

Crystal River/Kings Bay Basin Management Action Plan (BMAP) Meeting Summary

*Tuesday, August 23, 2016 at 9:00 AM
Crystal River City Hall
123 Northwest Highway 19, Crystal River, FL 34428*

Attendees

Holly Alexander, Kings Bay Springs Alliance
Gene Altman, SWFWMD
Will Bryant, FDOH-Citrus County
Debra Burden, Citrus County
Tiffany Busby, Wildwood Consulting
Ed Call, City of Crystal River
Kevin Coyne, DEP
Cathy Foerster, Wildwood Consulting
Xueqing Gao, FDOH-Tallahassee
Roxanne Groover, FOWA
Terry Hansen, DEP
Janet Hearn, ATM on behalf of FDOT
BJ Jarvis, UF-Citrus County Extension

Tim Jones, DEP St. Martins Marsh Aquatic
Preserve
Joyce Kleen, USFWS
Jamie Letendre, DEP St. Martins Marsh Aquatic
Preserve
Terri Lowery, Jones Edmunds
Sky Notestein, SWFWMD
Trisha Phy, USFWS
Jennifer Sagan, Amec Foster Wheeler
Bill Stevens, Citrus County
Elke Ursin, FDOH-Tallahassee
Barry Vance, Water & Air Research
Devon Villareal-Dabbs, Citrus County
John Walkinshaw, GPI

Introduction

Tiffany Busby opened the meeting at 9:00 AM by welcoming everyone. She explained that the focus of today's meeting is to continue the development of an onsite sewage treatment and disposal system (OSTDS) remediation plan and determination of the priority focus area (PFA). Terry Hansen, the Florida Department of Environmental Protection (DEP) basin coordinator for Crystal River/Kings Bay (CR/KB), will discuss new legislative requirements related to the development of the PFA. We will then recap the discussions from last month on the three components of the OSTDS remediation plan: education, projects, and science, with a focus today on science-related actions. She thanked the City of Crystal River 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 then requested that each person in the room introduce themselves.

BMAPs

Since there were a few new people in the audience, Tiffany and Terry provided a brief overview of the BMAP process and the purpose of the BMAP – a watershed restoration plan to reduce the nutrient footprint in a specific geographic area. More than 20 BMAPs have been adopted by DEP for surface water. DEP is now mandated to adopt BMAPs for 29 first magnitude springs (groundwater).

Terry displayed a map of the CR/KB study area and discussed pollutant sources. He followed this with a bar chart that reflected the current discharge of nitrogen out of Kings Bay compared to the total maximum daily load (TMDL), and estimated nitrogen loading to groundwater per the DEP nitrogen source inventory loading tool (NSILT). The current discharge is higher than the TMDL.

PFA

Terry presented a series of slides on the legislative requirements for determination of a PFA – defined as an area or areas of a basin where the Floridan Aquifer is generally most vulnerable to pollutant inputs where there is known connectivity between groundwater pathways and an Outstanding Florida Spring.

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Specific to CR/KB, DEP is currently working with Southwest Florida Water Management District (SWFWMD) on the methodology and geographic boundary determination of the PFA. As part of the PFA determination, a groundwater contributing area (CA) must be established for the spring. Terry showed a map of the proposed CA for CR/KB. Upon consensus with SWFWMD, DEP will share the proposed PFA area with the stakeholders. It is anticipated that the entire BMAP study area will be a PFA. DEP and SWFWMD intend to have consensus on the approach for determining the PFA by the end of this month.

Questions/comments by attendees

1. Gene Altman: Are the loading rates the result of monitoring? Terry: Yes, the loading rates are an average concentration of discharge via monitoring by SWFWMD.
2. When you reference "Kings Bay" are you meaning the entire area? Terry: Yes, the CR/KB area is also referred to as the "Kings Bay" area.
3. Roxanne Groover: So, prioritized areas in Wakulla Springs and Rainbow Springs BMAPs can now be classified as PFAs? Kevin: Yes, the priority areas in those plans can now be considered PFAs.
4. Dr. Gao: Will all Springs Coast BMAPs have PFAs identified by the end of this month? Terry: Only the CR/KB PFA will be delineated by the end of this month. The agreed upon methodology with SWFWMD will be the template for PFA determinations in other basins.

Planning Projects and Level of Effort

Terry classified this topic as occurring and future activities in the BMAP process. He presented a pie chart with sources of nitrogen loading to groundwater based on the NSILT. On October 19, 2016, at a meeting in Brooksville, the NSILTs for CR/KB and Weeki Wachee will be finalized; the draft NSILT for Homosassa/Chassahowitzka will be discussed. He noted that stormwater is not identified as a source on the pie chart since it is integrated and its impact considered as a part of other sources, such as urban turfgrass fertilizer.

Based on the pie chart, Terry then showed a table that conveyed the proposed nitrogen reduction by source. The overall load reduction targets are 30% of the total within five years; 80% of the total within ten years; and 100% of the total within 15 years. He stated that the goals are aggressive for the first ten years; however, the overall load reduction must occur within 20 years. DEP intends to be aggressive with the reduction targets so that it can request funding from the Florida Legislature to meet the load reduction goals.

Terry presented a proposed nutrient reduction strategy that focuses on controllable loads. Loading attributed to atmospheric deposition (AD), an uncontrollable load, is acknowledged but will be set aside for five years. Load reductions will be assigned to each entity and agriculture. Load reduction progress will be tracked yearly and adjustments made as needed. At the five-year milestone, progress will be assessed, load reductions adjusted as necessary, and it will be determined if AD reductions should be assigned. Entities have flexibility in the types and locations of projects as long as they achieve the overall load reduction assigned to the entity. Monitoring of existing groundwater and springs sampling locations is essential. Terry displayed a map of the existing monitoring network within the basin.

Terry reminded the stakeholders of the other source categories (other than septic systems) and requested the stakeholders be prepared to discuss urban and sports turfgrass fertilizer at the next meeting. BJ Jarvis responded that she has been tasked by the Citrus County Board of County Commissioners (BOCC) to propose more stringent provisions for the county's existing fertilizer ordinance at the BOCC meeting on

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September 13, 2016. Tiffany stated that DEP will need to figure out the credit calculations for new fertilizer requirements and would greatly appreciate BJ's input.

Terry provided a matrix of current comprehensive plan policies, ordinances, and land development codes related to fertilizer, stormwater, reclaimed water, and septic systems/wastewater for Brooksville, Crystal River, Citrus County, Hernando County, and Pasco County. Brooksville and Crystal River need to adopt fertilizer ordinances. It was pointed out by Will Bryant that while Citrus County does have a requirement for septic system inspections prior to transfer of title of real property, it is not enforceable due to House Bill 1263.

Terry announced that a joint meeting for CR/KB and Weeki Wachee stakeholders will take place on October 18, 2016 at SWFWMD headquarters in Brooksville. The focus will be on public education efforts and successes. Presentations will be given by the Tampa Bay Estuary Program (TBEP) and SWFWMD public affairs office. Upon presentations, Terry envisions a roundtable discussion of what can be applied in the Springs Coast basin's public education plans.

Questions/comments by attendees

1. Jennifer Sagan: Was springs funding used for the septic to sewer conversion in Ocala and what was the timeline for that project? Kevin and Terry: Springs money was used and the timeline was 2.5 to 3 years because Ocala was already ahead of the game, before the Silver Springs BMAP was adopted.
2. Gene Altman: At what point in time can credit be claimed for best management practices (BMPs)? Kevin: DEP is uncertain at this time, but usually credits can start after the TMDL-verified period. Tiffany: The date of eligibility is usually in the past, prior to the BMAP adoption date.
3. Dr. Gao: Will there be a monitoring network specific to the OSTDS remediation plan? Terry: The existing monitoring network will be used and built upon, if needed.
4. Gene Altman: What is going to happen to agriculture properties that are not yet enrolled in the Florida Department of Agriculture and Consumer Services (FDACS) BMP program or if enrolled, not implementing BMPs? Terry: FDACS will address this issue and provide information at a future BMAP meeting in either November or December 2016. Agriculture is only 16% land use in this basin. Kevin: Also, DEP will provide compliance assistance for those growers who fail to enroll in the BMPs.
5. Gene Altman: Has there been litigation yet related to agricultural noncompliance? Kevin: It is too soon for litigation, since the BMAP is not adopted.

OSTDS Remediation Plan

Tiffany provided a recap of the OSTDS remediation plan requirements and the plan components (education and projects) that were covered at last month's meeting.

Science-related Actions

Tiffany provided a series of slides on science-related actions and projects that are contained in the 2015 CR/KB Surface Water Improvement and Management (SWIM) Plan adopted by SWFWMD. She sought concurrence, other ideas, and overall comments.

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1. Elke Ursin: The Florida Department of Health (FDOH) is submitting projects on the Homosassa SWIM plan that may be relevant to this BMAP: a public education campaign based on the Duval County campaign, and septic system inventory update.
2. Jamie Letendre: The DEP St. Martins Marsh Aquatic Preserve is a partner on Project COAST and has a data set (20 stations) for the end of the stream. Tiffany: We would greatly appreciate receipt of a description of that monitoring effort from you.
3. Roxanne Groover: I am meeting with a third party septic system testing (NSF) entity in September and will bring data to share at the next BMAP meeting. The data will describe the treatment levels for various types of septic system technologies both at the end of the pipe and at the after the septic field. I recommend that certain septic system manufacturers present at a future meeting. Tiffany: We will make a note that we should check with you for an update for the September 29, 2016 meeting.
4. Debra Burden: Is the age of the septic system a part of the data set in the FDOH inventory? Elke: FDOH has the age of the home from Department of Revenue data and installation dates from electronic records post-1990s. Thus, there is some information, but there are also data gaps on the age of the system.
5. Debra Burden: I suggest that a color-coded map be prepared to easier visualize the septic systems within the PFA. Colors for groundwater elevation, age of system, and vulnerability areas. Will Bryant further suggested identification of homes that do not have documented septic system repairs within the last 40 years. Elke: FDOH has repair data in spreadsheet format on the FDOH website.
6. Jennifer Sagan: Florida State University (FSU) published a study five or so years ago on advanced treatment systems with a finding that half of the systems were dismantled by the homeowners. Roxanne: There will need to be some mechanism in the BMAP by which a homeowner is responsible for the system.
7. Devon Villareal-Dabbs: I was previously employed by DEP in the Florida Keys. The Lower Keys (Monroe County) utilized a decentralized system with an opt-in program in which the local entity maintained the system via an easement, or in the alternative, the homeowner installed and maintained an expensive system.
8. Bill Stevens: Need to look at the proximity of the wastewater treatment facility (WWTF) and determine cost for an owner to connect to the WWTF.
9. Elke Ursin: I suggest that the NSILT be combined with the FDOH nitrogen study to gain site-specific load calculations and use geographic information systems (GIS) to refine load estimates.
10. Will Bryant: Look at commercial infill areas that are on septic systems. They are candidates for conversion to sewer.
11. Bill Stevens: The BMAP needs to specify a timeline for local governments to codify their codes and ordinances for consistency with the BMAP. For example, the medium to be used for nitrogen reduction.

Project Strategy

Tiffany stated that overall reductions are needed by source category and by entity/group. DEP is flexible on the project approach as long as each entity does its fair share. She stated that DEP is also determining how best to calculate project credits. Calculations will be reviewed and discussed at a future meeting.

1. Devon Villareal-Dabbs: Are there existing data sets regarding the reduction of fertilizer when reclaimed water is used? Sky: SWFWMD is not aware of such data. BJ: I am aware of research, but no conclusive data. Terry: The On Top of the World golf course in Marion County track that

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kind of data. Tiffany: Just a reminder that reclaimed water is factored into the wastewater source category on the pie chart. An entity could receive credit for improved reuse effluent.

2. John Walkinshaw: Pinellas County continues to have discussions on this topic. Overuse of reclaimed water is a pollutant source in the Tampa Bay region.
3. Someone asked if there are any studies available on reuse loads. Tiffany: A 2012 PowerPoint summarizing a reuse study by Harvey Harper will be posted to the DEP site. The study focused on impacts of reuse irrigation on nutrient loadings and transport in urbanized drainage basins.

Public Education

Tiffany provided a recap of the recommendations provided by stakeholders at the last meeting on public education target audiences, messaging, and available resources/materials. She then provided a matrix that conveyed the top three priorities identified by Brooksville, Crystal River, and Citrus County on audiences, messaging, and materials. Tiffany would like the stakeholders to contemplate what they are going to do and what they want to do should additional funding become available. The topic of public education will be revisited after the October 18, 2016 meeting in which presentations will be given by TBEP on the "Be Floridian" public education campaign and SWFWMD on its education campaigns.

1. Debra Burden: The Citrus County public information officer, Cynthia Oswald, should be invited to the October 18, 2016 meeting.
2. Elke Ursin: The U.S. Environmental Protection Agency (EPA) will be hosting SepticSmart webinars in September.
3. Roxanne Groover: Think about the population in each BMAP area. Once public education strategy does not fit all.

Next Meeting

The next meeting will be in the morning on September 29, 2016 in Crystal River at which time we will possibly discuss site considerations/field enhancements for OSTDS; approaches to load reduction calculations; potential efforts/reductions in other source categories, particularly urban and sports turfgrass fertilizer; Citrus County's fertilizer ordinance changes; and third party septic system testing data.

In the meantime, presentations from today's meeting will be placed on the DEP website at the following location:

http://publicfiles.dep.state.fl.us/DEAR/BMAP/Springs Coast/BMAPs/CR_KB_BMAP/.

Adjournment

The meeting adjourned at 11:25 AM.

Action Items

Below are action items from the meeting.

1. Terry – Present the PFA determination to stakeholders at a future meeting.
2. Terry – Post presentation on the DEP website.
3. Terry/Cathy – Send out a save-the-date announcement for the September 29, 2016 BMAP meetings, October 18, 2016 joint BMAP meeting, and October 19, 2016 NSILT meeting.
4. Terry – Determine the starting date for project/credit eligibility.
5. Terry/Tiffany – Coordinate with BJ Jarvis on calculating credits for new fertilizer requirements.
6. Terry/Tiffany – Confirm final time and arrangements for October 18, 2016 joint BMAP meeting. Invite SWFWMD public affairs staff to present at the meeting.

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7. BJ Jarvis – Provide status of Citrus County fertilizer ordinance changes at the September 29, 2016 BMAP meeting.
8. Roxanne Groover – Provide an update on the third party septic system testing data (NSF) at the September 29, 2016 BMAP meeting.
9. Terry – Obtain data set from Jamie Letendre on the 20 stations at the end of the stream.
10. Terry/Tiffany – Post the Harvey Harper 2012 reuse irrigation study to the DEP site.
11. Terry – Invite the Citrus County public information officer, Cynthia Oswald, to the October 18, 2016 meeting.
12. Terry – Coordinate an FDACS presentation for either the November or December 2016 BMAP meeting.