

North Plains Water News



A Publication of the NORTH PLAINS GROUNDWATER CONSERVATION DISTRICT

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SUMMER 2009

District Drills Monitor Wells in the National Grasslands

The District's dedicated monitor well network continues to grow as drilling progresses on the USDA Forest Service's Kiowa and Rita Blanca National Grasslands in Dallam County. The wells are part of a larger project that will add new wells to the District's aquifer monitoring network. The USDA has authorized the District to drill up to eleven wells in the Grasslands. The first two monitor wells that have been drilled to date are currently being analyzed by the District staff to plan well construction on the remaining nine well sites.

The District uses the information gathered from the monitor wells to assess the groundwater conditions in the Ogallala aquifer, and also now in the Dockum formation. Though the District

staff anticipates that groundwater production in the Grasslands will not substantially increase in the future, the amount of groundwater under the Grasslands will impact aquifer conditions and future production south and east of the area. The Grasslands drilling project should be completed by December of 2010.

There are now four dedicated monitor wells in Lipscomb County, two in Ochiltree County, one in Hansford County, two in Sherman County, four in Moore County, four in Hartley County, and seven in Dallam County. The District will continue to monitor close to 500 other wells each year for data collection.

The Hydrology Atlas and associated maps are available for

download on the District website at www.npwd.org by clicking on the link for "hydrology". The atlases are also

available free of charge in the District offices at 603 East 1st Street in Dumas.



District Board and Staff Attend Red River Basin Advisory Committee Meeting

Bob Zimmer, District Board Vice President, recently represented the District at the annual Red River Basin Advisory Committee meeting in Amarillo. Also in attendance were Dale Hallmark, District hydrologist, and Rhonda Artho, Education & Public Relations Coordinator. The Red River

Authority of Texas (RRA) partners with the Texas Commission on Environmental Quality (TCEQ) to ensure that the Texas Clean Rivers Act is carried out for the Canadian and Red River Basins in Texas. The Texas Clean Rivers Act requires basin-wide water quality assessments for each river basin in the state, and

part of the monitoring and water quality decision-making process involves informing other agencies and groups of the work being carried out by the RRA at Advisory Committee meetings such as this one.

Natalie Bell, the Texas Clean Rivers Program project manager, presented updates from the Texas Commission on Environmental Quality on the Clean Rivers Program and its progress in Texas.

David Holub, RRA Environmental Specialist, presented the Draft 2009 Basin Summary Report. This annual report documents current characteristics of the Canadian and Red River Basins, as well as water quality reviews for each of five reaches of both rivers. The agency also publishes information on public involvement in the maintenance and improvement of water quality along both rivers, including conferences, education events and website updates.

Scott Burns, another Environmental Specialist with the RRA, spoke about current monitoring activities and recommendations for FY 2010.

Phyllis Dyer, a research assistant with Texas AgriLife Research Center,

presented a program on the watershed protection plan for Buck Creek. Her work involves identifying fecal contamination in the watershed by matching the DNA to known animal species. Her data enables scientists to determine if fecal contamination in a particular stretch of the creek is due to birds, feral hogs, domestic hogs, deer, cattle, horses, etc. This will aid researchers in managing contamination problems from wildlife populations and domestic animal operations.

Chad Pernell, Deputy General Manager of the Canadian River Municipal Water Authority (CRMWA) provided a progress report on Lake Meredith Salt Cedar Eradication Program, and plans for continuing the program into the future. It is hoped that the eradication of the invasive, non-native salt cedars will increase flow into Lake Meredith, as the cedars are known to absorb large quantities of water and release it into the air. Areas that have been treated for salt cedar are showing recovery with native species such as cottonwoods and willows moving back into the areas that the salt cedar had overtaken.



State Rainwater Harvesting Expert Gives Presentation in Dumas

In March, the District hosted a class on rainwater harvesting for the public as part of the District's conservation education program. Billy Kniffen, Rainwater Harvesting Specialist with Texas AgriLife Extension, presented the class. He travels around the state of Texas assisting in the installation of rainwater harvesting systems for individuals and businesses. Mr. Kniffen, who lives in Menard County, Texas has also built his own rainwater harvesting system which is the only source of fresh water for his home.

The thought of getting a significant amount of water from rainwater harvesting is often met with skepticism from Panhandle residents, but Mr. Kniffen presented information

that shows that 6/10 of a gallon of water can be obtained from every square foot of roof during a 1 inch rain. This is sufficient to provide a supplemental source of water for landscaping, and for larger roof surfaces, such as barns and gymnasiums, the amount of water harvested can be very significant. Mr. Kniffen has worked on the installation of many rainwater harvesting systems that provide water for landscaping, toilets, showers, etc, at schools and public businesses.

Anyone interested in obtaining more information on rainwater harvesting & what is involved in putting in a rain barrel or a larger system can contact the District office at 806-935-6401 to request materials.



Water Efficiently for Smart Irrigation Month!

Did you know that one-third of the water Americans use daily is used to irrigate lawns, water gardens, and maintain landscaping? More alarming, up to fifty percent of that water goes to waste due to overwatering, runoff, and evaporation. With a few simple steps, we can significantly reduce the amount of water we use--and waste--on our lawns and gardens without compromising their health or appearance. July is Smart Irrigation Month, and EPA is encouraging homeowners across the country to take a closer look at their outdoor water use. There are several simple steps you can take to save water and money such as planting native plants, properly applying mulch, avoiding watering driveways and sidewalks, utilizing micro-irrigation (such as soaker hoses), and in-ground sprinkler systems. For more information on watering efficiently, and information on WaterSense irrigation partners, visit <http://www.epa.gov/watersense/sim/index.htm>.

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District Sells Airplane Hangar to Moore County

The District's Board of Directors recently approved the sale of the District's aircraft hangar at the Moore County Airport to Moore County. Moore County plans to lease the hangar an airplane mechanic. Moore County airport manager, Brandon Cox, states that the lease of the hangar to a licensed mechanic will bring more business into both the airport and the community. The airport is currently undergoing major improvements to make it more useable for larger company jets that now have to land in Amarillo.

The hangar, which housed the District's cloud seeding plane when District conducted the Weather Modification Program has set idle since 2006. In 2006, the District discontinued the program and sold its aircraft and other equipment and the

District's Board directed that proceeds from the sale of the aircraft, equipment and the hangar be used to construct and equip water level monitor wells throughout the District. The dedicated monitor wells will give a more accurate picture of the condition of the Ogallala and Dockum aquifers, and will allow the Board to make decisions based on accurate scientific data being collected from the monitor well network. Steve Walthour, the District's General Manager, says the sale was a win-win situation for the District and Moore County. The District can direct the funds for studying the Ogallala and Dockum aquifers while the County gets a very nice aircraft hangar that will enhance the County's airport operations.



District General Manager, Steve Walthour, looks on as Moore County Judge Rowdy Rhoades presents a check for the airport hangar to Director Harold Grall.

Save Water This Summer on Your Utility Bills

Did you know that the average U.S. household throws hundreds of dollars down the drain each year – in water? It's very easy to cut your consumption, however, by implementing the following steps.

1. Give your faucets a tune-up – Most faucets are fitted with aerators – tiny screens that screw over the opening to cut water flow. Trouble is, older models still let a lot through – three to four gallons a minute! A 50-cent replacement could slash your water usage in half!
2. Check for sneaky toilet leaks – Put a few drops of food coloring in the toilet tank, and if the color appears in the bowl within 30 minutes (don't flush), a leaky seal could be wasting 100 gallons or more a week! The simple fix: an easy-to-install replacement (ask for a "flapper valve") that costs just a couple of dollars.
3. Skip the "permanent press" setting on your washing machine! It uses five gallons more water per load than the regular cycle, thanks to the extra rinse cycle that is unnecessary for most clothes.
4. Follow the pencil rule! When you need to wash dishes or rinse fruit and veggies, you keep the water flowing – but if you have it running full blast, it is estimated that a gallon goes to waste each minute. Instead, restrict the stream to just the width of a pencil. You'll still have enough water to get the job done, but by not having an all-out deluge, you'll save a bundle!

Tips from Women's World Magazine

Perryton “Make a Splash” Festival a Success Despite Blizzard

The late blizzard of 2009 forced a cancellation of the scheduled Water Festival held in Perryton each year, but Frank Phillips College was kind enough to host it the following week instead. The Festival, sponsored by North Plains Groundwater Conservation District (NPGCD) and Frank Phillips College Allen Campus (FPC) each year, draws students from multiple school districts in the Eastern Panhandle.



Schools in attendance this year were Perryton, Higgins, and Follett. In all, there were approximately 210 students at this year’s festival. The students spend a day learning about the natural resources of the Texas Panhandle, including water, and also learn about their role in being good stewards of those resources for the future.

Activities presented at the festival include:

1. What’s In My Water? (NPGCD & FPC) – Explanation of water quality testing done by NPGCD, and students participated in testing water samples for nine different contaminants
2. WeAllLiveDownstream- (NPGCD & FPC) – using the Enviroscape Model, students w learned about point source and nonpoint source pollution as they added pollutants to a watershed and then “rained” on it to discover the effects of the pollution. Students also learned about their local watershed where they live.
3. The Incredible Journey – (Texas AgriLife Extension Ochiltree County & FPC) – Students became water droplets in the water cycle as they threw giant dice to see where in the water cycle they would go next. Students made a colored bead bracelet that shows where they went on their journey, and will follow up back at school with a creative writing exercise describing their trip.
4. Texas Parks & Wildlife Fisheries – (TPW Fisheries) – while viewing a boat used in the work of the fisheries department, students learned about fish in Texas and how the state works to maintain healthy populations in Texas lakes and rivers.
5. Aquatic Artwork – (NPGCD & FPC) - Students listened to music with background sounds of water and birds, and imagined what they were hearing and then drew it.
6. Panhandle Soils – (Ochiltree County NRCS) – students learned about soils as a natural resource and how important it is to protect the soil for the environment.
7. Water Jeopardy – (FPC) - two classrooms competed in a classic jeopardy style game to answer questions worth increasing amounts of water. The team with the most water at the end of the game received a Jeopardy Champion Certificate
8. The No-Know Game- (FPC) – students competed in a board game that stresses good vs. bad decisions that can affect their water resources as they worked their way around a game board.
9. Macroinvertebrate Mayhem – (NPGCD & FPC) a fast-paced race as students played the roles of differentaquaticmacroinvertebrates in an ecosystem with environmental stressors. Students learned that some species are more tolerant of ecosystem stressors than others and that the populations of different organisms can be an indicator of water quality.
10. H2O Olympics – (FPC) student teams competed in an Olympics style activity as they learned about the properties of water. Students competed in activities such as

floating the largest number of paperclips on a cup of water, getting the most drops of water on a penny, and trying to get the most pennies into a cup of water without making it overflow.

11. Water History Trunk – (NPGCD) – Students took a journey back in time as they opened up a mysterious trunk with unfamiliar objects inside. While trying to identify the objects and their purposes, students looked at pictures of ways in which early settlers here in the Panhandle used water compared to how we use it now. Students became familiar with objects such as ice tongs and ice signs, washboards and wash tubs, water bags, and the development of the ability to pump groundwater with windmills, and later electric motors.

The festival is one of two that are held each year by North Plains Groundwater Conservation District. Unfortunately, the Dumas Festival, to have been held on May 7, had to be cancelled for this year due to the worry about bringing 450 students together for such an event in light of the possibility of flu transmission. Both festivals should be held again in 2010.

Any school, whether public or private, or home school group who might be interested in attending one of the water festivals may contact Rhonda Artho, Education & Public Relations Coordinator, at 806-935-6401 or at artho@npwd.org.



Water IQ Teaches Texans to Conserve

Based on current population projections in the 2007 state water plan, “Water for Texas 2007,” about 85 percent of the state’s projected population will not have enough water by 2060 in drought conditions. Water conservation is critical for meeting the state’s long-term water needs.

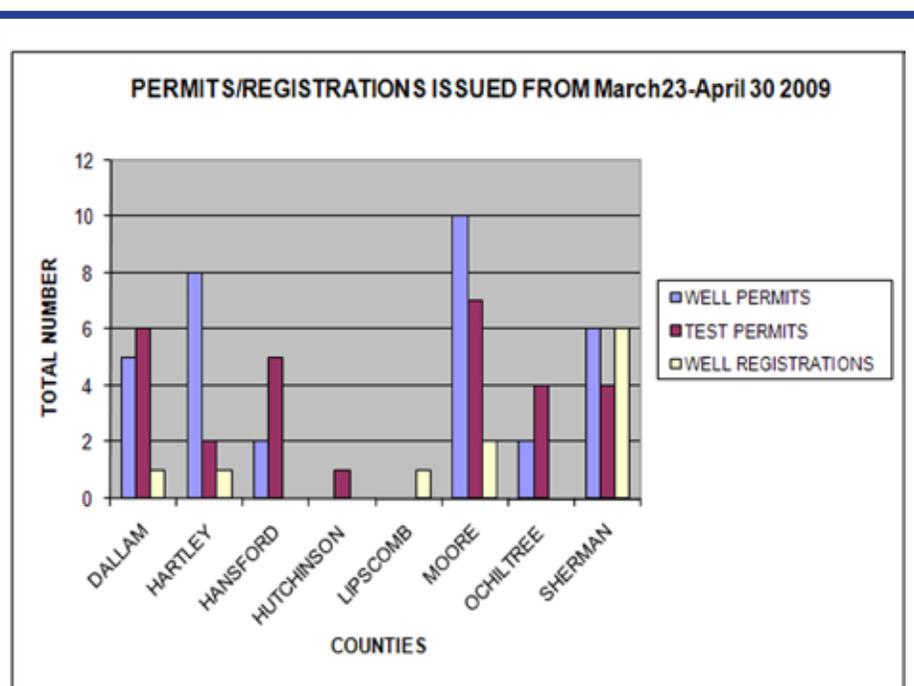
The “Water IQ” statewide public awareness program teaches Texans the importance of water conservation. Managed by the Texas Water Development Board (TWDB), Water IQ provides information on water-efficient practices, raises awareness about the importance of water conservation, and

helps Texans use less water.

North Plains Groundwater Conservation District is joining in the public awareness program by promoting the Water IQ materials at all educational events and through press releases to local media throughout the coming year. In addition, the District will promote the use of the Water IQ curriculum materials in middle schools throughout the District.

The District will begin holding “Test Your Well” events in towns throughout the District this summer where well-owners can bring in samples of their well water for free water quality testing. The Water IQ materials will be displayed prominently at all of these events to encourage well-owners and others to consider not only protection of their wells, but ways to conserve the groundwater that they rely on as well.

Individuals who wish to find out more about the water conservation tips and materials available through the TWDB may now find that material through a link on the District’s website at www.npwd.org.



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“Gardening in a Dry Climate” Class Provides Attendees with Information on Plant Selections and Water Conservation

Angie Hanna, gardening consultant and teacher, recently taught the annual “Gardening in a Dry Climate” class at the District offices. Angie maintains an informational website for Panhandle gardeners at www.highplainsgardening.com, and is considered a local expert in garden design and plant selection.

The theme of Angie’s presentation was “Gardening in Harmony” – Creating Organic Home Landscapes. Through the introduction of beneficial microbial life and the addition of organic matter, soils can be very healthy environments for plants and less chemical intervention will be needed.

The six principles of “gardening in harmony” that she presented to the class were:

1. Always use the best-adapted varieties for each environment.
2. Plant in the preferred season.
3. Balance the mineral content of the soil.
4. Build and maintain the soil organic content – humus.
5. Do nothing to harm the beneficial soil life.
6. Consider troublesome insects and diseases as symptoms of one of the above rules having been violated.

In addition, she addressed the seven basic principles of xeriscaping, or using plants adapted to dryer conditions to produce a beautiful landscape that conserves water and is lower maintenance. The seven principles are:

1. Plan and design
2. Analyze and amend the soil
3. Create practical turf areas
4. Choose appropriate plants
5. Efficient irrigation
6. Use mulch.
7. Practice appropriate maintenance.

Angie states that these two sets of principles are *the most powerful tool* in the gardener’s toolkit. From these principles, the home gardener will be able to create beautifully thriving gardens that are low maintenance, low water-use, and of course, ecologically friendly.

Ecologically friendly means instituting a system of gardening that promotes a diversified ecology; a garden ecology that works within its own garden community to foster not only survival, but also a beautifully, fully functioning

ecosystem. Once the system is set, the soil food web, in place, macro and microorganisms above and below ground work together to help sustain the garden. These macro and microorganisms are the organisms that give life to the soil. They will do a lot of work for the gardener if given a chance to live and grow.

On her website, www.highplainsgardening.com, she details how to implement these two sets of principles into our High Plains gardens. Our area is unique, just as any other area of the world, and has its own unique set of characteristics that permit certain plants to grow and thrive.

Materials on plant selections for the Panhandle, as well as on topics such as drip irrigation and rainwater harvesting are available through the District office, and can be obtained by calling Rhonda Artho at 806-935-6401 or e-mailing to artho@npwd.org. District staff are also available to conduct individual presentations on water conserving landscape methods for our area.



The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased, and not impaired, in value.

Theodore Roosevelt

Groundwater Production Reporting for 2008 Nearing Completion

The numbers are rising on the number of groundwater production reports being entered into the District’s databases for the 2008 production year. To date, 96% of the 2455 well owners required to report have successfully completed that task. The District is very pleased with these numbers and the data will provide invaluable information for planning for the protection of the groundwater resources of the District into the future.

There were, however, some late filers, and only 94.3% of the reports were filed before the March 1 deadline. 2 %, or 51 of the well owners filed their paperwork late.

There were 2.7 % (69 total) of the 2455 well owners who chose not to file their production reports, and the District is now pursuing action against those well owners by requiring fines along with the missing paperwork. Those who have not filed their 2008 annual reports will be receiving a letter from the District outlining their fines and the deadline for payment.