



## USDA-CSREES 2006 National Water Quality Conference

### Innovations in Understanding Basin-Scale Nutrient Dynamics

The 3-year, USDA/CSREES-funded Tallapoosa Watershed Project (TWP) began in Alabama in 2003 to better understand nutrient loading in a river basin. The TWP was implemented by partners from universities, citizen groups, schools, the extension system and the environmental regulatory agency, so that research findings would be appropriately extended to classrooms, the general public and policy makers. Scores of sites on two reservoirs and six tributaries were sampled for two years using standard methods of field and laboratory analyses. Citizen volunteers and researchers concurrently used EPA-approved “water watch” techniques, two types of hand-held spectroradiometers and satellite imagery to directly or indirectly analyze water for nutrients. The comparative advantages of each monitoring approach were evaluated to determine an optimal mix of technologies for measuring, modeling and managing nutrients. An aquatic science curriculum called *Living Streams* was developed and piloted in several schools to teach biomonitoring and the impact of nutrients on aquatic life. A TWP website, sponsored exhibits at an environmental education center and an annual “State of Our Watershed” conference have long-term impact potential for informing the public about water quality, biota and nutrients. The stakeholder-driven, TWP model is transferable and can advance current approaches for addressing nutrients in cost-effective ways.

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