## **Texas Water Resources Institute**

Helping Texans make every drop count since 1952

## SUSTAINING & ENHANCING

Our Water Sustainability Program centers on increasing the value and the smart use of municipal, industrial and agricultural water supplies to meet the increased demand from Texas' growing population.

Sustained and secure water resources are vital to economic growth, ecological sustainability, public health and continued food production in Texas. Increased water demand coupled with declining supplies threaten the state's water resources. Reccurring droughts and invasive species add further pressure to existing water supplies. The state water plan predicts that by 2060 Texas will need an additional 8.3 million acre-feet of water to meet the needs of its people, businesses and agricultural enterprises during severe drought.

Texas needs to develop and implement new technologies to use diverse sources of water, such as desalination and water reuse. Texans must also adopt conservation practices throughout the municipal, industrial and agricultural sectors and advance policy innovations that improve water efficiency.

The Texas Water Resources Institute (TWRI) is uniquely suited to address water sustainability challenges. Our Water Sustainability Program centers on increasing the value and the smart use of municipal, industrial and agricultural water supplies to meet the increasing demand from Texas' growing population.

Collaborating with researchers and extension professionals throughout the state and nation, we use sciencebased solutions to improve water-use efficiency and management for agricultural production.



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## ASSESSMENT OF TRANSBOUNDARY AQUIFERS

We work with the U.S. Geological Survey Water Science Centers in Arizona, New Mexico and Texas along with the Arizona Water Resources Research Center and New Mexico Water Resources Research Institute on the Transboundary Aquifer Assessment Program. This program is evaluating the transboundary aquifers shared between Mexico and the United States.

At TWRI, we are working to enhance the quantitative understanding of the Hueco Bolson Aquifer near El Paso, Texas, and create a framework for identifying and assessing the condition of all transboundary aquifers on the Texas-Mexico border. Our scientists have developed a ranking system to prioritize aquifers based on their level of "transboundariness," an approach that prioritizes transboundary aquifers using socio-economic and political criteria.

## AGRICULTURAL IRRIGATION & WATER MANAGEMENT

Through our Diversifying the Water Portfolio for Agriculture in the Rio Grande Basin project, we are working with almost two dozen faculty, research scientists, extension specialists and graduate students in Texas A&M AgriLife Research and Extension Centers, departments in Texas A&M University's College of Agriculture and Life Sciences and the New Mexico Water Resources Research Institute at New Mexico State University.

The project team is investigating alternative water sources, new crops, management practices and improved water conservation to sustain agriculture in the basin. The project is funded by a U.S. Department of Agriculture National Institute of Food and Agriculture Water for Agriculture Challenge Area grant.

The Texas Water Resources Institute fosters and communicates research and educational outreach programs focused on water resources science and management issues in Texas and beyond.

979.845.1851 | twri@tamu.edu | @TxWRI

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