



## WATER RESOURCES RESEARCH GRANT PROPOSAL

**Project ID:** CO881

**Title:** Description and Interpretation of Salinization in the Lower Arkansas River Valley, Colorado

**Focus Categories:** Water Quality, Agriculture

**Keywords:** Salinity, Saline soils, Drainage, Water quality, Groundwater quality, Data analysis, Data storage

**Start Date:** 03/01/2001

**End Date:** 02/28/2002

**Federal Funds:** \$18,520

**Non-Federal Matching Funds:** \$38,443

**Congressional District:** 4th

**Principal Investigators:**

Timothy K. Gates

Associate Professor, Colorado State University

John W. Labadie

Associate Professor, Colorado State University

**Abstract**

The project will continue the effort to strengthen the data foundation needed to characterize salinity and waterlogging problems in the lower Arkansas River Valley. Over the last two years, data have been compiled from a number of different sources and new data have been collected over a study area of about 65,000 irrigated acres. Measurements have included more than 30 observations over time from a battery of 110 monitoring wells and about 175 surface water monitoring sites. Intensive studies of soil salinity have been completed in as many as 75 irrigated fields. Extensive surveys of topographic and hydrographic features also have been conducted. Existing data will continue to be compiled and evaluated and new field data will continue to be collected, including: soil salinity, water table depth and salinity; river level, flow and salinity; water levels, flows and salinity in canals and drains; irrigation efficiency and salt loading; hydraulic conductivity of surface soils; well pumping; and crop yields.