



WATER RESOURCES RESEARCH GRANT PROPOSAL

TITLE: Effectiveness of Irrigation District Conservation Price Programs

DURATION: September 1996 to September 1998

FEDERAL FUNDS REQUESTED: \$74,725

NON-FEDERAL FUNDS PLEDGED: \$153,127

PRINCIPAL INVESTIGATORS:

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CONGRESSIONAL DISTRICT (lead institute): Washington Fifth District

STATEMENT OF CRITICAL PROBLEM.

Irrigated agriculture, the largest user of water in the western United States, is under pressure by federal and state government agencies, other water users and interest groups to adopt conservation measures to encourage efficient allocation of scarce water resources. Specifically, irrigation districts that provide water to 9.2 million acres of agricultural land have been encouraged by the U.S. Bureau of Reclamation and others to implement conservation measures, and in particular, conservation oriented pricing policies. Interest in the potential impacts of conservation pricing has also been expressed by municipalities, industry and environmental concerns. At the same time, irrigation districts and farmers have expressed strong concern and a reluctance to adopt conservation pricing stemming from virtually no experience and uncertainty about the impacts on their water use and economic well being. However, very little information exists on actual farmer responses to conservation pricing programs. Most of the research to date has involved mathematical optimization and econometric models to estimate hypothetical farmer responses to changes in water prices. Uncertainty about the accuracy of the limited estimates and actual response by farmers has been and continues to be a major impediment to the acceptance and adoption of conservation pricing and an impediment to more efficient use of scarce water resources.

BENEFITS OF THE PROPOSED RESEARCH.

This research will benefit irrigation districts, farmers and other water resource managers and the public by developing and providing knowledge and analytical methods that will result in better management and use of limited water resources. The proposed research will provide much needed information regarding actual farmer response to water conservation pricing to evaluate the impacts and effectiveness of conservation pricing in agriculture. The analytical methods developed and tested will increase both scientific and applied knowledge about the types models that best describe actual farmer response and which types of price programs are effective or ineffective.