

**Draft Minutes**  
**Technical Oversight Committee Meeting**  
**Tuesday, October 9, 2001, 10:15 a.m. to 1:30 p.m.**  
**SFWMD Headquarters, B-1 Building, Storch Room**  
**3301 Gun Club Road**  
**West Palm Beach, Florida 33416**

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**Attendees**

Garth Redfield, TOC Chair, SFWMD	James Erskine, Miccosukee Tribe
Carrie L. Trutwin, SFWMD	Lisa Smith, SFWMD
Nick Aumen, NPS/ENP	Linda Davis, SFWMD
Barbara Powell, SFWMD	Bob Mooney, USGS
Stuart Van Horn, SFWMD	Randy McCafferty, SFWMD
Bahram Charkhian, SFWMD	Sharon Trost, SFWMD
Bill Baker, MFL Inc.	David Struve, SFWMD
Bob Barron, COE	Gary Goforth, SFWMD
Larry Grosser, SFWMD	Tracey Piccone, SFWMD
Carlos Adoriso, SFWMD	Rajiv Srivastava, FIU
Vince Peluso, SFWMD	Amer Awwad, FIU
Mike Waldon, USFWS	Trey Buttelman, FIU
Cheol Mo, SFWMD	Maxine Cheesman, SFWMD
Damon Meiers, SFWMD	Ken Weaver, DEP (speaker phone)
Mike Zimmerman, NPS/ENP	Frank Nearhoof, DEP (speaker phone)
Paul McGinnes, SFWMD	Rajiv Srivastava, FIU
Linda Lindstrom, SFWMD	Dewey Worth, SFWMD
Laura Brandt, USFWS, Refuge	

**1. Introductory comments – Garth Redfield**

Garth Redfield began the meeting by announcing some minor changes to the agenda. He noted that, due to scheduling problems, the Technical Oversight Committee did not meet at its regular quarterly interval and it had been five months since the last TOC meeting.

**2. Water Quality Conditions Reports to the TOC – Cheol Mo**

Cheol Mo discussed the Water Quality Conditions Report (Attachments A and B), including an exceedance of the interim total phosphorus (TP) limit in October 2000. Due to staff limitations, the report was delivered with graphics only at the meeting. Narrative will be added later and provided to all attendees. Dr. Mo agreed with Redfield that trends seen in the water quality were dominated by stages due to the persistent drought in South Florida.

Mo briefly discussed the Shark River Report (Included in Attachment C). He agreed with Redfield that the Shark River Report indicates there was very little flow there and that there were no exceedances of the TP limit. Mo

then briefly discussed the Taylor Slough and Coastal Basins TP Tracking Report.

Mike Zimmerman asked whether the District had put in an automatic sampler at S-332D. Mo confirmed that the District had done so. Mo further discussed the autosampler data, noting that during the last few months, even though there was very little flow in S-175 and S-332, there was some flow at S-18C, and his guess is that S-18C got some flow from the eastern side of the canal, not from the western side. Mo pointed out that the autosampler data, which is seven-day, time-proportional data, used to be from S-332D up to May 2001. At that time, he said, the data changed to S-332DAS because there was a problem maintaining the autosampler at the pump station. Consequently, the District cannot incorporate these data into the tracking data, he said. He noted, however, that the autosampler concentration data are very comparable to grab samples, and he does not see a problem with the data. He attributed the high values to extremely low flow.

Mike Zimmerman, referring to the October 11, 2000 spike, asked whether that number correlated with the October storm, when there was a 39. Redfield asked Mo for clarification as to whether that correlated with the October storm event and whether it was the high flow rather than the low flow. Mo confirmed that was correct. Redfield sought clarification as to whether the reason the District installed and is operating the autosampler is to obtain loading calculations and improve data coverage, but that it is not being used for compliance purposes at this time. Mo said that was correct.

Maxine Cheesman pointed out that there were some blanks on the QA Report on the same days the high values were reported at 332D. She said she would go back and look into that, adding that she feels the Park sampling needs to be looked at because there seems to be a recurrence of some high blanks up to March 2001. She said other than that, data that were flagged have been reported and accuracy targets have been met. There was no further discussion of this item.

### **3. Review of letter to TOC principals – Garth Redfield and Cheol Mo**

Redfield reminded attendees that at the May 21, 2001, TOC meeting, he was asked to write a letter, which is standard procedure whenever there is a water-quality excursion. He noted that he and Tim Bechtel had drafted a letter (Attachment D) and that it is available for review. Redfield invited meeting attendees to submit to him any comments on the letter, at that time or within one week, after which he and Tim Bechtel would finalize it. Referring to information in the letter, Redfield pointed out that there was a 0.5-microgram exceedance of the geometric mean for one month, and since that time there have been no excursions and the numbers have remained below both the interim and the long-term TP limit. He noted that a high-water event had occurred, and he pointed out that the letter provided details as to how that water came into the Refuge. Redfield also noted that Gary Goforth had provided an update on the TP control measures relevant to the Refuge. Redfield said everything is moving along as required by the EFA, though he acknowledged there is still a lot more loading that needs to be

reduced for the Refuge. Redfield concluded that it appears there was less dilution effect than had been expected or that the equation allowed for, resulting in an exceedance of the TP limit. He concluded that he did not see a need for the District to take any specific action at this time. He welcomed comments and suggestions on the letter and said he would incorporate them into the final version and send it off to the principals as an information item.

Frank Nearhoof asked whether he was correct in assuming that Redfield was planning to update the letter somewhat since the letter stems from a prior report and should include information received since then. Redfield disagreed, saying Mo had already included in the back of the letter the most recent, complete Loxahatchee data. Redfield said he would e-mail Nearhoof the entire letter.

Mike Waldon said it appeared to him that a lot of the flow came in during the storm through the S-6 pump. Nearhoof agreed, pointing out that the District wasn't yet diverting flow to STA-2 at that time. Garth Redfield confirmed that was correct.

#### **4. Update on water quality in C-111: Interlaboratory cooperation – Garth Redfield**

Glen Schuster, the scheduled presenter for this item, was not in attendance, so Garth Redfield began with a discussion of two memos, one written by Frank Nearhoof (Attachment E) laying out DEP's position on phosphorus data in the C-111 Basin, and a two-page memo from Glen Schuster (Attachment F) summarizing the Corps' analysis of the C-111 data. Also discussed was the intent of an e-mail from Jim Riley (Attachment G) stating that the monitoring program was reviewed by SERA, and that the program's purpose was not compliance with the Settlement Agreement. Nearhoof noted that what DEP had stated on the draft C-111 General Reevaluation Report (GRR) was that the intent of the monitoring program was in fact to determine compliance relative to the 5-to-10 ppb target for the Park.

Nick Aumen pointed out that another item mentioned in Riley's e-mail was that the program at that time was also intended to determine peaks of phosphorus and get quantification of phosphorus loads that the C-111 project would have to address. Aumen further pointed out that to get loads, one needs to have all the concentrations, not just the peaks. He noted that the Schuster memo included additional information regarding taking away from DEP the authority to conduct a TP Round Robin. Nearhoof disagreed with this suggestion. Redfield asked Nearhoof for clarification, and Nearhoof explained that DEP has "clear statutory authority" from the State of Florida for conducting the Round Robins and has had them for a long time. Further, he said that as the CERP project goes forward, there will be an ongoing effort to make sure the Round-Robins continue and that DEP would not cede responsibility for doing them to someone else. Garth Redfield acknowledged Nearhoof's comments and suggested he speak to the effort that goes into the Round Robins and who would pay for the additions.

Maxine Cheesman said she felt Nearhoof was correct on everything except item 5, which is not part of the CERP, and Nearhoof agreed. Redfield submitted that there were, then, two areas of disagreement. He also concurred with Cheesman's disagreement regarding item 5.

Nearhoof asked for clarification as to whether there are now two autosamplers at 332D and whether they are co-located. Redfield said they are co-located.

There was discussion among Mike Zimmerman, Redfield, Nearhoof and Mo regarding the comparison of data from the District's grab samples and the autosampler. Mo again noted that the District's samples are time-composites and should be comparable to the autosampler data. There was continued discussion about the comparability of the two sets of data. The discussion ended with Ken Weaver and Mo agreeing to work together to compare more recent data.

Cheesman offered that the District would get DEP a site map so DEP can see where the sampling sites are located. Redfield offered that an action item for the next TOC meeting would be to get the data together to facilitate further discussion of the comparability of the autosampler data to the grab-sample data.

Nick Aumen raised a question about the Schuster memo, saying it seemed that part of the memo agrees with DEP, but part of the memo doesn't and the issue would probably come up again. Cheesman offered that from this point on, the District and DEP would be working together to resolve the issues. Garth Redfield asked Lisa Smith, who he said had recently been involved in some of those issues, for an update and explanation regarding the confusion. Smith said she believed the confusion had to do with the fact that the monitoring was only supposed to last for a few months, but because DEP had issued four extensions of the emergency authorization, it has lasted longer. Consequently, monitoring activities in the C-111 Basin were overlapping. She suggested there is now a need to create a plan outlining how the District can segue into a longer-term phase of monitoring, as opposed to that which is still taking place under the emergency authorization extensions. She recommended that the plan should include guidelines for ensuring comparability of the data. Redfield asked Cheesman whether she felt the data would be comparable, and Cheesman replied yes.

Dewey Worth suggested it would be safe to assume that data gathered prior to November 2000 could not be relied upon to characterize concentrations and flows in the C-111 Basin. Nearhoof agreed. Redfield amended that to December 2000, instead of November 2000, due to some unexplained high values that occurred before December. He agreed that the responsibility of ongoing monitoring should be resolved, as must the problem of what to do with the high values in the 2000 data. He said these high values are problematic because they not only constitute a major management issue, but they could have potential legal ramifications, as well. He noted that though the District cannot explain the high values, it does not feel there is any evidence they are real. Keith Rizzardi asked if, when discounting the lowest values, the high-value data was even valid to begin with. Redfield said he could not see an association between flow and the high

numbers and said it would be wrong to allow spurious numbers to lead people to believe there is a major water quality issue in the C-111 Basin. Ken Weaver pointed out that since DEP and the District had worked with the contractor's lab to fix the data problems there and that there is now an appropriate detection limit, the incidence of occurrence of the high values has decreased. Nearhoof concluded that was more than coincidental, and earlier 2000 data have unexplainable variability.

Rizzardi expressed concern that the memo takes all the data collected prior to December 2000 and says that the District is discarding the low values, but is leaving all the high values. Doing so, he said, would imply that the District is automatically in noncompliance, when in reality the data should be being flagged for being way outside the historic range of values. Nearhoof pointed out that the memo does not explicitly state that DEP is leaving the high values in. Rizzardi then suggested that Nearhoof/DEP modify the memo to say that. Redfield asked Nearhoof whether DEP could give the District, in writing, a statement saying data collected prior to December 2000 should not be used for making low-level phosphorus determinations in the C-111 Basin. Nearhoof said he could work with the lab and with Cheesman to figure out how to do that. Redfield emphasized the need to put the issue aside, but added that it must be done formally, from a legal standpoint. Rizzardi agreed, saying that legally the data could not be thrown aside and that the reason the data is problematic needs to be formally clarified and stated. Redfield reminded the TOC that the issue of the differences between grab and composite samples has been examined repeatedly, and that while there are some subtle differences, depending on location, amount of particulate matter, etc., there is no systematic difference overall between composite and grab samples. Nearhoof agreed that the central tendencies between autosampler data and grab-sample data are essentially the same. He pointed out, however, that simply throwing out the problem values raises the central tendencies of the remaining data set, and that making management decisions based on a raised central tendency doesn't make sense environmentally. He stated that he intends to capture that in a letter specifically addressing the problem.

Cheesman stated her desire to ensure, as the project moves forward, that there is a project manager in the lab who will oversee the QA of the data and incorporate it into the database.

Redfield asked whether the data for the optimization studies were high. Cheesman replied that there is a completely different set of criteria that has been applied to that data. She reminded the TOC that the reason for flagging the high-level data was based on the fact that the current data and the tracking of it is different now than previously, a situation that doesn't exist in the case of the optimization studies. Nearhoof said he had not followed Cheesman's explanation, and Cheesman said she would speak with him later regarding the issue.

Nearhoof explained that DEP had plotted and cross-compared all the available data regarding a particular lab and that when DEP looked at the data, regardless of what project that lab had worked on those data didn't track with the other data that were out there. Cheesman stated that if that

was indeed the case the District would need to see proof of that. Redfield moved to close discussion of the issue and take it up again at the next TOC meeting.

**5: Update on basin feasibility studies for water quality improvement  
– Gary Goforth and Sharon Trost**

Redfield asked Paul McGinnes to update attendees on activities taking place to review monitoring programs. McGinnes stated that a task force had been put together to review the monitoring being done in the various structures in the Everglades Protection Area, including ECP as well as non-ECP structures, to determine whether money was being spent unnecessarily. McGinnes said he hopes to have a final analysis of the monitoring by the end of the year.

Sharon Trost, Gary Goforth and Tracy Piccone updated attendees on basin feasibility studies for water quality improvement (Attachment H). Piccone highlighted goals of the studies with respect to evaluating combinations of source control and regional public works to achieve compliance with water quality standards by December 31, 2006. She said that by June of next year the District plans to finalize the evaluation of water quality improvement alternatives in each of the basins.

Nick Aumen asked if there were any plans to look at marsh readiness of effluent water from advanced treatment. Gary Goforth responded that the plan is to let the ATTs fulfill their role. He said the District has collected as much information as was necessary and will now give the data to DEP and let them deal with it. Aumen expressed concern regarding a statement made by Jennifer Jorge at the 2002 Everglades Consolidated Report Peer Review Workshop that there were no plans for marsh readiness.

Aumen summarized comments from an e-mail from Bill Walker regarding basin feasibility studies, specifically that EAA Basin runoff still exceeds 100-120 ppb. Aumen said there is an extensive database on runoff quality and quantity that shows there are numerous hot spots, and he feels that these data can be used, along with BMP research results, to develop quantitative evaluation of further source-control measures. Sharon Trost requested that Aumen send a copy of Walker's e-mail to Garth Redfield.

Aumen asked Nearhoof whether he had any comment on marsh readiness. Nearhoof had no comment. Sharon Trost added that, in accordance with the original agreement with DEP that DEP would have responsibility for this issue, the District will do the best it can to come up with strategies for each basin, conceptualize those and place them into its application for a long-term compliance permit and submit it to DEP in advance of the deadline. However, she said there is no time to launch a program of marsh readiness research. She also said she was not sure the District is the agency that needs to be doing that research. Redfield moved to continue onto the remaining agenda items.

## **6. Water quality sampling changes at S-6 and S-5A – Bahram Charkian**

Bahram Charkian briefly introduced issues involved in the sampling changes at S-6 and S-5A (Attachment J). Redfield summarized the various comments on the changes being proposed, stating that what was being proposed was a canal site that is somewhat south of S-6 that will represent water flowing in that part of the Refuge. Laura Brandt confirmed that was correct. Redfield sought confirmation as to whether there would be a follow-up, agreed-upon protocol for high-water sampling at 338. That was confirmed.

Charkhian introduced a proposal to eliminate sampling at L-3 (Attachment I) because redirection of the levy began in June 2000 and there is no longer any need to collect samples at that site. Charkhian proposed collecting samples at L-3BRS instead, eliminating the L-3 sites. In addition, Charkhian proposed reducing the prompts for the S-355A and S-355B sites (Attachment I) to keep them consistent with parameters for 1, 3 and 4. Redfield asked if there were further comments on the proposed changes. There were none, and he okayed the changes.

## **7. Conceptual design of the S-5A total flow auto-sampling system – Rajiv Srivastava**

Rajiv Srivastava of FIU presented a conceptual design for a total-flow automatic sampler for pumping station S-5A (Attachments K and L). He suggested that current sampling is not entirely representative of the flow going through the S-5A pump and highlighted important aspects of the total-flow autosampler, i.e. that sampling is done at all times, that nothing goes by without being sampled, and the process is repeatable throughout the entire system.

After the presentation, Srivastava added that the new autosampler would in no way replace the grab samplers already in place and that FIU would work with the District to provide a comparison analysis of the report. Redfield asked whether there were any questions on the composite sampling system. Bob Mooney had two comments: first, he noted that regarding areas of potential variability, Srivastava had referenced a document on the rpm flow rate relationship, and Mooney pointed out that rpm and flow rate are not always linear. Srivastava explained that FIU had taken that into consideration and had built that into the curve. Redfield sought confirmation as to evidence that there is a need for the autosampler based upon the differences between the grab samples versus the composites. He added that he wanted to be sure there is hard data to support the need for the autosampler. The consensus was that there is hard data.

Redfield asked if there were further questions regarding the autosampler proposal. Nearhoof pointed out that if a new monitoring sampler is going to be implemented for "x" period of time, there is a lot to think about, statistically speaking, regarding how to go about demonstrating that the data from the two different methods are, or are not, comparable. He

noted that there was currently nothing in the autosampler proposal regarding what hypothesis was going to be tested or how that would be accomplished. He said that whoever is responsible for doing any such testing, it will have an effect on how the data are derived. Redfield agreed, adding that the District would take that under advisement and figure out where to go from here. He noted that the next step would be implementation of the autosampler. There were no other comments regarding the proposal.

**8. Date for the next TOC meeting and chairmanship of the TOC  
– Garth Redfield**

Redfield noted that he has been chairman of the TOC for about three years. He added that the District does not mind chairing the committee, but he also wanted to ensure that everyone understood it is a rotating chairmanship. He asked for recommendations regarding whether to appoint a new chairman or leave the chairmanship as it is. Nearhoof recommended leaving Redfield as chairman. There were no objections.

Redfield moved to set the date for the next TOC meeting for sometime in January. Aumen suggested January 24, 2002. Redfield said he would send out an e-mail reminding attendees of the January 24 date.

**9. Open public comment and adjourn – Garth Redfield**

There were no additional comments. Redfield thanked everyone and adjourned the meeting.