

Report for 2002TX63B: The Role of Suspended Clays in Phosphorus Processing by Lotic Periphyton

There are no reported publications resulting from this project.

Report Follows:

**WOLFE - TWRI Graduate Research Enhancement Grant Progress Report
March 2002 - February 2003**

Project Title: Nutrient processing by in-stream periphyton in a reservoir-watershed landscape

Principle Investigator: Mr. June E. Wolfe, III

Co-Principle Investigator: Dr. Owen T. Lind

First Quarter Activity - (March-May 2002):

- Received grant funds and assigned an account number through the Baylor University budget office.
- Ordered supplies – Dionex Ion Chromatograph (IC) Atlas Suppressor.
- Became familiar with ion chromatography techniques for orthophosphate determination in laboratory stream samples.
- Became familiar with spectrophotometric techniques for total phosphorus determination in laboratory stream samples.

Second Quarter Activity - (June-August 2002):

- Ordered supplies – Micro-filtration glassware, filters, and long path equipment for Genesys 5 spectrophotometer.
- Paid student fees for summer seminar course – Basin Watershed Modeling (1 hr).
- Conducted preliminary experiments to develop operating procedures for laboratory streams and determine phosphorus sorption potential of laboratory stream construction materials.
- Developed handling and storage procedures for laboratory stream water samples.
- Developed spreadsheets for data handling.

Third Quarter Activity - (September-November 2002):

- Paid student fees for two courses (Biology Seminar – 1 hr, Interdisciplinary Teaching – 1 hr).
- Logged 1349 travel miles (Temple to Waco and return).
- Completed the required Dissertation Research Proposal and filed with Baylor Biology Department.
- Further development of laboratory techniques for phosphorus analysis.
- Developed methodologies for determining periphyton biomass.

Fourth Quarter Activity – (December 2002– February 2003)

- Paid student fees for one course (Wetland Ecology – 4 hrs)
- Ordered supplies - Polyethylene sample bottles, plastic centrifuge tubes, high temperature crucibles, chemical reagent.
- Requested reimbursement for travel expensed incurred during fall semester commute.
- Became familiar with techniques for measuring clay turbidity in laboratory streams.
- Developed turbidity curves for clays under investigation.
- Became familiar with techniques for separating suspended clays from water samples using a centrifuge.
- Evaluated three laboratory stream substrates as phosphorus sources/sinks.