TMDL AUDIT Executive Summary

Audited Organizations

Field Sampling and Data Submitting Agency
Florida Department of Environmental Protection (DEP)
Watershed Monitoring and Data Management Section
2600 Blair Stone Road, MS 3525
Tallahassee, FL 32399-2400
(850) 245-8503

Analyzing Laboratories
DEP Bureau of Laboratories
Central Laboratory
E31780, FDOH Certification Number

Chemistry Section, MS 6510
(850) 245-8085

Biology Section, MS 6515
(850) 245-8177

Auditing Agency
Florida Department of Environmental Protection (DEP)
Environmental Assessment Section (EAS)
2600 Blair Stone Road, MS 6511
Tallahassee, FL 32399-2400
(850) 245-8065

Audit Date
February 10th, 2004

This audit was conducted to determine if past data generated by the DEP Biology, Chemistry and Watershed Monitoring & Data Management Sections are usable for Total Maximum Daily Load (TMDL) listing purposes as specified in Chapter 62-303, F.A.C.

This evaluation was performed using criteria that were developed to meet specific data quality objectives for the TMDL program. Selected records were reviewed to determine if sufficient information was available to verify the quality of the data, with emphasis on calibration and quality control procedures. This audit was not conducted as a regulatory action.

The audit consisted of a review of data retrieved from STORET that was identified as having been produced by the audited parties in the years 2000 through 2003.

No problems were noted with the chemical analyses and in general, no significant problems were found with any of the data generated by the analyzing laboratories.

Inspection of the submitted documentation indicates that the quality of some of the field-testing data for ***dissolved oxygen*** measurements did not meet the usability criteria established for TMDL purposes. At the request of the Watershed Monitoring & Data Management Section, 34 additional dissolved oxygen data records were selected for verification subsequent to the date of the original audit. Approximately 32% of all of the audited results failed to meet usability criteria or were unverifiable from the documentation.

Additional audits of more recent field testing data are needed to establish whether corrective actions have been implemented. These audits will ensure that field-testing documentation is sufficient to verify the analyses and that submitted data meet the department's quality criteria for TMDL use.

The attached table summarizes the findings of the audit of historical data. Other supporting documentation is available upon request.

TMDL DATA USABILITY SUMMARY

DEP Biology Section, DEP Chemistry Section, DEP Watershed Monitoring & Data Management Section

DATA FROM SAMPLES COLLECTED ON JUNE 2ND & JUNE 4TH, 2003

Analytes / TMDL Criterion	Chlorophyll A	Fecal Coliform	NH3	NOX	o-P	TKN	TP	TSS	Turbidity	Calcium	Magnesium	Sodium	Potassium	pH	Sp. Cond.	DO
Holding times met criteria	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	n/a	n/a	n/a
Sample preservation met criteria	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	n/a	n/a	n/a
Reported PQL ≤ TMDL usability level	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	n/a	n/a	n/a
Replicates ≤ 20% RPD or RSD	Y	n/a	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	n/a	n/a	n/a
Spike recoveries within TMDL limits	n/a	n/a	Y	Y	Y	Y	Y	n/a	n/a	Y	Y	Y	Y	n/a	n/a	n/a
Spike concentrations met TMDL levels	n/a	n/a	Y	Y	Y	Y	Y	n/a	n/a	Y	Y	Y	Y	n/a	n/a	n/a
SRM or QC check sample within acceptance limits	Y	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sample concentrations >10X QC blank values	n/a	n/a	Y	Y	Y	Y	Y	Y	n/a	Y	Y	Y	Y	n/a	n/a	n/a
Required minimum number of calibration standards used	n/a	n/a	Y	Y	Y	Y	Y	n/a	Y	Y	Y	Y	Y	Y	Y	n/a
Calibration curve correlation coefficient ≥ 0.995	n/a	n/a	Y	Y	Y	Y	Y	n/a	n/a	Y	Y	Y	Y	n/a	n/a	n/a
Second-source calibration verification for initial calibration	n/a	n/a	Y	Y	Y	Y	Y	n/a	n/a	Y	Y	Y	Y	n/a	n/a	n/a
Calibration verifications met TMDL acceptance limits	n/a	n/a	Y	Y	Y	Y	Y	n/a	Y	Y	Y	Y	Y	**N**	**?**	**N**
Samples & QC samples within verified time bracket	n/a	n/a	Y	Y	Y	Y	Y	n/a	Y	Y	Y	Y	Y	**?**	**?**	**?**
Samples & QC samples within verified concentration bracket	n/a	n/a	Y	Y	Y	Y	Y	n/a	Y	Y	Y	Y	Y	**N**	**N**	n/a
Audited sample results properly calculated	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	n/a	n/a	n/a
Critical method-specific requirements met	n/a	Y	n/a	Y	n/a	n/a	n/a	Y	Y	Y	Y	Y	Y	n/a	n/a	n/a

Legend:
Y=Data quality met TMDL criteria for all of the audited data
N=Data quality did not meet TMDL criteria for some or all of the audited data
?=Data quality could not be verified from the audited documentation for some or all of the audited data
n/a=Criterion not applicable