

Everglades West Coast Basin Management Action Plan (BMAP) Annual Meeting Summary

Wednesday, February 22, 2017 at 10:00 AM

*South Florida Water Management District (SFWMD) Lower West Coast Service Center
2301 McGregor Boulevard, 1st Floor Large Conference Room
Fort Myers, FL*

Attendees

Bob Burleson, ATM
Marisa Carrozzo, Conservancy of SW Florida
Terry Cerullo, DEP
Sara Davis, DEP
Greg DeAngelo, DEP
Tim Denison, Johnson Engineering
Rebecca Flynn, DEP-Estero Bay Aquatic
Preserve
Cathy Foerster, Wildwood Consulting
Kathleen Greenwood, FDACS
Katie Hallas, FDACS
Janet Hearn, ATM
Keith Kibbey, Lee County

Lisa Koehler, SFWMD
Lisa Kreiger, Lee County
Katie Laakkonen, City of Naples
Roland Ottolini, Lee County
Libby Pigman, SFWMD
Pete Quasius, Audubon of the Western
Everglades
Erin Rasnake, DEP
Gary Ritter, Florida Farm Bureau Federation
Steve Sentes, SFWMD
Mary Szafraniec, Amec Foster Wheeler
Rhonda Watkins, Collier County

Introduction

Cathy Foerster opened the meeting at 10:00 AM by welcoming everyone. She stated that this is the fourth annual meeting of the adopted Everglades West Coast (EWC) Basin Management Action Plan (BMAP). She reminded attendees to sign in and provide their email information should they desire to be on the Florida Department of Environmental Protection (DEP) contact list to receive meeting notices regarding EWC. She told them to complete a stakeholder notification sign-up card if they would like to be on distribution lists for other basins. She also mentioned that one-day state park passes are available at the sign-in table. She requested that each person in the room introduce them self. She then turned the meeting over to Sara Davis, DEP Basin Coordinator. Sara stated that the purpose of today's meeting is to provide an overview of the 2016 annual report for the EWC BMAP; discuss activities that occurred during the reporting period; provide an update on the monitoring program; review water quality analyses; discuss next steps; and receive comments. She mentioned that the draft annual report was posted on February 21, 2017 and available for review.

Overview of the 2016 Annual Report

This is the fourth annual report for the EWC BMAP that was adopted in 2012 to implement total nitrogen (TN) total maximum daily loads (TMDLs) that were adopted in 2008 for Hendry Creek and Imperial River to address dissolved oxygen (DO) impairments. The reporting period for the 2016 annual report is December 1, 2015 through November 30, 2016. Sara presented a series of slides that showed the progress toward achieving the TMDLs. For Hendry Creek, 67 % of the necessary TN reductions have been achieved through projects completed or submitted by Lee County, Florida Department of Transportation (FDOT), and agricultural producers. For Imperial River, 26 % of the necessary TN reductions have been achieved through projects completed or submitted by Lee County, FDOT, City of Bonita Springs, and agricultural producers. Sara stated that projects in this BMAP should achieve at least 33 % of the required reductions by the end of the first five-year phase, which has been greatly exceeded in Hendry Creek. However, in Imperial River, only 26 % has been achieved; therefore, more projects are needed in Imperial River by the end of November 2017.

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Activities During the Reporting Period

Hendry Creek

Sara stated that no projects were completed during the reporting period; however, various ongoing efforts continued such as public education; street sweeping and maintenance; implementation of local ordinances for source control; and enrollment of agricultural producers in best management practices (BMPs). Slides were shown with photos of Lee County's "Fertilize Smart" public education campaign and Lee County's Lakes Park Filter Marsh Project. Sara then displayed slides regarding the Florida Department of Agriculture and Consumer Services' (FDACS) agricultural lands enrollment activities during the reporting period. There are 91 acres of agricultural lands in the Hendry Creek area of which 27 acres have been enrolled for an estimated reduction of 78 lbs-N/year.

Imperial River

The City of Bonita Springs completed three projects during the reporting period: increased street sweeping for an additional reduction of 161 lbs-N/yr, the downtown redevelopment drainage project, with reduction credits still to be determined, and quantification of credits related to a previously completed septic system removal project (912 lbs-N/yr). Agricultural enrollments increased by 67 acres. To date, FDACS has enrolled 4,466 of 6,586 acres for an estimated reduction of 11,034 lbs-N/yr. Various ongoing efforts also continued such as public education; street sweeping and maintenance; and implementation of local ordinances for source control.

Questions/Comments by Attendees

1. Janet Hearn: How was the reduction credit calculated for the City of Bonita Springs' septic removal project and how many septic systems were evaluated? Sara: The City used ArcNLET to calculate the reduction credit upon meeting with DEP several times and DEP review of methodology and parameters. I believe approximately 1,500 septic systems were converted for the project, although fewer likely contributed loading to the waterbody.
2. Roland Ottolini: It is very difficult to receive credit for removal of septic systems and there is no incentive credit-wise to do so. There has to be a better methodology for calculating septic system credits. Sara: For clarification, ArcNLET estimates the credit based on proximity or connectivity to waterbodies. When considering new septic to sewer conversion projects, these factors should be considered in order to receive optimal credit. DEP is also receptive to other methodologies for calculating credit for these projects.
3. Roland Ottolini: In Hendry Creek, Lee County has two projects under design: Hendry Creek West Branch Restoration and Lakes Park Littoral Zone. Sara: Yes, we have narrative on those projects in the annual report.
4. Steve Sentes: SFWMD provided cost-share funding to the City on the Felts Avenue Bio-Reactor Project which should be completed soon. Sara: Yes, we have narrative on that project in the annual report.

Monitoring Program Update

Sara presented slides regarding the monitoring program. Water quality monitoring is conducted by Lee County and DEP South Regional Operations Center (ROC) in Hendry Creek. Water quality monitoring is conducted by the City of Bonita Springs, Lee County, and DEP ROC in Imperial River. She stated that the Florida STorage and RETrieval (STORET) water quality database is being replaced by the Watershed Information Network (WIN). There are minimum data quality standards associated with WIN. WIN will be open for data uploads in spring 2017; after December 2017, all data will need to be uploaded to WIN.

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Sara provided a slide with contact information for the STORET/WIN coordinators as well as a webpage address that can be accessed for more information.

Water Quality Analyses

Sara stated there was preliminary discussion regarding completion of a water quality analysis and prioritization of data for analysis at last year's annual meeting. Dr. Mary Szafraniec of Amec Foster Wheeler was here today to provide an overview of the water quality analysis methods and results for Hendry Creek and Imperial River. Dr. Szafraniec presented a series of slides regarding the seasonal and regional Mann-Kendall trend analyses that she completed for Hendry Creek and Imperial River. The seasonal Mann-Kendall trend analysis was based on individual stations using original frequency and incorporating season (attributed to the month that the sample was collected) as a factor. The regional Mann-Kendall trend analysis was based on: 1) aggregating stations into Hendry Creek or Imperial River as regions using original frequency with region as a factor, and 2) Hendry Creek or Imperial River as regions using data aggregated into annual geometric means (AGMs) and then analyzed within region as a factor. Both Calendar Year (CY) and Water Year (WY) were used for AGM analysis.

For the seasonal analysis, she said that it is very important to look at data distribution; every other month is sufficient data, but an insufficient number samples in a particular season deem the test invalid. In addition, when the sampling distribution is heavily loaded with most samples in one portion of the year (i.e. wet season months), then the test results could be biased to that part of the year. It is more appropriate to have an even distribution of samples across the year to assess trends over time.

Hendry Creek

For the Hendry Creek analyses, data were pulled from STORET as of January 2017. For each station, there were at least five years of data for trend analysis. The seasonal trend analysis reflected two stations with an increasing TN trend. The regional trend analysis reflected an overall increasing TN trend for all data points, and for the aggregated CY AGM, and WY AGM.

Imperial River

For the Imperial River analyses, data were pulled from STORET as of January 2017. Compared to Hendry Creek, the periods of record were shorter. The seasonal trend analysis reflected four stations with an increasing TN trend and one station with a decreasing TN trend. The regional trend analysis reflected no significant overall TN trend for all data points, and for the data aggregated into CY AGM. However, there was an increasing trend for data aggregated into WY AGM.

Dr. Szafraniec stated that for both Hendry Creek and Imperial River, large TN increases were seen through 2012, then a sharp decline that could possibly be attributed to climate/rainfall and/or reductions in nitrogen from the watershed.

Questions/Comments by Attendees

1. Keith Kibbey: The periods of record should not include historical data. Rather, the periods of record should begin at 2012, the adoption date of the BMAP. Sara: It is difficult to have an arbitrary cut-off date for data since projects have been considered for this BMAP since prior to 2012. We welcome suggestions on the period of record to use for trend analyses.
2. Keith Kibbey: The water quality analyses should be revisited in one to two years since there will be five years of data since BMAP adoption. Sara: The individual station analyses are helpful as well as

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the aggregate analyses. The analyses provide indicators of where we should focus our efforts and determine if adjustments are needed to the monitoring network.

3. Rhonda Watkins: Based on the recent analyses, does Imperial River still have a DO impairment?
Sara: I'm fairly certain it does, but will confirm and get back to you. Two stream condition indexes were completed and both failed.
4. Marisa Carrozzo: For stations with increases, are you looking at land uses or surrounding sources to ascertain the cause of the increase? Sara: Yes, we review the land development index among other things.
5. Roland Ottolini: There needs to be clarity in the BMP efficiencies process. We are chasing load reductions for projects. We are not meeting allocations, but the environmental resource permit (ERP) process presumes that local governments can meet requirements. It should not be the local government's responsibility to achieve TMDLs. Sara: We understand this issue and have been discussing it; however, it is related to permitting rather than the BMAP.

Groundwater Study

Sara presented a series of slides on the groundwater study that was completed in February 2017 by the DEP Site Investigation Section. The study was based on collection and analyses of quarterly groundwater samples between March 2014 and March 2016 (nine quarters total) in four basins, including Hendry Creek and Imperial River. The study concluded that: 1) direct discharge of low DO groundwater to canals or streams could be an influence on DO concentration in these waters; 2) the form of nitrogen that is typically most prevalent in groundwater samples is NO₂/NO₃, but levels are low to non-detect; and 3) total phosphorous was not determined to be a causative pollutant impacting Hendry Creek or the Imperial River.

Questions/Comments by Attendees

Keith Kibbey: Are there acetaminophen and sucralose data? Sara: Yes, the groundwater study contains acetaminophen and sucralose data. The report is available for download on the DEP file transfer protocol (FTP) site.

Next Steps

Sara provided a brief overview of the new legislative requirements for BMAPs that include additional reporting mechanisms and that all new or revised BMAPs must include the following information on existing and future projects: priority ranking; planning level cost estimates; estimated completion date; expected nutrient load reduction; source and amount of funding.

Sara stated that she would like stakeholder comments provided to her on the draft annual report, including missing information for the project tables, by March 8, 2017. She reminded attendees that: 1) STORET database uploads need to be completed; 2) feedback is needed on the water quality analyses, including suggestions on the periods of record; and 3) stakeholder assistance is needed to identify future projects to meet milestones, particularly in Imperial River.

Adjournment

The meeting adjourned at 10:50 AM.

Action Items

Below are action items from the meeting.

1. Sara: Post final presentation and meeting summary to the DEP BMAP public site.

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2. Stakeholders: Provide comments on draft annual report and missing project information to Sara by close of business March 8, 2017.
3. Stakeholders: Provide feedback on the water quality analyses.
4. Sara: Provide Katie Laakkonen groundwater report with Gordon River results.
5. Sara: Add the monitoring station network map to the final annual report.
6. Sara: Follow-up with Rhonda Watkins regarding Imperial River DO impairment.