

**St. Lucie River and Estuary Basin Management Action Plan (BMAP)
Public Meeting Summary**

Tuesday, November 5, 2019 at 9:00 AM

Blake Library

John F. and Rita M. Armstrong Wing Auditorium

2351 SE Monterey Road, Stuart, FL 34996

Attendees

Irene Arpayoglou, FDEP
Venetian Barnes, Fort Pierce Engineering
Vanessa Bessey, FDACS
Katie Bowes, Martin County
Darrell Brand, Rivers Coalition
Joe Capra, Captec Engineering
Melissa Corbett, Milcor Group
Sara Davis, DEP
Patrick Dayan, St. Lucie County
Amy Eason, AECOM
Marcy Frick, Tetra Tech
Patti Gorman, SFWMD
Kathleen Greenwood, FDACS
Becky Harris, Citizen
Janet Hearn, ATM

Jodie Hutchins, SFWMD
John Maehl, Martin County
Dale Majewski, City of Port St. Lucie
Merritt Matheson, City of Stuart
Anne Murray, Martin County
Nick Muzia, Martin County
Ximena Pernet, SFWMD
Nicolas Pisarello, ATM
Chris Powell, City of Port St. Lucie
Ted Saltos, DEP
Jose Vega, St. Lucie County
Rachel Vitek, E Sciences
Don West, St. Lucie County
Paul Whalen, TAC Environmental

Welcome and Opening Remarks

Marcy Frick welcomed everyone to the St. Lucie River and Estuary BMAP meeting. The participants introduced themselves and the entity they represent.

Background

Ted Saltos stated that the BMAP was established to help meet the total maximum daily loads (TMDLs) for the St. Lucie River and Estuary. The Florida Department of Environmental Protection (DEP) adopted the TMDLs in 2009, and the BMAP was adopted in June 2013. In June 2018, DEP completed the 5-Year Review for the BMAP to review the current status, evaluate what was done well and what could be improved, and make recommendations for improvement. The current goal is to meet the TMDLs by June 2028, which is 15 years from BMAP adoption. Ted showed a map with the updated BMAP boundary compared to the current boundary. The boundary changes are discussed in the 5-Year Review.

BMAP Update

Ted stated that Executive Order 19-12 included updating all restoration plans impacting South Florida communities within one year, which is by January 2020. These plans include the BMAPs for the St. Lucie and Caloosahatchee estuaries, as well as Lake Okeechobee. DEP was also asked to provide the Blue Green Algae Task Force with information to help them provide guidance for water quality. The task force is made up of policy and technical experts and they just released a consensus document. There will continue to be task force meetings.

Ted stated that in October, DEP published a request for information (RFI) to collect additional information on projects that were not in the BMAP and other potential approaches to reduce nutrient loading and improve flow. DEP is currently reviewing the responses and some of those responses will be included in the BMAP update. This public meeting is being held in early November to provide an update on efforts. The draft BMAP document will be made available for review later this month, and a webinar will be scheduled in late November/early December to discuss the BMAP. DEP will review stakeholder feedback on the BMAP in December, and then finalize the document before the submission deadline in January 2020.

Ted stated that the BMAP will include new components. One new component is the new targeted restoration area (TRA) prioritization approach that was used to focus projects in specific areas to achieve the largest load reductions. The BMAP will also include requirements for basin-wide sources such as wastewater treatment facilities, septic tanks, and nonpoint urban and agricultural stormwater. The BMAP monitoring network will also be updated. The South Florida Water Management District (SFWMD) has assisted DEP in identifying locations for new monitoring stations to address data gaps. There are 15 new stations proposed throughout the BMAP area. In addition, some of the existing monitoring stations used to track progress were shifted based on which locations have the most consistent data. The updated monitoring goes hand-in-hand with the TRA approach because it provides data to determine which basins to prioritize.

The approach for the water control districts (WCDs) was also updated. The WCDs will no longer receive numeric allocations and instead will have a list of best management practices (BMPs) that the districts will be expected to implement. The districts will have a set of basic BMPs plus specific BMPs based on the land uses in the district. For instance, districts that are mostly urban will have education activities to conduct and districts that are mostly agriculture will have an expectation to assist the Florida Department of Agriculture and Consumer Services (FDACS) with reaching out to agricultural producers. Another modification to the BMAP is the use of the Watershed (WaSh) model to calculate allocations and load reductions instead of using the previous spreadsheet model. The WaSh model was calibrated with data for each basin and, as a result, the modeled loads are closer to the measured loads.

Jose Vega asked if locations have been selected for the 15 new water quality monitoring stations. Ted responded that there are locations identified and the new stations will be included in the draft BMAP document for comment. Most of the stations were added in the western basins, which currently only have one structure station. The new stations will provide information about what is occurring further upstream in the basins. Jose asked if SFWMD will be monitoring these stations and where the data will be stored. Sara Davis responded that SFWMD will be monitoring the stations and the data will be stored in both DBHYDRO and the Watershed Information Network (WIN) database for the BMAP.

Anne Murray stated that Martin County has a significant septic to sewer program and putting all the information for these projects in the WaSh model is unwieldy. Sara responded that for septic to sewer projects, DEP relies on the ArcGIS-Based Nitrate Load Estimation Toolkit (ArcNLET) model since it has the ability to simulate the processes in more detail than the WaSh model. Anne responded that she meant the ArcNLET model. She asked if this is the only way to receive reduction credits. Sara responded that this basin is lucky because the ArcNLET model developer built a model for this area. The results from this model can be applied to other projects, if the conditions are similar. For areas

where the current model results do not apply, a new model will be needed. DEP can evaluate the modeling needs on a case-by-case basis.

TRA Approach and Request for Information

Ted stated that the new TRA approach was discussed during the September webinar. This approach is used to help identify where limited resources would have the most benefit in the BMAP area. DEP used basin delineations from the BMAP with slight modifications based on where data are available from the monitoring network stations. Steps 1 and 2 of the TRA approach use the five-year average concentration or flow-weighted mean concentration, where flow data are available. The measured concentrations are compared to the TMDL benchmark concentrations for total nitrogen (TN) and total phosphorus (TP). This comparison is used to place the basins in different prioritization categories. Priority 1 is for basins where the measured concentration is more than double the benchmark concentration. Priority 2 is for basins where the measured concentration is greater than the benchmark concentration but less than twice the benchmark concentration. Priority 3 is for basins where the measured concentration is equal to or less than the benchmark concentration. Steps 1 and 2 are combined to assign an initial priority.

In step 3 of the approach, the unit area load (UAL) is used to provide more information about what is occurring in the basin. The UAL for the basin is compared to the target UAL to meet the TMDL. Basins with a UAL more than 50 % above the basin target UAL are moved up a priority category (such as from a priority 2 to priority 1 basin). If the UAL is more than 50 % greater than the target UAL but the basin is already a priority 1, the basin will remain a priority 1. If the basin UAL is less than 50 % above the target UAL, the basin maintains its priority ranking. If the basin UAL is less than the target UAL, the basin will move down a priority level.

Step 4 of the approach uses the trend analysis that was part of the 5-Year Review based on data from water year (WY) 2009 through WY2018. If there is a statistically significant increasing trend in the basin, then the basin moves up a priority category. If there is no significant trend, the basin maintains its priority. If there is a statistically significant decreasing trend, the basin moves down a priority category. Ted showed the results for both the TN and TP priority evaluations.

Darrell Brand stated that the map in the presentation has Tier 1 and Tier 2 stations, and he asked if these tiers are related to priorities. Ted responded that the Tier 1 stations have TN, TP, and flow data, whereas the Tier 2 stations do not have flow data. These stations are being used to represent the basins in the TRA approach.

Amy Eason asked how DEP reconciles using data to evaluate the C-44 basin that includes Lake Okeechobee flows. Ted responded that the WaSh model scenario used to determine allocations assumes that the flows from Lake Okeechobee meet the lake's TMDL concentrations so that the allocations do not require the stakeholders to address these loads. Sara added that the prioritization of the basins goes beyond allocations because DEP was trying to give priorities for the state. They included the Lake Okeechobee contributions to show that projects are needed there because there are loads from the watershed and Lake Okeechobee that need to be addressed.

Kathleen Greenwood asked if step 3 uses the TMDL for the target load. Ted responded that the basin load is calculated from the measured flow and concentration data at the structures, and the WaSh model is used to determine the target load after all stakeholder reductions are met. Each then uses the total

acres in the basin to calculate the unit area load. Kathleen asked if DEP will look at the projects in the basins to see how those would affect the priorities. Ted responded that it will be important to look at what projects are planned in the basins. If a basin is priority 1 but has a lot of planned projects, it may be better to focus efforts in another priority 1 basin.

Paul Whalen stated the Lake Okeechobee flow pass through may be a nuance that is lost on some of the people who will read the BMAP. He asked why the C-44 basin UAL is so much higher than the target. Sara responded that DEP did not get into that level of detail as part of this exercise; they just looked at the data and followed the steps in the process. DEP did discuss whether to include the Lake Okeechobee contributions in the evaluation. They will make sure to discuss this in the BMAP and would like feedback on whether the language needs to be modified. Paul stated that his recommendation is to provide information on the loads both with the Lake Okeechobee pass through and with the basin only. Sara responded that DEP will consider conducting this evaluation.

Ted stated that DEP published the RFI for the BMAP in October. The goal was to obtain information on projects and technologies to reduce nutrients and restore flow. The RFI goes hand-in-hand with the TRA approach. The results of the TRA evaluation were included in the RFI so that people who submitted had information on concentrations to determine how their projects could help in a basin. The goal was to obtain a clearinghouse of projects that were not already in the BMAP to help address needs in priority basins. DEP is currently reviewing the RFI submissions to determine which ones meet all guidelines to include in the BMAP as potential projects. DEP received 37 submissions that ranged from structural projects, such as stormwater treatment areas and septic to sewer, to new and emerging technologies. The submissions with specific locations, benefits, and costs will be prioritized for inclusion in the BMAP. Some projects submitted were already listed in the BMAP as future projects.

Anne asked what DEP will do with the information on the emerging technologies. She asked if they will rank the technologies or just log in the details. Ted responded that DEP is collecting the information to determine if the technology would be useful for a basin. If the technology has a specific location, DEP may continue to evaluate it for the BMAP. Anne asked how stakeholders can use the information that people provide to DEP on their technologies. Sara responded that if the submission includes a location for the technology, it will be included in the BMAP in case funding is available. For the BMAP, DEP is not evaluating the technologies, although other parts of DEP are doing this statewide.

Allocation/Project Credit Update

Ted stated that since the webinar, slight changes were made to the starting loads for a few entities based on boundary changes. DEP already reached out to any stakeholders that were impacted. DEP continued to calculate project credits based on information from the stakeholders. For TN, the 10-year milestone is to achieve 75 % of the reductions. The projects completed to date achieve 63 % of the TN reductions, and the completed plus future projects are estimated to achieve 71 % of the reductions. For TP, the 10-year milestone is to achieve 65 % of the reductions. The completed projects achieve 46 % of the TP reductions, and the completed plus future projects are estimated to achieve 60 % of the reductions. Katie Bowes asked if the stakeholder's RFI projects are included in these numbers. Ted responded that the RFI projects are not part of these totals. Patrick Dayan stated that the original BMAP had equivalent milestones but the milestones are now different. Sara responded that the milestones were updated as part of the 5-Year Review.

Don West asked if there will be an opportunity for public comment after DEP distributes the draft BMAP. Ted responded that the BMAP document will be made available for feedback in a few weeks. Stakeholders can submit comments to DEP on the document, and a webinar will also be held to further discuss the document.

Ted stated that the BMAP will include a new section about the BMAP compliance methodology, which is different than the TMDL compliance. DEP has identified two options for the compliance methodology: (1) use the average concentration from latest five WYs and compare to the TMDL concentration, or (2) compare annual WY concentrations to the TMDL concentration and the annual concentrations must achieve the TMDL concentrations for three consecutive years. Both approaches would use data from the compliance point at S0E-03. DEP would like feedback from the stakeholders on these approaches by November 12th.

Dale Majewski asked what the concentrations look like under each option. Sara responded that she does not have that information available but those concentrations are in the South Florida Environmental Report. Ted added that both current results are higher than the TMDL concentrations. Patrick asked if either of those compliance methodologies are met, would the TMDL be considered passing despite the allocations not being achieved. Sara responded that if BMAP compliance is achieved and there are still remaining reductions, the BMAP will essentially be put on hold. Patrick noted that it will be a challenge to meet these with the Lake Okeechobee inputs. Sara noted that the stakeholders can provide DEP with ideas for other methodologies. Dale asked if compliance can be determined using monitoring when Lake Okeechobee is not releasing. Sara responded that even without releases, there are other things occurring where the structures may be open. The compliance methodology is another way to track BMAP progress, in addition to the load reduction estimates from the model.

Kathleen asked how the three consecutive years would be used to determine BMAP progress. Sara responded that if the concentrations for WY2017, WY2018, and WY2019 all meet the TMDL concentration, then the BMAP would be in compliance. Kathleen asked if the concentrations increase and decrease over time, will DEP conduct an analysis to determine if the trends are significant. Sara responded that DEP will still conduct statistical evaluations of the water quality trends. The TMDL did not include a methodology for determining compliance so DEP would like to include that methodology in the BMAP.

Darrell asked how data are collected. There are a lot of variables such as rainfall, tide, and wind that affect the results. Sara responded that specific protocols are followed when the samples are collected. Patti Gorman added that the data are collected using a protocol that has been in place since the 1970s. The goal is to sample a variety of conditions to determine an annual average condition. The samples are collected on a regular basis. Darrell noted that some data are collected on a continuous basis and he asked if these data are used in the evaluation. Patti responded that the continuous data are for physical parameters but not nutrients.

Next Steps

Ted stated that DEP will continue to develop the revised BMAP document and will release it for public review later this month. The Statewide Annual Report (STAR) project requests will go out in November. The stakeholders should provide feedback on the compliance methodology by November 12th. A webinar will be held in late November/early December to discuss the BMAP. If the stakeholders

have any questions, they can contact Ted or Sara. The link to the DEP file transfer protocol (FTP) site was included in the presentation. The FTP site had all the meeting materials, and an email will be sent with the link when the materials from this meeting are posted.

Adjourn

The meeting was adjourned at 10:23 am.

Action Items

- DEP will look into evaluating the C-44 basin without the contributions from Lake Okeechobee.
- The stakeholders should provide DEP with feedback on the compliance methodology by November 12th.