



**2011 Annual Quality Assurance Report
Watershed Evaluation and TMDL Section**

December 2011

Executive Summary

The Department's Watershed Evaluation and TMDL (Total Maximum Daily Load) Section (WET) has the primary responsibility for determining TMDLs for nonpoint source pollutants and Water Quality-Based Effluent Limits (WQBELs) for dischargers to state surface waters. The TMDLs and WQBELs are derived using mathematical and/or statistical models or water quality studies to determine the assimilative capacity of receiving surface waterbodies. The section's objective in developing a TMDL or WQBEL is to assure that nonpoint source pollutants and discharges into the surface waters of the state will not degrade receiving water quality below applicable surface water quality standards (Rule 62-302, FAC) or affect the designated uses of the receiving water.

During the 2011 calendar year WET attended a series of QA training workshops designed to address topics of general relevance to DEP's programs. Other routine QA activities performed by the WET QA staff included technical assistance to WET staff; review of QA planning documents for contracts and grants, and coordination with the Department's designated QA Officers. As part of the section's responsibilities for QA coordination with EPA, the DEP WET Quality Management Plan was revised and updated.

The WET Section initiated and completed a number of audits during the year. These included performance audits of individuals to document that samplers and sampling teams could demonstrate skill and proficiency in the use of the DEP SOPs. The Section conducted an internal performance audit of its sampling teams in conjunction with the data collection efforts in the Escambia Bay and Lake Munson systems, and a records audit of projects conducted in the Caloosahatchee Basin.

As part of the WET 2011 internal audit process, we identified documentation as an area in need of improvement. The Section conducts data analyses for TMDL and WQBEL projects, but the criteria and process by which data are included or excluded in data sets used for the analyses have not, in some cases, been documented in a sufficiently clear manner. WET will clarify this documentation in the future. In addition, for some projects, records related to QA activities (like meter calibrations) are not maintained in a consistent manner. In the coming year, WET will create a standard format and list of required QA/QC elements that must be documented and maintained. These improvements in documentation for data analysis and operational practices will be further explained with this year's revisions to the WET Quality Plan.

In 2012, WET plans to focus more effort on the development of written guidance materials, covering a number of quality assurance topics. The guidance would be directed at assisting WET's data users to evaluate data using a standardized set of protocols and to standardize record keeping throughout the section. The WET QA staff also plan to implement efficiency improvements for audits they conduct and write an audit SOP that would be included with the WET Section Quality Plan.

Report of Quality Assurance Activities and Issues

1. Quality Assurance Training Activities

The section staff participated in various QA training activities in 2011. These involved different categories of training, as follows:

Bioassessment training

Staff participated in training for field staff performing bioassessment procedures according to the DEP SOPs.

General Quality Assurance Training

Staff attended QA training workshops developed by the DEP. This training was designed to address QA topics of general relevance to DEP's programs, and also included information specifically requested by the many employees who had specific topics of interest. The workshops provided both classroom and "hands-on" lab and field training, and included information on the QA Directive (#972), evaluation of analytical data (data usability), approved laboratory methods, QA planning documents (for grants, contracts and research projects), field and lab audits, and DEP SOP sampling and field testing procedures. The DEP SOP training included both classroom and hands-on field training, modeled after the courses taught at the UF TREEO Center. An additional training segment was targeted for staff responsible for follow-up strategic monitoring at waterbody sites listed in the "4D" category for impairment status, and focused on site reconnaissance to improve the selection of representative sampling locations and interpretation of monitoring data.

2. Audit Activities

The section conducted a number of audits for routine and special purposes.

Water Quality Sampling Performance Audits

The section conducted internal audits on its sampling teams for conformance with the DEP SOPs for surface water quality sampling. WET QA staff accompanied WET teams on scheduled sampling events in the Escambia Bay (June 2011) and Lake Munson (February and April 2011) aquatic systems. Only minor deficiencies were found, and corrective action was initiated for all of the deficiencies.

3. QA Coordination

The WET QA staff participate in Quarterly QA meetings with other DEP QA staff.

Technical Assistance

The WET QA staff provided technical assistance on a variety of QA topics to other section staff in support of the Department's programs. This included assistance provided by email, phone, and attendance and presentations at meetings and teleconferences.

Project QA Plan Reviews

WET QA staff are responsible for reviewing the QA components for any contracts and grants that the section may administer. The contents of the plans are required according to the associated contract or grant, and generally follow standard template language provided by the DEP's Standard and Assessment Section.

DEP Quality Plans

The section QA staff revised and updated the WET Quality Manual. This plan formalizes the procedures and criteria utilized by the work unit in carrying out their quality assurance responsibilities under the DEP QA Directive. The quality plan comprises part of the QA documentation provided to EPA in order to satisfy quality system management requirements described in DEP's Quality Management Plan.

4. Quality Assurance Issues

Documentation of data usability determinations

The section generates work products in the form of reports and other documents that incorporate the results of data assessments, statistical analyses, and water quality modeling. The assessment and analysis process may involve the exclusion of data according to applicable usability criteria. The censoring process and the criteria used are not always well documented. Section QA staff have identified this as a potential deficiency in our section quality system and have recommended that management formalize internal documentation procedures for the results of data usability determinations. These procedures will be included in revisions to the WET Quality Plan.

WET Quality Plan

The WET quality plan was revised with minor edits in July 2011. Staff identified several sections of the document that need revision to update or expand the information for various procedures and criteria. These additional revisions were initiated in December 2012.

5. Section QA Goals for 2012

The WET QA staff intends to accomplish the following quality assurance projects in the 2012 calendar year.

Training and Guidance

As part of the long-term goal to standardize data analysis procedures for excluding data from further analysis and record keeping practices, the section plans to create training documents, guidance and other materials to be made available to WET staff.

Audits and Audit Reports

The section QA staff are planning to increase the number of audits performed in 2012 and streamline the reporting process for efficiency and turnaround time. This effort will include attending training provided by the DEP for conducting audits. In support of efficiency improvements, a formal audit SOP will be written and incorporated into the WET quality plan. This SOP will document WET audit procedures and provide a training resource and reference for auditors.