

North Plains Water News



A Publication of the NORTH PLAINS GROUNDWATER CONSERVATION DISTRICT

VOLUME 56, NO. 2 "Maintaining our way of life through conservation, protection, and preservation of our groundwater resources."

Winter 2010

"200-12 Reduced Irrigation on Corn"

The North Plains Groundwater Conservation District Agriculture Committee invited producers and researchers to take a close look at the preliminary results of the District's "200-12 Reduced Irrigation on Corn" demonstrations. Harvest was completed on the three demonstration fields in October, with all three falling just short of the 200 bushel goal. Closest to the goal was the Moore County field of Harold Grall, coming in with 198 bushels per acre. The Ochiltree County field of Danny Krienke and the Hartley County demonstration of Phil Haaland came in less than 5-percent off the mark, with yields of 192 and 191 bushels per acre, respectively.



However, the yields don't tell the entire story. Preliminary analyses show that reduced input costs resulted in little change in net return on the demonstration fields, compared to their historic returns. "The results of this year's demonstrations illustrate that a shift from yield-focused production to a return on investment model can protect profitability while conserving groundwater," said Danny Krienke.

With the 12-inch maximum irrigation allowed by the program, the producers left an average of 8 inches of water in the ground, with little effect on the bottom line. The producers compared four major input cost including, fuel, seed, fertilizer and harvesting costs to calculate their return on investment. The final report on the demonstrations should be released later in 2011.

Representatives from the Texas Association of Corn Producers, Texas AgriLife Research, and Texas Tech University, along with other corn producers and ag professionals reviewed the demonstration data. David Sloane, Chief Agronomist for AquaSpy Inc., said he recognizes the same shift that is taking place in his native country of Australia. "Producers are having to approach their operations based on maximizing their profit-per-acre-inch of irrigation if they have a chance of remaining viable,"

said Sloane. AquaSpy provided soil moisture monitoring equipment that was combined with residue, nutrition, pest and weed management, and irrigation scheduling to create a resource management system. A draft of the final report will be reviewed by the group before the information is released to the public.

The "200-12 Reduced Irrigation on Corn" demonstrations were designed to show the possibility and profitability of a strategic resource management system designed to grow 200 bushel-per-acre corn on only 12 inches of irrigation water. "Even acknowledging better than normal rainfall this year in much of the test area, the '200-12 Project' has been extremely successful in demonstrating ways to make the most efficient use of the irrigation water that's available, while maintaining respectable yields," said Harold Grall, District board member.

The board voted to expand the program to include at least 6 cooperators in 2011. For those interested in participating, the protocols approved by the board for the 2011 demonstrations are listed below.

200-12 Demonstration Project Participation Protocols

1. Cropping practice of either corn on corn, or corn on wheat

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Texas AgriLife Research Tracks With District 200-12 Demonstrations

As part of the cooperative agreement between North Plains Groundwater Conservation District and Texas AgriLife Research, Texas AgriLife is performing companion research to the District's "200-12 Reduced Irrigation on Corn" demonstrations. The Texas Corn Producers Board is joining the District and Texas AgriLife to help producers try to maximize their water and still produce economically adequate yields.

The name of the research-based study is the "200-12 Corn Project". "It is being carried out at the North Plains Research Field near Etter," said Thomas Marek, AgriLife Research senior research engineer. The North Plains Research Field is owned by the District and leased to Texas AgriLife Research.

"This is a key area for corn production," said David Gibson, Texas Corn Producers Board executive director at the North Plains Corn Irrigation

Research and Extension Field Day. "Our growers are learning a lot about what they need to do with their water," Gibson said.

Part of the impetus to evaluate growing 200 bushels per acre of corn on 12 acre inches of irrigation water is new rules imparted by North Plains Groundwater Conservation District. "These rules will lower pumping limits from 2 acre feet per acre to 1.5 acre feet per acre by 2012," said Danny Krienke, District board member. "However, our board thinks it's a good goal for us to see if we can go farther with the water and get out ahead of the current production curve," Krienke said. "This research here will help us see if it is achievable. We are not planning on changing the district's pumping limits any further, but we want to see what is possible."

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TCEQ Dismisses Mesa Water Petition

The Texas Commission on Environmental Quality has dismissed a petition filed by Mesa Water, L.P. requesting an inquiry into the Desired Future Conditions (DFC) adopted by Groundwater Management Area (GMA) 1.

North Plains Groundwater Conservation District is a part of GMA 1, along with Panhandle Groundwater Conservation District, Hemphill County Groundwater Conservation District, and High Plains Underground Water Conservation District.

According to Texas Water Code Chapter 36.108(f) a district or person with a legally defined interest in the groundwater within the management area may file a petition with the commission requesting an inquiry if a district or districts refused to join in the planning process or the process failed to result in adequate planning, including the establishment of reasonable future desired conditions of the aquifers, and the petition provides evidence that:

- (1) A district in the groundwater management area has failed to adopt rules;
- (2) The rules adopted by a district are not designed to achieve the desired future condition of the groundwater resources in the groundwater management area established during the joint planning process;
- (3) The groundwater in the management area is not adequately protected by the rules adopted by a district; or
- (4) The groundwater in the management area is not adequately protected due to the failure of a district to enforce substantial compliance with its rules.

The TCEQ Executive Director (ED) recommended dismissal of the petition because the issue of reasonableness has already been decided by the Texas Water Development Board

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Get Ready to Learn About Water Wise Gardening

If you would like to get some detailed information and see demonstrations about how to maintain beautiful, low water-use landscapes, then you won't want to miss the Water Wise Gardening Workshop coming up this spring and sponsored by North Plains Groundwater Conservation District.

During last year's workshop gardening experts shared their knowledge about the best plant varieties for the Panhandle, as well as demonstrations of drip irrigation systems for plant beds, lawns and containers. Leon Church, former Extension Agent for Potter County, explained the 7 basic principles of water wise gardening, while showing slides of some of the more successful native plant varieties. Doris Rogers talked about container gardening and how drip irrigation allows you to be more efficient and effective in

delivering just the right amount of water for each plant.

If you'd like to know more about water wise gardening, call the District office at 806-935-6401 to pre-register for the workshop and be the first to get the scoop on spring gardening secrets.

For now, here's a little something to give you a head start on your garden during those long, cold winter days.

Seven Principles of Water Wise Gardening

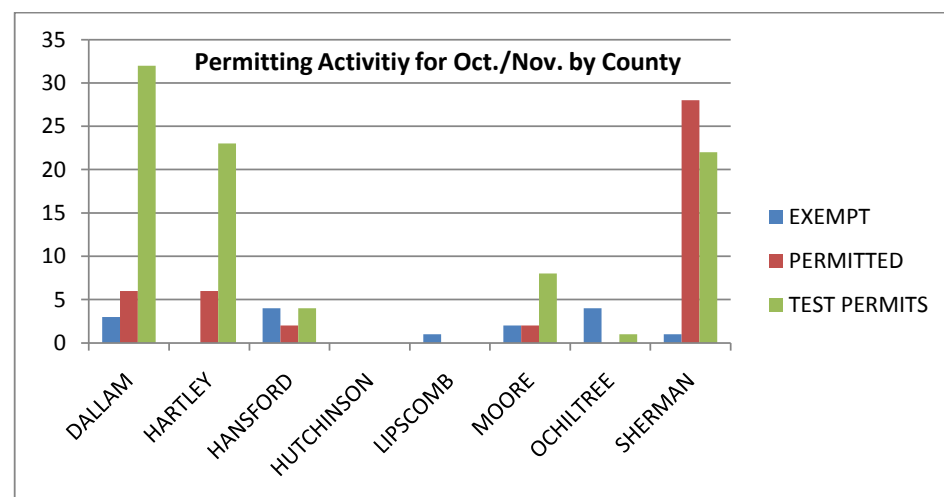
1. Plan and design.
2. Analyze and amend the soil.
3. Create practical turf areas.
4. Choose appropriate plants.
5. Irrigate efficiently
6. Use mulch.
7. Practice appropriate maintenance.

You Should Have Received Your Production Report Forms for 2010...

Groundwater Producers in the North Plains Groundwater Conservation District should have already received their 2010 Production Reporting Forms and Worksheets. If you are a producer in the District and you have not received your forms, please call the District office at 806-935-6401. **March 1, 2011 is the deadline for production reports to be completed and turned-in to the office to avoid late fees.** Anyone who paid late fees on their 2009 reports by May 21, 2010 may be eligible for a refund if their 2010 reports are completed and in the office by January 15, 2011. If you have any questions about filing production reports please call the District office at the number listed above, or stop by the office at 603 E 1st Street in Dumas. District staff will be happy to assist you!

Help Us Save Time, Money and Trees

Electronic media is a great way to communicate quickly and efficiently, while saving precious resources. We'll be using more e-mail, e-newsletters and texting and you can find us on Facebook and Twitter. You can help us achieve all of this by simply sending your email address and cell phone number with the ability to receive texts to welchk@npwd.org. You can be assured that we will protect your peace and your private information. We will strive to make our communications with you extremely valuable and useful. We would never share any of your contact information with any other group or individual unless disclosure is required by law. If at any time you decide you no longer want to receive communications from us, all you need to do is send us an email to unsubscribe from any or all contact lists. Thanks for helping us be more efficient!



Exempt = domestic and livestock wells.

District Water Quality Testing

The North Plains Groundwater Conservation District monitors Ogallala water quality by collecting and analyzing samples from over 250 wells within the District. It is the goal of the District to ensure as much as possible that future supplies of water are adequate, as well as of good quality.

The District also performs water quality analysis of samples at the request of local landowners and prior to many land sales for banking and real estate concerns. Most analyses are free to District residents.

The District offers water quality tests for Calcium, Magnesium and Total Hardness, Chloride, Conductivity, Fluoride, Iron, Nitrates, pH, Sodium, Sulfate, Total Dissolved Solids, and presence/absence testing for coli-form bacteria.



District Natural Resource Specialist Randy Coon performs a water quality analysis.

"200-12 Reduced Irrigation on Corn"

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2. 60 acres minimum of corn, a full quarter mile center pivot is preferable
3. Center pivot with water applicators approximately 18" above ground level, spaced 60" or 80"
4. Crop residue management practice utilized
5. Soil thickness of 3 feet minimum above caliche
6. Site readily accessible to read and record data weekly
7. Producer selected seed from any supplier
8. Producer selected planting population
9. Site equipped with a method to monitor sprinkler location in the field
10. Install gypsum blocks
11. Install moisture sensors
12. Yield formula used by NCGA in NCYC contest
13. Producer sincerely concerned about available groundwater, with an open mind to learn and manage more

For more information about participating in the 2011 "200-12 Reduced Irrigation on Corn" demonstrations call the District at 806-935-6401. In 2010, the District submitted the project for a Conservation Innovation Grant (CIG) through the Natural Resource Conservation Service (NRCS) to offset some of the cost of the project. However, despite a glowing endorsement from the NRCS Texas State Conservationists office, the project was not selected for funding. The District plans to re-submit the project for 2011 CIG funding. The District is also investigating the possibility of applying for Environmental Quality Incentives Program (EQIP) funding in 2011, also through the NRCS.

Texas AgriLife Research

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Marek said the "200-12 Project" means a 10-inch reduction of irrigation water, on average, for the corn plots at the AgriLife Research field.

"A typical corn crop, watered at 100 percent evapotranspiration or ET, as it is known, would now require about 32 inches of total water and would be expected to yield above 250 bushels per acre," Marek said.

"That total water requirement has already been lowered through breeding and irrigation management from the 34-36 inches required on older varieties that produced less yield," he said.

Marek said the research plots this summer received 12.8 inches of moisture from rainfall, as opposed to the normal 8 to 10 inches received, so only 8 inches of irrigation were applied to bring the total crop water to 21.6 inches. The target level was 22 inches.

"The irrigation protocol was to use the 4-foot-soil profile moisture, which was 5.42 inches of available water at planting time. When that decreased to 50 percent, irrigation began at a rate of 1-1.5 inches per application, depending on what rainfall probability was forecast," he said.

"This targeted irrigation protocol and total water level are what distinguishes this research-based study from other demonstrations within the region," Marek said. "Our intent is to target total water with management control; if it rains a lot, we don't irrigate as much and only then up to 12 inches of irrigation. That's the difference with the study here."

Kay Ledbetter, Communications Specialist with Texas AgriLife Research and Extension Center in Amarillo contributed to this article.

Salt Cedar Funding

The control of non-native brush species has been recognized for many years as an effective tool in water conservation. The Canadian River Municipal Water Authority (CRMWA) has been doing battle with the thirsty salt cedar for years and have about 1700 acres scheduled to spray this year. CRMWA Chief of Water Quality, Rod Goodwin said the number of acres is down because they have already treated 98-99 percent of the most critical area. According to Goodwin, landowners in the CRMWA watershed may be eligible for financial assistance from CRMWA, in addition to any other funding they may receive for removing salt cedar from their properties. Landowners can contact CRMWA at 806-865-3325 for more information about project assistance.

The NRCS Cooperative Conservation Partnership Initiative (CCPI) uses Environmental Quality Incentive Program (EQIP) funds to help landowners offset 70-75 percent of the cost of eradication programs for invasive brush species, including salt cedar. The National Wild Turkey Federation and Texas Parks and Wildlife Department are also providing additional funds in Hutchinson, Roberts and Hemphill counties. The result is that the landowner may pay only 10-percent of the actual cost of ridding their property of these non-native, invasive species. For more information on the NRCS CCPI program contact your county NRCS field office.

For more information on the Salt Cedar Update, log on to www.npwd.org/Extras.

District Hydrologist Earns Designation



District Hydrologist and Assistant Manager, Dale Hallmark has successfully completed and passed the examinations required to be licensed as a Professional Geoscientist (PG) in Texas. "Licensing requirements and tests to be registered as a PG are equal to those of professional engineers," said Steve Walthour, North Plains Groundwater Conservation District General Manager.

Hallmark has served as the District's Hydrologist for over 14 years, providing valuable scientific expertise as a part of the ongoing mission of the District. He received his Bachelors of Science degree in Hydrology and Water Resources from Tarleton State University in 1996. "Hallmark's, recognition as a Professional Geoscientist in Texas, lends further credibility to the District's already substantial scientific component," said Walthour.

North Plains Groundwater Conservation District Recognized as a Groundwater Guardian

North Plains Groundwater Conservation District has been named a 2010 Groundwater Guardian Community by The Groundwater Foundation of Lincoln, Nebraska in recognition of its efforts to protect local groundwater supplies. North Plains Groundwater Conservation District is among 132 communities in 34 states and one Canadian province to receive this designation.

Groundwater Guardian is a program of The Groundwater Foundation which encourages and recognizes local groundwater protection and education activities. Groundwater Guardians form teams of local stakeholders that implement activities to address local groundwater concerns and issues, which range from water festivals and pharmaceutical take back programs to rain garden installations and wellhead protection activities.

North Plains Groundwater Conservation District has been designated as a Groundwater Guardian for 6 years.

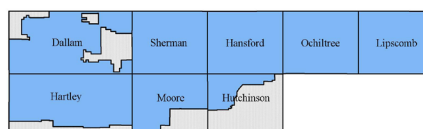
"Communities like North Plains Groundwater Conservation District live up to their designation of a 'Groundwater Guardian,'" says Groundwater Guardian Director Jennifer Wemhoff.

"We say at The Groundwater Foundation that 'It is because of people that groundwater must be protected, but it is only through the efforts of people that it can be accomplished.' We are proud to recognize the work of people like the North Plains Groundwater Conservation District Groundwater Guardian team for their efforts."

The Groundwater Foundation is a nonprofit organization with a mission to educate people and inspire action to ensure sustainable, clean groundwater for future generations. Since its inception in 1985, the Foundation has developed programs, projects, and resources that have educated youth and adults about the importance of groundwater and ways they can help protect it.

For more information about Groundwater Guardian or The Groundwater Foundation, please call 1-800-858-4844, e-mail guardian@groundwater.org, or visit the Foundation's website at www.groundwater.org.

The Groundwater Guardian program is supported by the U.S. Geological Survey.



TCEQ Dismisses Mesa Water Petition

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(TWDB). The TWDB ruled against Mesa Water, L.P. in their previous challenge of the DFCs, finding that Mesa Water, L.P. failed to show the DFCs adopted by GMA 1 are unreasonable. Mesa then filed suit against the TWDB to challenge the ruling, only to have that suit dismissed by a Travis County District Judge in early December.

The ED also recommended dismissal on the grounds that the petition is not ripe to challenge the adequacy of the districts' rules. The ED further explained that the petition was premature since the groundwater districts have not yet received the managed available groundwater (MAG) calculations from the TWDB. Without the MAGs, the districts don't have the best available data to use for any necessary rulemaking.

GMA 1 is one of 16 GMAs in the state charged with task of determining the DFC of the groundwater within their geographic boundaries. A DFC is a measurable projected goal for the desired amount of remaining groundwater available after 50 years. The DFCs will be used in the ongoing state water planning process.

TCEQ to Decide Future of Dallam County PGMA's

Residents in three sections of Dallam County voted not to be annexed into North Plains Groundwater Conservation District during the general election in November 2010. The election was part of the Texas Commission on Environmental Quality (TCEQ) process for administering the state's Priority Groundwater Management Areas (PGMA). After a hearing in Dalhart before a judge from the State Office of Administration, the TCEQ determined that the three designated PGMA areas should be part of groundwater conservation district (GCD). The TCEQ then asked the District board of directors if they would accept the areas into the District. The board agreed and called for the required election to annex the PGMA areas into the District. Since the annexation vote failed, the matter now reverts back the TCEQ. The Commission can either create a new GCD or turn the matter over the Legislature to resolve.

Legislative Staff's Visit the District



In a whirlwind, one-day tour of the Panhandle, staffers from the offices of Texas Senators Kel Seliger and Troy Fraser visited three of the four groundwater conservation districts that comprise Groundwater Management Area 1. Seliger is a member of the Senate Natural Resources Committee and Fraser is the chairman. The legislative staff accompanied representatives

of the Farm Bureau and the Texas and Southwestern Cattle Raisers Association as they travelled the state seeking support for proposed legislation dealing with a land owners' rights to the groundwater under their property. Members of the board and staff of

North Plains Groundwater Conservation District had about two hours to share information about how groundwater is managed in the District, and to learn more about the proposed legislation. The board has taken no formal position regarding the legislation and will address it during their regular meeting in January.

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Water Conservation Artwork Calendar Winners



Konnor White, daughter of Randy and Lisa White of Dalhart, was this year's grand prize winner in the Water Conservation Artwork Contest sponsored by North Plains Groundwater Conservation District. The annual contest is open to all fourth, fifth, and sixth grade students who reside within the District.

Konnor's artwork, titled "Save Water! Wash the Dog in a Bath Tub!" featured an oversized dog in an undersized bathtub and encouraged pet owners to save water by not washing their pets with a running water hose. Konnor received a certificate of recognition, a \$50 cash prize, and her artwork will be featured on the cover of the 2011 North Plains Groundwater Conservation District Water Conservation Calendar. Konnor is in Mrs. Olson's class at Dalhart Intermediate School. The calendars are free to the public.

Other winners in this year's contest were:

Gabriel Apodaca – artwork titled "Help the World With Every Drop of Water". Gabriel is the son of Kathy Apodaca and

Elias Rodriguez, and is in Mrs. Holland's class at Morningside Elementary in Dumas.

TJ Coile – artwork titled "Save Water". TJ is the son of Todd and Holly Coile, and is in Mrs. Blankenship's class at West Texas Elementary in Stinnett.

Mackenzie Cooper – artwork titled "Save the Planet's Water". Mackenzie is the daughter of Jamie Hetzel and Billy Cooper, and is in Mrs. Williams' class at West Texas Elementary in Stinnett.

Gracie Cover – artwork titled "Xeriscaping". Gracie is the daughter of John and Michelle Cover, and is in Mrs. Frische's class at Dalhart Christian Academy.

Briana Cruz – artwork titled "Help Save Water". Briana is the daughter of Curtis and Liza Zambrano, and is in Mrs. Fisher's class at Dalhart Intermediate School in Dalhart.

Addyson Davis – artwork titled "Dripping Faucet". Addyson is the daughter of Shane and Jenny Davis, and is in Mrs. Ford's class at Hillcrest Elementary in Dumas.

Ravyn Denning – artwork titled "Water is Our World". Ravyn is the daughter of Jeremy and Wendy Denning, and is in Mrs. Holland's class at Morningside Elementary in Dumas.

Jayden McLain – artwork titled "Water Cup Catching". Jayden is the son of Sandi and Monty McLain, and is in Mrs. Vela's class at Williams Intermediate School in Perryton.

Noah Moore – artwork titled "Turn Off Sprinklers When Raining". Noah is the son of Patrick and Rosa Moore, and is in Mrs. Roden's class at West Texas Elementary School in Stinnett.

Kaitlin Nick – artwork titled "H₂O". Kaitlin is the daughter of Mike and Kara Nick, and is in Mrs. Stroud's class at West Texas Elementary School in Stinnett.

Evelyn Fay Ortega – artwork titled "Stop Water Dripping". Evelyn Fay is

the daughter of Adrian and Karen Ortega, and is in Mrs. Vela's class at Williams Intermediate School in Perryton.

Dalin Williams – artwork titled "Grass Grows...Mud Doesn't". Dalin is the son of Chuck and Lori Williams, and is in Mrs. Blankenship's class at West Texas Elementary in Stinnett.

All of these students received certificates of appreciation, a \$25 cash award, and will have their artwork featured inside the annual Water Conservation Calendar. In addition, each student will receive copies of the calendars to share with friends and family.

The free water conservation calendars serve as a colorful reminder throughout the year of ways that each of us can be more responsible for our water resources in the little every day actions that we can take. The calendars will be available at the North Plains Groundwater Conservation District offices at 603 East 1st Street in Dumas, and also at all water utility offices in each town within the District. You can also request copies of the calendar by calling the District office at 806-935-6401.

The District would like to thank all of the students who participated in this year's contest. The District also appreciates the parents and teachers who encourage their students to enter this contest each year. It is an excellent way to encourage students to think about ways that they could conserve water and get a water conservation message to others through their art.

State Rainwater Harvesting Expert Coming to the Area

The thought of getting a significant amount of water from rainwater harvesting is often met with skepticism from Panhandle residents, but Billy Kniffen, Rainwater Harvesting Specialist with Texas AgriLife Extension, will come to the area in the spring just in time to explain how to make the most of the spring showers. Mr. Kniffen will explain that .6 gallons 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, who lives in Menard County, Texas has built his own rainwater harvesting system which is the only source of fresh water for their home. In addition, he travels around the state of Texas assisting in the installation of rainwater harvesting systems for individuals and businesses. 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 attending Mr. Kniffen's Spring Rainwater Harvesting Workshop can contact the District office at 806-935-6401 to pre-register.

Did You Know?

A leaky toilet can waste as much as 200 gallons of water a day. Repairing leaky toilets is an easy way to be water wise!