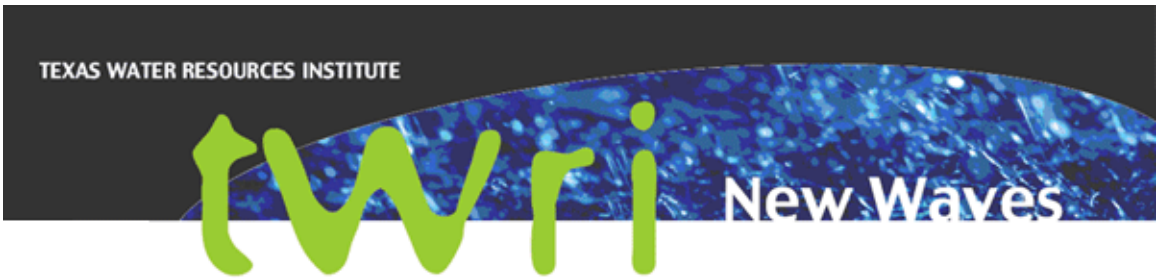

Breaking news about water resources research and education at Texas universities

October 3, 2005

1. New Waves E-letter Launched

The Texas Water Resources Institute is launching an e-mail newsletter to provide Texas water resources professionals with brief, timely information about university-based water resources news, results of projects and programs, and new water-related publications and faculty. "New Waves" will supplement the new "txH2O" newsletter, which contains more in-depth articles. TWRI will distribute the e-newsletter as needed, but no more frequently than every other week.

If you have information for "New Waves" or "tx H2O", please contact Kathy Wythe at kwythe@tamu.edu or 979.845.1862.

2. Water Conservation for Nursery/Floral Growers Evaluated

The Water Conservation Project, a joint project of the Texas Cooperative Extension, Department of Horticultural Sciences, the Texas Water Development Board and the Texas Nursery and Landscape Association, officially started during the TNLA's EXPO industry event on Aug. 18-21, 2005.

The project will evaluate the amount of water used for the production of nursery/floral crops and how nursery growers use water in their operations. The nursery/floral industry represents the largest segment of irrigated crop producers in Texas with $1.2 billion in receipts, compared to $1.0 billion for cotton in 2001.

The "On-line Water Use Survey," completed by nursery and floral growers, will help establish a baseline on the amount of water used and will help plan for long-term water use.

The "On-line Analysis for Water Conservation and Surface & Groundwater Contamination" evaluates individual growers' operations to identify improvements in short and long-term water management practices that can conserve water, reduce irrigation runoff and protect natural resources. The growers receive an electronic report, which summarizes the results of the analysis and provides a conservation/contamination estimate, ranking the potential for implementing best management practices with potential action areas highlighted.

Extension is conducting educational field days to demonstrate the latest in innovative water conservation systems and strategies for nursery/floral producers. Field days were held Sept. 8 at Chamblees Nursery in Tyler, Sept. 22 at Mortellaro's Nursery in Schertz and another is scheduled for Oct. 6 at Hines Wholesale Nursery in Fulshear, near Richmond.

According to the project's Web site, no existing body of knowledge exists on how growers use water in their operations or the amount of water used for the production of nursery/floral crops. Without this data, state water planners have made broad assumptions concerning industry water use and potential savings from the implementation of conservation strategies.

For more information, go to http://aggie-horticulture.tamu.edu/greenhouse/TWDB/index.html

3. Project Evaluates 60-day Drought Survival of Turfgrass Species

Texas Cooperative Extension in cooperation with the San Antonio Water System and the Turfgrass Producers of Texas recently began a two-year research project. The project will construct a rainout shelter and evaluate the 60-day drought survival of turfgrass species and cultivars in San Antonio. David Chalmers, associate professor of soil and crop sciences and state Extension turfgrass specialist; and Guy Fipps, professor of biological and agricultural engineering and Extension agricultural engineer, are co-principal investigators.

Team members have constructed the research site and just recently sodded the plots with 25 different turfgrasses commonly used in the San Antonio area. Fipps will oversee the construction and operation of a 5,000 sq. ft. automatically retractable rainout shelter to protect the plants from rain during the 60-day simulated drought conditions. Drought studies are scheduled for 2006 and again in 2007. Under a recently passed city ordinance, turfgrass for new construction in San Antonio is limited to those grasses that can recover from a 60-day drought. The rainout shelter and associated facilities will be constructed by the Irrigation Technology Center and will be available for use in future studies.

More details are posted on a project Web page on the Irrigation Technology Web site http://itc.tamu.edu. For more information, contact Dr. Chalmers at dchalmers@ag.tamu.edu or Dr. Fipps at FIPPS@ag.tamu.edu.

4. Small Water Systems Training Workshop Set for Oct. 28

The Texas Water Resources Institute and Texas Cooperative Extension are offering a workshop on homeland security issues for small water systems on Oct. 28 in Houston. The workshop is funded through Southeastern Technical Advisory Center and the Environmental Protection Agency.

"The workshop will provide information about homeland security issues to small water systems managers," said Monty Dozier, an Extension water resources specialist. "It is also designed to help small water systems with both short-term and long-term planning."

The workshop will take place at the Extension office for Harris County, 3033 Bear Creek Dr., Houston.

Registration, which includes lunch, is $20 before Oct. 20 and $30 after Oct. 20.
Speakers will include J.P. Riordan, an FBI agent specializing in counter-terrorism, Larry Bell from the Texas Rural Water Association, and representatives from the Office of Rural and Community Affairs, the Lower Colorado River Authority and the EPA.

Todd Kent, a political science professor with Texas A&M University, will speak about the university's Homeland Security Center and the need to organize governmental agencies and operations to ensure rapid and effective responses to failures in essential community services.

Dr. Kelly Brumbelow, a researcher in the Texas A&M University System Civil Engineering Department, will address the need to assess homeland security issues related to interdependent services, including water systems and fire protection.

Elizabeth Bristow, a Texas A&M civil engineering graduate student, will address how to respond to water contamination. Gene Theodori, Extension specialist in recreation, park and tourism sciences, will also address homeland security issues related to those areas.

For more information or to register, call the Texas Water Resources Institute at (979) 845-1851 or go to http://water-workshop.tamu.edu.

Adapted from the Texas A&M University Agricultural Program AgNews. Janet Gregg, writer.

5. New Water Resources Faculty

Texas A&M University has added several water resources faculty members in the past year. New faculty include:

Georgianne Moore, Assistant Professor, Rangeland Ecology and Management. Dr. Moore, with expertise in ecohydrology and woody vegetation management, joined the department in February 2005. Her particular interest is the role of vegetation in the water cycle and how vegetation management/change affects water resources. Dr. Moore is conducting research in Texas and New Mexico, comparing water use by native and invasive woody species in riparian ecosystems under different management regimes.

Douglass Shaw, Professor, Agricultural Economics and Recreation, Park, Tourism Sciences. His expertise is the area of valuation of water quality and quantity changes, emphasis on health risks and uncertainty; value of health risk reductions associated with arsenic in drinking water; and value of increased water supply at recreation areas.

Raghupathy Karthikeyan, Assistant Professor, Biological and Agricultural Engineering. Dr. Karthikeyan joined department in the Fall 2005 semester. His research involves application of spatial science tools in water quality and natural resources management as well agriculture, biological and homeland security, disease trading and control, and disaster management and response. He also researches the fate, transport and removal of contaminants in terrestrial and aquatic environments.

6. Some Recently Funded Water Resources Research and Education Projects

"Education of Best Management Practices in the Arroyo Colorado"

Use of the Arroyo Colorado's water for municipal, industrial or irrigation purposes is severely limited because of the poor water quality. Education from this project will help restore the Arroyo Colorado, the most important stream draining the delta formed by the Rio Grande in South Texas. The program will educate farmers on how to produce and better manage their land to reduce the potential for non point source pollution. The project is also supporting and promoting

associated programs that are implementing best management practices related to water quality protection.
Principal Investigator: Kevin Wagner
Funding Agency: Texas State Soil and Water Conservation Board/ U.S. Environmental Protection Agency.

"The Impact of Proper Organic Fertilizer Management in Production Agriculture"

The team members involved in this project will demonstrate the benefits of using proper organic fertilizer management techniques on cultivated and pasture fields in the Leon River basin. Increased landowner use of these practices will result in improved soil quality and water quality in the river basin, which is threaten by excess nutrients and impaired by excess bacteria.
Principal Investigators: Bruce Lesikar and Daren Harmel (USDA-ARS).
Funding Agency: Texas State Soil and Water Conservation Board/ U.S. Environmental Protection Agency.

"A Community-based Water Quality Curriculum which Enhances Stakeholder Involvement in Watershed Protection Plan Initiatives: A Pilot Project"

The pilot project will develop a community-based water quality curriculum to increase local stakeholder involvement in watershed protection plans. The curriculum will increase local understanding of the forces that can adversely affect water resources and the tools that can be employed to prevent them.
Principal Investigators: Monty Dozier, Mark McFarland.
Funding Agency: Texas State Soil and Water Conservation Board/U.S. Environmental Protection Agency.

If you have a new project you would like mentioned, please e-mail the information to kwythe@tamu.edu .

7. New Publications

"Treating and Drinking Well Water in the Presence of Health Risk from Arsenic Contamination: Results from a U.S. Hot Spot," W.D. Shaw, M. Walker, and M. Benson. Forthcoming. Risk Analysis.

"Significance of private water supply wells as a route of exposure to aqueous arsenic." M. Walker, M. Benson and W. D. Shaw. Journal of Water and Health, 2005, Vol. 3 (3/September): 305-312.

"Who Owns the Water?" R. Kaiser, Texas Parks & Wildlife, July 2005.

"On-Site Wastewater Treatment Systems: Soil Particle Analysis Procedure," B. Lesikar, C. Hallmark, R. Melton, and B. Harris. Texas Cooperative Extension publication. 8-2005.

If you would like your publication listed, please e-mail kwythe@tamu.edu with your information.

News Waves is an email newsletter about brief, timely information about university-based water resources news, results of projects and programs, and new water-related publications and faculty. If you have information for possible inclusion in "New Waves" please e-mail items to kwythe@tamu.edu and include your contact information. All submissions may be edited for grammar and style.