



Panhandle Water News

APRIL 2011

District Begins New Program for Conserving

Panhandle Groundwater Conservation District (PGCD) is excited to introduce a new cooperator program, More Crop for the Drop, this spring that will research a new way to conserve water when irrigating. More Crop for the Drop will use innovative soil moisture sensing technology. Measuring soil moisture is important in agriculture to help farmers manage their irrigation systems more efficiently, which in turn will help to save water. Producers in our District are constantly looking for better ways to manage their resources,

and this program will not only lend a hand in water conservation, but also help to increase yields and the quality of the crop by better management of soil moisture during critical plant growth stages.

Irrigation Engineer Leon New will be working closely with producers to grow corn and cotton on reduced irrigation guided by soil moisture sensor technology. Probes are placed to a depth of 60 inches with 15 sensors in each probe. The data is then sent via telemetry technology and viewed on the internet. The readings will

be used to monitor water in the profile at various stages of plant development. Stressing plants at the right time can aid root growth. Once crops are established, soil moisture sensors help ensure that they are receiving timely irrigation. Soil moisture technology allows producers to better manage time, fuel, fertilizer and water. In addition, it aids in avoiding what many growers refer to as a water penalty which occurs when too much water is given to a plant at the wrong time resulting in lost production.

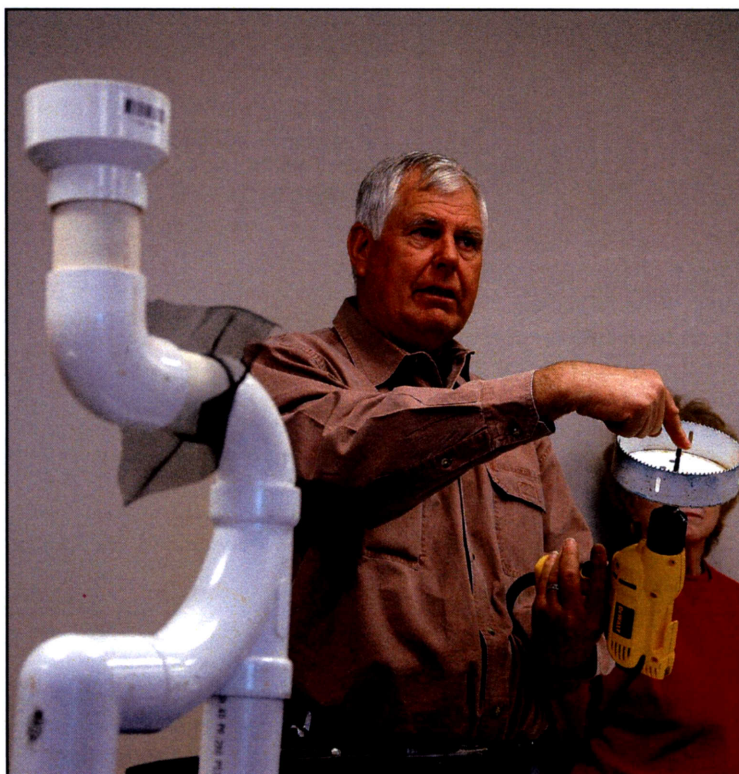
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AgriLife Extension Water Harvesting Workshop

Area residents gathered at the Potter County AgriLife Extension office on Saturday, March 12 to meet rainwater harvesting expert Billy Kniffen and learn about passive and active water collection and water issues facing the Texas Panhandle. Rainwater harvesting, the accumulation and storage of rainwater for reuse, was once a method of survival for early Texas settlers. As our population grows and our supply of freshwater dwindles, it is increasingly important to take full advantage of our annual rainfall.

In an informative and amusing presentation, Billy shared his personal experiences with rainwater harvesting. When he and his wife decided to build their dream house in a remote location, they discovered that their property had no groundwater beneath it. Not letting that

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Rainwater harvesting expert Billy Kniffen teaches a class on how to build a rainwater harvesting container at the AgriLife Extension Office.

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Rainwater harvesting expert Billy Kniffen helps a student build a rainwater harvesting barrel at the AgriLife Extension Office Water Harvesting Workshop in Amarillo.

deter them, they built their house and installed five 3,000 gallon water tanks to collect the rainwater that came off their 4,900 square foot roof. Using the simple equation of 0.6 gallons of water per square foot of roof in a 1-inch rain, Billy estimated that they capture about 2,900 gallons of water for every inch of rain. With their annual rainfall of about 25 inches, they collect roughly 72,500 gallons of water a year which is more than enough to sustain them. Incredibly conscious of their water use, the Kniffens each use only 35 gallons of water per day compared to the average Texan's water use of 167 gallons per day.

Rainwater can easily be collected and used for landscaping. In addition to reducing the demand on municipal water supply, it also saves money by reducing water bills. Storage devices do not have to be elaborate and can range from recycled 55-gallon barrels to steel drums. Billy even had pictures of horse troughs that had been converted into collection vessels.

While there is flexibility on the container, there are some safety guidelines to follow. First of all, the barrel should be secured to prevent tipping. Secondly, window screens should cover all openings to prevent mosquitoes from entering and breeding. Finally, the barrel should be clearly marked that the water is NOT safe to drink. Many communities do rely on rainwater for drinking water; however, it is filtered and disinfected first.

The workshop culminated in a hands-on demonstration of how to build a rainwater harvesting barrel. Boyd's in Amarillo provided barrels for the participants and each person was able to take one home. As Billy jokingly warns that rainwater harvesting is addictive, the barrels were constructed so that they could be easily connected to another barrel.

If you are interested in learning more about rainwater harvesting, please visit the Texas AgriLife Extension Service's website at <http://rainwaterharvesting.tamu.edu/> or contact our office at 806-883-2501.

Driller's Info Meeting Held

On February 18, Panhandle Groundwater Conservation District (PGCD) hosted an informational meeting for area water well drillers. This meeting provided a great opportunity for PGCD to discuss many topics about the groundwater district with the drillers, and also stressed the importance of the driller's practices to PGCD's operations.

PGCD's General Manager C.E. Williams began the meeting by welcoming all the drillers in attendance, explaining the District's goals concerning groundwater, and emphasized the need for team work between the drillers, landowners and PGCD when drilling a new water well. In the past the only requirement for drilling a well was to meet the District's spacing requirements; however, since 2004 in addition to meeting spacing rules all permits are given a one acre-foot per contiguous acre allotment, and a meter is required if the well produces more than 265 gpm.

Later in the presentation, Permitting Clerk Anita Haiduk went over the current registration and permitting rules, and clarified that PGCD will be requiring landowner signatures on all permitting applications. A driller will only be able to sign a permitting form if the driller possesses a power of attorney from the landowner. In addition to the current permitting rules, Haiduk also provided information on well configuration for meters. Since March 24, 2010, all new wells drilled must be constructed with a sufficient run of 10 pipe diameters upstream and five pipe diameters downstream of the meter. This rule was put in effect to allow enough space for the meter to be installed correctly and read accurately.

After discussing the importance of the District's rules when drilling a well PGCD Hydrologist Amy Crowell focused on how the technical information from the logs provided by the drillers is used. Well logs are used to pick redbed depths, which are used to make a saturated thickness map, which in turn is used to evaluate depletion, and excessive decline can result in production limitations. The logs are also used to evaluate formation to determine the type of aquifer or aquifers the well is drilled in. The information on the well logs plays an essential role in determining the characteristics of the District, and information including color, texture of formation, water level, water use and correct location that is notated on the logs is helpful.

The meeting concluded with lunch, and PGCD provided a packet of information to the drillers for a quick reference guide. If you have any questions regarding permitting please contact PGCD at (806) 883-2501. Thanks to all the drillers in attendance, and thank you for your future cooperation on permitting within the district.

Ag Loan Money Still Available

In 1992, Panhandle Groundwater Conservation District (PGCD) began its agricultural loan program to assist qualifying farmers in financing their irrigation sprinklers. Since then, loans totaling \$6,913,864 have been disbursed. In 2011 alone, PGCD has approved funding for seven loans totaling \$705,000 leaving another \$300,000 available. With an unprecedented low interest rate of 1.3% and a payback term of eight years, interested applicants are encouraged to download an application on our website at www.pgcd.us or contact our office at (806) 883-2501.

Antigone Club Presentation on Xeriscape and Water Harvesting

Each year, our staff visits over 50 schools and attends numerous water festivals and agriculture fairs to deliver presentations on groundwater conservation. On Monday, March 7, Joy Shadid attended the Antigone Club meeting at the home of Mariah Mills in Panhandle and spoke about efficiently using water in our homes and gardens. With a dozen ladies in attendance, the presentation included information on xeriscaping and rainwater harvesting.

Xeriscaping received its name in Denver, Colorado after the Greek word *xeros* meaning “dry” and refers to landscaping and gardening in ways that reduce or eliminate the need for supplemental water from irrigation. It requires choosing the appropriate plants for the location. The following are benefits of xeriscape gardening:

- Lower water bills
- More water available for other uses and people
- Less time and work needed for maintenance
- Little or no lawn mowing
- Increased habitat for native bees, butterflies and other fauna

Using rainwater harvesting, one can practically eliminate the need to use municipal water for gardening resulting not only in water conservation, but also in substantial savings to

your pocketbook.

Panhandle Groundwater Conservation District created a xeriscape plant guide complete with plant height, spread, watering information and pictures to help area residents plan their summer gardens. The brochure and a lawn gauge were given as a gift to each member. Lawn gauges measure the amount of water a yard receives from sprinklers, watering and rainfall. Most grasses and plants need only 1 inch of water per week to thrive in our climate.

To ensure that your plants are receiving the greatest benefits from your watering efforts:

- Water in the early morning or evening to prevent the evaporation of water.
- Routinely check sprinkler heads to keep their aim over your yard and prevent watering of the sidewalk or street.
- Avoid watering on windy days.
- Use a soaker hose to water flowerbeds, shrubs and trees.

Visit your local plant and garden center to pick up your free lawn gauge and plant guide. If your group is interested in learning more, please call Joy Shadid at (806) 883-2501 to arrange a presentation.

Ogallala Commons Hosted Conservation Education Day

Ogallala Commons held a Conservation Education Day on March 1 at the Southwest Branch of the Amarillo Public Library. Educators and landowners attended to learn more about playas and their role in our lives.

Approximately 19,300 playas are found in the Texas High Plains and they serve as the primary source of water recharge to the Ogallala Aquifer. Darryl Birkenfeld, Executive Director of Ogallala Commons, explained that playas are shaped more like a plate than a bowl. With gradually sloping sides and a flat center, playas are generally 1-3 feet deep and, when prop-

erly cared for, can provide a wonderful habitat for flora and fauna.

As a result of poor farming and grazing practices and increased road construction, the playas have sustained extensive damage. Landowners had the opportunity to visit with Manuel De Leon from the United States Department of Agriculture Natural Resources Conservation Service (NRCS) who explained conservation methods in relation to farming. The NRCS offers varying levels of assistance to landowners including technical support and conservation planning.

Ogallala Commons is a nonprofit community development network, offering leadership and education to reinvigorate the commonwealth that forms the basis of all communities. They offer playa festivals to area 5th graders that include hands-on demonstrations and field trips so students are able to learn about playas, the water cycle, the Ogallala Aquifer and wastewater management. If you are interested in coordinating a festival, please contact Darryl Birkenfeld at (806) 945-2255 or visit www.ogallalacommons.org.



A wet playa East of Brownfield, TX. Photo by Ogallala Commons.

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Cooperating producers are being asked to set a goal of only 15 inches per irrigated acre for corn and eight inches per irrigated acre for cotton. These irrigation reduction allotments will be used on sample plots throughout the district. By spreading out the data collection, we hope to better investigate how soil moisture sensor technology influences production capabilities in areas with varied soil characteristics, rainfall and groundwater production rates.

PGCD looks forward to working with our cooperators on this trial. Watch future newsletters for the results of this and other district programs.

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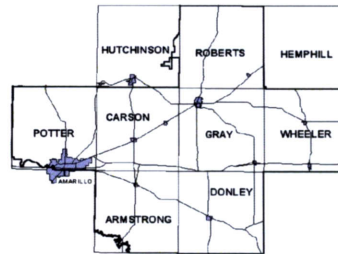
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Joy Shadid New PR Coordinator



After 11 years in Los Angeles, Joy Shadid has returned to the Texas Panhandle and is now the public relations and education coordinator for the Panhandle Groundwater Conservation District (PGCD). Joy spent a number of years working in the entertainment field before transitioning into non-profit public relations and business development. Most recently, she worked in development for Hilton Hotels Corporation's luxury and lifestyle department in Beverly Hills.

Joy grew up in Panhandle and graduated from the University of North Texas in Denton with a major in Radio, Television and Film. As the daughter of local farmers Bill and Venita Gray, Joy learned the value of water early in life and has always been passionate about advocating for conservation. She is thrilled to be a part of the PGCD team and is looking forward to working with our community to protect and conserve our precious water supply.

Joy and her husband Corby reside in Panhandle with their dog Twain.

**14th World Lake Conference
Austin, Texas
31 October - 4 November 2011**



The International Lake Environment Committee and the River Systems Institute are co-sponsoring the 14th annual conference.

The focus, titled Lakes, Rivers, Groundwater, and Coastal Areas: Understanding Linkages, is on lake and reservoir systems and their hydrological linkages to upstream and downstream river systems. Organizers have designed the conference to provide an interactive international forum for the exchange of knowledge and experiences related to lakes and the water systems that support them.

Call for Abstracts: Presentations consistent with the theme and objectives are welcomed and invited. The authors of selected presentations also will be invited to submit for possible publications in the ILEC Journal, Lakes and Reservoirs: Research and Management.

Visit www.wlc14.org for more information.