

Notes from the Quarterly Meeting of the Everglades Technical Oversight Committee (TOC)

February 27, 2018

South Florida Water Management District
3301 Gun Club Road, West Palm Beach, FL 33406

TOC Representatives:

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| Julianne LaRock, TOC Chair, SFWMD | Lori Miller, Refuge <i>(by phone)</i> |
| John Barkett, Special Master <i>(by phone)</i> | Frank Powell, FDEP <i>(by phone)</i> |
| Daniel Crawford, USACE <i>(by phone)</i> | Donatto Surratt, ENP |

Note: *This meeting was recorded by a court reporter and copies are available for purchase. For more information, contact Florida Court Reporting (561-689-0999). Handouts and presentations are available on the TOC website (www.sfwmd.gov/toc). A video of the meeting is available online at <http://sfwmd.igam2.com/Citizens/Media.aspx>.*

10:07 a.m. **1. TOC Opening Business** – Julianne LaRock, SFWMD

1A. Welcome, Announcements, and Identification of Phone Participants

Julianne LaRock called the meeting to order and welcomed attendees. Phone participants introduced themselves.

Julianne LaRock noted that at the October 24, 2017, TOC meeting there was a lot of discussion and comments about getting information on stormwater treatment area performance and the Long-Term Plan meetings. The Long-Term Plan meetings will continue on an annual basis. Also, there have been at least three Restoration Strategies technical representatives meetings since the October TOC meeting.

Julianne LaRock noted that the SFWMD principal wants to resolve the Appendix A issue as soon as possible. There are a lot of projects coming up and progress could be held up if Appendix A is not resolved. Frank Powell indicated that the FDEP principal is supportive of reengaging the subteam for this purpose and acknowledged that FDEP is the lead agency responsible for coordinating the Appendix A subteam meetings. John Barkett asked that he be advised of the subteam meetings. Donatto Surratt expressed concurrence to continue the Appendix A subteam effort.

1B. Agenda Modifications and Documents Available on the TOC Website

Julianne LaRock reviewed the agenda and the list of files recently posted on the TOC website. There were no requests for changes to the agenda.

1C. Approval of Meeting Summary for October 24, 2017

Donatto Surratt requested a minor change to the text, and with this change, the TOC approved the meeting summary for October 24, 2017.

Associated Online Documents:

- [Final Agenda for February 27, 2018](#)
- [Draft Meeting Notes for October 24, 2017](#)

10:21 a.m. 2. Third Quarter 2017 Settlement Agreement Report – Jonathan Madden, SFWMD

Jonathan Madden presented results for the third quarter of 2017 (July–September), including provisional results for Shark River Slough (SRS), including the S-12 structures. For Taylor Slough and SRS, this period coincides with the Federal Water Year that the Settlement Agreement Report is based on.

Refuge geometric mean total phosphorus (TP) values for the months of July, August, and September 2017 were below the computed long-term levels. Preliminary results for the Refuge for October and December 2017 are above the computed long-term level, and preliminary results for November 2017 and January and February 2018 are below the long-term level. Jonathan Madden noted that the average TP geometric mean over the last three years was 7.2 ppb, the last five years was 7 ppb, and long-term level [period] was 7.2 ppb. These approximately match the long-term expectation of 7 ppb stated within the Consent Decree.

SRS provisional TP flow-weighted mean concentrations (FWMC) for the 12-month periods ending July, August, and September 2017 were calculated using two methods. The provisional tracking results for both methods indicate the TP FWMC was higher than the long-term limits for all three periods. The event in June 2017 that was discussed in previous meetings was associated with these levels; although the FWMC did continue to come down after that event, they were not able to get low enough to attain the long-term limit for this year. These results are based on provisional data, but it is expected that the compliance results will not change significantly when the final data are available. The percent of sampling events greater than 10 ppb was below the guideline for the three periods. Final SRS data will be presented at the next quarterly TOC meeting. Thus far in Water Year 2018, over one million acre-feet of water has flowed to SRS at a TP FWMC of 5.7 ppb based on provisional data.

Taylor Slough and Coastal Basins flow-weighted mean TP values for the 12-month periods ending July, August, and September 2017 were calculated using three methods. Results for all three methods remained well below the long-term limit of 11 ppb. For the periods ending July and August 2017, no sampling events were greater than 10 ppb. For the period ending September 2017, the percent of sampling events greater than 10 ppb was 1.6 percent, which is far below the guideline maximum of 53.1 percent. For the last 5 years, TP FWMC levels for Taylor Slough and Coastal Basins have been about 5 ppb, well below the limit of 11 ppb and below the Consent Decree's expectation of 6 ppb.

Lori Miller commented that she has been unable to get flow data for S332DX1 since July 2017. Jonathan Madden explained that there was no flow at the structure during that period because it has been closed due to construction downstream as part of the Taylor Slough Headwaters project. Although it is not currently available in DBHYDRO, District staff are working on getting the flow data for this station to show zeros for this period.

Dan Crawford inquired about the status of installation of headwater and tailwater gages for G-737. Jonathan Madden said he'll have to get back with Dan on this but indicated installation of the platforms is moving along and it is likely the telemetry and electronics that need to be completed at this point.

Agency Technical Comments:

Regarding the two excursions for the Refuge, Bill Walker commented that it would be good to look at the excursions in relation to the phosphorus load entering the Refuge prior to the

sampling events as has been done in the past, especially given the two major events (in June and September) that increased loads. Bill suggested it would be useful to present that kind of information at the TOC meeting to provide some perspective on possible causal relationships. Jonathan Madden said it is something that could be brought forward and noted one source of information that is already available is the Refuge compliance worksheet posted online, which includes monthly loads. Juli indicated that the Refuge data are preliminary (final data will be presented at the next meeting) and suggested that the three questions in the principals' 2016 letter of direction on evaluating exceedances can be used as guidance which would likely apply to the information Bill Walker referred to. Jonathan Madden added it would be worthwhile to look at the variability in values month to month as well as differences among the individual stations. Donatto Surratt indicated that he agrees with the approach and has already begun looking into it at the individual station level and as a whole system, as well as inflows.

Associated Online Documents:

- [Provisional Shark River Slough TP Tracking Report, Third Quarter 2017](#)
- [Quality Assessment Report for Water Quality Monitoring, Third Quarter 2017](#)
- [Quality Assessment Report for Water Quality Monitoring, Third Quarter 2017 Data](#)
- [Refuge TP Compliance Table, 2007 through Third Quarter 2017](#)
- [Settlement Agreement Report, Third Quarter 2017](#)
- [Settlement Agreement Report, Third Quarter 2017 Presentation](#)
- [Taylor Slough and Coastal Basins TP Tracking Report, Third Quarter 2017](#)

10:54 a.m. **3. Water Quality Conditions for Everglades National Park, Water Year 2017, Shark River Slough** – Jonathan Madden and Stuart Van Horn, SFWMD

Julianne LaRock noted that the information in this presentation was originally sent out in January and has been provided to the principals. Jonathan Madden explained that, in general, his presentation is modelled after the one given to the TOC in 2015 by Melissa Martin (former TOC representative for the Refuge), and pointed out that additional helpful information is available in [Melissa Martin's presentation on the TOC website](#).

This presentation was developed because, as discussed in the previous agenda item, SRS provisional results for WY2017 indicate that the year-end FWM TP concentration is 9.8 ppb, which exceeds the computed long-term limit of 7.7 ppb.

Jonathan Madden presented details of WY2017 water quality conditions for inflows to ENP. There were prolonged dry conditions in the region from December to early June 2017, followed by extreme rain in June 2017 resulting in flow to SRS. A grab sample at S-333 on June 12, 2017, had a TP concentration of 87 ppb; the same site was only 13 ppb a week later (June 19 sampling event; not used for compliance). For April and May, the average flow through S-333 was about 50 cfs (S334 was nearly equal), however during June the average flow through the station was drastically greater at about 1,100 cfs (S334 was about 470 cfs). WCA-3 experienced dry conditions for more than half the water year, with the average stage dropping from nearly 11 feet NGVD29 (North American Geodetic Vertical Datum of 1929) at the beginning of the water year to 8.5 feet NGVD29 by June 2017. From June 6 through 7, approximately 11 inches of rainfall fell in the area. Stage at the EDEN12 marsh station rose 10 inches in 20 hours.

Slide 11 combined information of stage, flow, TP and TSS to illustrate conditions throughout WY2017. Jonathan pointed out the rise in phosphorus concentrations coincident with low stages in WCA-3A and even more specifically related to the headwater stage at S-333. The total suspended solids result with the June 12 grab sample spiked coincident with the TP, as was observed in WY2014. Jonathan Madden followed with an overview of average stage, flow, and TP FWM concentrations to SRS by water year since WY2014, along with a comparison of stage and TP FWM concentrations at SRS from WY2003 to WY2017. Downstream conditions in the marsh stations at the northern end of SRS in the Park showed a slight rise in TP concentrations after the large flow event in June, followed by a quick return to lower levels. It is not clear whether that rise was due to water coming in through S-333 or simply to the rewetting of the marsh, which had been too dry to sample in April and May 2017.

In summary, WY2017 conditions were representative of the previously documented relationship between stage and TP concentrations. Long-term water quality conditions and trends in the Everglades Protection Area continue to improve and the long-term downward trend in TP FWM concentrations for inflow structures to the Park continued in WY2017.

Stuart Van Horn noted that we also looked at concentrations upstream of SRS in 2014 and 2017. In the past, the upstream conditions would have been a causal factor in the higher downstream concentrations that might exceed the long-term limit for SRS. We have now shifted to a place where we are seeing more of the dynamics of what occurs when the system is dry and then rewets as a main factor affecting water quality conditions. That is an area under Appendix A which we hope will be looked at moving forward. Overall, for the Park, what we see in the upstream marshes in the WCAs is that the overall water quality is improving, with most of that system being under 10 ppm TP. That is a trend we are also seeing in the Park. The Consent Decree goal is to achieve an average of 8 ppb TP at the inflows to SRS. For at least the past 5 years, including the provisional data for WY2017, it has been about 8.5 ppb, so we are getting very close to that number. The long-term goal for the water moving into the Taylor Slough and Coastal Structures is to achieve 6 ppb TP on average, and we've been approximating 5 ppb. The Consent Decree goal for the Refuge is to approximate 7 ppb, and the values there have been about that level, despite a couple of values slightly higher than that in October and December. Stuart Van Horn stressed that the salient point is that in many respects we are seeing a shift in the system that we are going to have to deal with. We are at or nearing the conditions in the long-term basis that we wanted to be at; we need to determine what that means moving forward, especially regarding the amount of water moving south and the associated loading.

Donatto Surratt agreed that downward trends are being observed overall but noted that S-333 does not seem to exhibit the same downward trend as the S-12s, and recommended that special attention be focused on determining the reason for this, particularly as we start moving forward with these discussions on Appendix A. Bill Walker cautioned against interpreting data from the marsh stations in the Park that are close to the L-29 levee because he feels the location of these stations do not appear to be directly in the flow path relative to where the inflows occur from the L-29, so impacts or intrusion may not be fully captured in the marsh monitoring network. Bill Walker stated that the compliance methodology is more protective because it focuses on the inflows.

John Barkett asked what the TOC is going to do next and what the expectation is given the requirements of the Consent Decree. Julianne LaRock recommended that TOC

representatives use the final data that will be available by the next meeting and follow the guidance in the principals' 2016 letter of direction on evaluating exceedances. Donatto Surratt concurred.

Associated Online Documents:

- [Letter: Principals to the Consent Decree, Direction to TOC Representatives, February 25, 2016](#)
- [Water Quality Conditions for Everglades National Park, Water Year 2017, Shark River Slough Presentation](#)

11:26 a.m. **4. Public Comments**

Jim Moran, SFWMD Governing Board member, urged the TOC to move quickly to resolve issues with the Appendix A compliance methodology or dismiss the case so restoration progress will not be held up and the District can move forward with being the local sponsor of CEPP and commencing upcoming projects needed to solve problems with the system. Mr. Moran expressed frustration at the time spent so far and pointed out that the Appendix A formula did not anticipate the increased flows that will result from the upcoming projects and which will yield more exceedances, not because there is more phosphorus, but because the Appendix A formula is flow-weighted. He noted further that there are now state and federal permits in place to enforce water quality standards. Mr. Moran concluded his comments with the statement, "This Consent Decree is an anachronism which needs to have the Appendix A formula revised to take into account changes on the ground over the last 30 years, or more appropriately, to have this case dismissed."

Special Master John Barkett asked who oversees organizing or advancing the agenda of the Appendix A subteam and Frank Powell responded that FDEP organizes the meetings and prepares the agendas. Mr. Barkett stated it is incumbent upon the TOC to figure these things out as soon as possible.

Mike Collins, former SFWMD Governing Board member, recounted some of the restoration progress made while he was a board member, and suggested that the phenomenon where TP spikes occur after an extended period of very dry weather is followed by inundation from heavy rainfall is an anomaly that the TOC or Appendix A subteam should look at, to determine how to incorporate it so it doesn't get in the way of the validity of the scientific conclusions. Mr. Collins feels this would be a good place to start in determining what to do next.

Martha Musgrove asked who composes the Appendix A subteam and stated that it should be clear to the public because of the relationship to determining compliance limits that will apply to the increased flows resulting from the upcoming projects.

11:38 a.m. **5. TOC Closing Business** – Julianne LaRock, SFWMD

Julianne LaRock thanked meeting participants and reminded everyone that an item about Appendix A is to be expected on the next TOC meeting agenda. John Barkett said that if a discussion of Appendix A might result in a request to modify the Consent Decree, counsel should be involved to work together with the technical staff.

The next quarterly TOC meeting was confirmed for May 1, 2018. There were no requests for special meetings.

Julianne LaRock adjourned the meeting.