

Building a Water Quality Monitoring Program for Alabama Lakes

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Biographical Sketch of Author

Fred is Chief of the Aquatic Assessment Unit (AAU) of the Alabama Department of Environmental Management (ADEM). The AAU is responsible for the Ambient Trend Monitoring Program, Alabama Monitoring and Assessment Program (ALAMAP), Nonpoint Source Assessment Program, Reservoir Water Quality Monitoring Program, and Fish Tissue Monitoring Program. From 1984 to 1989, he worked as a research assistant in the Rivers and Reservoirs Laboratory of the Auburn University Department of Fisheries, graduating with an M.S. in Fisheries Science. In 1989, he began work for the ADEM, with primary involvement in the initiation and development of the Reservoir Water Quality Monitoring and Fish Tissue Monitoring Programs.

Abstract

In 1985, the need for information on the trophic state of Alabama lakes led to an initial survey conducted by ADEM/USEPA. The survey established limited baseline information and was used to rank lakes according to trophic condition.

In 1989, Clean Lakes Program funds enabled the ADEM to conduct lake assessments a second time. Trophic state index values from the 1989 study indicated potentially significant increases when compared to values from 1985.

In 1990, the Reservoir Water Quality Monitoring (RWQM) Program was initiated by ADEM. Through 1997, limited monitoring was conducted regularly. Additional Clean Lakes funds enabled expansion of the Program to include extensive monitoring of lakes for which water quality concerns were greatest, and the inclusion of border lakes.

During 1997, intensive monitoring of lakes by basin was initiated. Intensive monitoring consisted of monthly sampling of mainstem reservoir and tributary embayment sites through the algal growing season.

Compliance monitoring of lakes for lake-specific nutrient criteria was initiated in 2001, with intensive monitoring of many other lakes conducted 2002-2004 to acquire additional data needed for future criteria development.

With the demise of the Clean Lakes Program in 1997, continued development of the RWQM program has been uncertain and funding an unsteady patchwork. The program continues, though the future is by no means clear as Section 319 funds decline. This presentation will examine the path chosen by the ADEM in the development of this program, and the many factors that have been influential.