



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2004TX149B

Title: Novel Polymeric Water Treatment for In Situ Removal of Organic Contaminants from Water Bodies

Project Type: Research

Focus Categories: Agriculture, Non Point Pollution, Treatment

Keywords: Water treatment, polymers, pesticides, flocculation

Start Date: 03/01/2004

End Date: 02/28/2005

Federal Funds: \$5,000

Non-Federal Matching Funds: \$14,465

Congressional District: 31st

Principal Investigators:

Timothy Goebel

Kevin McInnes

Abstract

The objective of this project is to develop advanced polymers that can adsorb Atrazine and other pesticides and flocculate clays to facilitate the removal of pollutants from contaminated waters.

This project seeks to develop advanced polymers that can capture pesticides and organic contaminants and flocculate suspended colloids to trap and remove bound pollutants from waters. The research involves modifying currently available polymers that can flocculate colloids but cannot sequester contaminants. The research will involve close collaboration with researcher Eric Simanek of the Texas A&M University Chemistry Department.

In this study, polymers based on melamine that were developed at Texas A&M will be attached to polyacrylamides (PAM) to promote the sequestration, flocculation, and settling of colloids. Laboratory studies will be conducted to evaluate new polymers developed in this study.

Ultimately, this methodology could develop a suite of treatment technologies that could utilize advanced polymers to target and remove particular contaminants of concern. Once pollutants are removed, the treated source water could then be returned to rivers and streams.