

Meeting Notes
Wekiva BMAP Working Group – Meeting #1
April 15, 2009 – 1:30 pm – 4:00 pm
VFW/Community Center, 519 S Central Ave, Apopka Florida 32703
FAW Notice ID: 7003126

Attendees

AFFILIATIONS	ATTENDEES	
Basin Working Group (BWG) Member Organizations (* working group status pending)	BWG Representative or alternate in attendance	Other Staff (including BWG alternates) supporting BMAP development
City of Altamonte Springs	Danielle Marshall	Bill Baer
City of Apopka	Jessica Schilling	
City of Eustis	Erwin Gajentan	
City of Maitland *	Marissa Rodriguez	
City of Mount Dora	Paul Ritter	
City of Oakland *	Roland Magyar	
City of Ocoee	Whit Heffington	
City of Orlando	Robert Cadle	Lisa Lotti (alt), Kevin McCann
City of Tavares	Jason Spann	
City of Winter Garden	Mike Kelley	
FDACS-Office of Ag Water Policy	Jody Lee	
FDEP - Wekiva Springs State Park & Wekiva Aquatic Preserve	Paul Lammoud	Deborah Shelley (Wekiva Aquatic Preserve)
FDOT District 5	Patrick Muench	Robert Potts (alt - E-Sciences)
Florida Expressway	Not in attendance	
Florida Turnpike	Not in attendance	
Friends of Wekiva	Nancy Prine	
Lake County	Mary Hamilton	Mike Bowers (alt), Walter Wood
Lake County Health Dept,	Not in attendance	
Marion County	Not in attendance	
Orange County	Lori Cuniff	Rick Baird, John Byrd, Ray Hanson (alt), Dan Homblette, Bill Hurley, Penny Post
Orange County Health Dept.	Gary Smith	
Seminole County	Joe Forte	Mark Flomerfelt, Gary Johnson (alt), Kim Ornberg, Roland Raymundo, Bob Walter, Shannon Wetzel
Seminole County DOH	Meghan Whidden	
SJRWMD	Casey Fitzgerald	Nancy Christman, Robert Mattson, Tom Ziegler,
Town of Astatula	Stephanie Cross	
Utilities Inc. /Wekiva Hunt Club WWTF	Patrick Flynn	
Quorum Met (22 of 26)		

Other Interested Organizations and Individuals Supporting BMAP Development	
AECOM	Mike Howe
CDM	Danielle Honour
East Lake County Chamber	Susan Brooks
East Lake Citizens Council	Clark Morris
FDEP	John Abendroth, Natalie Ayala, Crystal Cook, Chris Ferraro, Vivian Garfein, Jennifer Gihring, Lou Ley, Day McClanahan, Kalina Warren
FDOH	Eberhard Roeder
Green's Environmental Services	Dominique Buhot
Home Builders Assn Lake County	Linda Nagle
Inwood Consulting Engineers	Mark Ellard
Mack Industries	Greg Liskey
Orange Auduban Society	Loretta Satterthwaite
PBSJ	Dave Tomasko
PEC (Ocoee)	April Breen
Representatives Nelson	Tresa Woodward
Residents	Win Adams, Leon Armentrout, Tim Barley, Quentin (Bob) Beitel, Clifton Bonds, Bill Brown, Joe Dixon, Randy Driggers, T.G. Earnest, David Emmel, Kevan Evans, Georgianna Fatic, Russell Fatic, Mike Fuentes, Terry Gancarz, David Goldstone, Frank Hanson, Robert Harris, Dan Hayes, Michael Holmes, Marjean Ingram, Bill Kurtz, David MacMillan, Neil McDonald, William Melchior, Tom Murnine, Gino Ratti, Robbie Richard, Amber Riley, Larry Robertson, Anthony Sammartino, Margaret Sammartino, Andrea Samson, Howard Scharfenberg, Robert Schutz, A.T. Scofield, Viva Springer, William Taylor, Caroline Tyo, Ronald Tyo, Scott Vannergrift, Hugo Walden, Anna Webb, Deborah Wetter, Jim Wieland, June Wieland, Mary Wittkamp
SAIC	Kathleen Harrigan, Bob Kelly
Senator Constantine's Office	Abigail Souders
The Nature Conservancy (TNC)	Keith Schme

Meeting Goals:

- Review BMAP Working Group Member Organization and Meeting Structure
- Review ongoing research studies and modifications to planning area boundaries
- Discuss water quality restoration projects within the planning area
- Discuss characterizing and quantifying pollutant sources within the planning area.

1:30 Welcome and intro (Kathy Harrigan, Facilitator)

Materials: Group Organization/Mission/Goals Handout

Kathy Harrigan reviewed the BMAP meeting organization and structure. She introduced new participants, conducted a roll call, confirmed the presence of a quorum, and reviewed the agenda. Kathy and Jennifer Gihring covered the following highlights:

- Many attendees are concerned about septic tanks. While septic tanks are piece of the puzzle, this meeting was not focused exclusively on septic tanks nor will we be discussing the proposed DOH septic tank rule.
- Wekiva Basin Working Group meetings will operate with a formal structure. Time will be provided for open questions from the floor, but this time will be limited in the interest of

ensuring that Working Group members have sufficient time to hear and discuss agenda topics.

- The Department will hold general public meetings as part of the BMAP process. These will be much less formal and allow more time for questions and discussion from interested parties.
- Jennifer explained the Mission and Goals Handout, noting revisions to incorporate the entire planning area.

Q&A:

Will septic tanks be discussed at all?	Septic tanks will be discussed within the context of all sources.
How many different sources are identified and what are they?	Hold on to that question because we are going to discuss later at 2:45 PM.
What is the objective for this particular group?	The purpose of this group is to make recommendations to the Department regarding the Wekiva BMAP. The BMAP is a document adopted by secretarial order that includes an understanding of impairment sources, the restoration process, the programs that will accomplish the restoration, and statements by different parties of what they will do to restore the basin.
Who actually votes? Do state agencies vote?	All Working Group members, including state agencies, have an equal role.
Which groups represent the on-site wastewater treatment systems?	Seminole, Orange, and Lake County Health Departments and Orange County Environmental Protection Division.
Is everyone on the board aware that the 56,000 people who will be affected are the same ones who will have to pay for new septic systems?	Yes, they are aware that septic tanks are part of the puzzle. The DOH septic tank rule is ongoing and on its own path. This forum is not the place to discuss the septic tank rule. We are here to discuss nutrient loads from septic tanks. We will keep abreast of the DOH rulemaking and incorporate their efforts as appropriate, but not talking about the rule here specifically.
Does this board impact the septic tank rule?	No, the Basin Working Group has no impact on or authority regarding the DOH rulemaking.
What are this committee's roles and responsibilities? Are decisions made here are taken for recommendations elsewhere?	Every entity represented here has an obligation in the BMAP to implement projects. We expect a statement of commitment from these entities. The charge of this group is to make recommendations to the Department regarding information and commitments to be included in the BMAP.
Is everyone here a government entity? Are people represented here through citizen representation, or just government entities?	Utilities and Friends of Wekiva are present. Citizen interests are being represented primarily through local governments.
How do we follow what the DOH does about the septic tank issue?	Talk to DOH so there is no misinterpretation of the information. The DOH website has information on this rule. (post-meeting note: See http://www.doh.state.fl.us/environment/ostds/wekiva/index.htm or contact EnvironmentalHealthOnsiteSewageProg@doh.state.fl.us for more

	<i>information about the DOH rulemaking)</i>
Are septic tanks on the list of pollutant sources? Are birds on the list? Dogs?	Yes, environmental deposition and natural area contributions were considered in the TMDLs and are seriously evaluated as nutrient sources. We will talk about dogs when we get to sources.

Action Items:

Responsible Party	Item	Deadline
Jennifer Gihring	Add information about the DOH rule on the FTP site and email to attendees.	ASAP (<i>post-meeting note: information available on FTP site</i>)

2:00 Technical Updates (Jennifer Gihring, DEP)

Handouts: Planning area map

Jennifer reviewed the ongoing isotope study involving FDEP, USGS and other partners.

Highlights:

- The study uses isotopes to identify nitrogen sources. This will help us better understand sources in the basin.
- The sampling and analyses are done. Water chemistry data quality assurance/quality control review is in progress. Isotope analyses are being conducted by USGS in Reston, VA. That data should be available within a few weeks.
- Results should be available by the next meeting (June).

Jennifer reviewed the updated BMAP Planning Area boundary. Highlights:

- There are two parts to the planning area: surface water basin (which now includes Blackwater Creek area and Seminole County's Stormwater delineation data) and groundwater basin (springshed; portion in pink area on the map).
- Springshed maps were compiled and the overlapping portion between the boundaries was determined to be the area that contributes to Wekiwa and Rock Springs. This resulted in a conservative planning area regarding groundwater.
- The BMAP Planning Area roughly corresponds to the Wekiva study area.

Q&A:

Are boundaries distinct or do they overlap? The surface area – how much of pink area is also stormwater runoff?	There is overlap between the surface watershed and springshed. We will include the GIS layers for springshed and surface watersheds separate on FTP website.
Does water from Lake Apopka go into the ground and contribute to the springs?	It was determined that Lake Apopka does not contribute to the Wekiwa or Rock springs. Lake Apopka has a spring within it and flows downstream through the Harris Chain.
Is the DOH study area different from the planning area map here?	The DOH is primarily following the Wekiva study area, which is slightly different than the BMAP Planning Area.

Action Items:

Responsible Party	Item	Deadline
Jennifer Gihring	Explain differences between DOH planning	Next meeting

	area and this basin map.	
Jennifer Gihring	Include the GIS layers for springshed and surface watersheds separate on FTP website	ASAP

2:15 Project identification (Jennifer Gihring, DEP; Bob Kelly, SAIC)

Handouts: Powerpoint presentation and agricultural acreage summary

Jennifer Gihring explained the role of project information in the BMAP process. In previous BMAPs, project information was gathered later in the process which proved to be a bad idea. Getting an early start on this process is important.

Bob Kelly (with SAIC, a DEP contractor supporting BMAP development) reviewed the status of project collection and guidelines for next steps. Highlights:

- Projects implemented since January 2007 (anything in planning stage or implemented after 1/1/07) are eligible for credit. We request that you also identify new projects.
- CDM identified stormwater and groundwater issues as part of the basin-wide stormwater master plan.
- Projects currently identified include the Elba way dredge and grade erosion control project and Sweetwater Cove tributary to the Wekiva. Many more projects are out there.
- Extensive information is needed for projects [see presentation]. Project detail will vary among projects and some technical information will require assistance.
- The projects should specify which area will be served by the project.
- Next steps include one-on-one meetings with BMAP Working Group member organizations to discuss eligible projects and pull together information.

Jody Lee (DACS Office of Ag. Water Policy) reviewed the agricultural best management practices (BMP) program, including data specific to the Wekiva. Highlights:

- In the BMAP process, agricultural interests are represented by Department of Agriculture and Consumer Services (DACS). Nutrient inputs from agricultural areas are addressed primarily through the agricultural BMP program. DACS is responsible for contacting landowners to enroll in the BMP program (i.e. documenting that they will implement BMPs to control nutrient loading from their property). Agriculture is a non point source contributor. All BMP manuals and programs are living documents. 3,906 acres are currently enrolled, which represents 25 percent of the eligible acres in the basin. DACS will continue to enroll growers. Jody Lee and Carol Johnson work in the Wekiva Basin to enroll landowners and assess their operations. Typically, growers are already doing 90-95% of what is suggested in the BMPs. DACS will be focusing on nutrient BMPs. Enrollment numbers will change as practices are verified on-the-ground.

Q&A:

Will a spreadsheet populated with these required items [presented in the slideshow] be distributed?	Yes. A template will be provided at a later date.
Are these projects only capital projects or all types of projects?	All types of projects.
How do you expect to measure the status of these projects in regards to reductions?	Estimates are determined using standard methods. There will be annual update meetings for every BMAP to go over project statuses individually, there is also a monitoring plan to track ambient water quality conditions. Further, selected projects will be monitored pre- and post-

	implementation benefits to determine if the anticipated benefits are being achieved.
Have there been successes in past BMAP that can shed light on this BMAP?	We will put this onto the June agenda (successes and achievements of other BMAPs such as the Upper Ocklawaha)
Will these be only government projects? What types are applicable to onsite systems?	Government and non-governmental projects will be included. Structural, nonstructural, public education and street sweeping projects can all be used. If an entity institutes a pump-out, that would be applicable to onsite systems.
Isn't there a cost- benefit column?	We will be looking at project costs in the BMAP process.
What is the source of information for ag BMPs?	DACS works with all state organizations and university (IFIS) data. Ag BMPs utilize the best available technology.
What is a non- point source?	Non- point source pollution differs from pollution from industrial and sewage treatment plants, in that it originates from many diffuse sources. Agricultural pollution usually comes in the form of storm water runoff, which carries contaminants into water bodies.

Action Items:

Responsible Party	Item	Deadline
Jennifer Gihring	Other BMAPs such as Ocklawaha BMAP project success or achievements	Next Meeting
Bob Kelley	Contact agencies to schedule meetings to discuss project information	ASAP

2:35 Stretch break

2:45 Source identification (Jennifer Gihring, DEP; Dave Tomasko, PBS&J)

Handout: powerpoint presentation

Jennifer Gihring opened the discussion by addressing lingering DOH questions. She explained that the DOH rule process is completely separate from the BMAP process. The intent of BMAP meetings is to address the contribution of nitrates in the basin which may include septic tanks. However, this group will not provide guidance to the DOH rule.

Dave Tomasko (PBS&J, consultant to the Department) reviewed existing information about nutrient sources in the Wekiva and their relevance to the BMAP. Highlights:

- o All data has certain level of confidence associated with it. Nitrates come from birds, fertilizers, wastewater, etc. The problem is quantifying relative contributions, how they've changed over time, and how to use that information. An accurate understanding of source loadings is needed for restoration money to be spent wisely.
- o Nitrate levels have increased in Wekiva, but are showing a current downward trend. The watershed has become more urbanized which increases impact, but there is also much better water treatment along with that urbanization. Agricultural fertilizer was a major load contributor in the 50's and 60's, but has largely been replaced by urbanization.
- o Assessing the changes in nitrate concentrations is important in determining the loads that each entity will have to account for.

- o The water coming out of the springs is 15-20 years old. The current decrease in nitrate corresponds to the historical decline of the citrus industry. However, further reductions are required to account for the levels not contributed by the citrus industry. Further, it is unknown whether nitrate levels will begin to increase in the future as a result of the post-citrus urbanization.
- o Denitrification=the process which turns environmentally harmful nitrogen (nitrate) into benign nitrogen (nitrogen gas) which is released into the air.
- o Comparing the DOH, TMDL, and MACTEC studies showed that 68% of the nutrients from onsite treatment disposal systems end up as load to the springs, but only 9% of input from nutrients from residential fertilizer end up at as load to the springs. Thus, 32% of the onsite system load is removed through processes such as denitrification, but 91% of fertilizer inputs are removed by similar mechanisms. While input from fertilizer may be a larger proportion of total inputs than onsite systems (estimated as 54 vs. 22%, respectively, in the MACTEC report), the 68 vs. 9% difference exists because fertilizer loads nitrogen in a way that maximizes its uptake before it enters groundwater, as opposed to septic systems, as the intent of fertilizer application is plant uptake. This distinction is important to understand when evaluating the relative importance of sources.
- o Isotope studies have been conducted to determine the source of nitrogen in the springs. Nitrogen occurs in two forms: N15 and N14. These have very different signatures. By identifying these signatures along with other tracers (caffeine, viruses, boron, atrazine) we can determine whether the nitrogen source comes from fertilizers or onsite treatment systems (septic tanks). This is especially important because the major land use in the basin is residential.

Q&A (responses from Vivian Garfein & Jennifer Gihring, DEP; Kathy Harrigan, SAIC; & Dave Tomasko, PBS&J):

Your research is what DOH is using to determine that there is a nitrate problem from onsite systems. There has to be some kind of coordination of facts, because we [the citizens] are impacted based on what you do. You want to continue examining sources, while the DOH feels satisfied with using existing data for this rule. We believe that these studies are interrelated.	Each entity here will at some point be told that it contributes a certain amount of pollutant into this system and will be responsible for a reduction related to their contribution. The task of figuring out the most cost-effective way to meet the reduction requirement belongs to each entity and is not the task of this committee.
Who allocates reductions? How are they determined?	This working group will go through all the information and determine how it will be used to move forward. It may be that we decide on a number system or use another method.
Is this all of this up to the cities and what they decide?	Each entity is responsible for determining the projects. Citizens can be involved through local governments in this process.
How do they know septic tank loads are not taken up by plants?	We've found that when different studies have looked at this issue from multiple approaches and their numbers are somewhat similar.
What is the time frame for the isotope studies?	The field work is completed and the data analysis done, but is currently going through the QA/QC process, so it should be completed by mid-May. The next BMAP meeting, in June, should have a presentation on the isotope study.
Springs used for aquatic facilities appear	There is a great amount of pressure forcing the

to have disproportionately higher levels of nitrogen. Are people using the springs as toilets?	water out of the spring vent. It would be near impossible for anything occurring at the vent to flow into it, as opposed to flowing further down the river.
Where are samples collected from? Spring vent or spring boil?	Samples are collected from the vent and boil, depending on the sampling agency and date. Samples from the boil and at the vent showed the same water chemistry and thus allows us to utilize a longer period of historical data.
GPS coordinates for Rock Springs describes the location as between the pool and spring run. Does this mean that the report reflects the spring run and not the boil or the vent?	We looked at transects down Wekiva River. The data points used in this are confirmed as the spring run, versus the boil and vents. The vent samples are collected, by the Springs Initiative, directly from the vent at Rock Springs.
Will the power point presentations be available online?	Yes at ftp site. Keep in mind that the site address is case-sensitive.
Do all springs show a similar decline based on '85- '83 data?	Hardly any of the springs have data currently, and especially not that far back in time. If you go far enough down the river, you'll find less nitrogen. There is little evidence of phosphorus uptake because that wasn't monitored previously. There is not enough data for Rock Springs to do data analysis on phosphorus.
How do we know the water isn't coming from Georgia or other states?	It's a common misconception that spring water in central Florida is coming from Georgia. However, that is not the case. Spring water in central Florida is coming from local recharge areas such as that shown as the Wekiva planning area. Most of the water coming out of the Wekiva spring is represented by the area on the planning area map. The ground water is coming from Florida and not other states.

Action Items:

Responsible Party	Item	Deadline
Jennifer Gihring	Contact Springs Initiative for nitrate level by springs statewide.	ASAP
Jennifer Gihring	Provide information about future SRF money	Next meeting
Jennifer Gihring	Distribute isotope study results via email and ftp site.	ASAP
Bob Kelley	Evaluation of TMDL, MACTEC, and DOH data to determine if we can/should make load allocations.	ASAP

3:40 Wrap up and next steps

Handouts: None

Kathy opened the floor to open questions and comments, reviewed action items, and next steps.

Q&A:

Cities and entities determine how reductions go into place. Does this mean that the DOH rule mandates, or is one of BMAP tools that can be used?	The requirements of the DOH rule may affect how entities choose to meet their BMAP obligations. However, the requirements of the BMAP will not affect the DOH rule.
As written, the DOH rule seems to be a mandate, but we need more information. Will the findings made here supersede this committee's finding?	As written, the DOH rule would be a standalone rule, if adopted. It may be a part of what municipalities are doing to reduce loads but information that arises through the BMAP process will not affect the DOH process.
I have no confidence that various entities can determine what to do with this problem when the DOH has mandated a septic tank rule before this BMAP committee has finalized its determinations. Can't this group determine that septic tanks are not an issue?	These are two different processes. This group will not make any recommendations on septic tank design. That is the DOH role; that is a separate issue.
Will isotope data be posted on FTP site before the meeting?	Yes, as soon as it is available.

Action Items:

Responsible Party	Item	Deadline
Jennifer Gihring	Summary statement of relationship between DOH rule and BMAP	ASAP
Jennifer Gihring	Post data on ftp site before next meeting	ASAP

4:00 Close

Next meeting: June 17, 2009; 1:30 PM
Seminole County Extension Services Auditorium
250 West County Home Road, in Sanford

Submitted by DEP Central District with contributions from C. Cook, N. Ayala, D. McClanahan, J. Gihring (DEP Watershed Planning and Coordination Section), K. Harrigan (SAIC), R. Mattson (SJRWMD), and D. Tomasko (PBS&J)

For more information contact:

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