



State Legislature may consider few water issues

With the start of the 82nd Texas Legislature, water could be on the agenda but may be overshadowed by budgets, redistricting, and the sunset review of state agencies, according to those involved in water issues and law in Texas.

Groundwater rights versus desired future conditions

Groundwater rights may be the biggest water issue that comes before the Legislature because of a court case that has made its way to the Texas Supreme Court and because of a state bill passed in 2005.

The Texas Supreme Court is set to rule on *Edwards Aquifer Authority v. Day*, a case concerning vested groundwater rights and takings. Coupled with the pending (at press time) court case is the issue of desired future conditions (DFCs), which, some say, could threaten property owners' groundwater rights. In 2005, the Legislature passed a bill that requires groundwater conservation districts (GCDs) to work with others in their groundwater management areas to develop a joint management plan that establishes DFCs, or aquifers' conditions in 50 years for each aquifer. The Texas Water Development Board (TWDB) will use these DFCs to help determine the managed available groundwater for use by both GCDs and regional water-planning groups. Some groups are concerned that this process may result in restrictive DFCs, caps on overall production, and denial of permits once the cap is reached.

During the first week of the 82nd Legislature, Sen. Troy Fraser filed Senate Bill 332, which stated that landowners have a vested ownership interest in the groundwater beneath

their property. According to Fraser's news release, he filed the legislation because some entities are challenging the Rule of Capture, established in 1904, in court. "For over 100 years, landowners have believed that the Rule of Capture gives them a vested private property right in the groundwater beneath their land," said Fraser in his release.

Fraser went on to say that the legislation is intended to work in conjunction with local groundwater conservation district regulation. Under the legislation, groundwater conservation districts could still require a landowner to get a permit and limit the amount of groundwater that can be produced. However, the legislation would prevent a district from "taking" a landowner's right to capture the water beneath the land.

Sunset review

During the interim, the Sunset Advisory Commission reviewed TWDB, the Texas State Soil and Water Conservation Board, and the Texas Commission on Environmental Quality. The Legislature will review the commission's recommendations for these water agencies. The commission's reports on each agency may be viewed at www.sunset.state.tx.us/.

Resources

Keep track of bills filed in the 82nd Texas Legislature: www.capitol.state.tx.us/.

Several organizations have published position papers or fact sheets on water issues that may become before the Legislature. Please visit twri.tamu.edu/txH2O for a list of these resources.

CIRE ranks priority irrigation issues

The Consortium for Irrigation Research and Education (CIRE) recently compiled responses from a survey to determine priority irrigation research and education issues facing water users. Texas Water Resources Institute (TWRI) led this task.

TWRI used survey responses to develop a list of 16 irrigation research and education topics. That list was sent to the CIRE listserv and to irrigation district managers, state agencies, agricultural producers, and others to be ranked by order of importance. Responses were returned from Texas AgriLife Research, the Texas AgriLife Extension Service, agricultural producers, underground water conservation districts, licensed irrigators, U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service, Texas A&M University–Kingsville, Texas Tech University, Texas Water Development Board, and USDA Agricultural Research Service.

The group's top five priority irrigation issues are:

- Research on water-use efficiency and on irrigation amounts, timing, and conservation relative to yield and crop quality impacts, and water-use efficiency

- Deficit irrigation, crop adaptation to drought stress, optimizing irrigation for pest and disease stress (IPM), primed acclimation, and precision irrigation
- Designing cropping systems, new drought-tolerant varieties, and selecting cultivars to minimize irrigation demands
- Practices for using limited quality water for irrigation on a sustainable basis
- Research and education on precision irrigation and sensing practices and technologies, efficacy, and economics

TWRI and CIRE experts hope this information will help better focus irrigation research and educational programs, assist commercial firms with equipment needs, and help to better target available funding, according to B.L. Harris, TWRI's acting director.

For the full list of all 16 priorities and additional information on CIRE, please visit CIRE's website at cire.tamu.edu.

TWRI welcomes new staff

Brian VanDelist became a project manager for Texas Water Resources Institute in September 2010. He is responsible for several projects focusing on water quality impairments. Before joining the institute, VanDelist was a graduate teaching assistant in soil science at Sam Houston State University. He previously worked as a soil conservationist for the U.S. Department of Agriculture's Natural Resources Conservation Service. He earned a bachelor of science degree in animal science and is currently completing a master of science degree in agriculture with an emphasis in animal and plant sciences, both from SHSU. After completing his master's degree, he plans to begin working on his doctorate in rangeland ecology and management at Texas A&M University.



Patrick Ireland also joined the institute in September 2010 as a Texas AgriLife Extension Service assistant for the Center for Invasive Species Eradication's *Caddo Lake Giant Salvinia Eradication Project*. He coordinates and facilitates activities that are carried out near and

at Caddo Lake. He manages the salvinia weevil-rearing facility and monitors the effectiveness of the weevils on the giant salvinia after they are released into the lake. Prior to joining the institute, he was a fisheries intern for Texas Parks and Wildlife Department and a graduate teaching assistant for fisheries management and animal ecology courses at Texas A&M. Ireland earned a bachelor of arts degree from the University of Mississippi and a master of wildlife and fisheries science degree from Texas A&M.

Water-related faculty join AgriLife Research

Dr. Nithya Rajan joined Texas AgriLife Research in July as the assistant professor in cropping systems and is stationed at the Texas AgriLife Research and Extension Center at Vernon. Rajan provides agronomic leadership to an interdisciplinary team that is developing and evaluating cropping systems for water-limited environments. She earned a bachelor's degree in agriculture from Kerala Agricultural University in India, a master's degree in soil science and agricultural chemistry from the Acharya N.G. Ranga Agricultural University in India, and a doctorate in agronomy from Texas Tech University. Previously, she was a post-doctoral research associate for the Texas Alliance for Water Conservation Demonstration Project with Texas Tech's Department of Plant and Soil Sciences.



Dr. Srinivasulu Ale is the new assistant professor of geospatial hydrology at the Texas AgriLife Research and Extension Center at Vernon. He will also have an academic appointment with the Department of Biological and Agricultural Engineering at Texas A&M University. Ale investigates water and nutrient balance under complex cropland and rangeland management systems and develops management strategies to increase water-use efficiency and protect water quality. Ale earned a bachelor's degree from Andhra Pradesh Agricultural University in India, a master's degree from the G.B. Pant University of Agriculture and Technology in India, and a doctorate from Purdue University in Ale joined Texas AgriLife Research in December 2010.

Dr. Seong Park joined Texas AgriLife Research in September 2009 as a research economist for both the Vernon and Amarillo centers. He works with crop and livestock production, watershed protection, groundwater modeling and nitrates in the water, the Ogallala Aquifer program, an air quality federal initiative, and irrigation water management and bioenergy feedstocks. Park earned a bachelor's degree in economics from Kyungpook National University in South Korea, a master's degree in agricultural economics from West Texas A&M University in 2005; and a doctorate in agricultural economics from Oklahoma State University in 2009.

