



2008 USDA-CSREES National Water Conference  
Sparks, NV

## **Barriers to Water Conservation in the Rio Grande Basin**

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### Abstract Text:

#### Abstract

The Rio Grande basin shares problems faced by many arid regions of the world: growing and competing demands for water and river flows and uses that are vulnerable to drought and climate change. In recent years legislation, administrative action, and other measures have emerged to encourage private investment in efficient agricultural water use. Nevertheless, several institutional barriers discourage irrigators from investing in water conservation measures. This paper examines barriers to agricultural water conservation in the Rio Grande basin and identifies challenges and opportunities for promoting it. Several barriers to water conservation are identified: clouded titles, water transfer restrictions, illusory water savings, insecure rights to conserved water, shared carryover storage, interstate compacts, conservation attitudes, land tenure arrangements, and an uncertain duty of water. Based on data on water use and crop production costs, price is found to be a major factor influencing water conservation. A low water price discourages water conservation even if other institutions promote it. A high price of water encourages conservation even in the presence of other discouraging factors. In conclusion, water-conserving policies can be more effectively implemented where water institutions and programs are designed to be compatible with water's underlying economic scarcity.

### Impact Statement:

Improving irrigation efficiency is the most economical way to save water. But, we've found it's important to guard against searching for water savings only from the farm or irrigation system level while ignoring the basin scale hydrology. For example, drainage water is often captured and reused by farmers before it gets back into the river system to be used downstream. This action promotes conservation from the farm view, but not for the basin. One farmer's sloppy water management can be somebody else's water supply.