

Caloosahatchee River and Estuary Basin Management Action Plan (BMAP) Public Meeting Summary

*Tuesday, June 25, 2019 at 3:00 PM
The Collaboratory
2031 Jackson Street, Suite 100, Fort Myers, FL 33901
Multipurpose Room 1*

Attendees

Martha Avila, FDEP	Lisa Kreiger, Lee County
Nathan Beals, Lee County	Alexandra Kuchta, DEP
Andrea Browning, LCU	Don Lees, Calusa Water Keeper
Marisa Carrozzo, Conservancy of SW FL	Chris McAvoy, Johnson-Prewitt
John Cassani, Calusa Water Keeper	Tommy Perry, Johnson-Prewitt
Deborah Culp, Citizen	Irene Quincey, Pavese Law Firm
Sara Davis, DEP	Jason Pim, Calusa Water Keeper
Dan DeLisi, DeLisi, Inc.	Nicolas Pisarello, ATM
Kate English, Pavese Law Firm	Erin Rasnake, DEP
Yesenia Escribano, FDACS	Holley Rauen, Calusa Water Keeper
Kim Fikoski, SFWMD	Gary Ritter, Florida Farm Bureau
Phil Flood, SFWMD	Maria Romero, Lee County
Sommer Foster, Johnson-Prewitt	Steve Smith, Gulf Citrus Growers
Marcy Frick, Tetra Tech	Liz Taggart, Calusa Water Keeper
Chad Gillis, News-Press	Amy Thibaut, Pavese Law Firm
Chris Guth, Federico & Associates	Ronald Visness, Citizen
Noah Handley, Lykes	Kevin Williams, DEP
Jennifer Hecker, CHNEP	Wayne Zahn, US Sugar
Nicole Iadevaia, CHNEP	

Welcome and Opening Remarks

Marcy Frick welcomed everyone to the Caloosahatchee River and Estuary BMAP meeting. Marcy noted that this is the first in-person meeting since expanding the BMAP boundary and she welcomed the new stakeholders. The participants introduced themselves and the entity they represent.

Background

Kevin Williams stated that the objectives of the allocation approach for the BMAP update are to estimate the existing condition loads to the total maximum daily load (TMDL) waterbodies across the watershed and to use the Hydrological Simulation Program – FORTRAN (HSPF) model to develop allocations for the adopted TMDLs. The BMAP to date has focused on the three waterbody identification (WBID) numbers that make up the estuary. There are now impairments in several tributaries so the Florida Department of Environmental Protection (DEP) is working to join the estuary and tributaries TMDLs to create a more comprehensive plan for the watershed.

The estuary TMDL was adopted in 2009 and was written for three estuary WBIDs (3240A, 3240B, and 3240C) and required a 23 % reduction in total nitrogen (TN). The tributaries TMDL is under rulemaking this year and includes Townsend Canal, Long Hammock Creek, C-19 Canal, S-4 Basin, and Lake

Hicpochee. The TMDLs are written for TN, total phosphorus (TP), and biochemical oxygen demand (BOD). The estuary BMAP was adopted in November 2012 to address the estuary TMDLs. DEP used a phased approach to include TN reduction activities and projects in the basin. DEP completed the 5-Year Review in November 2017, which provided an opportunity to include recommendations to improve the BMAP including milestones, improved modeling, revised allocations, and updating the monitoring stations in the tiered monitoring network. Kevin noted that the Governor issued Executive Order 19-12, which set the timeline to update the Caloosahatchee, St. Lucie, and Lake Okeechobee BMAPs by January 2020. The order also included creating the Chief Science Officer position, Office of Accountability and Transparency, and Blue-Green Algae Task Force.

Proposed Allocation Approach

Kevin stated that DEP identified several considerations when determining the allocation methodology. The new tributaries TMDL will be joined with the estuary TMDL in the BMAP. DEP considered what period of record from the HSPF model should be used to determine the nutrient loading. DEP also considered the boundary changes and the new stakeholders that need to be added to the BMAP. Kevin presented a table showing the tributaries and estuary with the associated TMDL TN and TP percent reductions. Kevin noted that the estuary TMDL is only for TN and the percent reductions specific to each area will be considered for localized restoration efforts. Kevin presented a graph showing the average precipitation data by year that DEP used to select a representative period of record to determine the loadings. They selected 2005 to 2015, which encompasses the highs and lows in rainfall. Kevin noted that the boundary expansion was discussed during the December 2018 meeting where four options were presented: (1) only include the estuary, (2) expand the boundary to include Townsend Canal, (3) expand the boundary to the Lake Okeechobee BMAP boundary, or (4) expand the boundary to Lake Okeechobee. Based on stakeholder feedback during and after the meeting, the majority of stakeholders were in favor of expanding the BMAP boundary all the way to the lake. Kevin noted that DEP will be following up with stakeholders about the jurisdictional boundaries. They will confirm they boundaries DEP has for the estuary stakeholders are correct and will collect boundaries from the new stakeholders.

Sara Davis stated that DEP used these considerations to determine how to assign fair and equitable allocations. During this meeting, DEP will present the proposed allocation methodology to solicit feedback from the stakeholders before moving forward with the calculations. The HSPF model includes the entire watershed and was used to develop the tributaries TMDL. The model is capable of calculating TN and TP loads that can be broken out into jurisdictional loadings. To determine the loads for each entity, DEP will follow a series of geographic information system (GIS) clipping steps, which are similar to the process used for the St. Lucie River and Estuary BMAP.

The first step is to clip out the water management areas, which is a general term for large projects, such as the C-43 reservoir and Lake Hicpochee project, which will not be assigned to any stakeholders. These areas will be removed from the coverage if they meet certain criteria so that DEP can be fairly confident in the boundary. Sara requested that if stakeholders know of any large projects that should be part of the water management areas, to provide her and Kevin with that information. The next step is to clip out Florida Department of Transportation (FDOT) roads and rights-of-way, which are designated by their own land use in the model and assign these loads to FDOT. The third step is clip out the water control district (WCD) canals and rights-of-way and assign these to the districts. DEP has started conversations with the WCDs in the expanded area to identify what activities they conduct in their canals and rights-of-way, which they can control, to improve water quality. The fourth step is to remove natural land uses,

which are not assigned to any of the stakeholders. The fifth step is to remove the agricultural land uses. By statute, agricultural producers are required to enroll in best management practices (BMPs) through the Florida Department of Agriculture and Consumer Services (FDACS) or implement a water quality monitoring program. DEP coordinates with FDACS to track where BMPs are being implemented. The sixth step is to clip out the areas for the community development districts (CDDs). CDDs are assigned allocations if they meet certain criteria to determine if they have management responsibilities over water quality. The seventh step is to clip the cities to their boundaries and they are assigned any remaining areas within their boundaries (after the first six steps are completed). The final step is to split the remaining area among the counties. Sara stated that DEP would like feedback on whether the process sounds fair. Kevin will be reaching out to confirm or obtain jurisdictional boundaries to use in this methodology.

Sara stated that once the loading is broken out by stakeholder using the above steps, the required reductions must be determined. The first step will be to calculate the load reductions for the estuary. All stakeholders within the watershed will be required to help meet the overall 23 % reduction. Based on the load assigned to each stakeholder, the required reductions will be calculated. For instance, if a stakeholder is 6 % of the anthropogenic load, they will receive 6 % of the required reductions. Tommy Perry noted that some of the lands are removed so he asked if that means other lands will have to achieve more than a 23 % reduction. Sara responded that the 23 % reduction needs to be achieved overall so the reductions are applied to the lands that are left. Jennifer Hecker noted that the TMDLs are focused on the anthropogenic loads, so the natural lands should be pulled out. Sara stated that there are options for lands that are converted to natural, which can be discussed later in the presentation.

Sara stated that after calculating the estuary required reductions, DEP will calculate the required reductions for stakeholders within the tributaries with TMDLs. The same math will be conducted based on the percentage of an entity's starting load. DEP will then compare each entity's reductions for the estuary and tributaries, and whichever reduction is higher will be the final required reduction. If the tributary reductions are higher than what is needed for the estuary, there is no need to add these together. If the tributary reductions are not enough to meet the estuary reduction, the entity will be assigned the estuary reduction. The presentation includes examples with fictional numbers.

Ron Visness asked what would occur if a stakeholder says their allocation is too high and they cannot pay for projects. Sara responded that DEP has had good participation from stakeholders in the BMAPs, and a lot of stakeholders have other requirements, such as a municipal separate storm sewer system (MS4) permit, that include BMAP participation. Ron stated that the amount of biologically active phosphorus has doubled since 1980 and this will be sent downstream. The estuary is going to have blue-green algae until someone works in Lake Okeechobee to decrease concentrations. Sara responded that the BMAP will not solve all the problems, but it is part of the solution. This BMAP focuses on treating the Caloosahatchee watershed and assigns responsibility to stakeholders and makes a case that money is needed for both local and larger regional projects by identifying the targets that need to be met and the resources required to meet those targets. A lot of efforts are happening for Lake Okeechobee, not only the BMAP. However, there is a large load from the Caloosahatchee watershed that needs to be addressed and that is the focus of this BMAP.

Jennifer commended DEP on the expansion of the BMAP to include the freshwater portion of the watershed. The Coastal & Heartland National Estuary Partnership (CHNEP) has likewise expanded its

boundary to have a holistic approach. She noted that recently during the CHNEP summit, there was a presentation on the importance of addressing both nitrogen and phosphorus. The tributaries TMDL includes both but the estuary only focuses on nitrogen. Jennifer suggested updating the estuary TMDL and BMAP to be more holistic. Sara responded that DEP has been considering these updates, but there are specific requirements that have to be met and a process that must be completed to create a TMDL. Due to the schedule for updating the BMAP, DEP has to move forward with the adopted TMDL, but the projects implemented will likely address both TN and TP.

John Cassani asked if a separate BMAP is needed for the new allocation approach. Sara responded that DEP is adaptively managing the BMAP and the process to create the update will be similar to the original BMAP. DEP is holding one-on-one meetings with the stakeholders, public meetings, and has information from the 5-Year Review and other sources that will go into the BMAP. The updated BMAP will be sent to the DEP Secretary for adoption. For the Caloosahatchee watershed, once the updated BMAP is adopted it will replace the current adopted BMAP. In other areas of the state, there have been smaller amendments to the original BMAPs. John asked what the public hearing process is for the revised BMAP. Sara responded that public hearings are for rulemaking (such as with TMDLs). Prior to BMAP adoption, DEP holds public meetings to obtain input.

Gary Ritter asked with the BMAP update needed by January 2020, when will stakeholders need to provide information to DEP to calculate reductions. Sara responded that DEP has started this process and the goal is to gather some information within the next two to three weeks. The water management areas and jurisdictional boundaries should be readily available and should be submitted right away. The next step in the process will be for DEP to calculate draft allocations to obtain feedback. Gary asked if there will be a series of meetings through summer and early fall. Sara responded that there are a few meetings planned, which will be discussed at the end of the meeting.

Don Lees asked what efforts other than the BMAP are being implemented to meet the goal. Sara responded that the TMDL sets the reduction goal but there are other efforts, such as the Comprehensive Everglades Restoration Plan (CERP), occurring in the Northern Everglades to address needs. There are also MS4 permit requirements. Don asked if there is anything that ties all the efforts together other than the BMAP. Sara responded that the BMAP tries to identify all the parts as best as possible, but she is not aware of an overarching report that ties everything together. John asked if the TN reductions will change in response to the revised allocations. Sara responded that she expects the allocations to change because a lot of time was spent updating and improving the HSPF model. John noted that if the load has increased since the TMDL, the reductions will also increase. Sara responded that DEP is applying the 23 % reduction so if the starting loads are higher, then the reductions would be higher. John noted that the TMDL is based on an old load estimate. Sara responded that the modeling includes more recent data and land uses.

Liz Taggart noted that the latest data in the slide was from 2015 and there was also a reference to 2009 but the environment is changing rapidly. Sara responded that the TMDL was adopted in 2009 and it takes time to update the TMDL and change the rule, so an updated TMDL will not be ready in time to meet the Executive Order deadline. The model includes more recent information than the model used in the TMDL. Jennifer asked if there is a plan to conduct an analysis based on actual data to compare to the modeled loads. Sara responded that DEP included a water quality analysis in the 5-Year Review including a trend analysis for a 10-year period of record for the Tier 1 monitoring stations. DEP will

continue to evaluate monitoring data in addition to the modeled data to adaptively manage the BMAP. The Caloosahatchee watershed does not have as much data coverage as the other Northern Everglades areas, but DEP is trying to collect more information to better determine loads. Marisa Carrozzo asked what land use year did the model use. Sara responded that the HSPF model used 2009 land use but a comparison to the 2012 land use was conducted. Marcy added that the 2009 and 2012 land uses were very similar with the major change in the C-43 reservoir area. The 2009 land use was selected because it better fit the model period of record. Marisa asked if DEP can use the 2016 land use in the allocations. Sara responded that the allocation steps are completed with the model land use and then DEP can make adjustments based on feedback from stakeholders.

TMDL Prioritization Update

Erin Rasnake stated that there are more than 4,000 impaired waters in the state. Florida is one of the few states that adopt TMDLs into rule and that has numeric nutrient criteria for every waterbody type. When DEP develops a nutrient TMDL, it becomes a site-specific rule and DEP holds public hearings about the rule. Lakes are the simplest waters for which to develop TMDLs and the process takes about 12 to 18 months. For the more complicated waterbodies, such as an estuary, the TMDL process takes years.

In 2013, the U.S. Environmental Protection Agency (EPA) required that all states prioritize TMDL development through 2022 (the anniversary of the Clean Water Act). DEP currently averages about 20 TMDLs per year. The prioritized list was determined using indicators such as the number of impaired waterbodies and ecological areas. DEP finalized the prioritized list in 2015 and decided to reevaluate the list mid-way through since standards and conditions change. DEP is in the process of this reevaluation using GIS data and information from the Impaired Waters Rule (IWR) Run 56. DEP uses hydrologic unit codes (HUCs) for the prioritization.

To better align with the Executive Order, additional impaired waters in the Kissimmee River, Fisheating Creek, and Taylor Creek HUCs were added to the TMDL priority list. Erin noted that in 2015, DEP prioritized 177 WBIDs for TMDLs. Of these TMDLs, 27 % were adopted, 16 % are in draft, 19 % were delisted, 11 % are for metal impairments (mostly copper, so there may be a statewide or region-based TMDL), and 27 % are for nutrients. Erin presented a map showing the prioritized locations and noted that the Caloosahatchee Estuary is still on the list to reevaluate the TMDL. If stakeholders have any data for the estuary, they should send it to Erin. DEP is analyzing the data they have, including results from the algal bloom response, to look for relationships and potentially identify new targets. The update of the prioritization list is due to U.S. EPA by the end of September.

Gary asked what the yellow areas are on the map that are north of Lake Okeechobee and south of Lake Kissimmee. Erin responded that these are WBIDs that were added to the priority list. Jennifer stated that CHNEP convened their partners about this a few years ago. There are Outstanding Florida Waters (OFW) that are designated to prevent them from becoming degraded, but many are not meeting state standards. The HUC approach is a concern because too many parameters and types of waters are lumped together. She noted that she wanted to reiterate that there are areas not being prioritized and they should be on the list. Erin responded that DEP is looking into this concern, but they need to consider if they can complete the TMDLs by the 2022 deadline. Many of these waters are estuaries, which take more time to develop. Some are bacteria impairments, but as the bacteria criteria changed a few years ago, there are not enough new data to set a TMDL. The TMDL group is also working with the standards group to look more closely at standards as part of the triennial review. Tommy asked if tribal lands are part of this

evaluation. Erin responded that they are, and one area is included on the priority list. John asked if U.S. EPA will have to approve the new prioritization. Erin responded that U.S. EPA will have to "accept" the list. John noted that it seems like impairments are being added faster than restoration is occurring. He asked if there is an existing TMDL that has been met. Erin responded that she is not sure, although some were met due to criteria changes. John asked if resources are the limiting factor in implementation. Erin responded that Florida is one of the few states that have implementation plans in statute. Gary asked what is included in the Environmental Justice screen. Erin responded that this is a federal criterion that uses information on potential areas for higher pollution.

C-43 Reservoir Water Quality Treatment Update

Kim Fikoski stated that the South Florida Water Management District (SFWMD) is administering the contract for the feasibility study, which is part of the Executive Order. The primary objective is to identify opportunities to provide additional treatment to improve water quality leaving the reservoir. They formed a Working Group to provide input and guidance throughout process. Kim noted that Lee County and the City of Sanibel are part of the group but any local government within the basin is welcome to join. The contract is with J-Tech (Joint Venture between Jacobs and Tetra Tech) and Wetland Solutions, Inc. (WSI) who have worked on the reservoir and mesocosm study. The study will evaluate pre-treatment, in-reservoir treatment, and post reservoir treatment options. A minimum of three conceptual alternatives for water quality will be identified. The study will begin with a literature review of studies and treatment technologies, both conventional and innovative, for biological, chemical, and physical treatment options. Any options must maintain the reservoir construction schedule and Congressionally-approved objectives. There will be four public meetings held -- about quarterly -- at The Collaboratory with Ingenuity Lab facilitating the meetings. Once the conceptual alternatives have been identified, the Working Group, DEP, and SFWMD will select an alternative or combination of alternatives to move forward with 30 % design and modeling under a separate contract.

Jennifer stated that CHNEP held a water quality summit recently and all presentations and video clips are on the CHNEP website. Kim added that J-Tech will be setting up an external website for information developed by the study. Yesenia Escribano asked when the first public meeting will be held. Kim responded that it will be held in about three months. SFWMD just signed the contract and the work plan is getting started. The first public meeting will be on the literature review and treatment technologies to obtain feedback. The second meeting will be three months later when information collection is wrapping up. The third meeting will be held to solicit input on the preliminary draft feasibility study. The final meeting will be on the draft feasibility study. There will also be a final presentation. Marisa stated that they are pleased to see this effort moving forward so quickly. She asked if there is a scope of work available for the study. Kim responded that she will look into whether the scope can be made available. John noted that the triennial review may result in changes to some water quality parameters, so they should keep an eye on this for the study.

Next Steps

Kevin asked that stakeholders submit comments on the allocation methodology by July 9th to him and Sara. He will be reaching out to confirm and obtain jurisdictional shapefiles. DEP will then apply the method to develop draft allocations and will also work on drafting the revised BMAP document. Meetings will tentatively be held in August and October.

Questions, Comments, and Discussion

Yesenia asked if draft allocations will be ready in early August before the August meeting. Kevin responded that this is the goal. John asked how DEP will assess agricultural compliance with the BMAP in terms of enrollment and if downstream monitoring will be required. Sara responded that the statute gives producers a choice if they are in a BMAP: enroll in BMPs and have a presumption of compliance or perform monitoring. DEP works with FDACS to track enrolled properties. Yesenia added that as of 2016, FDACS is required to provide a report to the legislature to summarize BMP implementation. Every year, FDACS conducts a survey and site visits to ensure implementation. John responded that there is also a need to verify the BMPs from a loading standpoint. Gary noted that this is no different than urban BMPs that are assigned reductions based on research conducted to determine effectiveness. Yesenia stated that FDACS will provide load reduction calculations for the BMAP based on enrollment. Sara added that the way DEP estimates reductions from agricultural and urban BMPs is to use Florida studies on efficiencies for different types of BMPs. Some projects have monitoring, and these data are then used. Yesenia noted that FDACS works closely with DEP to identify where implementation is not occurring. FDACS gives the landowner a chance to sign up for BMPs and if they do not, they are sent to DEP for enforcement. Sara added that FDACS and DEP are tracking enrollment in the BMAP each year. FDACS is conducting outreach and enforcement is prioritized.

A stakeholder asked on the watershed map, what percentage of the stakeholders in the upstream area, marked with a question mark, have been identified. Sara responded that DEP thinks they have identified all the stakeholders including Glades and Hendry counties, WCDs, CDDs, and MS4 permit holders. Marcy noted that the question mark on this map indicates that DEP does not have jurisdictional boundary files for these stakeholders. A stakeholder asked what is needed to obtain better information about loading in the watershed. Sara responded that DEP is looking at the stations in the DEP Watershed Information Network (WIN) database to identify data gaps. There are a lot of tributaries without flow monitoring and some without water quality monitoring. There were several flow stations added in the watershed during the last few years. Ron asked if the presentation will be made available. Sara responded that the presentation and other meeting information will be posted to the FTP site listed at the bottom of the agenda.

Marisa stated that although it is great the additional flow stations were added, she hopes that part of the BMAP update will include identifying funding and resources needed to fill the data gaps. Sara responded that installing stations during the last few years provided good information on costs. DEP is working to determine which tributaries/basins do not have data in the WIN database and will see if entities are collecting data that are not being uploaded or if DEP or another entity can add monitoring. Jennifer stated that CHNEP hosts a water atlas that collects water quality and flow data. She would like to build this up as a central repository. U.S. EPA recently contacted CHNEP about funding available for monitoring, but CHNEP needs to provide feedback by July 15th. Sara stated that DEP can provide information on where they have found data gaps.

John stated that he has suggested that the BMAP program integrate the operations of the MS4 program. Every three years, the Phase I MS4s are required to calculate loading at the major outfalls. This information would be useful for the BMAP to track the loading rate from the urban areas. Sara responded that the BMAP group has been working with MS4 staff and a lot of their data are in the monitoring network. There is also language in the MS4 permits that they need to comply with the BMAP. Ron asked when the concentration of nutrients will stop increasing. The monitoring needs to

show that fewer nutrients are coming through the lock and dam. Sara responded that the water quality trends are included in the 5-Year Review. Ron responded that those trends do not track with data from SFWMD, which show an increase since 1980. Sara responded that the data used are the same, but the analyses used different period of records. There was a lot of thought that went into determining the timeline for the BMAP analysis to determine if the BMAP is moving the needle on water quality. John stated that this basin cycle assessment started in 1999 and the BMAP gave credit back to 2001; however, the analysis started in 2007. He noted that he thinks they should increase the period of record. Sara responded that DEP evaluated when projects were implemented to set the period of record. They also tried to select a time period to create a consistent approach for the three Northern Everglades BMAPs.

Adjourn

The meeting was adjourned at 4:34 pm.

Action Items

- Stakeholders should provide input on potential water management areas to Kevin Williams and Sara Davis.
- Stakeholders should send any Caloosahatchee River and Estuary data to Erin Rasnake and provide her feedback on the TMDL prioritization.
- Kim Fikoski will determine if the feasibility study scope of work can be shared.
- Stakeholders should provide comments on the allocation methodology and provide jurisdictional boundaries to Kevin and Sara by July 9th.
- DEP will provide input to CHNEP by July 14th on where they are finding monitoring gaps that could be filled with the U.S. EPA funding.