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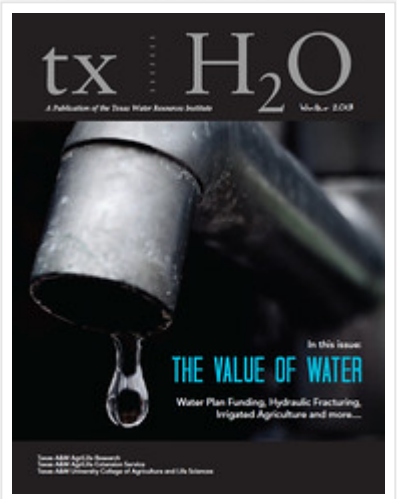
Conservation Matters

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 *txH$_2$O*, 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 *txH$_2$O*, 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:

- HB 4: "Relating to the creation and funding of the state water implementation fund for Texas to assist the Texas Water Development Board in the funding of certain water-related projects." **Rep. Ritter**, primary author.
- HB 11: "Relating to the appropriation of money from the economic stabilization fund to finance certain water-related projects." **Rep. Ritter**, primary author.
- HB 178: "Relating to exemption from the sales tax for certain water efficient products for a limited period." **Rep. Larson**, primary author.
- HB 227: "Relating to the appropriation of money from the economic stabilization fund to be used for the purposes of the water infrastructure fund during the next state fiscal biennium." **Rep. Larson**, primary author.

- HB 449: “Relating to restrictions on xeriscaping by property owners' associations and certain political subdivisions.” **Rep. Dukes**, primary author.
- HB 752: “Relating to the types of entities that are considered municipal water suppliers for purposes of the law governing the effect of the subdivision of certain land on certain irrigation water rights.” **Rep. Longoria**, primary author.
- HB 1173: “Relating to a credit against the ad valorem taxes imposed on property on which certain water conservation systems have been installed.” **Rep. Anchia**, primary author.
- HB 1182: “Relating to energy and water management planning and reporting by state agencies and institutions of higher education.” **Rep. Kacal**, primary author.
- HB 1189: “Relating to interstate cooperation to address regional water issues.” **Rep. Larson**, primary author.
- HB 1307: “Relating to rates for water service, to the transfer of functions relating to the economic regulation of water and sewer service from the Texas Commission on Environmental Quality to the Public Utility Commission of Texas, and to the duties of the Office of Public Utility Counsel regarding the economic regulation of water service.” **Rep. Geren**, primary author.
- HB 1460: “Relating to the use of land and water for wildlife management.” **Rep. Gooden**, primary author.
- SB 4: “Relating to the administration and functions of the Texas Water Development Board.” **Sen. Fraser**, primary author.
- SP 22: “Relating to the administration of the Texas Water Development Board; making an appropriation from the economic stabilization fund to finance certain water-related projects.” **Sen. Fraser**, primary author.
- SB 198: “Relating to restrictive covenants regulating drought-resistant landscaping or water-conserving turf.” **Sen. Watson**, primary author.
- SB 224: “Relating to the availability of money from the economic stabilization fund to be used for the purposes of projects in the state water plan.” **Sen. Seliger**, primary author.
- SB 235: “Relating to the creation of regional authorities for water infrastructure projects.” **Sen. Fraser**, primary author.
- SB 272: “Relating to water well recordkeeping and reporting requirements, including the production, use, and withdrawal of groundwater. **Sen. Seliger**, primary author.
- SB 302: “Relating to the management, operation, rulemaking authority, and oversight of groundwater conservation districts.” **Sen. Seliger**, primary author.
- SB 342: “Relating to exemption from the sales tax for certain water efficient products for a limited period.” **Sen. Estes**, primary author.
- SB 567: “Relating to rates for water service, to the transfer of functions relating to the economic regulation of water and sewer service from the Texas Commission on Environmental Quality to the Public Utility Commission of Texas, and to the duties of the Office of Public Utility Counsel regarding the economic regulation of water service.” **Sen. Watson**, primary author.
- SB 589: “Relating to the designation of certain river or stream segments as being of unique ecological value.” **Sen. Hegar**, primary author.
- SB 662: “Relating to the composition of the drought preparedness council.” **Sen. Carona**, primary author.

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 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. Issuance of the incidental take permit will enable the applicants—the Edwards Aquifer Authority, San Antonio Water Systems, New Braunfels, San Marcos and Texas State University—to continue their projects and operations, while preserving protected species and their habitat, according to FWS.

“Approval of the EARIP’s HCP marks a significant conservation achievement for the Edwards Aquifer region,” said FWS Southwest Regional Director **Benjamin Tuggle**. “The organizations and individuals involved in the development of the HCP clearly demonstrated that it is possible to come together and develop a consensus-based solution to a very complex water issue in Texas.”

The approved incidental take permit covers activities that would occur in Bexar, Medina and Uvalde counties and portions of Atascosa, Caldwell, Comal, Guadalupe and Hays counties. The HCP describes measures the applicants agreed to undertake to minimize and mitigate the effects of incidental take of the following federally listed species dependent on the springs and river systems associated with the Edwards Aquifer: the fountain darter, San Marcos salamander, Texas wild rice, Texas blind salamander, Peck's cave amphipod, San Marcos gambusia, Comal Springs dryopid beetle and the Comal Springs riffle beetle.

Read the recent article in Texas Water Journal‘s Volume 4, Number 1 issue and the Fall 2012 *txH*$_2$*O* article for background information on the EARIP and the Texas A&M Institute of Renewable Natural Resources’ involvement with the effort. Read the full FWS news release for more information, or visit the HCP website.

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.

Other indications that the drought is still around include water use restrictions on Texans around the state. As of **Feb. 13**, according to the Texas Commission on Environmental Quality, 1,020 public water systems had either voluntary (376) or mandatory (644) water use restrictions. Three systems had 45 days or less of water, three had 90 days or less and nine had 180 days or less.

The U.S. Drought Monitor, released for the week ending **Feb. 12**, showed about 90 percent of the state in some type of drought with 50 percent of Texas in severe drought or worse. Parts of the Panhandle and South Texas were in exceptional drought.

In January **Gov. Rick Perry** renewed the proclamation declaring that exceptional drought conditions pose a threat of imminent disaster in a number of counties in Texas.

With the occurrence of some rainfall in the winter and spring of 2012, some water officials predicted that by the time the Texas Legislature convened in January 2013, the drought and the problems it brought could be forgotten.

However, some legislators are looking to provide money to fund some of the projects in the state water plan. Sen. Troy Fraser, Sen. Kel Seliger and Rep. Allan Ritter have introduced bills that, if passed and signed into law, would provide $2 billion from the state's Economic Stabilization Fund to finance some of the proposed projects in the state plan. Other legislators have introduced similar bills and suggested other amounts.

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.

The golden-cheeked warbler is a migratory songbird that breeds exclusively in central Texas. It was listed as endangered by the U.S. Fish and Wildlife Service in 1990 due to habitat loss and fragmentation.

More information on the symposium and the presentation files are available online.

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 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.

"In the workshops, **Dr. Larry Redmon** of AgriLife Extension will discuss stocking rates and pasture management techniques that will help producers manage their land during times of drought," Alldredge said. "Redmon will also discuss ways cattle producers can protect the water quality in their area through the innovative Lone Star Healthy Streams program."

While drought has negatively affected cattle numbers statewide, the feral hog population has continued to increase, Alldredge noted.

"Feral hogs cause an estimated $52 million in damage to the agriculture industry in Texas every year, including destruction of pastures and crop fields," he said. "In addition, feral hogs are known to be a contributor to the bacterial impairments that affect our water bodies across the state."

Alldredge said this third round of informational workshops for area landowners is provided at no cost and is open to the public. Two hours of continuing education units—1.5 general, 0.5 laws and regulations—will be available for participants as well.

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.

To RSVP for one of the workshops, contact Alldredge at 979.845.0916 or balldredge@tamu.edu, or see nrt.tamu.edu/schedule.

The Building Partnerships for Cooperative Conservation in the Trinity River Basin project is managed by the Texas Water Resources Institute and funded by the Texas State Soil and Water Conservation Board through a Clean Water Act grant from the U.S Environmental Protection Agency.

Read the full AgriLife TODAY article for more information.

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.

For poster contest details, see twri.tamu.edu/waterdaze, and for further information contact **Dr. Rosario Sanchez Flores** at Rosario@geos.tamu.edu.

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.

“There will be door prizes and a silent auction during the Fiesta leading up to the raffle,” Flores said. “I want to ask all of our Arroyo partners to help make this a fun and successful event.”

For more information on sponsorship opportunities for the event, purchasing raffle tickets and the ACC’s work, visit ArroyoColorado.org or contact Flores at 956.495.5532 or jjflores@ag.tamu.edu.

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.

Organizers encourage researchers, agricultural and environmental organizations, consultants, cooperative extension agents and specialists, equipment manufacturing and sales reps, agricultural producers and regulatory and policy staff to attend. Continuing education credits are expected to be available for certified crop advisors, professional animal scientists, professional engineers, technical service providers and others.

More information and registration is available at www.extension.org/63747/ or by contacting **Mark Risse** at mrisse@engr.uga.edu.

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.

Rollins will be joined in the series instruction by **Helen Holdsworth** of the Texas Wildlife Association, co-sponsor organization for the series.

Sessions and locations are as follows: **March 24-26**, Rolling Plains Quail Research Ranch at Roby; **May 5-7**, to be announced; **July 7-9**, to be announced; **Sept. 15-17**, Kingsville.

Rollins said the workshops are not for the casual quail proponent.

“The workshop topics, exercises and homework will be rigorous, thought-provoking and taught at a college-senior level,” he said. “The target audience is landowners interested in quail management, quail hunters, agency biologists, master naturalists and college students seeking up-to-date quail information.”

Hands-on exercises and a mix of lectures and field trips will round out the curriculum, Rollins said. Students will also build plant and seed collections from their own properties and learn how to evaluate management practices.

“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.”

The series is limited to 35 participants, so early sign-up is advised, Rollins said. Individual tuition is $400, which includes several meals and educational support materials. Three hours of graduate college credit are available for an additional charge through the Department of Wildlife and Fisheries Sciences at Texas A&M University.

For more information, read the full AgriLifeTODAY article, or contact Rollins at 325.653.4576, d-rollins@tamu.edu or Holdsworth at hholdsworth@texas-wildlife.org. Online registration is available at texas-wildlife.org.

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.

The recovery campaign is led by the Arbor Day Foundation, a non-profit organization, in coordination with the Texas A&M Forest Service and the Texas Parks and Wildlife Department. According to the Forest Service, the campaign is working to reestablish the trees to once again be a productive and healthy environment.

Since the fire, native loblolly pine seedlings have been grown by ArborGen, a commercial nursery based in East Texas; the Louisiana Department of Agriculture and Forestry; Texas A&M Forest Service’s West Texas Nursery and the Lady Bird Johnson Wildflower Center, to be replanted in the destruction zone, according to the Forest Service.

According to the Arbor Day Foundation, most of the seedling plantings to-date have been volunteer efforts. The campaign’s goal is to plant close to half a million seedlings within the next few months and its long-term plan is replanting 4 million seedlings.

Texas A&M University’s Aggie Replant organization, a student-led environmental community outreach service organization, hopes to plant close to 30,000 trees itself in the state park during four separate sessions within the month of February.

For more information, visit the Lost Pines Recovery campaign online, or read the full article at TAMU Times.

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 finds ways to dispose of the waste by building expensive underground deep-well injection systems or evaporation ponds.

Supported by a three-year grant of $1.5 million from the Bureau of Reclamation, researchers at UTEP have been developing and commercializing the Zero Discharge Desalination (ZDD) technology, which is now capable of at least 98 percent desalination efficiency.

“The way I think of it is, ‘We spent all this energy and money to bring this water up from underground, why throw it away?’” said **Malynda Cappelle**, principal investigator of the ZDD demonstration project and associate director of CIDS.

The UTEP team includes the inventor of ZDD, **Dr. Tom Davis**, professor of civil engineering and director of CIDS. With the help of Veolia Water Solutions & Technologies, their ultimate goal is to commercialize the ZDD system to inland areas in great need of water without disposal options.

Read the full UTEP news release for more information.

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.

According to organizers, the event is the “industry's only ‘hands-on’ workshop on water and waste water treatment. Instructors will present on water treatment technology for industrial water systems including oil- and gas-produced water and hydraulic fracturing flowback brine.

GPRI is a part of the Texas A&M Engineering Experiment Station and The Texas A&M University System. See the course website for more information.

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**.

“Through the recovery of otherwise-wasted energy to provide heating, cooling and domestic hot water to campus facilities, Texas A&M has demonstrated exceptional leadership in energy use and management,” said McNeil, who heads the CHP Partnership Program in EPA’s Climate Protection Partnership Division.

Citing the significant savings in fuel, he said Texas A&M’s CHP system “prevents an estimated 99,600 tons per year of carbon dioxide emissions, while providing enough electricity to serve more than 11,000 homes.

“Moreover, by generating electricity on-site, the CHP system displaces grid-supplied power, increasing the reliability of the energy supply while reducing demands on existing transmission and distribution infrastructure.”

Texas A&M’s 5,200-acre campus serves a 50,000-member student body, one of the largest in the nation, and a highly active faculty, many of whom are engaged in a multitude of research projects while also carrying out their teaching responsibilities. Riley pointed out those experiments and studies, which require highly reliable utilities and energy, represent an annual investment of more than $700 million, placing Texas A&M among the leading research institutions nationally.

Read the full TAMU Times article for more information.

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. "We are looking for clues to sustainability from our acequias here in New Mexico and their analogs around the world. Presenters will address issues relating our system to ones in Mexico, Peru, Chile, Spain, Morocco and Bali."

For more information and to register, visit globalperspectives2013.wrri.nmsu.edu.

New Publications/Papers and Training Courses

New 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 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. Clar**y, 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

Natural Resources Training Courses

Cooperative Conservation in the Trinity River Basin, Corsicana	Feb. 27
Introduction to Modeling Cooperative Conservation in the Trinity River Basin, Huntsville	March 27
Cooperative Conservation in the Trinity River Basin, Athens	April 3
Introduction to ArcGIS 10	April 16-17

New Projects

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