



## WATER RESOURCES RESEARCH GRANT PROPOSAL

**Project ID:** 2003WY13B

**Title:** Conveyance Losses and Travel Times of Reservoir Releases Along the Bear River from Woodruff Narrows Reservoir to Cokeville Wyoming

**Project Type:** Research

**Focus Categories:** Agriculture, Hydrology, Irrigation

**Keywords:** Agriculture, Conveyance Systems, Hydrogeology

**Start Date:** 03/01/2003

**End Date:** 02/28/2006

**Federal Funds:** \$23,244

**Non-Federal Matching Funds:** \$66,335

**Congressional District:** 1

**Principal Investigators:**

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### **Abstract**

This study will measure conveyance losses on the Bear River between Woodruff Narrows Reservoir, WY and Cokeville, WY. There are three main reasons why these measurements should be done. First, it will allow irrigators near Cokeville WY to use Woodruff Narrows storage water. Second, it will provide better understanding of conveyance losses and return flow timing and thus, allow downstream Wyoming irrigators to better plan for utilize reservoir releases. Third, information obtained in this study will be useful in future decision-making related to the development of a wildlife refuge that has been approved for this part of Wyoming. Stream flow data and the hydrologic budget approach will be used to determine conveyance losses for the Bear River. Through this analysis, major mechanisms influencing flow will be determined and quantified. The method to be used requires the comparison of quantities for inflow and outflow in order to determine conveyance losses. These measurements will be obtained from USGS stream gages and from continuous stage recorders to be installed on the major diversions and tributaries over this reach of the Bear River.