

Water Quality Problems Lead to Environmental Concerns

- The Arroyo Colorado River flows 90 miles through Hidalgo, Cameron, and Willacy Counties in the Lower Rio Grande Valley of Texas.
- A history of bacterial contamination and low dissolved-oxygen levels in the Arroyo Colorado River watershed has raised concerns among local citizens and state officials about public health, water quality, water-use limitations, and aquatic habitats.

AgriLife Extension's Response

- In 2002, the Texas Commission on Environmental Quality (TCEQ) determined in a Total Maximum Daily Load study that a 90% reduction of nutrients and biochemical oxygen demand was needed to achieve healthy waters.
- The Arroyo Colorado Watershed Partnership (ACWP) was established to help restore the watershed. In 2007, the partnership published the Arroyo Colorado Watershed Protection Plan, which identified and addressed impairments and concerns in the watershed.
- Since 2007, the Texas Water Resources Institute has partnered with the ACWP, TCEQ, and the

Texas State Soil and Water Conservation Board to implement projects to improve the water quality of the Arroyo Colorado.

- To support the need for stakeholder involvement, the *Texas Watershed Steward Program* was initiated to provide science-based, watershed education to help citizens identify and take action to address local water quality impairments.
- Through educational meetings and workshops, the Texas A&M AgriLife Extension Service engaged 7,000 agricultural producers and landowners to improve public awareness and participation vital to developing and implementing the watershed protection plan. More than 100,000 individuals have viewed the watershed demonstration model created as an educational aid.

Economic and Environmental Impacts

- As a result of these projects, six externally funded grants totaling \$1.7 million over five years were obtained to implement critical water quality protection activities identified in the Arroyo Colorado Watershed Protection Plan.
- These grant-financed projects for improving and protecting the watershed support an additional 19 jobs annually in the region.

