

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

May 10, 2022

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

TOC Representatives:

Julianne LaRock, TOC Chair, SFWMD
John Barkett, Special Master
Daniel Crawford, USACE

Lori Miller, Refuge
Ed Smith, FDEP
Donatto Surratt, ENP

Note: *This meeting was conducted in person, online, and by phone, and was recorded by a court reporter. Copies of the transcript are available for purchase; for more information, please contact Florida Court Reporting (561-689-0999). Handouts and presentations are available on the TOC website (<https://www.sfwmd.gov/our-work/toc>) and a recording of the meeting is available online at: [TOC - Granicus Content](#).*

10:00 a.m. 1. TOC Opening Business – Julianne LaRock, SFWMD

1A. Welcome, Announcements, and Identification of Participants

Julianne LaRock called the meeting to order.

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 to modify the agenda.

1C. Approval of Meeting Summary for January 18, 2022

The TOC approved the January 8, 2022, meeting summary with no requests for changes.

Associated Online Documents:

- [Final Agenda for May 10, 2022](#)
- [Draft Meeting Notes for January 18, 2022, Meeting](#)

10:12 a.m. 2. **Fourth Quarter 2021 Settlement Agreement Report** – Chelsea Qiu, SFWMD

Chelsea Qiu presented the 2021 fourth quarter Settlement Agreement report, which includes results of total phosphorus (TP) monitoring in the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Refuge), Shark River Slough (SRS), and Taylor Slough and Coastal Basins through December 2021. Results for SRS were calculated using provisional flow data and are preliminary.

Refuge 14-station geometric mean TP values for October, November, and December 2021 were below the computed long-term levels. The stage was high enough for all 14 stations to be sampled during these months. The 36-month average TP geometric mean is 6.9 parts per billion (ppb), which is 2.8 ppb below the 36-month average long-term level of 9.7 ppb. Preliminary geometric mean TP concentrations for January through March 2021 are below their long-term levels.

For SRS, the fourth quarter represents the beginning of WY2022, and reporting was for the 12-month tracking period. Provisional TP flow-weighted mean concentrations (FWMC) for tracking were higher than the tracking limits. Compliance will be assessed after WY2022 is completed and final data is available. The WY2021 dry season had much more flow than the previous two dry seasons. Both WY2020 and WY2021 had spikes of TP FWMC during the dry season. In the annual FWMC calculation, the spike in TP FWMC in WY2020 was associated with zero flow, which didn't change the FWMC. In comparison, in WY2021 under the Combined Operations Plan (COP), the spike was coupled with continued flow as required by the Tamiami Trail Flow Formula (TFFF), which significantly influenced the final TP FWMC for the federal water year ending on September 30, 2021.

TP FWMC values for Taylor Slough and the Coastal Basins for the 12-month periods ending in October, November, and December 2021 showed a decreasing trend and were less than half of the long-term limit (11 ppb). The observed percent of sampling events greater than 10 ppb was zero for November and December and far below the guideline for October.

Associated Online Documents:

- [Settlement Agreement Quarterly Report, October–December 2021, presentation](#)
- [Settlement Agreement Report, Fourth Quarter 2021, October–December](#)
- [Quality Assessment Report for Water Quality Monitoring, October–December 2021](#)
- [Quality Assessment Report for Water Quality Monitoring, October–December 2021: Water Quality Data](#)
- [Arthur R. Marshall Loxahatchee National Wildlife Refuge Total Phosphorus \(TP\) Compliance Status as of December 2021](#)
- [Provisional Shark River Slough Fourth Quarter 2021 Total Phosphorus \(TP\) Data Report](#)
- [Taylor Slough and Coastal Basins Fourth Quarter 2021 Total Phosphorus \(TP\) Data Report](#)

10:30 a.m. **3. Shark River Slough Final Water Year 2021 Annual Compliance Results** – Chelsea Qiu, SFWMD

The final flow data for the S-12 structures was received and confirmed by the US Geological Survey (USGS) so we now have the final WY2021 annual compliance results for SRS. Only minor changes were made by the USGS to the flow calculations, and TP FWMC levels remain the same after rounding compared to the provisional data previously published. Final WY2021 12-month TP FWMC was 8.2 ppb, 0.6 ppb above the long-term limit of 7.6 ppb. The percentage of event FWMC results above 10 ppb is over 50% for the 12-month period ending on September 30, 2021, which is higher than the guideline of 40.1%. TP FWMCs higher than the long-term limit persisted from March to September 2021.

Questions, Comments, and Discussion:

Donatto Surratt stated that Everglades National Park (ENP) has done their own investigations into the high TP FWMC numbers and are also pointing to the low stage and high flow deliveries during the dry season. He added that these conditions in the dry season are expected to occur pretty consistently going forward as the Combined Operations Plan (COP) is implemented. The TFFF is requiring deliveries which provide ecological benefits necessary, particularly during the dry season. We need to do some work on how to resolve this. ENP will be presenting their analysis of the TP FWMC and flow data at the next TOC meeting.

Ed Smith said we are seeing the same kind of exceedances we saw in 2019. We were hoping the new S-333N structure would help ameliorate the high TP FWMCs, but it does not appear to be resolving the localized issue.

Dan Crawford stated that the the US Army Corps of Engineers (USACE) is still doing their analysis of the WY2019 data. Supporting agencies have spent a great deal of time scoping the Sediment Characterization Study and Hydrodynamic Modeling Study after the WY2019 exceedance. USACE adopted the COP in September 2020. The dry season water deliveries to SRS are a critical part of the restoration goals for the Everglades and will continue. Hopefully, the ongoing studies from the WY2019 exceedance will continue to be accelerated and that information be made available to our agencies to review at the earliest opportunity.

Lori Miller echoed what the others have said. The Refuge is here to assist in any way it can.

Julianne LaRock stated that SFWMD is looking through the WY2021 data further to better understand what is happening in that part of the system.

Associated Online Documents:

- [Settlement Agreement Report WY2021 Annual Shark River Slough Compliance presentation](#)
- [Final Shark River Slough WY2021 Total Phosphorus \(TP\) Data Report](#)

10:45 am **4. Water Quality Conditions for Shark River Slough, Water Year 2021** – Chelsea Qiu, SFWMD

Chelsea presented an exceedance analysis for the SRS WY2021 TP FWMC results based on the hydrologic and water quality conditions. Four types of conditions were analyzed: possible data errors, possible extraordinary natural phenomena (both required by the Consent Decree), system operations, and upstream conditions. The investigation found that data errors had no influence on the exceedance. The evaluation of extraordinary natural phenomena, even though rainfall at the beginning of the water year was very high and at the end of the year was very low, did not explain the high annual TP FWMC. The evaluation of upstream conditions showed that it was not a factor in the exceedance. As in other years, there were high TP concentrations under low stage conditions, which have been attributed to localized conditions in the vicinity of the S-333. Considering all of these factors, it was concluded that the major driver for the WY2021 exceedance was the localized effects of periods of higher concentration under low stage conditions combined with the significant flow during these periods.

Questions, Comments, and Discussion:

Mr. Barkett asked if we have evaluated possible solutions. Julianne responded saying the work being done by the S-333 Working Group, referenced earlier, might help us land on a solution.

Donatto stated that we might be looking at a localized event, but he cannot yet conclude that the high concentrations are not coming from upstream from the L-67A or the marsh as the sediment characterization study still needs to be completed. Lori asked if the S-333 Working Group would be invited to a TOC meeting. Dilip Shinde provided an update on the sediment studies being undertaken by ENP: (1) samples were being collected until the end of June, (2)

lab analysis, data synthesizing, interpretation, and reporting will probably take a few months, and (3) the team is looking at early next year to determine how to use the information.

Matahel Ansar, SFWMD, provided an update on the hydrodynamic study, indicating that bathymetry survey was completed in May and the modeling study will take 6 to 9 months.

Dan Scheidt, US Environmental Protection Agency, asked to clarify the statement that “Upstream influence continues not to be a factor”. Julianne responded that the TOC agreed that the WY2019 exceedance was due to localized factors not upstream STA releases. The TP concentrations at the STA outflows were lower than the concentrations at the S-333 structure for both WY2019 and WY2021. Dan followed up with asking if the statement implied that the Restoration Strategies projects were irrelevant. Julianne responded that was not the intent of the statement and Ed agreed.

Troy Hill asked two questions: (1) if total loads of phosphorus were looked at because FWMC may not be the best indicator given the loads coming out of the system, and (2) why the analysis focused on the WCA-3A eastern flow path and the western flow path was not in the table. Julianne replied that the consent decree evaluation is based on flow-weighted-mean concentrations. Chelsea explained that the analysis focused on the eastern flow path because it has more influence on the southeast portion of WCA-3A, while the western flow travels through the marsh and is not directly influenced by upstream sources. Stuart Van Horn elaborated further by stating that the intent of Restoration Strategies is better water quality coming from the Everglades Agricultural Area, and that there are ancillary benefits of CERP. Water moves into the water conservation areas (WCAs) from the west and east. Water from the western flow way moves across the WCA-3A marsh and by the time it reaches the southern end of WCA-3A, the water has very low phosphorus concentrations. This marsh water flows into the southern end canals that ultimately flow through the S-12s. In comparison, the delivery of water from the east canal water. Donatto stated that we recently evaluated water in the western portion of WCA-3A, which has water coming from the Western Basins, and found higher concentrations in this region. Donatto asked if SFWMD has evaluated the water in this region of the marsh? Stuart replied that water in the area comes from many sources, with some sources being local and others upstream, but even this upstream water goes through the marsh at the L-28 gap with lower TP concentrations. So it is difficult to determine the source of the higher concentrations in this area. Maybe this is something we need to evaluate further in the future. Dan added that in the evaluation, it is important to look at dry-outs in the area as they can contribute to the concentrations from legacy loads.

Associated Online Documents:

- [Water Quality Conditions for Everglades National Park, Water Year 2021, Shark River Slough](#)

11:42 am **4. Public Comment**

Public comments were given by Paul Julian II with the Conservancy of Southwest Florida and Ernie Barnett with the Florida Land Council.

11:49 a.m. **5. TOC Closing Business** – Julianne LaRock, SFWMD

The TOC will determine the next quarterly meeting and future meetings via email. This meeting date will be put on the web page as soon as possible.

11:53 a.m. Julianne LaRock adjourned the meeting.