



## **USDA-CSREES 2006 National Water Quality Conference**

### **INVESTIGATION OF THE CHANGES IN WATER QUALITY IN THE LITTLE BEAR RIVER WATERSHED IN RESPONSE TO THE**

This CSREES Conservation Effectiveness Assessment Project is evaluating whether adoption of several agricultural best management practices in a Northern Utah watershed have had a measurable impact on phosphorus loadings into the Little Bear River. Historical ambient water quality data suggest an aggregate decline in phosphorus loadings in the Little Bear River watershed. We are analyzing fine-grained data from throughout this watershed to determine whether these changes are related to the implementation of management practices or to other exogenous factors such as changes in land use or long term drought conditions during the years since the completion of most of the BMPs. This poster presents preliminary findings after one year of our three year project. We have compared locations of implemented projects with critical areas in the watershed, as determined by GIS pollutant routing techniques. We are surveying those who have participated in implementing BMPs to determine the degree to which changes in management practices were sustained over time. We are also comparing the traditional water quality monitoring approaches that relied on discreet grab samples with continuous monitoring methods. Our current monitoring program will evaluate the strengths and weaknesses of each of the water quality monitoring techniques.

Author: Nancy Mesner

Coauthor(s): David K. Stevens, Jeffery Horsburgh, Darwin Sorensen, Douglas Jackson-Smith, Ron Ryel Utah State University Michael Allred, Utah Division of Water Quality Jon Hardman, USDA-Natural Resource Conservation Service