

Meeting Minutes
**WATER QUALITY PROTECTION PROGRAM CANAL
RESTORATION ADVISORY SUBCOMMITTEE**
May 15, 2015

1:00 pm – 4:30 pm
Marathon Government Center, BOCC Board Meeting Room
2798 Overseas Highway, Marathon, FL 33050

Member and Advisory Attendees: Gus Rios - FDEP; Commissioner George Neugent – Monroe County; Susan Sprunt - Islamorada; John DeNeale - Key Colony Beach; George Garrett - Marathon; Skip Haring - Layton; Billy Causey – NOAA; John Hunt – FWC; Scott Donahue - NOAA

Members not in Attendance: Alison Higgins – Key West; Charlie Causey – WQPP SC Member; Steven Blackburn – USEPA

Advisory: Rhonda Haag – Monroe County; Wendy Blondin – AMEC; Gregory Corning – AMEC; Rich Jones – Monroe County; Annie McGreenery – FWC (meeting minutes).

Permitting Team (on the phone): Maria Bezanilla – USACOE; Trisha Stone – SFWMD; Joanne Delaney – NOAA FKNMS.

FIU Monitoring Program: Dr. Henry Briceno – FIU

1. **Introduction and Approval of the January 16, 2015 Meeting Minutes.** Gus Rios called the meeting to order at 1:00 pm. **Billy Causey moved** that the minutes from the January 16th meeting be approved and **Skip Haring seconded, all approved.**

Gus Rios reviewed the agenda for this meeting and items that would be discussed. He introduced some of the permitting team members participating by phone. Gus pointed out that during Public Comments each person from the Public has 3 minutes to speak and encouraged the public to keep to the 3 minute time frame. Gus encouraged members of the public who wished to speak to please sign the Public Comment form, along with their contact information.

2. **Public Comments # 1:**

Dirk Smits: Live in Harbor Drive, Key Largo, mile marker 100. Our canal, Hurricane Harbor, has failed the dissolved oxygen test. The canal is between Water Ways drive and Harbor Drive. The canal is probably dredged very deep. The neighborhood is more than willing to participate financially. We are willing to pay an engineer, just point us in the right direction. **Gus Rios** pointed out that as part of today's agenda there is an item to help homeowners with funding restorations.

Colin Hannaford: He is representing the Sugarloaf homeowners association. He gave the committee members a hand out reflecting a blocked culvert under 100 Sugarloaf Blvd just after turning off of the Overseas Hwy, at MM 17. He feels that no one is maintaining the existing infrastructure. He said the picture shows a prime example of canal/tidal flush that has been left to atrophy. He said, the real responsibility of cleaning this canal out is with FDOT. He wanted to point out that the maintenance of existing canals is not part of this committee. Maintenance of existing canals is not mentioned in the Canal Management Plan. He would like to have this subcommittee make maintenance of existing canals a priority. Requesting that the subcommittee promote maintenance, facilitate the maintenance and when necessary the subcommittee enforce the

cleaning of the canals where it affects water quality. FDOT is working on a plan but Colin feels that FDOT thinks it is a drainage ditch to US1 not a tidal flushing canal. He is asking the subcommittee's support with engaging with FDOT to make sure that the work that they do is consistent with good flushing of the canals and all the good work that is being done. The culvert and the canal is within the responsibility of DOT. **Billy Causey** asked if the culvert has collapsed. **Colin** response was no, it is just not functional because of the mangrove growth, etc. **George Neugent**: Monroe County Public Works and the Department of Transportation are in communication on this issue. Communication has been established and discussion continues.

Gus Rios: Wanted to recognize two projects that have been completed so far. Treasure Harbor in the Village of Islamorada is a weed gate and an aeration system. The canal is already looking great. The new culvert on Big Coppitt Key, the water is very clean and the flow is outstanding. I saw a huge school of Mangrove Snappers. He thanked the Village of Islamorada and the County and their consultant AMEC for their efforts to improve these canals.

3. Review of County Demonstration (Demo) Projects and Related Issues – Wendy Blondin and Rhonda Haag

Wendy Blondin reviewed the overall projects that were chosen for this project demonstration.

- **Eden Pines Pumping - Discussion**

Nancy Finley – USFWS joined the Eden Pines discussion.

Wendy Blondin: The pumping projects is by far one of the most complex projects based on its technology. It was selected because the canals are the longest, the most 90 degree turns and flush the least. The objective of this project is to add a pumping technology to help the flushing of these canals. The initial design was a pump intake, taking fresh canal water at the Watson Blvd culvert. USFWS was concerned about any of the hydrology north of Watson Blvd. The revised plans are looking at an intake outside of the culverts. This plan is all conceptual at this time. The final sizing of pumps and pipes will be completed during the final design phase. Wendy explained they are proposing to install a wet well and two pumps on the south side of Watson Blvd. The pipes would run along Narcissus Avenue, then the pipes would split one going north and one going east. The design will be for all canal flushing, including the finger canals. The design will be pulling enough clean bay water to flow through the canals to improve water quality. The design will be fine-tuned with all the hydraulic modeling. There were some concerns about draft – the design would make sure there is a 4 foot draft for boat access. AMEC's design came up with a tidal prism model and a four day turn-over rate. This is based on an EPA documentation for a preliminary design. AMEC came up with a 1200 gallon per minute pumping rate, which would be two 6 horse power pumps. This would be about \$800 per month electric usage. There still needs to be a tidal study for the final design and hydraulic modeling. This conceptual design is just preliminary.

Bob Mullenix reviewed this initial design and he felt that the system should be much larger. He felt that there should be more flexibility to increase the pumping rate. AMEC took a target of 5 feet per second, which equated to 2200 gallons per minute, basically doubling the capacity and the electric rate increased to \$3,300 per month.

AMEC needs access from USFWS for the pump intake and also access in running the pipe over into the canals. AMEC is also looking for volunteers to provide access so they can move forward on the final design. Another issue is cost, AMEC was concerned about the monthly electric costs. The community will need to be involved with the monthly costs and maintenance after the initial two years.

This is a very complex system and will need to be documented for the regulatory agencies. In order to obtain the required State permits, we must provide reasonable assurance that the project will not result in degradation of the nearshore Outstanding Florida Waters (OFW) located offshore. Florida law affords special protection to OFW waters and requires that these waters shall not be degraded below the existing ambient water quality conditions. This will require an assessment of water quality in the ambient waters outside the canals before and after construction. AMEC will be working with FIU to monitor the dilution and distribution of the canal water as it flows from the canal system and into the nearshore waters.

Rhonda Haag: Will the pump run 24 hours/ 7 days a week? What about the pumping noise? What is the life span of these pumps? **Wendy Blondin:** AMEC does not think it will have to run 24/7, but it all depends on the Hydraulic modeling. The goal would be to time it with the tidal waters so that pumping it in as the tide goes back out. The noise will be contained in the pumps themselves which will be underground. The water is fresh bay water, pine channel water. The pumps will probably take the water at the ebb of the tide, so that when it reaches the back of the fingers of the outgoing tide – but to be honest this will be fine-tuned with the modeling. The life span of the pumps is about 10 years.

George Neugent: There are issues with this pumping system and it is extremely complex. This design requires some answers, commitments, and some discussions before the county commissioners. How do we deal with costs? You have capital costs of the initial building of the project and we are making some assumptions that it will be successful. Then there is a fee for replacement costs over the life of the equipment that will be there. Then you have the operational costs. He is not sure if all of these issues have been addressed from an engineering standpoint but it is substantial. This is certainly an area that we would like to address and clean up the water in these canals. So how far along has U.S. Fish and Wildlife come to approving this project for us to proceed in a time and money investment? The potential flaw would be if U.S. Fish and Wildlife does not approve this project. Once everyone approves and agrees to proceed with the project then we will need to determine how to pay for the operational costs, capital costs (which may be the easiest), and the replacement costs. Is the cost spread over the folks on just this canal system or will it be shared county wide? All of these questions will need to be answered.

Gus Rios: Asked Nancy Finley to join the discussion and to identify any issues that must be addressed to comply with US Fish and Wildlife Service requirements. This is just a brainstorming session and today's primary purpose is to learn more about any impediments that must be overcome to gain the approval of the USFWS.

Nancy Finley: My perspective is that there is nothing you can't do with enough time, money, engineering, or whatever is necessary. U.S. FWS is supportive of the concept however the devils are in the details. We need more design information to determine what can or can't be done. I am not sure where there might be an impediment but we can probably figure out a way around those impediments. One concern is having the intake at the bridge itself, this is a little bothersome. Perhaps taking the water from the seaward side of that system. The bridge, for lots of little reasons is a pain in the neck. She has to have it inspected yearly, it is a big deal with the infrastructure and because of inspections and the fact that we have had other bridges fail around the county – it is a little touchy.

The other key issue is that we have spent hundreds of thousands of dollars doing the restoration of the wetland systems to the north of the Watson boulevard bridge. We do not want to do anything that would jeopardize the water quality and flow in that area. So the

volume of water is important. What you may or may not do to alter or re-direct water from the canal system is important and that needs to be considered in the design. From a simplistic perspective if the intake system is a little off from the main channel it may be better because it would give the water more opportunity to diffuse over a large body of water and this would not change what is currently happening in a more natural system than what was there historically.

We can go through and find a way to alter the bottom and put in some sort of intake structure somewhere else. There is a location that is a little closer to Narcissus Avenue that might work. You have seen one of our wooden gates across the road there. It is really shallow in there but depending on how you set up your structure, you might be able to do something there. This area is in the slew but it is on the south side of the road and way off from the restoration area. It is not very deep but if you are trying to time it on a tidal cycle in might work just fine. If AMEC were to consider this area there would be less of a run on the system.

Wendy Blondin: We thought it was less of an issue for U.S. Fish and Wildlife if it was attached to the bridge. But we can always run it along the bay bottom that would not be a problem. AMEC's will take a walk out in that area you have suggested.

Nancy Finley: With regard to the process for obtaining authorization from U.S.FWS, the Federal government is not so keen these days in doing "right of away easements" but we gave the sewer project a "right of access" and that seem to be ok with everyone. With "right of access" just keep to the parameters of this project. Since this is a demonstration project that would simplify the permitting and the compliance process with the idea that if something were to go wrong we could pull it. U.S.FWS wants to make sure that this project does not alter the hydrology and that the wet lands stay in tack. That it does not create some other problem like sucking fish up and that we can do this within the confines of our regulatory process. Under the demonstration project, we might be able to complete the project under the exclusion of the "National Environmental Policy Act."

Gus Rios: Is there any formal application process for AMEC? Within DEP, we set up a pre-application process, where the applicant has an opportunity to discuss the project details and discuss any concerns. That is with the technical staff and the engineers. **Nancy Finley:** AMEC will ask what is required of U.S.FWS. I can set up a team of folks from the regional office. Send a letter requesting what you are asking of the agency with a detail plan. That you are asking to put a pump(s) here, with these qualities, for this length of time, etc. An additional item which would need to be completed if there was any ground disturbing activity would be subject to review by our Archeologist under National Historic and Preservation Act and the Archeological Protection Act. Those have been going pretty easy for us down here but it is a time constraint.

1. Public Comments – Eden Pines:

Bob Mullinex (on the phone): Want the system to be successful in restoring the canal water quality. He was concerned that the conceptual design may not be sufficient to give a good flush of the canal. There is a lot of water in those canals and feels that a lot of water will need to be flushed. Asking an AMEC hydraulic engineer about how much water could be pumped to the back of the canals. He thought that 4,400 gallons per minutes would not cause scouring of the canals. Pump size and running time variables would affect the cost per month. **Gus Rios:** Bob's comments have also been sent via e-mail to Rhonda Haag.

George Neugent: Determined from Wendy that they have identified 14 other canals in Monroe County with stagnant water canal issues that would be applicable for the pumping technology. At this point, even though this is an expensive pumping system, the knowledge

gained could benefit the other 14 canals. There is justification for doing this project and the risk to gain the data to save us a better understanding in the future.

Thomas San Martino: Frustration that the language used in the documents regarding the cost maintenance – “Agreement from the Homeowners.” All the Eden Pine homeowners want to let this subcommittee to know that there is no legal entity that could take over the maintenance of whatever the project is. So asking any individual homeowners to sign any kind of document to support the maintenance cost will not occur. This project benefits the environment, it is mandated and folks did not have a choice to opt-out. He feels that the solutions is to have a property tax base, equitable allocation across and using the county's balance sheet to maintain the reverses for maintenance and smoothing out the electrical costs funded in advance through property taxes and assessments to homeowners. Wanted to note that the water quality is worse on the north side of the bridge versus the south side. And equitable meaning non-canal owners because they use the boat ramp as well. He would like to encourage the subcommittee to adopt a philosophy on how the fees will be paid and work out the details as time goes by. His primary concern is the atrophy that may set in about 15 years down the road for who will be responsible to replace/maintain this system. If the Eden Pines homeowners are required to sign a financial commitment for this critical demonstration project, then it probably will not be able to proceed. So Eden Pines is looking for a financial alternative. There is a high degree of absentee owners.

George Neugent: Concerning the homeowners of Eden Pines, we want to come together and determine what is equitable. There needs to be a democratic process of agreement when presenting this to the County Commission. We are being required to address these impaired waters in these canals. So, it will be the responsibility of the Commission to determine how this will be paid. One model in place is how we dealt with waste water. We need to bring some solutions to the table. The canal restoration demonstration projects are keeping mandates at bay by addressing the bad water in these canals.

Gus Rios: There is legislation for all states to review their bodies of water and determine what bodies of water are impaired, which ones do not meet water quality standard and how the state will bring them up to the approved water quality. Eden Pines Canals and other projects which require expensive equipment, long term maintenance and long term support will need to be addressed.

George Neugent: We have some work ahead of us and anything that can be brought to the County Commission level, as a group, to be discussed regarding what we've talked about here would be beneficial. In establishing a Municipal Service Tax Unit (MSTU), which we have done to cover administrative cost on waste water, the property owner, whether a resident or no gets a vote. One entity we can use to address this cause is the County and State lands within Eden Pines.

George Garrett: An example was when Jolly Rogers wanted to put in culverts they did a special taxing district, which was a one-time cost and then went away. Eden Pines may involve both construction and maintenance so it could be a long term thing. So perhaps the subdivision could have a referendum. We can complete this project proactively or bring the task by some statutory mandate. It does not matter whether the subdivisions approval was 50% or 40% we need to press on. The County Commission is going to have to recognize at some point in time, these kinds of issues will have to be dealt with.

Wendy Blondin: Eden Pines did not make the County Commission requirement, of 75% on those initial letters. For us to even to go to the next step we will need the community to put more effort in. The County Commission will need to change the % requirement in order to proceed with the Eden Pine canal restoration demonstration.

Michael Maurer: Where do we go if by chance the financial issue is not resolved? Or the U.S. FWS decide it is not a viable project with the current proposed design? He had heard a rumor that there was supposed to be a canal that went from Narcissus Ave. and Palm Ave. out to open water, which is less than ¼ of a mile. He had heard that the developer ran out of money so it was not completed. What if we were to put a culvert system or just open it up as a canal?

Gus Rios: I appreciate that you are trying to get a common solution, When you are talking about dredging there are all kinds of federal and state regulations that would require permits for such a project. We are trying to stay within the scope of what has already been dredged and try to maintain a good flow of water into the existing canals, while avoiding new dredging which is currently prohibited by the County's Comp Plan.

Michael Maurer: Another concern that I have with some of the Canals within Eden Pines is debris and overgrowth. In some of the canals the overgrowth is so bad that it is a navigational hazard to try to get around some areas. The debris is coconuts, palm fronds, and leaves. This may slow down the water flow.

George Garrett: This problem is an enforcement issue if you do not maintain the canal area on of your property. The City of Marathon is now taking this enforcement on through the Public Works as Mangrove trimming or shoreline trimming. We copied the ordinance out of Monroe County. Which the city went through DEP for the permits to trim the Mangroves.

Gus Rios: Michael mentioned the option of exploring the idea of other culverts, is this something this subcommittee would like to look at this as an option? Is Mangrove trimming and debris removal something that the subcommittee should be looking at right now?

Rhonda Haag said she would investigate and get back to the committee.

Wendy Blondin: The Eden Pines demonstration project was excluded from the original work order from AMEC Because there was not a definitive enough acceptance by U.S. Fish and Wildlife or the community to know that it was going to be a buildable project. **Rhonda Haag** has asked AMEC to design, final permitting and move forward. This is similar to the other demonstration projects. Or does this subcommittee feel that it is too complicated or not a high enough priority. AMEC has only completed a conceptual design because we did not have a work order.

George Neugent: Once a final design is complete and permitted the estimated cost and maintenance will have to be presented to the County Commission. Then the County Commission can discuss the alternatives for initial costs and maintenance in an equitable manner. For the initial design there is clearly going to be participation from the State and Monroe County in being property owners in the Eden Pines subdivision.

Wendy Blondin: The next step for AMEC is to go out and do tidal studies, survey, determine where the pipes should go so we know depths, water levels, tidal flow, including the tidal flow out in Pine Channel then we can run a hydraulic model. This would be used for the bases of

our design. There is a major field effort for data collection, engineering interpretation and the modeling.

George Garrett: It sounds like we are still in a phase of feasibility. Let's continue the feasibility.

John Hunt: This is one of the technologies that we have chosen to be evaluated to determine if the water quality in the canals improve. This is a technology that needs to be evaluated and we have added some extra complexities with Eden Pines.

John Hunt: Made a motion to move forward with AMEC collecting the information to effectively evaluate what scale of pumping system is needed. AMEC will complete all the necessary collecting of data, have the engineers run hydraulic modeling. Incorporate and evaluate the best suited locations for the pumps on the U.S. Fish and Wildlife properties and an initial assessment of the potential impacts to Florida waters outside of the canals. Allow AMEC to give feedback to the subcommittee regarding the best approach for proceeding to the County Commission. **George Garrett 2nd the motion. All approved.**

- **Geiger Key Culvert Project (DEP Funding Agreement)**

Wendy Blondin: Just completed. The culvert cost close to \$200,000. AMEC did the overseeing of the work. The culvert was installed between March 9th through April 21st. AMEC has submitted the 'as built' for the package completion. Initially having poor water quality prior to the project now the water quality is absolutely gorgeous – the culvert is working very well.

- **C29 Key Largo Backfill Update**

Wendy Blondin: The project is underway. This canal was over 35 feet deep. The goal is to fill it to -7.7 feet across the canal. The project is close to completion. They installed triple curtains to ensure turbidity is not an issue. The goal for completion is June 3rd.

- **C266 and C290 Organic Removal Update**

Wendy Blondin: C266 – Dr. Arm and C290 – Avenue J, removal of about 5 feet of muck is the goal. C266 an air curtain will be installed. C290 the homeowners will maintain their air curtain. The spoil material will be re-used for C266. C290 had some copper and arsenic so it be taken off island to a landfill.

4. **Update from City of Marathon on projects for 2015 or 2016 – George Garrett**

George Garrett: Presented to the Subcommittee a project proposal within Marathon to add culverts to help with canal water quality. He identified culverts on four canals. The proposed culverts would be on 89th, Avenida Primacera, Calle De Luna, and 30th street. George believes these four canals could be completed within a \$100,000 budget. This project is a proposal for potential DEP funding.

5. **FDEP Water Quality Protection Program Funding for 2015-2016 – Gus Rios and Group Discussion**

Gus Rios: Every year funds have been provided through the FDEP Water Quality Protection Program it is usually \$100,000. State and local government entities are welcome to submit a project proposal for the funds.

- **Criteria for the Funding/Readiness to Proceed**

FDEP Water Quality Protection Program funding that may become available for the next fiscal year (July 1, 2015-June 30th, 2016). Below are the selection criteria that FDEP will use to prioritize funding for those projects that are ready to proceed.

1. Priority shall be given to the **construction** of water quality improvement technologies recommended in the Monroe County Canal Management Master Plan.
2. Acceptable projects shall result in hydrological improvements that will increase dissolved oxygen and improve water quality to address impaired waters in the canals.
3. Ease of permitting and construction are important considerations. At a minimum, the projects shall comply with all applicable federal, State and local regulations.
4. The selected project(s) must be ready to proceed at the time the funding becomes available (Assuming any funds are appropriated for the WQPP projects for the next FY)
5. The project construction must be completed by June 15, 2016.
6. Preference will be given to a construction project that is ready to proceed, and meets the above referenced criteria, but has not received funding to this date.

This subcommittee reviews projects which need funding, prioritizes them, and recommends a potential selection. This is a project which has not gotten any other allocated funding and can be completed within the designated year. This project also needs to be on the Master Plan.

John Hunt: Homeowners could work with Monroe County and an engineer and create a clear design plan, clear cost estimate and a clear sense of a time estimate. Then partner with a government agency to complete the project as planned.

6. Water Quality Monitoring Report – Dr. Henry Briceno, FIU

Dr. Henry Briceno: They did some measurements at the Geiger Key Culvert Project before and after the construction and determined that when they went to the bottom of the canal turbidity declined after remediation, the salinity increased, and higher oxygen concentrations were documented. We went from below compliance before remediation to being in compliance after remediation. Applause of success was given from the subcommittee.

7. Public Comment #2: No public comments.

8. Next meeting date, place, and agenda topics:

Our next meeting has been scheduled for July, 17th 2015 at the Monroe County Government Center at 9:00 am to Noon.

Meeting adjourns at 3:47 pm.