

**Minutes**  
**Silver Springs Basin Management Action Plan**  
**Orientation Meeting**  
**January 23, 2013 1:00p.m.- 3:00 p.m**  
**Marion County Growth Services Department**  
**2710 East Silver Springs Boulevard**  
**Ocala, FL 34470**

Opening Remarks, Introductions & Meeting Goals (Tom Frick)

- This is an orientation meeting to kick off the Basin Management Action Plan (BMAP) for Silver Springs. A BMAP has specific goals involved. The law allows us to look at water quality restoration and focus on projects and activities that will specifically reduce nitrates in our system.
- BMAP is stakeholder driven and collaborative. This is not a process where DEP mandates specific actions. BMAPs are developed by gathering stakeholders to come up with projects that will reduce nitrates to the spring. There are already lots of activities going on in the basin.
- Introductions: Mary Paulic is basin coordinator. Rick Hicks is administrator of groundwater and springs section. He is also the author of this TMDL and assists with technical issues. Charlie Gauthier is administrator of the section that develops BMAPs. Shane Williams is the BMAP facilitator. Shane works for Marion County, but is facilitating for FDEP. Marion County will have department representatives, separate from Shane in the BMAP meetings.
- DEP's and facilitator's role is to listen, help develop plan.

Why we are here: Silver Springs TMDL Summary (Rick Hicks)

- Meetings were held with local agencies and the general public last July to present the draft TMDL. Since then the TMDL has been finalized and was approved in November. Existing rules will be updated in late January, early February to reflect TMDL.
- A TMDL is the formal target for achieving the water quality component of restoration, based on the concentration of nitrate. Nitrate concentrations have increased over time. In 2009 Silver Springs was listed as impaired based on an association of nitrate concentration and algal growth. For springs the methodology links the ecological imbalance of algal communities to elevated nitrate concentration. DEP looked at ten year period of record to establish the TMDL for Silver Springs
- Components of TMDL: threshold/target and an assessment of what the reductions need to be to meet that threshold. Used existing research to establish that threshold. From that info DEP and EPA have developed nutrient criteria for nitrate in springs. The value is 0.35 mg/l of nitrate. To estimate necessary nitrate reductions, the max monthly average is used. Highest average monthly concentration was 1.69 mg/L in January, which relates to a 79% reduction needed.
- Three different WBIDs identified in the subject TMDL: Upper Silver River, Silver Springs Group, and Silver Springs Main Group. FDEP used 100 year contributing zone, which is not necessarily the travel time. In the area, 24% of land use is agriculture, 10% was pasture and hay, many golf

courses, 240 horse farms, 72 domestic wastewater treatment facilities, and a large number of septic tanks.

- There are two source categories for TMDLs.
  - a. Point sources – those that directly discharge into the impaired water body. Not many here.
  - b. Non point – fertilizer, septic tanks. They make up the vast majority of the sources.
- A table summarizing the required concentration reductions for point sources was presented. Waste load allocation pertains to direct wastewater discharges but there are none in this basin. There are a few NPDES surface water facilities, largely concrete batch plants.
- The non point source category is described through load allocations. There is an implicit margin of safety in that FDEP uses max monthly concentration to get the most conservative reduction value.

Q&A (public questions with responses by Rick Hicks):

Will Kanapaha contribution be highlighted as a point source?	No, point sources discharge directly into a waterbody.
Why was January the worst month for nitrate concentration?	It could be because January follows dry months, so flushing occurs in January. No definitive data on that.
Flow rate is not separable from nitrate concentration?	FDEP has not established a link. Flow rate has a lot to do with the overall health of the system.
Comment: you can't attack the nutrient problem without understanding the flow rate is a factor.	
Once all of this is approved, what kind of actionable items will be implemented to local governments?	Actionable items are the outcome of the BMAP process.
Did you look through data to see if concentration in January was significantly greater than other months?	Not in great detail.
Comment: It's important to determine if there is a statistically higher concentration in January to see if there are seasonal things that take place in Silver Springs.	Response by Tom Frick- we will be scheduling meetings to investigate these technical issues.
Is the lyngbya nitrate driven? Silver Glen has high lyngbya but low nitrate.	We understand that there are other factors involved in algal growth, but there is enough information on nitrate to know that nitrate must be addressed if there is going to be change.

Overview of BMAP Process

- a. Overview of Basin Management Action Plans (Charles Gauthier)
  - Bureau of Watershed Restorations does not issue permits, their focus is on water quality collection, assessment and action. The division (Environmental Assessment and Restoration)

works to set water quality standards throughout the state. The assessment process identifies impaired waters and then a TMDL is set. The BMAP comes next and is primary vehicle legislature has given the state.

- The BMAP is a way to bring government, business, community groups, and environmental interests together to solve water quality problems. It is proactive and deliberative. It identifies where work is needed using a watershed management approach and in it, management strategies and projects are identified. The BMAP group will have to identify a boundary for this BMAP even though natural boundaries are dynamic.
- Statutory authority found in Section 403.067, F.S. BMAPs are adopted by secretarial order. FDEP works closely with agencies, local governments, etc but law also requires the broadest level of public participation possible.
- Four new BMAPS were adopted in the state in 2012, and more are starting this year- Wakulla, Silver Springs, Rainbow Springs and Lake Okechobee.
- The BMAP will be implemented for point sources and nonpoint sources. For point sources (waste water and municipal separate storm sewer systems (MS4)), implementation is through NPDES permit issued Under Clean Water Act. For nonpoint sources, the BMAP is the implementation tool. MS4 permit holders in Marion County are Ocala, Marion County, FDOT and Belleview.
- Under state statute once a plan is established there is an obligation for agricultural operators to implement BMPs or prove that agricultural operations are not a contributor. FDACS oversees best management practices (BMPs) for agriculture, and has a whole series of BMPs to work from.

Q & A- (the majority of responses were given by Charles Gautier)

<p>How long have BMPs for agriculture been in place?</p>	<p>FDAC has had a set of BMPs adopted by rule for 5-6 years. Ag in this state has been around much longer. It's a challenge to get them in place. Under statute, there is monitoring to ensure that actions are working and every five years we reassess our progress. It is an adaptive process.</p>
<p>Are there regulatory monitoring processes for BMAPs to find that they are working? We saw improvement with the surface water drains but I haven't seen ag practices monitored for efficacy.</p>	<p>We can target demonstration of BMP effectiveness as part of the BMAP. DEP evaluates FDACS BMPs before they are adopted. FDACS is obligated to conduct On-farm verification. There is also always a monitoring plan in the BMAP for the basin. We may not see improvements in the first few years because of groundwater. In the past, restoration focus areas have been established to see if actions are effective.</p>
<p>Are producers are required to implement BMPs. Is there a penalty other than monitoring?</p>	<p>Answered by Daryl Smith (FDACS) -Once the BMAP is adopted they have a choice to implement BMPs or monitor. Monitoring is at the expense of the producer. If they do neither of that then we do have a</p>

	procedure to go through for compliance and enforcement. We can send you the law.
Have any ag producers opted for monitoring?	Not that FDACS is aware of. There is always a compliance schedule with a goal in the BMAP of who will be signed up within first five years, etc. Tom Frick- when we get to the end of that 5 years, if we haven't reached our goals we have to figure out who has not signed up and proceed from there. BMAPs are relatively young so we're just now getting to that period.
Comment: I hope that we'll get to the concerns over the length of time this will take. Silver Springs doesn't have 10 or 15 years.	

b. Silver Springs Basin Management Action Plan Fundamentals (Mary Paulic)

- Mary Paulic is the Basin Coordinator in the Watershed Planning and Coordination Section. The BMAPs are part of a larger cycle of water quality evaluation and assessment. It describes restoration actions and as activities and projects are implemented, results are assessed and adaptations are made. Ideally, a TMDL will be met within the 5 year cycle of BMAP implementation, but there must at least be measurable improvement over that time.
- The 3 water bodies identified as impaired in the TMDL will be covered by this BMAP. A major consideration is the geographic area to be covered in the BMAP. There are multiple ways of delineating the basin including capture zones and political boundaries. We'll have to look at how water gets to the springs and then look at how political boundaries and land uses factor into this in order to identify stakeholders.
- Nitrate sources are another consideration. We have to manage location, and understand magnitude of sources. The statute also requires consideration of future growth.
- Projects will be developed that will lead to nitrate reduction. We will develop an implementation schedule and identify who's responsible for project implementation and funding.
- Some types of projects that are surface water BMPs: surface water ponds, baffle boxes, waste water upgrades, public education and outreach, ordinances, etc.
- Ultimately need to identify sufficient projects to achieve reduction in the time frames required.
- Once the BMAP is completed, progress is measured through a monitoring plan. Annual assessments are conducted, with comprehensive reassessment after first five years.
- Challenges: because it is a groundwater basin, flow direction, retention time, etc. are not obvious. There are also closed basins where water drains internally with no visible output. Sometimes sources to Silver Springs may not be close geographically, due to underground pathways. Also need to consider complication of waste water discharges. In this basin they are not directed to surface water. Permits are handled through state discharge permit and not

NPDES. The concentration limits of those permits are different than if wastewater was being permitted through a surface water discharge permit.

- Benefits: Extensive studies have been done in this basin and included dye studies that followed groundwater flow. This will help figure out actions and strategies faster than if we had to start from scratch.
- Since the TMDL workshop in July 2012, there have been intergovernmental briefings and a tour of Silver Springs courtesy of Karen Chadwick and funding has been secured for a project to divert some wastewater flows away from the spring.

Q & A (majority of responses by Mary Paulic)

<p>Dye trace studies were limited in scope but provided some updated info on how that water travels. Do you perceive more focused projects being implemented? The stuff that was supposedly in the 100 year capture area actually reached Silver Springs in two years.</p>	<p>Not yet familiar with the data in the report, but that will be part of the BMAP discussion. FDEP staff has been prompted by division director to work with water management districts and increase nitrate work.</p>
<p>What is your typical source of project funding? Where is your office?</p>	<p>Mary's office is in Tallahassee. Closest DEP office is Orlando. Funding can come from local govt, storm water utilities, state grant and TMDL restoration dollars. There is not a central source of funding. Stakeholders have the obligation to find funds. From ag standpoint money typically comes from legislature, USDA and water management districts.</p>
<p>Is there a central place to find the studies? What is diff between 2, 10 etc capture zones?</p>	<p>The WMD has done modeling to estimate the time of travel from one point in the basin to the springs. Under idealized circumstances those would define travel times. We will discuss that in future BMAP meetings.</p>
<p>When you do these studies do you look at new industries that could change loading?</p>	<p>Rick –The TMDL is based on the threshold based on resource itself, not on practices that contribute. We do have to consider changes that are going on. Mary – the issue of future growth is something we'll have to consider. In other BMAP, (Harris Chain of Lakes in the Upper Ocklawaha) future additional loading was added to the overall reduction in loading that was needed. Another consideration is surface water rules and where local governments want to focus development.</p>
<p>How does this interweave with what is coming and</p>	<p>Our data ends at 2011. Anything after that is</p>

what is already here. Did you factor in potential Adena data?	not incorporated now. Considering future loading is part of the BMAP so it will be addressed.
Where are you getting your data? Are you working with a broader bunch of people then just WMD?	We're not trying to be narrow. Initially we're looking at existing studies and working it into this BMAP.
What is the range in the number of years that it takes to complete a BMAP like this?	The length of time depends on how quickly and frequently we can meet, as well as, how agreeable the group is to making decisions and degree of complexity of specific issues.
Comment: Half the people here are paid to be here. Its notorious that BMAP processes are abandoned by the public after a certain period of time. We don't want that to happen here.	There are plans to hold periodic public meetings to keep everyone involved and updated without having to attend all the meetings.
How do farmers sign themselves up for BMPs and whose responsibility it is? I just want to be clear on whose responsibility it is to get farmers signed up.	Daryl Smith (FDACS) : FDACS has the responsibility to sign farmers up. We work with UF, WMD, associations and NRCS. Carol Johnson and Jody Lee are two FDACS staff that deal with local producers. Jaime Cohen works with horse farmers in this county.

### Approach to the Silver Springs BMAP (Mary Paulic)

- The BMAP developmental timeline includes: Data discovery → BMAP development → BMAP adoption
- In data discovery, look at data collection methods, available reports and information, discuss BMAP process and get people on board. Start BMAP meetings in March and April.
  - a. FDEP and Marion County's roles. (Mary Paulic)
    - Shane Williams is a facilitator and works for Marion county. Kim Dinkins also works for Marion County and will help with meeting notes and compiling information.
    - County does have a second role as a stakeholder in this basin.
  - b. Stakeholders and other interested parties. (Shane Williams)
    - Stakeholder identification is the initial part of this process and includes community and environmental interests. We need feedback on stakeholders who are here today and who are missing. It's important to understand that all stakeholders enter on level playfield, and no one viewpoint should dominate the process. Not everyone becomes a stakeholder but everyone can contribute to conversation. Public meetings in the evenings may be an option to enable public involvement.

## Next Steps and Meeting Dates (Shane Williams)

- If you have any info or reports you'd like to share get that to us and we'll add to library.
- We have met with stakeholders individually. We'll be happy to do that with anyone who would like that.
- Next couple of meeting we will get into issues of BMAP boundaries, other sources, projects.
- The BMAP will be conducted with Government in the Sunshine philosophy; meetings are public and posted at least a week before meeting. Email is best way to get info out.
- TMDL website, ftp site, meeting announcement site (all on handout). Meetings and agendas are posted on the FDEP website. An ftp site is available and is a repository for reports, data, meeting minutes, and agendas. We're considering a Silver Springs website to more quickly get out updates.
- Comment: there already is a Silver Springs website under the FDEP springs initiative.
- The next tentative dates for meetings are March 6 and April 17, 2013. The agenda topics will include identification of additional stakeholders and basin boundaries.

### a. Final Questions and Comments.

Comment: Missing stakeholders- FGS, USGS, Aquatic Preserve Managers, Private Utilities	
Are county boundaries irrelevant in this process?	There are political and hydrological boundaries. Part of the BMAP process determines the relevance of political boundaries. We'll have to figure out the most appropriate contacts in those areas. Another thing to consider is other BMAPs which overlap in this basin.
What are the 3 impaired waters?	The springs and two parts of Silver River. They are just segments of the Silver River.
Comment: There is some evidence that the Silver and Rainbow basins are something of a super basin and there will be similar stakeholders.	
Is it going to be a sufficiency of effort BMAP or detailed allocations?	In surface water FDEP usually deals with loads where individual govts are assigned a number of pounds that they must reduce. In groundwater we look at concentrations instead so we're probably going to be looking at sufficiency of effort. Work is being done in Wekiva so that will be monitored to see how it progresses and if that process can be applied here.
Comment: need to keep the sense of urgency to this.	
Not a lot of farmers here. What we see is a	We obviously want to get to that .35 as quickly

<p>state agency representing their interests. I don't see one representing the environment. This is a lopsided process. There is concern that the public cannot afford to come to meetings.</p>	<p>as possible. The BMAP is not intended to take 15 years. There are some places in the state where very large reductions have to be made and financial constraints dictate that the process takes more than 5 years, so it is a stepped process.</p>
<p>We should ask farmers to reduce their fertilizer use by half. I honestly can't believe that you think there will be measurable decreases in five years with this.</p>	
<p>Does DEP have any plans for retrospective clean up like they do for soils? Does anyone go into the river and scrub plants or do something? What do we do to clean up what is there now?</p>	<p>We might look at those types of projects in the future.</p>
<p>How does this relate to numeric nutrient criteria (NNC) between EPA and DEP?</p>	<p>Our springs TMDL is the same as the EPA NNC. The back and forth is about flowing systems. Florida has already determined that Silver Springs is impaired so we've set a TMDL and are kicking off our restoration process to achieve that goal.</p>
<p>Please continue information sharing.</p>	<p>That is the intent even to the point to holding meetings in the evenings. There will be ample opportunity for the public to contribute</p>

- A letter from Robin Lewis, professional wetlands scientist was read by a citizen. The letter stressed urgency and an expedited BMAP process.
  - Shane emphasized that this is a stakeholder driven process and that no one voice will dominate so hold applause.
  - These are topics of discussion that are part of the BMAP process.
- Homework: collaborative stakeholder ideas about nutrient reductions. Projects, activities, to reduce nitrates in the basin. That is goal in the BMAP. Think about missing stakeholders, get that info to us. Our homework is gathering info on studies. Please send data to us.
- Marion County Stormwater group has a corporate run for the springs. Team/individual event, April 13<sup>th</sup>.

Adjourn (3:06)