

## Conservation Matters – May 2013

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### Next Carter Creek Stream Team training June 16 in College Station



Local students, homeowners and interested citizens are invited to join the Carter Creek Stream Team and help monitor local water quality in Bryan and College Station. The effort is a part of the [Carters Creek Watershed Assessment Project](#), said **Lucas Gregory**, [Texas Water Resources Institute](#) project specialist.

The next stream team training will be held June 16 and attendees will have the opportunity to be officially certified as a volunteer monitor. Participants can register by emailing [carterstreamteam@gmail.com](mailto:carterstreamteam@gmail.com). Volunteers will have the opportunity support efforts to develop a better understanding of potential causes and sources of local water quality impairments by collecting water quality data and participating in watershed surveys.

"This is really a great opportunity to volunteer locally and provide a very useful service to the community," Gregory said. "By volunteering to monitor water quality in the watershed, needed data is collected and provided to resource managers in the watershed so that they can use their available resources to the best of their ability to improve local water resources."

Volunteer sampling will be conducted at 10 sites throughout the watershed, Gregory said. Volunteers are trained locally in water quality monitoring procedures using [Texas Stream Team](#) materials. The collected data will be provided to local resource managers for use in future decision making processes, Gregory said.

The Carters Creek project is funded by a Clean Water Act, Section 319(h) Nonpoint Source Pollution program grant from the Texas Commission on Environmental Quality and U.S. Environmental Protection Agency.

For more information, see [cartersandburton.tamu.edu/volunteer-monitoring](http://cartersandburton.tamu.edu/volunteer-monitoring) or contact Gregory at 979.845.7869 or [lfgregory@aq.tamu.edu](mailto:lfgregory@aq.tamu.edu).

### New USGS study shows accelerating deficits in aquifers across the country



A new U.S. Geological Survey (USGS) study has reported that the nation's aquifers are being drawn down at an accelerating rate. Researchers conducting the study, [Groundwater Depletion in the United States \(1900–2008\)](#), evaluated long-term cumulative depletion volumes in 40 separate aquifers, or distinct underground

water storage areas, in the United States, and brought together reliable information from previous references and from new analyses, according to USGS.

"Groundwater is one of the nation's most important natural resources. It provides drinking water in both rural and urban communities. It supports irrigation and industry, sustains the flow of streams and rivers, and maintains ecosystems," said **Suzette Kimball**, acting USGS director. "Because groundwater systems typically respond slowly to human actions, a long-term perspective is vital to manage this valuable resource in sustainable ways."

While the rate of groundwater depletion across the country has increased markedly since about 1950, the study found that maximum rates have occurred during the most recent period of the study (2000–2008), when the depletion rate averaged almost 25 cubic kilometers per year. For comparison, 9.2 cubic kilometers per year was the historical average calculated over the 1900–2008 timespan of the study.

From 1900 to 2008, the nation's aquifers, decreased by more than twice the volume of water found in Lake Erie, according to the study. The USGS news release noted that the depletion of groundwater has many negative consequences, including land subsidence, reduced well yields and diminished spring and stream flows.

For more information, see the full [USGS news release](#) and the [USGS study](#).

### **TPWD reminds boaters to “clean, drain and dry” to combat zebra mussels**



As Texans head to their favorite lakes this summer, the [Texas Parks and Wildlife Department](#) (TPWD) is urging boaters and anglers to follow their simple “clean, drain and dry” procedure to keep zebra mussels from further expansion in the state.

“Now that water temperatures are getting warmer, zebra mussels are approaching their peak period of reproduction,” said **Brian Van Zee**, TPWD inland fisheries regional director. “The best way to stop zebra mussels is for boaters who operate their vessels on Lakes Texoma, Lewisville or Ray Roberts, to clean, drain and dry their boats before launching into another body of water.”

Zebra mussels became established in Lake Texoma in 2009 and last year were found in Lake Ray Roberts and the Elm Fork of the Trinity River above Lake Lewisville. They can expand their range farther by hitching a ride on boats and trailers that have been immersed in waters where they have established populations, according to TPWD.

“Unfortunately, zebra mussel larvae, called veligers, are not visible to the naked eye,” Van Zee said. “You could be transporting them on your boat and not even know it. This is why it’s particularly important to always clean, drain and dry your boat and gear before heading to another water body.”

For more information on zebra mussels see [texasinvasives.org/zebramussels](http://texasinvasives.org/zebramussels), TPWD’s new [zebra mussels video](#) or the full [TPWD news release](#).

### **Extension offering Weslaco homeowner water conservation program June 29**



To help residents save water now and in the future, the Texas A&M AgriLife Extension Service has partnered with other agencies to provide an educational

program on home water conservation from 9 a.m.–1p.m. **June 29** at the Texas A&M AgriLife Research and Extension Center at Weslaco, 2401 E. Highway 83.

“Hopefully, the severe drought we are currently experiencing will end soon, but according to the National Weather Service, there will be others,” said **Ashley Gregory**, AgriLife Extension assistant for water programs who works for the [Texas Water Resources Institute](#) through the [Arroyo Colorado Watershed Partnership](#). “That coupled with the fact that the Lower Rio Grande Valley’s population is expected to double in the next 40 years means we need to think regionally, and we need to think long-term in conserving water.”

Topics to be covered at the no-cost educational program include indoor water conservation, rainwater collection and landscape design using native plants and soil amendments to help retain moisture. Participants will also be encouraged to take the [40-Gallon Challenge](#), a statewide effort to save 40 gallons of water per day per person, she said.

“We’re excited about this program because we’ll have a professional landscape designer helping participants develop their own master plan for a native landscape, which uses a fraction of the water of traditional landscapes,” Gregory said. “And we’ll have a drawing to give away a rainwater harvesting kit that includes a barrel, 50 feet of gutter and a downspout.”

To help design their own native landscaping, participants are asked to bring the dimensions of their yard and pictures if possible, she said.

“Typically a program like this would cost about \$150 to attend, but thanks to funding from the [Rio Grande Basin Initiative](#), a program of the Texas Water Resources Institute, we are able to offer this amazing program to homeowners at no cost to them,” Gregory said.

Lunch will be provided, but seating is limited. To preregister, contact Gregory at 956.968.5581 or [ahgregory@ag.tamu.edu](mailto:ahgregory@ag.tamu.edu).

### **Pecos River Watershed Protection Plan update meetings set for June 4–5**



Landowners in the Pecos River watershed are invited to participate in discussions on local water quality and updates to the [Pecos River Watershed Protection Plan](#) during a series of upcoming meetings.

Four separate June meetings are scheduled across the watershed to give area landowners ample opportunity to attend, said **Lucas Gregory**, [Texas Water Resources Institute](#) project specialist and Pecos River watershed coordinator. The same information will be covered at each meeting location, he said.

Meeting dates, start times and locations are: **June 4**, 8:30 a.m., Community Hall, 508 S. Oak St., Pecos; **June 4**, 1:30 p.m., Community Center, Allison Ave., Imperial; **June 4**, 6:30 p.m., Civic Center, Alley Oop Lane, Iraan; and **June 5**, 8:30 a.m., AgriLife Extension office in Crockett County, 1301 Ave. AA., Ozona.

In 2008, the Pecos River Watershed Protection Plan was developed and identified needed management activities and needed research that would address deficient dissolved oxygen levels often found in the Pecos River, Gregory said. The current slate of meetings will center on efforts undertaken to determine the causes of low dissolved oxygen and the evaluation of potential remedies for these problems.

“Since 2006, the Pecos River between the Ward II Irrigation Turnout and U.S. Highway 67 has been considered impaired for depressed dissolved oxygen levels,” Gregory said. “Using a computer-based

model, scientists at the Texas Institute of Applied Environmental Research have evaluated potential factors leading to the low dissolved oxygen and also evaluated potential impacts that several hypothetical management measures have on instream dissolved oxygen.”

Gregory said the causes of the low dissolved oxygen, as predicted by the model, and the resulting impacts of evaluated management scenarios, will be discussed at these meetings. Additionally, he said an update of watershed protection plan implementation and implementation needs is being developed.

“The Pecos River WPP Addendum,’ as it’s being called, documents implementation progress made since the watershed protection plan was developed and also provides an opportunity to amend the plan with new information, such as the dissolved oxygen modeling results,” Gregory said.

These meetings will provide a first look at the contents of the addendum and provide an opportunity to discuss other items that should be included as implementation progress or as additional needs identified in the plan, he said.

Gregory said landowner participation is always important, but even more so in these meetings.

“Information will be provided that can be used to make future watershed management decisions, and landowners participating in these discussions will provide guidance on how to use the information discussed,” he said.

Funding and support for the development and implementation of the Pecos River Watershed Protection Plan is provided through a Clean Water Act Nonpoint Source grant from the Texas State Soil and Water Conservation Board and the U.S. Environmental Protection Agency.

For more information contact Gregory at 979.845.7869 or [lfgregory@ag.tamu.edu](mailto:lfgregory@ag.tamu.edu).

## **New Publications / Papers**

### **New Extension publications**

**[Native Grassland Monitoring and Management](#), Blake Alldredge, Larry Redmon, Megan Clayton, James Cathey, Texas A&M AgriLife Extension Service, WF-001, 2013.**

**[Phosphorous Acid Products for Controlling Downy Mildew of Grapes](#), Fritz Westover, Texas A&M AgriLife Extension Service, EHT-012, 2013.**

**[Small Impoundment Management in North America](#), Billy Higginbotham, Michael P. Masser, J. Wesley Neal, David W. Willis, Texas A&M AgriLife Extension Service, WF-002, 2013.**

**[Texas Well Owner Network: Well Owner's Guide to Water Supply](#), Kristine Uhlman, Diane Boellstorff, Mark L. McFarland, Brent Clayton, John W. Smith, Texas A&M AgriLife Extension Service, B-6257, 2013.**

### **New TWRI and IRNR publications**

**[A range-wide survey of the endangered black-capped vireo in Texas](#), T. M. McFarland, H. A. Mathewson, J. E. Groce, M. L. Morrison, R. N. Wilkins, Southeastern Naturalist 12:41-60. 2013.**

[Bacterial Source Tracking to Support the Development and Implementation of Watershed Protection Plans for the Lampasas and Leon Rivers](#), L. Gregory, E. Casarez, J. Truesdale, G. Di Giovanni, R. Owen, J. Wolfe, TR-442, 2013.

[Bacterial Source Tracking to Support the Development and Implementation of Watershed Protection Plans for the Lampasas and Leon Rivers](#), L. Gregory, E. Casarez, J. Truesdale, G. Di Giovanni, R. Owen, J. Wolfe, TR-441, 2013.

[Soil & Water Assessment Tool Input/Output Documentation Version 2012](#), J. Arnold, J. Kiniry, R. Srinivasan, J. Williams, E. Haney, S. Neitsch, TR-439, 2013.

[Status of the freshwater mussel \(Unionidae\) communities of the mainstem of the Leon River, Texas](#), C.R. Randklev, M.S. Johnson, E.T. Tsakiris, J. Groce, N. Wilkins, Aquatic Conservation: Marine and Freshwater Ecosystems. DOI: 10.1002/aqc.2340. 2013.

### Natural Resources Training Courses

<a href="#"><u>Texas Riparian &amp; Stream Ecosystem Workshop, Lockhart</u></a>	<b>June 25</b>
<a href="#"><u>Introduction to ArcGIS 10</u></a>	<b>July 17-18</b>
<a href="#"><u>Social Media 101-Raising Stakeholder Awareness in an Information Age</u></a>	<b>July 18</b>
<a href="#"><u>Introduction to ArcGIS 10</u></a>	<b>Oct 8-9</b>

### Newly Awarded TWRI/IRNR Projects

#### Relocation Plan for the Inspection of the Beck Branch Gravity Sewer Crossing at Rowlett Creek

The North Texas Municipal Water District (NTMWD) is performing an analysis of the 39" Beck Branch Gravity Sewer crossing at Rowlett Creek. The crossing is located in Breckenridge Park in Richardson, TX. As part of the inspection process, cofferdams will be used to dewater portions of the creek within the propose project area. Generally, freshwater mussels are intolerant of emersion, especially for prolonged periods of time. Because of this a presence/absence survey was performed at this location to determine if state-threatened freshwater mussels were present up or downstream of the crossing. No live unionid mussels or shell material were observed within the area surveyed. However, unionid mussels can be difficult to locate so there is a possibility that live individuals were overlooked during the survey. Therefore, a relocation plan is needed in the event that state-listed mussel species are observed following dewatering of the proposed project.