

Springs Coast Basin Joint Basin Management Action Plans (BMAPs)
Meeting Summary –Crystal River/Kings Bay and Weeki Wachee and Aripeka Springs

Wednesday, January 18, 2017 at 9:00 AM

*Southwest Florida Water Management District (SWFWMD) Headquarters, Board Room
2379 Broad Street, Brooksville, FL 34604*

Attendees

Gene Altman, SWFWMD	Melissa Gulvin, SWFWMD
Mike Bauer, Atkins	Terry Hansen, DEP
Juanita Bernal, Pasco County	Jeff Harris, Pasco County
Clay Black, Hernando County	Dan Hilliard
Alys Brockway, Hernando County	BJ Jarvis, UF/IFAS-Citrus County
Will Bryant, FDOH-Citrus	Tim Jones, DEP
John Burnett, Hernando County	Bill Lester, UF/IFAS-Hernando County
Tiffany Busby, Wildwood Consulting	Terri Lowery, Jones Edmunds
Nick Caesar, FDOH-Pasco	Mary Lusk, UF/IFAS
Ken Cheek, Citrus County	Christine Lynch, Pasco County
Kevin Coyne, DEP	Ken Maguire, FDOH-Pasco County
Mike Czerwinski, MGC Environmental	Sky Notestein, SWFWMD
Dennis Davis, Wright-Pierce	Jon Perry, Janicki Environmental
Dave DeWitt, SWFWMD	Danielle Rogers, SWFWMD
Yesenia Escribano, FDACS	Jeff Rogers, Citrus County
Sarah Faraji, Amec	Chris Rowe, Armorock
Cathy Foerster, Wildwood Consulting	Mary Szafraniec, Amec
Xueqing Gao, FDOH-Tallahassee	Elke Ursin, FDOH-Tallahassee
Alan Garri, Kimley-Horn	Barry Vance, Water & Air Research
Mark Green, SWFWMD	Dawn Velsor, Hernando County
Roxanne Groover, FOWA	John Walkinshaw, GPI

Introduction

Tiffany Busby opened the meeting at 9:02 AM by welcoming everyone. She stated that this is the third joint BMAP meeting for the Springs Coast area for Weeki Wachee and Aripeka Springs (WW) and Crystal River/Kings Bay (CR/KB). She stated that the Florida Department of Environmental Protection (DEP) intends to have draft BMAPs prepared for WW and CR/KB by the end of March 2017. The purpose of this meeting is to review pollutant load reduction milestones; ideas to reduce urban turfgrass fertilizer; future growth strategies; conserving lands to protect surface water and groundwater resources; and updates on funding opportunities to implement nonpoint source pollution education projects. Terry Hansen, DEP basin coordinator, will present these topics. She stated that these BMAPs are the first springs BMAPs prepared under the new (2016) legislation. DEP continues to determine actions needed to reduce nitrogen loading to groundwater and credits for such reductions; there are no existing methodologies for credit calculations involving groundwater.

Tiffany thanked SWFWMD for arranging the meeting room. She reminded attendees to sign in and to provide their email information should they desire to be on the DEP contact list to receive meeting notices. She also requested that attendees let her or Terry know if they are not receiving emails notices through the DEP GovDelivery system. She then requested that each person in the room introduce them self.

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Pollutant Loading and Reduction Milestones

Terry presented a series of slides on pollutant loading and reduction milestones for both CR/KB and WW. He stated that the numbers are initial, starting estimates for both pollutant loading and needed reductions. In CR/KB, the estimated load to groundwater is 600,000 pounds of nitrogen per year (lb-N/yr); the estimated Total Maximum Daily Load (TMDL) to groundwater is 200,000 lb-N/year; therefore, approximately 400,000 lb-N/yr needs to be reduced over the next 20 years. The DEP goal is to achieve a 30 % reduction in the first five years, an additional 50 % within 10 years (80 % total), and the remaining 20 % within 15 years.

The WW BMAP includes pollutant loading and reduction milestones for Aripeka Springs as well as WW Springs. Though Aripeka is not a first magnitude spring, it is included in the WW BMAP due to proximity to WW. For Aripeka, the estimated load to groundwater is 137,929 lb-N/yr; the estimated TMDL to groundwater is 4,228 lb-N/year; therefore, approximately 134,000 lb-N/yr needs to be reduced over the next 20 years. For WW, the estimated load to groundwater is 940,000 lb-N/yr; the estimated TMDL to groundwater is 103,000 lb-N/year; therefore, approximately 837,000 lb-N/yr needs to be reduced over the next 20 years.

Terry presented calculations and septic system options to meet reduction goals in CR/KB and WW (note that numbers were not provided for Aripeka since they are not yet available). The calculations and options are based on enhancement and/or replacement of existing septic systems within medium and high recharge areas. The calculations are simplistic, do not account for future loads, and assume:

- One septic system averages 18 lb-N/year loading (based on two persons per household at 9.012 lb-N/person).
- Septic enhancement achieves 65% reduction in overall loading to groundwater (35% continues to groundwater).
- Septic replacement achieves 95% reduction in existing load to groundwater.

Based on this exercise, it is observed that a combination of enhancement and replacement will be needed to meet the 20-year reduction estimate of 168,000 lb-N/yr in CR/KB and 251,100 lb-N/yr in WW for septic systems. Also, the number of systems that need enhancement or replacement exceeds the number existing in the BMAP study areas.

Terry presented maps of existing septic systems within Citrus County (approximately 28,500 systems in CR/KB study area) and Hernando County (approximately 33,000 systems in WW and Aripeka study areas). He placed circles on the maps of where he thought that conversion to sewer could occur. His purpose of this exercise is to convey the magnitude of how many systems will likely need to convert to sewer. He stated that Citrus County needs a plan for enhancement and/or replacement of systems; Hernando County just completed a study on septic to sewer conversion of potentially 30,000 systems and should be able to meet its 10 to 15-year goals. Alys Brockway stated that she wanted it made clear that Hernando County's effort to date is the completion of a study that contains recommendations on how to move forward with potentially expanding the county's wastewater service area. The study has not yet been presented to the Hernando County Board of County Commissioners; therefore, it is not yet known how the county will proceed with septic systems. John Burnett elaborated that there may not be political will to require conversion to sewer.

Terry explained slides for CR/KB and WW in which he estimated known options for load reduction per source category, how much total credit would result from these reductions, and the gap between the total amount to be reduced per category and estimated credits. His take home message is that a lot more work

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needs to be done to achieve reductions for each source category in both BMAPs. He stated there is uncertainty regarding input data in the DEP Nitrogen Source Inventory Loading Tool (NSILT) report for urban turfgrass fertilizer and golf course fertilizer. He acknowledged there are data gaps for golf courses and DEP is determining how best to obtain real numbers for fertilizer application on each golf course within the study areas.

Terry reminded attendees that the estimates do not take into consideration future growth and that DEP continues to work through septic system policies for inclusion in the BMAPs.

Questions/comments by attendees

1. Ken Cheek: Do you have a recharge map available for CR/KB? Terry: The recharge map is available in the NSILT report and prior presentations, but not in the current presentation. *Note: Terry located a recharge map on his flash drive and shared it with attendees at the end of the meeting.*
2. Elke Ursin: In the calculations, does septic replacement equate to conversion to sewer and enhancement means using a new liner system? Terry: Yes, enhancement assumes use of the new passive liner systems; replacement is conversion to sewer.
3. Elke: The numbers provided for septic system options are individual numbers per category? Terry: Yes, they are individual numbers per category per milestone. They should not be summed together.
4. Dan Hilliard: The numbers do not take into account geographic locations; they are not realistic numbers. Terry: Correct. The numbers are simplistic and are only to convey the magnitude of the situation – the sheer volume of systems that will need to be replaced and/or enhanced.
5. Roxanne Groover: If the enhanced systems achieve 65 % reduction in loading to groundwater, why does the footnote say 35 %? Terry: 35 % still reaches groundwater. We will revise the footnote for consistency with the replacement footnote.
6. Mike Czerwinski: What about older sewer systems that have leaks, such as the Beverly Hills sewer system? Terry: System leaks are accounted for in the wastewater treatment facility (WWTF) source category. A table will be included in the BMAPs similar to what DEP used in the Rainbow Springs and Silver Springs BMAPs that prescribes WWTF requirements for nutrient reduction.
7. Mike: I do not mean the WWTF itself, but rather the lines and system. Ken: Beverly Hills is a private system that Citrus County tried to buy. Since it is private, the county cannot repair it. Jeff Rogers: It is agreed that leaks need to be fixed. Terry: DEP is aware that system leaks are issues.
8. Mary Lusk: What is the basis for the estimated 13 % to 15 % reduction in groundwater nitrate for farm fertilizer? Terry: The farm fertilizer reduction estimate is from a study prepared by Dr. Wendy Graham on row crops (corn and peanuts) in the Suwannee River Basin. The study measured effectiveness of best management practice (BMP) applications and assumed 100% enrollment and 100% verification.
9. Mary: How will the gap be addressed between the reduction needed and current credit that can be achieved for farm fertilizer? Terry: The Florida Department of Agriculture and Consumer Services (FDACS) is assisting DEP on this topic. The current credit will get us through the first five years. Tiffany: FDACS originally created the BMPs for stormwater, not groundwater; therefore, FDACS is adjusting BMPs.
10. Roxanne: Did the NSILT assume that all WWTFs are advanced wastewater treatment facilities? Terry: No. The DEP groundwater staff evaluated each WWTF in the BMAP study areas.
11. Roxanne: Are package plants considered a part of the WWTF source category? Terry: Yes, package plants are a part of the WWTF source category.
12. Clay Black: How did golf courses report fertilizer applications? Terry: The DEP groundwater staff sent surveys to each golf course in the study areas. Since not all golf courses responded (there is not a

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mandatory requirement that they provide fertilizer application data), DEP used literature values for those courses that did not respond.

13. Jeff Harris: Are the loading and reduction numbers for Aripeka rolled into the WW numbers? Terry: The Aripeka numbers are not yet available and will be identified separate from WW.
14. Clay: Is there a boundary delineation for Aripeka? Terry: Yes, there is a delineation and it will be available in the soon-to-be-released NSILT report for Aripeka.

Future Growth Strategies

Terry provided examples via PowerPoint and a hardcopy handout of future growth strategies that were used in the Rainbow Springs and Silver Springs BMAPs. He stated that the NSILT reports that are the basis for the Springs Coast BMAPs are static analyses and do not contemplate future loading. Therefore, BMAPs contain future growth strategies to "hold the line" on pollutant loading. He would like the stakeholders to begin contemplation of such strategies since he will formally request strategies as part of the project collection process in a few weeks.

Land Conservation Strategies for Groundwater Protection

Tiffany provided examples via PowerPoint and a hardcopy handout of land conservation activities that were included in the Rainbow Springs and Silver Springs BMAPs. She stated that land conservation is an option to abate future growth. She requested that stakeholders contemplate existing and potential land conservation activities that can be included in the BMAPs. Jeff Rogers stated that this concept makes sense, but the Springs Coast stakeholders may not be as progressive as the Rainbow Springs and Silver Springs stakeholders. John Burnett stated that Hernando County commissioners think there is already enough land in conservation. Tiffany responded that if land conservation is not an option, perhaps the stakeholders can indicate conditions that can be imposed on new development to control future loads. Jeff Rogers asked what the Florida Department of Health (FDOH) will do to control future loads. Will Bryant responded that FDOH will continue to provide good intergovernmental coordination in Citrus County. Elke responded that the use of septic systems inherently restricts growth since they are typically not allowed in high density land uses. She stated that FDOH will continue to work with DEP and the Technical Review Advisory Panel (TRAP) to modify rules, as needed.

Projects to Reduce Pollutant Loads

Terry conveyed via a PowerPoint slide and hardcopy handout the type of project information needed from stakeholders. The hardcopy handouts contain projects submitted to DEP to date. Cathy Foerster clarified that the format in the handout is the format that will be used in the actual BMAP documents; however, DEP will be requesting further detailed information in Excel workbook format that will be used to calculate reduction credits. DEP anticipates initiating the formal project collection process through use of the Excel workbook in a couple weeks. Jeff Rogers asked for the baseline year of data. Terry responded that it will be the last year of the verified period used in the TMDL reports. *Note: The baseline year is 2012 upon review of the TMDL reports.*

Actions/Ideas to Reduce Urban Turfgrass Fertilizer (UTF)

Terry stated that in addition to previously discussed education ideas, he would like to know if attendees have any further ideas/actions that can reduce UTF. Danielle Rogers inquired as to the purpose of this discussion as well as the previous discussion regarding project collection. Is DEP seeking "turn dirt" projects or just trying to facilitate collaboration among stakeholders? Terry responded that DEP is seeking both collaboration and viable projects since there are currently inadequate options for UTF. Tiffany elaborated that DEP is seeking tools for its toolbox to share across the state with all stakeholders.

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Tiffany used a flip chart to list the following ideas from attendees:

- Dan: Call lawn and garden centers to find out how much fertilizer is being sold (obtain good data).
- Mike: Mandate local reporting of fertilizer sales.
- Tiffany: Perhaps FDACS can improve verification of fertilizer sales reporting to the agency.
- Will: Perhaps the federal government will have responsibility in the future.
- Jon Perry: Education on the use of residential reuse water to reduce fertilizer use.
- Dan: Incentivize data collection by providing credit to the local government.
- Dan: Include text in the BMAP documents regarding data limitations and needs.
- Mike: Limit sod and irrigation areas in new developments.
- BJ Jarvis: We don't know the effects of preferred projects. As we move forward, we need to capture impact on load reduction.
- BJ: "Professional" landscapers should be a target audience for behavior change. There are few barriers to entry into the landscape business. There needs to be education and training.
- Dawn Velsor: Hernando County has licensing requirements for lawn fertilizer applicators, but there is a lack of enforcement (not enough staff) and a lack of political will.
- Tiffany: Pinellas County assigns stickers for placement on commercial fertilizer applicator vehicles to denote licensing. *Note: An attendee stated that Broward County also has such a program.*
- Roxanne: There needs to be education so that the public should seek a licensed, bonded fertilizer applicator.
- Alys: There should be a coordinated, single campaign on fertilizer.

Funding Updates

Terry presented a series of slides on education funding opportunities via the U.S. Environmental Protection Agency (EPA) 319(h) grant process in 2017 and 2018. \$1 million has been set aside specifically for nonpoint source education projects in the 2017 grant cycle. For 2018, specific money is not set aside for education projects, but education projects can be submitted with anticipated total funding of \$5 to \$6 million. Local governments are the only eligible applicants for the 2017 education grant monies. State agencies, state universities, water management districts, and local governments can submit education projects during the 2018 grant cycle. Eligible projects for 2017 funding are nonpoint source education/outreach projects that implement adopted BMAPs. Terry stated that the Springs Coast BMAPs should be eligible since anticipated adoption is July 2017. Education projects should include a minimum 40 % non-federal match; funding may not exceed 60 % of the total project cost. It is unknown at this time if the U.S. EPA will provide recurring funding specifically for education projects.

Mary stated that while the 2017 grant cycle is open to local governments only, the University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) will be happy to partner with local governments to provide assistance with the grant writing. Jeff Rogers stated that the required three-year project performance period may not be adequate for a full social marketing-based education campaign.

Dan asked if there is anything in the grant program to incentivize collaboration of stakeholders. Terry responded that the match requirement is the incentive. Elke said that the "Protect Florida Springs" license plate revenue is another grant opportunity for community-based research and education.

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Jeff Harris asked for the definition of "at its source" as used on the 2018 grant funding slide that states that eligible projects for funding are "projects that treat nonpoint source pollution at its source." Does this mean at the water reclamation facility (WRF)? Kevin Coyne responded that a WRF is a point source, not a nonpoint source. Funding for WRFs is through stormwater grants.

Terry presented a slide with information on a proposed DEP grant for septic system upgrades. It is anticipated that DEP will receive lists and schedules from local governments to upgrade or replace septic systems, but not for conversion to sewer. DEP would provide money received from the Florida Legislature designated as springs funding to local governments to offset costs to homeowners for the upgrades or replacement. Match dollars may be required. Terry will share additional details as they become available.

Watershed Information Network (WIN) and Florida Storage and Retrieval (STORET) Update

Terry provided a series of slides on the status of conversion by DEP from the STORET water quality database to WIN. Water quality providers will be able to begin uploading to WIN in spring 2017. STORET will remain open through December 2017. Data providers are encouraged to modify their processes now involving collection and/or data recording.

General Discussion / Additional Comments or Questions

Jeff Rogers asked for a status on the FDOH rule-making process to allow for the lined/enhanced drainfield systems. Elke responded that TRAP requested changes to the proposed rules and those revisions will be provided to TRAP for approval within the next few weeks. TRAP will seek concurrence from the FDOH Variance Committee. Elke did not provide an anticipated final rule-making end date. Elke did state that FDOH is exploring the addition of an in-tank system to add to the list of approved technologies. This will not require a rule change.

Roxanne reminded attendees that tours are available at the Florida Onsite Wastewater Association's (FOWA's) training center in Lake Alfred to view available advanced septic system technologies. Kevin responded that DEP has scheduled a tour for some of its staff and stakeholders in February and will share that date with Springs Coast stakeholders.

Mike asked why there cannot be a statewide rule that requires advanced septic systems in all springsheds. Will responded that such a rule is not realistic. Roxanne elaborated that there would need to be legislative intent for such a rule and consideration of economics.

Next Meeting

The next meeting is scheduled for Thursday morning, March 2, 2017 in Brooksville and will be another joint BMAP meeting. The primary focus of the meeting will be discussion of projects to reduce pollutant loads.

Adjournment

The meeting adjourned at 11:55 AM.

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Action Items

Below are action items from the meeting.

1. Terry/Cathy: Finalize presentation based on comments and observations voiced during the meeting.
2. Terry: Post final presentation, handouts, and meeting summary to the DEP Springs Coast web page.
3. Cathy: Email the final meeting summary and handouts to Brooksville, Crystal River, and Janet Hearn (on behalf of Pasco County) since they were not in attendance.
4. Terry: Email stakeholders with the FOWA tour date.
5. Cathy: Continue drafting the CR/KB and WW BMAPs for Terry's review.
6. Terry: Obtain reduction credit calculations from Amec for inclusion in the project collection Excel workbook.
7. Terry/Tiffany/Cathy: Finalize project collection Excel workbook.
8. Cathy: Send final Excel workbook to stakeholders for data input.
9. Cathy: Schedule meetings (or teleconferences) with Crystal River and Brooksville to discuss project collection.
10. Yesenia Escibano: Determine current status of fertilizer reporting to FDACS and how FDACS processes this information.
11. Cathy: Send a save-the-date notice via GovDelivery to stakeholders for the March meeting.
12. Terry: Prepare Florida Administrative Register (FAR) notice and post March agenda to DEP BMAP web page and Springs Coast web page.