



LOXAHATCHEE RIVER MANAGEMENT COORDINATING COUNCIL
MEETING

Monday, September 25, 2017 2:00 pm

The River Center
805 N. US Highway 1
Jupiter, FL 33477

MINUTES

I. Call to Order

Tom Howard call the meeting to order at 2:00 p.m. and welcomed everyone.

II. Roll Call

Greg Braun – Martin County Conservation Alliance
Michael Dillon - South Indian River Water Control District (SIRWCD)
Deborah Drum - Martin County
Chad Kennedy - Florida Department of Environmental Protection
Tom Howard - Jupiter Inlet District
Ivette Leiva - Florida Department of Transportation
Pat Magrogan - Gulfstream Council
Justin Nolte - South Florida Water Management District (SFWMD)
Jonathan Ricketts - Northern Palm Beach County Improvement District
Gary Ritter - Florida Farm Bureau
Dick Roberts - Martin County Conservation Alliance
Herb Zebuth - Florida Native Plant Society

III. Approval of Minutes from June 26, 2017 meeting

Consideration for approval of the June 26th minutes was moved to the next Council meeting scheduled for January 29, 2018.

IV. Project Updates

A. Florida Turnpike Widening Project Update – Mark Easley (20 min)
Brian, general engineering consultant for Florida's Turnpike presented the project development environmental PDE study they are doing along Florida's Turnpike from Indiantown Road to Ft. Pierce/SR70 – 36-mile area. They will be doubling the size of the turnpike from 4 lanes to 8 lanes and reconstructing bridges over several waterways especially the Loxahatchee River and the St. Lucie Canal. As part of their analysis they will be looking at the existing interchanges to see if there are any modifications that can be done to help with the traffic flow and also looking at several new interchanges along the system. Today's focus was on the Loxahatchee area. He shared several constraints they will have to deal with including the wild and scenic requirements for the Loxahatchee River. This is something they need to consider as they move forward with this study. This project began in early 2017. An alternatives information meeting will be held in April 2018 and a public hearing will be held in early 2019; one in a southern location and a duplicate meeting in a more northern location. There will be an approved document in mid-2019.

Questions/Comments

Gary Ritter asked when FDOT are doing these projects especially in an area where you have the Loxahatchee that's doing the reasonable assurance plan and also going into an area that has a basin management action plan, is there a way they can dovetail what they are trying to do to help provide storage and water quality treatments in these environmental projects that are within that?

Brian shared that one of the proposals was to look at a regional facility or projects in the basin or BMAP that the turnpike can contribute to as they move forward with the design, construction and permitting as opportunities to do those kind of steps. It is still early in the process to determine what that is.

Brian shared that Council members are welcome to submit comments throughout the process. They will take every comment into consideration.

B. Riverbend Park Update – PBC Parks (10 min)

Donald Campbell, recreation program supervisor with Parks and Recreation provided an update on the Riverbend Park project. Donald shared that Eric Bailey is no longer working on this project as he left at the end of July and with his departure, there has been a little bit of a gap in service as far as rentals at the park. As of right now, they are encouraging people to come out and enjoy the park and anyone wanting to rent a canoe or kayak, are being directed to their sister park at Jonathan Dickinson. Currently in the review process regarding the specs that they will be requesting from those who will be bidding on the Concessionaire project. The goal is to have the project contract awarded for the Concessionaire in Dec/Jan and construction to begin shortly after it's awarded. New park amenities include new offices, restrooms, new parking lot with over flow parking as well. Water and Sewer are setting up at Battlefield Park to be able to have restrooms there in the future. The new park amenities to be completed in Fall 2017. The plan is to have a ribbon cutting on Nov 4th.

Questions/Comments

Dick Roberts asked if there are any development criteria from the park as opposed to Battlefield, do you separate those two uses and if the vegetation criteria will be the same as that in Battlefield Park?

Donald shared that they will have signs that will designate the parks as River Bend Park and Lox River Battlefield Park. Also, being a passive park, they want to encourage as much opportunity for wildlife to succeed and have opportunities for food, water and shelter and at the same time the public can come enjoy it but they will try to discourage certain activities in certain areas. It's very similar as far as the natural areas.

Chad asked is there going to be any linkages between the two parks to Cypress Creek.

Donald said yes, there is a pedestrian bike trail that comes from Cypress Creek that goes right into the Riverbend property.

A question was asked about the number of acres in Battlefield Park and if there are reenactments at the park?

Donald said Battlefield is 43-45 acres and the entire park is 700 acres and they just had their first Seminole battlefield reenactment called "The Battle of the Loxahatchee" last year in January and they are planning a second one this year.

C. Lainhart/Masten Refurbishment Update – Octavio Castillo (10 min)

Octavio Castillo, project manager with the SFWMD gave an update on the progress of the Lainhart and Masten Dam project. He shared that the SFWMD sent inspectors to check out the area after hurricane Irma. They lost a few small trees but no damage to the area. Everything looks good and vegetation is growing. He showed some pictures of how everything looks right now and the portage being constructed on the east side of Masten and benches. He showed pictures of the seepage barrier construction at Lainhart. The portage at Masten Dam should be completed in two weeks. Lainhart should be done by the first week of November. The contract should be completed by end of November. This is way ahead of schedule as the original contract had the project completed by July of next year. Octavio shared a picture of how the area will look when everything is complete.

D. Update on the Impaired Waters RAP – Julie Espy, Program Administrator, Water Quality Assessment Program 2 hr)

(Note: Minutes below from FDEP Minutes dated 9/25/17)

Julie Espy, Program Administrator of the DEP Water Quality Assessment Program, welcomed everyone to the Loxahatchee River RAP meeting. She started the meeting with a brief overview of the last workshop. During this workshop, the restoration plan options were reviewed and a poll was taken to determine the preferred plan option. Based on the poll, the goldfish and peacock plan options were the most selected. The goldfish plan is a RAP without delay. The goldfish plan uses the current numeric nutrient criteria (NNC) and the DEP pollutant load plan is put on hold while one or two things happen— the targets are evaluated and/or the model is enhanced/changed. The stakeholders may use the PLSM or develop/use a locally-funded model. The stakeholders could also sponsor an effort where the NNC are evaluated and, perhaps, new targets proposed and justified to DEP and the U.S. Environmental Protection Agency (EPA). Julie reminded the attendees that the PLSM is a simplistic model that has limited input capabilities. For example, the model does not take into account groundwater and onsite sewage treatment and disposal system (OSTDS) inputs.

Tom Howard stated that he originally preferred the goldfish option, but is now leaning more towards the peacock option. The peacock option will ensure the targets are right, which will help determine appropriate projects and, in turn, responsible use of taxpayer dollars. Deborah Drum stated that she prefers the peacock option as well, but government budgets for the next fiscal year are going through the adoption process right now. The money required for the technical work associated with this plan option, may not be available until the next budget cycle. Deborah noted that the rabbit plan option (4e plan) could be considered, since the local governments have improvement projects budgeted for this fiscal year. Julie stated that the rabbit plan is a temporary plan that would be replaced with a total maximum daily load (TMDL).

Tiffany Busby reminded everyone that the PLSM is a DEP estimation tool that is available to stakeholders at no cost. The model is a simple model that is driven by the annual rainfall and land use. At the last workshop, the model inputs were reviewed and the following recommendations of refinement were provided:

1. Use local event mean concentrations (EMCs) rather than literature values.
2. Review runoff coefficients (ROCs) and associated soil types.
3. Look at other flow stations for representative flow data.
4. Use rainfall data from a more localized station.
5. Account for groundwater load.

DEP came up with alternative input data based on these recommendations. The alternative data and the supporting information will be posted on the DEP file transfer protocol (FTP) site.

DEP originally used statewide literature-based EMC values (Harper, H. H., 2011, New Updates to the Florida Runoff Concentration Database) in the PLSM. Local EMC information was provided to DEP after the last workshop by Alan Wertepny. Greg Nolte, Martin County, also provided comments and suggestions. DEP reviewed the information and created a comparison table of the local and statewide values. The comparison table also shows the recommended alternative EMCs (blue shaded cells). The land use descriptions shown in the comparison table are based on the land uses in the PLSM. The EMC values from the local studies were placed in one of these categories, as appropriate.

The St. Lucie BMAP EMC values are not the calibrated values and the EMC values from the Palm Beach County Report are based on the Lake Worth Stormwater Master Plan Report. The Lake Worth and Palm Beach County total phosphorus (TP) EMCs are exactly the same. For total nitrogen (TN), the values are different, because the Lake Worth study used total Kjeldahl nitrogen (TKN) values. The blue shaded cells are the recommended alternative EMC PLSM input data.

Questions/comments on EMCs:

- How old is the Harper report? Tiffany replied that the report was published in 2003 and updated in 2011.
- Were the agricultural EMCs compared to the University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) EMCs? Julie replied no. Tiffany stated that the local studies only had one land use description for agriculture, whereas the Harper study had four land use descriptions. She noted that they could use the Harper agriculture values instead, if those were preferred or are important land use types in this basin.
- Tiffany stated that she will post the presentation and the EMC source documents on the DEP FTP site.
- Bud Howard asked if the recommended EMC values have been incorporated into the model. Julie replied that DEP has not re-run the model with the recommended values, but the spreadsheet model is set up to analyze side-by-side the original and alternative values. Tiffany recommended that the stakeholders pick the values they want and re-run the model to determine the change.
- There was a suggestion to exclude the northwest fork of the river (possibly referring to Kitching Creek basin) from the study area since it is not contributing to the impairment.

The ROCs originally presented in the PLSM were based on the Schueler method. This method uses percent impervious for each land use type to calculate the ROC using a regression equation. An alternative to the Schueler method is the Harper and Baker method. The Harper and Baker method estimates runoff values using a clustering algorithm for eight land use types and four soil groups across the State of Florida. The ROCs shown in the comparison table for the Harper and Baker method are an average of the four soil group ROCs. Although the Harper and Baker method is more detailed than the Schueler method, it could only be related to six land uses in the PLSM (the study only covered eight land use types). Tiffany recommended that the Schueler method be used or the PLSM be modified to account for soil groups. However, if the Harper and Baker numbers are used, there would still be a need to establish ROCs for the land uses not evaluated in the Harper and Baker study. This could be accomplished by using the most similar land use types in the Harper and Baker study and using those values for the other land uses or using the Schuler method for the values where the Harper and Baker study does not provide estimates.

Questions/comments on ROCs:

- Pattie Gertenbach stated that soil type and land use were used to calculate ROCs in the Indian River Lagoon.
- Julie stated that DEP has the soil type information and can look at adding this information to the PLSM, if preferred.
- Tony Janicki stated that the Schueler study was performed in Pennsylvania, which is very different geographically. He suggested tying the land use to soil type.

Julie displayed a table of the U.S. Geological Survey (USGS) flow stations in the basin. Station 2277600 is the only station that records actual discharge data, but it is located at the bottom of the basin and is not representative of the Loxahatchee River discharge. The South Florida Water Management District (SFWMD) S-46 station is also not representative of actual flow conditions because it is managed to maintain specific conditions.

Questions/comments on USGS flow stations:

- Tony reported that a SFWMD hydrologic model (and associated minimum flows and levels [MFL] report) may contain relevant flow data.

Tiffany reported that the original rainfall data used in the PLSM were obtained from Station JDWX. This station is located north of the RAP boundary and is missing several months of 2006 data. Station SIRG (located southwest of the RAP boundary) was used to fill the 2006 data gap. The Loxahatchee River District provided additional rainfall data along with regression analyses of observed rainfall data to Next Generation Radar (NEXRAD) data. The regression analysis shows a strong correlation between the two datasets.

Based on a review of the rainfall data and station locations, an average of the Tequesta Water Plant (TWP) and S-46 rain gauge data are recommended for the PLSM. Both stations have a complete dataset for the evaluation period and have good agreement with the NEXRAD data. The two locations were selected because they provide some spatial variability—TWP is located east of the north fork and S-46 is located southwest of the north fork. There are several rain gauges near S-46. S-46 was selected to represent this area but a different station can be selected, if preferred.

Questions/comments on rainfall stations:

Tiffany stated that she will post the rainfall workbook provided by the Loxahatchee River District to the DEP FTP site. She noted that she added maps to the workbook to show the rain gauge locations.

Julie stated that the PLSM does not consider groundwater loads to the estuary. Comments were received that that this load be included in the model. DEP is pulling together the groundwater data to be able to evaluate this load. The Loxahatchee River District provided a groundwater study. The DEP groundwater section is reviewing the study to see if the estimates match the measured data. The study will be posted and conclusions of the study will be presented at a future meeting.

Questions/comments on groundwater loads:

- It was noted that the model just looks at stormwater runoff, but many systems are designed to control groundwater levels. The discharges from these systems could have groundwater loads in addition to loads from stormwater runoff.

- Dick Roberts noted that Martin County (on Kitching Creek) and SFWMD also performed groundwater studies. Julie asked Dick to provide copies of the studies. Julie stated that the surface water data were aggregated in an attempt to find better relationships between water quality concentrations of TN and TP with chlorophyll-a (higher r-squares). A good relationship (r-square) for estuaries would be around 0.4 or higher due to the dynamic nature of these systems, but lower ones could be acceptable. Waterbody identification (WBID) 3226D is showing a good relationship compared to the other WBIDs. Although WBID 3226D is not an impaired WBID, it is the receiving WBID. This provides some confidence that projects will help achieve the water quality targets.

Questions/comments on regressions by WBID:

- The poor statistical relationships cause concern for the goldfish plan option. Projects may not achieve the water quality targets.

Julie stated that Amec Foster Wheeler is evaluating the data for hotspot areas. A preliminary analysis will be available next week, so the results should be ready for the next meeting.

Julie reminded everyone to submit best management practices (BMPs) along with information to estimate reductions. She noted that Palm Beach County provided their current urban stormwater BMPs. Tiffany reminded everyone that the project reductions will be based on the selected EMCs and ROCs.

Julie stated that the last recommended PSLM refinement was to include more recent land use. This is not recommended because it will reduce the number of projects that can be applied to the baseload reductions.

Questions/comments on hot spots, BMPs, and land use:

- Pattie stated that the existing water quality monitoring stations may not be capturing all the hot spots.
- Tiffany commented that most of the monitoring stations are located near the shore and not in the middle of the waterbody. The monitoring providers might want to consider adding new ambient water quality monitoring stations. The additional data may improve the regressions.
- Bud noted that the hot spot areas have been identified. It might be worth going into the basins to look for issues (i.e., data with special projects).

Julie displayed a table of the current water quality targets and noted that the existing targets apply to the goldfish option. Alan commented that the project reduction goals may not be sufficient to meet the water quality targets. Tiffany stated that progress towards the water quality targets is evaluated every five years. If the water quality is not improving as anticipated then adjustments are made to the plan. Project reductions are also evaluated on an annual basis. Ken Todd asked how progress is determined with the rabbit option. Julie replied that the rabbit option is a short-term plan; if this plan is selected then the targets should be met within five years. The rabbit plan is a good option if you have a handle on the issues; it is not the best option for a complex system like an estuary. Ken noted that he is representing Palm Beach County and is leaning towards the peacock plan option. Tom stated that a decision on the type of plan will not be made today, but a census should be taken at a future meeting.

Bud presented chlorophyll criteria for the Loxahatchee River. He first reviewed chlorophyll basics and the history of the NNC development. He noted that the NNC for chlorophyll seemed excessively

stringent. There are two WBIDs designated as impaired for chlorophyll. Opportunities for improvement have been identified along the southwest fork. The river is sampled weekly for bacteria and special projects are identified in various areas along the river. A comparison of the NNC to subtle changes in the NNC (i.e., one to two micrograms per liter increase) can change the impairment status. In summary, the chlorophyll criteria are stringent, there are variations in the station results (variability with laboratory results), and subtle changes to criteria affect the impairment status of the river. Bud stated that the Loxahatchee River District supports a scientific approach and proposes to reassess the targets with stakeholders and subject experts. It is proposed that the reassessment be incorporated into the RAP.

Tony agreed that there is large variability in results from laboratory to laboratory. He also agreed that the criteria may be too stringent for the Loxahatchee River.

Bud noted that they should look at peaks rather than annual averages. Tony stated that seagrasses do not respond to peaks, which is why averages are used. Julie commented that an annual geometric mean does not have to be used if new targets are established; a different measure can be selected.

Wrap Up and Closing Remarks

Tiffany stated that she will let everyone know when the PLSM refinements are complete and the new file is posted. This should be sometime next week. No feedback was received on the project collection information. Stakeholders should provide corrections to DEP as soon as possible, otherwise it will be assumed that the information is correct.

Julie set the next meeting for October 30, 2017. Tom noted that he would like expert recommendations since there are so many variables. He suggested that the agenda for the next meeting include each action item with multiple choice options. Tiffany also suggested that the agenda include a decision on the PLSM; additional refinements may not be necessary if a locally-funded model is selected.

V. Watershed Status Updates

A. Loxahatchee River Dashboard Overview, Albrey Arrington, LRD (5 min)
Albrey was not in attendance to present this item.

B. Water Quality, Bud Howard, LRD (5 min)
The summary to Bud's Water Quality update is included here in the FDEP RAP minutes section on pages 6 and 7.

VI. Field Trip Planning & Discussion

January field trip suggestions – The new River Bend Park

VII. Member Issues (brief, verbal status update)

- A. Land Management
- B. Flood Control
- C. Environmental Issues
- D. Recreation Opportunities
- E. Permits

Tom Howard shared that Jupiter Inlet District was able to get a permit for the Moonshine Creek restoration from the Corps. He thanked the SFWMD and DEP.

Public comment

A representative of Jupiter farms residents who also spoke on behalf of Jupiter Farms Environmental Council wanted to make the LRMCC aware that there is a proposal being considered by the Palmar board to do a land swap between developers and state and county governments to enable residential development in the Palmar Water District. He shared that once residents are established, it will be easier for additional development to occur because the obstruction of roads and drainage will be introduced. He said this wouldn't ordinarily be a concern with Martin County, Palm Beach County and SFWMD sitting on the board and having the ability to keep Palmar undeveloped. The representative said there was a letter sent to the executive director of the SFWMD that has been unanswered for over a month. He shared that in the past, LRMCC members have been sensitive to the slightest chance that Palmar could be developed because the wetlands store entry water going into Cypress Creek and the NW Fork of the Loxahatchee River. This was the idea behind the agencies buying up all this land. He asked that the Council support their position to try to keep development out. His concern is for Jupiter Farms residents. The development in Palmar can potentially affect the quality for them in the form of more traffic and less green space but primarily less water storage areas to the northwest. Final point he made is that these developing lands are likely to discharge water of poor quality to an already impaired water body.

Tom Howard suggested this item be added for discussion at the next LRMCC meeting.

VIII. 2018 Meeting Schedule

All meetings will be held at The River Center – 805 N. US Highway 1, Jupiter, FL 33477

January 29, 2018

March 26, 2018

June 25, 2018

September 24, 2018

IX. Public Comment

X. Adjourn

Next Meeting is scheduled for January 29, 2018