



## **WATER RESOURCES RESEARCH GRANT PROPOSAL**

**Title:** Investigation of Optimum Sample Number and Timing for Determining Pollution Loads

**Duration:** September 1, 1997 to August 31, 1998

**Federal Funds:** \$84,514

**Non-Federal Funds:** \$169,066

**Principal investigators names and university:**

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**Congressional district of university where the research is to be conducted:** Third

**Statement of critical regional water problems:**

Accurate measurements of pollution loads in streams is critical for determining the impacts of non point source (NPS) pollution in the Arkansas and Southeast U.S. Regions. Many researchers are currently attempting to determine these impacts. There are, however, no consistent rules or guidelines for determining the best sampling technique to be used. The ideal technique is to continuously measure stream flow and the concentrations of the pollutants of interest (typically solids and nutrients). Pollutant loads

may then be calculated with a high degree of precision and accuracy. If flow measurements are available in real time and sampler can be properly programmed, then flow weighted composites can be collected. However, these techniques are often not realistic due to economic and/or technical restraints.