Everglades West Coast BMAP
Annual Meeting Summary
Wednesday, March 30, 2015
SFWMD Lower West Coast Service Center – 1st Floor Large Conference Room
2301 McGregor Boulevard, Fort Myers, Florida

Attendees

Martha Avila, FDEP	Lisa Kreiger, Lee County DNR
Jim Beever, SWFRPC	Katie Laakkonen, City of Naples
Brenda Brooks, CREW Land & Water Trust	Sam Lee, Lee County DNR
Stephanie Burkhardt, FWC	David Liccardi, City of Bonita Springs
Tiffany Busby, Wildwood Consulting	Judy Ott, Charlotte Harbor NEP
Kevin Coyne, FDEP	Andy Tilton, Johnson Engineering
Sara Davis, FDEP	Steve Peene, ATM
Don Duke, Florida Gulf Coast University	Pete Quasius, Audubon/Collier
Matt Feeney, City of Bonita Springs	Raulie Raulerson, FDACS
Rebecca Flynn, EBAP/DEP	Gary Ritter, Florida Farm Bureau
Gene Gibson, CRCA/Riverwatch	Joe Schmidt, SFWMD
John Gucciardo, City of Bonita Springs	Ray Scott, FDACS
Katie Hallas, FDACS	Mary Szafraniec, Amec Foster Wheeler
Jennifer Hecker, Conservancy of SWFL	Dan Waters, Barron Collier
Daryl Hamquit, FGCU	Rhonda Watkins, Collier County
John Jenkins, City of Bonita Springs Utilities	John West, Citizen
Keith Kibbey, Lee County DNR	David A. Urich, Responsible Growth Management Coalition

Welcome and Opening Remarks

The meeting started about 1:08 pm. Kevin Coyne welcomed everyone to the Everglades West Coast Basin Management Action Plan meeting. Everyone introduced themselves. Kevin noted that Sara Davis is the Basin Coordinator for this effort.

Overview of the Everglades West Coast BMAP Annual Progress Report

Sara Davis reviewed the items that would be covered during the meeting. Sara then noted that the Everglades West Coast (EWC) 2015 Progress Report has been drafted and the link to the report was distributed for review and comment. Comments are due by April 8th on the report. Sara explained that the total maximum daily load (TMDL) for total nitrogen (TN) and dissolved oxygen impairments (DO) was adopted in 2008 and the BMAP was adopted in 2012. Therefore, the 2015 Annual Progress Report is the third annual report and covers the reporting period of December 2014 to November 2015.

Sara noted that projects associated with 65 percent of the necessary TN reductions have been completed or are underway for Hendry Creek. For Imperial River, projects associated with 24 percent of the necessary TN reductions have been completed or are underway.

For Hendry Creek, Sara showed a bar chart that displayed the TN starting load, the estimated November 2015 TN load, and the TN allocation we are trying to reach. Sara also showed a pie chart for Hendry Creek that showed who has accomplished the current reductions and what reductions are remaining.

Overall, Sara showed a table noting the entities that had completed projects in Hendry Creek for a total of 7,100 lbs/yr TN reductions.

For Imperial River, Sara showed a similar bar chart that displayed the TN starting load, the estimated November 2015 TN load and the TN allocation we are trying to reach. The pie chart for Imperial River showed that 45,608 lbs/yr reductions still need to be achieved. The pie chart also showed reductions achieved to date by agriculture, city of Bonita Springs, the Florida Department of Transportation (FDOT), and Lee County. Sara had a table that detailed the total 14,517 lbs/yr reductions and how they correspond to each entity and their remaining obligations for reductions.

Activities During the Reporting Period

Hendry Creek Activities

Sara described the various activities that occurred to achieve TN reductions during the reporting period. Lee County increased its street sweeping efforts. Various on-going efforts continue such as public education, street sweeping and maintenance, local ordinances, and enrollment of agricultural producers in best management practices (BMPs).

Sara showed a photo of one of Lee County's "Fertilize Smart" billboards, four of which were displayed in the county from July through September 2015. Sara also displayed a photo of the Lakes Park Filter Marsh, where over 300 cubic yards of vegetation harvesting was completed. Sara noted that there are not many acres in commercial agriculture in this basin. The enrollment of 27 acres gives an estimated TN reduction of 78 lbs/yr.

In the reporting period, Lee County's additional street sweeping provides an additional 148 lbs/yr TN reduction credit.

Imperial River Activities

In the Imperial River Basin, the city of Bonita Springs has two projects underway—a woodchip bio-reactor and the Pine Lake Preserve re-hydration project. The reductions from these projects will be included in a future report. Also, Lee County increased its street sweeping and conducted some enhanced public education efforts, such as their "Fertilize Smart" campaign. Sara showed a photo of one of the city of Bonita Spring's Florida yards & Neighborhoods Workshops.

For agricultural lands enrollment in BMPs, enrolled acres used for TN reductions are 4,399 acres for a reduction estimate of 10,837 lbs/yr TN. Sara showed a map of the enrolled acres (pink) and the enrolled acres used to estimate TN reductions (blue). The green acres on the map are the areas still eligible for enrollment and future reductions based on land use information.

Sara described the additional reductions achieved during the reporting period that included Lee County's additional street sweeping (35 lbs/yr) and the additional agricultural enrollment (882 lbs/yr) for a total of 917 lbs/yr TN reductions. Since the BMAP started, the cumulative estimated reductions are 14,517 lbs/yr.

Monitoring Program Update

Kevin introduced Dr. Mary Szafraniec from Amec Foster Wheeler. Mary gave an update on monitoring and water quality in the two basins.

In Hendry Creek, Mary stated that the water quality monitoring is being conducted by Lee County and the DEP-South Regional Operations Center (ROC). Mary also showed a map of the monitoring stations. Mary noted that the data available determined the period of record (POR) used for the analyses which ranged from January 1, 2000 to November 2015, depending on the station. Mary added that any stations that were listed as National Pollutant Discharge Elimination System (NPDES) outfall locations were not used in any ambient monitoring analysis. Mary stated that additional data are needed to perform high quality trend analyses.

In the Imperial River, Mary noted that water quality monitoring is being conducted by the city of Bonita Springs, Lee County and DEP-South ROC. Mary showed a map of the stations in this basin. Mary noted that the POR for the stations in the Imperial River Basin ranged from January 2000 to December 2015, depending on the station.

Mary stated that for BMAP evaluations, DEP will only use data that has been uploaded into STORET and has had the necessary data quality review. This is why it is very important that local data are uploaded into STORET so they can be used for these kinds of evaluations related to the BMAP.

For the water quality analyses, time series and trend analyses of monthly TN concentrations were conducted for stations with adequate, available data. Mary urged all those conducting monitoring to make sure they upload their water quality data into STORET in a timely manner.

Mary described trend analyses she performed on monthly TN concentrations. Mary showed a map of the site location. Mary explained that this site was selected because they had a long enough data period to allow for a trend analysis. Mary stated that she filtered the data to select only surface grab samples, which eliminated duplicate samples at different levels in the water column that were taken at some stations. Mary added that laboratory "U Codes" or "non-detect" measurements were treated as if the sample measured one-half the minimum detection limit (MDL). The analyses that were performed were monotonic trend analyses using a non-parametric approach. Mary used the Mann-Kendall test to identify trends and to test if the trends were significant.

Mary stated that annual geometric means (AGMs) were calculated using monthly values for each year in the period of record (POR) for data available since January 2000. Mary noted that AGMs are less sensitive to outlying data than arithmetic means and are, therefore, more appropriate for comparing targets. Mary stated that she also overlaid the AGMs on the long-term time series trend line.

Mary used a P Value standard of 0.05 or less to indicate significance of a trend. For the station called "Bonita Springs CBS 9" the trend line showed a significant upward trend with weak strength, with a P Value of 0.004. Mary also showed the AGMs for each year and noted that this station has data gaps in 2011, 2012, 2013 and 2014. The data for 2015 were only through September 2015. This was the only station in the Imperial River Basin that had adequate data to perform the trend analyses.

Sam Lee asked what is the reason that the trend here was statistically significant but were not significant in the Caloosahatchee. Mary responded that a number of factors could have caused the trends or caused them to be weak, such as rainfall levels and influence from groundwater. Sam asked if it would be beneficial to compare the rainfall record here. Mary responded that it would be possible to look into that.

Keith Kibbey noted that he thought the purpose of the water quality analyses was to show the benefits of the reductions made and the progress in water quality. Keith stated that the impairment here was for dissolved oxygen (DO) and wondered why the DO trends weren't being analyzed. He added that there have been recent studies on the correlations of nutrient concentrations and juvenile fish, and no correlations were found. There was also a study looking at correlations of fish and DO and no relationships were found. Keith suggested that we should focus on the impairments identified in the TMDL. Mary responded that she did run some correlations between TN and DO, and that she would be happy to share them with anyone after the meeting if there was interest.

Jennifer Hecker asked to skip back to the first part of the meeting where the reductions for the reporting period were listed. Sara went back to the slide and showed the total reduction number to date. Jennifer questioned why previous projects could still be counted when the projects weren't completed during the reporting period and were completed previously. Sara stated that the BMAPs are done in five year phases and this is the first phase. Tiffany added that the previously completed projects do work year after year and that is why their reductions are considered to be cumulative year after year. For example, when a stormwater pond is built, it brings benefits when it is completed, but the pond also continues to reduce nutrients the next year, and the years afterwards. Jennifer questioned giving credit for public education efforts than might ramp up one year but then decline, such as no longer having billboards up. Tiffany responded that for some efforts, the credits will be taken away if they do not continue every year. For example, street sweeping credits will be removed if the efforts are not repeated every year. The same applies to public education. For example, if a county received credit for an ordinance that a future commission revokes, the county would lose their credit for that ordinance. Sara offered to provide Jennifer with the worksheet used by DEP to assign these types of credits.

Someone asked if the site specific alternative criterion (SSAC) would be pursued. Sara responded that the standards group reviewed the available data that would be applicable to a SSAC. That review showed that not enough data was available for Hendry Creek to establish a SSAC. Sara said she would have to look up what the situation was for the Imperial River but it was also not eligible for a SSAC.

Gary asked what the annual sample size was. Mary responded that she has the number of samples in her records but did not have that information available to display, however, she mentioned that most years had 12 records and some had less than 12 because of data gaps. Andy Tilton asked if the goal for the Imperial River was too aggressive and unrealistic. They were told a better goal would be established and would recognize the benefits of the city's septic tank phase out program. They are still waiting for a better model that would work in a situation with very low gradients. There was discussion about the ArcNLET model and the limitations of using the surface topography to estimate the ground water gradient. If the topographic gradient is too low, the ArcNLET model does not handle that lack of a ground water gradient very well. Sam mentioned that the ArcNLET is a regional model while the Department of Health has a case-by-case model that could be used.

David Liccardi stated that they asked these questions four or five years ago and there is still no model for them to use and they are frustrated. They are looking for a commitment from DEP to provide something usable to calculate their project credits. Kevin suggested that they get together to discuss some options and identify a practical option. David asked for that to happen soon. Sara asked if anyone else had tried to use ArcNLET and had issues. Keith replied that they tried to use a previous version of ArcNLET in Lehigh Acres.

Andy questioned what we do if a target of 0.74 mg/L is unrealistic. Sara replied that a SSAC is not an option at this time. Kevin added that the original intent was to do a SSAC but we know now that we can't do that. Andy asked why we don't review the rule because it's the trends that triggered the TMDL. Sara mentioned that the trend analysis is different than the SSAC analysis, because it is on a waterbody identification (WBID) level. Andy responded that the rules aren't making sense. Kevin noted that changing the rules is a different discussion and suggested that we start talking about a method to calculate the septic tank credits and get those quantified.

Jennifer commented that we don't want to undo the TMDL work but we do think that the city should be credited for their phase out projects. She added that education efforts receive large amounts of credits while the phase out we know has real benefits, so it should not be hard for them to receive credit for these efforts. Kevin noted that DEP does want them to receive the proper credit; that is not at issue.

Anyone else who would like to be involved in the discussions of how to calculate phase out credit should let Sara know as soon as possible.

Roland commented that the stormwater projects take a lot of investment not just when they are built but for planning and for operations and maintenance. The resources necessary to plan them, build them, and maintain them are not well understood in the community.

Judy had a question on the Imperial River reductions. Sara clarified that the street sweeping and agricultural BMP reductions shown for the reporting period are only the new efforts completed in the last year. Then, the agriculture table shows the cumulative reductions for the entire BMAP period, including the new reductions through BMP enrollment from this reporting year.

For the ground water study, the two years of monitoring has been completed and an additional sampling event was scheduled in March 2016. Sara reminded everyone that the sites represent different land uses, and we are trying to see if there are differences in ground water concentrations in these different areas. Sara noted that a report on this study will be available in the future, and Sara will provide the report when it is available. Sara has a preliminary results summary, but not all the data are included there. The preliminary results indicate that nitrate is often at non-detectable or trace levels. The highest total phosphorus levels are not co-located with the higher nitrite-nitrate levels. The ammonia results show concentrations of greater than 0.1 mg/L in 22 of the 32 wells. Sucralose was present in all but nine wells. DEP is considering continuing the study and installing some additional wells.

Keith asked if acetaminophen was sampled. Sara responded it was not. There was discussion about the break down rates of acetaminophen versus sucralose.

Jennifer asked if the results were what was expected. Sara replied that DEP would like to continue the study and adjust the sites to try to find out more about sources. Keith asked if the sites correlate with anything else such as reuse. Sara responded that the sites are already associated with different land uses and reuse presence or absence. Judy asked if sucralose breaks down quickly. She suggested it might be interesting to look for the areas of highest concentrations and plumes. Sara responded that she can speak to the study leaders about that idea.

Next Steps

Sara relayed that the Florida Legislature made revisions to Section 373.4695, Florida Statutes (F.S.) in 2016. These changes provided new requirements for the Northern Everglades watersheds including Lake Okeechobee, Caloosahatchee and St. Lucie. The requirements include enhanced integration of SFWMD protection plans and BMAPs and additional reporting requirements.

For the Northern Everglades and Estuaries Protection Program (NEEPP) BMAPs, the new requirements include the listing of projects to achieve the TMDL in 20 years; five-year milestones to measure progress; and a five-year progress report. New elements for all BMAPs include the collection of additional project and funding information.

In response to these requirements, in early 2016 Sara and her counterparts contacted more than 1,000 stakeholders in the five South Florida BMAPs and requested information on new projects. To date, information on 18 projects has been received. No projects have been received for the Everglades West Coast area. Sara encouraged everyone to submit any projects they would like to pursue.

Sara listed the action items she has identified that include the following: comments are due on the annual report by Friday, April 8th; everyone who collects monitoring data is strongly encouraged to upload their data into Florida STORET; DEP will continue water quality analyses; model results are expected in March 2017; the next annual meeting is planned for Spring 2017; development of the Phase II BMAP should begin in 2017; and the Muddy Water Blues event will be held on April 26, 2016 in Ft. Myers.

Steve Peene noted that there was discussion about dealing with septic tank loads and those concerns apply to the Caloosahatchee Basin also. It is important to break out those loads separately.

David A. Urich noted that the brochure that he skimmed doesn't reflect what is actually happening in the Caloosahatchee Basin. He is very upset about these conditions and wants everyone to understand that we have a critical problem. David Urich stated that the tourist dollars make the county work, and those are in jeopardy. Sara replied that the brochure is about a different report and apologized for that being confusing. The brochure provides highlights of the South Florida Environmental Report (SFER) produced by the South Florida Water Management District. Jim Beever added that the SFER report should not be called the 2016 Report since the time period of study ends in 2015.

Judy asked how we could get more new project suggestions from the west coast. After discussion, Sara agreed to follow up with Judy (Charlotte Harbor NEP) and Jim (Southwest Florida Regional Planning Council [SWFRPC]) and enlist their aid in spreading the word that project information is wanted.

Jim noted that there are lots of land use changes occurring and more impervious surfaces being created. Sara responded that DEP can look at updated land use in the Phase II BMAP, and stakeholders will be invited to participate in the development of that plan. Jim added that we need to watch for "blocking" in the land use information and need to consider looking at where reuse is being used.

Tiffany reviewed the action items.

Adjournment
The meeting adjourned at 2:33 pm.

Action Items
- Sara will provide the public education credit documents to Jennifer.
- Meet with Bonita Springs and other interested stakeholders (e.g., Steve Peene) on a practical approach for septic tank phase out calculations where the surface topography can't be used as a proxy for the ground water gradient in ArcNLET.
- Comments are due on the annual report by Friday, April 8th.
- Everyone who collects monitoring data is strongly encouraged to upload their data into Florida STORET.
- DEP will continue water quality analyses.
- The ground water study report will be distributed when it is available.
- The next annual meeting is planned for Spring 2017.
- Development of the Phase II BMAP should begin in 2017.
- The Muddy Water Blues event will be held on April 26, 2016 in Ft. Myers.
- Sara will follow up with Judy and Jim to help spread the word on the project requests.