

**Orange Creek Basin Management Action Plan (BMAP)
Basin Working Group (BWG) Meeting Summary**

Wednesday, November 28, 2018

9:30 AM

Gainesville Regional Utilities (GRU)

Eastside Operations Center

4747 North Main Street

Gainesville, Florida 32609

Participants

Sally Adkins, City of Gainesville

Tiffany Busby, Wildwood Consulting

Katie Galluscio, Marion County

Madeline Hart, FDACS

Janet Hearn, ATM

Robin Holland, FDACS-FFS

Karen Kohoutek Luckin, FDOT

Mark Kuhn, FDOT

Jody Lee, FDACS

Allen Martin, FWC

Patrick McCord, FWC

Keith Morin, DEP

David Moritz, AC EPAC

Jim Myles, DB Environmental

Alan Obaigbena, FDOT

Bob Palmer, Florida Springs Institute

Mary Paulic, DEP

Alice Rankeillor, City of Gainesville

Laura Savage, Wildwood Consulting

Jim Tatum, Our Santa Fe River

Tiffany Trent, SJRWMD

Barton Wilder, FDACS

Shane Williams, Alachua County

Welcome and Introductions

Tiffany Busby welcomed everyone to the Orange Creek BMAP meeting and thanked GRU for use of their meeting room. Tiffany reminded the attendees to sign in. She noted that the sign in sheets assist with meeting notes and are used to update the Florida Department of Environmental Protection (DEP) distribution list. Tiffany introduced Mary Paulic, the DEP basin coordinator and primary contact for the Orange Creek BMAP, and had each person introduce them self and the entity they represent.

Agency Updates

Alice Rankeillor asked if Boulware Springs was included in the draft 2018 Verified List for Group 1 Basins. Mary replied that she has not looked at the list, but it should be available on the DEP website. Mary noted that the list reflects the DEP current assessments for these waterbodies, but they are subject to change based on input received during the public comment period, which ends December 7, 2018. The draft list was produced with water quality and biological data included in Impaired Water Rule (IWR) Database Run 55. Tiffany suggested that everyone review the IWR Run 55 data for accuracy. She noted that DEP is receptive to adjusting errors if they are found.

Alice asked if DEP is offering grants to enhance onsite sewage treatment and disposal systems (OSTDS) located in impaired springsheds. Mary replied that DEP has funding available to enhance septic systems located within priority focus areas (PFAs). Bob Palmer reported that Columbia County is not eligible to receive funding. Mary offered to verify the eligibility requirements. A check of the program requirements identified that the program only provides funds for enhancements within the Priority Focus Areas of the following counties: Citrus, Hernando, Leon, Marion, Orange, Pasco, Seminole, Volusia and Wakulla. Information is available at <https://floridadep.gov/springs/restoration-funding/content/septic-upgrade-incentive-program>.

Alice asked if Mary knew the nitrate concentration for Boulware Springs. Shane Williams replied that the criterion is 0.35 milligrams of per liter (mg/L). Mary checked the draft verified list for this spring and found the following annual geometric means (AGMs): 2012 (1.11 mg/L), 2013 (1.12 mg/L), 2014 (1.06 mg/L), and 2015 (1.18 mg/L).

Shane announced that the Alachua County code for stormwater treatment and surface water discharges was revised to include numeric reduction requirements and discharges to groundwater with a volumetric treatment requirement. The county also changed the fertilizer code to require store signage that alerts consumers of fertilizer restrictions. Construction of the Newnans Lake Nutrient Reduction Project will begin next year. The project may be modified to include two baseflow weirs rather than one. Shane explained that the weir is an offline system that is designed to treat baseflow through a sand filter bed.

Mary reported that there is funding available that does not require matching funds. She encouraged the stakeholders to apply for these funds. Sally Adkins asked for the name of the grant. Mary offered to send a link with the funding information. She noted that Amanda Peck is the contact person for the grant. [Editor's note: The referenced grant is called a Water Quality Restoration Grant (<https://floridadep.gov/wra/319-tmdl-fund>)].

Patrick McCord reported that the lake levels in the basin are higher than average. The higher water elevations have improved habitat quality, which in turn has increased recreational use of the lakes. The Florida Fish and Wildlife Conservation Commission (FWC) mechanically removed large tussocks from Lochloosa and Newnans lakes. The high-water level in Orange Lake has caused large chunks of land (i.e., 5 acres or more) to break off into floating islands. Wind has moved the “islands” to the other side of the lake. Removal of floating aquatic vegetation was suspended during the water fowl season and during high-recreational usage times. The ongoing maintenance of these plants will recommence soon. FWC is looking, where appropriate, to connect back-surrounding areas of Orange Lake to the lake’s open water area. FWC placed out for bid a project to mechanically remove 40-acres of aquatic vegetation. The bids were 2.5 times higher than expected—making the project cost-prohibitive.

Annual Project Reporting

Mary provided an update on the annual project reporting. Agencies in multiple BMAPs will now have all their projects organized in one Excel workbook. The new statewide BMAP project database requires that only one entity be named as the lead agency. In the past, coordinators had

the option of listing multiple co-leads. Projects with multiple co-leads were revised to have one lead entity with the other co-leads listed as partners. The new database truncates project descriptions that are greater than 255 characters for reporting purposes. The stakeholder project workbooks will include a new field (column) for shortened project descriptions. Lead entities should provide shortened descriptions, if applicable; otherwise, Mary will shorten the description. Tiffany explained that DEP took the individual BMAP project tables and imported them into a statewide database. The information has been standardized and truncated in the database, which is the reason for the changes. Mary reported that the deadline for project submissions is January 15, 2019. She asked that the stakeholders provide new and updated project information and to pay attention to possible changes with the lead entity.

Sally Adkins asked if DEP changed the available credits for public outreach projects. Mary replied that the BMAP Program is still using the 6 % credit scheme. Tiffany asked if the credit change was associated with municipal separate storm sewer system (MS4) reporting. Sally replied that she would review the comment again and let Mary know the source and change.

Alice stated that the Gainesville urban area has a cooperative partnership (known as the Clean Water Partnership [CWP]) with the Florida Department of Transportation (FDOT), City of Gainesville, and Alachua County. She asked if it would be possible to designate CWP as the lead agency for the projects that receive funding from this partnership. Mary replied that she can do that—list CWP as the lead entity and FDOT, City of Gainesville and Alachua County as the partners—she would just need to know who to send the project update requests to. Sally commented that she is concerned how the lead partner designation may affect the project credits. The credits should be equitably shared among the CWP partners and not assigned to just one partner (i.e., the lead entity). Mary replied that she will check on this and let the partnership know if there are project credits that need to be split equitably among the three entities.

Mary reminded the lead entities to provide geographic information system (GIS) shapefiles with new projects. Mary noted that DEP uses the files to verify project locations and boundaries. Tiffany added that DEP also uses the files to visually display the projects on a story map.

Patrick asked if the project type is user defined or a drop-down menu. Mary replied that the project types are listed in a drop-down menu. Patrick noted that FWC has struggled to find an appropriate project type. Most projects address the BMAP (i.e., nutrient reductions) whereas FWC is a steward of the nutrients once they are in the waterbody. He suggested adding project types that are specific to FWC efforts, such as habitat management.

Orange Creek Basin Lakes Allocation Updates

Mary reported that DEP changed the name of the report from “supplemental” to “amendment.” The content of the report is the same—only the name changed. The report is an amendment to the 2014 adopted Orange Creek BMAP. It provides allocations for Newnans Lake, Orange Lake, and Lochloosa Lake; adds Lochloosa Lake TMDL to the BMAP; and provides updated nutrient budgets for Lake Wauberg and Alachua Sink. The amendment will be adopted by Secretarial Order. The existing 2008 and 2014 BMAPs remain under Secretarial Order and are enforceable.

Bob Palmer asked Mary to define the term allocation (as shown on slide 7 of the presentation). Mary defined the term as the assignment of reductions.

Mary explained that the reduction assignment process includes two pathways: 1) assign reductions to watershed (Lake Wauberg and Alachua Sink); and 2) assign reductions to local entities (Newnans, Orange, and Lochloosa Lake). For Lake Wauberg and Alachua Sink, the nutrient budgets were updated to reflect project credits. For the other lakes, the nutrient budgets were prepared without project credits. The anthropogenic nutrient loading was then proportion to the local entities adjusting for atmospheric deposition, undeveloped land runoff, and groundwater.

Mary displayed a table of the total maximum daily loads (TMDLs) and maps of the modeled boundaries. She noted that the Cross Creek TMDL will be addressed by the Lochloosa Lake remediation. Mary noted that the modeled boundaries map includes an area not modeled. This area is rural and does not include allocations. The Lochloosa Lake boundary includes 12 sub-basins. The last sub-basin (sub-basin 28) is the outflow of Lochloosa Lake and includes Cross Creek. An error noted on slide 9 has been corrected.

Mary reviewed the loading steps. She noted that she is providing a summary of the information since she presented detailed information in past meetings. The first step included assembling the nutrient budgets by sub-basin. The loadings were separated as follows: forest (set aside), undeveloped land uses, developed land use, agriculture, septic systems, atmospheric deposition, groundwater/seepage, and internal loading. Loading reductions were not assigned to forest, other undeveloped land, atmospheric deposition, or groundwater. The source loading reductions focus on reducing stormwater loading sources from urban areas, agriculture, and roads. The reductions for these source loadings were adjusted to compensate for uncontrollable sources. The total reduction for a jurisdiction is the sum of the adjusted stormwater loading reductions plus any loading reductions from septic systems. Mary explained that the loadings from Lochloosa Lake's watershed were attenuated before reaching the lake. Attenuation occurs in each sub-basin and varies by year and by total nitrogen (TN) or total phosphorus (TP). Projects reductions are also attenuated before credits are assigned.

Mary stated that the basin working group agreed that only septic systems within 200 meters of a waterbody or conveyance would be considered as part of the loading. The Lochloosa Lake TMDL evaluated septic systems but did not include as a separate source. The septic system loading for Orange Lake and Newnans Lake was apportioned to local jurisdictions depending on location of the septic system—number of systems located within a jurisdiction as portion of total loading.

Mary displayed the draft TP and TN nutrient budgets. She noted that the tributary inflow loading into Orange Lake is large. Orange Lake is affected mostly by external sources/sources outside its watershed. The TN internal nutrient recycling loading for Newnans and Lochloosa lakes is large. The internal loading could be buildup from years of deposition. The TMDL modeling may need to be reevaluated in the future. Mary asked if there were any questions regarding the nutrient budgets. Dave Moritz asked what the TMDLs are in milligrams per liter (mg/L). Mary did not

have concentration limits available but offered to provide these after the meeting. Table 1 at the end of the notes lists the loading and concentrations targets for each TMDL.

Mary showed a map of the agriculture Notice of Intent (NOI) coverage and explained that the loading is a percent of the agriculture acreage covered by the NOI. The NOI acreage can include entire parcels of land (i.e., homes and other areas not in production). The acreage is adjusted to look at just the production lands. A 30 % efficiency is then applied to the loading of the adjusted acreage. Reduction credits are also given to cost-share projects funded by the St. Johns River Water Management District (SJRWMD). A 30 % efficiency is also applied to these projects to estimate the reduction credits. Mary displayed a map of the cost-share projects and noted that one of the projects resulted in large reductions in Orange Creek. She then displayed tables of the NOI credits and cost share project credits. Mary asked Madeline Hart if the Florida Department of Agriculture and Consumer Services (FDACS) enrolled additional lands in the best management practice (BMP) Program. Madeline replied that she may have an additional six months of data of share.

Mary reviewed the Florida Yards and Neighborhood (FYN) crediting approach. The FYN credits were extended to Hawthorne, Waldo, Micanopy, McIntosh, and Reddick since the FYN Program is a statewide program. The Alachua County fertilizer code and water quality code was applied to jurisdictions within the county (i.e., charter county). The irrigation code was applied to Gainesville and Hawthorne. Alachua County and Gainesville have all the educational element (i.e., receive 6 % credit) and Marion County has all but one element. Marion County is not a charter county, so their ordinances could not extended to the jurisdictions within the county. Mary displayed a table showing each jurisdiction's educational credits.

Mark Kuhn asked if the small communities are invited to the public meetings. He also asked if the meetings are optional. Mary replied that she invites the small communities to the meetings, but she cannot force them to attend. Shane Williams reported that Alachua County provides periodic updates to the small communities located in Alachua County. They provided recent updates to all but Waldo and Hawthorne.

Mary defined internal loading as the nutrients that enter a lake and are stored in the sediment but can be recycled back into the lake. Internal loading originates from the watershed and can be a large portion of the loading. The initial strategy is to address the watershed loadings. The emphasis is on TP removal but does not exclude TN removal. Dredging and alum treatments are typical methods employed in Florida to address internal loading. However, presence of cultural resources limits the manipulation of sediment, treatment options are expensive, and if dredged, a large volume of material must be disposed of. Mary stated that internal loading was not assigned to jurisdictions. Additional work will need to be performed over the next five years to figure out how to address this load.

Mary displayed tables of the draft Newnans, Orange, and Lochloosa lakes allocations. The goal is to meet 50 % of the required reduction by 2023. The septic system reductions must be achieved by the second, five-year milestone (year 2028). The last column shows the total reductions to be achieved by 2028. A zero at the end of a table means the jurisdiction has meet

its assigned reductions. Shane asked if any septic tank liners have been tested for TP removal ability. Mary responded that TP is not expected to be as mobile as TN because it binds to soils, but she offered to investigate it.

Mark asked why the required reductions zero out if a jurisdiction achieves more than their required reduction. He asked if the additional credits will be available for trading or for future allocations. Mary replied that the additional credits are accounted for in a project database. Mark stated that he would prefer to use the extra credits for future allocations. Tiffany stated that required reductions can change as newer models/information become available. The current model provides a best estimate of the required reductions, but the numbers could change/increase if an update occurs. Mark noted that he is against trading credits, but if credits cannot be banked/saved for future allocations, he would explore that option.

Alice asked if the 2028 deadline is a statute or a policy. Sally asked if the interim and final deadlines will effect MS4 permits—if there are consequences to not meeting the 2028 deadline. Tiffany thought that the MS4 Program may require permittees to meet the BMAP schedule. Sally asked if there could be some flexibility in the schedule and if this could be mentioned in the BMAP. Mary replied that she doesn't want to keep pushing the deadlines, but she could list the date as a recommended date with an evaluation period to help with the MS4 requirement, if applicable. Sally stated that the city, county, and others have dedicated resources to meet certain TMDLs, but they may need more time to meet the other TMDLs.

Mary noted Orange Lake benefits from improvements in Lochloosa and Newnans lakes. Shane asked if the Orange Lake reductions on slide 32 are for TP or TN. Mary replied that they are for TP.

Mary showed a side by side comparison table of the Orange, Newnans, and Lochloosa lakes TP loadings. She noted that 49 % of load to Orange Lake is from tributary inputs.

Mary explained that the Alachua Sink budget is based on year 2004 as representative wet year. This year has large loading from Prairie Creek (Newnans Lake watershed). The TN baseline loading was taken directly from the TMDL document. The budget includes a 129,004 pound per year (lb/yr) reduction from the Sweetwater Branch Project. The budget also includes load reduction credits from street sweeping and education credits. Shane asked why DEP selected 2004 as a representative wet year—there were hurricanes that year. Mary replied that it was the best data they had at the time. Shane replied that 2004 was an extremely wet year; 2012 would have been a more representative wet year, but it was not at the time of the TMDL. Alice asked Mary if she could provide a breakdown of the projects and project credits included in the draft Alachua Sink TN budget table. Mary replied that she has a more detailed table that she will provide.

Mary reviewed the draft Lake Wauberg TP and TN budgets and workplan. She noted that the TP budget includes 39 pounds in reductions and the TN budget includes 199 pounds in reductions. The budgets show that additional TN and TP reductions are needed to meet the TMDLs. The workplan includes conducting shallow ground water sampling at the University of Florida recreation area septic system sites down gradient of the drainfield, phytoplankton sampling, and

repeat shallow ground water sampling of the replaced septic system at the Paynes Prairie Campground. Mary noted that the model used to estimate the loadings to Lake Wauberg may be higher than other watershed models. The role of atmospheric deposition needs to be defined since the watershed is small in comparison to the lake's surface area. In addition, bird roosting around the perimeter of the lake can be adding large amounts of nutrients. A solution to these issues is to evaluate the water quality against the numeric nutrient criteria to improve estimation of water quality impairment.

Next Steps and Timelines

Mary stated that the allocation calculations are posted to the DEP file transfer protocol (FTP) site. She will provide a link to the FTP site. The document is in review and is being edited. The document will be posted as soon as possible. The plan is to have the document ready for Secretarial adoption by January 2019.

Adjournment

Meeting adjourned at 12:21 PM.

Action Items

1. Mary: Provide the link to draft 2018 Verified List and water quality data that supports impaired waters list (IWR Run 55).
2. All: Review the draft 2018 Verified List for errors and provide comments to DEP by December 7, 2018.
3. Mary: Provide a link to grant and funding information.
4. Mary: Verify the funding eligibility requirements for OSTDS enhancements in PFAs.
5. Mary: Send project update request to stakeholders. Stakeholders: Provide new and updated project information. Pay attention to possible changes with the lead entity and provide shorten project descriptions, if applicable.
6. Mary: Review CWP projects in metrics workbook for credits once updated project workbooks are received. Divide any credits equitably to partners if requested.
7. Mary: Designate CWP as the lead agency for projects that receive funding from this partnership and list FDOT, City of Gainesville, and Alachua County as the project partners if agreed to with updated entity project workbooks.
8. Sally: Check with the MS4 Program regarding changes to the public education credits. Let Mary know their response/any changes.
9. DEP: Consider adding project types that are specific to FWC efforts, such as habitat management.
10. Mary: Correct the typo on slide 9 (bottom, right corner of the table) and clarify budgets are for TP and TN. *Corrected.*

11. Mary- Post the presentation and other meeting materials to the DEP FTP site. *Posted.*
12. Mary: Post the TMDL concentration limits.
13. Madeline: Send Mary the NOI enrollment update information. *Received and processed.*
14. All: Determine how to address internal loads over the next five years.
15. Mary: Check on the TP removal ability of septic tank liners. *Information provided to Shane Williams.*
16. Mary: Review the MS4 requirements for BMAP deadlines. Consider listing the required reduction date as a recommended date to help with the MS4 requirement, if applicable. Include language about an evaluation period.
17. Mary: Provide a breakdown of the projects and project credits included in the draft Alachua Sink TN budget table to Alice Rankeillor.
18. Mary: Continue to provide updates on the Lake Wauberg workplan.

Table 1. Newnans Lake, Orange Lake, Lochloosa Lake, Alachua Sink, and Lake Wauberg TMDLs with loading and TP and TN concentration targets

Notes: WBID = Waterbody identification; lbs/yr = Pounds per year; mg/L = Milligrams per liter; NA = Not applicable

¹Cross Creek TMDL includes loading from Lochloosa Lake Watershed.

Waterbody	WBID Number	Parameter	TMDL Starting Load (lbs/yr)	TMDL (lbs/year)	Target Concentration (mg/L)	Wastewater Wasteload Allocation (lbs/yr)	Load Allocation (nonpoint) (lbs/yr)	Overall Needed Reduction (%)
Newnans Lake	2705B	TP	25,732	10,924	0.062	386	10,538	59
Newnans Lake	2819A	TN	315,510	85,470	0.97	3,104	82,366	74
Lochloosa Lake	2738A	TP	16,752	9,932	0.0552	NA	9,932	41
Lochloosa Lake	2738A	TN	416,142	172,318	1.152	NA	172,318	59
Cross Creek	2754	TP	5,090	3,530 ¹		NA	3,530	31
Cross Creek	2754	TN	125,971	71,680 ¹		NA	71,680	43
Orange Lake	2749A	TP	27,889	15,262	0.031	NA	15,262	45
Lake Wauberg	2741	TP	748	374	0.056	NA	16,696	50
Lake Wauberg	2741	TN	4,064	2,062	1.01	NA	2,207	51
Alachua Sink	2720A	TN	462,557	256,322		NA	2,844	45