

**Technical Oversight Committee Meeting**  
January 29, 2002  
South Florida Water Management District Headquarters  
3301 Gun Club Road  
West Palm Beach, Florida, 33414

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**Attendees:**

Garth Redfield, TOC chair, SFWMD	Paul McCormick, NPS/ENP
Carlos Adoriso, SFWMD	Damon Meiers, SFWMD
Nick Aumen, National Park Service (NPS)/Everglades National Park (ENP)	Frank Nearhoof, Florida Department of Environmental Protection (DEP)
Linda Davis, SFWMD	Vincent Peluso, SFWMD
Bill Baker, MFL	Tracey Piccone, SFWMD
Tim Bechtel, SFWMD	Barbara Powell, SFWMD
Bahram Charkhian, SFWMD	Pete Rawlik, SFWMD
Maxine Cheesman, SFWMD	David Struve, SFWMD
James Erskine, Miccosukee Tribe	Carrie L. Trutwin, SFWMD
Gary Goforth, SFWMD	Stuart Van Horn, SFWMD
Larry Grosser, SFWMD	Mike Waldon, United States Fish and Wildlife Service (USFWS)
Jennifer Jorge, SFWMD	Meifang Zhou, SFWMD
Julia Lacy, SFWMD	Mike Zimmerman, NPS/EN

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**1. Introductory comments – Garth Redfield, TOC chair, SFWMD**

Garth Redfield opened the meeting at 10:00 a.m. He asked if there were any final revisions to the October 9, 2001 TOC meeting minutes. No changes were recommended. Redfield declared the October 9, 2001 minutes finalized. He introduced Tim Bechtel, who presented an update on the Settlement Agreement Water Quality Conditions (WQC) Report (Attachment A)

**2. Water Quality Conditions Reports to the TOC – Tim Bechtel, SFWMD**

Bechtel noted that with respect to the Arthur R. Marshall Loxahatchee Wildlife Refuge (Refuge), the WQC Report covered the period of July, August, and September 2001. Bechtel said the District passed the geometric means of the phosphorus samples selected in each of those months, but in September 2001 the District exceeded the long-term limit. He noted that since the long-term limit doesn't become effective until December 2006, the District is currently in compliance with water quality parameters. However, he suggested that whenever dry conditions prevail, unless the system is able to come up with more water it will always have trouble meeting the phosphorus limits.

Redfield asked whether, when considering the baseline period, there were limits when the water was low. Bechtel noted that the water level had gone as low as 177 kilos per acre-feet per year. He said that hurts the District with respect to concentrations. He noted that in Taylor Slough there is no direct relationship between flow and concentrations. Frank Nearhoof pointed out that the same pattern is evident in both the Refuge and in Everglades National Park, that is, when water levels are very low, there tends to be noncompliance with the long-term limit, and when water levels are high there tends to be compliance. Nearhoof suggested that the model being used to detect phosphorus isn't as robust as it should be, and if that is so, he doesn't want to see water being artificially forced into the system to achieve compliance.

Bechtel noted that the District has given some thought to re-opening the equations in the Settlement Agreement, which would mean taking the last 10 years of data and adding it to the years that went into determining the baseline conditions and then seeing what the data looks like. Redfield suggested the District should get Bill Walker's opinion on an approach before undertaking that endeavor. Nearhoof and Nick Aumen agreed.

Redfield expressed concern that there would be major changes in phosphorus distribution in the Refuge over the next five years, but that the District is not expecting as many changes to occur in the south end of the system. Nearhoof asked Redfield for clarification. Aumen pointed out that there would almost certainly be changes to the system once CERP is implemented and once more water is flowing into Shark River Slough. Redfield posed the question of whether it was worth revisiting the Settlement Agreement equations in light of the changes to the system that are expected to take place.

(Nearhoof et al. temporarily excused themselves from the discussion because of a fire alarm going off at their location). Aumen noted that the last time Settlement Agreement modifications were proposed it took five years, and there are only five years remaining before the new phosphorus limit is scheduled to take effect. He suggested that an analysis be conducted to find out why these particular patterns are occurring, but not necessarily with the goal of changing the model. Aumen said he would talk to Bill Walker. Redfield suggested the issue be left as an open item to be discussed at the next TOC meeting.

Bill Baker asked Aumen if he thought there had been changes since the Sparrow operation. Aumen said yes, and that those were exactly the kinds of things that should be looked at when conducting an analysis. He pointed out that a lot has happened with mod waters implementation and with ISOP, and those changes should have made the area wetter, not drier. Baker suggested that water coming from a different area might be dirtier than water that had previously entered the system. Aumen agreed that was a possibility. Redfield said the District would like to examine the patterns. Aumen agreed, but he reiterated that any analysis that is done should have the goal finding out what's causing the patterns to occur. Bechtel pointed out that such an analysis would be more difficult for Shark River Slough than for the Refuge because the Refuge has a very cyclical, seasonal change from high concentrations, which is inverse to stage, and it has been like that for many years. Mike Zimmerman asked if anyone had considered whether the loads have increased. Redfield asked whether the District had done that for the Everglades Consolidated Report (ECR). Bechtel said he was unsure, because DEP had taken over writing the ECR's water quality chapter the past two years. Redfield reiterated that District staff would cooperate with Bill Walker in any analysis that was done and would discuss it at the next TOC meeting. Redfield asked if there was any further discussion or questions on the WQC report. There was no further comment.

Maxine Cheesman asked to present an update on the QA quarterly report. She stated there was, as yet, no QA quarterly report but that she would e-mail it as soon as it becomes available. She also put the TOC on notice that the next WQC Report would contain some flagged data from some of the structures analyzed by the USGS lab because the data were analyzed past the holding time. She said there have been some major problems at the USGS lab recently, and the District is working with the lab to fix the problems. Mike Zimmerman asked if the analyses were done in the USGS Denver lab. Cheesman replied that the analyses were done in the USGS Ocala lab. Redfield asked Cheesman if there would be any information on the Ocala situation in the forthcoming QA report. Cheesman said there was nothing more to explain other than the report would have some missing data. Redfield asked if data for the QA report would be available by the following week. Cheesman said yes. Redfield suggested that anyone

having additional questions should let him know and he would add them to the next TOC meeting agenda. He moved to continue the meeting.

### **3. Modifications to monitoring programs – Pete Rawlik, SFWMD**

Pete Rawlik delivered a presentation regarding changes the District would like to make to water quality monitoring in the 8½-Square-Mile Area, known as G-211 (Attachment B). Aumen asked whether there were any data prior to 1997. Rawlik said there were not. He noted he had been asked about six months ago to take over the 8½-Square-Mile Area Project. He said in reviewing the mandate, the uses of the data, the sample collection, and the structure, he had determined that changes were warranted in the way G-211 is monitored. Noting that there is a DEP operating permit for the area, he described the permit's monitoring requirements as "very vague." He also noted there was a 1991 DEP-approved modification to the permit. A separate provision for water quality monitoring is also very vague, he added. Rawlik said that since November 1995 G-211 has operated under Iteration 7, the experimental program of water deliveries. Based on that, he said it is unclear whether the permit is still relevant to the project. He noted there is a record of a TOC request, in late 1996 or 1997, for monitoring at G-211. He proposed a review of the request to ensure that its original goals and objectives have been met. Then, if G-211 is no longer providing information unique from that provided by S331-173 – which appears to be a good surrogate sampling site – and if no one is actively using data from G-211, then monitoring at G-211 should cease. (Nearhoof et al. returned to the meeting and rejoined the discussion). Aumen inquired as to the original reason for monitoring at G-211. Cheesman offered that the 8½ Square Mile Area had been a "hot issue" at the time. The District did not have any data from that site, and there was a request to begin monitoring there, she said. Zimmerman asked whether the Army Corps of Engineers' (Corps') preferred alternative for the 8½-Square-Mile Area involved G-211. Nearhoof said he thought it did. Redfield asked Zimmerman to clarify what he had just said. Zimmerman explained that the Corps has proposed implementing a flood mitigation plan that includes installing additional pumps and constructing a seepage canal levee around the outer edge of the 8½-Square-Mile Area. Given that, would G-211 be replaced by that project? Redfield asked Nearhoof to provide clarification regarding the issue. Nearhoof reiterated that G-211 probably does factor into the Corps' recommended plan for the 8½-Square-Mile Area. Bahram Charkian pointed out that Dewey Worth had agreed there was no longer any reason to collect samples at G-211. Nearhoof reminded the TOC that DEP would have to approve any monitoring or permit changes at the site. Cheesman noted that at the time G-211 monitoring was begun, no specific permit had been required. Nearhoof reiterated that the District would need to coordinate with DEP any changes that take place at G-211 that fall under a DEP permit. Cheesman suggested it would be prudent for the District to communicate with the Corps and discuss whether data from G-211 are still relevant. Aumen offered that he would present the issue to the Park, as well. Redfield suggested that in light of uncertainties surrounding G-211 monitoring, there should be a two-week comment period for interested parties to gather and forward information regarding G-211 to the District. He asked if there was any further comment on the issue. No comment was offered.

Redfield briefly updated Nearhoof on the earlier discussion surrounding the water quality issue in Shark River Slough. Nearhoof reiterated that any additional data compiled should be used to check the robustness of the model. Zimmerman reminded the TOC that the purpose of revisiting the model should be to try and understand why water in Shark River Slough isn't meeting the standard. Redfield concurred. There was again consensus to consult Bill Walker for an opinion. Redfield offered that there would be a follow-up item at the next TOC meeting to discuss the water quality model. He

asked if there was further comment regarding the Shark River Slough data. There was no further comment. Redfield moved to continue to the next item on the agenda.

**4. Update on Basin Feasibility Studies for Water Quality Improvement – Gary Goforth, SFWMD**

Gary Goforth presented an update on the basin-specific feasibility studies for water quality improvement (Attachments C and D). Nearhoof suggested it might not be necessary to revisit the topic since everyone in attendance was familiar with it, so Goforth proceeded with a brief review of key points. He noted the District has been keeping landowners involved and informed of the project's progress through public meetings and is also maintaining a calendar of all activities related to the feasibility studies. He pointed out that as soon as the District solves some major uncertainties associated with the project, the design phase could begin. Goforth asked if there were any questions. Aumen inquired as to the status of the development of a marsh-readiness protocol. Goforth said a preliminary protocol has been drafted and is currently undergoing peer-review. Jennifer Jorge offered that her staff is putting together an experimental design. Aumen offered that Paul McCormick would be available to assist the District with that. Jorge thanked Aumen and accepted the offer.

Mike Zimmerman suggested there is a potential for the appearance of organizational conflict-of-interest (OCI), since contractors currently assisting with the feasibility studies will likely be around when work that is now being suggested begins to be implemented. He inquired whether the District has a plan for dealing with the issue. Goforth offered that the District has a two-part plan to have as many public meetings as possible and make information available via the District's external Website, and also to ensure that consulting firms make no recommendations regarding the project. He said the District is keeping consultants at arms-length by making it clear that the feasibility studies are a fact-gathering activity only.

Aumen inquired as to whether the District had heard any grumbling of late about manure being spread around the county. Damon Meiers offered that the Village of Wellington has an ordinance requiring the removal of horse manure by licensed haulers, who must provide a list of places where they are taking it. He described the problem as ongoing and said Palm Beach County is looking at possible solutions, including implementing zoning ordinances.

**5. An improved method for determining low-level phosphorus concentrations – Dave Struve and Meifang Zhou, SFWMD**

Redfield moved to continue to a presentation by District staff on a new method for low-level phosphorus determinations (Attachment E). Dave Struve presented a comparison of data and information between the current phosphorus detection method and the proposed new method. Struve explained that the new method incorporates an organic dye and uses a traditional digestion technique, allowing for the use of sample pre-concentration wherein the signal can be amplified and low-level determinations made. According to Struve, the new method is relatively inexpensive, is readily available and represents fairly new technology. Limits from .1 to .5 ppb can be detected, which is well within the quantification limit, he noted, and the new method is almost 100 times more sensitive than the traditional detection method. Struve reported that the Everglades Round Robin had revealed that, across the board, results were good for the new method. Nearhoof noted that the error results contained in the data being presented at the TOC reveal some numbers above 20 ppb. Struve pointed out that those numbers had been diluted and that the new technique still needs some refining. He said the new method would be presented at WEF in February, and once the data have been

accumulated and a validation package put together, the District would seek HRS and EPA approval for the method.

Jennifer Jorge inquired as to when the new method might be fully implemented. Struve replied that it is possible the method could be implemented right away for research work; however, for compliance work it must first go through the validation and approval process.

Aumen inquired as to whether there had been a cost evaluation of the method. Struve estimated the cost at no more than \$20 per sample. Aumen also inquired as to whether the method could be used in field tests. Struve replied that it might not be feasible to bring the method into the field due to contamination issues. He also said he anticipated that the turnaround time for the new method would be comparable to the 48-hour turnaround time available under the old method.

Aumen inquired about the status of online phosphorus analyzers. Struve offered that the District has been working with a manufacturer in Australia for the past few months. Zimmerman asked whether there was any difference in the holding times between the two methods. Struve said both methods offer a holding time of 28 days.

Redfield inquired as to what resources were needed to move the method through the approval process. Struve replied that the District would need to formalize a data package and submit it to HRS and the EPA. He estimated the turnaround time with HRS to be from one to three months. The EPA turnaround time would be longer, he predicted, possibly up to six months. He added that the NELAC laboratory certification system had been expected to speed up the method-approval process, but so far that wasn't happening. Redfield suggested that in the meantime the District could be collecting data.

He asked whether Struve had a manuscript. Struve said a manuscript is currently undergoing peer review, and as soon as it is approved he will send it out. Redfield suggested that the TOC might want to look at comparison data being generated and consider the implications for those structures that have compliance issues. He suggested a follow-up on the data at the next TOC meeting. He asked if there were any further comments. There were none.

**6. 2002 Everglades Consolidated Report is available and on the District's Website. Comments are welcome – Garth Redfield, SFWMD, TOC chair**

Redfield offered that the 2002 Everglades Consolidated Report is available and on the SFWMD Website. He welcomed comment on the Report and added that if anyone thinks additional topics or information should be included in the 2003 Report they should let him know. He noted that the Report's Executive Summary cost \$4.62 each to produce.

**7. Public comments – Garth Redfield, SFWMD, TOC chair**

Redfield asked if there were any further comments from public representatives or from anyone else in attendance. No further comments were offered. Redfield adjourned the meeting.