

Orange Creek Basin Management Action Plan (BMAP)
Florida Department of Environmental Protections (DEP)

Discussion Summary

Wednesday, March 31, 2021

1:00 PM

By Webinar

Participants

Sally Adkins, City of Gainesville
Neesha Anderson, Citizen
Pedro Aquino, Citizen
Suzanne Archer, SJRWMD
Sean Beaudet, UCF
Evelyn Becerra, DEP
Connie L. Becker, DEP
Marcelo J Blanco, FDOH
Christopher Boever, Citizen
Tatiana Borisova, UF-IFAS
Audra N Burchfield, FDOH
Tiffany Busby, Wildwood Consulting
Lauren Campbell, DEP
Terry Carr, COJ
Arvind Chandrasain, City of Apopka
Conn Cole, SFMO
Susan Davis, SJRWMD
Paul Davis , GRU
Douglas Dycus, FDOT
Holly Eschenburg, In-Situ
Yesenia Escribano, FDACS
Kenneth Hayman, FDEP
Janet Hearn, ATM
Cori Hermle, FDACS
Robin Holland, Florida Forest Service
Moir Homann, DEP
David Hornsby. SJRWMD
Joss Nageon de Lestang, Marion County

Lindsey Kelly, Alachua County
Michael Lucas, Citizen
Jeff Martin, DEP NED
Erich Marzolf, SJRWMD
Patrick McCord, FWC
Jennifer A McElroy, GRU
David Moritz, Alachua County EPAC
Jessica Mostyn, DEP
Gail L Mowry, Marion County
Jim Myles, DB Environmental
Edward Northey, FDOT
Alan Obaigbena, FDOT
Kevin O'Donnell, DEP
Gregory Owen, ACEPD
Mary Paulic, DEP
Amanda Peck, FDEP
Christopher Pettit, FDACS
Nicolas Pisarello, ATM
Dr. Derek Reiners, FGCU
Charles Shinn, Florida Farm Bureau
Jennifer Thera, Citizen
Tiffany Trent, SJRWMD
Ellen Vause, City of Hawthorne
Christine Vrabic, Marion County
Kaylene Wheeler, Hydro Solutions
Barton Wilder, FDACS
Shane Williams, Alachua County

Welcome and Introductions

Tiffany Busby and Mary Paulic welcomed everyone to the March 2021 Orange Creek BMAP webinar. Ground rules for using Teams were reviewed. Tiffany urged everyone to use the mute function when not speaking and the chat function for asking questions. Tiffany notified everyone that the meeting was being recorded.

Agriculture Updates for the Orange Creek Basin

Corrine (Cori) Hermle (Florida Department of Agriculture and Consumer Services [FDACS]) gave a PowerPoint presentation. Cori explained that agricultural best management practices (BMPs) should be effective. Cori explained the benefits of agricultural BMPs such as water quality benefits, water conservation, and aquifer recharge.

The FDACS role in implementation includes developing manuals and adopting BMPs by rule. FDACS assists producers with BMP enrollment. FDACS also identifies and supports targeted cost-share implementation of certain BMPs.

Producers can sign a notice of intent and receive a presumption of compliance or they can follow a DEP or water management district monitoring plan, which is conducted at their own expense.

In Orange Creek, 41 % of all ag acres are enrolled in BMPs and 77 % of all irrigated acres are enrolled. Most of the current enrolled acres are cow/calf operations. Within the Orange Creek BMAP, the Florida Statewide Agricultural Irrigation Demand (FSAID) ag acres are 18 % of the total BMAP area with a 41 % enrollment of the total FSAID acres. Of those unenrolled acres about 61 % are likely enrollable while 39 % are unlikely enrollable. Cori explained that likely unrollable acres include timberland (silviculture), which would be enrollable through the FDACS-Florida Forest Service (FFS), but not through the FDACS-Office of Agricultural Water Policy (OAWP). There are also a lot of properties (~1,000) that are smaller parcels of 25 acres or less that need to be enrolled.

Cori also reviewed BMP implementation verification. FDACS was already required to verify BMPs, as required by the law amended in 2016 and enhanced by 2020 Senate Bill 712, the Clean Waterways Act. Cori explained how FDACS is implementing the Clean Waterways Act including BMP research, adding new staff, prioritizing certain BMAPs for enrollment outreach, updating training and staff guidance, gathering records, outreach to producers, and rulemaking.

In the chat, Holly Eschenburg asked if FDACS has information regarding the solicitation of researcher/research plan regarding the possible update of the BMP manuals. Chris Pettit (FDACS) added that the request for proposals (RFP) is going out this Friday, April 2nd. This will be posted in the Florida Administrative Register (FAR). The RFP will ask for submittals by the end of May. Because of the budget transition in July, the RFP process will extend into the new fiscal year. Tiffany posted the website for the FAR at <https://www.flrules.org/bigDoc/Default.asp>. Chris added that the RFP will also be posted on the FDACS website under the research section.

Producer outreach has included the development of a frequently asked questions (FAQ) document and continued collaboration with University of Florida-Institute of Food and Agricultural Sciences (UF-IFAS). Additional technical and video assistance are also under development.

Cori reviewed the upcoming BMP manual revisions. Cori reviewed the current manuals that are in effect. Manuals in development include the Hemp Manual and Diversified Operations Manual.

Cori showed some snapshots of the 2020 FDACS Legislative Report. The report, updated annually and published by July 1 each year, includes statewide statistics as well as agricultural BMP implementation information by BMAP.

Alan Obaigbena (Florida Department of Transportation [FDOT]) asked about carbon sequestration mentioned on one of the slides. Yesenia Escribano (FDACS) noted in the chat, "Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide. It is one method of reducing the amount of carbon dioxide in the atmosphere with the goal of reducing global climate change." Chris added that when you look at carbon farming, the federal government has pivoted to looking at carbon sequestration benefits and improving soil health from farming activities. When you look at many of the practices that FDACS already funds such as cover crops and no-till approaches, these retain nutrients and recycle nutrients. A lot of those practices also benefit carbon sequestration/carbon farming. FDACS cost-share support is being targeted at projects that benefit water resources but also carbon sequestration. Chris added that FDACS has funded cost-share projects this year related to these priorities. There is a research page on the OAWP website that describes some of these kinds of efforts.

David Moritz (Alachua County) asked how many new enrollments have we had in the last year and do we have yearly counts of new enrollment? Is there a plan for completing the remaining enrollments? Cori responded that contacting many of landowners is tricky because the effort requires not just a contact but counseling on what activities they conduct and determining if/what program for which they are eligible. Cori commented that with additional OAWP staff, they will be able to make progress on the enrollments. The enrollments that remain are the harder ones—the ones that have small acreages. David asked how many are being enrolled on a yearly basis. Cori responded that in the FDACS annual report there is an update on Orange Creek and that document is updated each year. Yesenia added that agriculture is dynamic and that the number of enrollments is less important than the total acres that are enrolled. The counts of the enrollments can be provided to David if he would like those data; please let Yesenia or Cori know if the data are needed. Cori explained that FDACS is changing to be more strategic about their enrollment areas and using additional information about where there are agricultural activities, to target those properties. David asked about the tax rolls and if it is found that a property owner doesn't have agriculture on their property, shouldn't they be changed in terms of the tax rolls and not provided an agricultural tax exemption. Yesenia noted that there are conversations about on whose land use ledgers are agriculture.

Alachua County Water Quality Monitoring Program

Lindsey Kelly (Alachua County) gave a presentation about the Alachua County water quality monitoring program. The Water Resources Division works on water conservation, water quality monitoring (ground and surface water), compliance responses, stormwater, wastewater treatment plant inspections, and others.

Lindsey reviewed the county's monitoring sites. First, she showed their urban monitoring sites on a map. Next, she showed the rural monitoring sites on a map. She noted that the county has added some sites that were monitored, long term, by the St. Johns River Water Management

District (SJRWMD) but were dropped, so the county has added those sites to their monitoring activities to continue those water quality datasets.

Lindsey showed the 2020 results for total nitrogen (TN), the results of their quarterly samples. Some samples were quite high. A lot of the sites have adopted total maximum daily loads (TMDLs), which is one of the reasons those locations are monitored. Lindsey also showed the total phosphorus (TP) results. She scaled down the results shown on the graph because they had a few very high results (~20 milligrams per liter [mg/L] TP).

Lindsey also showed their hot spot monitoring for *Escherichia coli* (*E. coli*) (bacteria) sampling. The county has 10 active sites and there are 8 historical sites. They use the membrane filter (laboratory) method, and they are also testing a new method that is quicker and easier to use; there is a holding time limitation for the new method. They don't sample as frequently if the count is below 410 colony forming units (CFU)/100 milliliters (mL). If the samples are above 1,000 CFU/100 mL they do a resampling. The geometric means were above the 410 CFU/100 mL threshold at each site.

Additionally, to address bacteria impairments and TMDLs, the county looked at microbial source tracking (MST) and human waste tracers. They partnered with DEP for MST and deoxyribose nucleic acid (DNA) markers. They used these methods to evaluate sites for potential human waste. They saw acetaminophen at every site—not in every sample, but at every site. For MST, they sampled 11 sites between 2018 and 2019. There were 20 sampling events and they looked for 80 compounds. Imazapyr and sucralose was detected at all urban locations. Some pesticides were also observed.

Human markers were above thresholds at six sites. In 2019, they looked at Possum Creek for potential sources using synoptic sampling. This type of sampling eliminates temporal variability in the distribution. Generally, they saw higher results in the rainy season. There is a lot more runoff in the rainy season and there are more sanitary sewer overflows during wetter conditions. They also performed targeted, synoptic sampling in Tumblin Creek, Sweetwater Branch, and Rosewood Branch. They used a game camera and found racoon use of the storm sewers. She noted that the main wastewater utility discharges to Sweetwater Branch, so that is a potential source. They also noted high counts downstream of some homeless camps.

Lindsey added that Alachua County has also conducted an outfall reconnaissance inventory (ORI) effort. They start downstream and inventory all the outfalls as they move upstream. They document the outfalls, note any deficiencies, and note any odor or color problems. Last week they found a broken pipe coming from a private property, discharging grey water. GRU addressed that pipe/discharge problem within an hour, but walking the creek was the only way that problem would have been observed. Mary asked about the greywater pipes and whether the property owner was fined. Lindsey responded that the property owner was not fined in this case.

The next steps are to sample public access park locations. The county hopes the park sampling and sharing the results will increase awareness of bacteria levels and sources (e.g., pet waste). The county will continue their ORIs and synoptic sampling. As mentioned previously, they are comparing laboratory methods for bacteria, and trying a new method. The county staff are also

conducting a leaching study looking at various residential landscaping practices. They are also reviewing the monitoring efficacy of Little Hatchett bioreactive weirs.

You can contact Lindsey for data for additional information. Tiffany thanked Lindsey for her presentation.

Project Status Update and Loading Reductions

Mary Paulic (DEP) showed a map of the Orange Creek BMAP Basin. Mary noted that the project information was through December 2020. Some project reductions were averaged where multiple years of data existed. In 2020, 11 new projects were added. Mary added that about half of the Orange Creek Basin overlaps the springshed for Silver Springs and its springshed. There are now 288 projects in the Orange Creek basin. This information is forwarded to the Florida Legislature in the Statewide Annual Report (STAR). The report is in production right now and will be released later this year (July 2021).

Mary reviewed some of the new projects added to the BMAP list including land acquisition and the City of Hawthorne's wastewater treatment plant upgrade. Gainesville is working on a retaining wall and stream stabilization project near the Gainesville Airport. Also, the city is installing some new hydrodynamic separators in the Newnans Lake basin.

In Alachua County, there are also some new public education efforts. The county is also working on a Newnans Lake wetlands feasibility study.

Mary noted the information about the DEP grant programs and the website where those are available. Emily Forinash (DEP) is a great contact for grant information. Mary provided some examples of the types of projects that DEP grants have funded. Mary noted that green infrastructure and low impact development projects are a high priority for DEP grants.

Mary exemplified that she assigned an average reduction if multiple years of data (2018 to 2020) were available for ongoing projects like street sweeping and hydrodynamic separator cleanout.

Mary gave an allocation update for Orange Lake. Marion County has added some street sweeping, which changed their total credits. Mary reviewed the table and how the allocations and project credits are related. Mary also reviewed the baseline loading and the additional TP reductions needed. She noted that 55 % of the Camps Canal (Newnans Lake watershed) project credits were assigned to Orange Lake. Forest lands were removed from the allocation calculations for Orange Lake as also for Lochloosa Lake and Newnans Lake.

Mary reviewed the Newnans Lake allocations for stormwater. The allocation table does not currently include the project plans for the Brittany Estates Wastewater Plan that redirects the effluent to GRU and away from a direct discharge to Newnans Lake. Brittany Estates has a wasteload allocation based on their permit limits; that is most likely the starting point for calculating a credit for this project. Mary noted that the agricultural reductions are considered draft until verified.

Mary reviewed the Lochloosa Lake credits and reductions. There have not been any new stormwater projects added but there have been some agricultural cost share projects in the basin.

Mary noted that there is a large internal loading estimated (64 % for TN and 32 % for TP of current loading) for this lake.

Mary reviewed the TN reductions in Alachua Sink. Additional TP removals are also estimated. We are in good shape in terms of Alachua Sink and the improvements. Prairie Creek is part of the TMDL and credits in that area are reduced/attenuated as project credits to Newnans Lake. Currently, the projects result in 805 pounds per year (lbs/yr) TP reductions and 4,100 lbs/yr TN reductions. Mary noted that we should see more benefits from the studies underway to address potential sources for Newnans Lake.

David asked about the FDACS credits and what those are for. Mary responded that one part of the credit is for cost share and specific projects and the second part is for BMP enrollment. David asked why is the credit for agriculture is given to FDACS? Mary responded that the credit is not really to FDACS, it is credit towards the contributions of agricultural sources and the loadings from agriculture. David asked if we know that loading from the prairie from Camps Canal—how much is making it to the Alachua Sink. There is quite a bit of land between Camps Canal to Alachua Sink. Mary said that is a good point. Mary is relying on the TMDL model, which is an older model (2006). It is possible that situation has changed a bit and there may not be as much contribution as was estimated in the TMDL. The approach would be to look at the model and that contribution. David said that connection is not strong. David added that the prairie may be removing a fair amount of nutrients (TN and TP) and the fact that some of the water is being redirected back to Newnans and some of the water may be going to Orange Lake, because some of the water by law is going there. David suggested that should be considered in terms of a proper assignment.

Agency Updates

Shane Williams (Alachua County) noted that the county is collecting data from the Little Hatchett Creek weir project. They did have a tree fall onto one of the weirs; the weir is fine, but the bank needs to be restored.

Mary asked about what GRU is working on besides the Sweetwater wetlands sheet flow project. Jen McElroy (GRU) responded that GRU has a large study underway for a big capital improvement project looking at each process at the Main Street Facility, which is an older facility (built in the 1920s). They are planning a design-build partnership with lots of upgrades in the next five years. Jen suggested that this effort could be a future meeting topic when more known about the project.

Mary asked David to follow up with her if he has additional questions or comments about Camps Canal.

Next Steps

Next meeting by next September, prior to Mary's retirement.

Adjournment

The meeting ended at 2:45 pm.

Action Items

1. Mary—Post the three presentations from today's meeting as well as the meeting summary.
2. Jen suggested that the GRU Main Street facility upgrades could be a future meeting topic when more known about the project.
3. Mary asked David to follow up with her if he has additional questions or comments about Camps Canal.
4. Mary—Plan for a meeting in September 2021, prior to Mary's retirement at the end of September.