habitats, which cover nearly 30% of the sanctuary, serve as critical nurseries for 186 species of reef fish and many marine invertebrates. For example, planktonic lobster utilize the red algae found in nearshore waters, while the larger juveniles use sponges, solution holes, and rocks for shelter and camouflage as they grow before maturing and moving to the reef.

Finally, sponges, which are found in the shallow water hardbottom habitats, are important as both filters of the water and as habitat for multiple organisms. Unfortunately, algae blooms have resulted in the loss of marine sponges and therefore a loss of ecosystem functions. Living sponges were essential habitat for the snapping shrimp, which create sounds heard underwater that are used by lobsters and other invertebrates as recruitment cues. Essentially, the loss of sponges has led to the loss of this important soundscape. Without sponge habitat, the shrimp disappear and the ecosystem loses diversity. To combat this loss, FWC is working to propagate sponges in nurseries and outplant 15,000 sponges by the end of 2019.

V. MARINE ZONE CASE STUDY: WESTERN SAMBO ECOLOGICAL RESERVE

Tom Matthews and Alejandro Acosta, Florida Fish and Wildlife Conservation Commission

Mr. Matthews described the 11 square mile Western Sambo Ecological Reserve (WSER), established in 1997, as an area designed to protect a large contiguous ecosystem comprised of multiple habitats including hardbottom, seagrass, and coral. Monitoring and data collection began at this site in 1997, and continues today. Projects completed in Western Sambo focused on lobster populations, including age, migrations, and density within and outside of the reserve. Lobsters utilize the multiple habitats found in the WSER for shelter and foraging. Over time, the relative abundance of lobsters increased in the WSER in comparison to fished areas, but no change in abundance was observed in the smaller Sanctuary Preservation Areas or Research Only Areas. The level of protection provided by the WSER for lobsters was directly related to reserve size, configuration, habitat and life history characteristics of lobsters.

Additionally, data demonstrates the larger male lobsters were more commonly found on patch reefs versus fore reefs, especially within the reserve. By examining neuroliofuscin, which is a hallmark of age, scientists were able to determine the lobsters within the reserve are also older than lobsters being fished outside the reserve.

When acoustically tagging lobsters, scientists epoxy radio transmitters to their carapace. Although the lobster will lose the tag during molting, the data can provide fine tune spatial information, such as home range. Over a 32 day time span, a pattern emerged of daytime sheltering areas and nighttime foraging areas. By tracking female lobsters, an offshore spawning area became another apparent migration of up to five kilometers. This pattern was evident both inside and outside of the reserve, however most of the female lobsters are leaving the reserve to spawn offshore, sometimes traveling to the outlier reef in deeper waters outside the reserve.

Mr. Acosta described the methods currently used to understand fish abundance within the WSER.

One of these methods is the Reef Visual Census (RVC), which attempts to count all fish for species, length, and abundance. From this census, a substantial reserve effect was demonstrated with abundance of red grouper and gray snapper significantly higher inside the protected area. However, this trend is not universal because some species are more transient and display higher abundance outside the reserve, especially if their preferred habitat is deeper water, or have a tendency to not form aggregations. Thus, moderate or no reserve effects were detected for mobile species such as yellowtail snapper, mutton snapper and black grouper. The level of protection provided by the WSER for fish was directly related to reserve size, configuration, habitat, and species life history.

Acoustically tagging fish is another method to determine home ranges, and involved surgically implanting a tag within the fish. Utilizing this data, scientists demonstrated the high site fidelity of species such as red, goliath, and gag grouper. This trend was observed over various habitat types, indicating that the home range is not dependent on habitat type. Again, this trend is not universal, especially with species found in deeper water such as black grouper, which exhibit less site fidelity than red grouper; adult black grouper are typically found in deeper waters beyond the WSER boundary.

VI. UNDERSTANDING FISH AGGREGATION SITES

Danielle Morely, Florida Fish and Wildlife Conservation Commission

Ms. Morely began with an introduction to the importance of fish aggregations as some species are reproductively limited to these events, which are predictable and therefore susceptible to overfishing. Based on landings data, potential spawning aggregation sites with the Florida Keys were identified, including Riley's Hump (inside the sanctuary's Tortugas Ecological Reserve South) and Western Dry Rocks.

Research in Riley's Hump and the Dry Tortugas area focuses on the connectivity of mutton snapper between these areas utilizing acoustic monitoring. These data demonstrated that almost half the fish tagged made multiple migratory trips between the two protected areas. Multiple individual fish were tracked making migratory trips monthly near the time of the full moon indicating a spawning corridor. Video evidence in 2009 confirmed the presence of a multispecies spawning aggregation at Riley's Hump. This result is significant when examining larval drift patterns, as the fish spawning in these sites have the ability to re-populate most of South Florida within 30 days when riding currents. Passive acoustic hydrophones recorded elevated number of grouper calls during the spawning season and cameras captured large schools of Cubera snapper. These data, which were presented to FWC Commissioners, show that the Dry Tortugas Research Natural Area was an effective MPA that now has been reinstated for another 20 years. Data also point to the complementary nature of the marine reserve network (Tortugas Ecological Reserve and DTRNA) in the region.

Western Dry Rocks research began in 2011 utilizing aerial surveys, diver observations, and telemetry efforts. Eighteen fish were tagged, and were demonstrated to be more present during winter spawning months, with little correlation due to moon phase. This data demonstrates a likely multispecies spawning site (for grey snapper, mahogany snapper, yellow goatfish, permit and spadefish).

Lunch

VII. DISCUSSION AND Q & A FROM MORNING SESSION

Mark Carr, MPA Federal Advisory Council Member and John Hunt, Tom Matthews, Alejandro Acosta, and Danielle Morely, Florida Fish and Wildlife Conservation Commission

What is the difference between a marine protected area and a no-take marine reserve?

- Mr. Carr explained that a marine protected area is any spatial defined area under protection, while a no-take reserve is one type of protected area with more strict regulations. Gradations exists between various marine protected areas, especially in regards to fishing regulations.

Are there any other significant spawning aggregations in the Florida Keys? Do we have data on these species diets?

- Ms. Morely confirmed there are preliminary reports of other spawning aggregations as far north as Key Largo, but may not be multispecies aggregations like Western Dry Rocks. Scientists are currently working on food web dynamics in South Florida.
- Mr. Hunt reminded members that Western Dry Rock and the Dry Tortugas are connected by the same gyre, so those aggregations may be more productive in repopulating the entire reef track when compared to an aggregation in the upper keys.
- Mr. Acosta mentioned more spawning aggregations may be possible with habitat restoration, but at this time none have been identified.

Is there any information about where the fish in the Florida Keys originate? Are they from here or elsewhere in the Caribbean where protections may not be as strong? Are deep-water seagrass beds critical habitats for these juveniles?

- Mr. Carr explained that research has shown that many fish in the Florida Keys do originate from other countries based on oceanographic models of larval flow. There is certainly a concern that management in these countries may not be as strict as protections in the United States. However, Mr. Hunt reminded the council that studies have also shown that fish larvae will replenish local stocks, explaining specific genetic studies have been done in the lower keys. While more research can certainly be done in any particular habitat area, scientists have determined that each habitat type is important for various life stages of fish, and it is important to protect each one.

What is the life history relationship between loggerhead sponges and lobsters? Are there different populations of lobsters in the Gulf compared to the Atlantic?

- Mr. Hunt. Explained that sponges play a role similar to primary succession in forests, as the slow growing, larger organisms which create the foundation of the ecosystem. Sponges can take up to 15 years to regrow after a die-off or other disturbance. If an area experiences this kind of perturbation, those small lobsters will be unable to seek refuge in the sponges, and a cascading effect will be seen.
- Mr. Matthews explained that lobsters follow various cues through their life histories that generally lead them on migrations to deeper water, so it would be rare for them to cross from one water body to another.

How long has the reef visual census been ongoing? Have you seen any patterns in fish populations?

- Mr. Acosta clarified that the survey has been ongoing for more than 20 years, but patterns can be hard to discern at a large scale compared to the species scale, spatial scale, or temporal scale.

What is the importance of sand habitats compared to the seagrass habitats?

- Mr. Acosta explained that larval fish are looking for settlement cues, and many times are attracted to the sand as it provides camouflage until they mature enough to migrate to the seagrasses or mangroves. Without this habitat, the ecosystem mosaic would be incomplete.

Can Western Dry Rocks be considered a year round multi-species spawning aggregation site?

- Ms. Morely clarified that while scientists have documented multi-species aggregations at this site, they have not yet been able to document spawning. This research is ongoing, and future observations will be utilized to determine if this is a spawning area.

How does FWC incorporate research science with citizen science?

- In certain studies, citizen science observations can supplement research science, however in other studies the methodologies may be too specific to accept citizen science data. In these situations, citizen science observations can allow researchers to adjust their study or examine different questions.

VIII. RESTORATION BLUEPRINT OUTREACH TOOLS AND PRODUCTS

Gena Parsons, Florida Keys National Marine Sanctuary

Ms. Parsons provided an overview of the PowerPoint, infographic, video, and talking points provided by sanctuary staff to SAC members to utilize during Restoration Blueprint outreach. Members are encouraged to engage with their constituents to interact with the upcoming release of the DEIS, and report back to sanctuary staff if any major issues arise before the release of the document.

IX. BOATER EDUCATION IN THE FLORIDA KEYS NATIONAL MARINE SANCTUARY

Kate Wiltz, Eppley Institute for Parks and Lands

Gena Parsons, Florida Keys National Marine Sanctuary

Ms. Wiltz explained the relationship between Eppley and public lands and waterways has been strong since developing mandatory training for Yellowstone National Park many years ago. More recently, Eppley has worked with Everglades National Park to create a mandatory boater education course, and has just finished development of the similar Florida Keys National Marine Sanctuary's voluntary boater education course.

When users begin the course, they will be directed to login to the ProValens learning system and will have free access to both the English and Spanish versions of the voluntary course. Once users select their course, they will be directed to an interactive dynamic course which will take on average 30-45 minutes to complete, as well as the assessment and a printable certificate of completion. Users will not be able to access the assessment until they have accessed the course.

Ms. Parsons explained the marketing effort behind promoting this course, including social media, directed emails, website traffic, and in person outreach. Sanctuary staff will be able to track the

numbers of people who take the course, and the percentage who pass the assessment.

Discussion

- This course differs from the Everglades course in being voluntary, focusing on sanctuary zones, and the different habitats encompassed with the sanctuary that are not protected by the Everglades, such as coral. This course differs from boating safety courses which are generic and focused on safety aspects, while this course is specific to the sanctuary and focuses on education.

X. PUBLIC COMMENT

Captain Bill Kelly, Florida Keys Commercial Fishing Association

Captain Kelly pointed out the importance of ecosystem based management and essential fish habitat, which ties back to the fisheries presentations given by FWC staff this morning. He encouraged everyone to provide comments to fisheries managers to put stock in these concepts. Spiny lobster amendment No. 11, called for in 2010, established a series of 50 new protection sites in the Florida Keys. These areas offered protection from commercial spiny lobster fishing, but other activities are not restricted. When this occurred the fishermen were shocked primarily because they don't fish on corals anyway. Of the 50 sites proposed, several of them were devoid of coral. The sites also overlapped with state waters in some cases and this federal rule couldn't be implemented in state waters. This frustrating situation was addressed by the fishing association and modifications were made. The result from listening to the user groups was that the sites were made bigger and better. The fishermen have a sense of what is really going on and are good sources of information. Last July, the commercial fishermen worked with University of Florida to cleanup marine debris in the Marquesas. In five days, they cleaned up 25 tons of marine debris. The interesting thing was that less than 2,000 pounds was lobster traps. Virtually every picture of marine debris shows a lobster trap. On their cleanup trip, they found car tires, batteries, etc. This debris is coming socially from a lot of sources and different areas. He thanked everyone for working on the marine debris issue and thanked John Hunt for a set of very interesting presentations this morning.

Janice Lindsey Hartz, Citizen

Dr. Hartz is here to promote NOAA's support for protecting Sunset Cove and Pelican Key, which is located in Sunset Cove. She kayaks regularly in this cove, which is located at MM 98 bayside. Pelican Key has more bird species than many of the islands in Everglades National Park or other shoreline islands. These bird species, include the brown pelican, cormorant, ibis, snowy egret, great white egret and white crowned pigeons, are permanent residents that nest and raise young there. Threatened bird species have made Pelican their home—at least for the 32 years she has been here. In recent years, new human caused activity has threatened the survival of these birds. These activities are associated with wedding destinations and party destinations, including fireworks. Birds disappear after these activities and then eventually begin to reestablish on the key after a while. She has observed no chicks for these threatened bird species in the past two years. Regular sea planes are now landing and taking off right next to the Pelican key. It is also an attractive destination for jet skiers that zip around the island and disturb the birdlife. She is here to urge everyone to add protections to this island that include no fireworks and other actions to reduce the effects on the birds.

Captain Bill Wickers, Key West Charter Boat Association

Captain Bill Wickers thanked the board for the service they have given to the community. Having spent 6 years on the first advisory council, he is aware of the sacrifice of time to cover these meetings. He appreciates it. The sanctuary needs to study the economic and social effects that proposed actions will have on the charter and commercial industry. This includes the ripple effects that would occur to community businesses that depend on charter and commercial businesses. They want to protect paradise, but don't want to put anyone out of business. It's difficult making a living in the Keys, especially since Hurricane Irma. Please take this into consideration when making policies. The act that created the sanctuary in 1990 did not give the sanctuary the power to pass fishing regulations. Bag limits, size limits, seasonal closures, spawning closures are in the purview of the Florida Fish and Wildlife Commission, the South Atlantic Fisheries Management Council and Gulf Fisheries Management Council. The state of Florida recently addressed the mutton snapper fisheries at Western Dry Rocks from a scientific, not an emotional standpoint. They declared that the mutton snapper is not overfished based on the science information. Based on the science, they changed the rules (FWC and South Atlantic) after holding meetings and collecting information on this topic. The rule that passed involved a change in the commercial trip limits to 500 pounds per day from January to April. In April, May and June, they implemented a limit of 5 per person per day. After the spawning season, the commercial limit goes back up to 500 pounds. They also addressed the recreational limit. They reduced the bag limits for the recreational fishermen from 10 to 5. He is trying to explain that when he was on the board habitat protection was what they addressed; they tried to stay away from fisheries management. He appreciates everyone listening and thinks that Western Dry Rocks fishing issue has been addressed.

Jeff Bowman, Namaste Eco Excursions

Mr. Bowman and his wife, Trish, have been conducting ecology/science based tours out of Key West since 2008. He and his wife are very concerned about the use and destruction of habitat in the patch reefs of Western Sambo Ecological Reserve. They have noticed in the past 3 to 4 months a lot of anchoring near shore in an eco-reserve. He is unsure about the anchoring rules in the reserve. New resorts are now operational and have been taking people into these areas. Anchor damage is something that damages the patch reefs. The reefs off of Boca Chica have high benthic coverage with live coral coverage of 20 to 30 percent. It would be a crying shame to see this area destroyed like has happened elsewhere. If the tourist boats continue to anchor there, those patch reefs will be gone.

Deborah James, Governors State University

Dr. James is an associate professor of media studies at Governors State University. She has been down here over the past five years looking at the different documentary footage taken of coral reefs in the area. This footage is sometimes well used and sometimes not used at all. She is putting together a proof of concept for a presentation to be given to the International Coral Reef Symposium in 2020. This involves seeing how existing media resources can be better leveraged to attract new audiences and talk to audiences in a different way about the reef. This model will be presented at the conference workshop and used as a model for others to reach out to people about the reefs in other areas. Governors University is the on-ramp to the middle class and she feels that the coral reef messages are not reaching these people. A connection with the people living in the middle of Illinois and other places needs to be made. She is looking for a community of people who are interested in having a conversation and identifying what resources exist and where they can be found.

XI. MEMBER UPDATES OF NOTE

David Vaughn provided a written comment stating “protected areas that only managed a limited amount of stressors without aggressive restrictions and aggressive restoration will be limited in successful protection and fail to manage an ecosystem.”

Joe Weatherby invited members to the celebration of the 10th anniversary of the sinking of the USS Hoyt Vandenberg at the end of May 2019.

Chris Bergh announced that The Nature Conservancy (TNC) along with U.S. Fish and Wildlife Service have taken over operations of Ballast Key after being willed the property from the late David Wolkowsky. The island will act as a research base for TNC’s research, restoration, and monitoring work in the Key West area.

Michelle Coldiron, Monroe County Elected Official, described a recent meeting with Florida Governor DeSantis where he discussed his priorities for the Florida Keys as water quality (Tamiami Trail), canal restoration, and investigating coral disease and replanting corals.

Chairperson Popham announced that they are having a chapter board meeting of the Sanctuary Foundation on Friday at Ocean Reef and are looking for new representatives in the Islamorada and middle Keys area. Fury has made a \$25,000 donation to the Foundation and is donating a portion of ticket sale proceeds. In addition, efforts are being made in Washington DC to improve the budget of the Office of National Marine Sanctuaries.

Motion/Resolution (Passed)

A resolution to recognize Dr. Billy Causey for his dedication to the Florida Keys National Marine Sanctuary on the occasion of his retirement was introduced by SAC member Chris Bergh. This resolution expressed the deep gratitude for his contributions and many accomplishments over the 40 years of service to the FKNMS. The motion passed unanimously.

XII. AGENCY REPORTS

Superintendent’s Report, Sarah Fangman, Florida Keys National Marine Sanctuary

- Superintendent Fangman thanked Mark Carr for his informative presentation this morning.
- Beth sent a job announcement out to everyone. If anyone knows of someone who is interested in this leadership position with FIU, please pass along this announcement to them. This person will be involved in water quality and Everglades restoration efforts/projects. She recalls that this group stressed the importance of looking outside of the sanctuary boundary when managing the resources.
- The sanctuary has been considering how to take the reef restoration to the next level in light of the many issues affecting corals in recent years. Last week a three day workshop was held with restoration partners and agencies to talk about plans for restoration. This included identifying specific locations where restoration practices can be applied.

Florida DEP Updates, Joanna Walczak, Office of Resilience and Coastal Protection

Office of Resilience and Coastal Protection:

- Executive Office of the Governor Updates:
 - Governor DeSantis and Secretary Valenstein have been champions for the environment, especially coastal ecosystem issues including water quality and coral disease. Although the Governor's recommended budget for coastal resilience and coral disease efforts was \$6 million, the current funding for next fiscal year is approximately at \$2.3 million. Among the ongoing efforts, they are working to align programs in DEP to better protect and improve water quality.
 - Dr. Thomas K. Frazer has been appointed as Florida's first Chief Science Officer. In his newly created role at DEP, Dr. Frazer will direct the newly established Office of Environmental Accountability and Transparency, coordinating and prioritizing scientific data, research and analysis to most effectively address Florida's pressing environmental concerns. He will ensure that sound science and innovative strategies expedite our progress. Dr. Thomas is director of the University of Florida School of Natural Resources and Environment and serves as chair of the Gulf of Mexico Fishery Management Council.
 - The former Florida Coastal Office has been renamed the Office of Resilience and Coastal Protection (RCP) to better align with the Governor's priorities of coastal resilience and ensuring the natural infrastructure that protects coastal communities is healthy.
 - Secretary Valenstein will be in the Keys next week to see coral disease issues and discuss response priorities.
- U.S. Coral Reef Task Force Updates:
 - Secretary Valenstein was in attendance at the meeting, leading the conversation. He has helped to emphasize the need for urgency and action, including the risk of inaction, and is leading conversations with FEMA to include coral reefs as natural infrastructure so that funding for restoring those resources can be pursued following hurricanes or other natural disasters.
 - Coral Reef Conservation Act (CRCA) of 2000: The USCRTF is also working on reauthorizing the CRCA. This is the main source of funding to NOAA and the jurisdictions to work on coral reef management issues.
 - National Academies of Science Coral Interventions Study: Working to assess the state of the science, capacity, technology, regulatory considerations, etc. to determine how to improve the persistence and resilience of coral reefs in the future.
 - U.S. All Islands Committee has asked the USCRTF to stand up a Restoration Working Group. This is focused on how, where and why to implement restoration to support critical ecosystem services.
 - DEP and FKNMS are giving a presentation to the South Florida Ecosystem Restoration Task force to continue to champion the importance and connectivity of these ecosystems.
- Force Blue has produced a Stony Coral Tissue Loss Disease mission video, available at: <https://vimeo.com/325871028>.

South District

- EPA and DEP are co-hosting a biannual meeting of the Water Quality Protection Program (WQPP) Steering Committee on Thursday, April 18th at the Marathon city Hall, Council Chambers. Topics on the agenda include updates on wastewater project and canal restoration,

coral disease response and monitoring, 24 years of water quality monitoring data, sponge restoration and the FKNMS regulatory review, among others.

- There is new EPA leadership and local participation will be important to integrate them into the issues and perspectives of the local community.

Florida Fish and Wildlife Conservation Commission – FWRI, John Hunt

- FWC is working on securing state funding to support the staff necessary to carry out disease related research and related activities. If corals are going to be outplanted with this disease work is needed to evaluate this practice.
- FWC is giving a presentation on coral disease and restoration component at the May FWC meeting. Gil McRae will be giving the presentation. Joanna Walczak and Sarah Fangman are on the panel that will be convened. This is a follow-up on the coral update given last summer to the Fish Commission.
- With regards to Biscayne National Park, FWC is trying to gear up the fisheries management process that began several years ago.

NOAA National Marine Fisheries Service, Heather Blough

- NOAA Fisheries has announced the opening dates of the 2019 South Atlantic red snapper fishing seasons:
 - The recreational season will open July 12 through 14 (Friday-Sunday) and July 19 through 20 (Friday-Saturday), with a one fish/person/day bag limit
 - The commercial season will open July 8, with a 75 pound trip limit, and remain open until the end of the year unless the commercial quota is reached or projected to be reached before then
- At their spring meetings, the South Atlantic Council approved a proposal to allow new types of sea turtle release gear to be used in the snapper-grouper fishery, and the Gulf Council approved proposals to delegate management of private anglers targeting red snapper to the states; convert historical captain permits that meet certain eligibility requirements to fully transferable federal for-hire permits; and further decrease red grouper quotas following expiration of the emergency rule currently being processed by NOAA Fisheries. We will request public comments on each of these proposals in the coming months.
- On April 30 and May 1, the South Atlantic Council will hold public hearing webinars on potential best fishing practice requirements for snapper-grouper species, which address the use of descending devices, venting devices, non-stainless-steel circle hooks, and powerhead gear. A best practices tutorial developed by the South Carolina Wildlife Federation for snapper-grouper bottom fishing is available on the Council website.
- At their June meetings, the South Atlantic Council is scheduled to approve revisions to the red grouper rebuilding plan, and to discuss new management measures for dolphin, and the Gulf Council is scheduled to approve proposals to authorize unused quota to be carried over to subsequent years under certain conditions and to reduce the greater amberjack commercial trip limit.

National Park Service, Christopher Kavanagh

- Everglades General Management Plan implementation continues with availability of the boater education course through the *ProValens Learning* website. The course is currently voluntary

at no cost, but will become mandatory this summer. Over one thousand individuals completed the course in December 2018. A similar number have taken the course between January and March 2019. Computer stations have been installed at Everglades NP visitor centers (Flamingo and Gulf Coast) to enable boater certification before entering in the Park marine waters.

- Contract work has started on replacing Aids to Navigation (ATONS) and corridor markers in Everglades National Park marine waters. The contractor has completed Snake Bight, Frank Key, and Murray & Clive. Work started on Dave Foy and Jimmies Lake the week of April 1. Project is 21% complete; 154 markers installed out of 740.
- Key Largo Rangers assisted FWC with an ultralight float plane that crash-landed just off the shoreline of Key Largo (near the Ranger Station). The plane flipped and sank; both passengers were brought to shore by a Good Samaritan.
- Key Largo Rangers responded to a grounded 41' vessel on Upper Cross Bank. The boat was unattended. After investigation, the boat was discovered to have been stolen from Miami. Rangers contacted Customs and Border Patrol for assistance. No suspects have been identified. Rangers are collaborating with Monroe and Miami-Dade County Police Departments. Severe injury was sustained; damage assessment to the Park is pending.
- Key Largo Rangers worked with Tow Boat U.S. to remove a partially submerged sailing vessel at Manatee Key.
- Flamingo Rangers responded to a report of a homemade vessel drifting south of Sandy Key. Rangers located the vessel but no persons were observed. United States Coast Guard (USCG) was notified.
- Water quality in central Florida Bay was finally clear in March 2019 after extended and recurrent phytoplankton algae blooms since hurricane Irma. Clear waters were noted throughout the eastern and western basins of the Park as well.

U.S. Navy, Ed Barham

- Supported Earth Day by hosting an informational/educational booth at the Mote's Ocean Fest at the Truman Waterfront Park on 13 April.
- Started our 2018 sea turtle nesting surveys on 15 April. We use volunteers to monitor sea turtle nesting activity on the Station's Boca Chica and Truman Annex shorelines.
- Started monitoring on Big Coppitt Key and roof-tops for nesting of the endangered roseate terns.
- NAS Key West proposal to removal/control of invasive, exotic vegetation from natural areas on Boca Chica and Fleming Key was accepted by FWC Invasive Plant Management Program.

XIII. UPCOMING MEETING AND CLOSING REMARKS

Ms. Dieveney will be reaching out to the advisory council core group, which was convened to work on DEIS related matters, to talk about the release of the DEIS.

Chairperson Popham reminded Advisory Council members the next meeting will take place June 18th and will be hosted in Marathon. He thanked everyone for their participation.

Adjourn