

MEETING SUMMARY
Lake Jesup, Crane Strand, and Long Branch BMAP
Technical Working Group Meeting
May 29, 2008
1:00 PM – 4:00 PM
Sylvan Lake Park
Sanford, Florida

Meeting Attendees

John Abendroth, FDEP Libertad Acosta-Anderson, CH2MHill Barbara Bess, FDEP Mary Brabham, SJRWMD Kelly Brock, City of Casselberry Tiffany Busby, Wildwood Consulting Fred Calder, FDEP Richard Creedon, E. Seminole Cty Rural Lands Coalition Lisa Curtin, City of Orlando Gloria Eby, Seminole County Tim Egan, City of Winter Park Bill Fagan, AquaFiber Technologies Brian Fields, City of Winter Springs Mark Flomerfelt, Seminole County Vivian Garfein, FDEP Jennifer Gihring, FDEP Ed Hayes, FWC Cecilia Height, Sierra Club	Dan Homblette, Orange County Danielle Honour, CDM Joel Jordan, RCS Bob Kelly, SAIC Robert King, Friends of Lake Jesup Regina Lovings-Morse, SJRWMD David Mahnkend, E-Sciences Kevin McCann, City of Orlando Durga Nagda, City of Lake Mary Kim Ornberg, Seminole County Zynka Perez, City of Winter Springs Marcy Policastro, Wildwood Consulting Penny Post, Orange County Robert Potts, E-Sciences Marissa Rodriquez, City of Maitland Gary Smith, Orange County Health Department Joe Walter, PBSJ Shannon Wetzel, Seminole County
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Opening Remarks

Welcome and Introductions

Tiffany Busby welcomed the group and everyone introduced themselves and the entity they represent.

Questions on the Total Maximum Daily Loads (TMDLs)

Kim Ornberg stated she received information that the Florida Department of Health (DOH) had a meeting this morning to discuss TMDLs and she asked if anyone knew about this meeting. Gary Smith responded that he attended the meeting and the DOH is looking into alternative septic systems that can use a passive type of treatment method as opposed to the more expensive option of using pumps. The University of Central Florida is conducting research on different types of systems and filter media. Jennifer Gihring added that the purpose of the meeting was to discuss the Wekiva TMDLs and she had provided information to the DOH on these TMDLs to present during the meeting.

Long Branch Basin Management Action Plan (BMAP) Adoption

Jennifer stated that the Florida Department of Environmental Protection (FDEP) Secretary signed the Secretarial Order for the Long Branch BMAP, which means the BMAP is officially

adopted. A hard copy of the BMAP is available at the FDEP Central District office and also in electronic form on the FDEP FTP site. The St. Johns River Water Management District (SJRWMD) provided a statement of support for the BMAP. Statements of support were also received from Orange County and the Florida Department of Agriculture and Consumer Services (FDACS).

Other Updates

Kevin McCann stated that Orlando recently completed two studies. One was a detailed diagnostic study on Spring Lake, located at the headwaters of Howell Branch, which identified several stormwater projects for the area. A meeting will be held on June 12th to present the report and its recommendations to the residents of Spring Lake. Kevin noted that a representative from FDEP may want to attend since the meeting is related to TMDLs. The second study focused on the remaining lakes in the Howell Branch basin and provided cost estimates and recommended stormwater projects. Last week, Orlando submitted approximately \$2.5 million in projects for Section 319 funding, which would result in about 500 lbs/yr of phosphorus reduction in the Howell Branch chain.

BMAP Project Discussion

Eligible Best Management Practices (BMPs) for BMAP Projects

Jennifer reviewed the handout on BMPs that will be eligible for credit towards meeting the allocations. This information is based on feedback from Eric Livingston (FDEP) on which types of BMPs he felt there was adequate information to determine estimated reductions. The list of acceptable structural BMPs in the handout have been shown to be effective in removing phosphorus from stormwater. The Stormceptor units are listed as provisional because Eric is funding a project with the City of Sanford to determine the benefits of this BMP. The results of the study should be available in June or July. If the study shows there are benefits to using Stormceptors to remove phosphorus, they will be eligible for credits in the Lake Jesup BMAP.

Kevin stated that they have found that continuous deflective separator (CDS) units are removing pollutants but the percent reduction has not been quantified. Tim Egan added that the CDS units are removing debris that would otherwise contribute nutrients but the pre and post monitoring data does not adequately show this reduction. Kevin noted that the only way to do this is to weigh the matter collected and determine the nutrient content; however, the FDEP standard is based on leaf content, which is not a good measurement. Kim stated that at the last Stormwater Technical Advisory Committee meeting, they discussed the regional sampling effort that will be conducted to collect sediment and other matter from street sweeping and catch basins. This study should help provide information on the nutrient content of the material removed by the BMPs. The University of Florida will conduct the study and is looking for feedback on land use types and BMPs to conduct the study in Orange and Seminole counties. Dan Homblette added that the results of the study will not be available for several years.

Tim suggested that for CDS units, a conservative estimate for the expected reductions could be used and then this value can be adjusted once more information becomes available. A lot of entities found that this BMP is most cost effective option for their area in certain circumstances and they should be able to receive credit. Bob Kelly noted that the TMDL is based on nutrients in the water column, not on sediment or leaf load, which has not been accounted for in the

TMDL. CDS units do work well for removing sediments and leaves but it is not known if they benefit the water column. Shannon Wetzel stated that most of the BMPs on the list are large construction projects and many of the entities do not have the land for projects of this scale.

Tim asked why exfiltration is not included on the list of acceptable BMPs. The City of Winter Park just completed a large exfiltration projects that was funded by Section 319 funds from Eric Livingston. They are currently conducting a study to determine what treatment is being achieved. Tim noted that he was not sure when the study would be complete because it is dependent on rainfall. Kevin stated that Orlando is designing a large exfiltration system but if it will not give them credit for the TMDL, then they will not complete this project. Brian Fields noted that they are adding exfiltration to their ponds to help meet SJRWMD criteria so it is difficult to say that it cannot be given credit in the BMAP. Fred Calder added that exfiltration is usually part of a treatment train to help with reductions. Jennifer will talk to Eric about adding exfiltration and treatment trains to the list of BMPs.

Jennifer stated that there are options for how credit can be given in the BMAP. One option is that if no information is available for a BMP, then no credit will be given. A second option is to use a conservative value for the reductions until more information is available. The third option is to give credit in the non-quantitative part of the BMAP. Fred noted that there are efforts currently underway to quantify reductions from nonstructural BMPs. The BMAP could discuss these studies and acknowledge that these BMPs cannot be quantified at this time. The BMAP can then be revised once more information is available since the BMAP will have to be updated to reflect information from other ongoing studies (such as the nitrogen fixation study). This is third option that Jennifer mentioned and is consistent with a phased BMAP approach.

Kim stated that this is a good option because it will provide an incentive to fund the studies since the studies will help the entities receive credits for those BMPs later. Tim noted that he was concerned that funding would be diverted from worthwhile efforts like street sweeping to fund a BMP that is on this list. Dan suggested that the BMPs from the approved list be included in the quantifiable column of the allocation table and that the non-quantifiable BMPs be listed in a separate column to show how the entities are receiving credit for some efforts while more information is being gathered on others.

Jennifer stated that she would talk to Eric about adding the BMPs discussed during the meeting to the eligible list and also about including language in the BMAP that additional BMPs could be added once more information is available. Dan noted that it will be important to know which BMPs are eligible for credit because the entities cannot take the risk of using something that might not give them credit. Tim added that time should be given to determine the benefits of those BMPs that are currently unquantifiable. Jennifer stated that credit can be given in the BMAP for any BMP that an entity has real pre and post monitoring data. Dan suggested that the group meet to discuss BMPs and their real experience with those BMPs to determine what values should be used for calculating benefits. Tiffany noted that the group should start putting together any data they have on their BMPs for discussion and for Eric's review.

Consumptive Use and In-Lake Projects

Brian noted that he raised this issue because there are a range of projects that will occur related to withdrawals and there is the opportunity to determine if nutrient removal is also occurring. Winter Springs has a consumptive use permit to remove water from Lake Jesup, treat the water, and use it in their reuse system. Brian asked if all the water that is removed is not needed, if there is the potential to receive credits for returning the cleaned water to the lake. Brian stated that this scenario is several years away so the recommendation in the handout to not give credit for these types of projects in the first iteration is acceptable but this option should not be removed permanently.

Jennifer noted that there are two parts to the handout: 1) removal of water for consumptive use and 2) in-lake projects. In regards to the consumptive use question, the group asked had asked for clarification on what is meant by consumptive use. The handout now explains that consumptive use is taking water out of the waterbody and moving it somewhere else for water supply purposes. For the BMAP and TMDL, credit cannot be given for consumptive use projects because the water is not being directly returned to Lake Jesup and it is not known if removing the water will benefit the nutrient level in the lake. Consumptive use projects will not be given credit in the first iteration of the Lake Jesup BMAP.

Kelly Brock asked if this policy only applies to consumptive uses of the lake or if it would apply to a stormwater pond that is used for reuse. Jennifer responded that this is only for consumptive use of the lake and that a stormwater reuse pond would be given credit since it reduces part of the external loads to the lake. Jennifer will add stormwater reuse to the list of BMPs to discuss with Eric Livingston.

Jennifer reviewed the recommendation for in-lake projects. Credit would be given for in-lake projects if in-lake loads are included as a source in the TMDL and if the pollutant load reductions and benefits can be estimated with confidence. In the case of Lake Jesup, neither of these criteria can be met in this iteration of the BMAP. The Lake Jesup TMDL did not include reductions associated with in-lake processes and the group does not have the necessary information to be confident in the nutrient reductions from in-lake projects. This recommendation is also consistent with the approach in the Interagency Plan, which focuses on controlling external loads before implementing projects in the lake. The BMAP will clearly state that these decisions are for the first iteration and could change in future BMAPs when there is more information.

Bill Fagan stated that in AquaFiber's studies on the lake, they found that a lot of phosphorus is regenerating from the lake, in addition to the external loads. Joe responded that Dr. Gao (FDEP) would agree that wind and other isolated events could stir up the sediments and nutrients but that over time it settles resulting in no net affect. Based on the model today and what is currently known about the lake, the model would show little benefit from dredging the lake. If a sediment component could be added to the model, based on the Seminole County and SJRWMD studies, the result could change.

Robert King asked when the next iteration of the BMAP would occur. Jennifer responded that she is unsure if the next BMAP would line up with the FDEP five-year TMDL cycle because

they are more dependent on the timeline of the studies to obtain needed information. Lake Jesup is a Group 2 basin so the model for the TMDL will be run again this year. Robert noted that this issue goes back to what the group was discussing earlier that if credit is not given for in-lake projects, no one will implement them.

Kelly suggested making a clarification to the recommendation for Question 1 (consumptive use) that this applies only to the lake and to stormwater reuse.

The Technical Working Group reached consensus on the recommendation that “consumptive use projects will not be considered for pollutant removal credit in the first iteration of the Lake Jesup BMAP” with the caveat that consumptive use projects applies only to the lake and not to stormwater reuse.

Tim noted that on the in-lake projects question, he is not comfortable with lumping projects that pull water from the lake and return treated water to the lake in the same category as in-lake projects. Returning treated water to the lake is very close to treating external loads and is not the same as treating an in-lake process that was not identified in the TMDL. Robert added that treating the lake water in the AquaFiber project is similar to treating stormwater, which is separate from treating sediments. Regina Lovings-Morse stated that monitoring will have to occur with AquaFiber’s project to determine how much phosphorus is being returned to the lake. In addition, a threshold should be set for the phosphorus level that can be returned to the lake.

Tiffany stated that they will revise the handout to clarify what is meant by in-lake projects (treating lake water and returning it) and to add certain types of in-lake projects in this iteration. The revised handout will be provided at the next meeting for discussion because this is a major change from what was originally recommended and what is included in the Interagency Plan.

Project Benefit Calculations

Tiffany noted that the group previously discussed developing tools to provide consistency for estimating phosphorus load reductions. Jennifer stated that Eric Livingston is in the process of reviewing the numbers for the Environmental Protection Agency (EPA) spreadsheet model to estimate the benefits from BMPs. The additional BMPs suggested by the group will be included in the model if approved by Eric. While a Geographic Information System (GIS) based tool was suggested for this analysis, the funding is not available to create this model. Joe added that the delineation (either in GIS or on paper) will be needed for all projects in addition to documentation for how the reductions were estimated. The percent reduction will be input into the model to determine the pounds of phosphorus removed so that the estimated reductions are consistent with how the TMDL was calculated. Jennifer stated that more information on the tools will be provided in a later meeting.

Allocations and Reduction Table Discussion

Site 10 EMCs and Estimated Loads

Tiffany stated that several members had comments on Site 10 before the group discusses the handout. Richard Creedon, Eastern Seminole County Rural Lands Coalition, stated that his comments fell into three parts: loading, blame, and future of the site. The dumping of any sludge on the site must be stopped as soon as possible because the lake cannot be cleaned up if sludge is

allowed to still be dumped on the site. Changing the form of the sludge by drying it out only kills bacteria and does not remove nutrients so a date must be set for stopping all sludge applications on the site. There is a lot of blame for the current state of the site. The Seminole County Board of County Commissioners stated that only commercial fertilizer could be used on the site but then FDEP allowed sludge to be applied. A funding mechanism must be found to purchase the entire site from the City of Sanford to place the site into permanent conservation.

Cecilia Height, Sierra Club, added that the site should not be allowed to remain with sludge on it because the sludge will remain a source of loading for years. It does not make sense to implement all these projects when there is a source of loading near the lake, which should not have been allowed in the first place. The necessary funding needs to be found to clean the site.

Tiffany thanked Richard and Cecilia for their comments and noted that the Site 10 handout was presented at the last meeting. The group had requested time to think about the allocation approach for the site. Jennifer added that they discussed how the numbers were calculated during the last meeting. The updated total load (approximately 4,000 lbs/yr) is made up of a stormwater load, which is the quantitative load that was assigned to all the entities, and a load from the wastewater and residuals applications (approximately 3,400 lbs/yr). This load will not be included in the quantitative allocation because it was not included in the TMDL. Jennifer noted that the City of Sanford already has projects planned for Site 10 and these will be included in the BMAP so while they would not have an allocation for this load, the City of Sanford would have the responsibility to implement the projects. Tiffany added that these projects will only give the city credit for addressing the loads from the wastewater and residuals and not from the stormwater load.

Jennifer noted that by not giving the City a load reduction for the wastewater and residuals, their wastewater permit will not be affected. Instead of giving Sanford a quantitative reduction for these sources, the projects will be listed in the BMAP with a requirement for additional detailed monitoring on the site to show the benefits of these projects on the loads from the site to the lake. Shannon asked what will happen if the monitoring shows that the projects do not remove the full loading from the site. Jennifer responded that in the next cycle of the TMDL, the wastewater and residuals load will be included so that it can be given an allocation if the proposed projects are not sufficient. Fred suggested that the BMAP include a separate table for Site 10 that lists the projects and timeframes for implementation.

Brian noted that the allocation table included a row for Site 10 and he asked how this would be included now. Jennifer responded that the row for Site 10 will stay in the table and represent the stormwater load. The stormwater load has been revised and will be lower than what was previously shown. Joe added that part of the load difference was split between another basin and wetlands. The load to the wetlands was handled like the other water/wetlands/conservation area loads. Brian suggested clarifying in the table that the Site 10 loads are just for stormwater.

Richard stated that the monitoring should be conducted by a third party to ensure the results are objective. Robert noted that the wastewater and residual loading value is a calculated number and between now and the next cycle, this number should represent what is actually coming off the site. Structuring the monitoring correctly is important to moving away from this theoretical

number. Bob stated that monitoring will be required by the BMAP upon adoption so monitoring can begin on the site at that time even if projects have not been started. Robert asked how long it would be until BMAP adoption because if Sanford is changing the process on the site now, monitoring is needed to determine what has historically been going to the lake from the site. Jennifer responded that BMAP adoption is approximately six months away.

Cecilia stated that a plan should be included in the BMAP to remove the sludge that has built up on the site. Robert added that the intent of the monitoring should also be clear in the BMAP and that the total reduction required for wastewater and residuals could be more or less than what is currently being estimated if the monitoring shows a different loading.

Robert asked if the permit number listed in the handout is for the facility or the whole site. If it is the permit for the whole site then this precludes them fixing everything that is necessary. Jennifer responded that she would ask Chris Ferraro (FDEP) and revise the handout, as necessary. Cecilia asked who would be responsible for the additional monitoring on the site. Tiffany responded that the handout currently reads that the city is responsible but there was a suggestion for a third party. Bob added that the city will be financially responsible.

The Site 10 handout will be updated and brought back to the next meeting for discussion and consensus.

Septic Tank Load Reductions: Calculations and Allocation Issues

Jennifer noted that this topic will be discussed at the next meeting when the handout is available and Vivian Garfein (FDEP) is in attendance. The issue had been raised at a previous meeting because the entities were concerned that the stormwater municipal separate storm sewer system (MS4) would be responsible for the reductions from the septic tank loads. Options for addressing this concern are outlined in the handout, which will be emailed to the group. At that time, the group will also be asked to provide feedback on whether a teleconference on this topic would be helpful before the next meeting.

Basin Working Group Meeting

Tiffany noted that the group had discussed having a Basin Working Group (BWG) meeting in June but, in order to have time to give the BWG notice, the meeting will be held on July 24th at 9:00 AM before the Technical Working Group (TWG) meeting. One BWG member has a conflict with morning meeting times so future meetings may be moved to the afternoon. Jennifer suggested that the group provide potential agenda items for the BWG meeting. The agenda will be provided before the meeting to give the TWG members time to brief their BWG representatives. This will be an orientation meeting to provide the BWG with background on the process thus far to help them with decisions at future meetings. Fred noted that the FDEP attorney should attend the first BWG meeting to review the Sunshine Law provisions.

Suggested agenda topics include:

- TMDL and BMAP 101 – background information
- Explain the basics of the Lake Jesup TMDL – what information went into the TMDL and why the BMAP will focus on phosphorus and not nitrogen
- Brief overview of changes made to the TMDL during the BMAP process

- Explain why the reductions are required and FDEP's enforcement actions
- Provide an example allocation table to show loading and how credit will be given
- Example project list
- Discuss what types of decisions the BWG will be expected to make to ensure they are the right person to represent their entity
- Establish a voting procedure for the BWG
- Review of the Sunshine Law

Next Steps

Next Meeting Agenda Topics

The next meeting topics include discussion and consensus on the in-lake projects recommendation, septic tank allocation process, and the Site 10 allocation approach. Future topics include discussion of data for BMPs to determine what reductions are expected, phosphorus loading in reuse water (implications and potential reductions), and the results of the study on reuse loading.

Next Meeting Date

The next meeting will be held on June 26th at 1:00 PM.

Adjournment

The meeting was adjourned at 4:00 PM.

Action Items

- Jennifer will talk with Eric Livingston about adding exfiltration, treatment trains, and stormwater reuse to the list of eligible BMPs and to the EPA tool.
- Jennifer will talk to Eric Livingston about the possibility of using a conservative value for CDS unit load reductions until more information is available.
- Consideration will be given to having the BMPs from the approved list being included in the quantifiable column of the allocation table and the non-quantifiable BMPs being listed in a separate column.
- The BMAP will clearly state that the decisions made on issues, such as consumptive use projects and in-lake projects, are for the first iteration only and could change in future BMAPs when there is more information.
- Jennifer will revise the consumptive use and in-lake restoration handout to clarify what is meant by in-lake projects and to consider adding certain types of in-lake projects in this iteration of the BMAP.
- Jennifer will modify the allocation table to show Site 10 load as stormwater.
- Marcy Policastro will add a consideration in the BMAP that Site 10 loads need to be monitored and refined based on the monitoring data. The intent of the monitoring on the site must be made clear and a note should be included that the load estimate may be changed based on new information.
- Jennifer will ask Chris Ferraro if the Site 10 permit number listed in the handout is for the wastewater facility or the entire site.
- Tiffany will send the septic tank allocation handout to the group. The TWG should provide feedback on whether a teleconference on this issue would be helpful.