Field Performance Audit
TMDL Program

Collection of Surfacewater Samples in Orange Creek Basin

Audit of Alachua County Environmental Protection Department
Conducted March 11, 2003
Environmental Assessment Section
FDEP Bureau of Laboratories

Summary of Audit and Findings

This audit was conducted in support of the Total Maximum Daily Load (TMDL) program. The purpose of the audit was to determine if the Alachua County sampling team was capable of collecting samples that were:

- usable by the TMDL Program and
- were verifiable and of acceptable quality according to criteria outlined in the DEP Quality Assurance Rule, 62-160 F.A.C. and Department of Environmental Protection Standard Operating Procedures for Field Activities, DEP-SOP-001/01, dated January 1, 2002 (DEP SOPs).

The Environmental Assessment Section (EAS) noted that there were some minor deficiencies but overall it was determined that sampling personnel were well organized, demonstrated good sampling technique, documented and tracked their activities appropriately and calibrated their field instruments and conducted field testing in conformance with the DEP SOPs. A summary of the deficiencies is outlined in the remainder of the report. Checklists used for the audit have been transmitted to the sampling organization and are available from the EAS.

Recommendations Based on Audit Findings

The sampling organization should be given a chance to respond to items in the report for the purpose of clarification, explanation or rebuttal. The response to the Department should include corrective actions that will be implemented for each deficiency noted in the list of deficiencies on page two of this report and in the audit checklists attached to this report.

Field Performance Audit
Summary of Deficiencies

EAS Auditors
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Field Documentation

- Records maintained for calibration standards need to be linked to specific calibration events. Records including lot numbers and expiration dates must be maintained for all standards.
- Documentation must be retained to verify that the thermometer used for temperature calibrations was NIST traceable. Temperature calibration checks need to be conducted at various temperatures covering the range of field temperature measurements . See FT 1400 of the DEP SOPs. Records of these checks must be maintained and linked to specific field temperature measurements.
- All documentation needs to be recorded at the time of the activity. It was noted that the results of preservation checks were recorded at the end of the sampling event and not at the time of the check.

Field Testing

- Flow measurement instrumentation needs to be calibrated according to protocols included in FT 1800 of the DEP SOPs.
- Acceptance criteria need to be established for all field measurement calibration checks. This had been done for most tests but was not established for conductivity calibration verifications.
- Problems were noted with maintaining proper calibration of the DO probe. This may have been an unusual occurrence but it is recommended that evaluations be made to try to identify activities that may be causing calibration problems. It was noted that the manner in which the membrane was being wiped down between measurements may be causing problems.

Surface Water Sampling

- Care needs to be taken to avoid allowing sample containers to contact the ground during sampling events. Minor incidents of this taking place were noted and in general every effort should be taken to avoid potential sample contamination.