

TWRI 2017

ANNUAL REPORT

Helping Texans make every
drop count since 1952

WHO WE ARE

At the Texas Water Resources Institute (TWRI), we have helped solve Texas' water issues through research, education and outreach for 65 years.

Established in 1952, TWRI became the state's official water resources institute in 1964. Today, we are one of 54 institutes in the National Institutes for Water Resources, supported by the U.S. Geological Survey.

We provide science-based, community-supported solutions for the state's pressing water quantity and quality challenges through internal expertise and external collaborations.

Engaging with local stakeholders and the water resources community in Texas, we provide:

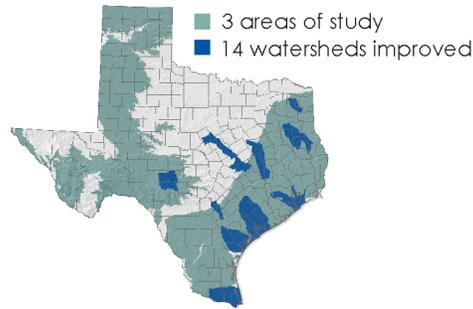
- project development and management
- stakeholder engagement
- watershed and aquifer assessment and planning
- bacterial source tracking
- water conservation research
- geospatial analysis
- professional training
- public outreach

We connect research teams and communities to multidisciplinary expertise by serving as a gateway to a national network of water institutes, The Texas A&M University System and other universities and water resources organizations.

We are a unit of Texas A&M AgriLife Research, the Texas A&M AgriLife Extension Service and the College of Agriculture and Life Sciences at Texas A&M.

TWRI also collaborates with all Texas A&M System units engaged in water resources research and outreach, maintaining strong collaborations with the Texas A&M College of Engineering, the Water Management and Hydrological Science Program in the College of Geosciences, and the Institute for Science, Technology and Public Policy in the Bush School of Government and Public Service.

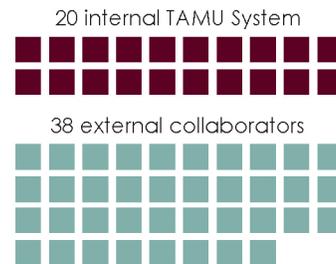
IMPACTS & ENGAGEMENTS



\$5,583,103
in external grants

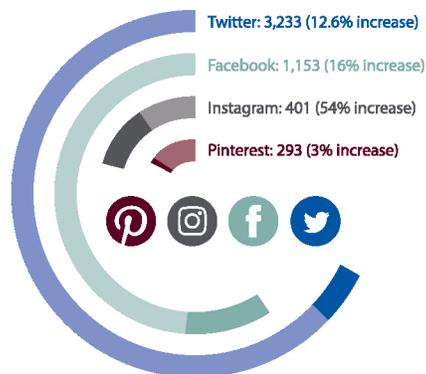
69% increase in external grants for CY 2017

Project collaborations



58 total collaborators on 62 projects

Social media followers



5,080 total followers (14% increase)

59
news releases



100
media mentions



144
presentations to



5,602
people in attendance



21
students supported



3,712
Facebook users engaged



88,663
Facebook users reached



35
publications



3,466
txH₂O magazine subscribers



5,211
newsletters subscribers



WHAT WE DO

RESTORING & PROTECTING

Our Water Quality Improvement Program works with stakeholders to use sound science and public participation to not only restore impaired water bodies but also proactively protect unimpaired watersheds across Texas.

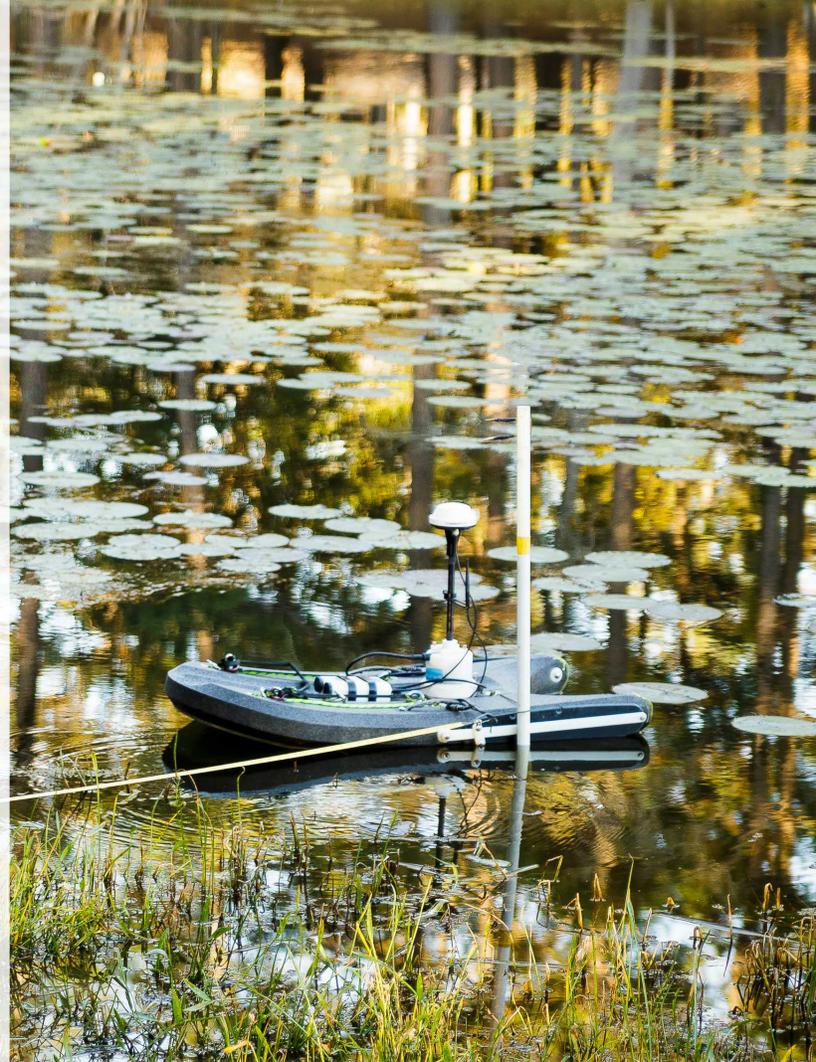
SUSTAINING & ENHANCING

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

ENGAGING & EDUCATING

Our Water Resources Outreach and Training Program serves interested citizens, students and water professionals to enhance their understanding of critical water issues and management practices.

PROGRAM HIGHLIGHTS



MATAGORDA BASIN

As a leader in restoring watersheds, TWRI engages local stakeholders to improve water quality in Texas watersheds through watershed-based plan development and implementation assistance. In 2017, much of this work focused on the Matagorda Bay watershed along the Texas Gulf Coast. This 3,619-square-mile watershed supports a diverse and rich ecosystem that sustains a robust commercial fishery, abundant wildlife and more than 300 species of birds.

Our water team worked with more than 250 local stakeholders and 8 state or regional agencies in the Tres Palacios, Lavaca and Carancahua Bay watersheds, all of which had portions designated by the state as impaired because of elevated levels of bacteria. The Tres Palacios Watershed Protection Plan (WPP) and the Lavaca River WPP were approved by the state, and both are awaiting approval by the U.S. Environmental Protection Agency.

TRANSBOUNDARY AQUIFER ASSESSMENT PROGRAM

In 2017, TWRI began working with the USGS Water Science Centers in Arizona, New Mexico and Texas, Arizona Water Resources Research Center and New Mexico Water Resources Research Institute on the Transboundary Aquifer Assessment Program.

We assessed hydrogeological transboundary linkages of aquifers and developed the first geological correlation of hydrogeological units between Texas and Mexico as well as a classification of aquifer potential. We began updating the numerical model of the Hueco Bolson Aquifer and integrated the first conceptual model of the Allende-Piedras Negras Transboundary Aquifer. We also 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.

EXTENSION PROGRAMS SUPPORT

The Texas Well Owner Network (TWON), a joint AgriLife Research and AgriLife Extension program between TWRI and the Departments of Soil and Crop Sciences and Biological and Agricultural Engineering, educates landowners about private well water testing, protection and management. In 2017, TWON held 12 Well Informed screenings analyzing 670 samples and 9 Well Educated trainings with 651 participants. TWON won the prestigious 2018 Texas Environmental Excellence Award in the education category.

Our new Urban Riparian and Stream Restoration Program, in collaboration with AgriLife Research in Dallas, is bringing awareness, education and the value of riparian and stream restoration to urban areas around Texas with 15 workshops planned over 3 years.

EXPANDING OUR IMPACT

NEW PARTNER: USDA SOUTHERN PLAINS CLIMATE HUB

TWRI, in collaboration with Oklahoma State University and Kansas State University, partnered with the USDA's Southern Plains Climate Hub to host the Resilient Southern Plains Agriculture and Forestry in a Varying and Changing Climate conference in El Reno, OK at Redlands Community College. This 1.5-day conference led by Dr. Ron Lacewell, a Texas A&M agriculture economics faculty member, brought together 68 researchers, extension professionals and stakeholders from the Southern Plains region of Kansas, Oklahoma and Texas to identify regional research and extension priorities and develop a 10-year strategic roadmap for ensuring resilient agricultural and forestry systems in the face of varying and changing climatic patterns.



EXPANDING RESEARCH PROGRAMS

The water resources within the Rio Grande Basin, plus the societies, economies, species and ecosystems that depend on them, are seriously threatened by drought, climate change and rapid population growth. Through the Diversifying the Water Portfolio for Agriculture in the Rio Grande Basin project, TWRI is working with almost two dozen faculty, research scientists, extension specialists and graduate students in AgriLife Research and Extension Centers, departments in the 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 USDA National Institute of Food and Agriculture Water for Agriculture Challenge Area project.

TWRI.TAMU.EDU
SOCIAL MEDIA: @TXWRI