TEXAS WATER RESOURCES INSTITUTE
twri New Waves

Breaking news about water resources research and education at Texas universities

Dec. 5, 2005

1. Range Revegetation Pilot Project on Fort Hood Expands - Integrating New Partners

The Range Revegetation Pilot Project on Fort Hood is expanding to include new College of Agriculture and Life Sciences departments and faculty in the development of strategies for composted dairy manure use in restoration of primary maneuver training lands on Fort Hood.

Dr. Fred Smeins, rangeland ecology and management professor, along with Dr. Tom Hallmark, soil and crop sciences professor, will implement research programs in collaboration with projects led by scientists from the Texas Water Resources Institute (TWRI) and Blackland Research and Extension Center in Temple.

According to Dr. Bill Fox, senior research scientist with TWRI, the first phase of the range revegetation project focused on examining whether the manure compost would cause nutrient run-off problems in the streams and rivers around the base and whether the compost would improve the revegetation of grasses on the training area.

"We tested the water quality and we know with some assurance that nutrients (from the compost) are not entering the area's streams," Fox said. Initial studies also show that demonstration plots with the manure compost are getting better vegetation coverage than those without the compost.

The project's next step is focusing on using the compost – how much and when to use it and with what combinations of other best management practices currently used on Fort Hood's training areas, Fox said.

Smeins' research will focus on developing revegetation strategies incorporating sequential approaches to reseeding and the use of compost in this process. The project will try a suite of plant materials to see which provide a rapid covering for the soil in the training areas. Hallmarks' research will focus on soil compaction and understanding how different revegetation strategies impact compaction on training areas. His work will be used in calibrating models used to estimate erosion on training areas.

Fox said the project will "ultimately end up with a maintenance program that will allow Fort Hood to reduce erosion and maintain high quality training grounds."

2. USDA Awards Water Resources Grant

The U.S. Department of Agriculture Cooperative State Research, Education and Extension Service (USDA-CSREES) awarded Texas A&M University $1.25 million in November to address water resource issues in the southern United States. Dr. Mark McFarland, professor and state water quality coordinator, and Dr. Diane Boellstorff, program specialist and project manager with the Texas Cooperative Extension lead the program.

USDA-CSREES administers the grant to address water quality and water quantity issues by integrating applied research, classroom education and outreach to farmers, ranchers and homeowners.

The Southern Regional Water Quality Program includes 13 states and is designed to promote regional collaboration, to enhance delivery of successful programs and encourage multi-state efforts to protect and restore water resources.

The Southern Region Water Quality Planning Committee, formed in 1988, includes water quality coordinators from land grant universities in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, New Mexico, Tennessee, Oklahoma, South Carolina, North Carolina and Texas.

The water quality coordinators focus on three main areas: agricultural pollution prevention, rural environmental protection and watershed management.

For more information visit, http://srwqis.tamu.edu/ .

3. Researchers Test Different Drip Irrigation Systems Designs

Subsurface drip irrigation systems maximize water use efficiency and boost crop yields in most cases. However, these automated irrigation systems are costly to install.

Scientists are testing and comparing less costly designed subsurface drip irrigation systems to see how they affect water distribution, crop performance and total yields.

Texas Agricultural Experiment Station agricultural engineer Jim Bordovsky, based at Halfway, is conducting this research with Dr. Dana Porter, Experiment Station and Texas Cooperative Extension irrigation specialist; Dr. Jeff Johnson, an Experiment Station and Texas Tech University economist; and Experiment Station research technician Joe Mustian.

Financial support for this research is provided by the Texas State Support Committee of Cotton Incorporated and the United States Department of Agriculture's Agricultural Research Service Ogallala Research Initiative.

Visit http://twri.tamu.edu/newsarticles.php?view=2005-12-05-02 to read AgNews story.

4. Watershed Management Training Successful

The second North Central Texas Watershed Management Training, held Nov.17-18 in Ft. Worth, provided attendees with a wealth of outreach and educational tools to assist them in their water quality programs and watershed protection and remediation efforts, said Clint Wolfe, project manager of the North Central Texas Water Quality (NCTWQ) Project.

The NCTWQ is a collaborative effort of the Texas Water Resources Institute, Texas Agricultural Experiment Station Spatial Science Laboratory, Tarrant Regional Water District, the Environmental Protection Agency, USDA-Natural Resources Conservation Service and Texas Cooperative Extension.

Over 100 stakeholders from local government, state and federal agencies, consulting firms and extension agents attended. The training included a broad overview of issues related to watershed planning, a look into the roles federal, state, and local agencies play in watershed planning and water quality management, Wolfe said.

Talks also addressed funding sources for water quality BMP implementation and watershed management planning as well as ways to facilitate stakeholder groups and develop outcome based programs both essential to having successful programs, Wolfe said.

To download the workshop's presentations go to http://nctx-water.tamu.edu/watershed_training_presentations.php

5. TWRI Solicits RFPs for USGS Student Grants

The Texas Water Resources Institute announces a request for research proposals for its 2006-2007 U. S. Geological Survey grant program. This program, which is funded by U.S.G.S. through the National Institutes for Water Research, is aimed at funding water resources-related research of graduate students at universities in Texas.

TWRI anticipates funding 10 graduate research enhancement grants of up to $5,000 in the area of water resources. Information and submission forms for this RFP can be found at http://twri.tamu.edu under the "What's New Section" or you may contact Clint Wolfe at cwolfe@ag.tamu.edu .

6. TWRI Announces RFPs for Water Resources Grants

The Texas Water Resources Institute announces requests for proposals for the U.S. Geological Survey in cooperation with the National Institutes for Water Resources matching grants to support research on the topics of water supply and water availability.

Please visit http://twri.tamu.edu/newsarticles.php?view=2005-11-07-01 to continue reading.

New Projects

"Water Quality Program for Lake Granbury, Texas"

This Congressional funded project will develop water quality education projects for adults and schoolchildren as well as conduct research on golden algae control.
Principal Investigators: TWRI, Texas Agricultural Experiment Station, Texas Cooperative Extension.
Principal Collaborators: Brazos River Authority, TCEQ, TPWD
Funding: Natural Resources Conservation Service and U.S. Dept. of Energy

"Environmental Infrastructure for the North Bosque River"

This Congressionally funded project will involve local stakeholders and cooperating agencies to plan, implement, evaluate and document the effectiveness of environmental infrastructure improvements designed to reduce nutrient and bacterial contamination of the North Bosque River.
Principal Collaborators: USDA Natural Resource Conservation Service, Texas Agricultural Experiment Station, Texas Cooperative Extension
Funding: U.S. Army Corps of Engineers, Congressional appropriations through U.S. Dept. of Energy

"Adoption and Diffusion of Alternative Water Resources"

This project will survey residents of Tom Green County to determine perceptions of their community's current water situation and their knowledge and attitudes of alternative water resources and their potential uses. The project will conduct a regional outreach conference to present results of the surveys and present fact sheets and other materials regarding water treatment technology.
Project Leader: Dr. Gene Theodori
Project Co-Leader: Dr. Bill Fox
Funding: Renewable Resources Extension Act

Renewed Projects for FY 2006

"Range Revegetation Pilot Project for Fort Hood,"

Project Manager: Dr. Bill Fox
Principal Collaborators: Texas Agricultural Experiment Station, USDA Natural Resource Conservation Service, Department of Defense, Fort Hood, Texas
Funding: Congressional appropriations through USDA Natural Resources Conservation Service

"Efficient Irrigation for Water Conservation in the Rio Grande Basin"

Project Director: Dr. B.L. Harris
Principal Collaborators: Texas Agricultural Experiment Station, Texas Cooperative Extension, New Mexico State University, U.S. Bureau of Reclamation
Funding Agency: Congressional appropriations through USDA-Cooperative State Research, Education and Extension Service

"Ogallala Aquifer"

Collaborators: Texas Agricultural Experiment Station, Texas Cooperative Extension, USDA Agricultural Research Service (ARS) Bushland and Lubbock, Texas Tech University, West Texas A&M University, Kansas State University, USDA Natural Resources Conservation Service
Funding Agency: Congressional appropriations through USDA-ARS

"North Central Texas Water Quality"

Collaborators: Tarrant Regional Water District, Texas Water Resources Institute, Texas Agricultural Experiment Station, Texas Cooperative Extension, Spatial Sciences Laboratory, Alan

Plummer Associates, Inc., and Espey Consultants, Inc.
Funding: Congressional appropriations through USDA Natural Resources Conservation Service

Recently Submitted Proposals

"Helping Small Water Systems Prepare to Deal with Natural Disasters in Texas "
Principal Investigators: M. Dozier, G. Theodori, and J. Harris, Texas Cooperative Extension
Funding: Georesources Institute

"Reverse Osmosis Desalination of Brackish Ground Water Field Demonstration of Oil Filed Disposal of Brine Concentration"
Principal Investigator: D. Burnett, TAMU, Dept. of Petroleum Engineering
Funding: Dept. of Interior - Bureau of Reclamation

New Publications/ Papers

"Views from the River Front: Rio Grande Decision Makers Rank Water Conservation Strategies,"
Valeen Silvy, Ronald Kaiser, Bruce Lesikar, Texas A&M University
A survey was conducted to help city officials identify the most preferred and feasible strategies for persuading residents in the Rio Grande area to adopt water conservation practices. Find it at http://texaswater.tamu.edu/Resources/riogrande2.pdf

"Water Wise Landscaping for the Permian Basin," 2005. written by Permian Basin Water Conservation Committee, of which Mike Mecke, Extension program specialist, is a member. This publication provides a recommended landscape plant list for Permian Basin homeowners and businesses to use in design or redesign of landscapes to be both attractive and use less water. To obtain copies of the brochure, contact Mecke at MBMecke@ag.tamu.edu .

"Disinfecting water Wells by Shock Chlorination," Mark L. McFarland and Monty C. Dozier, Texas Cooperative Extension; and R. Craig Runyan New Mexico Cooperative Extension Service, New Mexico State University

"New Waves" Solicits News

Please email your unit or department news about water resources research or education, results of projects and programs, or new water-related research projects, publications, papers and faculty to Kathy Wythe at kwythe@tamu.edu . The purpose of "New Waves," the email newsletter for the Texas Water Resources Institute, is to provide a compilation of timely, brief news to people interested in university-based water research and education programs, not only at Texas A&M University but also across the State.

"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 research projects, publications, papers and faculty. If you have information for possible inclusion in "New Waves" please e-mail items to kwythe@tamu.edu or 979.845.1862 and include your contact information. All submissions may be edited for grammar and style.