

If you have trouble reading this email, go to the [online version](#).

FEBRUARY 2013

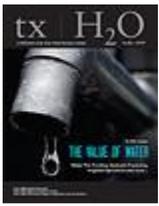


Conservation Matters

THE TEXAS LAND, WATER AND WILDLIFE CONNECTION

A publication of the Texas Water Resources Institute and the Texas A&M Institute of Renewable Natural Resources

New issue of txH₂O published



The value of water is spotlighted in the [Winter 2013](#) issue of txH₂O, the Texas Water Resources Institute's magazine. Stories include an in-depth look at the costs of implementing the state water plan versus the consequences of doing nothing as well as a brief primer on water issues in the current Texas Legislature.

Dr. Calvin Finch, director of the Water Conservation and Technology Center, compares water saving strategies in his recurring column, and another article covers the power generation industry's use and consumption of water. Experts also discuss hydraulic fracturing and its water use, as well as potential new technologies to perfect the process. An article describing the major economic impacts that drought has had on lakes and tourism in Texas, a report examining the economic value of irrigated agriculture, and a feature on the Lone Star Healthy Streams program round out the issue.

Round-up: water-related bills filed in the Texas Legislature



The 83rd Texas Legislature is in session, and water is on the minds of some lawmakers. As mentioned in the [new issue of txH₂O](#), establishing funding mechanisms for implementing the state water plan has been discussed by some legislators.

To keep up with the status of bills filed during this session, use the state's [online bill-tracker](#) or [bill search](#). The following listing includes a few of the water-related bills introduced by legislators, linked to each respective bill-tracker entry, which provides further information such as full bill text, committee hearing dates and testimonies

Edwards Aquifer Recovery Implementation Program permit approved

The [U.S. Fish and Wildlife Service](#) (FWS) has approved the Edwards Aquifer Recovery Implementation Program's (EARIP) [Habitat Conservation Plan](#) (HCP) and incidental take permit. The notice of availability of the final Environmental Impact Statement and an incidental take permit for the EARIP, including the

Follow [TWRI](#) and [IRNR](#) on Twitter



[Read the Winter 2013 issue of txH₂O](#)



[Read Texas Water Journal Vol. 4, No. 1](#)

Resources

ScoopIt! pages on [Texas water news and funding](#) and [TWRI programs](#), curated by TWRI

[Drought in Texas Newsletter](#)

[Water Conservation Resources](#)

[Water Education in Texas](#)

40 GALLON CHALLENGE

Join Texas A&M AgriLife Extension in the [40 Gallon Challenge](#)

Natural Resources Training Courses

Cooperative Conservation in the Trinity River Basin, Corsicana	Feb. 27
Cooperative Conservation in the Trinity River Basin, Huntsville	March 27
Cooperative Conservation in the Trinity River Basin, Athens	April 3

HCP, was published in the **Feb. 15** *Federal Register*.

The EARIP's HCP is the result of a consensus-based, collaborative effort by a stakeholder group of more than 40 organizations and individuals to address the conservation needs of eight listed species and needs of the communities dependent upon the Edwards Aquifer.

"Approval of the EARIP's HCP marks a significant conservation achievement for the Edwards Aquifer region," said FWS Southwest Regional Director **Benjamin Tuggle**.

Drought update: dry conditions continue around Texas



After the single driest year in recorded history in 2011, many parts of Texas are still in a drought two years later and the forecast may not be better.

According to the [state climatologist](#), the state may be in the midst of the second-worst drought on record.

Speaking before the [Texas House and Senate Natural Resources Committees](#) in February, **Dr. John Nielsen-Gammon** said that Texas has received only 68 percent of its average rainfall over the past two years, and if the rainfall deficit continues, the current drought could be the worst recorded. Reservoir levels are at their lowest since 1990, he said, and the forecast is for slightly drier conditions than normal in 2013.

IRNR researchers present golden-cheeked warbler research



The [2013 Golden-cheeked Warbler Symposium](#) was held Jan. 25 in Austin and hosted by Biodiversity Works. The symposium was also sponsored by Bandera Corridor Conservation Bank, the [Texas A&M Institute of Renewable Natural Resources](#) (IRNR), and Zara Environmental LLC. Researchers from IRNR and Texas A&M University participated in the symposium and presented on a variety of research projects, including warbler habitat credit trading, management guidelines, use of distribution models for conservation planning, breeding habitat and warbler responses to human disturbances.

Third round of Trinity Waters workshops to address cattle production, feral hogs



[Trinity Waters](#) and the Texas A&M AgriLife Extension Service will be hosting a third and final round of workshops for landowners in the Trinity River basin area, coordinators said.

"The focus will be on beef cattle production and feral hog control so producers

[Introduction to ArcGIS 10](#)

April 16-17

[Visit the training program website](#)

New Publications/ Papers

Extension publications

[Aquatic Vegetation Identification Cards](#), **Michael P. Masser**, Texas A&M AgriLife Extension Service, B-6095, 2013

[A Guide to Mass Rearing the Salvinia Weevil for Biological Control of Giant Salvinia](#), **Allen E. Knutson, Julie Nachtrieb**, Texas A&M AgriLife Extension Service, ESP-475, 2013

[Guide to Texas Grasses](#), **Robert B. Shaw**, Texas A&M AgriLife Extension Service, SP-494, 2013

[Texas Quails: Ecology and Management](#), **Leonard A. Brennan**, Texas A&M AgriLife Extension Service, SP-495, 2013

[Beef, Brush, and Bobwhites: Quail Management in Cattle Country](#), **Fred Guthery, Fidel Hernandez**, Texas A&M AgriLife Extension Service, SP-496, 2013

[On Bobwhites](#), **Fred Guthery**, Texas A&M AgriLife Extension Service, SP-497, 2013

New IRNR/TWRI publications

[Evaluation and Demonstration of BMPs for Cattle on Grazing Lands for the Lone Star Healthy Streams Program](#), **K. Wagner, L. Redmon, T. Gentry, C. Clary**, Texas Water Resources Institute TR-437, 2012

[2012 International SWAT Conference Proceedings](#), **Dan Kiniry, Courtney Smith, Raghavan Srinivasan**, Texas Water Resources Institute TR-436, 2013

[The use of GIS as a Real Time Decision Support System for Irrigation Districts](#), **G. Bonaiti, G. Fipps**, Texas Water Resources Institute TR-435, 2012

[Water Rights Analysis Package \(WRAP\) River System Hydrology](#), **Ralph A. Wurbs**, Texas Water Resources Institute TR-431, 2012

can improve profitability, reduce hog damage and benefit area water resources," said **Blake Alldredge**, AgriLife Extension associate and education and outreach coordinator for Trinity Waters, College Station.

The workshops will take place at the following dates, times and locations: **Feb. 27** from 1-5 p.m., Navarro County Expo Center, 4021 W. Highway 22, Corsicana; **March 27** from 1-5 p.m., Walker County Extension Office, 102 Tam Road Suite B, Huntsville; and **April 3** from 1-5 p.m., Texas Freshwater Fisheries Conservation Center, 5301 County Road 4812, Athens.

Water Daze event to include poster contest, free film viewing



The [Water Management and Hydrological Sciences Program](#) at Texas A&M University and the [Texas Water Resources Institute](#) (TWRI) are hosting [Water Daze](#), a public event featuring a poster contest and film viewing, **April 24** in Rudder Tower on the Texas A&M campus.

The water poster competition is open to all Texas A&M students and will award prizes to the best three posters. The "Let's Talk About Water" portion of the event will include a free screening of the film "Last Call at the Oasis," sponsored by Universities Allied for Water Research, beginning at 4 p.m., followed by a panel discussion.

Arroyo Colorado Conservancy announces boat raffle, Oct. 10 Fiesta



The [Arroyo Colorado Conservancy](#) (ACC) is hosting the Save the Arroyo Fiesta **Oct. 10** at Dargel Boats in Donna, Texas, to celebrate 14 years of local conservation and watershed protection, said Arroyo Colorado Watershed Coordinator and ACC Executive Director **Jaime Flores**.

"Since 1998, when dedicated stakeholders began meeting to come up with ways to address the various issues facing the Arroyo Colorado in Weslaco, we have been working to improve the water quality and to preserve, expand and enhance native wildlife habitat along the Arroyo Colorado for the benefit of current and future generations," Flores said.

Dargel Boats has partnered with the ACC to hold a [boat raffle](#) as part of the Fiesta, he said. The raffle prize is a Dargel 190 Skout w/115HP Evinrude Motor & McClain Trailer, valued at more than \$35,000. Flores said tickets are \$100 each, and only 500 will be printed.

From Waste to Worth Conference set for April 1-5 in Denver

The Livestock and Poultry Environmental Learning Center is hosting a [national conference](#) **April 1-5** in Denver. Following the theme of "From Waste to Worth: 'Spreading' Science and Solutions," the conference will cover research, education and extension efforts related to managing environmental impacts of livestock and poultry production, according to organizers. The [conference program](#) will include farm tours, posters, workshops, commercial exhibits and oral presentations.

Become a quail management expert at 2013 QuailMasters class series

The dates for the [QuailMasters 2013](#) management workshop series spearheaded by the [Texas A&M AgriLife Extension Service](#) have been set, according to organizers.

The four sessions will focus on bobwhite and scaled quail, and participants should plan to attend all four of the three-day workshops slated for March through October, said class coordinator and instructor Dr. Dale Rollins, AgriLife Extension wildlife specialist at San Angelo.

"Our goal is to make the students quail experts," he said. "We want graduates to come away from the series with the knowledge to speak comfortably on quail biology, ecology, technology and sociology. Students will see some of the best quail ranches in the nation and learn firsthand how proper management can enhance quail numbers."

Bastrop recovery campaign continues to draw support



The [Lost Pines Forest Recovery Campaign](#) is more than a simple replant effort. After nearly 5 million trees were destroyed in 2011's destructive fire, the campaign has become an effort involving not only many in the Bastrop community and county, but also outside support groups and organizations.

In February, the campaign has seen a push from volunteers helping reestablish the forests of the 6,600-acre state park in Bastrop County. Replant initiatives such as the one led by Texas A&M University's Aggie Replant organization is helping jumpstart regrowth in the park, according to a recent [TAMU Times article](#).

The Lost Pines Forest Recovery Campaign is a five-year replanting effort that will focus on the Bastrop State Park area as well as provide service to central Texans by contributing native tree species for replanting on private lands that may have also been affected by the fires.

UTEP desalination project nears 100 percent efficiency goal

Researchers at The University of Texas at El Paso (UTEP) [Center for Inland Desalination Systems](#) (CIDS) have developed and demonstrated technology that is close to producing zero liquid waste in the desalination process.

Current inland desalination systems recover up to 80 percent of the water extracted from underground, disposing of the remaining 20 percent of water heavily concentrated with salt, according to the researchers. While seawater desalination plants and some brackish desalination plants return their salty concentrated waste to the ocean, inland areas must find ways to dispose of the waste by building expensive underground deep-well injection systems or evaporation ponds.

Global Petroleum Research Institute to host annual water short course

The [Global Petroleum Research Institute](#) (GPRI) is hosting the [2013 Water/Wastewater Short Course](#) **April 15-17** at Texas A&M University. Following a theme of "Water and Wastewater: Issues, Challenges, Solutions, and New Technologies," the course will include experts from both industry and academia, as well as daily equipment demonstrations. This is the twenty-third year of the course, which is directed by **Carl Vavra** of the GPRI Designs Separation Science Research Center.

Texas A&M receives EPA award for campus power plant's efficiency



Texas A&M University has been selected to receive a top award from the [U.S. Environmental Protection Agency](#) (EPA) for energy efficiencies resulting from the installation on campus of a combined heating and power (CHP) system that requires only 33 to 50 percent of the energy consumed in a typical off-campus power plant, according to Texas A&M officials.

Jim Riley, Texas A&M's executive director of Utilities and Energy Services, was notified by EPA official **Gary McNeil** that

the university is a recipient of the [2013 Energy Star CHP Award](#) that was formally presented at the International District Energy Association Campus Energy Conference in San Diego on **Feb. 20**.

NMSU to offer global perspective at March 2-3 acequia symposium



New Mexico State University will host a two-day acequia symposium focused on "Acequias and the Future of Resilience in Global Perspective," **March 2-3** at the Las Cruces Convention Center, 680 E. University Ave. in Las Cruces, NM. According to organizers, acequias are an age-old system of ditch irrigation-and social organization-especially prevalent in the northern part of New Mexico.

"Given the similarities among ditch irrigation systems in many parts of the world, we have developed a program with international scope," said **Dr.Sam Fernald**, New Mexico Water Resources Research Institute interim director and a professor in New Mexico State University's Department of Animal and Range Sciences.

Newly Awarded TWRI/IRNR Projects

Lower Laguna Madre Regional Treatment Wetland System: Phase I

This project will provide the resources and support for the design, construction and implementation of the first phase of a constructed wetland system bordering the Arroyo Colorado beginning within the City of Harlingen, Texas, park system. Successful completion of the project will result in improved water quality and enhancement of fish and wildlife habitat in the Lower Laguna Madre and tidal portion of the Arroyo Colorado. The entire project will be implemented in four phases; Phase I will be completed using these funds to construct wetlands in 5 acres of the Ramsey Park area.

Funded by: Texas General Land Office

Partners: Texas Water Resources Institute, Texas Institute of Applied Environmental Research, City of Harlingen

East Wildlife Foundation GIS Needs Assessment, Development, and Implementation

This project will assess the need for, develop and implement a geographic information system for the East Wildlife Foundation (EWF). By reviewing the operations and mission of EWF, spatial data will be compiled and a functional GIS will be developed and implemented to allow for integrated use by the Research, Land Management and Operations Divisions of EWF.

Funded by: East Wildlife Foundation

Partners: Institute of Renewable Natural Resources

Initial Water Resource Assessment: East Wildlife Foundation Ranches

Mapping and compilation of publically available data provides an initial assessment of water resources available to the East Wildlife Foundation properties. Local (shallow) as well as regional aquifer characteristics will be obtained by interviews of regional water supply providers and visits to the properties. The findings of this assessment will clarify data needs to test long-term sustainability to meet future needs.

Funded by: East Wildlife Foundation

Partners: Water Conservation and Technology Center, Institute of Renewable Natural Resources

Biodiversity assessment: South Texas, with a focus on the South Texas Sand Sheet

The primary scope of this research is to survey and assess the baseline occurrence of birds, mammals, amphibians and reptiles across the properties of the East Wildlife Foundation. This survey will produce collections and other data that will serve to document the terrestrial biodiversity of South Texas with a focus on the South Texas Sand Sheet. This project will contribute to the long-term research and education mission of the East Foundation. This project will be accomplished by intensive collecting and long-term surveys of birds, mammals, amphibians and reptiles across the various habitat types represented on over 215,000 acres of East Wildlife Foundation lands. Included as a deliverable of this project is a reference collection of terrestrial vertebrates found on the East Wildlife Foundation properties. This collection will be a

resource benefitting the future research and education mission of the foundation.

Funded by: East Wildlife Foundation

Partners: Institute of Renewable Natural Resources, Department of Wildlife and Fisheries Sciences

Texas Coalition, Grazing Lands Conservation Initiative

The purpose of this cooperative agreement is 1) to complete two brush management courses for landowners, brush management contractors and USDA Natural Resource Conservation Service employees specifically as it pertains to habitat for black-capped vireo (listed as Endangered under ESA) and golden-cheeked warbler (listed as Endangered under ESA), in addition to an update on proposed listed species, and 2) to complete up to two riparian grazing workshops for landowners and other interested parties.

Funded by: Texas Coalition, Grazing Lands Conservation Initiative

Partners: Institute of Renewable Natural Resources, Department of Wildlife and Fisheries Sciences

EAA-Regional Water Conservation Program Support

The Texas A&M Water Conservation and Technology Center will support the Edwards Aquifer Authority (EAA) in operating the Regional Water Conservation Program (RWCP). The primary goal of the RWCP is to provide 10,000 acre-feet of water to serve as a reserve in the Edwards Aquifer (EA) to benefit spring flow levels. The RWCP was developed as part of the EA Habitat Conservation Plan (EAHCP) because of the necessity of spring flows for species protection.

Funded by: EAA - Edwards Aquifer Authority

Partners: Water Conservation and Technology Center, Texas Center for Applied Technology

Conservation Matters is a monthly e-mail newsletter of the [Texas Water Resources Institute](#) (TWRI) and the [Texas A&M Institute of Renewable Natural Resources](#) (IRNR). TWRI and IRNR work together to foster and communicate research and educational outreach programs focused on water and natural resources science and management issues in Texas and beyond. TWRI and IRNR are part of [Texas AgriLife Research](#), the [Texas AgriLife Extension Service](#) and the [College of Agriculture and Life Sciences](#) at [Texas A&M University](#).

Conservation Matters publishes timely information about water and natural resources news, results of projects and programs, and new water-related and natural resources-related research and education projects, publications, papers and faculty, at universities and organizations in Texas.

If you have information for possible inclusion in *Conservation Matters* please contact **Leslie Lee** at lhlee@ag.tamu.edu or 979.862.7139. All submissions may be edited for grammar and style.

If you have difficulty with any links or text, please visit the online version of *Conservation Matters* at twri.tamu.edu/publications/conservation-matters/.

[Subscribe](#) or [unsubscribe](#) to the *Conservation Matters* mailing list.