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twri new waves

Texas Water Resources Institute's E-Newsletter

Breaking news about water resources research and education at Texas universities

July 8, 2008

WRAP Short Course set

The Texas Water Resources Institute (TWRI) will host the Water Rights Analysis Package (WRAP) Short Course on Aug. 6-8 at the Centeq Research Plaza on the Texas A&M University campus.

The two and a half day course will focus on the fundamentals of WRAP, a generalized modeling system for simulating the development, management, allocation and use of the water resources of a river basin and will include computer-modeling exercises. The course is designed for engineers and scientists employed by water agencies and consulting firms.

"Participants will gain a thorough understanding of the modeling system and proficiency in its application," said **Dr. Ralph Wurbs**, associate director for engineering for the institute and a professor of water resources engineering in Zachry Department of Civil Engineering.

Instructors include Wurbs, and **Richard Hoffpauir**, a consultant with several years experience in the application of WRAP.

The WRAP course is part of TWRI's new program to coordinate training courses for water resources professionals. This training program will educate professionals on the latest techniques, innovations and products of university research that can be translated into real-world application.

For more information on the WRAP course or other training courses, visit the training program Web site or contact Courtney Swyden at cmswyden@ag.tamu.edu or 979.862.2299.

TWRI grant recipient studies bacterial loadings along the Texas Gulf Coast

By Laura Maeker

The University of Texas student **Stephanie Johnson** is working with her advising professors **Drs. David Maidment** and **Mary Jo Kiristis** to evaluate bacterial loadings to six bays along the Texas Gulf Coast that currently do not meet state water quality standards.

Johnson, originally from Minnesota and a recipient of a $5,000 2007-2008 Texas Water Resources Institute (TWRI) research grant, said once the model is developed, it will be generalized for application to other coastal watersheds in Texas and perhaps across the nation.

"The average American can learn that modeling is one of many tools to be used in the overall battle for clean water," Johnson said. "We do the best we can to simulate the way nature responds

to our actions but science and engineering can only do so much. The ultimate answer to clean water is through the actions of the average citizen."

According to Johnson's report, of the 39,000 water bodies in the United States that are currently classified as impaired, over 13 percent are listed due to bacteria contamination, making it the highest single source of surface water contamination in the country today. The ability to accurately model nonpoint bacterial loading to water bodies has historically been limited largely due to the complicated biological and physical interactions that bacteria undergo when they are released into the environment.

"The results expected from this project include an understanding of the way bacteria survive and are transported through the environment," Johnson said in her report. "Research will help quantify these factors and their relationship to bacterial movement within a watershed.

"I hope that my modeling methods can be used to address water quality issues along the Texas Gulf Coast," she said. "I would define success as assisting to make water that is safe to be enjoyed by all."

Johnson said she plans on completing her doctorate and either returning to the engineering consulting field or becoming a teacher at a university in the Midwest United States. However, if she does return to the consulting world, she said she would like to maintain her connections with the academic community through collaboration on research or serving as an adjunct faculty member.

Her research was funded by TWRI with funds obtained through the U.S. Geological Survey as part of the National Institutes for Water Research. TWRI is the designated institute for water resources research in Texas.

Buck Creek monitoring moves into watershed protection plan development

Results from a three-year monitoring study indicate that Buck Creek in the southeastern part of the Texas Panhandle is not excessively contaminated, and experts are advocating it should be taken off Texas' list of impaired water bodies.

"Overall the creek is in good shape," said **Lucas Gregory**, project manager with the Texas Water Resources Institute in College Station. Gregory and other officials met with landowners to announce the findings and discuss the future of the Buck Creek project.

"Several locations periodically exhibit elevated bacteria levels," he said. "So until it comes off the list, something has to be done to determine and manage the source of the bacteria."

To continue reading the AgNews story, click here.

Irrigation Training Program set for Chillicothe

Texas Water Resources Institute's Irrigation Training Program will have a one-day training event Aug. 19, 2008, at Chillicothe. **Drs. John Sij** and **Dana Porter** will coordinate the program designed to help farmers and others learn about efficient tools and techniques of irrigation management.

The Chillicothe event is the second of six Irrigation Training Program events being held in different regions of the state during 2008-09. The first training program was in Lubbock. The program creates a cohesive region-specific program of information about irrigation practices, cropping

systems and climates. Other sites where training events will be held are Mercedes in October 2008, San Patricio County in November 2008, Uvalde in Fall 2008 and Amarillo in January 2009.

The program is a collaboration with TWRI, Texas AgriLife Extension Service, Texas State Soil and Water Conservation Board, and USDA's Natural Resources Conservation Service. The Texas Water Development Board funds the project through its Agricultural Water Conservation Grant program.

For more information about the upcoming programs, contact **Cecilia Wagner** at cawagner@ag.tamu.edu or 979.845.1851.

Program releases report on climate change effects on agriculture, land, water resources, biodiversity

The U.S. Climate Change Science Program (CCSP) recently released "Synthesis and Assessment Product 4.3 (SAP 4.3): The Effects of Climate Change on Agriculture, Land Resources, Water Resources and Biodiversity in the United States." The CCSP integrates the federal research efforts of 13 agencies on climate and global change. The report is one of the most extensive examinations of climate impacts on U.S. ecosystems. USDA is the lead agency for this report.

"The report issued today provides practical information that will help land owners and resource managers make better decisions to address the risks of climate change," said Agriculture Chief Economist **Joe Glauber**.

To continue reading the USDA story, click here.

Partners protect Trinity River

Dr. Ed Smith, Texas AgriLife Extension Service director; **Gov. Rick Perry** and **Carter Smith**, Texas Parks and Wildlife Department (TPWD) executive director; spoke at a Trinity River Basin Conservation Foundation gathering June 18 in Seagoville. The foundation, along with AgriLife Extension, TPWD, Texas A&M Institute of Renewable Natural Resources, Texas Commission on Environmental Quality, Texas State Soil and Water Conservation Board, Texas Water Development Board, Trinity River Authority, U.S. Fish and Wildlife Service and the Texas Wildlife Association are all partners in conserving the Trinity River.

To read the AgNews story about this event, click here.

Desalination workshop will present latest technologies

The 4th annual practical short course, "Water: Desalination, Process and Wastewater Issues and Technologies," is set for Aug. 4-5, 2008, at Texas A&M University in College Station.

The hands-on workshop exploring the technologies of desalination is sponsored by the Global Petroleum Research Institute, the Separation Sciences Program and the Food Protein Research and Development Center of Texas A&M University; and the Texas Water Resources Institute, an entity of Texas A&M AgriLife.

The registration fee is $650 before July 25, 2008, and $695 after July 25. Continuing education units for water & water management are available.

To register or for more information, please visit the laboratory's Web site or contact **Carl Vavra** at 979.845.2758 or cjvavra@tamu.edu; **Connie Conaway** at 979.845.2272 or connie@pe.tamu.edu; or **Cyndi Casanova** at 979.847.8997 or shortcourse@tamu.edu.

53rd Annual New Mexico Water Conference

The New Mexico Water Resource Research Institute is hosting its 53rd annual water conference on Oct. 20-22 in Albuquerque, New Mexico. The two-day meeting, Surface Water Opportunities in New Mexico, provides a public forum for the discussion of important and often critical state water issues. John W. Hernandez has been selected to give the 2008 Albert E. Utton Memorial Water Lecture.

Regular registration by October 6 is $225. After October 6 and at the door is $250. For more information about the conference, please visit
http://wrri.nmsu.edu/conf/confsymp.html.

New Publications

B-6153
Rainwater Harvesting
Dana Porter, Russell A. Persyn, Valeen Silvy, Texas AgriLife Extension Service publication, B-6153 (reprint)
Homeowners and landowners can build simple or complex systems to capture, store and use rainwater to water their landscape plants.

L-5498
Rainwater Harvesting: Landscape Methods
Bruce J. Lesikar, Justin Mechell, Rachel Alexander, Texas AgriLife Extension Service publication, L-5498 (reprint)

With the state's growing population and limited supply of groundwater and surface water, Texans must use water wisely. Rainwater harvesting is an approach that anyone can use to capture rainfall. This publication explains how rainwater harvesting landscape methods can save consumers money, reduce the demand for potable water, use water efficiently and reduce flooding, erosion and surface water contamination.

"**New Waves**," an email newsletter of Texas Water Resources Institute, a unit of Texas A&M AgriLife, publishes timely information about water resources news, results of projects and programs, and new water-related research projects, publications, papers, and faculty, at universities in Texas. If you have information for possible inclusion in "New Waves" please email Kathy Wythe or call 979.845.1862 and include your contact information. All submissions may be edited for grammar and style.

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