

St. Lucie River and Estuary Basin Management Action Plan

Public Meeting Summary

Wednesday, April 10, 2013

9:30 AM – 12:00 PM

Martin County Commission Chambers

2401 SE Monterey Road, Stuart, Florida 34996

Attendees

Sam Amerson, Stuart	Bill Griffin, Stuart
Carmela Bedregal, SFWMD	Katie Hallas, FDEP
Jason Bessey, St. Lucie County	Janet Hearn, ATM
Vanessa Bessey, FDACS	Dianne Hughes, Martin County
Greg Braun, Guardians of Martin County	Kerry Kates, Florida Fruit and Vegetable Association
Tiffany Busby, Wildwood Consulting	Milton Leggett, Stuart
Lorrie Bush, St. Lucie West Services District	Dale Majewski, Port St. Lucie
Kevin Carter, SFWMD	Tom McGowan, AECOM
Deb Drum, Martin County	Alan Miller, Oceangrown Inc.
Amy Eason, AECOM	Greg Nolte, Martin County
Rebecca Elliott, FDACS	Mark Perry, Florida Oceanographic Society
Tom Frick, FDEP	Marcy Policastro, Wildwood Consulting
Stan Ganthier, FDEP	Kenneth Rau, Higgins Engineering
Pattie Gertenbach, E-Sciences	Gerard Rouse, St. Lucie West Services District

Welcome and Opening Remarks

Tiffany Busby welcomed everyone to the St. Lucie River and Estuary Basin Management Action Plan (BMAP) meeting. Tiffany noted that this meeting is both the last part of the BMAP development process and the public workshop. The participants introduced themselves and the entity they represent.

Overview of the St. Lucie River and Estuary BMAP

Katie Hallas stated that the Florida Department of Environmental Protection (FDEP) implements the total maximum daily load (TMDL) program through a watershed management approach. FDEP uses a basin rotation schedule in which the 52 major hydrologic basins in the state are separated into five groups by FDEP district office. The basin rotation cycle includes five phases. The St. Lucie River and Estuary Basin is in Phase 4, which is development of the BMAP. Once the BMAP is adopted, the cycle moves into Phase 5, which is implementation of the BMAP.

TMDLs identify scientifically based goals for the restoration of waterbodies that do not meet state water quality standards. Once a TMDL is adopted, FDEP identifies a plan to achieve the TMDL goals. Katie stated that both the TMDL and BMAP programs are highly dependent on stakeholder involvement, and the BMAP would not be possible without the stakeholders' input. A TMDL identifies the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards. A TMDL is specific to a waterbody and a pollutant, such as total phosphorus (TP) in the C-23 Canal. The steps to develop a TMDL involve determining the assimilative capacity, which is the water quality restoration target; specifying the current conditions to determine how far the waterbody is from meeting the target; and calculating the pollutant reductions needed to achieve the target.

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FDEP identified nine waterbody identification (WBID) numbers in the St. Lucie River and Estuary Basin that are impaired for nutrients. TMDLs were adopted in March 2009 for total nitrogen (TN), TP, and biochemical oxygen demand (BOD) for these WBIDs. The TMDL loads in the upstream WBIDs were calculated using the same target concentrations as for the St. Lucie Estuary. The BMAP takes the TMDL targets and identifies actions from the different entities who contribute to the loading. The BMAP process is guided by Section 403.067(7), Florida Statutes. The BMAP is developed collaboratively with stakeholders; integrates the best available scientific information; includes completed and new projects, research, and an adaptive management component; and provides equity among the stakeholders.

Katie reviewed the draft BMAP components. Katie stated that the BMAP includes the acknowledgements table to thank everyone who has been involved in the BMAP process. The Executive Summary summarizes information from the BMAP about the St. Lucie River and Estuary Basin: TMDLs as the basis of the BMAP, key elements of the BMAP, anticipated outcomes of implementation, costs, follow up, and commitment to plan implementation.

Katie stated that Chapter 1 is the context, purpose, and scope of the plan. The BMAP represents joint efforts of multiple stakeholders to prepare a restoration plan. Katie noted that without the stakeholders' help and support, this BMAP would not be possible. The BMAP includes projects to reduce watershed nutrient loading and a monitoring plan to track water quality trends and effectiveness of efforts. The technical meetings started in July 2009, and a total of 12 technical meetings were held. FDEP also met one-on-one with stakeholders to discuss projects or BMAP questions. All the technical meetings were open to the public and noticed in the *Florida Administrative Weekly* (FAW), which is now the *Florida Administrative Register* (FAR).

Katie presented Figure 1 from the BMAP, which shows the BMAP basin and six sub-basins: Basins 4, 5, and 6; C-23; C-24; C-44/S-153; North Fork; and South Fork. Figure 2 in the BMAP shows the BMAP basin compared to the St. Lucie River Watershed Protection Plan (SLRWPP) basin. FDEP went through an extensive effort with the South Florida Water Management District (SFWMD) to align the BMAP boundaries with the SLRWPP; however, the boundaries from the two plans do not match exactly. The northern portion of the SLRWPP basin is included in the Central Indian River Lagoon (IRL) BMAP, instead of the St. Lucie River and Estuary BMAP. The SLRWPP also includes the South Coastal sub-basin, which is not part of the BMAP due to a lack of nutrient loading data. Katie noted that FDEP is planning to include this sub-basin in the next BMAP iteration. The purpose of the BMAP is to implement the TN, TP, and related BOD reductions to meet the TMDLs over a 15-year period. The first BMAP iteration will cover a five-year period, which will start in mid-2013 after BMAP adoption and end in mid-2018. Each entity is required to achieve 30% of the TN and TP reductions in the first iteration.

Katie stated that the assumptions and considerations are summarized in the presentation and the full language can be found in Chapter 1 of the BMAP. The assumptions used in this iteration of the BMAP include: (1.) reductions in TN and TP loading will increase dissolved oxygen (DO) concentrations and reduce chlorophyll-*a* concentrations to improve water quality conditions in the waterbodies, (2.) the allocations do not include required load reductions from natural land uses, and the stakeholders are not required to make reductions on these lands, (3.) achieving the TMDL is contingent upon reductions from the Lake Okeechobee Basin, and a separate BMAP is

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being developed to address this load, (4.) in the C-44/S-153 sub-basin, only 76.5% of the runoff flows to the St. Lucie Estuary and the remaining 23.5% of the runoff flows to Lake Okeechobee, (5.) and certain best management practices (BMPs) were assigned provisional credit in this BMAP iteration, and the credits can be refined as more information on these projects, e.g., public education and floating islands, is obtained.

There are also considerations for items that need to be addressed in future BMAP iterations. Katie stated that she would like to start having meetings in the late summer/early fall to discuss these items to prepare for the next BMAP iteration. (1.) One of the considerations is the next iteration will use the most up-to-date land use coverage. This BMAP iteration uses the 2004 land use coverage to match the 2012 SLRWPP Update. (2.) FDEP will modify the basin boundaries to include the South Coastal sub-basin and to make adjustments to the C-25 East sub-basin. (3.) FDEP will also make adjustments to the jurisdictional boundaries, including Martin County/City of Stuart and the Beau Rivage neighborhood, which will move to Martin County's jurisdiction in mid to late 2013 from St. Lucie County. (4.) FDEP had several conversations with Port St. Lucie about the community development districts (CDDs) within its boundaries, and FDEP may change the allocations to the CDDs in future iterations, based on each CDD's responsibilities. (5.) Adjustments will be made to the event mean concentrations (EMCs) and runoff coefficients (ROCs) in the model. Katie asked for those stakeholders who have mentioned that they have information on EMCs and ROCs to share it, so FDEP can compile information for future discussions. (6.) Water quality standards modifications are also listed as a consideration because FDEP is developing new statewide DO criteria. (7.) There are also considerations for legacy loads and atmospheric deposition, where information is available on these sources. (8.) The final consideration is an acknowledgement that there is some retention of the C-23 sub-basin and C-24 sub-basin runoff, and a factor similar to the C-44/S-153 sub-basin may be needed in future BMAP iterations.

Katie stated that the future growth section is the last section in Chapter 1. State statutes require that a BMAP identify mechanisms for addressing future growth. The St. Lucie River and Estuary BMAP does not include an allocation for future growth; however, new discharges cannot increase existing load and must meet "net environmental improvement" for the Environmental Resource Permit (ERP) program requirements.

Katie stated that Chapter 2 describes the land uses in the basin, which are aggregated using simplified level 1 codes. Agriculture makes up 55.6% of the acreage in the basin; natural land uses are 27.0%; urban and built up are 14.3%; transportation, communication, and utilities are 14.3%; and barren land is 0.3%. Figure 3 from the BMAP is a map of the land use distribution in the basin. For the water quality trends in the basin, overall most of the TN and TP concentrations at the structures were higher than the TMDL targets. Katie noted that this is to be expected since BMAP implementation is underway. TP decreased slightly in all segments of the estuary, except for the South Fork. Chlorophyll *a* decreased in the Middle and Lower estuarine segments, but not in the South Fork or North Fork, where concentrations did not differ between the two time periods (2006-2010 and 1995-2005). Bottom DO decreased in the South Fork but increased in the Middle and Lower segments and in the North Fork.

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Mark Perry stated that Table 4 previously stated that the 3000 land use category is “rangeland” but it now shows this code as “upland non-forested.” Marcy Policastro responded that they received a comment during the BMAP review period to correct this label in the document. The 3000 land use category is upland non-forested, and the code 3300 is rangeland. Katie added that she would correct this label in the presentation; it has already been corrected in the BMAP.

Chapter 3 describes the nutrient sources in the TMDL. These sources are urban stormwater, which includes both municipal separate storm sewer systems (MS4s), and nonpoint sources; agricultural stormwater; Lake Okeechobee, which is based on the loading calculations in the Lake Okeechobee TMDL; and groundwater. The BMAP lists the MS4s in Table 5, and all of the MS4s in the basin are Phase II. The BMAP also lists the non-MS4 stakeholders in the basin. The reductions to the nonpoint sources are enforceable through the BMAP itself, whereas the MS4 permits include a self-implementing clause for BMAP responsibilities. The primary agricultural uses in the basin are cow/calf and citrus. Due to urban encroachment, citrus health issues, and the downturn in the economy, the amount of active agriculture in the basin has been affected. Agricultural producers in the basin must implement appropriate BMPs or water quality monitoring to show that they are not having an impact on water quality. This chapter also includes a list of anticipated outcomes from BMAP implementation in this iteration. This list of outcomes will be refined in future iterations.

Katie stated that Chapter 4 describes the allocations, which were discussed in detail at past meetings. This chapter includes information on collaborating with SLRWPP efforts; calculating starting loads; handling of natural land uses and the Florida Power and Light (FPL) cooling pond, which did not receive allocations; and calculation of the *de minimus* determination. Katie noted that the *de minimus* entities did not receive allocations in this BMAP iteration, and combined these stakeholders contributed about 1% of the total TN and TP starting loads. As information in the BMAP is refined, the *de minimus* entities could receive an allocation in a future BMAP iteration. This chapter also includes the target load per acre calculations, allocations and required reductions, and allocations by source. Table 15 in the BMAP shows the 30% TN and TP reductions for the MS4s, and Table 16 shows these reductions for the nonpoint sources. Table 17 is the agricultural reductions for the first BMAP iteration, and these are a combination of the reductions for agriculture as an entity and agriculture within the special districts.

Chapter 5 describes the management actions submitted by stakeholders. The stakeholders provided projects that are stormwater management focused; completed, ongoing, or planned to be completed in the first iteration to achieve TN and TP reductions; and completed since January 1, 2000. Credit was assigned only for the portion of reductions above and beyond permit requirements. Tables 18 and 19 in the BMAP summarize the MS4 projects by source and the TN and TP load reductions, respectively. Katie noted that many of the entities provided more reductions than needed for this BMAP iteration, so they have credit for the next iteration. Table 20 and 21 summarize the credit for the nonpoint source entity projects. These tables include a column for agricultural credit within the special districts for agricultural BMP implementation or changes in land uses. Table 24 in the BMAP shows the agricultural credit for only the agricultural allocation, and not agriculture within the special districts. The table includes an estimate of the credit from a target of 90% BMP implementation, and a credit for agricultural

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land use changes to urban or fallow. Katie stated that for fallow lands, credit was assigned if the lands were assumed to stay fallow for the first BMAP iteration. Agriculture also has credit for the next BMAP iteration. Table 25 in the BMAP is similar to Table 24; however, it includes the reductions and credits for all agricultural lands, even those within the special districts. Figure 5 in the BMAP was created by the Florida Department of Agriculture and Consumer Services (FDACS) to show the BMAP enrollment in the basin as of December 31, 2012.

Chapter 6 describes the process to assess progress and make changes. FDEP will work with the stakeholders to organize monitoring data and project implementation information into an annual report. The stakeholders will meet at least annually to review the progress made and make modifications to projects and monitoring, if needed. Katie stated that she is planning for a meeting in late summer/early fall to start working on the considerations for the next iteration. Meetings may be held more frequently than annually, especially if there is stakeholder interest. The monitoring plan objective will be assessed using the existing monitoring network from several stakeholders. Figures 6 and 7 in the BMAP show the water quality monitoring network, and Figure 8 shows the U.S. Geologic Survey (USGS) flow stations. Jason Bessey noted that some of the USGS stations without a funding partner might be discontinued due to sequestration. Katie stated that she would coordinate with SFWMD on this, and add a note in the BMAP if any of the flow stations are changing. Tom Frick added that Rick Hicks (FDEP) would have this information.

Katie stated that the monitoring plan also includes biological monitoring. A figure of this monitoring is being created and will be included in the final BMAP. All of the biological sampling is conducted by SFWMD to monitor and map seagrass and oysters and is designed to supplement the water quality monitoring. The ambient water quality data must be collected using FDEP's standard operating procedures and be uploaded to the STORET database or its replacement. SFWMD will continue to upload its data to DBHYDRO and maintain the biological data. The water quality data will be reviewed yearly, but a comprehensive evaluation will be done in year four of the BMAP. There were also two research priorities, nutrient budget and DO dynamics, which were identified by the stakeholders, if funding becomes available. These research items were also included in the 2012 SLRWPP Update.

Katie stated that Chapter 7 is short and describes the commitment to the BMAP. The stakeholders have worked collaboratively to develop the BMAP, have committed to the activities in the BMAP, and will continue to confer with and support each other in implementation. Katie stated that there are several appendices in the BMAP. Appendix A explains the TMDL basin rotation schedule and Appendix B is a summary of statutory provisions that guide BMAP development and implementation. Appendix C lists the U.S. Environmental Protection Agency (EPA) recommended elements of a comprehensive watershed plan, which need to be met to receive certain types of funding, including Section 319 funds. Appendix D lists the BMP efficiencies and projects submitted by the stakeholders. This is an important appendix, and the stakeholders should carefully review their project information. Appendix E is the glossary of terms, and Appendix F is the bibliography.

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Review March 2013 Comments and Changes to the Draft St. Lucie River and Estuary BMAP

Katie stated that she would review the more significant changes to the BMAP that were made based on stakeholder comments. In the Executive Summary, details were added to explain what the BMAP costs included and to add new cost information that was provided. The total cost was split into the costs for completed, planned, and ongoing projects. The BMAP includes the caveat that the projects were not all developed for the BMAP, so there are other purposes being addressed through the project costs. Some of the projects may also include operations and maintenance costs. Katie noted that costs were only provided for 35% of the BMAP projects, and she asked the stakeholders to provide additional cost information, if available.

In Chapter 1, sub-basin boundaries were added to Figure 2. Text was added in Section 1.3.4 to explain that the projects implemented during this BMAP iteration count towards the total reductions to achieve the TMDL, and any additional reductions made beyond the 30% of the required reductions for this iteration will go towards reductions in future BMAP iterations. The credit for projects in the South Coastal sub-basin will be added in future BMAP iterations once the BMAP boundary has been expanded. However, these projects are already listed in Appendix D with a note that the reductions will be calculated in future iterations. Katie asked the stakeholders to provide any additional projects in this sub-basin so that they can be added to the BMAP. In Section 1.3.6, the text was revised to show the actual TMDL adoption date of March 2009 and to clarify that the target nutrient concentrations for the estuary were used to calculate upstream reductions. In Section 1.4.1, a new assumption was added about the C-44/S-153 sub-basin runoff split. In Section 1.4.2, new considerations were added for atmospheric deposition and for adding a factor in future iterations to split the C-23 sub-basin and C-24 sub-basin runoff similar to what was done for the C-44/S-153 sub-basin.

In Chapter 2, language was added in Section 2.2 to describe the connection between the C-24 and C-25. In Section 2.3, additional information was added to describe the water quality trends in the basin. In Chapter 3, the list of nonpoint sources was added in Section 3.1.2. In Section 3.1.3, information was added about the enforceability of the agricultural reductions, similar to the language in the MS4 and nonpoint source sections. In Chapter 4, the language in Section 4.3 was modified to clarify how the FPL cooling pond functions. In Table 17, there was a mathematical error on the agricultural reductions. Katie noted that the presentation shows the correct reductions, although the version of the BMAP that was distributed still needs to be updated.

In Chapter 5, the dates for the C-44 projects were corrected in Section 5.4 to state that the first phase would be completed in 2014, not in 2013. The same changes to the agricultural reductions were made in Table 25. A new section, Section 5.6, was added to the BMAP to discuss SFWMD's Pollutant Source Control Program. The language in this section is consistent with the information in the Caloosahatchee Estuary BMAP. In Chapter 6, missing monitoring information was added to Table 26. In Table 27, the sampling entity for the biological monitoring was added, and FDEP is developing a map depicting the biological monitoring. There were also several miscellaneous changes made to the BMAP including fixing the heading in Appendices C-F, correcting the table numbering, adding the tables in Appendix D to the List of Tables, revising the maps to correct the name for Hobe St. Lucie Conservancy District, and

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adding new projects. Katie noted that the Florida Department of Transportation (FDOT), Martin County, and North St. Lucie River Water Control District provided new projects, and the updated project tables are posted to the FTP site. Each entity now has its own folder for their project spreadsheets.

Katie stated that the second public comment period on the BMAP started on April 3rd when she sent the link to the revised BMAP. The BMAP is posted to the FTP site and hard copies were provided at the meeting. The public comment period on the revised BMAP ends on May 2nd. Katie will brief her upper management on the BMAP by mid-May. The FDEP Deputy Secretary and Secretary will then be briefed to obtain approval of the BMAP by the end of May. Secretarial approval of the BMAP will be noticed in the FAR, which will start the 21-day challenge period. If no challenges are received, the BMAP will be adopted and enforceable by the end of June. The stakeholders should submit any additional comments on the BMAP to Katie by May 2nd using the comment matrix or track changes. Any missing project or monitoring information should also be provided by this date.

Public Comments

There were no public comments on the BMAP.

Stan Ganthier asked if the policy maker briefings have been scheduled. Katie responded that she would be meeting with the City of Stuart this afternoon, the City of Port St. Lucie next week, the IRL National Estuary Program Advisory Board the week after, and the City of Fort Pierce and Martin County in early May. The dates for these policy maker briefings are included in the BMAP.

Katie requested that the stakeholders provide information on EMCs and ROCs and any other data that FDEP should start considering for the next BMAP phase. This will allow Katie time to compile the information for the meeting in late summer/early fall. This will be a more informal meeting, like the monitoring plan meeting, where the stakeholders will sit around a table and look at maps and any other information provided by the stakeholders.

Tiffany thanked everyone for their participation in the BMAP process and for all the work that went into providing information and reviewing the document.

Adjourn

The meeting was adjourned at 10:36 AM.

Action Items

- Stakeholders who have information on EMCs and ROCs should send it to Katie.
- Katie will revise the land use table in the presentation to show that the 3000 land use category is upland non-forested. – *Completed*.
- Katie will coordinate with SFWMD and Rick Hicks (FDEP) on the status of the USGS flow stations in the basin and update the BMAP description, if necessary.
- The stakeholders should review their project information in Appendix D.
- The stakeholders should provide any additional project cost information.

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- The stakeholders should provide comments on the BMAP and any missing information to Katie by May 2nd.