



WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: TX3301

Title: Towards an Integrated Water Policy Planning Model for the Texas High Plains

Focus Categories: Management and Planning, Agriculture

Keywords: sustainable ground water use, dynamic efficiency, water policy analysis

Start Date: 03/01/2001

End Date: 02/28/2002

Federal Funds: \$0

Non-Federal Matching Funds: \$15,000

Congressional District: 19

Principal Investigator:

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Abstract

The thrust of this project will be to develop a spatially and temporally disaggregated model for the water resources of the Texas High Plains. This water policy model will provide planners with a proactive planning tool that can be used to evaluate water policy and management decisions. The planning model will be capable of addressing regional environmental, economic, and hydrologic concerns. This model will also be able to simulate the effects of such policies on smaller watersheds within the region. A generalized algebraic modeling system (GAMS) will be used to develop a spatially dynamic economic model, while data from the Texas Water Development Board will be incorporated into a water use model. These modeling tools will be linked to a groundwater model of the Ogallala Aquifer now being developed at Texas Tech University. The project should assist planners and water managers in evaluating the costs and benefits as well as the water resources implications of various management measures proposed for this region.