

FLORIDA KEYS NATIONAL MARINE SANCTUARY ADVISORY COUNCIL

MEETING NOTES
Tuesday, October 17, 2023

Marathon City Council Chambers
Marathon, FL 33050

Attendees:

Council Members:

Citizen at Large – Upper Keys: Kate DeLoach (absent)
Citizen at Large – Middle Keys: George Garrett
Citizen at Large – Lower Keys: Mimi Stafford
Boating Industry: Ken Reda
Diving – Upper Keys: Seanna Knight (absent)
Diving – Lower Keys: Joe Weatherby (absent)
Fishing – Charter Fishing Flats Guide: Will Benson
Fishing – Charter Sports Fishing: vacant
Fishing – Commercial – Marine/Tropical: Ken Nedimyer
Fishing – Commercial – Shell/Scale: Daniel Padron (absent)
Fishing – Recreational: Karen Angle
Tourism – Upper Keys: Lisa Mongelia
Tourism – Lower Keys: Andy Newman (absent)
Conservation and Environment (seat 1): Ben Daughtry
Conservation and Environment (seat 2): Jerry Lorenz
Research and Monitoring: Erinn Muller
South Florida Ecosystem Restoration: Kelly Cox
Education and Outreach: Shelly Krueger (absent)
Submerged Cultural Resources: Diane Silvia (absent)
Elected County Official: Jim Scholl

Council Alternates (present):

Citizen at Large – Middle Keys: Bobby Dube
Citizen at Large – Lower Keys: Stephen Patten
Conservation and Environment (seat 2): Caitlin Lustic
Fishing – Charter Fishing Flats Guide: Bob Beighley
Tourism – Upper Keys: Ginny Oshaben
Tourism – Lower Keys: Eddie Kertis
Research and Monitoring: Karen Neely
South Florida Ecosystem Restoration: Marisa Carrozzo
Education and Outreach: Dora DeMaria

Submerged Cultural Resources: Sara Ayers-Rigsby

Agency Representatives (present):

Florida DEP: Nick Parr, Mollie Sinnot
Florida FWC Fisheries/FWRI: CJ Sweetman, Tom Matthews
Florida FWC Dept Law Enforcement: Capt. David Dipre
NOAA Fisheries: Lauren Waters
NOAA OLE: Officers Justin Powell, Russell Kiefer
National Park Service: Tylan Dean
US Coast Guard: ENS Jordan Haas
US Fish and Wildlife Service: Greg Boling
US Navy: Wendy Wheatley-Techmer

Municipalities (present):

City of Layton: Councilwoman Cynthia Lewis
City of Key Colony Beach: Mayor Pro-tem Beth Ramsay-Vickrey

I. CALL TO ORDER, ROLL CALL, CHAIRPERSON'S COMMENTS

The meeting was opened with the Pledge of Allegiance and called to order with roll call at 9:02 am. Council chair George Garrett welcomed the council and members of the public.

The chair introduced the agenda for this meeting as well as the notes from the August meeting for council approval, both were motioned, seconded, and subsequently approved. Ben Daughtry made the motion to approve the August notes with no edits, with a second from Ken Nedimyer. Karen Angle made the motion to adopt the agenda for this meeting with a second from Ken Reda.

George noted that the council member selection committee met recently to discuss the applicants for the four council vacancies: boating industry alternate, fishing - charter/sport (primary and alternate), and fishing: commercial shell/scale alternate. Selected applicants have been forwarded to ONMS headquarters for vetting and director approval. All applicants, regardless of selection, will be notified when selections are finalized.

At the end of September, George and SAC Coordinator Liz Trueblood attended the SAC Chairs summit in Oswego, New York. They were on the shore of the proposed Lake Ontario National Marine Sanctuary, a freshwater sanctuary with shipwrecks, fishing, and early American and indigenous history. This was the first time this meeting has occurred in person since 2018, and both George and Liz shared that the experience was valuable and impactful. The summit included representatives from each sanctuary site, as well as headquarters leadership staff. George shared some of the summit topics which included diversity and inclusion on councils,

indigenous community perspective and engagement, and best practices for council meetings. Liz shared that one of her favorite aspects of the meeting was recognizing the commonalities that exist between sanctuaries and councils, despite their differences, and the immense value of these shared in-person discussions. George added that it was illuminating to see how climate change issues are affecting the sanctuaries in different ways, including FKNMS with the recent marine heatwave.

George passed the microphone to Sarah for any opening remarks, and Sarah referenced the council's requested topic on artificial structures and artificial habitat. Following the August meeting, she and George invited the county to come have this discussion, and they requested we delay this topic for a few months. They are in the process of hiring a person to coordinate these efforts for the county, and would like that person to be onboarded and present. This will be on a future agenda. Sarah also noted that the FKNMS Facebook page was hacked last week. NOAA is working to address this issue with Meta. Please do not engage with the sanctuary's Facebook page at this time. We regret that we are unable to use this tool to engage with the public for the time being.

II. BUOY WORKING GROUP FINAL RECOMMENDATIONS AND RESOLUTION

George introduced buoy working group co-chairs Will Benson and Lisa Mongelia who reminded the council of the material contained in the August presentation. They introduced the draft resolution for discussion by the council. Discussion is captured here, and minor edits were made to the resolution document accordingly. Following the meeting, the resolution will be advanced to superintendent Sarah Fangman.

Council Discussion / Q&A:

- Will Benson reminded the council that there is a supporting document attached to this resolution that lays out the formal recommendations from the buoy working group in more detail. The channel marker program was highlighted for a trial run around the Sugarloaf channel; following discussion with others in the community, the working group is recommending this trail start be redirected to the Lower Keys backcountry. Liz adjusted the language in the supporting document. Lisa Mongelia reiterated that the group has tried to make this as detailed but also as flexible as possible.
- **Q:** Ken Reda noted that the general public is looking for us to produce more buoys in more areas. Being on the working group, he recognizes why that was limited in certain areas, due to financial obligations, etc. The public may question what became of this effort, due to there not being a huge increase in buoys in their favorite recreational spots.
 - **A:** Will Benson reiterated the facets this group considered. Including pressure to the resource, and the budget available to implement changes. This was a long

process. Moving forward a public private partnership is key to advance the buoy program and enhance this service to the users and ecosystem.

- Sarah noted the expectation that “more is better.” The recommendations that came out of this will give us a better system - not just more, but more efficient, more appropriate to the uses and changes we are seeing, etc. We can answer the question of how we are making this better because it is more effective.
- Will noted the group did look at the buoy program more broadly than had been done in the recent past.
- **Q:** Erinn Muller recommended talking points be provided to the SAC, so they can communicate appropriately with the community about the differences they see versus what they may have expected.
 - **A:** George reiterated that this is more efficient and detailed than what has been in place in the past. Not necessarily more buoys, but in better locations and better thought out. Agrees that talking points could be helpful.
 - Will Benson noted that the group considered new uses, emerging patterns, etc. that have not been considered in the past. This buoy program will better service the uses of today. A lot of time went into thinking through challenges facing the buoy system and FKNMS.
 - Liz will coordinate the effort to create talking points and share them with the council.
- Lisa Mongelia added that this document reinforces the idea that there are NGOs in the community that can help fill gaps in financing. This framework will help identify those resources as the buoy plans are implemented.
- George referenced the discussion on channel markers. The 1997 plan included almost 1000 additional markers in FKNMS (at the beginning and end of many channels); but many places were left out, including the Lower Keys Backcountry. Now those are being considered again.
 - Will Benson noted the success of the channel marking program in Everglades National Park. We can use a similar model in the Lower Keys. This is included in the recommendation.

Motion to vote made by: Lisa Mongelia

Second: Karen Angle

Voting result: Unanimous approval with 15 voting members present

III. COUNCIL REPRESENTATIVE TO WATER QUALITY PROTECTION PROGRAM

George reminded the council that the sanctuary also has a Water Quality Protection Program (WQPP) co-chaired by EPA and DEP in coordination with NOAA. The Water Quality Protection

Program (WQPP), which is managed by an interagency Steering Committee, provides recommendations for a variety of corrective actions, education and outreach, monitoring and research activities to (a) help understand and address sources of pollution that contribute to water quality degradation, and (b) maintain the conditions necessary to sustain healthy coral reefs and other marine resources in the sanctuary.

The WQPP Steering Committee includes a seat for a Sanctuary Advisory Council member, whose role is to help with information sharing between the WQPP and SAC. This seat was previously held by Dr. Patrick Rice, whose membership on the SAC ended earlier this year. This seat is now vacant, and we are looking for a new SAC member to volunteer to fill that seat.

Council Discussion / Q&A:

Q: Will Benson inquired about the requirements to serve on this committee.

A: George Garrett noted that there are varied agendas for these meetings like the SAC. The difference is that the SAC is composed largely of stakeholders, whereas the WQPP is largely interagency and includes those agencies with some oversight over water quality regulations.

Q: Kelly Cox asked if the role could be split between herself and her alternate, Marisa Carrozzo? If so, they would be happy to volunteer as a team.

A: Yes.

Q: Will Benson is engaged in water quality and thinks this is incredibly important as we need the right water for the rest of our efforts to pay off. As a fisherman, he is interested in this program. He is also interested in the connectivity between our waters and those in the rest of the state. Fully supports Kelly Cox and Marisa Carrozzo playing this role. They are members of the Everglades Coalition.

Kelly and Marisa will be the next SAC representatives to the WQPP.

IV. SOUTH FLORIDA ECOSYSTEM CONNECTIVITY TEAM, WORKING GROUP UPDATES AND RESOLUTION

Jerry Lorenz, council member and working group co-chair presented an update and draft resolution proposed by the Florida Keys and Southeast Florida Ecosystem Connectivity Team. The team has been discussing the Biscayne Bay Southeastern Everglades Ecosystem Restoration Plan (known as BBSEER), which is being developed as part of CERP. The goal of this effort is to restore freshwater flow in the Biscayne Bay. This area does not receive the amount of water it has historically.

This is the first really big CERP project that is using what we've already done to make larger improvements in this area. This project footprint overlaps FKNMS in Card and Barnes Sound. This is being discussed now because the last stages of modeling are underway to assess various components of the plan. Next is a Tentatively Selected Plan; this is our last opportunity to affect the modeling and planning process.

Jerry walked through each bullet point of the resolution:

- A review of traditional and natural flows through Taylor Slough and the Transverse Glades. BBSEER models should mimic these flows as closely as possible to ensure that the flows through the Model Lands and Triangle Lands portions of the project and into Sanctuary waters of Card Sound, Barnes Sound, and Manatee Bay are as close to historic flows as practicable.
 - The project aims to take water from the north and move it south through canals, then redistribute it along the coast where we don't get sufficient freshwater flows. This does directly impact FKNMS waters. He noted that the Restoration Blueprint recommended a WMA in this region.
- Complete backfilling of the C-111 Canal – a canal that has long altered the entire hydrology of the region, diverting water from Taylor Slough and Florida Bay while stifling water flow patterns south. Complete backfilling is essential for the health of Florida Bay, southern Biscayne Bay, and Sanctuary waters, and partial backfilling will not achieve scaled ecological benefits
 - This is one of the most important pieces as the canal takes water from Everglades National Park and moves it to Barnes Sound. This canal was originally planned to be much smaller. It does extensive damage and allows invasive species to transit this area. The request is to ensure this is included in the next round of modeling.
 - Jerry noted a conflict with an endangered species which resides in the footprint that will be affected by a full backfilling of the canal. The Department of the Interior has recognized that this habitat will also be affected by sea level rise, as the Cape Sable Seaside Sparrow needs dry land to nest. The Connectivity Team's concern is that by delaying the full backfill, we could lose the opportunity to move forward when we have the political will to do so. Full backfilling will also help improve resilience to sea level rise.
- Critical wetland features such as the Pennsuco and Bird Drive basins act as recharge areas for the Biscayne Aquifer, provide short-hydroperiod foraging habitat for wading birds, serve as an environmental buffer to the Everglades Protection Area, improve flood resilience across the region, and sequester carbon in alignment with climate resilience goals.
 - The team is recommending this bullet point be moved up to improve the flow of the resolution.
- Prioritization of coastal water storage solutions in the modeling of this project to increase dry season flows that benefit Biscayne National Park and Sanctuary waters; and

- The team is recommending updates to this section: Prioritization of coastal water storage solutions (Water Preserve Areas) in the modeling of this project to increase dry season flows that benefit sanctuary waters as well as Everglades and Biscayne national parks.
- Expanding coastal wetland Water Preserve Areas and exploring the viability of groundwater recharge wells to store excess water; and
 - The team is recommending updates to this section: Explore the viability of groundwater recharge wells since BBSEER modeling indicates that pumping excess water into the aquifer, as groundwater has beneficial environmental effects even without a plan to recover that water to use as surface water at a later date (i.e., not Aquifer Storage and Recovery).
 - Stressing that this is not recovery will be important to include here. There has been resistance to this idea in the past due to water quality considerations with recovered water.
- Elimination of the agricultural drawdown practices from modeling considerations for BBSEER because this practice lowers groundwater levels when sea level is at its seasonal maximum at the end of the rainy season, increasing saltwater intrusion and compromising groundwater integrity – reducing water availability for restoration.
 - Excess water has been pumped to tide in the past, which is very damaging. Modeling shows that this will not be needed in the future if groundwater recharge and water preserve areas are implemented. Those restoration efforts will create a win-win for south Dade agriculture and the ecosystem.
- Identification of solutions to conveyance issues to redistribute water flowing more effectively from northern Biscayne Bay to southern Biscayne Bay.
 - Currently water is concentrated to the north of the Bay, but needs to be redistributed to the southern end of the Bay where it would have gone naturally.
- Include model runs with and without sea level rise changes so as to best evaluate which components best capture historic flow patterns while also allowing for a better understanding of the sensitivity of these benefits as they relate to sea level rise and ultimately incorporate components for resiliency.
 - Models currently incorporate 50 years of sea level rise projections. This confuses modeling results - it becomes difficult to determine if changes are due to management or to sea level rise. Thus the request is to include model results with *and* without sea level rise so that the driver of changes can be better understood. This will also help to improve resilience.

Council Discussion / Q&A:

Q: Ginny Oshaben asked about the sewer pipe being built to go down to Turkey Point. Are you familiar with this project? What is the effect of that? They are using injection wells and want to change to move water to Turkey Point. This is something they are constructing now.

A: Jerry noted this is water reuse for the cooling canals. They are asking for more water than is available to cool those canals. That does not have to do with this current restoration effort.

A: Kelly Cox added there were two phases of this project. First was to use treated wastewater from the South Dade plant, which is either injected or pumped out of the outfall. The state is working to transition away from this; counties are required to reuse a portion of their wastewater on a shifting deadline because this is technologically very challenging. The reuse is being confined to the power plant rather than a broader wetland restoration effort due to water quality concerns.

Q: Will Benson asked for more information on the complete backfilling of the C-111 canal vs. the habitat needs of the Cape Sable Seaside Sparrow. Understands how important backfilling the C-111 is for restoration of Biscayne Bay. What is your advice Jerry?

A: Jerry strongly encourages the backfilling. The question of the sparrow has to do with subpopulation D that is in the footprint of planned restoration. The other challenge is that this subpopulation likely won't be viable in the face of future sea level rise. We are managing the system currently to keep that subpopulation intact. It is important to consider the sparrow, but we need a plan by FWS to manage or relocate these birds. That is overdue and should have been implemented sooner. Right now we have an opportunity to fix a major issue - this is a very damaging feature and we have the opportunity and political will to fill that canal now. He worries that phased implementation could take decades. Partial backfilling does not do the job and will leave the ecologically damaging canal intact. His suggestion would be to address C-111 now and address the sparrow as we go; this should be done in tandem. Language could be added to the resolution to address this consideration.

Q: Will noted the risk of not seizing this opportunity to backfill the C-111, and supports the language as drafted in the original resolution.

Q: George agrees. What is the process to backfill?

A: Jerry referenced the image of the C-111 canal and explained the process of backfilling. There is a spreader canal that will be added to help redistribute the water. This will keep and distribute water in the panhandle of ENP, the Triangle, and possibly the Model Lands. This is necessary before the C-111 can be backfilled.

Q: Ginny asked how far the C-111 would be backfilled? She noted that the water is different colors in the canal on Google Earth.

A: Jerry clarified on the map what the full backfill would entail. When the C-111 was completed decades ago, it was recognized that it should be backfilled. As for water colors on satellite imagery, this could be from a variety of factors and may or may not indicate water quality.

Q: George asked about where water would flow following the backfill?

A: The canal is kept lower than the Everglades. That canal drains Taylor Slough. Once the canal is gone, water will stay in Taylor Slough like it's supposed to, which will allow more flow to the middle of Florida Bay.

Q: Will referenced the request in the resolution to model without climate change and clarified for the SAC that this is not intended to delay the process. This is to ensure the modeling gets it right.

A: Jerry agreed. This is part of the process; the time will be the same whether they model this or not. These recommendations are things we think would benefit the sanctuary and they should be included in the process.

Q: Tylan Dean noted that this is an important issue. DOI agrees that C-111 should be backfilled, it's just a matter of timing. This is a tough issue to balance the CSSS, sea level rise issues, etc.

A: Jerry agreed this is complex. This is an important moment for Everglades Restoration.

George encouraged moving on this soon. There will be adaptive management throughout the process too.

Q: Mimi Stafford asked what the timing is for this project, when acknowledging the current political will.

A: This will go before Congress who needs to approve the expenditure for this project. This is proposed for 2026. Jerry referenced the slide with the BBSEER planning process timeline. The chief's report is the end of the process, and that is December 2025. Congress would approve in 2026. The Tentatively Selected Plan is what is upcoming following the next modeling effort. It will be another two years before this is moving.

Voting result: Passed unanimously with 15 voting members present.

Motion to vote: Will Benson (language as adjusted, without the addition of the Cape Sable Seaside Sparrow to the C-111 bullet point).

Second: George Garrett

V. COUPON BIGHT AQUATIC PRESERVE MANAGEMENT PLAN UPDATE

George introduced Dr. Nicholas Parr, of Florida DEP, to present updates to the management plan for Coupon Bight Aquatic Preserve. DEP is the state's lead agency for environmental management and stewardship. CBAP is south of Big Pine Key, and surrounds the Newfound Harbor Keys. The seaward extent is the 12' depth contour. This encompasses 5,400 acres of seagrass meadows, hard bottom communities, mangrove wetlands, and coral patch reefs. This is the most ecologically diverse of the Aquatic Preserves. The goals of the management plan were reviewed; this is a non-regulatory plan. The management plan can be found on the [DEP website](#).

Water Quality

Goal 1: Improve CBAP's long term water quality monitoring in order to understand current status and future changes in CBAP's natural resources.

- Obj 1: Understand water quality trends in CBAP from existing data and through ongoing data collection. DEP has monthly samples and a data sonde that collects data every 15 minutes. The sonde will be deployed at the end of Newfound Harbor Channel.
- Obj 2: Seek easy to improve existing water quality data collection.

Goal 2: Restore, enhance or maintain water quality within CBAP.

- Obj 1: Identify water quality problem areas within CBAP, both point and non-point sources of pollution.
- Obj 2: Reduce or eliminate identified water quality problem areas.

Comments/questions/suggestions from the SAC:

- Karen Neely asked what we know and what we don't know that we should get more data on? Are there things we should be testing that we aren't?
 - Nick: Looking to see what effect Big Pine Key has on water quality in the AP. Identify what is locally derived vs. other sources. These are otherwise the same issues we deal with throughout the sanctuary, nitrogen, dissolved oxygen, etc. Have sampled for sunscreen and have been unable to detect it thus far (it is below the mean detection limit).
- Ben Daughtry - can we test for endocrine disruptors? Is this being done?
 - DEP is not doing this, but they are supporting CFK that is getting into this research. It's hard to test for and DEP doesn't have any regulations that are applicable. DEP is not testing because it's not currently regulated, but that could change in the future.
- Karen Neely: Regarding Goal 2, is there reason to suspect there are water quality areas?
 - There are some issues - e.g., mosquito ditches that are slowly recovering on their own. For the most part, septic to sewer is completed, road related water quality issues are being addressed by the WQPP currently.

Wildlife and Habitat Protection

Goal 1: Conduct and maintain natural resource inventories.

- Obj. 1: Conduct and maintain a natural resource inventory. We cannot protect it if we don't know what we have.
- Obj 2: Conduct and maintain inventories of wading and diving birds and their habitats. Some areas are inaccessible, but DEP will monitor what they can. They do Christmas bird counts, and are working on implementing benthic monitoring to be paired with water quality stations.

Goal 2: Restore habitat in the aquatic preserve

- Obj: Restore or enhance suitable habitats or resources where feasible.

- Currently only one seagrass bank on the south side of Munson Island has been identified for restoration. Have added signage to try and stop boats from cutting across the flat.

Goal 3: Protect submerged resources

- Obj 1: Minimize potential damage to submerged resources in the AP.
- Working with Seacamp to possibly add additional channel marking.

Goal 4: Protect emergent vegetation and habitats

- Obj 1: Collaborate with the US Florida Fish and Wildlife Service on management of the publicly-owned islands with Coupon Bight Aquatic Preserve and the Coupon Bight Buffer Preserve.
- Obj 2: When appropriate, work with partner agencies or organizations to perform ecosystem restoration activities on upland areas.

Goal 5: Protect listed species and their habitat.

- Obj 1: Determine which portions of the aquatic preserve serve as habitat for listed species.
- Obj 2: Protect all listed species of animals and plants.

Goal 6: Maintain or enhance the functional integrity of habitats

- Obj 1: Determine the primary factors that influence the survival of marine grass beds and algae.
- Obj 2: Determine the primary and secondary factors that affect the species of the hardbottom and coral patch reefs.
- Obj 3: Encourage applied research directed toward enhancing the management of the preserve's resources.

Goal 7: Identify and locate unknown archaeological and historical resources within CBAP.

- Obj 1: Assist with management and monitoring of existing archaeological and historical resources.
- Note that DEP does not currently know of any archaeological resources in the preserve.

Comments/questions/suggestions from the SAC:

- George: Are people still cutting through between Cooks and Hopkins islands?
 - Not as much as they used to. This is hard water to navigate.
- CJ Sweetman: Supports linking water quality and habitat monitoring. What parameters are currently measured?
 - WQ grab samples include nitrogen, TKN, nitrate, nitrite, phosphorus, chlorophyll a, turbidity. Field sample also measures salinity, DO, temperature, pH, etc.

- The sensor measures salinity, DO, temperature, etc. too. Sunscreen compounds are also tested quarterly at Newfound Harbor SPA.
- Ken Nedimyer: Are listed coral species included in goal 5?
 - Yes. *Obicella sp.* primarily exist on the patch reef. There are no acroporids. This is also an Iconic Reef, so a lot of work is happening in this area.
- Sara Ayers-Rigsby: there are 12 documented resources in the preserve. Has the area been surveyed? Why is the assumption that no more exist?
 - The area has not been systematically surveyed. If something is identified, the agency will respond appropriately with the correct expertise.
- Are there any invasive species to be addressed?
 - Australian pine has been removed; there are not many other invasive species observed. Lionfish are occasionally observed and removed.
- Non-point source pollution and runoff. Anything to address marine debris?
 - We do have a marine debris removal program. DEP hasn't had to do much in this area as the Conch Republic Marine Army is very active in this area, and willing to partner. DEP is currently working on a project in Lignumvitae Key Aquatic Preserve; the lessons learned from that will be incorporated into CBAP.
 - DEP did spend a lot of time and money to get all the debris out of the preserve following Hurricane Irma.
- Karen: Is anchoring an issue, and is it being addressed?
 - There are a few vessels that anchor in the area, but they haven't created bad impacts. Most who anchor are there for a month or so. This area is not eligible for a mooring field.
- Will Benson: Has Seacamp asked for any support with buoy installations in this area?
 - DEP works closely with Seacamp, this is not something they've requested.

Public Awareness

Goal 1: Enhance knowledge of natural resources in CBAP and how visitors can be good stewards.

- Obj 1: Improve education and outreach programs of the Florida Keys Aquatic Preserves regarding awareness of the Florida Aquatic Preserve Program and how the public can help protect it.
- Obj 2: Provide a permanent space for the public to learn about the Florida Keys Aquatic Preserves.

Goal 2: Improve education and outreach programs of CBAP to protect wildlife and habitats found within the AP.

- Obj 1: Use outreach and communication on how to be good stewards of the seagrass beds and decrease prop scarring and other seagrass damage by raising awareness of how to safely navigate the aquatic preserve.

- Obj 2: Use outreach and communication regarding the marine debris issue and how aquatic preserve users can reduce their impact to the aquatic preserve.

Goal 3: Increase awareness of management activities inside the AP.

- Obj 1: Provide timely and accurate water quality data to the public and other interested parties.
- Obj 2: Improve public knowledge of aquatic preserve status and trends.
- Plan to have an annual Florida Keys Aquatic Preserve report that updates the public with data. This will likely begin this year.

Comments/suggestions from the SAC:

- George Garrett asked about sharing the visitor center with FWS on US-1?
 - This is something DEP loosely explored; will continue the conversation. They are also exploring Windley Key State Park as a location for LKAP.
- Sara Ayers-Rigsby: Please include information about historic and archaeological use in the area in outreach efforts. People tend not to understand the long term history of this area. Thank you for including the cultural history in the Management Plan.
- Erinn Muller: Can you integrate with the FKNMS Sanctuary Explorer App.
 - Lindsey Crews noted that we partner with others to write “Discover Stories” for the app. Will collaborate with the APs to create content.
 - Nick added that APs often show up on charts as no-discharge zones; since the entire sanctuary is designated as such and there are no other specific regulations associated with the AP boundaries, these are hard to get on the NOAA charts.

Public Access

Goal 1: Improve visitor access potential into CBAP.

- Obj 1: Facilitate access to CBAP through enhanced visibility of existing designated access points. Note that the goal is not to increase visitors, but to improve the quality of experiences and the awareness of the visitors.
- Obj 2: Attempt to understand levels of use and potential carrying capacity limits in order to protect resources. CBAP has low visitor usage inside the bight, the offshore portion has a lot of visitation at the SPA and transit through the area.
- Obj 3: Partner with ecotourism operators to provide visitors with an educational experience that increases their appreciation of the resources. Currently working with Sea Base and Seacamp to ensure awareness of CBAP

Comments/questions/suggestions from the SAC:

- DO you have signage?

- There is signage at the Spanish Harbor Ramp, Big Pine Fishing Lodge, and the kayak launch. A sign will also be added to the Key Deer Visitor Center. There is also a sign at Little Palm Island.
- Do you have a partnership/fixed displays at the Sunshine Key and Big Pine Fishing Campground?
 - Nothing at Sunshine Key. There is a sign at Big Pine Fishing Campground. Nothing more extensive has been considered.

Council Discussion / Q&A:

Q: George Garrett noted that APs came along with the Outstanding Florida Waters program. Coupon Bight was already established when he first got here. They attempted to create an AP across the entire Florida Keys. At the time, the regulatory component of the AP was OFW. OFW was put into place, but the AP was not. This has been in place since 1986 or 1987.

A: APs are designated as OFWs automatically. This is the highest tier of water quality protection. State waters across the entire Keys are designated as OFWs, as are the Looe Key and Key Largo Sanctuary areas. The idea of making the entire Keys an Aquatic Preserve was tabled with the designation of FKNMS.

Q: Are there signs within the AP itself?

A: They have started with seagrass signs visible when leaving NFH channel. They are also working with Seacamp on additional signage to let folks know they are in an AP and that seagrasses have a higher level of protection in the AP. These are informational signs, but also have a regulatory component associated.

Q: Will Benson asked if the channel marking process will be open for public comment? Can the fishing guides be included in that discussion?

A: There is not a process currently, but Nick and DEP are open to input. They worked with Seacamp to identify the location for the current proposed markers. They are absolutely open to hearing from local guides.

Q: Ken Nedimyer: Are fisheries still managed by FWC in the AP?

A: Yes, FWC is the lead on fishery management within the APs and state parks. Coupon Bight does have the SPA zone as well. State law prohibits damaging hardbottom, but there hasn't been a need to enforce this.

Q: Marissa Corrozzo referenced the WIN database and appreciation for making WQ data more accessible. What is the interface going to be for that? A map, station listings, downloadable, etc?

A: Currently they are considering an interface for the entire southeast. This will be a map with clickable stations for the various monitoring programs.

DEP is accepting official public comments to Nick for the next week or so, but comment received at any time is valuable. This is going to the Acquisition and Restoration Council in Tallahassee for review and approval in February, and the plan needs to be ready for review 3 months in advance. Nick can be reached at Nicholas.Parr@FloridaDEP.gov.

VI. STATE OF FLORIDA DERELICT VESSEL PROGRAM: ENFORCEMENT OVERVIEW AND UPDATES

George introduced Captain David Dipre, of FWC department of law enforcement, to present an overview and update on the State of Florida's Derelict Vessel Program. This agenda topic was requested by council members earlier this year.

Capt. Dipre was appointed to work with derelict vessels in 2005; shortly thereafter Hurricane Wilma came along and they had about 1,600 vessels to deal with. Another 1,600 derelict vessels were addressed after Irma, with hundreds in between. The challenge with this issue is that there is a complicated human element as some of these vessels serve as housing. When Capt. Dipre became captain in 2012, he encouraged a proactive approach to derelict vessels, rather than the historic reactive approach. FWC was able to get statutory language in place for "At Risk" vessels which allowed law enforcement to warn people that their vessel is close to becoming a derelict vessel if issues are not addressed. These boats are the most affordable housing options for some people, but unfortunately they cannot be insured in the same way as a house or a car. This leads to boats that sink further into disrepair, and ultimately become abandoned. FWC works on being proactive and writing citations requiring people to maintain their vessel, but this is difficult in this socioeconomic group. People may also use vessels for storage and not pay attention to them; thus they become derelict. Capt. Dipre estimates that less than half of people cited will address the at-risk vessel. The rest of the time, people are not reactive despite multiple citations and the risk of arrest. Rather than putting people in jail, FWC now issues "notices to appear." The court system in Monroe County supports providing warrants/court orders for those responsible for derelict vessels. FWC does the investigative work, then Monroe County coordinates funding for derelict vessel removal. Unfortunately, the amount of vessels abandoned is much greater than what we can currently afford to remove, and abandoned vessels pose risks to both navigation and to our natural resources. This year the Department of Emergency Management supported the removal of 100 derelict vessels in Key West, along with 300 abandoned migrant vessels. Still, derelict vessels are pervasive in the Keys. This is a unique challenge that needs to be addressed.

Capt Dipre reminded the advisory council that as individual community members they can reach out to elected officials and FWC decision-makers in Tallahassee. It's important that these people understand the magnitude of the issue. FWC is working with the county to remove vessels right now, and has an excellent relationship among our partners in the Keys; if ever you don't know

who to call, call someone and they can direct you. Unfortunately, it takes about six months to navigate the process of removing a vessel. On rare occasions, if it is a hazard to navigation, FWC will relocate them so they are no longer a hazard and a danger (tied up in mangroves, on a flat, etc.). Marinas generally will not accept derelict vessels for storage.

Officers under Capt Dipre are asked to do three derelict vessel checks per quarter; by the end of June 2024, they'll have marked 400 derelict vessels up and down the Keys. This issue may increase as the number of visitors increases and as housing continues to be a challenge. FWC can now mail citations, however with high turnover of vessels, registrations are not always accurate. Investigations can take months before the responsible party is tracked down. Often, the responsible party does not have funds to pay for vessel removal. This results in a non-judgement lien, and possible probation. The state will continue to have to fund these removals. For example, a 25' power boat that sank will usually cost \$5,000 to remove; but maybe \$3,000 if it's still floating. A large shrimp vessel could cost \$100,000 to remove.

Council Discussion / Q&A:

Q: Stephen Patten asked about the boat off North Roosevelt that has been there for years?

A: A vessel is private property and is often someone's home. Under the 4th Amendment of the Constitution, people have a right to due process. Within 20 days of being notified, a person can take FWC to a civil hearing; this happened over and over. It's been 5 years and the criminal case has now been dropped. This boat should be removed soon.

Q: Ginny noted that there are a couple derelict vessels she's observed. One was floating and looked ok, and was tied to the mangroves. It ended up sinking, then there was a fuel pollution issue. Understand that these cannot be brought to a marina, but the boat looked like it was in good enough condition and someone wanted it. How can we prevent a boat from sinking in the future?

A: Noting someone wanted that boat originally - if someone wants a vessel, they cannot get it once it's declared derelict and involved in a criminal case. Before that, try and get hold of the owner or you can get in contact with FWC and they can do a "found property." At that point that boat can be claimed and it becomes your responsibility. After 90 days if FWC cannot locate the owner, that boat can become yours. People can claim vessels that appear to be abandoned. As far as sinking in the mangroves: If a vessel has helm and motors, but is no good (is "junked") - FWC can move it and USCG can address fuel if that's a problem. If a vessel is wrecked, it is on the bottom and requires mechanical assistance for removal. At that point, FWC does not have an immediate means to remove that vessel. Thus, the best they can often do is to relocate a boat to a place where it cannot sink or pose a hazard to navigation.

Q: Ginny shared a recent example, a family was living on a boat, now it is sinking. Could they call USCG to get the fuel pumped?

A: Yes, they can, but some people are reluctant to take action; if they draw attention to themselves, they may then be held accountable for the vessel so unfortunately, boat occupants do not always report this issue.

Q: Ken Reda: What happens to large boats? A few years ago old wooden vessels came to Key Largo carrying migrants, where do those go?

A: Contractors raised these vessels, floated them to a marina and cut them up gradually to remove them from the water.

Q: Mimi Stafford asked about a vessel in front of her neighborhood that they've reported previously. Does this need to be reported again?

A: It can be, and FWC can see if it's still on the list. An orange sticker will mark boats, but those can degrade over time. The vessels under investigation and approved for removal are all available on a map online. If this included locations of removed vessels, it would entirely encompass the Keys. There is an 80' steel hull vessel that's been there for 7 years now. This was a hazard to navigation that has been addressed. This has turned into habitat, but this is a problem. These are not good habitats and can easily be disrupted and moved by storms.

Q: Will Benson acknowledged how challenging this issue is considering the affordable housing crisis. Is there a mechanism to build a pressure release into the system? For example, if someone has accrued a number of citations, can they turn the boat in instead of going to jail?

A: FWC has the Vessel Turn-In Program (VTIP). This was not successful at first as people tried to keep the vessel for as long as possible until it's no longer a liveable option (is on the bottom). People need to turn the vessel in sooner, before the vessel is on the bottom and it becomes a crime. Many of these people do not have alternate housing which complicates the issue.

Q: Will Benson asked if there could be a regulatory fix specifically within the sanctuary - e.g., once something is a DV to reduce the paperwork and expedite the processing of these boats before the situation becomes worse?

A: Capt. Dipre explained that in order to change regulations that dictate the process, individuals would need to contact agency leadership and/or state legislative representatives. It is important to note that much of the time required to remove derelict vessels is generally associated with vessel owner rights under the constitution.

A: Sarah Fangman thanked Captain Dipre for his years of effort on this issue. To Will's question, in the draft rule there is language to help with the derelict vessel issue. This issue is very complex and has no silver bullet. As a reminder, FKNMS has proposed a new sanctuary wide regulation that would provide another angle for dealing with this issue. The Restoration Blueprint includes a proposed regulation to address occupying or abandoning a derelict vessel or

vessel at risk of becoming derelict within the sanctuary. (CFR Part 922.163 draft rule language can be found on the [Federal Register website](#).)

Q: Is there a way to prevent someone who is a repeat offender from registering a new boat?

A: Yes, someone with a derelict vessel citation cannot register a vehicle or vessel in Florida until they have paid the citation. Frequently people work around this by registering vessels and vehicles in their partner's name.

VII. MISSION: ICONIC REEFS SUMMER FIELDWORK UPDATE

George introduced monitoring team members Ben Edmonds and Andrew Ibarra to provide an update on Mission: Iconic Reefs and the summer coral bleaching event. In 2023, we had unprecedented heat across the globe. In the Florida Keys, daily sea surface temperatures broke records. The last major coral bleaching event in Florida was from 2014-2015; the 2023 event was much worse. For much of the summer, our area was in an “Alert Level 2” from Coral Reef Watch. High sea temperatures led to mass bleaching events both in coral nurseries and on the natural reefs. A photo of a wild elkhorn coral (*Acropora palmata*) was shown as an example of the bleaching impacts. As of October 8th, that colony was dead. Beyond wild colonies, elkhorn outplants were also severely impacted.

Response efforts to this event included coral rescue and evacuation. Reef Renewal established a temporary deep water nursery at 65' to reduce heat stress. Mote Marine Laboratory removed coral from their Sand Key Nursery to ex-situ locations. Coral Restoration Foundation also evacuated corals to land based nurseries. This response was unprecedented with regard to the speed in which it happened. The permits for Reef Renewal's nursery were issued in just three days. The restoration community showed incredible teamwork and tenacity.

In August, the FKNMS MIR team participated in a 10-day cruise that pivoted from a focus on nighttime invertebrate surveys to instead focus on bleaching assessment from Key Largo to Key West at the seven MIR sites. Seventy three surveys were completed as part of this cruise and are complemented by local temperature data. MIR has temperature loggers out on the reef, which show how far temperatures rose past the bleaching threshold. Even at the lowest temperatures recorded during the summer, sites were already near the bleaching threshold, such that reefs were mostly above the bleaching threshold for the duration of the summer. Newfound Harbor and Cheeca Rocks spent nearly 100% of the summer above the bleaching threshold. At the time of the cruise in late August, 27% survival was documented for elkhorn (APAL) outplants and 40% for staghorn (ACER) outplants at the seven MIR sites. Team members expect that survival may have dropped since that time, based on follow-up surveys. Those data are still being analyzed. Most surviving APAL and ACER outplants were observed to be bleached during the survey period.

Concurrent with the heat stress event, the MIR team conducted a snail removal effort. Snail predation has a greater likelihood of impacting the corals when they are already stressed by the heat. These snails are corallivores that eat live coral tissue and were observed in higher densities across restoration sites. Last month, in an effort to reduce this stressor, MIR organized a concentrated snail removal effort. Over 2,000 snails were removed by two dive teams during a 4 day blitz. Those sites were revisited a couple of weeks later to determine the impact of that effort. Those data are still being processed.

MIR has also recently partnered with a company called SoFar that makes data buoys. Five of these are currently installed at the MIR sites (Eastern Dry Rocks, Newfound Harbor and Looe Key) and provide real-time temperature, wind and wave data. More will be installed soon at the upper region MIR sites as well. These will aid the team in their ongoing monitoring efforts. These data can be provided to restoration practitioners and eventually will be made publicly available.

While many outplants and wild corals were lost this summer, hope is not lost. There are resilient strains and large corals that are still surviving. A time series of the same corals at Cheeca Rocks shows that resilience and recovery from bleaching is possible. The corals in the photo can be seen to regain their normal color in recent weeks when the heat stress had subsided. The team noted that many of the large bouldering corals seemed to have a better survival rate than their faster growing branching counterparts.

A follow-up cruise is in the works for January/February 2024. This will include a reassessment of the MIR sites following the bleaching event and will provide information to guide future restoration efforts. Massive coral species will also be mapped to get a better understanding of their survival and distribution. The team will also continue to assist the restoration practitioners as needed.

Council Discussion / Q&A:

Q: Ken Nedimyer thanked the team for their help this summer. His experience with ACER and APAL (more so), is that they generally do not survive more than a month bleached. His suspicion is that the final data won't look good. Brain and star corals are more resilient. Reef Renewal didn't lose any of these to bleaching in the nursery and on the reef. A few have died, but not due to bleaching. Estimate that 80% of brain and star corals survived the summer. This is Phase 1B of Mission Iconic Reefs. Noted they are probably seeing a lot of mortality on the acroporids? There are 4 or 5 hope sites he used to track in the Keys (Horseshoe, Turtle Rocks,

Phillips Reef, Conch Reef and parts of Looe Key). Unfortunately, they are all dead now. Two reefs he's heard are doing better are Carysfort and the Elbow.

A: Yes, acroporid effects have been Keys-wide. Carysfort was cooler than the rest of the Keys and, anecdotally, the outplants there seemed to fare better than at the other MIR sites. There are also some survivors in the deeper areas off of Eastern Dry Rocks.

Q: Sarah Fangman added that this was a snapshot synoptic survey done this summer. The intention is to go do another survey. Monitoring will also continue between now and then; this story continues to unfold, and we are trying to collect as much data as possible so we can use it going forward. Our techniques need to adapt; we need to be ready for more of this in the future. The repeat cruise is not planned until January or February 2024 because the risk is not over. Disease is the next problem that we need to anticipate. As noted, part of the response was to move some of Reef Renewals nursery into deeper waters. A 60-day emergency rule is protecting that nursery, an area of 0.07 square miles. This is temporarily a transit-only area unless permitted to stop. FKNMS is working to extend the 60-day emergency rule for one additional period. The corals will eventually be returned to their shallower nursery.

Q: Karen Neely noted that at Nova Southeastern, she doesn't work a lot with acroporids. They work with the boulder and brain corals, and the picture looks better for those species. They visit 1000s of corals every 2 months and they have not lost most. Even the hardest hit sites at Newfound and Cheeca have only lost 30%. This is devastating for acroporids, but there are some survivors.

Q: Erinn Muller shared that her dissertation was about how disease pops up after bleaching. Disease peaks during thermal events for acroporids. This was likely a one-two punch happening at the same time that causes a lot of mortality in a short time. Boulder and brain corals will continue to be physiologically stressed for one to two years after this bleaching event. Their immune system is compromised so they are more susceptible to disease. We often see a three to six month lag between bleaching and when tissue loss disease sets in. This may not happen. Notably, we see less scleractinian coral tissue loss disease (SCTLD) during bleaching events. This inverted relationship with temperature is unusual. Mote is working with other partners to visit outplant sites to document their success. There are some outplants that not only survived but thrived; so they are working to understand why - is it genetics, the strain of symbiont, something else? This is a huge experiment opportunity that we can learn from and integrate into the restoration plans for the future. Black band disease (a cyanobacterial mat also known as BBD) has a tight association with high light and high temperature; and we often see that it subsides as temperatures cool. Mote is working with Ocean Alchemists on a compound to treat BBD which does not include antibiotics. They are exploring how to implement more of this if needed.

Q: Will Benson inquired if there have been observations whereby shaded corals do better? Similarly, are corals in deeper water faring better? Would we move MIR site selection to adapt to these findings.

A: Karen Neely noted that shade can help individual colonies - undersides are often less bleached than topsides. As far as different sites, they have found that sites with more mortality are closely tied with the accumulation of thermal stress known as degree heating weeks (DHW). It did not get as hot as long in the upper Keys, and that is showing in the survival data.

A: Ben noted anecdotally that sites in the 40-50' range off of Eastern Dry Rocks seemed to be doing better. Along the east side especially; possibly related to better water flow. Elsewhere, bleaching was bad down to 80 feet.

A: Ken Nedimyer noted that a subset of Reef Renewal's ACER and APAL were moved to the deep nursery. In August some brain and star corals were moved too. This made a huge difference for the ACER and APAL; where genotypes were bleached in the shallow nursery, they saw uniform good color in the deep nursery. They lost some corals at the deep nursery, but not much. Boulder corals in the shallow and deep nursery are starting to recover. It got warm at the deep reef, but the UV penetration and DHW were much less. The shallow nurseries are getting too much light; may need to shade or move deeper.

Q: Will Benson - is the coral community preparing now for next summer? It's hard to hear this negative information and still be optimistic. It is encouraging to hear there is a way we can plan and adapt.

A: Sarah Fangman: Yes. As far as Mission: Iconic Reefs, this will be used to adapt plans, and it will also be used to inform efforts underway outside of MIR. A meeting is planned for December between agencies, restoration practitioners, etc. to discuss what we need to do differently moving forward and what other tools can we prepare to better react to the next event? We are still doing this work, but will do it better in light of what we're learning.

Q: Audience member asked if anyone is collecting water temperatures in deeper locations, at 60-70 feet?

A: MIR is focused on the shallower areas. Anecdotally, they recorded temperatures that were 87-88 F at 100 feet. There is not a ton of variation across locations, although it was slightly cooler at depth.

Q: For the SoFar buoys, are those transmitting from the substrate?

A: The yellow part at the top transmits the data. This is connected by a cable to subsurface temperature loggers. There is a shallow subsurface logger 1m deep, and another is located just above the bottom.

Q: Ginny Oshaben: is the SoFar buoy data publicly available?

A: Not at this time, but hopefully in the future.

Q: Karen Angle: Are you looking to translocate corals to deeper depths than they may have been found naturally?

A: Ken Nedimyer: Everything is under consideration right now. The brain and star corals did ok in the shallow water. Elkhon has to be in shallow water; it will not thrive in 30.' Corals have a range they can live in.

VIII. PUBLIC COMMENT OPPORTUNITY

George opened the floor for public comment. He reminded the council and the audience that this is an opportunity for the council to hear from our community members. This is not a time for dialog and discourse, rather it is a time for the council to listen.

Tim Birthisel, Terra Sub Aqua: Tim lives in NC and spent most of his life in Ohio, but has dove in the Keys for over 50 years. For 28 of those years he's been a liverock farmer. He has a zoology background, which influences his perception and techniques. He views coral as an ecological problem. He is fixated on trying to help the ecosystem, hoping it will carry the corals along. We know fish are beneficial to corals through various mechanisms, including algae removal. He has a 37 year background as an agricultural research and development person. In the field of bulk materials handling, a subset of physics that deals with fluidization and beds of granular type materials. He views sand outside the coral reef as his playground.

Tim has an aquaculture operation at 57' in sand outside the reef permitted through the National Marine Fisheries Service. If you take a vertical rod and insert it into a bed of granular material (like deep sand in the ocean), it will stay there. He takes three 9' long pieces of 5/8" rebar and hammers them into the sand in a triangular pattern, then stacks them with rock, and ties them together at the top with a stainless steel band. This is similar to a technique used by the Navy, because a stable tripod underwater can withstand a lot of force, including hurricanes. If you take a bulk pile and want to move it - if you pound a meter long probe into the material, then move the pile, that will move along with it vs. falling over or getting buried. When you have a single stack of rocks with rebar, the worst he experienced over 20 years was during Hurricane Irma. Irma cracked the reef bedrock near his operation. Most rock left the rebar, but the rebar stayed. Closing the tops with the 3-way structure is more stable.

In looking at recent IPCC reports, his view is that we are entering into hothouse earth. We can expect temperatures to keep going up and for things to get worse for many years, even if we reach net zero. Lets get proactive and go to the deepest water that these corals can exist in, and use all of our techniques. His system is useful for anchoring outside the coral reef and is inexpensive and relies on off the shelf materials. Rebar, coquina rock, etc. holds up well once installed. Over the years he has noticed that between hurricanes the ecosystem loves this set up.

He would have a dozen tripods in an area the size of this meeting room for \$2500 in materials and labor, and that causes herbivorous fish to come hang out at the tripods for cover. They keep the ocean bottom clear. When the blue-green algae comes in over the sand, around the farm it is clear because of the grazers. If he added more tripods to that set, he could put in miniature spurs with tripods. This is where a fish hatchery might occur. This operation then improves water quality with filter feeders that grow on these stacks. The biodiversity is incredible with over 100 species observed compared to when he started. There is a thermocline that he'll hit about 10 feet from the bottom. This could also be an advantage; he would like to have a data logger to see what's going on in this area. He has a deeper site in 67' that he's planning to move toward. Terra Sub Aqua is the name of this project - can be located on Google and Linked In, or on his website.

Gretchen Luchauer, Auburn University: PhD student working under Dr. Kelly Dunning. Gretchen is studying public policy for climate change resilience at FKNMS and Flower Garden Banks NMS. Originally she was not planning to conduct surveys in the Florida Keys but then the marine heat wave happened. She is currently conducting interviews about the emergency response efforts from the community - including corals, sea turtles and any other organisms and habitats affected by the marine heatwave. If anyone would like to give information about the emergency response, ongoing efforts, impacts, etc, please reach out to her via email: gml0044@auburn.edu.

IX. AGENCY REPORTS

Superintendent's Report - Sarah Fangman:

First, Sarah thanked the council for being ready to adapt in the case of a government shutdown at the end of September, and shared the plan in case of a shutdown in the future. If a shutdown occurs, we will plan not to have our December 12th SAC meeting *if* we are in a shutdown mode as of December 5th. This ensures adequate time to prepare for a meeting. Members can expect an email from Liz keeping them updated. The FKNMS staff has a number of employees that are funded by previous appropriations so in the case of a shutdown, we are unable to fuel boats and cars during this time, but some employees can continue to work, without using our federal facilities.

Volunteer hours contributed during the last fiscal year almost reached 3,000. This was twice what we had the year before. Thank you to all of our dedicated volunteers.

We will be hiring a new Deputy Superintendent and EDC Manager in the coming months. We had 20,000 EDC visitors last year, which is on pace to the number of visitors we had pre-

COVID. We are currently open 2.5 days per week, Thursday afternoon as well as Fridays and Saturdays.

New hires have been welcomed: Cate Gelston has joined the Upper Keys MIR Field Team. Joanne Delaney left FKNMS at the end of August; Howard Goldstein is stepping in as a detailee to support permitting while Dr. Harrison Albert is also being brought on full time to fill this role. Jacqueline Laverdure is starting on November 5th. She was previously on the FKNMS education team a few years back before moving to Olympic Coast NMS. She is rejoining our team and will work primarily behind the scenes, but is also an experienced captain and an educator.

The Restoration Blueprint is still in progress; a lot of work is underway to make this happen. The final environmental impact statement and rule are being drafted, meetings are ongoing with partners for management agreement updates, etc. There are many layers of review, but this is moving.

Florida Department of Environmental Protection - Nick Parr:

DEP has taken on eight coral Disturbance Response Monitoring sites. These sites are mid channel patch reefs off of Big Pine and Ramrod Keys. So far, it isn't looking as bad as expected; these reefs seem to be showing a good bit of resilience. Have seen recovery following bleaching, including on important reef building species.

DEP is working on kicking off the next phase of the tidal connection project adjacent to Curry Hammock State Park in Marathon. They are hoping to get this shovel-ready. This is DEP and EPA funded; and will also include baseline data on water quality, flow, and benthic community composition.

Within the Aquatic Preserves, they have funding for a new AP Manager, a Career Service position. This is posted and will close Friday @ jobs.myflorida.com.

Coupon Bight AP - moving forward with the management plan with a target date to finalize that in February. Currently working under the former MP. They have a bracket installed for a new permanent water quality monitoring station, south of Munson Key, less than a mile from the MIR site at Newfound Harbor SPA. They are also establishing three benthic monitoring sites away from coral; to be paired with water quality sites.

Lignumvitae Key AP - they are starting the next quarter of benthic monitoring. They are altering methodology and coverage calculations to be more comparable with Jim Fourqurean's data and the Biscayne Bay Aquatic Preserve data.

Annual passes at the state parks are currently half off.

Florida Fish and Wildlife Conservation Commission: Fisheries - CJ Sweetman:

The commission met in early October in Jensen Beach. They approved a stone crab final rule change that for the 2023-24 season will require changes to recreational and commercial traps to include an unobstructed escape ring to reduce bycatch.

The commission approved management regions and regulations for Snook in state waters that will go into effect January 1, 2024. In the Keys, there is an open season at certain times and bag/slot limits.

Recent FFMC meeting updates - lot of discussion on findings from NMFS pilot study. Showed that fishing effort surveys may be biased and overestimated by 30-40%. The councils are working to evaluate these impacts, how they affect stock assessments and management.

NMFS will close Gag Grouper recreational fishery on October 19th, and in South Atlantic waters on October 23rd. This is based on projections of meeting quotas by those days.

Next FWC commission meeting is in Orlando December 5-6. Information available on the [FWC website](#).

Florida Fish and Wildlife Conservation Commission: FWRI - Tom Matthews:

Nearshore hardbottom habitat took a hit during the heatwave. They had hundreds of isolated fish die offs in the Keys during this event. Little fish died, not the large ones. Please report this stuff - can call or use the FWC app. Monroe County has the lowest reporting rate using the app compared to most other counties in Florida. This was a broad spectrum die off of sponges, sea fans, sea whips, and corals. When sponges die, they are gone in a week. If you were to go there now, you'd never know what was there before. FWC will be organizing a workshop to draw on expertise about what was there recently, so we can better understand what has happened this summer. This habitat is the infrastructure for the fishery and ecosystem. This will not affect this year's harvest, but could affect future years.

Florida Fish and Wildlife Conservation Commission: Department of Law Enforcement - Capt. Dipre:

Extra FWC officers are no longer coming down to the Keys to assist with migrant vessels. All outside FWC are heading to Texas now. There have been only one or two migrant landings over the past few months. This may be due to lack of resources and economic constraints in Cuba.

State officers are making resource cases up and down the Keys. Have had 3pm to 3am midnight patrols along the reef line. This results in fewer stops, but they tend to be more productive in terms of the proportion of stops that result in citations. Boat races are coming up; patrols will

continue in FKNMS. It hasn't been busy the past few months, but closer to Miami, they are seeing more violations. For example at Carysfort where people enter sanctuary waters from the north and spearfish where it is not allowed.

NOAA National Marine Fisheries Service, Southeast Region - Lauren Waters:

Equity and Environmental Justice: The request for public input on NOAA Fisheries Southeast Region's strategy to advance equity and environmental justice through the conservation and management of living marine resources closed on Sept. 30th. Other engagement strategies included a virtual webinar conducted September 28 in English, Spanish, and Vietnamese and a series of small focus group meetings with underserved community members and liaisons throughout the region, including two in the Keys. We're now turning our attention to analyzing stakeholder input and drafting the regional implementation plan which we expect to finalize this winter or next spring.

Protected Resources Updates:

- Regarding our evaluation of over 75,000 comments on the Petition to Establish a Mandatory 10-Knot Speed Limit and Other Vessel-Related Mitigation Measures to Protect Rice's Endangered Whales - We've completed summarizing the comments received and are evaluating whether to deny the petition or to proceed with some or all of the petitioned actions.
- Regarding designating Rice's Whale critical habitat in the Gulf, the request for public comment was extended to October 3rd, and virtual public hearings were rescheduled for September 28th.
- Regarding the proposed rule to designate critical habitat for Nassau Grouper and to list the queen conch as a threatened species. We anticipate the final determinations for Nassau grouper critical habitat and queen conch listing in late 2023 or early 2024.

Fisheries Updates:

Sustainable fisheries:

- Public comment on changes to the acceptable biological catch control rules for the Snapper-Grouper and Golden Crab Fishery Management Plans (FMP) in the South Atlantic, and the Dolphin and Wahoo FMP in the Atlantic are due November 13, 2023.
- Published a final rule, effective on October 23, 2023, to implement new catch levels and management measures for South Atlantic Gag and Black Grouper. For gag, these changes include establishing a rebuilding plan, and revising the acceptable biological catch, annual catch limits, annual optimum yield, sector allocations, accountability measures, and management measures for the commercial and recreational sectors. The final rule also modifies recreational management measures for black grouper.

- Published a final rule, effective October 26, 2023, to implement new catch levels and management measures for South Atlantic Greater Amberjack. For greater amberjack, these changes include revising catch limits, sector allocations, commercial minimum size limit, commercial trip limit for Season 2 (September through February), and the April spawning season closure.
- Recreational harvest of Gag in Federal waters of the Gulf of Mexico will close on October 19th.

South Atlantic Fishery Management Council:

- The Council last met September 11-15 in Charleston, South Carolina.
- The Council approved the Council Habitat Program Blueprint and the Beach Renourishment Policy, and received updates on the Essential Fish Habitat (EFH) 5-year review.
- The Council approved an amendment that would require electronic logbook reporting for commercial fishermen fishing for snapper grouper, coastal migratory pelagics and Dolphin/Wahoo. Currently, commercial fishermen must submit paper-based logbooks.
- The Council reviewed Amendment 46 that considers a federal permit for private recreational fishermen fishing for snapper-grouper species. The Council is scheduled to approve the amendment for public hearings at their December 2023 meeting.
- The next South Atlantic Council meeting will be December 4-8 in Beaufort, NC. The agenda has not yet been released. Public comment will be available at the meeting on December 6th, there is a virtual and in person option.

Gulf of Mexico Fishery Management Council:

- The Council last met August 14 -17 in Austin, Texas.
- The Council reviewed amendments to modify management measures for recreational and commercial greater amberjack management Measures as well as gag and black grouper.
- The next Gulf Council meeting will be October 23-26 in Panama City, Florida. Agenda items include taking final action on the joint amendment with the South Atlantic Council to require commercial electronic reporting; taking final action on modifications to recreational and commercial greater amberjack management measures; and review draft options for gag and black grouper management measures. Public comment will be available at the meeting on October 23 from 2 - 5 pm there is a virtual and in person option.

Habitat Conservation:

- HC Division met with the Defense Advanced Research Projects Agency (DARPA) to discuss a “Reefense” in Biscayne National Park, similar to the proposal DARPA made for the FKNMS. The University of Miami is leading the effort for DARPA, and Biscayne National Park has tentatively agreed to allow a pilot study in park waters. DARPA and

the University of Miami hope to submit an EFH Assessment before the end of October, begin initial installation in May 2024 of 50 meters of reef, and then add a second 50 meters of reef in February 2026. DARPA plans to end the project in 2028, at which time Biscayne National Park will either take custody of the structure or DARPA will remove the reef from Biscayne Bay.

NOAA Office of Law Enforcement - EO Russel Keifer:

Since August, they have generated 24 incidents in the sanctuary; most are still open. Most are SPA violations, including spearfishing. ATBA violations continue as well. NOAA officers did an operation over Labor Day with FWC - they spent 4 days in the Dry Tortugas that was successful. They documented multiple violations. This time of year, we start seeing shrimp vessels stack up along South Roosevelt to get out of the wind. A year ago they boarded a commercial shrimp vessel in this vicinity. They were out of Panama City and the captain was actively discharging bilge with oil directly dumped into the water. This was recently adjudicated. Compliance rate is typically ~80% with these commercial shrimp vessels, but there are still violations.

National Park Service - Tylan Dean:

Thanks to partners who helped with efforts in Biscayne and Dry Tortugas National Parks. Coral conditions in the National Parks have been very similar to what has been reported by others throughout the sanctuary.

Everglades National Park - they are monitoring an algae bloom east of Snake Bight that has been expanding over the past month. If past patterns persist, this will expand and persist for several months.

Last SAC, Dr. Fourqurean was concerned about a seagrass die off in October. They've been monitoring for this; have not seen conditions getting worse. Did see bottom temperatures above the 93F lethal limit he cited, but these were for short periods of time. Oxygen levels are improving as heat has subsided.

There are vacancies they are working to fill in NPS.

Last week NPS participated in Caribbean park managers informational sharing meeting.

USCG - Jordan Haas:

MST2 Hunt was recognized for his work with Keys Energy issues. There has been a decrease in migrant landings. They are trying to work over the next couple months to do more LMR boardings. Boat races are coming up; USCG has a force who will be in place for that.

USFWS - Greg Boling:

FWS led a successful prescribed burn over the past week on Big Pine Key with help from partners, the fire covered about 200 acres of pine rockland habitat where periodic fire is essential to ecosystem health.

NAS KW - Wendy Wheatley-Techmer:

Active sea turtle season this year; they identified 21 nests and an additional 11 false crawls. Did have some impacts from TS Idalia; 4 nests were lost. 17 nests yielded 1500 hatchlings. This included two green sea turtle clutches. Had an ICC cleanup and collected over 1000 lbs of debris from Boca Chica beaches. Participated In a NOAA-sponsored SCAT training to prepare for oil spill response.

X. CLOSING REMARKS

George thanked the council and members of the public for attending. The next meeting will be December 12, 2023. Meeting adjourned at 3:19 pm.