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

August 30, 2022

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

TOC Representatives:

Julianne LaRock, TOC Chair, SFWMD	Lori Miller, Refuge
John Barkett, Special Master	Edward Smith, FDEP
Daniel Crawford, USACE	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; please contact Florida Court Reporting (561-689-0999) for more information. 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.

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 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 May 10, 2022

The TOC approved the May 10, 2022, meeting summary with no requests for changes.

Associated Online Documents:

- Final Agenda for August 30, 2022
- Draft Meeting Notes for May 10, 2022, Meeting

2. First Quarter 2022 Settlement Agreement Report – Chelsea Qiu, SFWMD

Chelsea Qiu presented the 2022 first 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 (TSCB) through March 2022. Results for SRS were calculated using provisional flow data and are preliminary.

Refuge 14-station geometric mean TP values for January, February, and March 2022 were below the computed long-term levels. All fourteen stations were sampled in January and March 2022, and thirteen were sampled in February 2022. The 36-month average TP geometric mean is 6.8 parts per billion (ppb), which is 2.7 ppb below the 36-month average long-term level of 9.5 ppb. For the April through July 2022 look-ahead, the preliminary geometric mean TP concentrations show an excursion for June 2022 but below their long-term levels for other months.

For SRS, the first quarter represents the midpoint 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.

TP FWMC values for TSCB for the 12-month periods ending in January, February, March 2022 continued to show a decreasing trend less than half of the long-term limit (LTL) (11 ppb). The observed percent of sampling events greater than 10 ppb was zero for January – March, below the monthly guideline of 53.1%.

Questions, Comments, and Discussion:

U.S. Department of Interior (DOI) consultant Bill Walker commented that it is the first time there is anticipation of 3 ppb above LTL for WY2022, and suggested discussions on the major changes in hydrology due to S333N operation and Combined Operational Plan (COP) operations. Julianne stated that more information regarding operations can be viewed in the meeting read-ahead link at https://www.sfwmd.gov/our-work/toc and that more information would be described in future quarterly meetings when the annual data results for SRS are finalized. Special Master John Barkett suggested gathering possible explanations for the exceedance of the LTL of inflows to Everglades National Park (ENP) through SRS for WY2021, which could provide insight into the likely exceedance in WY2022. He reminded the group that the TOC is still discussing WY2021 and are comparing the explanations between the two years for similarities and differences. The TOC needs to address how their initiatives are consistent with the Settlement Agreement/Consent Decree.

Associated Online Documents:

- Settlement Agreement Quarterly Report, January – March 2022, presentation
- Settlement Agreement Report, First Quarter 2022 January - March 2022
- First Quarter Quality Assessment Report for Water Quality Monitoring, January - March, 2022 - Revised
- First Quarter Quality Assessment Report for Water Quality Monitoring, January - March, 2022 Water Quality Data
- Arthur R. Marshall Loxahatchee National Wildlife Refuge Total Phosphorus (TP) Compliance Status as of First Quarter 2022
- Provisional Shark River Slough First Quarter 2022 Total Phosphorus (TP) Data Report
- Taylor Slough and Coastal Basins First Quarter 2022 Total Phosphorus (TP) Data Report

3. **Shark River Slough Water Quality Compliance Evaluation WY2021** – Donatto Surratt, ENP

Donatto Surratt provided an overview of the conclusions drawn from his SRS compliance evaluation of WY2021. The data was analyzed from the perspective of the regional and local drivers of water quality. The regional drivers may include the following:

- Levels of TP discharged into the Miami and L67A canals were higher than the LTLs of TP that are protective of ENP. Additionally, analyses show increasing TP FWMC levels over the last 10 years at the S9A, along the western boundary of Water Conservation Area (WCA) 3A, and at Structure (S) 12A.

Local drivers focus on the conditions when stages are below 9.2 ft at S333 headwater and include the following:

- Exceedances are more likely when high percentages of flow from the S333s are delivered once the stage was below 9.2 ft.
- In WY2021, 56% of flows were delivered when water levels were below 9.2 ft, substantially more flow into SRS during low canal stages than in previous periods.
- There is a strong inverse relationship between TP and stage—when the stages are lower, the TP values are higher. In WY2021 stage below 9.2ft explains 77% of TP variability.
- In past years, flows during low stage were sent to South Dade Conveyance System, instead of SRS, and thus, were not incorporated into the SRS compliance calculations.
- Flows delivered to SRS during the dry season are beneficial to the ecology of the SRS despite the exceedance of TP concentrations for WY2021. Potential solutions need to be assessed to eliminate the excess nutrients found in the additional low stage inflows.

The goal is to continue implementing previously approved long-term solutions, Restoration Strategies, to reduce TP concentrations. The sediment characterization and hydrodynamic studies need to be completed to guide solutions moving forward. ENP was unable to implement the water quality adaptive management strategies under COP and need to evaluate these strategies, particularly within Central Everglades Planning Project 1.0 (CEPP 1.0).

Questions, Comments, and Discussion:

Bill commented on the increasing TP FWMC along the western side of WCA-3A, and the increasing TP FWMC trends at S9A, and asked if CERP projects exist that would address these areas. Edward Smith mentioned the C-11 Impoundment in the Broward County Water Preserve Area (BCWPA) is a CERP project that is under development. Daniel gave a status update on the Western Everglades project and indicated this project is a CERP component and not a component of Restoration Strategies. Bill also asked if the relative TP concentrations at S333N are higher than the concentrations in S333? Donatto replied there is a 1:1 relationship between both structures with variations of 1ppb between the two.

SFWMD technical staff Nenad Iricanin raised several questions related to the Na:Ca evaluation presented.

John read page C-4 in the Consent Decree:

> "If the Park or Refuge concentration levels are violated, then additional remedies will be taken, such as expansion of STAs, more intensive management of STAs, a more stringent EAA Regulatory Program, or a combination of the above. The State Parties shall not implement more intensive management of the STAs as the sole additional remedy."

John commented that the first bullet for the "Ask" section of the presentation is too vague to explicitly be referencing page C-4. John suggested more detailed information regarding action steps, timelines, and metrics to link such possible solutions to potential causes, especially since it appears that WY2022 will end with another exceedance.

Donatto responded that completing the Sediment Characterization and Hydrodynamic studies initiated by the S333 working group will guide which potential engineering solution should be used to inform the remedies. Thus, the studies must be completed first before the ENP can settle on specific action recommendations. Donatto appreciated John's feedback and that returning with more specific action steps at the next meeting, rather than generalities, will be taken into consideration.

Daniel specified that CERP, including the Western Everglades project and CEPP, are not corrective actions or remedies to achieve compliance with state requirements under the Consent Decree, or under Restoration Strategies. USACE's partnership in CERP is complimentary to everything the agencies are trying to do in Restoration Strategies.

Edward commented that the presentation demonstrates a correlation between stages lower than 9.2 ft and increasing TP concentrations. Donatto agreed and Edward indicated that the correlation confirms what was agreed upon by the Principals for 2019: That a localized issue was causing the exceedance and that FDEP still agrees with this conclusion.

Daniel and the USACE agrees with the ENP's conclusions regarding the signals from the local drivers from WY2019 influencing the WY2021 exceedance. USACE agrees with completing the ENP Sediment Characterization and the SFWMD Hydrodynamic modeling studies to help determine the next steps to help reduce TP concentrations.

Edward addressed Donatto 's comment regarding the increased flow and how that is improving the ecology of the ENP by asking if any studies or trends have been discovered that can be reported to the TOC. Donatto has staff who have looked into this more thoroughly and can do a presentation at a future meeting regarding their findings.

Julianne asked Donatto if the ENP can work with her staff to break down the data presented to provide additional information that was implied by John's comments. Donatto is willing to work with Julianne's staff to dissect the analysis and develop the next steps regarding the evaluation.

Chelsea commented that the nearby marsh consistently has low TP concentrations. The S12C, S12D, S333, and S333N were used primarily to send flow to SRS, and S12A and S12B were only allowed to open for 2.5 months, making a limited contribution to the SRS exceedance. The S333 downstream concentrations are driven by the stages. Donatto stated that his intent was not to establish a 1:1 relationship between upstream dynamics and what is happening in S333, but to convey that they may not have been cleaned to the point that they are protective of the flows entering SRS and should still be considered. Julianne stated that the TP concentrations in the marsh are consistently low.

Water Quality Bureau Chief Stuart Van Horn stated that Donatto gave an excellent presentation with a lot of food for thought. He indicated that a better job needs to be done

in the future on connecting some of the dots to address these questions and expressed that he is glad the agencies will work together to be able to do that.

Associated Online Documents:

- Shark River Slough Water Quality Compliance Evaluation WY2021, Presentation

4. Follow-up Discussion of Exceedance Federal WY2021– TOC Representatives

Julianne indicated that this agenda item was to address "the three questions" recommended in the 2016 memo from the Principals of the Consent Decree. The first two questions are: Has the TOC sufficiently evaluated the relevant information for a better understanding of what may have caused the exceedance? Is there substantial evidence to conclude whether the exceedance was due to error or extraordinary natural phenomena?

Daniel stated that based on the presentations given at this and the last TOC meeting, the exceedance is not the result of extraordinary natural phenomena or a data error. He believes the answer to the first question is contingent on the analyses being done by the S333 working group. Research has been conducted utilizing the information that has been provided. However, there is additional data being collected in part because of the expertise of the agencies represented by the TOC that have developed a hydrodynamic workplan with sediment characterization studies. To identify the main contributing factors to the exceedance, the work that was initiated after the WY2019 exceedance must be continued. Once we have the results from those studies, we will be able to decide the next steps.

Lori agreed with Daniel's statement. Donatto also agreed and stated that after having this discussion and deciding to do further work with Julianne's staff, he noticed that the arriving at answers to the first question is stalled by the amount of initiatives that must be completed in addition to the sediment characterization and hydrologic characterization studies.

Edward stated that it was neither a data error nor extraordinary natural phenomenon that caused the exceedance. Instead, there are localized issues whose causes need to be clearly identified. Then potential remedies will be put in place. All TOC members agreed that there was neither a data error nor extraordinary natural phenomenon that caused the exceedance.

Julianne stated that Question 3 will be tabled for the next meeting. Technical staff from the agencies will work together to present additional information at upcoming meetings, and is looking forward to raw data from the sediment and hydrologic studies.

Lori stated that the S333 Working Group scope of work needs to be presented to understand what the next steps are. This was requested before but can be placed as a tentative agenda item for the next meeting.

Associated Online Documents:

- Update on the Process for Dealing with Excursions

5. Public Comment

Public comments were given by Paul Julian II with the Sanibel-Captiva Conservation Foundation (SCCF) and Ernie Barnett with the Florida Land Council.

6. TOC Closing Business – Julianne LaRock, SFWMD

The TOC will host the next quarterly meeting on December 13, 2022. This meeting date will be put on the web page as soon as possible.

Julianne adjourned the meeting.