

**FLORIDA KEYS NATIONAL MARINE SANCTUARY
WATER QUALITY PROTECTION PROGRAM
STEERING COMMITTEE MEETING
March 11, 2015
Marathon Government Center Marathon, FL
DRAFT MINUTES**

Steering Committee Members Present

Jon Iglehart, FDEP (Co-Chair)
Jennifer Derby, EPA Region IV (Co-Chair)
Gil McRae, Florida Fish & Wildlife Conservation Commission, Fish and Wildlife Research Institute
Andrea Leal, Florida Keys Mosquito District
Charlie Causey, Florida Keys Environmental Fund
Chris Bergh, The Nature Conservancy, Vice-Chair of Sanctuary Advisory Council
Billy Causey, NOAA Southeast Region of National Marine Sanctuaries
Sandy Walters, SWC, Inc. citizen representative maritime interests of the Florida Keys
Mike Forster, Islamorada, Village of Islands
Carol Mitchell, South Florida Natural Resources Center, Everglades National Park
Barbara Powell, Florida Department of Economic Opportunity, Florida Keys Critical Area
Gerald Briggs, Florida Department of Health

I. Call Meeting to Order (Co-Chair, Jon Iglehart, FDEP)

II. Opening Remarks, Jon Iglehart (FDEP)

Co-Chairperson Jon Iglehart welcomed everyone and recognized Jennifer Derby, EPA, as the co-chair. Co-Chair Iglehart stated that he is sitting in today for the new FDEP secretary, Jonathan Steverson. Secretary Steverson is anxious to come to the meeting and participate in person. This is his first legislative session and it just began last week. He asks for the committee's indulgence for not being able to be here for this meeting.

Co-Chair Iglehart thanked the following: Monroe County for the meeting room; Superintendent Sean Morton for providing sanctuary staff support for today's meeting; and Steve Blackburn for getting this meeting together. Public comment forms are available and public comment will be heard two times during the day—10:30 am and 3:15 or somewhat later. Please keep comments to 5 minutes and everyone is welcome to participate.

Co-Chair Iglehart recognized Cliff Rydell of Conch Records who is filming a segment on canal restoration. He has six questions and would like to interview committee members and members of the audience. He provided a set of questions that will be asked in the interview. This is an opportunity for committee members and others to show their support. The questions are as follows:

1. What is your name and title? What is the role that you serve in terms of canal restoration program in the Keys?
2. How does your agency contribute to the program?
3. What do you see as challenges to the program?
4. What do you see as potential benefits of the program?

5. Do you support the canal restoration program, what should be done for the future and would you like to see a project in your neighborhood? (for homeowners only)
6. Why do you believe that canal restoration projects are so important?

Co-Chair Iglehart continued with his opening remarks. The committee is spending some time today reviewing the latest in monitoring trends, outreach special projects, major ongoing projects and on the agenda for the first time is an item addressing sea level rise and adaptation. There are no action items on the agenda today. Rather, today is for learning and knowledge sharing. He hopes that all members have the entire day to take this opportunity to help fulfill our charter to the Water Quality Protection Program, which is to recommend priority corrective actions addressing point and nonpoint sources of pollution to restore and maintain the chemical, physical and biological integrity of the sanctuary. He thanked everyone for coming today.

Co-chair Jennifer Derby, EPA, Section Chief Marine Regulatory and Wetlands Enforcement section, based in Atlanta, introduced Steve Blackburn South Florida Geographic Initiative Florida Keys Coordinator and two EPA guests: Dave Evans and Tom McGill. Dave Evans is Deputy Director of the Office of Oceans, Wetlands and Watersheds. He works on resources management, information management and administrative leadership for the Oceans, Wetlands and Watersheds program. Prior to that, he served as the Wetlands Division Director working on 404 regulatory programs and state and local government grant and wetlands partnership programs, and in the wastewater construction grant, superfund and oil spill programs. Tom McGill is Branch Chief for the Oceans, Wetlands and Stream Protection. He has a very wide background in the water division in Atlanta. Over the years, he has worked in water quality standards, managed programs in wastewater permitting, nonpoint source, water quality monitoring, state revolving funds, grant programs and others. Steve Blackburn has already started giving the three of them tours of the Keys. The team visited the NOAA facility in Key West (Florida Keys National Marine Sanctuary office/Florida Keys Eco-Discovery Center) and had a great tour with Sean Morton and Billy Causey. They will be introducing Dave and Tom to canal restoration projects tomorrow.

III. Review and Adopt Agenda, Chair

A quorum was not present to approve the minutes from the August 14, 2014, meeting. No changes were made to the agenda.

IV. Update on Wastewater Projects in Monroe County

Monroe County, Representatives of Municipalities, and Key Largo Wastewater Treatment District
(Tina LoSacco, Maria Aguilar)

Monroe County: Ms. Tina LoSacco, Senior Engineering Technician for Monroe County, gave the update in place of Kevin Wilson. To view her presentation, visit http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. Ms. LoSacco presented a table showing the percentage of wastewater connections throughout the county. Many places are close to being 100% connected. The Cudjoe plant is in testing right now and should be ready by the end of April, early May. At that time, they anticipate inviting Cudjoe Key, Summerland and the Upper Sugarloaf Keys to join by second quarter, 2015. They anticipate having almost everyone online by the deadline of December 2015. Parts of Big Pine might fall behind because of design changes, etc. All of Big Pine should be completed and online by the third quarter of 2016.

Discussion

The discussion revolved around the fact that some residential systems will be individual ones and will still have to meet high standards. These onsite systems will be costly for people who live far away from

areas where central systems are possible. This is a state mandated requirement. There are some grants, but they don't typically cover onsite systems.

Islamorada Village of Islands: Maria Aguilar, Islamorada Village of Islands Manager, gave an update on behalf of Greg Tindle. Islamorada is still on schedule with the project and will finish this year. They sent out connection letters to the first half of property owners on Middle Plantation Key this week. The second half of property owners will be notified at the end of April. Everyone else will be notified when construction is completed. By the end of the summer, Lower Matecumbe will get their letters. Islamorada has implemented a grant program. Property owners in North Plantation Key continue to hook up to central. Islamorada has sent letters indicating that further delay may result in enforcement actions.

V. Florida Keys Water Quality Improvements Program (FKWQIP)

Steve Blackburn gave an update on behalf of Shelly Trulock, US Army Corps. She expressed her regrets for not making it to the meeting. Steve provided a US Army Corps fact sheet summarizing the program. To view this fact sheet, please visit

http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. The Army Corps was authorized to reimburse local municipalities for wastewater infrastructure project for up to 100 million in federal funds. Thus far, 40 million have been spent. This year, 2 million was allocated—one million will go to Islamorada, one-half million to Key Largo and one-half million to Marathon. A copy of the fact sheet was provided to committee members and to others at the meeting.

VI. Canal Restoration Advisory Subcommittee Update – Monroe County/Islamorada demonstration projects, DEP Grant for Geiger Key (Rhonda Haag, Wendy Blondin, Susan Sprunt, Gus Rios)

Ms. Wendy Blondin gave an update on the demonstration projects being done with guidance from the Canal Restoration Advisory Subcommittee. To view her presentation, visit http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html.

Restoration is needed in some canals because wastewater and storm water upgrades are not expected to correct low dissolved oxygen conditions. Many canals were dug too deep and have dead ends. The water quality implications were not realized at the time the canals were constructed. Eventually, over one hundred seventy miles of canals were dug in the Florida Keys. Canals destroyed the natural mangrove buffer that helped filter activities on land. Today, many canals do not meet Class III marine surface water standards for nutrients and dissolved oxygen. Ms. Blondin's presentation reviewed the Canal Management Master Plan and described restoration techniques being tested: organic removal, air curtains, weed barriers, culverts, backfilling and pumping. Monroe County provided five million in funding for the demonstration projects. Islamorada Village of Islands funded \$100,000 to join in the demonstration program for a canal restoration in Islamorada. The presentation summarized the status of each demonstration project currently underway.

Ms. Rhonda Haag finished the presentation by reviewing next steps for canal restoration, which involves public outreach and education, including the production of an educational video.

Discussion

Chris Bergh noted that with the opportunity for filling canals to shallow them brings an opportunity for creating structures that support marine life and that idea might be revisited in the future. Jennifer Derby mentioned that another channel deepening project will be occurring at Port Everglades in Ft. Lauderdale and obtaining fill from this process through the Corps of Engineers may be feasible if it is planned for in advance.

Homeowner Canal Education

Ms. Rhonda Haag gave a presentation on homeowner canal education, *Update on EPA Grant for Public Outreach to Homeowners for Canal Restoration*. This presentation may be viewed by visiting

http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. Ms. Haag thanked EPA and DEP for funding education and restoration regarding canals. With the EPA education grant funds, they are holding a series of public outreach meetings to explain canal restoration and needs and have produced a series of posters to inform the public. At the meetings, home owners are being taught best management practices for canals and how to access and use online canal data. As part of this initiative, web based permitting guidance is being provided to assist homeowners in permitting their own restoration. In the near future, they will be offering canal demonstration tours for interested homeowners. Information is available on the Monroe County canal restoration home page, which can be viewed at <http://www.monroecounty-fl.gov/index.aspx?NID=598>.

VII. Florida Keys Water Watch--Rhonda Haag, Shelly Krueger

Ms. Shelly Krueger provided a presentation on a new program called Florida Keys Water Watch. To view this program, visit http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. Water Watch program goals spell the word ADAPT and stand for Awareness, Data, Adopt, Partnerships and Tools & Training. Ms. Krueger was formerly with Georgia Sea Grant and has been trained by Georgia Adopt a Stream, which is an EPA approved program that is being duplicated here in Monroe County with Water Watch. As part of this effort, Ms. Krueger will be working on a water quality assurance plan for the State of Florida. Program volunteers will be able enter their data online to www.georgiaadoptastream.org. Students, homeowner associations, and others are encouraged to participate. Training is available for participants, including for students in 5th grade and up. The first workshop will be held in the Sugarloaf area.

Discussion

Sandy Walters noted that the Sugarloaf Homeowners Association has been participating in Lake Watch and would like to see how they can make sure their data is usable. Shelly is familiar with this program and the work that has been done so far. She has been working with homeowners in the area to provide tools for Water Watch to continue, in addition to Lake Watch. Lake Watch uses laboratories and that makes it more expensive. Sandy thinks homeowners would be happy to use the new method and wants to make sure data that have been collected already are used. Cudjoe Gardens is another place where data have been collected over the years.

Chris Bergh explained that years ago The Nature Conservancy spearheaded Florida Bay Watch and Canal Watch. Bay Watch involved having volunteers collect water samples from Florida Bay and Canal Watch, involved collecting water samples from canals. Those data should be available for comparison purposes. TNC was not able to keep up the program partly because of the costs involved in processing laboratory samples. He is happy to see that Water Watch is housed within government and that samples can be processed at a lower cost.

VIII. Canal Monitoring Results (Dr. Henry Briceño)

Dr. Briceño gave a presentation, *Water Quality Monitoring Project Demonstration of Canal Remediation Methods in the Florida Keys*. To view this presentation, visit

http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. Canal monitoring consists of two phases. Phase 1 is a characterization of the canal waters before remediation and Phase 2 is monitoring water quality after remediation. At this time, Phase 1 is complete and Phase 2 will be done after remediation. A control canal was identified for each canal being restored using the different remediation methods. The presentation contained graphs showing trends in light extinction, salinity, dissolved oxygen, nitrogen, etc. One parameter that will be used to measure success is dissolved oxygen. Many canals were shown to exceed the standards for dissolved oxygen. Monitoring will begin in remediated canals six month after remediation and will be performed quarterly.

IX. Public Comment Period

Ms. Jan Edelstein, resident

Ms. Edelstein lives on Cudjoe Key. Six months ago she appeared before the committee on behalf of Dig Deep Cudjoe with a focus on deep versus shallow wells for the Cudjoe Regional Wastewater Treatment Plant. Today, she is speaking more generally. She has learned a lot since then. Her message is that the wastewater job is not done. It is two-thirds done—the collection systems are in place and the treatment plant is ready to be turned on and that is to be celebrated. There is a third item to be addressed. Instead of TMDLs, the Monroe County has a Reasonable Assurance Plan as directed by the Florida Legislature in 1999 in Chapter 99-395 Laws of Florida. There are three areas of management: collection, treatment and effluent disposal. The law is very clear and recognizes that AWT is not necessarily enough to protect surface waters. For plants that are sized a million gallons or more, deepwell injection is always required. For smaller plants, even if the discharge is otherwise in compliance (even if it meets AWT), then if the discharge from a well will cause or contribute to a violation of water quality standards, DEP shall take some action to prevent it. The law does say if this violation is demonstrated, but does DEP have to wait until algal blooms appear at the base of the well? The answer is No. DEP has made a good provision for dealing with this. They have a rule that recognizes the hydraulic connection between groundwater and surface waters in Monroe County and requires applicants “as part of the operation permit application to provide reasonable assurance that operation of the well will not cause or contribute to a violation of surface waters standards”. So, why didn’t the legislature simply rely on treating effluent to AWT standards? Make no mistake, AWT effluent is polluting to sanctuary waters. Ms. Edelstein showed a bar graph with nitrogen standards for drinking water, AWT permits and DEP water quality standards. AWT is still nutrient rich in comparison to water quality standards. Another slide contained a graph that showed the nitrogen in groundwater at Cudjoe Landfill compared to drinking water, AWT and surface water standards. This information is known from the Cudjoe Regional groundwater samples. Because the treatment plant is being located at the former landfill, a number of years of groundwater monitoring information is available. The graph shows that the groundwater in that location is already too nutrient rich. Adding what could be 9000 pounds of nitrogen from Cudjoe Regional, which is what is allowed per year under the permit, is not going to make things better. It will only make things worse.

Ms. Edelstein continued by pointing out that the plant is located at a former landfill and there is no information or study on what will happen when a million gallons a day are being put into the system and flushing out residuals from the land fill. There are a number of constituents that are of concern and one is pharmaceuticals. There is a water quality standard that is applicable—that is a narrative standard that says there are to be no substances in concentrations which injure or are chronically toxic to humans, plants or animals. There have been some studies done in this area, but she urges that more studies be undertaken since AWT effluent is being disposed of in Keys surface waters. AWT effluent needs watching. Unfortunately, DEP is not doing this at this time. She is sorry to have to report this, but DEP does not enforce its own rule requiring well information as part of the application permit about the impact of the effluent coming from the well. Instead, DEP says it is AWT and that is enough. No more information is needed as to what will happen when the water comes out of the well. Even where DEP acknowledges the connection between the injection into surface waters as it has on Stock Island, where the shallow well permits have also been challenged, the applicant has not been required to provide geological and existing water quality information, even though that application will double the amount of shallow well injection to almost a million gallons per day.

The good news is that one study at Cudjoe Regional is taking place that is looking at baseline geological and water quality information, but it is not because DEP required it. This study is the result of long discussions between Dig Deep and FKAA. The executive director of the Aqueduct sincerely wants to know if the operation of the wells is going to create a problem. In her presentation, Ms. Edelstein listed some recent studies about preferential pathways and injected wastewater for everyone’s own information. In conclusion, we can deliver on the promises made in the Reasonable Assurance Document. In 2012,

Monroe County voters approved the extension of the 1 cent sales tax for the express purpose of funding wastewater projects and according to the Monroe County administrator; the funds are available to install deepwell technology where it is needed. She urged the committee to put wastewater back on its “to do” list. It is not done. Please foster studies and investigations into the impact of AWT effluent on inshore waters and particularly the impacts of pharmaceuticals. AWT water is being reused on golf courses and there is concern about pharmaceuticals. One golf course has a permit to store up to a million gallons of AWT treated water a day. She doesn't know what happens to migratory bird populations and leaves that to the committee. She thanked the committee. Ms. Edelstein provided a handout of her presentation for the committee and public.

Mr. Harry Powell, resident

Mr. Powell is pleased that all of us are here and appreciates a chance to speak. He has lived in the Keys for 40 years, four of those years were as a Key West city commissioner. He remembers how the reef and nearshore waters used to be and is dismayed by what has happened. Those spiny black sea urchins sure did hurt, but the staghorn and elkhorn corals were beautiful and healthy. They are mostly gone now and he doesn't dive anymore. Some say its big sugar, overdevelopment, eutrophication or climate change. He thinks it is all of these factors and more. In his forty years here with many other controversies, he has never seen four different groups challenging something that is supposed to make things better as with the Cudjoe Regional Wastewater System. Something is wrong here and he would like the committee to please take another look at the situation. FDEP says that they have reasonable assurances that the system will work. Do they have engineers who have really looked at it? There are many, but it's half-baked. The county commissioner says he trusts the engineers that the system will work. Are they the ones who proposed running sewer lines from Little Palm Island through Coupon Bight Aquatic Preserve in shallow water through old water pipes that boats often run over? One group challenged that permit and it was hastily withdrawn by FDEP. Thank you, boats. He is now reassured.

FKAA has designed a hybrid low pressure system, which other engineers give a reasonable assurance of failure—environmental problems and/or extensive maintenance required. When it fails, will we be made to leave? At an early public scoping meeting, they were told that the system would have only a few hundred E-one grinder pumps for only outlying areas. The fact is that the bids had already gone out for thousands of these pumps. It seems that they were misled. Notices were put in out of town newspapers, if at all. One FKAA engineer asked FDEP not to notice a permit at all because it would be challenged. Desperate men, why? Were NEPA requirements followed since this was a federally funded project? Was there an environmental assessment, EIS, for the Cudjoe Plant as was done elsewhere in the other Keys projects? One answer that he received from an EPA official was there was “no federal nexus” although there is 90 million dollars of federal funds going into it. That is tough to figure. Is there a record of consultation with Fish and Wildlife, NOAA, South Florida Water Management District, FKNMS and others? Is there a record before the decision was made for this hybrid system? Was the decision for this hybrid system already made before the public input was invited? It seems to him that it might have been. Has anyone looked at the geology of the lower Keys enough to convince him that AWT shallow well injection is not much better than just running a pipe out into the ocean? Four groups of citizens challenged this project on environmental grounds for the betterment of the Keys. They want it done. They want it done legally and they want it done right. Trust the engineers, reasonable assurance? That is just about as good as being able to get the professional engineer's (PE) license with a 70% pass rate and that is not good enough for his peace of mind. Mr. Powell stated that he would finish without mentioning some of the engineering aspects that he is not qualified to address such as scouring velocity, ten state standards and friction coefficients. He will give reasonable assurances that this system will haunt everyone if something is not done to make it better. He thanked everyone for their time and attention.

Bruce Prevatt, Dump the Pumps, Inc.

Mr. Prevatt represents Dump the Pumps in the Lower Keys. They very much support the water quality efforts of the committee. He would like to submit some documents into the record. He provided these documents in hard copy and on a DVD. One document of interest is the Draft Environmental Assessment (EA) for the Cudjoe Regional Wastewater System with the Army Corps logo and Jacksonville address on it. They have inquired with the Army Corps about this document, but the Corps so far says that they don't know anything about it. This is not an Army Corps document and who authorized it or fabricated it is unclear. Mr. Prevatt's group is seeking an answer, but has not received one yet. Other documents provided address legal requirements. Every wastewater collection project in the Florida Keys has a final EA and seems to have followed the NEPA (National Environmental Policy Act), except those projects permitted by DEP to the Florida Keys Aqueduct Authority (FKAA), with the exception of the City of Layton. None of the Florida Keys Aqueduct projects followed that protocol, including Cudjoe Regional, Duck Key, Big Coppit-Gieger Key. His group is curious as to why in the heart of the Florida Keys in the midst of the Big Pine Key Refuge, home of numerous endangered species, that there is no final EA and not even a genuine draft of an Environmental Impact Statement. Meanwhile, massive construction continues, obviously unsupervised.

Dump the Pumps challenged several permits issued by the DEP to the FKAA. This action resulted in a hearing before an administrative law judge this past September. The proposed order from the administrative law judge is included in these documents. Also included are Dump the Pumps exceptions to the judge's proposed order. Of interest are conclusions on both sides: The design of CRWS does not meet minimum national standards for wastewater collection systems. Mr. Prevatt finds this an impossible thing to even imagine in the Keys. The "cop-out" is that the alternative system is not a conventional gravity system. That fact comes out in these records. So, conveniently, DEP says that none of the rules apply since it is an alternative system. This is an absolute copout by DEP. Ten state standards is the "Bible" to which all wastewater collection systems are designed. The general permit requirements on the application for a DEP permit are drawn directly from and reference specific paragraphs of the ten state standards. But, when challenged, DEP says that the rules do not apply to them. It is in the documents.

The twenty year old mandate to central sewer the Florida Keys surely envisioned a state of the art wastewater collection system to best protect the nearshore and offshore waters of the Florida Keys. The documents and conclusions show that the system, in a multitude of instances, does not even meet minimum standards. Bottom line, DEP and FKAA, do not care and he is talking about water quality in the Florida Keys. As stated earlier, Dump the Pumps challenged several permits issued by DEP and FKAA. One permit issued to the FKAA would allow a business on an offshore island to pump raw sewage through an abandoned water pipe across the fragile waters of Coupon Bight, which is a classic marine sanctuary known officially as Coupon Bight Aquatic Preserve. This permit was requested by the FKAA and approved by DEP. He asks whether the US Army Corps NOAA, FWS and/or the marine sanctuary authorities were consulted. They find no record of such consultations. The abandoned water pipe permitted runs is unprotected on the shallow sea bed and is weighted down on the bottom with concrete blocks. This is FDEP and FKAA at their finest and they want us to believe they were concerned about the environment. Dump the Pumps challenged this permit and the application was withdrawn. They do not believe that the vision of putting the Keys on central sewer included this kind of slip shot permitting by the FDEP and requested by the FKAA. He thanked everyone for their time and added that he hoped they continue to look at this system.

Suzy Roebing, Audubon Society

Ms. Roebing works for the Audubon Society at the Everglades Science Center in Tavernier. She is here on behalf of Dr. Jerry Lorenz and Peter Frezza, who were not able to attend. They provided a letter for her to read regarding the sponge restoration project that will be discussed later today by Charlies Causey. Ms. Roebing read the following letter. "As ecologists working for Audubon's Florida Everglades Science Center, we have a combined 40 years' experience working on ecosystem studies in the Everglades, Florida Bay, Biscayne Bay and the FKNMS. Over this period, we have also actively and successfully

applied our scientific findings to implement policy to the benefit of this region's diverse ecosystem. We have experienced numerous major algal bloom episodes during our tenure and have contributed to scientific knowledge on the damaging effects of these events. We understand the damage that has been done to sponge populations throughout the region as a result of these blooms. We believe that culturing and deploying of sponges throughout the sanctuary and adjacent Florida Bay waters in order to supplement the recovery of sponge populations shows great promise and will provide great benefits to sanctuary water quality. This would also provide augmented habitat for fisheries species such as spiny lobster and fin fishery species. We hereby lend full support for financial backing of these valuable and promising efforts. Thank you."

Captain Bill Wickers, Key West Charter Boat Association

Captain Wickers represents the Key West Charter Boat Association and himself. He decided to speak because it seems like the Cudjoe project is still getting a lot of flak. Members of the charter boat association have seen the water quality deteriorate over the years. Mr. Wickers was born in the Keys and can remember when you could see the bottom on the 10 fathom bar with the moonlight. To him, water quality is the key here that makes everything so great and as water quality goes downhill, so does paradise and the economy and everything else. If a project like this is going to be done, then... He applauds members of the committee for sticking out this long process that has taken many years. He recalls that 17 years ago water quality was a major focus of the original Sanctuary Advisory Council and he supported these efforts during his six years on the council. And, now they are reaching the last stretches of the job with the Cudjoe Project. He cannot understand how it could come to the very end and now they want to save some money. This project is 40,000 gallons under what DEP sets as a minimum (one million gallons) for advanced wastewater to go to 2,000 feet. It doesn't take a whole lot of new homes to put them over the million gallon threshold. Why would anyone want to take a chance of messing up the water, which could also mess up the economy, livelihoods and quality of life? If a mistake is going to be made, make it on the side of caution. If the wastewater can be put down 2,000 feet and not have to worry so much about it like Key West did, that should be done. People shouldn't play games with the economy and water quality.

Note: Dr. Tanju T. Mishara, resident of Bay Point, Monroe County, submitted the following email as part of the public comment.

I have lived in Bay Point since 2004. Our central sewers were completed in 2005; ten years ago. I was all for this because there were quite a few cesspits in Bay Point, so we expected a significant improvement in water quality. That's what we were told. That's what we were sold. We hoped the water quality would improve enough to make the tripled water bill, impact assessment, and expense of connection worthwhile.

For many years, my neighbor friends and I have snorkeled in our canals and snorkeled or dived in the Atlantic and back country near Baypoint. We thought it should make a difference.

Our treatment plant was positioned between a restaurant and a store and deli (used to be a pizza shop). But all it did was to create noxious odors that kept eating out in open air out of question. It stinks all the way to my house at the end of the island, when a North wind blows (NW & NE as well)

Despite the treated effluent from our sewer plant going down shallow wells, the water quality has visibly deteriorated since the central sewers went in. I saw that over the years the ledges were covered by a ghostly slime that looked like a science fiction /horror film, and suffocated the sponges, and the lobsters abandoned the algae ridden nooks and crannies. There was no longer the variety of sealife where infant fishes came to hatch, and feed on seagrass; or soft spine

creatures that attracted them. I wondered what this was doing to do to one of Florida's main sources of income, fishing, lobstering, crabbing. My fish market guy tells me "nobody cares, right now we pay higher prices for what we get; so eat all you can, for there won't be none". How are these folks going to support their families, they are my neighbors!

I would like to suggest that you pump our effluent to Cudjoe or Big Coppitt and send it down a deep well in one of those locations, so we can clean up our side of Bay Point. I want the extra sales tax that we allowed to be put in to fund a good sewer system to improve the water quality at Bay Point. This money can be used wisely that way, instead of more mindless! land development and tourist amenities. Remember they come because of what our ocean treasures offer, and to eat our good fish even if it is shipped to Canada.

X. Sea Level Rise Adaption Work in Monroe County (Chris Bergh, Rhonda Haag)

Ms. Rhonda Haag gave a presentation on sea level rise the new sustainability action plan the county is developing. To view this presentation, visit

http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. Ms. Haag's presentation was a summary of the work that has been done by an expert team in the past year. The team created scenarios based on two projections—3 to 7 inches for 2030 and 9 to 24 inches for 2060. In these analyses, over a dozen different tools were used to help make predictions and analyze the scenarios using multiple analytical approaches. A tool from Florida Department of Transportation was used to analyze roads under different scenarios and showed cost-benefit analysis for different actions to address sea level rise in Key Largo. Monroe county is sponsoring two upcoming public meetings—one in the Middle Keys and one on Stock Island.

Mr. Chris Bergh continued with a description of the impacts of sea level rise on freshwater and tropical hardwood hammock habitats. Freshwater is a critical resource for many animals and is in jeopardy with sea level rise. The habitat predictions shown in this presentation, which are based on Monroe County habitat dataset, are independent of any storm surge impacts from climate change and are given for the low and high predictions for the same years—2030 and 2060. The importance of the tropical hardwood hammock and freshwater wetlands for migrating birds, the Key Largo woodrat and other wildlife was emphasized. Pine forests in the Lower Keys depend on freshwater and will be impacted as well. The challenge is to address both the natural and built environment.

Mr. Bergh continued with a second presentation that reviewed online tools for exploring coastal hazards and nature-based hazard reduction options. This presentation may be viewed by visiting http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. The Nature Conservancy became interested in the topic of sea level rise about 10 years ago because of their land acquisitions and public lands in the Florida Keys. Tools may be accessed by visiting <http://coastalresilience.org>. The coastal resilience website, which has a sea level mapping tool, has a collection of Florida Keys related reports and tools. Online webinars and tutorials will be available for people to learn how to better use these tools. Visualization tools help people understand better what features, both built and natural, will be affected by sea level rise. One of the goals is to figure out how to use natural features and systems to address impacts such as sea level rise, storm surges, etc. The coastal berm that exists along some Keys islands is an example of a natural feature that provides protection for inland areas. Coral reefs, mangroves, beaches and dunes and coastal berms are natural protective features that can be considered when planning for climate change. The coastal defense application of the resilience tool helps evaluate the value of natural features, including how much wave height can be reduced with coral reef and/or mangrove restoration along the shoreline. These tools are for everyone to use in their planning efforts.

XI. EPA Funding / Request for Proposals (Steven Blackburn)

Steve Blackburn reviewed the budget for WQPP for the past five years and gave an update on FY2016. To view the handout with a table showing the figures and special study information, visit http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. The WQPP program usually received 2 to 2.1 million dollars each year up through Fiscal Year 2010. In 2011, due to budget cuts, monitoring programs, which cost a total of 1.2 million together, were restructured with some monitoring stations being lost in the Tortugas and Southwest Shelf at that time. In FY14 and FY15, total South Florida funding was at about 1.7 million. The projected in the President's budget for FY16 is less than 1.1 million, which is going to barely cover the bills. Salaries for EPA FTE positions come out of the South Florida funding, which is also used for the Southeast Florida Coral Reef Initiative and Everglades projects.

Special studies funding for FY15 will probably come to be about 200k. Right now, funds are not available for special studies in 2016 due to funding. In the past, *Waterways* film series, which is administered through Everglades National Park, has released some very informative episodes recently. He is happy to take input regarding the Waterways YouTube channel and guidance as to how to proceed since some of the people involved in the program are no longer with their agencies. Steve reviewed the WQPP special studies funded in FY14 and priorities for the future. Non-FKNMS programs are also funded using South Florida Geographic Initiative funding from EPA. A RFP for special studies will be sent out when the funding is known. Funding for special studies may not be available in FY16. Steve would like to narrow down the WQPP priority topics identified previously to three to five topics and sought input from the steering committee. He will send the priorities to the management committee to be reviewed further. He will take input from the steering committee back to the management committee. The RFP will probably go out in April when the figures are firm.

Discussion

Billy Causey pointed out that the role of the management committee is to help set priorities. In the past, the Technical Advisory Committee was also active in this process, but has not been active recently. As has been done in the past, the management committee can make recommendations to the steering committee because they know the issues well. The steering committee can then provide input and approval to Steve before he sends out the RFP. Billy noted that this process has been incredible and he thanked EPA for all of the funding through the years. Steve tied the priorities, including the one about stormwater techniques, to action items in the Water Quality Action Plan, which also in the sanctuary's management plan. The EPA WQPP report to Congress also has the priorities and plans.

Billy Causey noted that the TAC was helpful for issues such as the deepwell injection issue in Key West. They brought the science to the forefront for the community. Steve mentioned it might be time to revisit the TAC and see who still wants to be involved. They may help with the Cudjoe question. Chris Bergh added that people in the community would probably appreciate that. Gus Rios noted proposals were not received on some topics that were considered a priority in the last RFP.

Action Items: 1) Steve will receive input via email regarding priorities and then share them with the management committee before sending to the steering committee for their approval. Send him any comments by the end of March. 2) Interest was expressed in reconvening the TAC. Steve will provide a status of the TAC at the next steering committee meeting.

XIII. Sponge Project Update (Shelly Krueger), Sponge Project Proposal (Charlie Causey)

Shelly Krueger provided progress report on behalf of Dr. Mark Butler regarding his recent sponge restoration work. This presentation may be viewed by visiting http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. Ms. Krueger provided some Florida Sea Grant two-pagers about sponges for everyone. One objective of this research is to test in a large-scale field experiment the importance of sponge community biodiversity on habitat utilization by

adult and newly recruited benthic and motile fauna. This experiment is underway and will make their first observations in May. They have started preliminary trials using mesocosms to test the influence of sponge biodiversity on filtration effects on water column planktonic communities and water chemistry. Studies to test whether the restoration of sponges and their biodiversity can also restore underwater soundscapes typical of unimpacted hard-bottom habitat are nearing completion and analysis of the data has begun. Shelly reminded everyone of the incredible filtration rate of sponges and why this is so important for water quality.

Dr. Briceño commented on how important this work because of the importance of sponges for cleaning up the water.

Charlie Causey presented a proposal for sponge restoration. To view this proposal, visit http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. Mr. Causey thanked everyone, especially EPA, for their support of this program over the years. He became interested in this topic because of the fisheries impacts of blooms in Florida Bay and the sanctuary. In looking back over the past 25 years, lots of money has been spent on water quality because of its importance to the Keys economy and ecology. Over the years, probably about 700 million dollars has been spent by the NOAA, FDEP, EPA and others on water quality. Sponges are a “bricks and mortar” project that can be effective in improving water quality. The Florida Keys National Marine Sanctuary, The Nature Conservancy and Everglades National Park funded a sponge restoration project that began in 2009. The WQPP funded the more recent sponge restoration study in FY14. Mr. Causey has gone to the private sector and raised money for this project. Hopefully, funding will be provided by the WQPP to make this project larger and more about restoration in a practical manner. He is speaking as an economist, not a scientist, and thinks sponge restoration will produce rewards--even though there are risks. If an algae bloom wipes out sponges in a certain area, individuals from a reservoir of sponges can be used as replacements. This is a maintenance approach similar to replacing channel markers after a hurricane. So far, he has raised \$175k with three contributors from the non-profit 501-C3 community: TNC, Bonefish Tarpon Trust and Florida Keys Environmental Fund. Another contributor may add more to make the total \$200k. He is asking EPA for \$200k to match the potential from the private sector.

Some scientists have already spoken in favor of sponge restoration. Audubon offered its support earlier today in a public comment letter. Dr. Briceño also spoke in support of sponge restoration. The following comments were also offered regarding sponge restoration.

- Chris Bergh stated that TNC is reading and willing to contribute money to the challenge match. TNC and through NOAA habitat restoration program have a partnership and TNC is able support efforts to go from proof of concept into an operational restoration mode similar to what has been done with coral restoration. He expects this work to determine how much it costs to produce a sponge of a certain size and capacity to filter in order to move the process along and to determine the value of sponge habitat.
- John Hunt, FWC, also spoke on behalf of this project. FWC Fish and Wildlife Research Institute has partnered with Chris Martens, University of North Carolina, on sponges and nitrogen research. He agrees that sponge production could be ramped up and is a laudable goal. His lab and the FWC commission are ready to facilitate this effort, even taking lead in helping build partnerships with the goal of ramping up sponge restoration and keeping it in a good science context. One idea is to study “mystery” basin in Everglades National Park, which until recently when a bloom came through, had the last vestiges of large loggerhead and other sponges. They may use this enclosed basin as an area for restoration.
- Billy Causey studied and learned about the importance of a diverse and rich sponge habitat off of Tarpon Springs. He was pleased to see the diverse community of sponges in the Keys when he came here many years ago. Sponges play such a key role as habitat in hardbottom and other key

areas. Just as with corals, they can be restored. This project is likely to build a synergy of support and interest in a broader community and start to answer scientific questions related to sponges. As a manager, he feels that it is important to continue to address the underlying issues because restoration can't fix everything and this will enhance the ability to restore. Climate change is affecting the nearshore waters and needs to be addressed and it is not practical to replace everything every time it is wiped out, but he does support sponges as an important component of the ecosystem.

- Charlie Causey pointed out that once the program is successful, then it will bring in more funds from outside sources. They have had great success with canal restoration and this process using a subcommittee would be appropriate. He provided some suggestions as to whom should be on the committee—Steve Blackburn, Shelly Krueger, John Hunt, George Neugent, Billy Causey, the contractor and two more scientists, giving a total of nine. He would be glad to sit in on the committee, too. He would like to see the steering committee fund this project with matching funds of about 200k.

Jon Iglehart stated that he didn't think it would be practical to get an approved committee today, but he likes the subcommittee idea. It is in the best interest of the committee for Charlie to form an informal group that comes back to the committee. At the next meeting, this subcommittee could be formalized under Sunshine. Charlie asked if it would be possible to vote on getting the funds for this project at this time and not wait until September. Steve stated that as a group the committee can vote on this topic to be the number one priority. The RFP would be available to anyone who wants to apply.

MOTION (Passed)

Co-Chair Iglehart made a motion that the sponge restoration project be moved to high priority on the list for funding at this time and goes to the management committee for discussion. Chris Bergh seconded the motion.

Discussion on motion

The funding can be applied for in FY15, but the length of the project is expected to be longer than one year. If the value of sponge restoration is established, it may become a mitigating factor in the future.

Motion passed with no opposition.

XIV. FDEP WQ Sampling and Potential Collaboration Efforts (Erin Rasnake, FDEP)

Ms. Erin Rasnake gave a presentation on FDEP water quality sampling in the Florida Keys. To view this presentation, visit http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html.

DEP started a Watershed Protection Program in 2000 that involves an assessment of conditions and TMDL development that is implemented through a Basin Management Action Plan (BMAP). Kim Dinkins is the basin coordinator for the South District; Kyle Ferris is the STORET coordinator; David Tyler is the Watershed Assessment Strategy (WAS) team lead. Ms. Rasnake is the district contact. The program is funded by the Clean Water Act, which has listing requirements for waters that are impaired. The Florida Keys is covered by one BMAP in the South District. A variety of assessment techniques are used to evaluate the impacts on aquatic life, recreation and human uses, fish and shellfish consumption and drinking water safety. The Watershed Management Cycle is 5 years and each basin is assessed every 5 years. Assessment units consist of WBIDs, Waterbody Identification. Erin welcomes feedback on WBIDs and input from the committee. For the 2015 Strategic Monitoring Plan for the Florida Keys, her team is sampling some WBIDs in the Northern Keys (Pennekamp), on the southwest coast, and surrounding Key Colony Beach and Grassy Key. She would like to know of any existing sampling programs in case they could share data and other resources. The sampling crew is based in Ft. Myers. Any assistance with site locations, logistics for boats and hotels are also welcome. Estuarine Nutrient Regions (in yellow) will also be sampled. ENRs in Florida Bay were shown and can include more than one WBID.

Discussion

Co-Chair Iglehart pointed out how water from the Caloosahatchee BMAP and Lake Okeechobee BMAP affect the waters of the Florida Keys. Waters from these areas have resulted in a blackwater event, algal blooms that reached the Florida Keys. Projects have begun in that area and other places to reduce phosphate inputs and discharges. DEP has just wrapped up Caloosahatchee BMAP and are starting Lake Okeechobee's BMAP. Gus Rios mentioned that Henry Briceño's water quality monitoring program is already sampling stations and they may be able to share data with them if the sites match up. Erin is willing to investigate such possibilities further.

XV. Coral Reef (CREMP) Monitoring (Rob Ruzicka, FFWRC)

Rob Ruzicka gave a presentation on coral reef monitoring. To view his presentation, visit http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. In 2014, CREMP sampled 46 of their historic sites and 40 normal sites. Sampling involved conducting video transects, demographic surveys and sponge (*Xestospongia muta*) surveys at the deep forereefs. The following main points summarize the presentation.

- The benthic cover results from 2012 to 2103 were presented; little change took place for all taxa groups. Spikes in macroalgae are partly due to nutrients released during certain events such as the cold water mortality event in 2010.
- Long term trends in benthic cover for five major corals were presented in graph form. Major declines were seen in the large slow growing coral, *Orbicella annualis*, in the late 1990s and again in 2009-2010, but unchanged since 2011. Densities of *Colpaphyllia natan* (boulder brain coral), *Montastrea cavernosa* (star coral) and *Orbicella annularis* (boulder star coral) have remained about the same in recent years.
- Octocoral densities are being tracked in this study. In recent years, corals show increasing densities throughout the Keys. Using photographs, comparisons were made between 2001 and 2009 at some shallow reefs. Acroporid corals were the main reef-building corals on these reefs in the 1970s, but had been lost by 2001. Bare substrate available after the thermal event in 1998 was colonized by octocoral recruits in the photographic comparison at Molasses reef. (The summer of 2014 was similar in terms of thermal stress.) A similar increasing trend toward increasing octocorals was evident at Conch shallow reef. This transition toward more octocorals has probably been taking place beginning 30 or 40 years ago. Although not a widespread trend, young *Acropora palmata* were visible in photographs of some shallow reefs, which is good news.
- Density increases were observed in 2013 and 2014 in *X. muta*, an iconic sponge that is found mostly only on deeper reefs. This is a fast-growing species that appears to be recruiting at certain deeper reefs. Although the species has a relatively high mortality rate, it appears not to be limited at a certain size class, young ones appear to be growing into adulthood.
- The Coral Reef Conservation Program recruitment study is underway at certain CREMP sampling sites. This three-year study is examining recruitment to determine if early life processes are limiting recovery in corals. For this study, tiles will be placed on the reef in advance of the spawning events because they need to grow a biofilm in order to be suitable for coral settlement.
- His team is working with The Nature Conservancy to assess the effects of 2014 bleaching and is developing a water temperature monitoring network with partners.

Discussion

Billy Causey explained that the bleaching event was massive in 1997-98 and this caused major declines. It is pretty clear now that elevated sea surface temperatures are playing a major role in such declines and that is not debated anymore. The good news is that another sharp decline has not been since the late 1990s, except with the weather event in 2010. Other reefs in the world also have similar issues with coral

cover. Keys reefs, as with other Caribbean reefs, have lower diversity naturally. And while water quality is not the sole problem, it does affect macroalgae and coral recovery.

Chris Bergh congratulated Rob Ruzicka for how the program has developed to glean more data on more species even with a budget that has declined over the years.

Martin Moe added that the *Diadema* culture work he is doing is ongoing and examining the effects of water quality on larvae. Jon Iglehart would like to see him present on this topic in the future.

XVII. Water Quality Monitoring (Dr. Henry Briceño, FIU)

Dr. Briceño reviewed the results for a variety of water quality parameters in 2014 as they relate to the EPA WQPP water quality targets. The second part of the presentation focused on the Cudjoe Dye Injection experiment. The presentation may be viewed at http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. Compared to the baseline derived from 1995 data and compared to 2013, chlorophyll, dissolved nitrogen and total phosphorus have increased, indicating poorer water quality.

The Cudjoe dye injection study is an assessment of the potential connection between injection level and surface water. FIU is sampling several shallow wells to see if they detect injected the dye. Results are not available at this time. The aquifer is very complicated and it is not known when or where the dye may come out, if it does and how long that will take. A drone catamaran is being used to collect data in this experiment. Experts on the team include: Dr. Piero Gardinali, Chemical Oceanographer (FIU), Dr. Reinaldo Garcia, Hydrologist-Modeler (FIU), Dr. Kevin Boswell, Biologist (FIU), Dr. Eugene Shinn, Geologist (USF) and Dr. Alexandra Serna, Chemical Engineer (FIU).

Discussion

If surface water connections are shown in the dye experiment, Dr. Briceño explained that FKAA may have to drill deeper. A design for deeper wells is already underway in case it is needed. The plant has very advanced treatment and that is why some people argue that deepwell injection is not needed. Dr. Briceño explained he is neutral. The contract goes to the end of the month and FKAA has agreed to wait at least until then before proceeding with construction.

XVI. Seagrass/Benthic Habitat (Dr. Jim Fourqurean, FIU)

Dr. Fourqurean gave a presentation on the benthic habitat monitoring program, which was originally designed as a regional assessment program. To view this presentation, visit http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html. In 1992-93, he was asked to design a regional program to assess and determine the status of seagrasses, quantify primary productivity, define baseline conditions and determine the relationship between water quality and benthic community structure. The coral reef and seagrass stations are co-located with water quality stations to detect trends in the ecosystem. His team has monitored sentinel sites since 1995 and uses a remap approach to document spatial habitat distributions. Because of funding, they are no longer doing the distribution assessment, but hope to go back to that in the future. The team has been collecting data on abundant and nutrient availability and measuring water column characteristics. To document what is taking place nearshore, they increased their nearshore sampling sites in 2012 (but it is too soon to include these data as results). The following summarizes the results presented using the most recent 2014 data.

- Species composition changes over time can be used as an indicator of nutrient availability in the water column. Over the past twenty years, they have seen species composition at many sites shift in a manner that is consistent with increased nutrient availability. These changes are consistent, but relatively subtle.
- In nearshore waters, phosphorus is a limiting nutrient and the addition of phosphorus nearshore will affect benthic communities. Nearshore waters are not limited in nitrogen, so its addition

doesn't change benthic communities. In contrast, offshore communities have plenty of phosphorus, but are nitrogen limited. Here, the addition of nitrogen will affect the benthic community. This nutrient regime has implications for wastewater in that phosphorus affects nearshore waters and nitrogen affects offshore waters. Wastewater treatment must address both nutrients in order to be effective.

- As in past years, some sites are trending toward the Redfield ratio where they are light limited. This year, there are also some sites that are shifting away from the Redfield ratio.
- Light limited plants have less of the Carbon 13 isotope, which is a stable isotope. Over the long-term record, statistically significant decreases in the stable Carbon 13 isotope were evident at 7 out of 30 sites. It takes a long-term record to see such trends.
- The Species Composition Index (SCI) is an average of the relative abundance of the slowest growing seagrass and fastest benthic plants. The SCI was trending down until 2011, but since then has been increasing. The Elemental Indicator (EI) is the measure of distance away from the Redfield ratio indicator and shows how light limited the system is. The same trend was observed in the EI. These results give reasons to think that the wastewater improvements might be having a positive effect in sanctuary waters.
- New nearshore stations were established in Key Largo and Big Pine Key.

Note: Daniel Kiermaier, Florida Fish and Wildlife Research Institute, was not in attendance for the meeting to give an update on WQPP data management and the website. His update presentation was distributed by email through Steve Blackburn and is available by visiting http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html.

XVIII. Effects of Mosquito Control Pesticides on Non-Targeted Organisms (Dr. Richard Pierce, Mote)

Dr. Richard Pierce gave a brief overview of a two-year study designed to assess the effects of mosquito control pesticides on coral and lobster larvae. His Co-PIs are Dr. Kimberly Ritchie, Mote Tropical Research Lab, and Thomas Matthews, Florida Fish and Wildlife Research Institute. Dr. Pierce thanked his Co-PIs and partners, especially EPA. This is a public private partnership that includes EPA, Florida Keys Mosquito Control District, FWC-FWRI, NOAA FKNMS and Mote Marine Laboratory. To view this presentation, visit http://ocean.floridamarine.org/FKNMS_WQPP/pages/wqpp_minutes.html.

Project goals involve determining if mosquito control pesticides result in toxic effects to sanctuary organisms. This is being accomplished by monitoring Florida Keys Mosquito Control District applications and conducting toxicity tests on non-target organisms. Mote is working with stakeholders to assess the risk of the pesticide and develop appropriate response strategies as needed to maintain control while reducing the risks to natural resources. Permethrin and Malathion are the two pesticides being tested in the 2012-2014 study. The following results provide managers of the sanctuary and mosquito control with empirical data and are summarized below.

- The results of a 1998 field applications showed that they were able to detect permethrin on filters in the water, but not Naled or DDVP. Tidal transport was probably a significant transport mechanism.
- In the 2012 to 2014 study, they found the highest concentrations of Naled in the canals 2 hours after the application. Within 5 hours because of the tidal distribution, concentrations went down sharply.
- For permethrin, the results were not so clear, but it was present in low concentrations. Permethrin appeared in the pre-application samples.
- LC-50 trials were set up to test toxicity in lobster larvae and coral larvae, *P. asteroides*. For coral larvae, *P. astreoides*, the Expected Environmental Concentration (EEC) was less than the toxic concentration, which meant that there was no acute toxicity (NOEL) to coral larvae for field

applications of Naled, Permethrin or Malathion in the Atlantic or Florida Bay adjacent to the Snake Creek study area.

- For lobster larvae, *P. argus*, the EEC was less than the toxic concentration, which meant that there was no acute toxicity to lobster larvae for field applications of Naled or Permethrin in the Atlantic adjacent to the Layton Key Canals.
- Mote has received additional funding to examine juvenile lobsters and pesticides and plan to look at a privately owned misting system for the Mosquito Control District.
- Other possible areas of related to this research were reviewed.

Discussion

Charlie Causey asked a question about testing on small fish, which are so important for recreational sport fishing. Dr. Pierce explained that certain fish species have been studied. Usually, invertebrates are more sensitive than fish (may not apply to fish larvae, though).

XIX. Closing remarks, SC member comments, next meeting date, adjourn meeting

Charlie Causey asked about the sponge restoration project process. Co-Chair Jennifer Derby stated that she is able to agree that sponge restoration priority, but is abiding by the competition policy in place for research proposal funding.

Chris Bergh has been participating in the sanctuary regulatory review process and sometimes hears that there is not enough science to make good decisions. He commended the WQPP for obtaining good science and using it well.

Barbara Powell noted that the good news for the Critical State Concern Program is that all of the wastewater and stormwater work is starting to have a positive impact on seagrass regrowth and stability of those beds. It is rewarding to see positive results from such a long term project that has had a lot of work put into it.

Carol Mitchell acknowledged that the list of special studies is very interesting and she is glad that the sponge restoration is a high priority. Everglades National Park is interested in becoming involved in the teams and subcommittees as they are formed.

Sandra Walters stated that when she travels and speaks to others in Florida she holds the WQPP up as an example of a long term program that makes baseline data available. This program has allowed people to understand the difference between natural and manmade issues. The Keys has the program, but similar ones are needed elsewhere in Florida to measure the changes that are taking place. She thanked the EPA guests for providing this kind of focus for this special place.

Billy Causey mentioned that Pedro Ramos was the new superintendent for Everglades and Dry Tortugas National Parks. Billy he looks forward to working with Superintendent Ramos. Dr. Causey added he is happy to see good science is coming out of this program and thinks that having a two day meeting would be a good idea. It has worked in the past. Billy also recognized and thanked the state, county and cities for their work.

Dave Evans stated that it was a pleasure to be here. The level of collaboration among the federal, state, local agencies and the NGO community was impressive and the science was really showcased today. It will position him when an opportunity presents itself, to speak favorable about this program. Tom McGill echoed everything that Dave said and stated that is it clear why this group has the reputation that it does and why people speak so highly about this program. Co-Chair Iglhart and everyone thanked them.

Billy Causey reminded everyone that while the Keys may have a small voting base, many people visit the Keys and love and support the Keys from all across the nation.

The next meeting date might be shifted to avoid the height of the lobster season toward later in the summer, early fall. Please send any changes on the steering committee meeting list to Steve Blackburn. Details about the field trip were provided for those who want to participate.

Co-Chair Iglehart adjourned the meeting and thanked everyone.