



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2002TX62B

Title: Adsorption and Desorption of Atrazine on Selected Lake Sediments in Texas

Project Type: Research

Focus Categories: Agriculture, Surface Water, Sediments

Keywords: atrazine, adsorption, desorption, sediment

Start Date: 03/01/2002

End Date: 02/01/2003

Federal Funds: \$5,000

Non-Federal Matching Funds: \$10,000

Congressional District: 8th

Principal Investigators:

Judy A. Vader
Texas A&M University

Scott Senseman
Texas A&M University

Abstract

Atrazine is a herbicide used extensively in Texas, and throughout the United States, to control weeds in corn, grain sorghum, and other crops. It is one of the most commonly detected herbicides in US surface waters and is a growing water quality concern. Atrazine has several fates in in lake water, including hydrolysis, photolysis, and adsorption to sediments. There has been little research done to-date to examine how sediments influence the fate of atrazine in lake waters. In this study, sediment samples will be collected from 8 central Texas lakes using an Eckman dredge. Samples will be dried in a greenhouse, will be ground, and will be sieved. Various laboratory tests, involving the use of centrifuges and table shakers, will be carried out to assess the fate of atrazine in sediments. Studies will also be conducted to study desorption trends. It is expected that this project may show that lake sediments with different properties will likely show variability in terms of how much adsorption and desorption of sediments actually takes place. This should yield insights into the types of lakes that may be most vulnerable to atrazine contamination, based in part on the type of sediments that are found near these water bodies.