

Upper Wakulla River and Wakulla Springs (Wakulla) Basin Management Action Plan (BMAP) Meeting Summary

*Tuesday, March 6, 2018 at 2:00 PM
Woodville Community Center
8000 Old Woodville Road, Tallahassee, FL 32305*

Attendees*

Andrea Albertin, UF-IFAS	Theresa Heiker, Leon County*
Curtis Baynes*	Carlos Herd, NFWFMD
Bart Bibler, Wakulla Springs Alliance	Moirra Homann, DEP
Catherine Bray, City of Tallahassee	Cal Jamison
Tiffany Busby, Wildwood Consulting	John Kraynak, Leon County
John Buss, City of Tallahassee*	Sondra Lee, City of Tallahassee
Melissa Corbett, Wakulla County*	Jack Leppert
Katherine Davis, FDOH*	Debbie Lightsey, Wakulla Springs Alliance
Greg DeAngelo, DEP	Celeste Lyon, DEP
Stan Derzypulski*	Sean McGlynn, Wakulla Springs Alliance
Robert Deyle, Wakulla Springs Alliance*	Michelle Misty, DEP
Cathy Foerster, Wildwood Consulting	Steve Peene, ATM
Xueqing Gao, FDOH-Tallahassee	Johnny Richardson, Leon County
Anthony Gaudio*	Charles Shinn, FFBF
Roxanne Groover, FOWA*	Herb Thiele, Leon County
Pamela Hall	Mark Thomasson
Terry Hansen, DEP	Edgar Wade, Leon County
Maddie Hart, FDACS	
Kenny Hayman, DEP	
Mark Heidecker, City of Tallahassee	

**Denotes Onsite Sewage Treatment and Disposal System (OSTDS) Advisory Committee member*

Introduction

Tiffany Busby opened the meeting at 2:05 PM by welcoming everyone. She stated that the meeting has a two-part agenda: an OSTDS committee meeting and a public meeting on the Wakulla BMAP. She reminded attendees to sign in to receive future meeting notices from the Florida Department of Environmental Protection (DEP) via the GovDelivery email system. She requested that each person introduce them self. She then introduced Moira Homann, DEP Basin Coordinator, and mentioned that Moira should be contacted with any questions regarding the BMAP; she will post today's PowerPoint presentation on Wednesday.

OSTDS Committee Meeting (2:10 PM to 3:42 PM)

Moira presented a series of slides on OSTDS restoration approaches that are proposed for the BMAP, including an OSTDS remediation plan. OSTDS remediation is either enhancement or replacement. She also mentioned that since the last committee meeting, draft springs BMAPs continue to be edited and that the latest versions are not posted to the FTP site.

OSTDS Enhancement

Remediation of OSTDS must achieve at least 65 % nitrogen reduction. Only the Florida Department of Health (FDOH)-approved nitrogen enhancement systems can be installed:

- Aerobic treatment units (ATUs)

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- Performance-based treatment systems (PBTS)
- In-ground biofilters (media layer systems)
- In-tank biofilters
- National Sanitary Foundation (NSF) 245 compliant systems with 24-inch separation

OSTDS Replacement

Replacement is the proper abandonment of OSTDS and connection to sewer service. Moira reminded attendees that the existing BMAP has more stringent nitrogen discharge limits for wastewater treatment facilities (WWTFs) in Priority Focus Area (PFA) 1.

New OSTDS

Moira explained that Florida Statutes prohibit new OSTDS within PFAs on lots less than one acre unless there are exceptions described by the BMAP. The proposed exceptions for the Wakulla BMAP are the following: 1) installation of nitrogen-enhancement OSTDS, and 2) installation of conventional OSTDS if the property is identified to be converted to sewer by a project listed in the BMAP. These exceptions will be identified in the BMAP and the OSTDS remediation plan, which is an appendix to the BMAP. Moira reminded attendees that the remediation plan is important to abate future growth of OSTDS loads.

Existing OSTDS

Moira sought input from the committee on the potential extent (“envelope”) of the remediation area for application of the enhancement policy to existing OSTDS in addition to new OSTDS. By addressing existing OSTDS, additional nutrient reductions could be achieved. Currently, there is a gap of 89,140 pounds of nitrogen per year (lb-N/yr) in achieving the total maximum daily load (TMDL). This gap is calculated as the needed reduction (139,564 lb-N/yr) minus the credits (50,424 lb-N/yr) associated with recently submitted stakeholder projects that will be included in the draft BMAP. Moira provided a table that reflected the number of existing OSTDS in both PFAs, on any lot size, and the potential reductions associated with either enhancing or sewerage. There are 11,917 existing OSTDS in the PFAs that could result in the additional reduction of 77,277 lb-N/yr if all are enhanced or 112,943 lb-N/yr reduction if all are converted to sewer. Enhancement is the most likely option if existing OSTDS are addressed. Moira provided a disclaimer that the OSTDS projects submitted by stakeholders may already be counted in the table, so it may be reasonable to reduce the amount that can be achieved by 7,787 lb-N/yr.

Implementation

The OSTDS remediation plan will include milestones for DEP and FDOH that include developing funding programs for homeowners and individuals to remediate OSTDS; update FDOH rules for OSTDS permitting and additional remediation options; and develop and disseminate education materials to identify the need, options, and funding for enhancement. The remediation approach still needs to be finalized; a draft remediation plan should be available for review in mid to late April as part of the draft BMAP.

Additional Options to Address the Gap

Moira mentioned that options to address the gap include additional OSTDS remediation in the PFAs or BMAP-wide; implementation of advanced agricultural practices; and additional wastewater treatment by expanding the existing WWTF policy beyond PFA 1. There may be opportunities to reduce urban turfgrass fertilizer (UTF) and sports turfgrass fertilizer (STF) through additional best management practices (BMPs).

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Questions/Comments by Attendees

1. Xueqing Gao: On the bullet list of FDOH-approved enhancement options, the first bullet (ATUs) is the same as the last bullet (NSF 245 compliant systems). Roxanne Groover: I disagree with that assessment and recommend that the first bullet is modified to "ATU NSF 40 compliant system with drip irrigation."
2. Anthony Gaudio: How do you determine that each enhanced system is meeting the required reduction of 65 %? How do in-ground biofilters achieve reductions? I suggest that the BMAP also specify the OSTDS location and method of determining achievement.
3. John Buss: I think less specificity is better. The BMAP should state that OSTDS enhancement should achieve a 65 % reduction through the installation of only FDOH-approved nitrogen enhancement systems. Do not list systems that do not achieve 65 % nitrogen reduction because the list could change over time.
4. Roxanne: The Florida Onsite Wastewater Association (FOWA) is preparing a second white paper that will alphabetize OSTDS manufacturers with links to product data. This will be a tool to understand the different enhancement systems that are approved in Florida.
5. John: The key is 65 % reduction. Let FDOH determine which systems and options are approved for use.
6. Roxanne: It needs to be noted that some companies do not want to go through the FDOH approval process; some companies prefer a DEP-approved process.
7. Anthony: OSTDS location and methodology for reduction should be outlined.
8. Pam Hall: Where does the attenuation factor come in? Where is the 65 % reduction to be achieved? Where disposal occurs is very important. Tiffany: The attenuation factor is applied post-drain field. Pam: But that is not where attenuation actually occurs. Greg DeAngelo: Studies in the Wekiva and Ichetucknee Basins reflect attenuation beyond the drain field.
9. Pam: It is tricky what the 65 % actually means.
10. Bob Deyle: Pam says you are double-counting since there is not a uniform attenuation rate.
11. Xueqing: NSF 245 compliant systems achieve an estimated 50 % reduction to the drain field and 15 % after the drain field for a total of 65 %.
12. Moira: I will post Rick Hicks' Wekiva study that details reductions of different systems. Pam: The question is not about systems and drain fields. The question is how to apply the 65 %.
13. John: Is my understanding correct that 65 % reduction is achieved at the tank and drain field, before the nitrogen leaves the treatment train? Tiffany: Your understanding is correct.
14. Bart Bibler: Are there required inspections and enforcement of OSTDS? Katherine Davis: FDOH inspects ATUs and PBTS once a year. Owners are not notified prior to inspection. Maintenance entities inspect twice per year and file inspection paperwork with FDOH.
15. Anthony: There needs to be oversight and enforcement.
16. Roxanne: Mechanisms are in place for enforcement, but enforcement is not embraced by the legal system to penalize the homeowner.
17. Debbie Lightsey: The BMAP should explain what the 65 % represents (system and drain field).
18. Bart: Once systems are installed, is it assumed the system is achieving 65 % reduction or is there post-installation monitoring to ensure achievement? Tiffany: The estimated achievement of nitrogen enhancement systems is based on research; there is not post-installation monitoring.
19. Anthony: Do the statutes define nitrogen enhancement? Moira: The statutes do not define nitrogen enhancement. Nitrogen enhancement will be defined in the BMAP.
20. Debbie: What are the time parameters associated with "conventional systems allowed if property is scheduled for a sewer project"? Moira: The sewer project must occur within 20 years if it is listed in the BMAP.
21. Bob: This is the same exact discussion we had at the last meeting where there are conflicting statements. It does not make sense to allow conventional systems for 15 to 20 years.
22. Greg: An entity identifying a sewer project with associated nitrogen reductions in the BMAP is a big deal. If the project does not happen, the entity is on the hook to achieve the reduction elsewhere.

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Also, DEP does not want the homeowner to incur the cost of enhancement if the property will be converted to sewer.

23. John: The BMAP should have tighter language regarding conventional OSTDS being allowed because a sewer project is planned. A time frame should be established such as 5 or 10 years, rather than allowing until a sewer project is completed.
24. Stan Derzypulski: Wakulla County has a good idea what they are doing and when in terms of sewer projects. Look at their projects to determine when and how much reduction will be achieved.
25. John: All local governments have a 5-year capital improvements plan (CIP) that is updated annually. The allowance for conventional OSTDS pending sewer installation should be tied to projects in the CIP, not the BMAP.
26. Roxanne: We originally had a 5-year reference for sewer projects in the draft springs BMAPs, but it was removed due to stakeholder comments in the Springs Coast Basin. The Wakulla stakeholders can request the 5-year language.
27. Anthony: Since there are already problems with existing conventional OSTDS, the time frame should be two years for a sewer project to be completed.
28. Melissa Corbett: The Wakulla County projects submitted to DEP for the BMAP have funding sources.
29. Bob: Give homeowners a financial credit for connection to sewer if they previously upgraded from a conventional to enhanced system. There are ways to offset costs to the homeowner.
30. Bob: I was not aware that entities with projects in the BMAP have reduction requirements that can be forced to occur if a project is not completed.
31. Greg: Entities are committing to the projects by having them in the BMAP. BMAPs are enforceable, but DEP prefers to not take enforcement action.
32. Bob: Is the 5-year timeframe still referenced in the draft springs BMAPs? Greg: That 5-year language was in the two initial draft springs BMAPs that were put out for public comment last fall. DEP is phasing out the 5-year language for existing and new OSTDS if the property will be connecting to sewer based on the comments received.
33. John: It is critical that the sewer projects are reflected in the 5-year CIPs. Moira: DEP asked stakeholders to identify projects for a 20-year period for the Legislature to understand funding needs.
34. Debbie: It would be nice to see the projects submitted by Leon and Wakulla counties. Moira: The water management districts maintain lists of projects submitted for funding.
35. Bob: The proposed remediation plan does not address future growth, just remediation of existing systems? Moira: That is correct.
36. Bob: Did you explore alternate envelopes such as beyond the PFA, but smaller than the BMAP area? Could option 2 be the geographic areas of the PFAs and remaining unconfined areas in the BMAP? Tiffany: DEP has not analyzed OSTDS remediation beyond the PFAs.
37. Anthony: Is the BMAP bound by the one-acre requirement? Moira: The less than one-acre constraint applies to new OSTDS per legislation. There are no size constraints for existing OSTDS, so the BMAP can have flexibility on existing OSTDS.
38. Bob: Are we only looking at data on PFA 1? Moira: The amended table that I just inserted in the PowerPoint is for both PFAs.
39. Greg: It may not be necessary to expand the envelope beyond the PFAs since the table reflects significant opportunity to reduce nitrogen through remediation of existing OSTDS in the PFAs.
40. Anthony: The physical reality is that remediation will likely occur through enhancement rather than replacement (sewerage). And you do not even mention maintenance entities as an option.
41. Bob: My term "envelope" was not meant to be just a geographic area. Rather, it was to include recharge areas and various lot sizes.
42. Anthony: The gap analysis is based on a static analysis since it does not take into consideration future growth. There will be more OSTDS contributing to the load due to growth.
43. Tiffany: Are there opinions on the other source categories on how to close the gap?

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44. Bob: DEP should look at a third scenario which would be all lot sizes in the high recharge area outside of the PFAs.
45. Anthony: If you use a more robust system of NSF 245 with drip rather than NSF 40 with drip, you get a better reduction for just a bit more cost. You get more bang for your buck by requiring the more robust system.
46. Curtis Baynes: You are still limited to the developable land size. For example, with the Leon County land development regulations, how can you maximize land area to install an enhanced system?
47. Bob: Of all of the sources, OSTDS are the only trackable source to achieve reductions and receptive to grant funding. BMPs are the only agriculture options and you can't tell farmers what to do. There are no easy options to reduce fertilizer loading.
48. Stan: The other sources need to be addressed.
49. Moira: We need to identify the initial policy envelope area. Then we can go through the rulemaking and funding processes during the first five years of the BMAP.
50. Bart: Will an inspection/maintenance program result in nitrogen reductions? Moira: Rick Hicks completed a groundwater study in which it was determined that OSTDS pump out does not necessarily reduce nutrients.
51. Bart: You could also find problems and remedy them through an inspection and maintenance program. Does a local government have authority to require such a program? Roxanne: Local governments are prohibited by law to require such a program.
52. Anthony: Inspection pump out programs are not beneficial for nutrient reduction.
53. Bob: Local governments should be included with DEP and FDOH for implementation. Moira: DEP will add local governments to the implementation component.
54. Anthony: A wastewater fee charged by Leon and Wakulla counties would cover the costs needed to address nutrients. John: I concur that a wastewater utility fee is good revenue source.

General Public BMAP Meeting (3:50 PM to 5:20 PM)

Restoration Approaches

After a brief recess, Moira reconvened the meeting by stating that the OSTDS Advisory Committee is now dissolved since it met its obligations. The focus of this part of the agenda is to discuss potential approaches to achieve nitrogen reductions and restoration. The total required reduction is 139,564 lb-N/yr. This was calculated by subtracting the TMDL load (561,847 lb-N/yr) from the load at the spring vent (701,411 lb-N/yr). The TMDL must be met within 20 years and the DEP goal is to achieve the required reduction within 15 years (30 % within the first five years: an additional 50 % within the first 10 years: and an additional 20 % within 15 years for a total of 100 %). The gap analysis table reflects that BMAP policies and stakeholder projects result in the reduction of an estimated 50,424 lb-N/yr which leaves a gap of 89,140 lb-N/yr. The credits take into consideration attenuation and recharge based on project location. Moira explained how each source credit was calculated.

Moira stated that possible approaches to achieve the remaining reduction include additional OSTDS remediation outside of the PFAs; expanding the current WWTF policy beyond PFA 1 or adopting a different WWTF policy; reducing UTF and STF; or better documentation of reductions achieved through agriculture BMP implementation or implementation of advanced cost-share BMPs, such as precision irrigation, soil moisture probes, cover crops, and conservation easements.

Moira presented a table on all OSTDS outside of the PFAs, but within the BMAP area. If all are enhanced, it could result in a reduction of 101,477 lb-N/yr. If all are converted to sewer, it could result in a reduction of 148,313 lb-N/yr.

Regarding WWTFs, expanding the current WWTF policy beyond PFA 1 could result in an additional reduction of 3,549 lb-N/yr. If a new policy is adopted for consistency with the other draft springs

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BMAPs, an additional 5,728 lb-N/yr reduction could be achieved. Moira explained the current WWTF policy compared to the proposed WWTF policy.

For UTF, Moira explained that entities have the option to collect and provide monitoring data to quantify reduction credits for additional measures. For example, Seminole County has a fertilizer outreach education program that includes three interconnected on-line calculators that help residents understand the percentage of slow release nitrogen fertilizer, application amount, and reclaimed water inputs. Moira will post the presentation given by Seminole County at the last Wekiva BMAP meeting.

Moira stated that the data in the advanced agricultural options table were calculated by taking the acreage associated with each option and multiplying by attenuation and recharge. Therefore, the estimated credits should be considered "either/or." For example, 31,600 lb-N/yr could be achieved in the high recharge area, or 14,045 lb-N/yr in the medium recharge area, or 3,511 lb-N/yr in the low recharge area. Since most of the agricultural lands are in the low recharge area, credits for advanced agricultural BMPs would likely be around 3,511 lb-N/yr.

Water Quality Monitoring

Moira stated that monitoring will continue via surface water and groundwater monitoring networks. The BMAP will update water quality stations in the monitoring network and biological monitoring information (frequency and parameters).

Next Steps

DEP will prepare the draft BMAP document in late April and conduct a newspaper-noticed public meeting on the draft BMAP document in late April or early May. DEP will post the draft BMAP for review prior to the public meeting and will inform stakeholders via the GovDelivery email system.

Questions/Comments by Attendees

1. Anthony: Are the seven OSTDS projects identified in the gap analysis double counted in the other OSTDS table? Moira: The 7,787 lb-N/yr associated with the projects could be double-counted in the other table.
2. Pam: You are really assuming 100 % owner-implementation of agricultural BMPs? Tiffany: Yes, it is standard practice to estimate agriculture credits based on 100 % owner implementation since the statutes require BMP enrollment or enforcement. FDACS is doing a good job of verifying enrollment. Maddie Hart: Yes, FDACS is verifying enrollment.
3. Greg: The gap analysis and calculations are for the 20-year period, not the first five-year interval.
4. Bob: The 4,589 lb-N/yr WWTF credit in the gap table is for improvements that have not yet been made? Tiffany and Greg: The credit could be for projects that are underway since 2015, when the existing WWTF policy was adopted.
5. Theresa Heiker: The Leon County projects in the draft BMAP project list are only those projects in the county's CIP.
6. Greg: The gap will not be static; it will be adjusted informally each year and formally every five years.
7. Bob: Expand the envelope to include OSTDS in the high recharge areas outside the PFAs.
8. Pam: The additional OSTDS options should include all lot sizes.
9. Anthony: Focus on the PFAs and require more robust treatment systems. Debbie: By requiring more robust systems in a smaller area (PFAs only), there will likely be more political support.
10. Roxanne: Higher efficiency systems are being contemplated in the Silver/Rainbow Springs BMAP. Greg: We are not really pursuing that option—it was discussed, but DEP does not think that is a

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practical approach. Remember that we evaluate progress every five years, so we can make adjustments through time.

11. Roxanne: Think about if lots can be grandfathered in.
12. Bob: Since the WWTF policies are facility-specific, I would need to see the proposed effects on each facility before providing an option on which WWTF policy should be listed in the BMAP. Moira: I can post the WWTF facility analysis.
13. Anthony: Which WWTFs are included in the analysis? Moira: I do not have the analysis with me. However, the NSILT identifies the WWTFs within the BMAP area.
14. Pam: Implementation of either the existing or proposed WWTF policies do not yield large reductions.
15. Anthony: Leon County is completing a WWTF study which may recommend cluster systems in place of small package plants that hardly ever meet their permit discharge requirements.
16. Debbie: Why would we want the Wakulla BMAP to have a less stringent WWTF policy compared to other springs BMAPs?
17. John and Debbie: We support the more stringent standards in the proposed WWTF policy.
18. Catherine Bray: Does the current WWTF policy apply to existing WWTFs only? Tiffany: The current WWTF policy applies to existing WWTFs in PFA 1. The proposed policy would apply to new and existing facilities inside and outside of the PFA. Catherine: The current adopted BMAP requires 3 mg/L nitrogen concentration limit for new WWTF in PFA1.
19. Pam: Since cluster systems have a capacity less than 10,000 gallons per day, they are permitted by FDOH rather than DEP. What would be the effluent standards set by FDOH for these WWTFs? The BMAP needs to consider cluster systems and associated effluent standards. Greg: This can be addressed by FDOH through rulemaking and recognized in the memorandum of understanding that will be executed by DEP and FDOH.
20. Anthony: How are you evaluating WWTF discharge? At the end of the treatment train? Tiffany: Yes, we are evaluating at the site of disposal which is after the treatment train.
21. Debbie: There should be an incentive for higher nitrate removal.
22. Debbie: The advanced ag BMP slide is more confusing than helpful. Maddie: I can provide DEP acreage by recharge area rather than by just BMP option.
23. Catherine: Are there not better application rates for farm fertilizer and livestock waste for northwest Florida instead of the University of Florida-Institute of Food and Agricultural Sciences (IFAS) IFAS rates? Celeste Lyon: We have tried numerous times to obtain more accurate rates. Catherine: My point is that the starting loads may be different/less, which means that additional ag practices are not needed.
24. Pam: Can the Wakulla BMAP be more stringent than the other springs BMAPs? Greg: The Wakulla BMAP can be different than other springs BMAPs as long as it can be explained why there are differences.

Adjournment

The meeting adjourned at 5:20 PM.

Action Items

Below are action items from the meeting.

1. Moira: Post final presentation and meeting summary to the DEP public access site.
2. Moira: Post WWTF analysis prepared by Wildwood Consulting.
3. Moira: Post Seminole County presentation.
4. Moira: Post Rick Hicks' Wekiva study.
5. Moira: Post Weeki Wachee and Homosassa/Chassahowitzka draft BMAPs.

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6. DEP: Consider time frame associated with conventional OSTDS.
7. DEP: Consider attenuation factor after the drain field.
8. DEP: Consider extending the remediation envelope beyond the PFAs to include the high recharge area.
9. DEP: Add local governments as responsible entities for funding implementation, in addition to DEP and FDOH.
10. DEP: Coordinate with FDOH on effluent standards for cluster systems and include details in the BMAP.
11. Maddie: Provide DEP advanced ag BMPs acreage by recharge area.
12. Moira: Post the draft BMAP prior to the public meeting that will be scheduled for late April/early May.