

**Florida Department of Environmental Protection (DEP)
Jackson Blue Spring and Merritts Mill Pond Basin Management Action Plan
(BMAP)**

Annual Meeting Summary

April 18, 2024

10:00 pm – 11:58 am CT

Peanut Hall

Jackson County University of Florida (UF)

Institute of Food and Agricultural Sciences (IFAS) Extension Office

2741 Penn Ave

Marianna, FL 32448

Attendees

Craig Brown, Citizen
Sydney Bunch, NFWFMD
Tiffany Busby, Wildwood Consulting
Lauren Campbell, DEP
John Carman, Citizen
Bruce Conrad, Citizen
Michelle Cousin, Citizen
Rett Daniels, Jackson County
Chris Denmark, FDACS
Rick Figlow, Citizen
Lori Forster, Citizen
Peggy Gilley, Jackson Soil & Water
Conservation District
Mack Glass, Jackson Soil & Water
Conservation District
Valerie Graham, Citizen
Bill Graham, Citizen
Sam Hankinson, DEP
Terry Hart, Citizen
Madeline Hart, FDACS
Moirra Homann, DEP
Paul Johnson, Citizen
Betty Johnson, Citizen
Diane Lamar, Citizen
Roger Langfetter, Citizen

Celeste Lyon, RES for FDOT
David Malley, Citizen
Amanda Marshall, FDOT
Chris Matthews, Citizen
Debbie Matthews, Citizen
Doug Mayo, UF-IFAS
Chris McAllister, Citizen
Chuck McIntosh, Citizen
Ben Odom, Citizen
Rex Patterson, Citizen
Case Pilcher, NFWFMD
Barbara Richardson, Citizen
Jeff Richardson, Citizen
Robby Roberts, Citizen
LaKarole Robertson, FDOH
Peter Scott, FDACS
Paul Thurman, NFWFMD
Darla Townley, Citizen
John Trott, Citizen
Becky Trott, Citizen
Brandon Warner, Stantec
Kevin Warren, Citizen
Ken Weaver, DEP
Garrett Williams, Jackson Soil & Water
Conservation District

Questions and Answers (Q&A)

Jackson Blue Spring Basin Management Action Plan (BMAP) Overview

Q: What were the three agricultural projects mentioned in the presentation?

A: More details on lead entity and the types of agricultural projects can be found on the Statewide Annual Report (STAR) StoryMap.

Q: Is the monitoring site “SB9674” the headspring site?

A: Yes.

Q: Some wells have much higher concentrations than others—is that a concern?

A: Yes, these areas may help identify areas where projects should be prioritized.

Q: I recently saw some well drilling along Blue Springs Road--is that the site of one of the new DEP monitoring wells?

A: What you saw was likely some geotechnical measuring for a county sewer project. The new DEP monitoring wells were drilled in 2022.

Q: Is the focus just on nitrogen reductions?

A: Yes, the total maximum daily load (TMDL) that the BMAP is implementing is for nitrate and the BMAP tracks total nitrogen.

Nitrogen Source Inventory Loading Tool (NSILT) Results

Q: When you talk about atmospheric deposition as a source, do you mean that nitrogen is deposited from the air to the water surface?

A: When we estimated atmospheric deposition, DEP estimated wet and dry deposition to both water surfaces and the land surface and then estimated the amount of that loading that reaches groundwater.

Q: What are the attenuation factors for—that not all the nitrogen makes it down into the groundwater?

A: Yes, the attenuation factors represent nitrogen that does not make it into the groundwater and is instead converted into nitrogen gas and vents to the atmosphere or is taken up by plants or other biological or chemical processes.

Q: How much nitrogen does the septic to sewer project around Merritt’s Mill Pond reduce?

A: You can check the current estimated reduction on the STAR StoryMap. However, the entire project is not complete so only those reductions that were achieved through 2023 are reported.

Q: Is the presentation going to be made available?

A: Yes, the presentation will be posted online, and the link will be emailed out via the GovDelivery system.

Q: Thank you for the adjustments to the urban turfgrass fertilizer loads compared to the prior NSILT; these estimates seem more reasonable but there is still room for improvement as fertilization rates are low in this area.

A: Thank you for your comment.

Q: In the map of the estimated atmospheric deposition, there is an area of lower deposition shown near Malone. Why is that area low?

A: The atmospheric sources in this area are small, so the graphic represents slight differences in loading. Overall, atmospheric deposition is not a big driver of nitrogen contributions in this area compared to other sources.

Q: From looking at the pie chart of sources, around 85 percent of the nitrogen is related to farming. Are we working on projects to address that loading?

A: DEP is working in collaboration with the Florida Department of Agriculture and Consumer Services and the Northwest Florida Water Management District on projects. Each BMAP with agricultural sources is expected to include cooperative regional elements to address agricultural loads.

Q: Are reductions going to be mandatory for farmers?

A: If an agricultural producer has activities within a BMAP area, they are required to enroll in best management practices or perform water quality monitoring. FDACS works to enroll producers and to verify their BMPs. The Florida Statutes require producers to participate.

Spring Vent Analysis Results

Q: Producers are not required to track and report their fertilizer use to FDACS, so the loading estimates are going to be the biggest number.

A: Yes, fertilizer use data are collected by FDACS.

Q: Why does the BMAP not focus on other pollutants?

A: The total maximum daily load (TMDL) that the BMAP is implementing is a nitrate TMDL, so that is the focus of this plan.

Q: Is DEP monitoring other pollutants?

A: In the new monitoring wells, nitrogen and phosphorus are measured but not a wider range of constituents. DEP assesses waters every two years and many more parameters than nitrate are reviewed. However, since the TMDL is for nitrate, that is the BMAP pollutant of focus.

Q: Is there a place to see the water quality data for other pollutants?

A: Yes, you can see the actual data on the [DEP Watershed Information Network](#) database online or see a statewide map with water quality information on the [DEP Protecting Florida Together website](#).

Q: The water quality graphs show variable nitrogen levels over time--around 3 to 4 milligrams per liter (mg/L) total nitrogen which is 10 times more than the target. Can we expect less hydrilla when the nitrogen levels are lower?

A: You can expect better conditions with biologically healthy nitrogen levels. However, hydrilla can survive in low nitrogen levels so fluctuations in hydrilla levels are likely to be unrelated to the nitrogen levels observed in recent years.

Next Steps - BMAP Updates

Q: If no reductions occur, then what?

A: The water quality in the spring is related to the loading to the land surface and the groundwater quality throughout the basin. Also, it takes time for some groundwater to reach the spring vent, so the benefits of some projects will take time to change the concentration at the spring. It is a balance of reducing loads at the land surface and measuring the groundwater in the basin to see how much progress towards the target is being made.

Q: Can you compare the loading to the land uses? Is forestry being counted as an ag land use?

A: The map showing the agricultural land uses is based on the FDACS database that is quite accurate. The map shows agricultural production other than forestry, which is present in the basin but not represented on the map. There are 42,000 acres of active agricultural lands in the basin.

Q: How is the goal of 0.35 mg/L nitrate set?

A: The goal is determined by the TMDL. The TMDL was established by modeling water quality and reviewing biological data. The TMDL is set to meet healthy ecological standards, which are different than human health standards, which are higher.

Q: How does the TMDL concentration compare to the human health standards for nitrate?

A: The U.S. Environmental Protection Agency (EPA) sets the standard for safe drinking water at 10 mg/L.

Q: Some crops such as hay are good at using nitrogen. How is that considered?

A: Some crops require more fertilization than others.

Q: In the graphs that showed the various well concentrations, the well (#7) that is closest to Alabama has the highest concentration. What is being done about loads from Alabama?

A: The BMAP is focused on sources in Florida. We can see from the well data and the NSILT that we have many sources within Florida that need to be reduced in order to meet our goal. While Well 7 is the furthest north, it is not along the border. Furthermore, it is a shallow well and is not measuring shallow groundwater from Alabama, it is measuring loading from nearby sources in Florida. Those sources are the loads we need to address before we worry about interstate coordination. If we reduce our loads and we see that loading from Alabama is a problem, we can address that.

Q: How are we going to achieve a 91 percent reduction?

A: Local sources need to do their part. DEP will work with the local governments to support their efforts and to help provide funding. A lot will be expected from the cooperative regional elements in this watershed because of the high proportion of loading from agriculture.

Q: It would be good to have local government officials attend these meetings.

A: Local governments will have assigned responsibility as part of the BMAPs and will have five-year milestones assigned. DEP will be performing outreach to the local governments in this basin.

Q: What are the penalties for not meeting the goal?

A: BMAPs are legally enforceable. While DEP has yet to assign fines for noncompliance, that is an option.

Q: Should we be concentrating efforts near the wells with higher concentrations?

A: DEP is hoping that that hotspot analysis can be a tool for identifying where projects would be the most effective.

Q: We understand that DEP is a Florida agency, but it seems important to reach out to Alabama soon, so we have a better chance of succeeding.

A: Thank you for that comment. As a reminder, the current wells represent local nitrogen sources, not Alabama sources.

Q: Are there other wells being monitored outside the BMAP area?

A: There are wells that measure water levels around the region, but those wells are not sampled for nitrogen.

Q: Is Well #7 deep or shallow? Why does the name of the well indicate that it is a water management district well?

A: Well #7 is a shallow well. The name indicates a former water management district well was located at the site.

Q: Do I recall correctly that the average age of the water at the spring vent is 17 years old?

A: There was a dye study that was performed prior to BMAP adoption. The age of the water at the spring vent is variable. There are conduits and cave systems that deliver some groundwater very quickly while other water can take decades to travel to the vent. The travel time is complex to assess. DEP accounts for the differences in geology with the recharge map and accounting for some areas where the groundwater would be expected to receive less loading and be more isolated from surface loads while other areas are more directly connected to loads at the surface. This variability is the reason DEP installed more wells. We may not see the benefits of the projects immediately, but the well data will help us understand what is happening in the groundwater before it reaches the spring vent.

Q: In prior years, a lot of the data was only for the spring vent. Thank you for installing the wells for more data.

A: Thank you for the comment.

Q: Do we have measurements for water quality at the dam and Highway 20?

A: There are some monitoring sites on the Mill Pond and those data are available on WIN and Protecting Florida Together.

Q: Are the concentrations at the dam lower? What about the concentrations at nearby springs?

A: For other springs in the area, some have higher, and some have lower concentrations. For the dam site, we do not know the concentrations offhand.

Q: On the BMAP boundary on the Chipola River upstream of Spring Creek, is there sampling there?

A: Offhand, we are unsure if there is a site there. The WIN database or Protecting Florida Together would have that information.

Q: The University of Florida-Institute of Food and Agricultural Sciences (UF-IFAS) is active in this area. Do they test the fertilizer rates for crops?

A: UF-IFAS does research on application rates. DEP coordinates with FDACS and UF-IFAS on the rates used in the NSILT. Where IFAS grows crops, they follow their own recommended application rates.

Q: The 91 percent reduction is infeasible. If you remove all the agricultural loading, we still will not meet the target. How is that going to work?

A: The goal is ambitious, so we need all the sources to make reductions.

Q: The concentrations have worsened since the BMAP was adopted. What else can be done?

A: It will take time to see some of the benefits of the projects that have been implemented. Also, few projects have been implemented since BMAP adoption, so we need to make a lot more effort to meet the goal.

Q: What is the number one thing that could be done?

A: We need nutrient reduction projects and local efforts.