



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2002TX63B

Title: The Role of Suspended Clays in Phosphorus Processing by Lotic Periphyton

Project Type: Research

Focus Categories: Surface Water, Water Quality, Nutrients

Keywords: water quality, reservoir-watershed landscape, periphyton, clay, nutrient processing

Start Date: 03/01/2002

End Date: 02/01/2003

Federal Funds: \$5,000

Non-Federal Matching Funds: \$10,000

Congressional District: 11th

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Abstract

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Studies will be carried out in simulated streams within controlled greenhouse environments at the Blackland Research Center at Temple, Texas. These simulated streams will be "seeded" with benthic organisms from local streams and will be established over a period of 4 to 6 weeks. These "cultured" organisms within these artificial streams will be exposed to a variety of artificially imposed conditions, including variations of light, pH, streamflows, and clay loads. The mass balance of phosphorus will be obtained on a regular basis.

The anticipated outcome of this project will be to provide information on the role of clay particles and periphyton play in the nutrient cycling process that affects surface water quality. Results will yield considerable insights into water quality and nutrient issues likely to be encountered in watersheds with widespread clay soils.