

Organization and Establishment of the Surface Water Ambient Monitoring Program (SWAMP)

The federal Clean Water Act, the State's 1983 Water Quality Assurance Act (Section 373.026, F.S.), Section 403.061 F.S., and State Water Policy (Section 62-40.540, F.A.C.) provide DEP with water quality monitoring, assessment, and data management responsibilities and authorities. The Surface Water Ambient Monitoring Program (SWAMP) is an effort started in 1991 to revitalize monitoring programs at DEP to better address the federal and state water quality management and assessment requirements. SWAMP is an interagency collaborative effort to coordinate Florida's monitoring efforts. It is also DEP's primary surface water quality monitoring program and central repository for surface water quality data.

It was not designed to identify causes of pollution, monitor compliance of point sources, or allow a thorough detailed understanding of an ecosystem, but rather to screen water bodies to provide a broad assessment of water quality. Information generated from this program would be used to develop total maximum daily loads (TMDLs), identify water bodies for more detailed studies, and potentially identify water bodies for restoration and rehabilitation.

The overall program goal of SWAMP is to provide information to the public, elected officials, and DEP managers about the health of Florida's water bodies, whether they meet standards and criteria, and the occurrence of changes in quality in a technically sound, timely manner, and easily understandable format using water chemistry, sediment, and biological data.

SWAMP's stated objectives are:

- Identifying and documenting the existing condition of the State's surface waters through a status network.
- Determining support of State water quality criteria;
- Identifying changes in water quality over time of significant water bodies through a trend network;
- Documenting potential problem areas;
- Establishing stream and lake ecoregion reference sites for comparison purposes;
- Collecting biological data at ecoregion reference sites to establish preliminary biological integrity measurement techniques;
- Providing information for management, legislators, other agencies, and the general public primarily through 305(b) reporting.

Organization and Implementation of the Network

SWAMP can be viewed as a three tiered program with a distinct set of goals assigned to each tier.

- **Water Chemistry Status Network**- Designed to define existing conditions of a water body.
- **Water Chemistry Trend Network** - Designed to determine trends in surface water quality and to determine adequate sampling frequency.
- **Special SWAMP Projects** - Designed as problem-specific or water body-specific monitoring programs.

Special SWAMP Projects

Section 205(j)(1)-604(b) funds also provide for the initiation of special monitoring projects. These are problem-specific or waterbody-specific monitoring programs. For the past four years, funds have been provided to the Suwannee River Water Management District, to obtain water chemistry data from springs within their district. This is critical background data needed to evaluate the impact of

agricultural and dairy practices on the Suwannee River and estuary. High nitrate levels have been found in ground water wells on agricultural lands near the river and in springs. The basin is an area of extensive karst topography and subject to the transfer of pollutants between ground water and surface water.

A second spring sampling project was initiated and completed in 1994 with the Northwest Florida Water Management District (NFWFMD). This project provided for an inventory of water quality of springs located within northwest Florida. Many springs are located in karst areas of the panhandle where there are also intensive agricultural activities and the potential exists for the same problems as in the Suwannee basin.

A third contract was executed with the South Florida Water Management District (SFWMD) to provide two years of water quality monitoring for Florida Bay. Water quality data were collected by Florida International University for the southwest Florida shelf. These data were needed to better define nutrient inputs into the Florida Bay.