

### Technical Oversight Committee Meeting

August 1, 2002

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

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#### Attendees:

Garth Redfield, TOC Chair, SFWMD  
Carlos Adoriso, SFWMD  
Nick Aumen, NPS/ENP  
Bill Baker, MFL, Consult. Agric.  
Bill Baxter, USACE  
Tim Bechtel, SFWMD  
Kelly Brooks, Miccosukee Tribe  
Kirk Burns, SFWMD  
Bahram Charkhian, SFWMD  
Maxine Cheesman, SFWMD  
Linda Crean, SFWMD  
Naomi Duerr, SFWMD  
James Erskine, Miccosukee Tribe  
Joetta Lorion, Miccosukee Tribe  
Gary Goforth, SFWMD  
Larry Grosser, SFWMD  
Matt Harwell, USFWS  
Delia Ivanhoff, SFWMD  
Jennifer Jorge, SFWMD  
Bob Kadlec, Consult. DOI  
Chad Kennedy, SFWMD  
Julia Lacy, SFWMD

Linda Lindstrom, SFWMD  
Paul McCormick, NPS/ENP  
Paul McGinnes, SFWMD  
Ben McPherson, USGS  
Damon Meiers, SFWMD  
Cheol Mo, SFWMD  
Frank Nearhoof, FDEP  
Vincent Peluso, SFWMD  
Barbara Powell, SFWMD  
Dean Powell, SFWMD  
Lisa Smith, SFWMD  
Ron Smola, USDA/NRCS  
Kim Taplin, USACE  
Sharon Trost, SFWMD  
Carrie L. Trutwin, SFWMD  
Stuart Van Horn, SFWMD  
Mike Waldon, USFWS  
Bill Walker, Consult. DOI  
Jeff Ward, Sugar Cane Growers  
Cooperative (SCGC)  
Ken Weaver, FDEP  
Mike Zimmerman, NPS/ENP

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#### Introductory Comments – Garth Redfield

Garth Redfield opened the meeting at 10:05 a.m. He announced that the minutes from the previous TOC meeting were not yet available and would be sent out prior to the next meeting, along with the draft minutes from the August 1, 2002 meeting. There were no additions or changes to the agenda.

#### Agenda Item #1: Settlement Agreement Report to the Technical Oversight Committee – Tim Bechtel, Cheol Mo and Delia Ivanhoff

Tim Bechtel presented the Settlement Agreement Report on water quality conditions (Attachment A). He noted a change to the Arthur R. Marshall Loxahatchee National Wildlife Refuge (Refuge) summary graph. A horizontal line was put at 15.42 feet, representing the minimum stage at which interim limits are applicable for compliance purposes. Bechtel noted that the geometric mean for the Refuge was below the interim and long-term limits for the last five months (Table 1). Bill Walker suggested that since a long-term dataset exists, the TOC should be open to looking at the influence of individual stations within the Refuge on the geometric mean. Bechtel explained that some areas within the Refuge experience low stages, and it's possible that sampling

there may be affected by frequent contamination from suspended solids. Bechtel also mentioned that there were differences in data patterns seen at different locations in the Refuge.

Moving on to Shark River Slough (SRS), Bechtel indicated that during the last two dry years the District did not comply with either the long-term or the interim limit for phosphorus. Recent data in the last two months (Table 2) reveal means equal to the interim limit, and the previous three months show levels above the limit by 0.1 to 0.2 ppb. Bechtel expressed a concern with meeting the interim limit by the effective date of October 1, 2003, leaving only 15 months for SRS levels to reach compliance with the limit. Bechtel deferred further discussion of the issue to Bill Walker, who had done a thorough analysis of SRS phosphorus data.

Walker explained that in 2001, the P concentrations increased in SRS and there was little flow during the last two years (see Figure 3). When there was flow, most of it came through the S-12C and D and the S-233 structures. Regarding Taylor Slough, Walker said that up until this report, two sets of data were run: S-332D and S-174 versus S-332 and S-175. 1999 had a higher total phosphorus (TP) concentration; 2000 was the same, and last year the TP concentration was lower. He noted that the issue was discussed at the previous TOC meeting, when a decision was made to drop that dual monitoring. He said there have been minor discharges since July 2000, and most of the flow is now going through S-332D. Walker noted that "frequency" of values above 10 ppb is not a required value for compliance; only the flow-weighted mean affects compliance. Frank Nearhoof agreed, and regarding S-332D, Nearhoof said the question is whether the TOC is going to continue sampling at the S-332D pump station or some other nearby location. Bechtel suggested the sampling should continue at both locations. He noted that there would be a meeting to discuss the issue as soon as the U.S. Army Corps of Engineers turns the site over to the District. Bechtel also noted that the District had been surprised by the discovery of a flowway that is coming out of the detention system and is completely contained in the Frog Pond. He suggested the flowway should be monitored, but acknowledged that no one has figured out a way to do that. There was further discussion about the flow at S-332D, the issue of seepage, and water quality. Bechtel suggested that since the best source of flow is at the pump station, then that would be the best location to monitor.

Naomi Duerr asked about the CH2M Hill measurements. Bechtel explained that those were only for the first two weeks of CH2M Hill's monitoring, and they indicate that a lot of the water going into those cells is going into the groundwater. He noted that the monitoring plan that was submitted would probably be revised to some degree. Nearhoof asked whether the TOC had seen the monitoring plan. Bechtel said the TOC had not seen the plan. Nearhoof pointed out that the monitoring plan would be in the permit. Duerr said the District had acknowledged that it might not be able to implement the entire monitoring plan at that time. Bechtel asked if there were any other questions or comments. There were none.

Delia Ivanhoff presented the Quality Assessment Report for Water Quality Monitoring, January through March 2002 (Attachment B). She noted that out of 600 blanks collected, fewer than two percent were positive. She added that in the past, a routine sample, a split sample, and a representative sample have traditionally been collected. Totals are calculated based on those three values. She indicated that field precision is generally meeting the criteria, and that the only deficiency was that FDEP requirements were not being followed. She presented a summary of the March 1 changes based on the DEP's new quality assurance (QA) rule, and she detailed how the District would be making those changes. One major change would be that the field duplicate would be dropped unless project managers specifically requested it. Split

samples would also be scaled back. At this time, then, she said three kinds of samples would be collected: routine, split, and two-way split, which would function as a tiebreaker. Another change is that a replicate sample will no longer be required; nevertheless, the District will continue to collect a replicate sample but will scale back the collection frequency to once every quarter. Regarding laboratory quality control (QC), Ivanhoff said precision targets for accuracy had been met and that beginning March 1 there would be a lot less field data. Ivanhoff asked if there were any questions or comments. There were none.

**Agenda Item #2: Modifications to monitoring programs in Manatee Bay and Long Sound – Bahram Charkian and Chad Kennedy**

Chad Kennedy and Bahram Charkian presented modifications to monitoring programs in Manatee Bay and Long Sound as a follow-up to the last TOC meeting (Attachment C). Kennedy noted that the District would be dropping stormwater sampling in Manatee Bay, which was begun in 1991 to document discharges from Manatee Bay and Long Sound. The program was poorly designed from the outset, and resulting data are very difficult to use for meaningful information on water quality distribution or impacts. Furthermore, other routine data are being collected in the area. He pointed out that the Miami-Dade Department of Environmental Resource Monitoring (DERM) also does sampling in the area, and these samples are available to the District if requested. This sampling is conducted monthly; Miami-Dade DERM also conducts quarterly metals sampling. In addition, Florida International University routinely monitors eight sites in nearby eastern Florida Bay. In summary, the District and other agencies will have access to a total of 19 sites being sampled in Manatee Bay and Long Sound to provide ongoing information for the area. Kennedy asked if there were any questions or comments.

There was extensive discussion regarding the District's decision to drop storm event monitoring for Manatee Bay. Nick Aumen asked whether District staff had talked to anyone regarding potential uses of storm event monitoring data. Kennedy said District staff had spoken to both Lisa Smith and Dewey Worth. Aumen asked whether District staff had spoken to anyone from Everglades National Park (ENP). Kennedy acknowledged that no one from the District had spoken to ENP staff regarding storm event monitoring, although Park perspectives were provided in a letter to the District. Aumen expressed a concern that storm event monitoring was being dropped solely because of a need to save money. He suggested that the District look at the bigger picture before dropping storm event monitoring entirely. He also noted that no quantitative evaluation of the data had been done.

Chad Kennedy pointed out that the District had, in fact, done an informal evaluation of the data but had found that the sampling design produced data of very limited value. Aumen said he would like to see the evaluation, adding that he thought it was important to spend time considering the data and results. Naomi Duerr noted that the District is in the process of evaluating seven neighboring regions to evaluate the impact of dropping the monitoring sites. She said the District understands the importance of conducting such evaluations and would be doing a mailout of its findings. She reiterated that the District's goal is not to save money on monitoring but to wisely use money on data collection of real value to the District and other agencies. To the contrary, she said, District funding is increasing significantly because of CERP. Mike Zimmerman pointed out that some of the monitoring might begin again once the CERP starts up. Redfield asked if there were any further comments on Manatee Bay/Long Sound. There were none.

**Agenda Item #3: Atmospheric Deposition Monitoring – Naomi Duerr**

Naomi Duerr presented an update on atmospheric deposition monitoring. She noted that the District had mailed out a related manuscript, and that at the last TOC meeting the District had put forth a proposal to eliminate the nine remaining monitoring sites. However, she noted that before a proposal could be evaluated finally by the TOC, it would be necessary to look at the recent deposition data where the splashguards were put up. Duerr said that at the next TOC meeting District staff would give a presentation on the data and discuss its value to understanding total deposition to the Everglades Protection Area. There was discussion regarding the importance of wet and dry deposition to ecological models, such as the ELM model. Redfield said he and Duerr would ask Dean Powell if he could help out with scenario modeling. Redfield noted that the ELM model's sensitivity would be a follow-up item at the next TOC meeting. He asked if there were any other comments on Item 3. There were none.

**Agenda Item #4: Evaluation of the phosphorus concentrations in Shark River Slough – Bill Walker**

Bill Walker presented an analysis of recent phosphorus data from Shark River Slough (SRS) inflows to Everglades National Park (Attachment D). His evaluation revealed that deviations from the limit were not associated with an aberration, such as using the model outside its calibration range. He also reported that the trend of increasing P concentrations in SRS has been arrested, although recent values have risen, and these recent increases are associated with low-flow conditions and with shifting distribution to structures farther to the east. All of these factors are involved in higher values seen in SRS data in recent years.

He made suggestions regarding what should be considered in the coming years regarding compliance with the phosphorus limit, and he presented seven final recommendations:

1. Compilation of one or more consistent, long-term stage records for WCA-3A.
2. Investigation of trends at individual S-12 and S-333 structures, with and without adjustment for hydrologic factors.
3. Tracking of trends in concentration and load at WCA-3A inflow points, and trends in concentration at marsh and intermediate canal stations within WCA-3A.
4. Discussion of how to interpret compliance monitoring results from years when stage exceeded the calibration range.
5. Discussion of whether concentration increases resulting from shifts in flow distribution (i.e., Cape Sable seaside sparrow protection measures) should be considered in determining compliance. The effects on inflow concentration could be estimated in each year by quantifying the actual flow shift and the flow-weighted concentrations at each structure.
6. Discussion of how potential delays in response to loading control measures attributed to P release from impacted areas can be evaluated and considered in interpreting compliance determination during the upcoming years.
7. Further discussion of technical details regarding computation of limits in years when flow is released through S-334.

Garth Redfield asked if there were any questions regarding Walker's presentation. Kim Taplin noted that the shunting of more water through S-333 is

seasonal. A representative of the Miccosukee Tribe expressed a concern that this was being treated as a natural phenomenon, when in reality it is a water management operation that is changing the system and is causing higher phosphorus concentrations. Walker acknowledged that there is a conflict between water management and water quality concerns, adding that as long as the canal concentrations are higher than the marsh concentrations, there will continue to be problems. Redfield asked if there were any further questions or comments. There were none. The TOC adjourned for lunch and reconvened at 1 p.m.

**Agenda Item #5: Interim Operation Plan for the Cape Sable Seaside Sparrow – Kim Taplin**

Taplin presented detailed information on projects, monitoring and operations in the C-111 area. Her presentation (Attachment E) included: WCA flow patterns; the 1999 biological opinion; reasons for changing from ISOP to IOP; IOP Recommended Plan Alternative 7R; C-111 and MWD project features currently under construction; IOP Alternative 7R operational changes and status of current operations; and monitoring plan components.

Redfield asked Taplin to e-mail her presentation to TOC members. Mike Zimmerman suggested that the TOC should clarify where it does compliance testing and should somehow come up with a different way of determining compliance. There was discussion regarding the District taking over monitoring of 332-D and the influence of flow distribution on TP levels in the area. Redfield suggested that monitoring in the area should be a follow-up item at the next TOC meeting. There was discussion regarding what to do with 332-D and how to measure flows going into the Park. Redfield suggested that the TOC put together a group to clarify monitoring in the area. Naomi Duerr suggested that the five TOC member agencies should each provide a couple of people to serve on the team. Redfield suggested that at the next TOC meeting the agencies should have a monitoring plan in writing. Redfield asked if there were any other comments. There were none.

**Agenda Item #6: Status Report on Phosphorus Control Programs – Gary Goforth, Sharon Trost, Jennifer Jorge and Garth Redfield**

Gary Goforth presented highlights of the June 26, 2002 status report provided to Judge Hoeveler on phosphorus control programs (status report is Attachment F; TOC presentation is Attachment G). He said the bottom line is that the Settlement Agreement's BMP and STA phosphorus control programs are performing better than expected. Substantial effort has been made to accelerate restoration through optimizing treatment performance. (More details can be found in the *2003 Everglades Consolidated Report*, chapters 3, 4 and 8). Jennifer Jorge announced that the District is getting ready to move forward with an RFP on alternative treatment technologies. The motivation for this effort is to ensure that no viable technology is overlooked as the District continues implementing P control programs in all basins tributary to the Everglades Protection Area.

**Agenda Item #7: TOC Discussion of Compliance Methodology for P Load Reduction Targets of the Settlement Agreement – Open Discussion**

Garth Redfield opened the discussion by suggesting that the TOC talk about overall load reduction and how to track it. Bill Walker suggested that such a discussion would not be all that straightforward because of variations in rainfall and other factors. Goforth suggested that the TOC bring the load reduction issue to official closure. Frank Nearhoof said Walker's (1996) approach had been implemented and that the FDEP had issued permits using it for STA compliance. Goforth reiterated that it would be helpful if the TOC could bring the issue to closure and could perhaps annually report on its findings, possibly in the Everglades Consolidated Report.

There was discussion regarding the perception that the District, and possibly others, had been reluctant to accept Walker's approach for total load reduction compliance. Walker said his recollection was that there was a reluctance to accept that the total load reduction specifications in the Consent Decree are sufficient for the Everglades. Redfield noted that there is no report to which the public can turn to find out, in one straightforward presentation, what the load reduction has been in the last few years. Walker pointed out that the Settlement Agreement requirement is a long-term average, not just an annual number to be judged as compliant or not. Lorion suggested that it was unfair to refer to a Walker paper from 1996 and not give everyone a chance to look at it. There were comments regarding discomfort with voting on something that not everyone has read. Redfield announced that the TOC would make the paper a follow-up item for the next TOC meeting so everyone has a chance to read it.

There was further discussion regarding the loads from the individual structures. Redfield noted that though the target date for posting the information to the Web and reviewing it was August 29, the document was running late and was going through an internal review process. He said that if the information was going into the 2003 ECR at all, it would need to be available at the public workshop in September. He noted that there would be a follow-up item on load reduction compliance at the next TOC meeting in November. He encouraged those wishing to distribute further information or materials to the TOC not to hesitate.

**Agenda Item #8.** Redfield asked if there was any further discussion. There was none. He asked if there were any other comments from the public. There were none. Trost announced that at the STA design meeting on August 21 her group would be presenting further information on water quality on areas that discharge into each of the basins. Nick Aumen asked if the TOC would be reviewing the entire report on load reduction compliance. Goforth noted that it was only five or six pages in length and that TOC members should review it and, at the next TOC meeting, bring it to closure. Redfield adjourned the meeting at 2:30 p.m.

## ***Final Agenda***

### **Technical Oversight Committee**

***August 1, 2002, 10 a.m. to 3 p.m.***

**South Florida Water Management District  
Headquarters, B-1 Building, Storch Room  
3301 Gun Club Road  
West Palm Beach, FL 33416-4680**

**Introductory Comments: Discussion and review process for minutes; additions or modifications to the agenda.**

Garth Redfield and Carrie Trutwin, SFWMD

- 1. Water Quality Conditions Reports to the TOC.** Tim Bechtel, Cheol Mo and Delia Ivanoff, SFWMD
- 2. Modifications to Monitoring Programs; Manatee Bay.** Bahram Charkhian and Chad Kennedy, SFWMD
- 3. Elimination of Atmospheric Deposition Monitoring; Continuing Discussion.** Garth Redfield and Bahram Charkhian, SFWMD.
- 4. Evaluation of the Phosphorus Concentrations in the Refuge and Shark River Slough.** Bill Walker
- 5. Interim Operation Plan for the Cape Sable Seaside Sparrow.** Kim Taplin, USACE
- 6. Status Report on Phosphorus Control Programs.** Gary Goforth, Sharon Trost, Jennifer Jorge and Garth Redfield, SFWMD
- 7. TOC Discussion of Compliance Methodology for P Load Reduction Targets of the Settlement Agreement.** Open discussion of approaches to load compliance and the role of the TOC in finalizing a compliance methodology. Discussion with Bill Walker, Gary Goforth and other interested parties.
- 8. Public Comments**