

North Plains Water News



A Publication of the NORTH PLAINS GROUNDWATER CONSERVATION DISTRICT

VOLUME 58, NO. 1 "Maintaining our way of life through conservation, protection, and preservation of our groundwater resources."

Spring 2012

North Plains GCD to Receive Environmental Excellence Award

DUMAS – The North Plains Groundwater Conservation District has been selected to receive a Texas Environmental Excellence Award (TEEA) for agriculture from Governor Rick Perry and the Texas Commission on Environmental Quality (TCEQ). The award recognizes the District's leadership in agricultural water conservation through its "Reduced Irrigation on Corn Demonstration Project," also known as the "200-12 Project."

Each year, the TEEA honors the state's most outstanding waste reduction and pollution prevention projects. TEEA began in 1993 and is presented in up to nine diverse categories, ranging from youth projects to agriculture. According to the official TEEA website, "By honoring the winners, the TCEQ hopes to encourage other citizens to initiate like-minded projects and reinforce a spirit of environmental stewardship."

The '200-12 Project' is beginning its third year of demonstrating how to achieve new levels of irrigation efficiency and groundwater conservation through a comprehensive resource management system. The system uses tried and true methods, combined with the latest technologies to allow agriculture producers to maintain viable production levels, while leaving water in the ground for

future generations. "The '200-12 Project' strategies are transferrable to other crops," said District General Manager, Steve Walthour. "We believe these strategies could conserve at least 3 inches of water for each irrigated acre." Over the 1,000,000 acres of irrigated crops in the North Plains GCD that savings amounts to 250,000 acre feet annually. This potential water savings is enough to supply 125,000 Olympic sized swimming pools, a city the size of Dumas for 88 years, a city the size of Amarillo for six years, or a city the size of San Antonio for one year.

The "200-12 Project" was started by North Plains GCD board members in 2010. They believed the board should lead the way by showing how water use can be reduced, not just creating rules to limit pumping. "We don't want to tell farmers what to grow. What we want to do is demonstrate conservation that can apply to a variety of the District's irrigated crops," said Bob Zimmer, North Plains GCD Board President. The board believed so strongly in this idea that in the first year, three of the board members risked their own acres with no financial protection from potential yield losses provided by the program. In 2011, five



Videographer, Kyle Cockayne, shoots video of LESA (Low Elevation Spray Application) on high corn residue as part of a video commissioned by TCEQ to recognize the District's award winning "200-12 Reduced Irrigation on Corn Project."

more cooperators joined the original board members and the Texas Water Development Board accepted an invitation to provide funding for the project.

Later in 2011, the project gained federal funding jointly with the Texas Alliance for Water Conservation project in the South Plains, through the NRCS-ARS Conservation Innovation Grant program. As a result of the additional funding, the "200-12 Project" has expanded

from three demonstration sites in 2010 to a total of 12 sites for 2012. The project is designed as a five-year demonstration to be completed in the 2014 growing season.

Representatives from the District will receive the award along with other TEEA recipients during a banquet in Austin on May 2. The awards banquet is part of the TCEQ Environmental Trade Fair and Conference.

Lipscomb Director Election Set for May 12th General Election

Only the incumbent Director in Precinct 7, Lipscomb County will have an opponent in the May 12th general election. The polling place for the election is the Darrouzett Senior Center, 217 Main Street, Darrouzett, TX. The polls will be open from 7 am–7 pm. Early voting in person will be Monday, April 30th – Tuesday, May, 8th at the City of Darrouzett, 111 West Texas Street, Darrouzett. Applications for ballot by mail may be mailed to:

Pauletta Rhoades, Finance and
Administration Coordinator
North Plains Groundwater Conservation
District
P.O. Box 795
Dumas, Texas 79029-0795.

Applications for ballot by mail must be received no later than the close of business on Friday, May 4, 2012.

In the March board meeting, the board ratified the notice for general election for the election of board members on May 12, 2012. The Director positions for Precinct 5, Hansford and Hutchinson Counties; Precinct 6, Ochiltree County; and Precinct 7, Lipscomb County were up for election in 2012. Because there was no opposition for the Precinct 5 and Precinct 6 races, the board cancelled those elections and the incumbent Directors for Precinct 5, Hansford and Hutchinson Counties; and Precinct 6, Ochiltree County will serve another term.



In memory of a true servant...

James Roland Wheat, age 94, of Higgins, Texas and Ocala, Florida passed away on Sunday, April 8, 2012 in Ocala, Florida. As one of his many acts of service, Roland was the Lipscomb County Director for the North Plains

Groundwater Conservation District from 1993 until 2000. Roland was born in Higgins, Texas on March 19, 1918 to James Washington and Effie Harris Wheat.

He attended Higgins school, graduated in 1936, and joined the Army Air Corps during World War II. He piloted a B-17, bombing German ball bearing factories. In June 1944 1st Lt. Wheat was forced to ditch his plane in the North Sea off the coast of England. Roland maintained control of his plane long enough for every crew member to be rescued without injury. He flew 30 missions in 100 days. Roland received the Distinguished Service Award from the 379th Bombardment Group. He was inducted in the Panhandle Veterans Hall of Fame at Pampa, Texas in 1999. The ceremony was conducted by General Paul Tibbets who was the pilot of the "Enola Gay".

Water Quality Program Gets Boost from USGS

Stakeholders in the northern Panhandle of Texas are aware that groundwater resources are limited. However, the quality of the resource may sometimes be taken for granted, or overlooked.

Since the quality of the groundwater may impact its suitability for certain uses in the future, the North Plains GCD is moving forward to improve the knowledge of water quality in the northern Panhandle portion of the Ogallala. The board recently approved an agreement to perform a comprehensive water quality study of the District in cooperation with the United States Geological Survey (USGS). The study is planned for three years and is designed to enhance the District's current water quality program.



District personnel take baseline samples of groundwater from the Ogallala in the North Plains GCD in preparation for the USGS crews.

The USGS was created by an act of Congress in 1879 and is the only science agency of the Department of the Interior. According to the USGS official website, the mission of the USGS is to "... serve the nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life." USGS employs 10,000 scientists and professionals from diverse fields to address some of our nation's greatest natural resource concerns.

"The USGS will bring a level of professionalism and credibility to the water quality program that will lay a solid scientific foundation for District personnel to build on in the years to come," said Dale Hallmark, Assistant General Manager/Hydrologist. According to Hallmark, the study will establish a scientific water quality baseline by performing extensive testing on samples taken from about 30 existing monitor wells drilled by the District.



USGS crew takes multiple readings per hour until the turbidity and conductivity levels in each well stabilize for accurate quality measurements.

The samples will all be analyzed by the USGS National Water Quality Laboratory (NWQL) in Denver, CO, and the USGS Organic Geochemistry Research Laboratory (OGRL) in Lawrence, KS. Because water quality data for the Ogallala in the Texas Panhandle is limited, the USGS will benefit by expanding their water quality database for the region.

2011 "200-12 Project" Report Available

The final results for the second full year of the "200-12 Project" are compiled and available to the public. 2011 was a difficult year for the participants in the Project as it was for producers across the state. Nevertheless, some valuable data was collected concerning water use efficiency under some of the most extreme drought conditions in history.

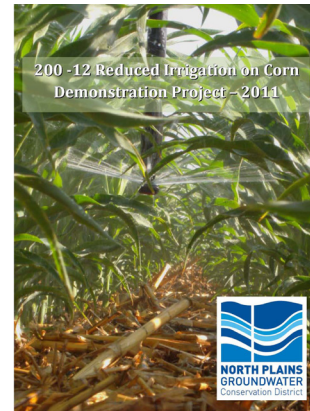
The "200-12 Project" began in 2010 as a five-year, commercial-scale, field demonstration project with a goal to produce 200 bushels of corn on 12 inches or 325,851 gallons of irrigation water per acre. The premise is based on the average annual rainfall of the region of approximately 12 inches, combined with 6 inches of soil moisture and 12 inches of irrigation to produce a total of approximately 30 inches of water available for the crop. The District believes the demonstrations will show that reducing irrigation by six inches under normal growing conditions can be reasonably accomplished. The idea is to

show how the use of new technologies combined with tried and true practices allow producers to reduce groundwater use and remain profitable and financially viable with restricted and diminishing groundwater resources.

The District has been awarded the Texas Water Conservation Advisory Council's Blue Legacy Award in Agriculture and will receive the Texas Environmental Excellence Award for Agriculture from the Texas Commission on Environmental Quality in May. Because of

the District's demonstrated focus in agriculture water conservation, the USDA and the Texas Water Development Board are both participating in our water conservation demonstration program.

For copies of the report you may contact the office at 806-935-6401, or find it under the "education" tab at www.northplainsgcd.org.



Texas AgriLife and District Join Forces on "EPIC" Project

AMARILLO – Reducing irrigation can actually improve economics when growing corn. Not only does it save water, but it can improve production in some cases, according to Nich Kenny, a Texas AgriLife Extension Service irrigation specialist in Amarillo.

Last summer Kenny, along with AgriLife Extension agents in five counties, cooperated on the "Efficient Profitable Irrigation in Corn" or EPIC project, as it is known to producers. The project is a result demonstration effort conducted by AgriLife Extension and funded primarily by the North Plains Groundwater Conservation District.

The premise behind EPIC is to manage irrigation water for maximized water efficiency, he said. The project is targeting corn producers who historically employ efficient irrigation systems and solid agricultural practices in a production strategy focused on maximized yields.

"There's a tapering-off point in the relationship of production and water applied," Kenny said. "Yield will increase with each increment of water only up to a point, and then the law of diminishing returns applies."

"Our question was 'If you manage for maximum profitability instead of yield, will you be able to save water?'"

and initially the answer we believe is yes," he said.

This past summer, Kenny and the agents conducted demonstrations with producers in Dallam, Hartley, Hutchinson, Ochiltree and Sherman counties. The Dallam County demonstration was under such extreme drought it could not be completed.

In all the locations, situations were selected where side-by-side plots were used, one as a "control" and the other as the "EPIC" plot. On the EPIC plots, three technologies – AquaSpy, AquaPlanner and Pivotrak - were used to manage the irrigation application without producer knowledge or access to maintain the purity of the control.

The control plot was titled the "legacy" plot and was managed according to the specific producer's standard practice. The EPIC plot was managed with AgriLife Extension inputs based on best management practices and information from management tools, Kenny said.

In all five cooperator plots, corn yields were maintained or increased with a corresponding reduction in irrigation water applied, he said.

The Hartley County producer realized a 3.2 inch reduction in water applied with no change in yield; the

Continued on page 4

Day of Environmental Learning at the Make a Splash Water Festivals

Panhandle fourth graders once again have a chance to learn more about their water resources and other natural resources at a fun-filled day of hands-on learning during the annual "Make a Splash Water Festival" sponsored by North Plains Groundwater Conservation District. More than 800 students and their teachers



Above right photo: The H2O Olympics allows students to explore characteristics of water.

Above photo: Texas Parks and Wildlife gives the kids up-close access to an official TPW Patrol Boat.

are expected to attend this year's three festivals in Dalhart, Dumas and Perryton. Students will have the opportunity to attend nine different interactive presentations during the day to learn more about water and water conservation, as well as aquatic organisms and Panhandle wildlife. By combining hands-on interactive activities with messages relevant to their daily lives, students are able to gain knowledge about the properties, uses, connections and importance of water, and the importance of all of the natural resources that surround them.

"Teaching our young people the importance of their role in caring for our limited natural resources gives them the tools to make informed resource decisions now and in the future," said the District's Assistant General Manager for Outreach, Kirk Welch. According to Welch, a program like this is only possible with broad-based community support. Contributing agencies include, 4-H, Texas AgriLife Extension, USDA Research Center-Bushland, NRCS, West Texas A&M University, Texas Parks and Wildlife, City of Dalhart, Frank Phillips College-Allen Campus, Conoco-Phillips and Valero, Inc. among many others. "Even with all these organizations stepping-up, this initiative still needs hands and feet to deliver this important information to these kids," said District General Manager, Steve Walthour. "We can use as many forward-thinking, committed volunteers as possible to be the boots on the ground, as well as role models for the future stewards of our water and our quality of life," said Walthour.

For information about volunteering for the Make a Splash Water Festival, contact Kirk Welch at 806-935-6401 or kwelch@northplainsgcd.org.

Photo right: In Aquatic Art students express how they feel about water.



Water festival photos provided by Crystal Lackey Hogue.

Common Sense Gardening for the Panhandle

After last year's historic drought, gardeners are understandably a bit cautious about planning their gardens this year. Nevertheless, a good crowd of would-be green thumbs attended this year's Water Wise Gardening Class presented by North Plains Groundwater Conservation District. Whether it was caused by a little more moisture than this time last year, or just the hope that accompanies spring, attendees were eager to get some insight on how to create a beautiful, healthy landscape in the semi-arid climate of the Texas Panhandle.

Former Texas Master Gardener and current Amarillo Globe News gardening columnist, Bob Hatton presented the program and stayed true to his message that using water wise gardening techniques in the Texas Panhandle just makes sense. Hatton avoids the term "xeriscape" because he says it may give people a negative impression. "Its xeri-scaping, not zero-scaping," says Hatton. "Xeri means low-water, not no water." Hatton prefers to call his approach "Common Sense Gardening," because it considers the climate, while providing a framework of information that allows the gardener to customize their experience to create a landscape that fits their lifestyle.

Hatton focused on the two most important aspects of gardening: soil preparation and watering practices, as well as the principles of xeriscaping. He presented information on native and adapted plant varieties for the gardener who wants a very low water-use landscape, but he also talked about non-native plants that can be successful and beautiful additions to a common sense gardening approach. According to North Plains Groundwater Conservation District Assistant General Manager - Outreach, Kirk Welch, "Low water use landscapes help reduce strain on supplies during peak use periods and can also reduce maintenance time and costs for homeowners and businesses."

For more information about water wise gardening practices you may contact the District at 806-935-6401, email kwelch@northplainsgcd.org or log on to www.northplainsgcd.org.



Indian Paintbrush (Castilleja) is a low water use wildflower that can provide color to local landscapes.

North Plains Board Amends Groundwater Conservation Reserve to Save More Water

"Extending the time limit on the Groundwater Conservation Reserve program will give well owners more incentive to save, help establish good conservation habits, and reduce the temptation to use it or lose it," said Board President, Bob Zimmer. "If we can do that while allowing no more water use than the previous rule, it makes really good sense."

The North Plains GCD Board of Directors voted unanimously in their February meeting to repeal the existing Rule 3.4 pertaining to the District's Groundwater Conservation Reserve program, and approve a new version of Rule 3.4. The new version of the rule increases the time that producers have to use "reserved" groundwater from 2 years to 5 years. The Groundwater Conservation Reserve allows producers who don't use all of their allocation in one year to use it in future production

years. The limitations on the reserve are that a maximum of 6 inches-per-acre of reserve may be used in any production year.

Prior to the rule change, any reserved allocation was lost if it wasn't used within two years, prompting concerns that producers might have incentive to use their allocation rather than lose it. While the revised Rule 3.4 allows well owners more time to use the reserve, it still requires the water to be saved before it can be used, insuring that well owners will not use more than their allocation in a given five-year period.

At their November meeting, the board proposed the extension and public hearings were held on the issue prior to the January and February board meetings. The extension will be retroactive to include reserves from the 2010 production year, the first year of the Groundwater Conservation Reserve.

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Students Are Invited to Attend Texas State Water Camp Free of Charge!

What is Water Camp?

Students from across the state meet in Monahans, Texas, for a 5-day interactive learning experience, and it's all about WATER! This educational event is designed to create an awareness of water issues including conservation, quality, groundwater leasing and marketing, and changing water laws.

It's On-site Observation.

There is an opportunity to see a variety of irrigation methods for crops that include cotton, onions, pecans, grains and cantaloupe.

It's Place-based Learning.

At every site, campers learn from experts about water in its many different uses for agriculture, industry and communities.

It's Team Projects.

Team projects include: Drip Irrigation, "Lawn 2-3", Watershed Management, Riparian Area Management, Water Economics and more!

and It's TOURS!

Site visits include a city water treatment plant, an electric plant, a city mulch garden that features Xeriscaping and a rainwater harvesting system, a pecan orchard, a shrimp farm, a carousel dairy operation, a wetlands exhibit, a historic windmill collection, and farming operations. All are located within a 50 mile radius of camp.

Who is Eligible for Water Camp?

Students in grades 9-11 who live in North Plains Groundwater Conservation District are eligible for scholarships to Texas State 4-H Youth Water Camp. North Plains GCD staff will review applications to determine the winner(s).

How Can I Learn More?

Contact us by email at kwelch@northplainsgcd.org, or phone at 806-935-6401. You can also get the fillable application at ward.agrilife.org. Also find more information on our website at www.northplainsgcd.org by clicking on the link for "Water Camp."

Who Are the Educators?

Camp is staffed by professionals from several state, federal and private agencies under the leadership of Texas AgriLife Extension Service and the Natural Resource Conservation Service.

Agencies involved in water camp leadership include:

- Texas AgriLife Extension Services
- Natural Resources Conservation Service
- Pecos Valley Resource Conservation & Development Area
- Texas Water Resource Institute
- Texas Natural Resource Conservation Commission
- State Soil and Water Conservation Districts
- Groundwater Conservation Districts

Texas AgriLife and District Join Forces on "EPIC" Project

Continued from page 2

Hutchinson County producer, 2.6 inch reduction and 10 bushel-per-acre yield improvement; Ochiltree County producer, 1.2 inch water savings and 20-bushel improvement per acre; and the Sherman County producer, 3 inch reduction and a 30 bushel-per-acre yield improvement.

Scott Strawn, AgriLife Extension Agriculture and Natural Resources Agent for Ochiltree County, said his cooperating producer, through the EPIC program, was better informed and able to make management decisions that saved on his bottom line.

"By utilizing the technology, the producer was given the confidence to go ahead and make the decision to cut late-season irrigation," Strawn said. "He was able to save one last watering with the knowledge that his yield would not be negatively impacted."

Kenny said while this was not a scientific, replicated study, but more for the purpose of demonstrating a scientifically sound approach to managing water, it had "very compelling results."

"From the preliminary results this first year of the EPIC project, the implication is that corn yields can be maintained or increased with a reduction in applied irrigation water," he said.

Kenny said he intends to further prove this concept and verify the 2011 results by continuing the EPIC project for at least three additional seasons.

In the next step, he said, producers who have participated in one season of blind technology utilization will be advanced to full exposure of the management tools with appropriate training. New cooperators will still be expected to participate in one season of blind participation to ensure a control.

Kenny said the blind participation is required, as it is human nature, as multiple cooperators admitted, to want to alter the management of the "legacy" plot to match the EPIC strategy.

In the future, Kenny hopes to include at least one producer from each of the eight North Plains Groundwater Conservation District counties. However, he said, adoption of the EPIC pattern should be considered by other Texas corn production regions to demonstrate an additional method of economic, water conservation

This article is contributed by Kay Ledbetter, Communications Specialist for Texas AgriLife Research and Extension. North Plains GCD underwrites the EPIC Project as an important aspect of the District's comprehensive agricultural conservation strategy, including conservation research at the District's North Plains Research Field and the award winning "200-12 Reduced Irrigation on Corn Project."

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