

Water Quality Education and Outreach in Texas

M.L. McFarland, M.C. Dozier, S. Feagley, C.R. Hart, D. Hoffman, J.S. Jacob, B.J. Lesikar, S. Mukhtar, R. Persyn, R. Srinivasan and D.E. Boellstorff; Texas A&M University

Waste Management

Programs addressing livestock waste management target beef, dairy and poultry production systems in the High Plains, Cross Timbers and East Texas land resource regions of Texas. Marketing Composted Manure is an innovative project designed to facilitate distribution and effective use of dairy manure (as compost) outside a nutrient impaired watershed. Compost use for forage and row crop production, and as a soil amendment in construction and landscape management are potential applications.



Other projects are focusing on land application of layer manure and dust and odor control from beef and dairy operations. In addition, applied research and education programs are being conducted to evaluate and promote the use of Class A municipal biosolids in agricultural production systems.



compost.tamu.edu

Drinking Water and Human Health

Texas Cooperative Extension (TCE) conducts water quality education events that include screening well-water samples for bacteria, nitrate, lead and conductivity. Of the nearly 4,000 samples screened since 1999, about 10% were positive for fecal coliform and average nitrate concentration was 2.6 ppm.



TCE sponsors the 4-H Water Camp where youth learn about drinking water quality and source water protection, water conservation, proper irrigation management and technologies for improving water use efficiency, and methods of reducing non-point source pollution. Participants acquire skills in evaluating water quality and water conservation problems and the ability to develop solutions to problems.



Nutrient and Pesticide Management

In cooperation with the USDA-NRCS, Texas Cooperative Extension has developed the state Nutrient Management Certification Program to train and certify agency personnel and third-party vendors. The program includes a 3-day training event followed by an exam, and is supported by a Nutrient Management Website which provides updated information on soil test recommendations. To date, 170 service providers have been certified.



nmp.tamu.edu/

Watershed Management



The Southern Region Water Quality web site brings together the collective water quality research, education and extension resources for Land Grant Universities in 13 states and provides specific links to water quality databases hosted by other agencies.

The website features a state-of-the-art search engine which examines thousands of science-based, water resource management publications in 65 databases maintained at universities throughout the Southern Region. All returns are highly relevant and provide objective water resource management information.

The Texas Coastal Watershed Program is part of Texas Cooperative Extension and Texas Sea Grant, and is affiliated with the national NEMO (Nonpoint Education for Municipal Officials) organization. The Program currently emphasizes projects in sustainable landscapes, soil and site evaluation for on-site sewage facilities, storm water drainage improvements, compost usage and education of municipal officials.



www.urban-nature.org/index.htm

Pollution Assessment and Prevention



TEX*A*Syst addresses a wide range of potential contaminants and helps homeowners assess how their activities affect their environmental risk. More importantly, TEX*A*Syst helps residents take decisive action to preserve the quality of their drinking water, prevent water pollution, and protect health.

waterhome.brc.tam.usd.edu/texasyst

The Texas Cooperative Extension Onsite Wastewater Treatment Program provides training on technologies available for managing wastewater.



osf.tamu.edu

Watershed Restoration



nctx-water.tamu.edu/

The North Central Texas Water Quality Project is providing technical and educational support to the Tarrant Regional Water District (TRWD), which currently serves 1.6 million Texans across 11 counties. The project is a collaboration between TRWD, Texas Cooperative Extension, Texas Water Resources Institute and the College of Agricultural at Texas A&M University.

The Project is examining water quality protection and improvements in six major reservoirs in the Trinity River Basin, and will assist TRWD in developing and implementing a watershed management plan which incorporates BMPs for improving water quality. Sediment and nutrient loading are of particular concern, and the Project is developing models which allow TRWD to assess loadings and impacts to the reservoirs.

Various publications, such as *The Watershed Management Approach* are being developed through the project and will be useful across the state.



Saltcedar, a non-native shrub planted along the Pecos River in 1925 to reduce soil erosion, is now known for its excessive water use. Extension Range Specialists are restoring original vegetation characteristics to the Pecos by removing saltcedar. Specialists estimate that savings of five billion gallons of water have resulted from treatment of saltcedar on the Pecos River banks.



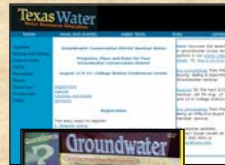
Water Quantity and Policy



The Texas Drought Information Center website integrates state-of-the-art techniques in Geographical Information System (GIS), remote sensing and computational sciences to provide drought-related information to the public on a real-time basis.

webgis.tamu.edu

The Water Quantity Management website is maintained by Texas Cooperative Extension and Texas A&M University, and features information about Groundwater Conservation Districts and regional water planning.



texaswater.tamu.edu

Texas Animal Manure Management Issues (TAMMI) website is a clearinghouse developed to provide agricultural waste management education and information. The website is continuously updated with research-based, unbiased educational materials on livestock and poultry operations, animal waste management and related air and water quality issues.



tammi.tamu.edu

Poster Contact Information
 Mark L. McFarland, Ph.D.
 Texas Cooperative Extension
 Dept. of Soil & Crop Sciences
 2015 TAMMIS
 College Station, TX 77843-2474
 Phone: (979) 845-2422
 Fax: (979) 845-6888
 E-mail: mcfarland@tamu.edu
 Dawn E. Boellstorff, Ph.D.
 Project Specialist - Water Quality
 Texas Cooperative Extension
 2015 TAMMIS
 College Station, TX 77843-2474
 Phone: (979) 845-2862
 Fax: (979) 845-6888
 E-mail: dboellstorff@tamu.edu