



## SOUTH FLORIDA WATER MANAGEMENT DISTRICT

3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045 • TDD (561) 697-2574  
Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680 • www.sfwmd.gov

### RES 14

July 17, 2000

**TO: Principals of the Consent Decree and Other Concerned Parties** (list attached)

**REF: Water Quality Excursions** from Interim Limits in the Arthur R. Marshall Loxahatchee Wildlife Refuge, June through December, 1999

The attached letter report documents excursions from the total phosphorus (TP) Interim Limits for the ARM Loxahatchee Wildlife Refuge (Refuge) set forth in the Settlement Agreement. The report summarizes data on four excursions in monthly geometric means from the 12-month period ending December 31, 1999, and provides information on contributing circumstances. Members of the Technical Oversight Committee (TOC) and other interested parties discussed this water quality information at the January and May TOC meetings, and provided review comments that have been incorporated into the attached letter report.

**Recommended Action:** Based upon a review of the excursions and relevant circumstances by the TOC, no immediate actions outside of continued compliance monitoring and data review appear to be warranted. This recommendation is consistent with factors discussed by the TOC including:

- The dry period in the first one-half of 1999 could influence TP levels in summer and fall when the excursions occurred.
- Water flow into the Refuge through the Everglades Nutrient Removal Project during 1999 was lowered by STA 1W construction activities.
- Hurricane Irene may have affected the TP concentrations recorded in October and November of 1999.
- STA 1W & STA 1E and the S-6 diversion to STA 2 must be fully operational before major changes in Refuge TP concentrations can be expected.

If you have any questions or comments on these water quality excursions and the attached letter report, please feel free to contact Garth Redfield (561/682-6611) or Tim Bechtel (561/682-6392).

Sincerely,

Thomas D. Fontaine, Ph.D., Director  
Environment Monitoring and Assessment Division

TDF/grs

Attachments: Letter Report  
Graph Data  
Distribution List

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This letter report was requested by the Technical Oversight Committee (TOC) at the January 25, 2000 meeting (see minutes pg. 4). The TOC asked that Garth Redfield, TOC Chairperson, and Tim Bechtel, supervisor of the Data Evaluation and Reporting Unit, provide a letter documenting excursions from the total phosphorus (TP) Interim Limits for the ARM Loxahatchee Wildlife Refuge (Refuge) set forth in the Settlement Agreement (1991, Case No. 88-1886-CIV-HOEVELER). The letter should also summarize facts relevant to determining whether these occurrences are due to "error or extraordinary phenomena" or represent non-compliance with the Settlement Agreement. With this information and recommendations from TOC members, principals of the TOC from the five signatory agencies will then decide upon what actions may be appropriate.

**TP Excursions:** The Interim Limit for the Refuge was effective February 1, 1999 and was exceeded four times during the 12-month 1999 sampling period. Data summarizing geometric mean concentrations of TP, applicable TP limits and water depth (stage) in the Refuge are presented in the table below for the four months in which excursions above the Interim Limit occurred:

Month 1999	Geometric Mean (ppb TP)	Interim Limit (ppb TP)	Long Term Limit * (ppb TP)	Average Stage (ft.)
June	14.2	11.7	9.8	16.5
September	10.3	9.9	8.4	16.8
October	10.3	8.3	7.2	17.3
November	9.0	8.3	7.2	17.3

\* Note that the Long Term Limit is effective December 31, 2006.

These data have been made available to the signatory agencies and the public in several forms. Water Quality Conditions Quarterly Reports, published by the District, reported excursions from the Interim Limits for total phosphorus (TP) in both the January and April 2000 editions. In addition, TOC members and interested parties were provided with water quality information, including data on the excursions, in quarterly reports to the TOC dated January 20 and May 5, 2000. Attachment 1 provides a complete and up to date graphic of data from October 1998 through March 2000 for TP levels and limits in the Refuge, as well as average stage for the area. Please note that the TP data from January, February, and March 2000 are below both the Interim and Long-Term Limits for the Refuge.

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### **Principals of the Consent Decree:**

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Colonel Joseph Miller  
Mark Musaus  
Richard Ring  
Michael Zimmerman

### **Other Concerned Parties:**

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Ed Barber  
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