

**WATER QUALITY PROTECTION PROGRAM CANAL RESTORATION ADVISORY
SUBCOMMITTEE**

Meeting Date: August 28, 2015

Time: 9:00 AM

**Monroe County
Government Center,
BOCC Room, 2798
Overseas Highway,
Marathon, FL 33050**

Meeting Minutes

Member and Advisory Attendees: Gus Rios – FDEP; Rich Jones for Commissioner George Neugent – Monroe County; John Hunt – FWCC; Susan Sprunt (phone) – Islamorada; Skip Haring (phone) – Layton; George Garrett – Marathon; Steven Blackburn – USEPA; Charlie Causey – WQPP SC Member; Joanne Delaney for Billy Causey-NOAA FKNMS

Members not in Attendance: John DeNeale – Key Colony Beach; Alison Higgins – Key West; Scott Donahue – NOAA FKNMS

Advisory: Rhonda Haag – Monroe County; Wendy Blondin – AMEC; Gregory Corning – AMEC; Michael Roberts – Monroe County; Barbara Powell – DEO ; Nancy Diersing, NOAA FKNMS.

Permitting Team (on the phone): Maria Bezanilla – USACOE; Tricia Stone – SFWMD; Joanne Delaney – NOAA FKNMS; Julie Espy - FDEP

FIU Monitoring Program: Dr. Henry Briceno; Jim Fourqurean

1. Introduction and Approval of the May 15, 2015 Meeting Minutes

Gus Rios-called meeting to order at 9:05AM and introduced participants on the phone. **John Hunt** moved for approval of the May 15, 2015 meetings minutes and George Garrett seconded, all approved.

John Hunt – Asked if there was a quorum present.

Gus Rios – confirmed a 2/3 quorum was present, in accordance with the WQPP Steering Committee bylaws.

John Hunt - requested to put the vote item first on the agenda as he had to leave early. Encouraged also public comments early.

Gus Rios - Went over the agenda, referenced the public comment sign-in sheet, and asked for public comments.

Colin Hannaford- member of Sugarloaf owners association. He wondered are we spending hundreds of thousands, millions of dollars creating new culverts and other processes while we're allowing existing structures, important canals with culverts to degrade to uselessness. He feels the members of the association believe that maintaining the existing structures is as important as building new ones. We should not let precious flow-through culverts decline into uselessness. He understands we have a process of evaluating which canals get done, so he took a look at that process. Why does the canal he is advocating not feature in the work that was decided upon? The data is mind-boggling. He states that Sugarloaf canal has worse dissolved oxygen measurements than the culvert on Geiger or organic removal on Big Pine. Sugarloaf canal has 50% more organic material at the bottom of it. These are 2 of the 3 highest rated factors that determine which canals got remedial treatment. Why did this one not percolate up? He feels the canal is under rated because it was not facing the direction that would attract sea grass. However, the canal has got more organic material than the ones that are because of mangrove organic material. Has been completely missed in the assessment. Asking to reevaluate canals that get addressed. New data that says some will provide bigger bang for the buck. Doesn't make any sense for the people on Sugarloaf why we are building new culverts when existing are being degraded. Sugarloaf flow through to connect upper and lower.

Gus Rios- Asked if Mr. Hannaford was requesting the Subcommittee to re-evaluate his project in relation to the master plan that is already out?

Colin Hannaford - Yes, because he feels there was very important criteria omitted. He stated that before money is spent to pump canals that existing infrastructure be cleaned out. The canal is the one connecting Upper Sugarloaf to Lower Sugarloaf.

Gus Rios – Addressed the Subcommittee to respond to Mr. Hannaford's question to look at the rankings of the canals and determine if they're correct based on the analysis that was done at the time.

Rhonda Haag - We need to look at all the canals, not just one. It wouldn't be fair to the other homeowners. **Gus Rios** agreed.

Gus Rios- Questioned if the determination of the Sugarloaf canal included any specific ranking? **Rhonda Haag** responded that 86/140 is the ranking for the Sugarloaf canal.

John Hunt – Asked what is the ranking numerically of some of the other demonstration projects?

Wendy Blondin- Master Plan was done for 502. It was done on data to prioritize for the County. The first thing we did was break out 3 huge groups-poor, fair, and good canals. We tried to help assist in prioritizing for the poor with that number that you folks are talking about. Any criteria that you use is subjective; however, the process was vetted through the Subcommittee. One thing that I don't think is understood is when we went to the demonstration project, we did not just use that ranking. We picked separate ranking criteria for demos that specifically targeted projects that could be completed quickly within a year

time frame, had a limited amount of permitting issues which included mangrove mitigation, and it was a separate subgroup. That has to be understood. It was a separate program just for the demos. The worst is 140.

John Hunt - The higher the number, the worse it is?

Rhonda Haag – Yes. It's still one of the poor canals, but it's just 86 out of 140.

Wendy Blondin - All the poor are bad and all the poor need restoration.

Colin Hannaford – On those rankings if you have mangroves that are the cause of the water quality, you get penalized by 15 points for habitat and 25 points if you're not pointing into open water even though you've got more organic material in your canal because no one realized that organic material is not just from seaweed.

Gus Rios – Looked at the layout given by **Colin Hannaford**. There is a large stand of mangroves there. Mangroves are protected, so this is also a permitting issue. He stated that today they are not ready to address it because they don't have enough information on whether this is a viable project or not. He proposed to look more at project to see if it's permissible, which was one of the criteria of the original project. Needs more evaluation to see if it's within the scope.

Colin Hannaford- These are all manmade canals. Monroe County's statutes require that mangroves get trimmed to 10% of the width of the canal.

Gus Rios - Monroe County has ordinances that have to do with navigation in some canals. There is trimming that is allowed under Florida law for navigation. That trimming includes trimming lateral branches. If someone is going to undertake looking into this project, they may need to start with a pre application meeting with SFWMD. **Colin Hannaford** wants an evaluation of the Sugarloaf canal against the other ones.

George Garrett - All canals are important, it's a question of time, money, and priority.

Gus Rios - **John Hunt** asked to rearrange the agenda to vote next on proposals for canal projects that can be funded through the DEP. Gus moved to rearrange the agenda and all agreed.

2. FDEP Water Quality Protection Program Funding for FY 2015 - The Subcommittee members will review project proposals submitted by local governments for funding and will select one using the selection criteria given below:

- a. Priority shall be given to the **construction** of water quality improvement technologies recommended in the Monroe County Canal Management Master Plan.
- b. Acceptable projects shall result in hydrological improvements that will increase dissolved oxygen and improve water quality to address impaired waters in the canals.
- c. Ease of permitting and construction are important considerations. At a minimum, the projects shall comply with all applicable federal, State and local regulations.
- d. The project construction must be completed by June 15, 2016.
- e. 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.

Gus Rios – Reviewed the summary for DEP funding for 2015-2016. Received \$100,000 devoted to the Water Quality Protection Program specifically for the canal projects. Funding agreements can only be made with a local government. Criteria is the same as last year and was reviewed based on the agenda. Already improving wastewater. The purpose of this project is to fix the hydrology of the canals so they flush better and have less floating seaweed coming in. We don't want to fund project that will result in significant impacts or destruction of resources and will require mitigation, which will kind of offset the value of the project. It has to be a project that's permittable and will comply with applicable state, federal, and local regulations. The money was approved by legislation, but the project needs to be completed and paid for by the end of June 2016, or the funds go away. Preference to projects ready to proceed, and projects not yet funded. He asked if each project proponent can give a brief presentation on their proposed project.

Rhonda Haag - Geiger Key Canal #472 weed barrier. Ties into the same project that DEP funded previously with the design and construction of the Geiger Key. Updated that the culvert is currently closed, but they are reviewing how to reopen. When the culvert was installed, there was an immediate increase in water quality and dissolved oxygen flow through canal. This project is to add on to that project. We know culvert works, but it weren't designed to stop seaweed so they thought to install weed barrier. They talked with homeowners about a potential bubble curtain, but that has higher costs for electricity. This is for a hard weed gate that would have lower costs for homeowners. The second project is the Tropical Bay Estates canal 277 culvert installation which was one of the original demonstration projects. However, we are running out of money. We don't have money to fund all the demonstration projects. This is one way of continuing the demonstration projects that have not received funding as of today.

Gus Rios – Invited the subcommittee to ask questions on the projects.

John Hunt – Does canal 277 have a connection to the open Bay/Ocean ?

Wendy Blondin- yes, on Watson Blvd.

John Hunt-Canals to west of Watson Blvd. That whole canal system, is that connected to ocean?

Wendy Blondin- The whole system has a connection there. This drains out to the bay area. There is natural flow in this area.

John Hunt – What's the distance from where the culvert would be to where the canal turns to ocean?

Joanne Delaney – About 0.22 nautical miles.

John Hunt – Is there any knowledge on the water flow through canal? Is there a pretty strong tidal flow? If a culvert is put in there, is it likely going to have the same effect as Geiger Key where it was pretty evident that there was a significant hydrologic connection?

Gregory Corning – the volume turnover, that's how we set up the hydrologic model to figure out the volume turnover in that canal. It has an 11-fold turnover which is similar to Geiger Key.

Rhonda Haag – This was an approved design that the homeowners approved.

Gus Rios – Tropical Bay Estates is one of the selected projects to be funded, but it was not as high as Geiger Key or other chosen to be funded. Is this project now being funded? Is there county funding now to pay for this?

Rhonda Haag- The ones under construction are funded. The remaining ones we have to make decisions on which ones we're going to fund. We don't have enough money to fund them all. On the remaining ones, we are going to have to make a decision on which ones we're going to fund. We don't have enough money to fund all of them so we have to cut out this one, Eden Pines, or one of the other ones we haven't done. We haven't chosen any that are not to be funded. For this purpose, we picked one that would fit within your funding guidelines so that would allow us to fund more of the remaining ones.

John Hunt - Why didn't you pick the canal that was just north of Warbler lane and come across the top of the canal that's one Sunrise? It would seem to produce a greater flushing effect.

Gregory Corning – There is already an existing culvert in place between the two canals, the issue that we see in the hydrologic models is that it's undersized and the issues now with trying to replace it would be a structural problem because there's a lot of headwall around it. The homeowners didn't want to recreate or modify that culvert in any way.

Joanne Delaney - There has been modeling that suggests that the culvert will increase flow. The proposal doesn't quantify how much the restoration will be expected to move the canal towards that goal of eliminating the dissolved oxygen impairment classification. Do you have a sense at what the new turnover rate might be?

Greg Corning – The turnover rate in the hydrologic model showed an 11-fold turnover for the whole water body in that canal system, which will improve the dissolved oxygen. We don't have a specific number with what that proposed dissolved oxygen is going to be with that 11-fold, but it is going to increase.

Wendy Blondin - That was the same turnover rate that was at Geiger Key 472? The data from FIU shows that it was able to 100% correct the dissolved oxygen impairments. We are trying to match the same turnover rate.

Gus Rios – asked for clarification on County funding for these projects.

Rhonda Haag – The original \$5 million is not going to cover all the demonstration projects. Out of the remaining projects, we have two air curtains, Tropical Bay culvert, and Eden

Pines. So far we have underway or completed Key Largo, two muck removals are underway and funded. That leaves Tropical Bay culvert, 2 air curtains, and Eden Pines. Out of the original \$5 million, we don't have enough to fund the remaining three projects. We picked this project because it was the most ready to proceed. This is one of the demonstration projects.

Gus Rios - How much money do we have left for these four projects?

Rhonda Haag – We are \$400,000 short finish the remaining three projects.

Gus Rios - Readiness to proceed. Where are we?

Wendy Blondin - Tropical Bay culvert is 90+% designed. We are just doing a final sit down with the homeowners, then submit a permit application within a couple weeks. Funding is already covered for the design, permitting and bit assistance plus construction engineering oversight. This grant request is to cover the contractor construction fee?

Gus Rios – have you done pre-application meetings with the Corps and with the Water Management District?

Wendy Blondin – we did them originally with all the culverts, but we will sit down again. They are very similar conditions.

John Hunt- The permitting issues as they relate to my agencies interests are essentially the exact same as Geiger Key and so the resolution should be the same and the pace should be the same.

Wendy Blondin- Ivan originally did these, but we had a nationwide done for culvert, and a general permit through the Water Management District so we'll re-approach and discuss those, but we've been through the basic issues with the agencies.

Charlie Causey - If the County is \$400,000 short on the three projects, if they did the two projects here, 472 and Tropical Bay, where would that leave them funding wise? Would they be within the \$5 million?

Rhonda Haag – Only one of these two projects, the culvert, is within the original demonstration projects. The weed gate for Geiger Key is not. That is a brand new project that we brought to the table. I the weed gate is not approved today, there is no funding for that period. It depends on which one gets funded today. If the weed gate gets funded, that doesn't leave any money to help the demonstration projects. If the culvert gets funded today, that leaves more money to fund the demonstration projects. Not sure if we'll have enough money to fund them all because there's a big variance with Eden Pines in terms of the size of the pumps and the cost of that. We're still working through some of the issues. We kept the easier ones going while we work up to Eden Pines.

Gus Rios - So you have \$5 million, and need \$400,000 to complete all of them. Where does Tropical Bay stand in ranking compared to others you are trying to fund?

Rhonda Haag - We never really ranked the demos. We included them all as equal rank and planned on doing them all.

Maria Bezanilla - In regards to Tropical Bay, are there red mangroves?

Wendy Blondin – There is some mangrove removal that we have a plan for replacement in kind at the same location.

Maria Bezanilla - if there are any red mangroves removal, specifically with culvert projects, it needs to go through the Protected Resource Division consultation process.

Gus Rios - There's no de minimus for mangrove impacts that would be offset by the water quality improvements versus significant impacts that would require mitigation?

Maria Bezanilla – It doesn't specify quantity, just no red mangrove impacts authorized.

Gus Rios - When you get into consultation with the National Marine Fisheries Service (NMFS), it can take a long time.

Maria Bezanilla – Maybe they can request a programmatic in general for canal restoration projects that you have in the next few years so you don't have to apply individually for each project. It may be more beneficial, but you'd have to know the project design in advance.

Gus Rios – It's a topic we need to address. We can put a bulk of the projects into a single consultation instead of piecemeal and have different people assigned to different projects. However, the immediate concern is the FDEP funding must be used by the end of the FY (June 30, 2016), so this is time sensitive.

Charlie Causey - How long will it take to get that approval in bulk?

Maria Bezanilla - A regular single project, the average is about a year. I would assume a programmatic type of project would take a year to two years.

Charlie Causey - Once you have that approval in the time period you submit in your proposal, it's just a question of money?

Maria Bezanilla – If the project design has already been approved in advance, you don't have to go through the lengthy process for each one. as you apply and the project could be applied toward that if it qualifies, it's almost like an automatic approval when it comes to the PRD process so when it comes to the Endangered Species Act, it has already been evaluated.

Charlie Causey - So if the necessary application met your requirements, the time would be a couple months under that classification?

Maria Bezanilla -Yes, it would be similar to a general permit for example General Permit 17. Those have already been pre-consulted with PRD. Once those come in, we notify PRD within 10 days. If they don't respond back, we're able to finalize our documents.

John Hunt – I want to clarify after this discussion. The mangroves in project area, these are white mangroves?

Gregory Corning - I just got confirmation from our biologist that there are red mangroves in the area.

Gus Rios – So this project will be subject to the permitting requirements that Maria described. The problem is that we have a deadline of June 2016 to use the FDEP funds.

Wendy Blondin – Let me clarify. This project needs to be finished next June. Based on what I've been working on with some of the other projects that are getting PRD review, to me this does not mean that we couldn't get this permitted as long as the permits came in very soon. I'm seeing that it's probably a three month review for something very simple?

Maria Bezanilla - I have no control over PRD. I've sent out letters to PRD and Fish and Wildlife to have the review be expeditious, but that's no guarantee that it's going to be reviewed like that on their part.

Gus Rios - Maybe can discuss this item at the Steering Committee Meeting on September 30th.

Maria Bezanilla – Maybe if you reach out to the PRD directly and ask for a main point of contact. Brandon Howard. He is more for the Habitat Conservation Division.

Gus Rios – Are there any permitting issues with the Geiger Key weed gate?

Joanne Delaney – Question on the proposal for 472. The Sanctuary was wondering why there was no discussion or plan built into the budget for maintenance of the weed barrier. What would the costs be, the lifetime of this structure and so forth?

Wendy Blondin – The reason we went to this type of weed barrier was the maintenance is very minimal, there would be some damage if it was hit by a boat or a storm, but there's no operational cost. It's just a physical barrier that will move when a boat moves across. The thought is that the homeowners would pay. We are just selecting the technology that had very minimal costs.

Gus Rios - Have we talked with a homeowner that is willing and able to give their land for the barrier?

Rhonda Haag – Not yet. We don't have to use the homeowner at the very end of the canal. We can move inwards as necessary.

Gus Rios – That is a concern I have.

Rich Jones – A weed gate does not provide any hydrologic improvements, correct?

Rhonda Haag – Correct

Rich Jones – Does that rule it out because it doesn't meet the hydrologic criteria?

Gus Rios – We are talking not only about flushing but also about keeping organic material out. It's definitely a construction technology covered in the Canal Master Plan.

Joanne Delaney - Where did the budget figure of \$100,000 come from for a manual weed barrier? That seems like a lot of money for what seems to be a fairly simple low maintenance, low cost project.

Wendy Blondin - That money is for everything. The engineering, site evaluation, access, permitting, homeowner coordination, construction, and oversight during construction. The breakouts of those will be refined, but other similar projects have had similar outcomes.

Charlie Causey - Back to Tropical Bay, is there definitely a red mangrove permitting problem on Tropical Bay with the Army Corps? In other words, to get that permit, if the red mangroves stand in the way, we're looking at a year? That's not going to work for us. If there are red mangroves there, that might exclude that project from happening.

Wendy Blondin – That year I believe is for programmatic review. We have had good work with PRD anywhere from 1-3 months for review. That is working with them closely. We do try and get expedited reviews if we need them and they have been cooperative in doing that. I don't think it will be a problem since construction doesn't have to start until May.

Maria Bezanilla – A single family homeowner will average a year. That's from the time they receive it to the time it gets off their desk. It is a risk to take. Once we start the process, we can see if they will lean toward expediting or not. I don't want everyone to think the project will be expedited guaranteed.

John Hunt- In any of the past projects that were expedited, did any include red mangroves?

Wendy Blondin - No, but they had issues with submerged bottom lands, so it's similar.

Rhonda Haag- We submit request from Roman to these agencies for expedited review. So far they have all received that expedited review. One was done in a month. So we've been very satisfied.

Gus Rios - Any projects that will include red mangroves will be subject to the PRD. On Geiger Key weed gate, are there impacts to red mangroves?

Wendy Blondin - No, that will be just an attachment to seawall, but we do need to get a location to do that. There's no subsurface impacts and we'll pick an area that will avoid mangroves. It's a floating device that will be attached to the uplands.

Maria Bezanilla – I think the project will require a general permit which has been pre-coordinated with PRD.

Gus Rios - Safe to say that the Geiger Key weed gate would not be subject to PRD review. The biggest issue is if there isn't a willing partner for land to install the gate. What happens if we select this project for funding and the homeowners who own the land say no, then the project is dead.

Wendy Blondin – My suggestion would be to have a second back up for weed gate if that doesn't go through.

Gus Rios - Move to City of Marathon.

George Garrett – Some advantages that the County's projects have that we don't have, they haven't been ranked in the same way simply because they are not as high priority, they don't have hydrologic work done. I think there's assumptions that the hydrologic parameters would improve. They are as proposed. Three culvert projects-Calle de Luna which is behind the golf course and 89th Street and 30th Street which has two parallel canals coming up to a head near US-1. Based on Maria's comment the Calle de Luna project- might be suspect because of red mangroves there on either shoreline, but 89th Street and 30th Street would be most likely clear. All projects are within city rights of way and none require involvement of property owners. We don't have design work done, but we have preliminary design estimates done. People are working on the design now. I think I could bring this to a permit as quickly as the County could be able to bring to permit within a month. The proposal we made was one application for two tasks. The tasks will be broken up into the process of engineering, design, permitting, and construction. We do have cost estimates for construction. We have factored in permitting at 20% and contingency at 25%. The project is \$122,000 each which makes it about a \$245,000 project. The City is prepared to match the \$100,000. We are seeking the \$100,000 with a match from the City of about \$145,000. We will focus on two at this point, but probably design all three. Based on comments Maria made, we may step back and decide if we want to focus on 30th Street rather than Calle de Luna because of mangroves I know to be there.

Gus Rios - How are these canals ranked in the master plan?

George Garrett – Decided to only go with projects that will involve culverts because they are all within the City of Marathon jurisdiction and don't require coordination with anybody. A weed gate would run into some of the problems we may run into with Geiger Key and trying to coordinate with a number of people. We don't have to do that.

Gus Rios – Acceptable projects shall result in improvements that will increase in dissolved oxygen and improve water quality.

George Garrett - Probably the worst of the three is Calle de Luna because it is a long way from its source of Sister's Creek. 89th Street is two long dead-end canals. That would become one U-shaped canal. 30th Street is not that far from Boot Key harbor so the benefit is not as great. In the long run, these are things we could do fairly easily.

Gus Rios - If you have to recommend a project, what would you recommend?

George Garrett - In consideration of Maria's comment, I'd chose 89th Street first and 30th Street second. The City is fully prepared to commit to accomplishing both projects, regardless of what our match is. The design estimates are deliberately high right now. We are prepared to match whatever is remaining after the grant money. We could have discussions with PRD about Calle de Luna, but it's easy enough to focus on the other two projects.

Gus Rios – Now you have two distinct projects?

George Garrett – I am asking for \$50,000 for each of the two projects.

Rhonda Haag - Are you sure you can meet that deadline for the grant?

George Garrett - Yes, we already have this in engineering.

Wendy Blondin - In master plan they're either good or fair. 30th street is fair and the other two are good. Islamorada did their own ranking on their canals to prioritize.

Gus Rios – Looking at the criteria, it's an important consideration that you don't have a project yet in Marathon.

Charlie Causey - If we look at ranking in the system, to at least the 30th Street project, what credence do we pay to our ranking in terms of making the choice here? 277 is higher up in the rankings than Marathon.

George Garrett – There are very few canals with problems in Marathon. We made a proposal and they are not ranked as highly as the County projects. If we solely look at the rankings in the Master Plan, this is lower.

Joanne Delaney – There were some canals ranked in master plan as high priority, 223 and 243, why were those projects not considered?

George Garrett - It comes down to what can get done in a year.

Rhonda Haag – I had a conversation with Commissioner Neugent before the meeting. We want Marathon to come aboard. If Marathon had a good project and was putting in money of their own, the Commissioner was willing to let the grant go to Marathon.

Gus Rios – We can prioritize the projects based on what we know right now. Do we want the County and Marathon to split the grant to \$50,000 each or do we want to spend the \$100,000 on one project?

Rich Jones – Wanted to clarify- If we chose the City, what has to be done by next year? One, two, or three canals?

George Garrett – I laid three projects out. There's only two we're proposing. We can separate them out and fund one or the other as these are independent projects. They would have to be done at the same time, May.

Gus Rios - Projects have to be ranked and there's an opportunity to split the funding.

Rich Jones - Just wanted to make sure not all three culverts have to be done by May.

Gus Rios – All the projects funded by the grant have to be done by June.

John Hunt - I see this as five separate canals. We have the freedom to choose one or five or prioritize them in some fashion. We are forwarding a recommendation to the Florida Department of Environmental Protection that they can either accept or reject.

Gus Rios - Once we get done with questions, we each will vote. There is a pot of \$100,000. Once we rank the projects, we can then decide if we want to only fund one or two. We can put the item for consensus.

Joanne Delaney - Do we have any minimal hydrological information that would demonstrate that culverts placed in any of the three proposed locations would be effective or how effective? Minimal improved flows, etc.?

George Garrett - Not in context with what the County has. Will it improve it? Undoubtedly, but I don't have a percentage.

Joanne Delaney – That might be something to build into the cost or design is a minimal hydrological examination. If you have three projects and you're trying to know where to place the money and they're rated as good and fair. It might be worth the money to look at where you will get the most bang for your buck.

George Garrett – I would build that in because there will be monitoring as well.

Gus Rios – The problem is we don't have all the data we'd like to have. We have to look at readiness to proceed. Tropical Bay has hydrological information done. Engineering is 90% done. Less than 1 month for application submission. We need to look at readiness to process, are these projects already being funded by some other source, is it an approved Canal Master Plan technology, and do we have enough information to expect dissolved oxygen and water quality improvements?

Rich Jones - Are the County projects going to proceed without this funding?

Rhonda Haag – The Tropical Bay culvert probably will, but the weed gate would absolutely not get funded.

Gus Rios - DEP enters into a contract with the local government. Once the project is in motion, you have to complete by a certain date. If you don't deliver the deliverables on time, you don't get paid.

Rich Jones – What is the purpose of having a backup?

Rhonda Haag – For example, for the weed gate, we haven't made contact with the homeowners. If we do and they reject the project, then we can go to the backup project.

Gus Rios – Moved to vote on the grant projects.

John Hunt – It comes down to which project is going to be the most effective. From my perspective, the weakest project is the weed gate. The culvert has vastly improved the dissolved oxygen and this is more of a nuisance resolution than a water quality improvement. Tropical Bay Estates is inherently consistent and has the largest hydrological change likely, is far along in the process, and is most likely to be completed at the endpoint. The only issue is permitting, but we do have a history of a positive expedited relationship there. Marathon was hard to follow at first, but it's better understood now. We throw off Calle de Luna. I like that 89th Street connects to ocean which we are really trying to improve the nearshore water quality in the highest capacity that we can. It would go from two single canals to 1 U-shaped canal. 30th Street connects to Boot Key Harbor. I am putting off Calle de Luna, the weed gate, and 30th Street because it doesn't connect directly to the ocean and the hydrologic connection is not at the endpoint of the canal so you would still have the remaining dead end canal. Tropical Estates has the smaller culvert at the very end for the upper reaches.

George Garrett – I agree with John.

Gus Rios – John Hunt and George Garrett have selected Tropical Bay and 89th Street.

Charlie Causey – I think giving \$50,000 to each of those projects is appropriate, 89th Street and Tropical Bay Estates.

Susan Sprunt - I feel very strongly that Marathon needs help. I would like to see everything go to Marathon. Is it 30th Street's location why John was against it?

George Garrett – Where you would make the connection across a street is about halfway down rather than at the dead end.

John Hunt – It will have a lesser effect on the overall water quality of those canal systems and will make a smaller difference based on my judgment.

Susan Sprunt – Do you feel that even a minor contribution would be significant?

George Garrett – Yes.

Susan Sprunt – Voted to give everything to Marathon. 89th Street and 30th Street.

Gus Rios – If the subcommittee decides to have two funding agreements, would you agree to split up the money to two different projects?

Susan Sprunt - Agreed to split up the money if that's what was agreed upon.

Gus Rios – **Charlie** – just to clarify, you would like to do Tropical Bay and 89th Street?

Charlie Causey - If we do the two projects in Marathon and they put in the \$145,000 for those two projects, that would be very important for Marathon and for the overall system in the county. The \$50,000 towards Tropical Bay is probably not going to make a difference in

whether the County does that project or not. They're probably going to do it without the \$50,000. If we feel good about the County going ahead with the complete cost of Tropical Bay, then I think we need to give the money to the two projects in Marathon.

Gus Rios – Remember the County still needs \$400,000 to complete their projects.

Rhonda Haag – We have three remaining projects: Eden Pines, Tropical bay, and the two air curtains. We're about to go out to bid the air curtains and if they go reasonably well, we might have enough money to squeak by with the culvert. So even without the grant we would still probably go forward with the culvert. We already bid it and it came in twice the budget. We're going to bid again. It largely depends on what that comes in as. That could eat up the rest of the budget and we won't have any money left for the culvert and Eden Pines. I don't know if we have enough money or not.

John Hunt – We have a suite of criteria. It's not our job to be nice to the City. It sounds like we are just being nice to the City to get them to be involved, then we have to decide how nice we want to be. If you look at the criteria, you won't get the same water quality criteria from the City projects.

George Garrett – I agree with John, there are much better projects to do. Frankly, there are maybe two canal systems in Marathon that are really a problem. Having said that, there is no canal system in Monroe County that is even fair really. Bottom line is that they all need to be fixed, but Marathon's are a lower priority. Are we going to move forward with projects? Absolutely. If we can do it with you, great, if not we will do them on our own.

John Hunt – My take is that the half nice is the approach that makes sense. If you have to do one project because of contracting limitations, the highest priority is Tropical Bay because that's where the criteria that the DEP has set up are mostly connected. It has the pre-existing monitoring. This allows the pre-existing demonstration projects to have the highest probability of getting 100% completion. That being said, I think the 89th Street project has merit. My priority one is the 50/50 approach: \$50,000 to Tropical Bay and \$50,000 to 89th Street. If the Florida Department of Environmental Protection will only do one contract, then priority two is \$100,000 to Tropical Bay Estates.

Rhonda Haag – For our budget, the ones already bid out are at \$4.3 million. For the other ones that haven't been bid out yet, it's at \$1.4 million. When we add those two together, it's at \$5.7 million. What's been happening is when we bid them out, they're coming in well over budget. In the case of the air curtains, double the budget. We're already \$700,000 over budget without even bidding the next 4 or 5 project. It depends on what project is selected next. We have \$700,000 remaining to bid out, so yes we can put the culvert out, but some of the other demonstration projects won't go.

John Hunt – So you have a chance to get more done with this grant?

Rhonda Haag – It means there's a possibility to do one of the other demonstration projects. But we still like Marathon. We want Marathon to participate.

John Hunt – I think that's why the half nice approach is priority one.

George Garrett – Seconded the motion that John made.

Charlie Causey – Agreed with the 50/50 approach first and the \$100,000 to Tropical Bay second.

Rich Jones – My understanding is that Commissioner Neugent would like to fund a City project. And it sounds like the best one is 89th Street. I would just like to point out the urgency that it is so far from shovel ready, and really none of these are shovel ready. But I believe that is what Commissioner Neugent would like to put forth.

George Garrett – I will make a commitment to getting this done.

Joanne Delaney – Based on the criteria for funding, not being nice. I still believe that Tropical Bay meets that criteria the best. However, if the group consensus is that there should be a split between the County and the City, we would support that. I'm not sure we will automatically support 89th Street because we have no preliminary information of any kind to demonstrate which project would provide the most hydrologic benefits from restoration. So if we give money to Marathon, it should be demonstrated at some point that the money is being used for the project that is going to move closest to the water quality goals that are outlined in the Master Plan.

Gus Rios – The Sanctuary continues to support Tropical Bay Estates but does not object to the subcommittee splitting the funds between Tropical Bay and 89th Street with the caveat that you gave us.

Gus Rios – Gave a brief overview of all the projects up for grant funding.

Steven Blackburn – Voted for Tropical Bay and 89th Street.

Gus Rios – Voted for Tropical Bay and 89th Street split funding.

John Hunt – My motion to the committee is priority one: 50/50 89th Street and Tropical Bay. If the DEP determines that they can only fund one project, then that project would be Tropical Bay Estates. **George Garrett** seconded.

Motion approved to prioritize:

#1 - split the \$100,000 50/50 between Tropical Bay & 89th Street.

#2 - fully fund Tropical Bay with \$100,000 if only one project could be approved.

3. Public Comment (3 min. each.) – No public comment

4. Update of County Demonstration (Demo) Projects and Related Issues

a) Eden Pines Pumping

Rhonda Haag – Been busy with all the demonstration projects but haven't received approval from the Commissioner to move forward with formal design of Eden Pines.

Wendy Blondin – The design was for a pumping system to pump water from the bay south of Watson Blvd to the far ends of the two large finger canals. This is all a conceptual design. The vote from the last meeting was to move forward with design and permitting despite some of the more complicated features of this project. Additional communication from homeowners after that meeting. Some items that need to be looked at if this project is to move forward is who should fund the project, whether it should be all county or federal. There is no current mechanism for the homeowners to take over operation and maintenance costs after the two year period that the County is willing to pay. This is by far the highest monthly and annually maintenance costs of any of the other technologies. It is high maintenance and some of the emails indicated that maybe alternate technologies should be looked at.

Jamel Weatherspoon- Are you referring to an update of the original design concept?

Wendy Blondin – We have made no revisions to the conceptual design.

Jamel Weatherspoon – The conceptual design that you first put out is what we're talking about?

Wendy Blondin – The design we put out at the May 15th meeting. In summary, it is taking water from an area. We don't have property access. Fish and Wildlife has indicated that they may want the water taken from a different area. The concept is the same. You take bay water and pump it to the far end of the canal. From the meeting in May, we agreed to go to the County Commission with an update and ask and see if they had any additional recommendations for how to proceed. We gave quite a detailed update. They did not make a vote, but did not change their requirement that they previously set back in 2014 to have 75% approval. It is something that this subcommittee may have to address because Eden Pines only has 50% approval. There are 536 parcels. Each parcel gets one vote. 296 were returned which is a 55% return rate. Originally, the County wanted every single parcel to say yes. We went back to the County Commission and said this is almost impossible. There's trust funds, there's people we can't reach. They came back with a compromise. The math was 75% of all parcels, not of returned votes. One topic up for discussion for the subcommittee is if this project were to proceed, one item you can think about today is addressing that existing requirement.

Members of the public stated that they did not receive the letter.

Wendy Blondin – They went out mail. We distributed at the public meetings. This was the procedure done on all the other canals.

Paul Kersher - I did get survey and have been to every meeting. I have talked to a lot of people in the development and they either didn't get the questionnaire or didn't have enough information about the project, such as what the cost was going to be or what you're going to do. You need to get the cost done, the conceptual design, then go to the people.

Jamel Weatherspoon – We want it. We just didn't have enough information.

Robert Andres - Many people claim to have not gotten letter or information about project. The letter was vague. Why doesn't the percentage go by only returned votes?

Rhonda Haag - We have a high maintenance cost of the project. If a small percentage votes, the maintenance costs will be very high for those people.

Sherry Curly - New homeowner. When I purchased my home, I never got a letter. I only found out about the letter through neighbors. I called and emailed to get a letter and never received anything. There is a huge turnover of property there.

Robert Andres – There needs to be concrete figures in there.

Rhonda Haag – It will be based on the information that we have. Estimated annual electrical cost, operations and maintenance costs.

Wendy Blondin – The final design is very critical in changing that number on the number of pumps. We did a second letter that provided estimated costs.

Members of the public stated that they did not receive the second letter.

Rhonda Haag – We will send out a new letter and it will be based on the pump size that we have currently and will be based on the estimated annual electric costs for that. When the design changes, then that will change the whole thing.

Sherry Curly - Remember many people are not here year round.

Wendy Blondin – It goes off the tax appraiser's mailing address for the owner.

Paul Kersher – Felt the way that votes were counted needs to be readdressed in order to make up for those that don't return their letters.

George Garrett – The County needs to be taken out of the vote. We know those are yes votes. We need to know what the homeowners want.

Dennis Painer - What was the content of the second letter?

Wendy Blondin – It referenced a public meeting and gave estimates on operational and maintenance costs. Based on what people are saying, we will send out a new letter and update everything.

Dennis Painer – We still haven't been told who is going to be involved in paying, whether it is just going to be waterfront or whether it will be all Eden Pine residents. Maybe consider in the next letter giving estimated costs if it was just the waterfront owners paying or if all the residents were paying.

Rhonda Haag – The County has to decide how the cost will be split. But the County has been clear it will not be the County. We will take that into consideration.

Public member - What did the canals rate at?

Rhonda Haag - Really bad.

Public member – wants a meeting for homeowners in their area. **Rhonda Haag** agreed.

Tom Samartino – The frustration level continues because the basic concepts seem to be stuck. There is a fundamental flaw in the approval concept. We don't know what the numerator of the cost fraction is and we don't know what an equitable denominator count is. You do not have a proposal to put in front of these people to ask their approval on. It's unfair to judge the approval rate when you have not posed the question properly. We all agree you will not get 100% concurrence, but the problems need to be addressed. I ask the subcommittee to please make progress on this before asking us again.

Gus Rios – The County is looking at how to spread the responsibility to finance these projects. There is a conceptual approval process on putting together about what a project is going to cost and what it will cost to residents.

George Garrett - This committee is entirely supportive of getting this project done. This is ultimately a decision between you and the County. The equitable split, you all need to understand what you're dealing with, but this table can't resolve that. We will support whatever decision that you all come to.

Tom Samartino – I thought the purpose of the demonstration projects is to test effectiveness of the different technologies. There are multiple projects that use culverts. Why are multiple projects used to determine the effectiveness of culverts?

Rhonda Haag – We originally had one of each, but then we had homeowners approach the Commissioners in a public meeting and the Commissioners agreed to add second projects.

Tom Samartino – There are two culvert projects that have not been committed that are more than your funding deficit and the cost of Eden Pines.

George Garrett - There has been a process to arrive at priorities. There has been a process to come to some conclusion about pilot projects. The money on the table today had nothing to do with pilot program, but weighed in on the decision.

Gus Rios – If you are not getting the letters, we need to make sure the letters are getting to the people. Someone mentioned a meeting. We know that we need to constantly update our records to have a fresh attempt to reach out to all of you. With regards to the 75%, the County has to make a decision on that, not up to the Subcommittee.

Public member – When we went to the County meeting in July, you know no more now than you did then. They asked the same questions and asked to get more information.

Rhonda Haag - Today we got caught up on the DEP grant and didn't have time for a lot of technical details. But we do need to spend some time going over this project in detail.

Mike Maurer - We've had this conceptual issue for a year and a half. The subcommittee asked Rhonda and Wendy to go to the Commission so we could move forward with this.

You told them that you got less than 50% of the people that are willing to do this which isn't true. You got a majority of the people willing to do this. Where is the technology for this? If you were up for vote for County Commissioner, and you 536 people that are in your area and 296 voted for you, you're in. That's 94% that voted for you. You have 94% of the people that responded to you saying yes, we are willing to go through with it, we are willing to pay for this. We're here saying that we want you as a subcommittee to make this work so we have a good foundation to take to the Board of County Commissioners and say we want this done. That's what you want. Mr. Neugent sat there at the last subcommittee meeting and said we want this to work. We do not want this to fail. This is in your hands. This has to move forward. You have to come up with a technology that you're going to use. You have to come up with a cost analysis. It has to come before the people so you can get an actual vote and get a good recognition of what we want.

Wendy Blondin - We did hear very strongly that better delineation of equitable funding method was needed. The county has been awarded a grant by the EPA. Item D there is related to finding an equitable way and reliable funding method and would be discussing Eden Pines as an example. It is one thing that we heard loud and clear that is going to be done.

Rhonda Haag - The County's Internal Legal Department is under a serious research on this whole idea. They are looking at the entire county at all those different options. We're talking a lot of money for the canal restoration program in it's entirety, hundreds of millions of dollars. We can't get all these answers quickly as much as we'd like them to. Eden Pines is a little more difficult because of the operational costs. Potentially if the project works, the operational costs are higher than anywhere else because of the technology. We're trying to move slowly to make sure that it's successful. I understand your frustration, but the County is trying to look at how to fund the entire canal restoration program. Unfortunately it takes a little time to do that when you're doing the whole county, but maybe we can work out some way to push that up just for your area.

Gus Rios - This project has been a priority since the beginning.

Rhonda Haag – We can schedule a homeowner meeting out there. We will send emails to those that we have.

Gus Rios - Maybe set up a public notice that you will have a public meeting out there and everyone that wants to attend will attend. Maybe you can poll with the people you have contact with to select a specific date.

Rhonda Haag – Meeting can be after the New Year.

Sherry Curly – Is there a link that we can sign up with if we're interested in receiving future emails? Then maybe we can reach out to our neighbors.

Rhonda Haag – That's a good idea.

b)Update from the Village of Islamorada

Wendy Blondin – The Islamorada project was an air curtain. It has been operating under a very difficult year. The seaweed loading has been very heavy. These systems need tweaking and have been going through the contractor who is also funded by the Village to do two years of operation maintenance. That is a key component in these systems to make sure they are correctly balanced for air flow. It is a developing technology the contractor keeps coming up with different recommendations of different diffusers, of different ways to monitor air. Air curtains don't keep every ounce of seaweed out. That is a common misconception. However, it has been very effective and marvelous success and is a demonstration project because we have the time to research how it is working and optimize it.

c) C29 Key Largo Backfill Update

Rhonda Haag – Received many emails from homeowners in the area. Gave update on public comments praising efforts and the wildlife.

d) Tour of C266 Organic Removal Project – August 5

Gus Rios – They are removing the organic muck at the bottom of the canal. It's then dewatered and the clean water is returned back to the canal. There is still a lot of work, but the canal used to be completely tannic and brown and the smell of sulfide was strong. I spoke with some residents who were very enthusiastic and happy that the canal was moving forward.

e) New EPA Grant funding

Rhonda Haag – Applied for \$125,000 and got \$75,000 to do 4 projects. We're going to do testing to assist with beneficial reuse of organics. An issue with the organics is that it has a content of salt. We want to do testing to determine the level of flushing that is needed in order for that to become an upland freshwater material. It is a gorgeous dewatered organic material. The second task is looking at alternative technologies to dredging for these organics with things like capping, in situ treatment technologies. A lot of this is broadening the existing technologies that are in the Master Plan to get a broader array of technologies. The third task is looking at alternative technologies for water quality improvement not just related to organic materials. These are ones not yet identified in the Master Plan and are more passive and less energy intensive. That may be something that could get addressed to Eden Pines. The last task is to start finding a funding mechanism for the canal restoration program. There are a lot of varied and good tasks in there.

Colin Hannaford – One thing you might look at is on the organic canal. You have about five feet. The process of extracting oxygen out of the water is only a couple of centimeters the rest is different levels of inert. If you don't have to go down so far, you can probably get more done for less.

Gus Rios - Part of the EPA grant is looking at alternate technologies to see if there are other feasible and effective ones. Biovation approached us and would like to say a few words about their company.

Dr. Randy Parkinson – Is here on behalf of Biovation. Has been talking with a colleague about alternative technologies and microbial blends that target specifically the organic matter in the water column and consume it. Then you reduce your biological oxygen demand and increase your dissolved oxygen. There would be a circulation system that would turn the water over. We did the back of the envelope on 287 and the system that we talked about would turn that water over weekly and then we would introduce microbial blends that would consume 40-50% of some of the standing stock over some amount of time. That detail would have to be worked out. The idea is to use this alternative technology is to attack the dissolved oxygen issue from two sides that are more traditional. We have a slightly different design from the ones that you are using. We think the energy consumption is about 95% less. You have economic, aesthetic, and the environmental noise that we avoid. We attack it through aggressive circulation and the introduction of air and blending and the micro blends. We would also proposed the same the same water quality strategy that FIU uses with the same technology, the same sampling, and the same parameters to demonstrate success. It's one of the things we noticed in the Master Plan, basically the idea should work but it's hard to measure the success. The budget is certainly with the numbers you have for the culvert installations and pumping. It's within the same level you are already doing.

Gus Rios- Brett Corwin of Biovation sent a “white paper” for review. This committee is interested in alternative technologies. **Dr. Parkinson** agreed to share the paper with the County/Rhonda for review.

Dr. Randy Parkinson - looked through the minutes of past meetings. This technology was brought up before. This method has proven, and can be used in groundwater restoration and contamination of organic molecules. Maybe you could look at more than more than some traditional engineering technologies that can be energy intensive and very expensive in long term maintenance. We think this would be significantly less in maintenance costs. You can eventually reduce or eliminate the introduction of bioblends once you reach your goals.

5. Water Quality Monitoring Report – **Dr. Henry Briceno, FIU**

Dr. Henry Briceno –We have performed four surveys in canals, three general and one specific to Geiger. We monitored before the culvert was installed, after it was open, and again after it was closed. The culvert was installed between 472 and 470. We measure water chemistry, the profile of the water column, and also deployed equipment there on the surface and the bottom of the canal to see how that behaves and changes over longer periods of time. In conclusion, there are more differences in canal behavior or chemistry through seasonal changes rather than the geographical orientation of canals. There was a significant difference in dissolved oxygen at the bottom with the culvert opened vs. closed. When the culvert was closed, it was out of compliance and when it was open, it was back in compliance.

6. Monitoring Harmful Algal Blooms (HAB) in

Gus Rios – We have been receiving reports from residents in Key Largo and the Lower Keys. There has been a lot of seaweed coming in many canals. People are complaining about the color of the canal and smell. FWC and Mote Marine Lab have been helping in monitoring the blooms associated with this seaweed loading. This can be a topic for another meeting, but maybe we can send water samples to the St. Petersburg FWC lab so we can capture the algal blooms in our data as well.

12. Next meeting date; place; agenda topics; adjourn

Meeting adjourned at 12:55PM.