

**Final
MEETING SUMMARY
Technical Oversight Committee (TOC)
South Florida Water Management District, Auditorium
3301 Gun Club Road, West Palm Beach, FL 33406
Thursday, August 26, 2004**

Attendees:

Garth Redfield, TOC Chair and Agency Rep., SFWMD
Nick Aumen, TOC Agency Rep., NPS/ENP
Paul DuBowy TOC Agency Rep., USACE
Frank Nearhoof, TOC Agency Rep., FDEP
Matt Harwell (FWS), TOC Alternate Agency Rep., USFWS

John Barkett, Special Master

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| Wossenu Abteu (SFWMD) | Leslie MacGregor (DOI) |
| Kelly Brooks (Miccosukee Tribe) | Juan Manzano (SFWMD) |
| Rick Burgess (Gunster, et al.) | Cheol Mo (SFWMD) |
| Laurene Capone (EAA Research) | John Moorman (SFWMD) |
| Bahram Charkhian (SFWMD) | Paula Moree (SFWMD) |
| Maxine Cheesman (SFWMD) | Mark Musaus (FWS) |
| David Crowley (FDEP) | Cal Neidrauer (SFWMD) |
| Linda Davis (SFWMD) | Gabriel Nieto (Steel, Hector) |
| Charles Demonaco (FDEP) | Tim Pinian (FWS) |
| Gene Duncan (Miccosukee Tribe) | Barbara Ross (SFWMD) |
| Gary Goforth (SFWMD) | Adam Siegel (USDOJ) |
| Larry Grosser (SFWMD) | Keith Smith (SFWMD) |
| Jennifer Hinckley (USFWS) | David Struve (SFWMD) |
| Bob Kadlec (DOI) | Susan Teel (USFWS) |
| Dan Kimball (NPS) | Stuart Van Horn (SFWMD) |
| Julie LaRock (SFWMD) | Bill Walker (DOI) |
| Kristin Larson (SFWMD) | Shi Xue (SFWMD) |
| Charles Lee (Audubon) | Mike Zimmerman (NPS/ENP) |
| Linda Lindstrom (SFWMD) | |

10:10 a.m.

Introductory Comments and Modifications to Agenda:

Garth Redfield, Chair, Technical Oversight Committee (TOC), called the meeting to order at 10:10 a.m. The agenda has been published on the web and it reflects guidance from the Principals. This is a quarterly meeting of the Technical Oversight Committee. No changes were requested in the TOC Agenda (**Attachment 1**).

The South Florida Environmental Report is almost entirely available on the District's website and all chapters will be available by September 1, 2004 at <http://www.sfwmd.gov/sfer/>. There is a section for *Public Comments* on this website and a public workshop is scheduled from September 21–23, 2004 in West Palm Beach.

10:15 a.m.

1. Approval of TOC Minutes from April 6, 2004 and May 26, 2004 TOC meetings:

The Chair stated that only one comment was received on the April 6, 2004 Minutes and no substantive changes were made to the Minutes. Therefore, the Minutes are considered approved. The May 26, 2004 Minutes are posted to the District's website for review and comment.

Recommendations and Follow Up:

Revisions and/or comments to the Chair on or before deadline of September 10, 2004 are requested for Minutes from the May 26, 2004 TOC meeting. There was a stenographer present to take *verbatim* Minutes at the May meeting and one is present at this meeting. Copies can be ordered from the District's Office of Counsel.

Nick Aumen asked if there was a charge for the *verbatim* Minutes. Kirk Burns, Office of Counsel, SFWMD, indicated that there is a per page charge for the transcript and he will let the group know the exact cost. The cost of the court reporter is shared by the Principals, but any request for copies of the transcript must be paid by the requestor. Paula Moree, Staff Business Operations Analyst (SFWMD), took notes for an abbreviated Meeting Summary.

10:25 a.m.

2. Presentation of the Settlement Agreement Report and Quality Assessment Report for Water Quality Monitoring. Julianne La Rock, Sr. Supervising Engineer; and David Struve, Supervising Chemist, respectively, SFWMD.

In her presentation, Ms. LaRock began by providing information available on the District's website and the best options on how to use this site (**Attachment 2**). She continued by reviewing the data, tables, and figures in the Settlement Agreement January–March 2004 Report (**Attachment 3**). *Preliminary Data* for compliance in the Refuge, Park, and Coastal Basins was then presented to illustrate the new approach to monthly publication of water quality data (**Attachment 4**). There was discussion on the development of the compliance networks, the role of water depth in sample collection, and the identification of sites in the field.

10:45 a.m.

David Struve, Supervising Chemist, SFWMD, summarized information on Field Sampling Quality, SFWMD Laboratory Quality and Technical data from the SFWMD laboratory QC summary in his presentation to TOC (**Attachment 5**). Details on each of these subjects can be found in the 'Quality Assessment Report for Water Quality Monitoring', published on the TOC website (**Attachment 6**). In summary, the quality objectives were met for the lab and field for the quarter ending March 31, 2004. Data were reviewed and samples were properly flagged as required. Data were found to be suitable for use in the Settlement Agreement report.

11:00 a.m.

3. Updates for TOC on Relevant Activities and Projects.

a. STA-1W: Gary Goforth, SFWMD, provided information on the STA-1W project and the 10-year anniversary of the 3,742-acre prototype treatment wetland (formerly known as the Everglades Nutrient Removal Project) (**Attachment 7**). A chart entitled STA-1W 12 Month Rolling Flow-Weighted Mean Concentrations and Rolling Total Phosphorus Loads was reviewed. Phosphorus data on the treatment area indicate that it is not fully recovered from high water loads, but performance has been quite good. An anomalous event (failure of an adjacent private stormwater retention dike) resulted in high phosphorus concentrations and loads entering STA-1W before Hurricane Charley.

b. STA-3/4: Gary Goforth also provided information on STA-3/4 and included background information on the periphyton-based STA (PSTA) project (**Attachment 7**). Photographs of the “before” and “after” construction activities were shown. Over 50,000 pounds of harvested submerged aquatic vegetation (SAV) material was taken by helicopter from nearby STA-2 and dropped at 50 sites within Cell 2B of STA-3/4. The transport and inoculation of SAV fragments has been very successful to date. The central flow-way has passed its start up requirements and limited discharge should proceed within the next 30–60 days, an important milestone.

c. STA-1E: Paul DuBow, USACE, provided information on the construction status of STA-1E (**Attachment 8**). The cells are substantially complete; however, additional work on levees is still needed. Grading options for Cell 7 were presented and the project should be ready for turnover to the state in fall 2004. PSTA information for STA-1E was presented and there was some consideration of the downstream effects and possible actions. The FDEP has been working with the District, Refuge, and USACE to coordinate review of an application for the permits to operate STA-1E.

11:45 a.m.

d. Refuge Monitoring & Modeling: Matt Harwell, USFWS, presented an update on Refuge monitoring and modeling to solicit feedback on the reporting format and to inform the TOC of progress (**Attachment 9**). A Refuge sampling site map was reviewed and information was given on the monitoring for stations sampled in June, July, and August 2004.

The presentation also included using prescribed fires as a management tool in the Refuge. Information on the wild fires is of interest particularly regarding possible effects of fire on water quality. Information was provided on the development of hydrodynamic and water quality modeling. A modeling contract is underway and model selection review panel contract in process. Finally, a monitoring contract is in progress (Cooperative Agreement) to gather data on canal hydrographic surveys and canal sediment characterization over time.

Recommendation and Follow Up:

Nick Aumen suggested that fire research and monitoring would be an ideal chance to work with the SFWMD on prescribed fires. The Chair said the District has a recovery project and is very interested in prescribed burns. He suggested Aumen contact the Everglades Division so there will be no duplication of efforts by the two agencies.

12:10 p.m.

e. Refuge Sampling Procedures. Kristin Larson, SFWMD, reviewed sampling procedures being used in the Refuge for the compliance network and on efforts to assure quality data and consistency over time. She indicated that both agencies are in complete agreement on appropriate sampling procedures and summarized how each site is sampled and how the samples are processed. There was general discussion of wetland sampling.

12:30 p.m. – Adjourn for Lunch

1:15 p.m. – Reconvene

4. Comparison of TP Analyses made by District and FDEP Labs.

Frank Nearhoof, FDEP, presented a comparison of TP analyses between SFWMD and FDEP (**Attachment10**). He reviewed key definitions of laboratory precision and accuracy, and introduced concepts underlying the *Minimum Detection Limit (MDL)* and *Practical Quantitation Limit (PQL)*. The presentation included examples of required laboratory QC activities, performance test samples, and lab control samples. All of these areas indicate that both labs are consistently among the best performing labs.

Information regarding the comparison between the FDEP's and SFWMD's TP measurements was provided and the labs yielded some long-term average concentration. Overall, the presentation supported the view that the labs are as good as they can get and they agree very well. Importantly, any small differences should have no relevance to compliance with the Settlement Agreement limits and levels.

Recommendation and Follow-Up:

A summary of reporting results for a longer period was suggested. It was agreed that this was a good idea and Water Quality Assessment reports can be modified to include longer term data sets. Staff will have a follow-up meeting to pursue these changes.

2:00 p.m.

5. Discussion of Phosphorus Load Compliance Methodology

Gary Goforth began by summarizing the three major areas of the compliance methodology that were identified at the last TOC meeting as needing refinement:

- a. Clarification of “low-flow water supply deliveries” to the WCAs.
- b. Clarification of how to account for extreme hydrological events.
- c. Steps and technical analyses to revise the annual concentration limit.

A fourth area to be discussed is the assumption that the STAs are being operated with the range of inflows anticipated during their design.

Gary Goforth discussed “low-flow water supply deliveries” to the WCAs and suggested that the TOC could consider recognizing a threshold stage in each WCA that represents a reasonable canal level that minimizes impacts to interior of marshes; e.g., 0.5 ft above the floor of regulation schedule. For example,

- i. For WCA-1, the floor is 14.0 ft, so the threshold stage could be 14.5 ft;
- ii. For WCA-2 the floor is 10.5 ft, so the threshold stage could be 11.0 ft; and
- iii. For WCA-3A the floor is 7.5 ft, so the threshold stage could be 8.0 ft.

Setting this stage threshold above the floor of the regulation schedule would allow consideration of proactive deliveries of treated water, if available, e.g., between 14.5 ft and 14.0 ft in the Refuge to minimize delivery of untreated water (i.e., if deliveries had to wait until the stage dropped to the floor). In addition, all pass-through deliveries of water when canal stage is at or below the threshold stage, regardless of whether the original source is Lake Okeechobee or stormwater runoff, could be considered low-flow water supply deliveries. The basis for this is that treated EAA runoff has lower TP than untreated lake water.

Cal Neidrauer, SFWMD, made a presentation on the Water Conservation Area Regulation Schedules to aid in understanding of water deliveries and stages (**Attachment 11**). He gave a complete overview of how the regulation schedules are implemented.

Gary Goforth continued his presentation with suggested refinements for the annual phosphorus concentration limits. Shi Xue, SFWMD, discussed suggested technical analyses that could be used to revise the annual limit values (**Attachment 12**). Using 10 years of data from the outlet of STA-1W (formerly the Everglades Nutrient Removal Project) at G-251, an annual limit of 60 ppb was calculated as an example, significantly lower than the 76 ppb in the current methodology. More stations could be included to refine the limit value for all the STAs.

Gary Goforth then discussed a suggestion for clarifying extreme hydrological events. As an example, he showed a chart of the volume versus duration of storm events for S-8 for the baseline period established in the Settlement Agreement (1979-1988)

(Attachment 12). Each of the remaining southern EAA pump stations (S-5A, S-6, and S-7) could be characterized in a similar manner, and the results could be compared to future year's inflow volumes to determine whether actual flows constitute extreme hydrological events.

With regard to the overall application of the methodology each year, he suggested that the TOC consider a multiple-step approach similar to the approach in the Settlement Agreement for assessing compliance with the phosphorus levels in the Refuge: apply the methodology to the entirety of flows identified in the methodology without excluding low-flow water supply deliveries and extreme hydrological events. If an excursion occurs, then the TOC will look into low-flow water supply deliveries and extreme hydrological events. The TOC could determine the maximum rainfall return frequencies for the baseline period (e.g., 100-year storm event) and this could be compared with each compliance year to determine extreme events.

Recommendations and Follow Up:

A working group will determine what data analyses are needed, and eventually, how to calculate the new annual limits. This technical working group could work through the issues and bring all options to the TOC to decide what to do with the information. The working group will provide their information by the next TOC meeting.

2:50 p.m.

6. General Public Comment.

Charles Lee, representing Florida Audubon Society, spoke on expanding the size of the STAs. He suggested it would be helpful if Gary Goforth could give TOC members a brief discussion to keep them informed. Gary Goforth provided a short briefing on plans to expand the treatment areas by about 18,000 acres. Preliminary design studies of the EAA reservoirs suggest that storage requirements can be met on smaller acreage, and that allows for about 50% increase in treatment areas. This is still a concept staff is working on and proposals will be going to the Governing Board next month.

7. Proposed Quarterly TOC meeting dates (B-1 Auditorium).

Suggested Dates for future meetings:

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| Thur | 11/18/04 | Tues | 2/1/05 |
| Tues | 11/23/04 | Tues | 2/15/05 |
| Tues | 11/30/04 | Tues | 2/22/05 |
| | | Thur | 2/24/05 |

Agreed to meet on November 30, 2004 as a quarterly meeting. February quarterly meeting was scheduled for February 24, 2005. Any changes in these dates should be sent to the Chair as soon as possible.

Meeting Adjourned: 3:05 p.m.