

North Plains Water News



A Publication of the NORTH PLAINS GROUNDWATER CONSERVATION DISTRICT

VOLUME 59, NO. 3

“Maintaining our way of life through conservation, protection, and preservation of our groundwater resources.”

Winter 2013

2013 “200-12 Project” Producing More Per Acre Inch

While the demonstration fields have been harvested, the results are not yet fully tabulated for this year’s “200-12 Reduced Irrigation on Corn Project” (200-12 Project). On the positive side, the death grip of the worst two-year drought in the region’s history, appears to have loosened in 2013, if only slightly. While the annual rainfall for some of the area was still only about half of the historical average, timely rain in the mid-season and while the

crops were finishing helped improve yields. Across the demonstration area, preliminary seasonal rainfall totals varied wildly, ranging from 0-300% higher than they were in 2012. Nevertheless, most demonstration sites received more rain than in either of the last two years, leading to predictions of higher average yields for the project, and no crop failures.

While the increases in rainfall amounts do not appear to have allowed for the goal of 200 bushels on 12 inches of irrigation to be achieved, project coordinator Leon New said there are some positive preliminary numbers to talk about. “We are seeing the numbers for production per acre inch of irrigation water in the 600 to 700 pound range, with the possibility of breaking 800 pounds,” said New. “That number is a real indicator of water use efficiency.” He explained that 400 to 500 pounds of corn per acre inch of irrigation is the historical efficiency range using traditional practices.

While most of the demonstration fields are expected to yield at or around 200 bushels per acre, the average seasonal irrigation will be roughly 16 inches. The average of 16 inches of irrigation combined with an average of 10 inches of rain and soil moisture, still equates to a savings of roughly 6 inches, compared to total water used in traditional irrigation practices. New said that even while missing the goal of

only 12 inches of irrigation, cooperators have created more production per acre inch by simply trying for the 12-inch mark.

Preliminary numbers indicate the “200-12 Project” demonstration fields saved an average of 5 to 6 inches compared to their “control field” counterparts for the season. The

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“200-12 Project” Coordinator, Leon New addresses attendees at a 2013 field day in August.



2013 Production Reporting Highlights

A schedule for the 2013 production reporting process has been set by the district staff. The 2013 Annual Production Reports are scheduled to be mailed on Friday, December 6th. Producers should receive the reports by the target date of December 13th. Anyone who does not receive their 2013 Annual Production Reports by December 20th should contact the district office. The reports are due in the district office by close of business on Friday, March 1, 2014.

The district will send a special notice to the producers who failed to file their 2012 Annual Production Reports on time. The notice will remind the producers that if the 2013 Annual Production Reports are filed by close

of business on Wednesday, January 15, 2014, the late filing fee charged for 2012 will be refunded in full.

The district will again be participating in the Crop Protection Clinics sponsored by Pioneer Hybrid, Inc. The 2014 Texas Panhandle Crop Protection Clinics will be held in 4 towns in our district. The dates and locations for the Clinics are: January 13th – Dalhart, January 14th – Dumas, January 15th – Stratford and January 16th – Spearman. District staff will be available at the Clinics to answer questions regarding production reporting and the Groundwater Conservation Reserve program, and to assist producers in completing their production reports.

Texas Water Development Board Approves NPGCD Management Plan

The Texas Water Development Board (TWDB) has presented North Plains Groundwater Conservation District the District’s Groundwater Management Plan Certificate of Administrative Completeness.

After a year of review and revision, the North Plains GCD’s Board of Directors approved the updated Management Plan in July 2013 and received final approval from TWDB in August. The district is required to resubmit the management plan at least every five years to make sure it continues to accomplish the objectives of the district’s enabling legislation and Chapter 36 of the Texas Water Code.

The focus of the most recent review period was to incorporate the district’s desired future conditions into the plan. A desired future condition (DFC) is the measureable condition of the aquifer at

a specified time in the future, agreed to by the district stakeholders. In the North Plains GCD, stakeholders settled on 40-percent of the aquifer left in 50 years for the western counties of Dallam, Hartley, Sherman and Moore; and 50-percent for the eastern counties of Hansford, Hutchinson, Ochiltree and Lipscomb.

With approval of the new management plan, the district has a one-year timetable for the process of revising rules; assuring they achieve the DFCs. For almost a year the board has been considering a variety of management options in preparation of the adoption of the new management plan. They will propose rules for public comment in early 2014. The new management plan is available for review on the district website at www.northplainsgcd.org.

**Proposed Rules Special Edition
Coming Soon!!**

2013 District Water Levels

Annually the district monitors declines in water levels as an important part of its data collection efforts which contributes to the management of the area’s groundwater resources. The district tracks declines in groundwater by maintaining a network of over 430 water-level monitor wells. District monitor wells are measured in January and February after the majority of the season’s agricultural pumping is completed and measuring is completed by mid-March. The information is analyzed and used to create maps that show average water level changes across the district. The data helps the district make reasonable, long-term management decisions based on accurate and current information.

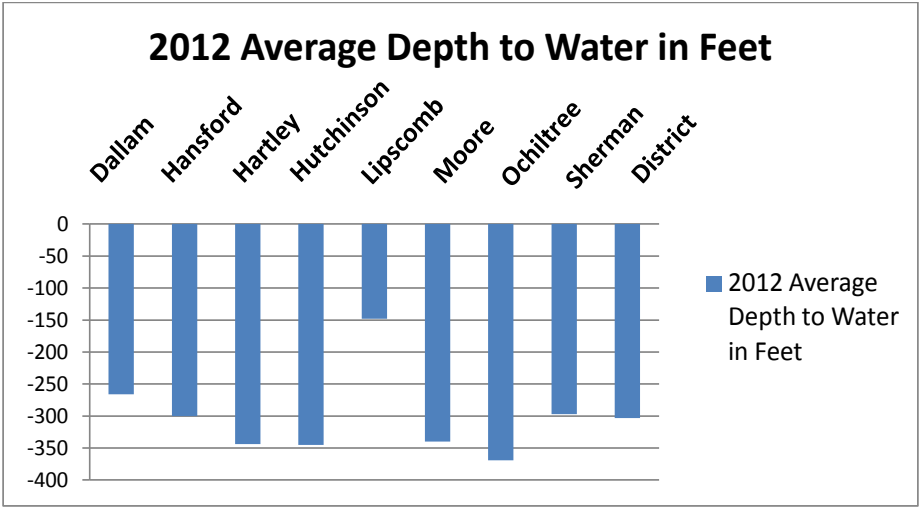
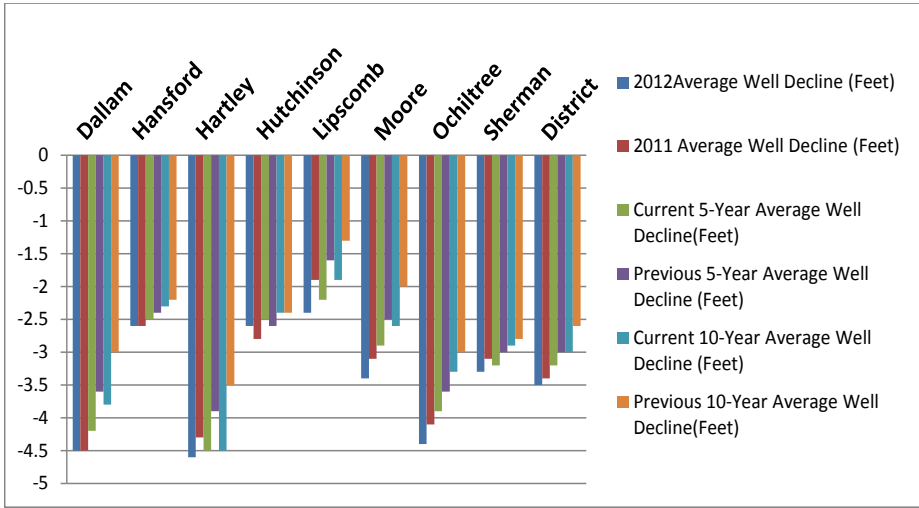
The district began drilling its own dedicated monitor wells in 2007 and also began installing water level monitoring equipment in many of them. The equipment records measurements every 12 hours. So far, the district has drilled 44 dedicated monitor wells and installed monitoring equipment in 34 of those. These continuous measurements create a valuable record of the ongoing changes in water levels. These non-production wells are dedicated solely to data collection. Dedicated, non-production monitor wells provide information with a greater degree of accuracy, reliability and consistency than do the other types of wells the district may monitor. They are also available, if necessary, for conducting water quality analyses and other aquifer tests and that cannot easily be

conducted in other types of wells. Changes in water levels in district monitor wells vary from rises in some instances to declines that locally may exceed 8-10 feet per year. Each county in the district has areas of little to no decline, as well as areas of much greater decline. Changes in the water level of the aquifer, averaged for all the monitor wells of any county or calculated from groundwater production data, show declining water levels.

Declines in the water table are caused predominately by pumping and are influenced by surface recharge and lateral flows into and out of the aquifer. Recharge of the aquifer from the surface comes from rainfall and snowmelt. The Panhandle of Texas receives such modest amounts of rain and snow and has such a high evaporation rate that there is little opportunity for surface recharge to appreciably affect water levels.

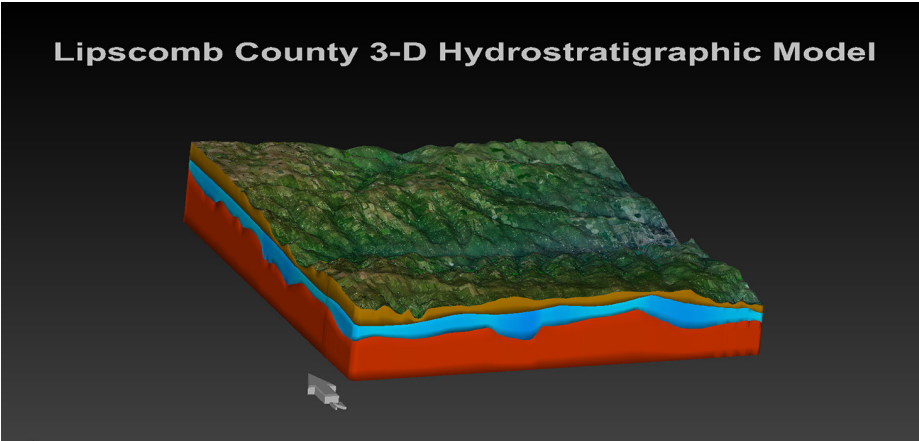
The water level measurements resulting from the 2012 production season have been gathered, tabulated and published in the “2012-2013 Hydrology and Groundwater Resources” report which is available in the district office and the district’s website <http://www.northplainsgcd.org/science-a-technology/hydrology-maps.html>. A summary of the results are also presented in the following table and illustrations. For information on measurements in specific areas please contact the district at 806-935-6401.

County	Average Depth to Water (Feet)	2012 Average Well Decline (Feet)	2011 Average Well Decline (Feet)	Current 5-Year Average Well Decline (Feet)	Previous 5-Year Average Well Decline (Feet)	Current 10-Year Average Well Decline (Feet)	Previous 10-Year Average Well Decline (Feet)
Dallam	-266	-4.5	-4.5	-4.2	-3.6	-3.8	-3.0
Hansford	-300	-2.6	-2.6	-2.5	-2.4	-2.3	-2.2
Hartley	344	-4.6	-4.3	-4.5	-3.9	-4.5	-3.5
Hutchinson	-345	-2.6	-2.8	-2.5	-2.6	-2.4	-2.4
Lipscomb	-148	-2.4	-1.9	-2.2	-1.6	-1.9	-1.3
Moore	-340	-3.4	-3.1	-2.9	-2.5	-2.6	-2.0
Ochiltree	-369	-4.4	-4.1	-3.9	-3.6	-3.3	-3.0
Sherman	-297	-3.3	-3.1	-3.2	-3.0	-2.9	-2.8
District	-303	-3.5	-3.4	-3.2	-3.0	3.0	-2.6



District-Wide 3-D Aquifer Modeling

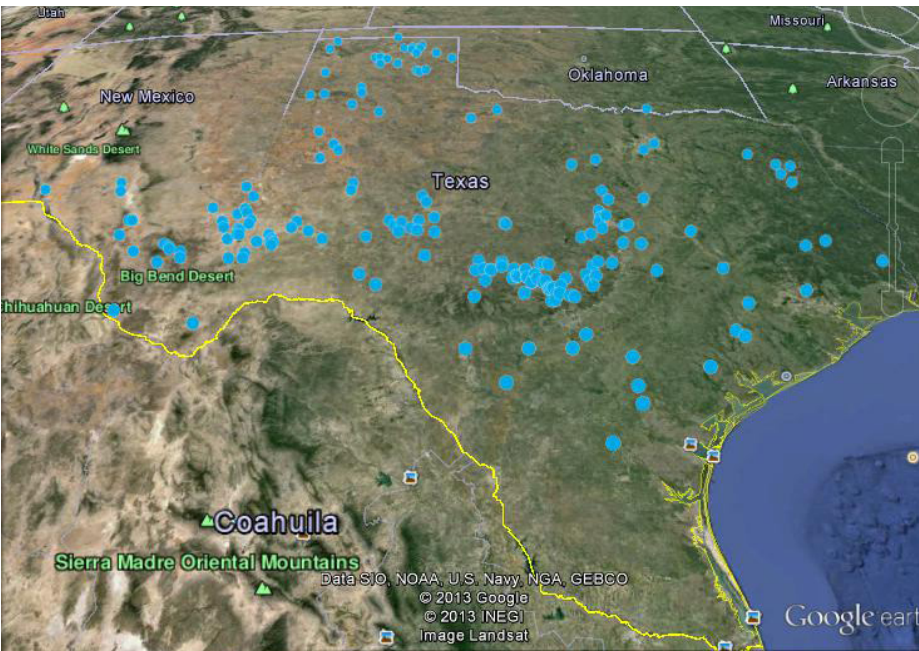
Following completion of a 3-D stratigraphic model of the aquifer beneath Lipscomb County, the district is moving forward with a district-wide 3-D aquifer modeling project. The board has selected Aquaveo Inc., of Provo, Utah to complete the project for the entire district. Since groundwater movement in an aquifer is influenced by numerous factors, this modeling project will provide the district and its stakeholders a tool to understand how those factors interact. The project will include the Ogallala aquifer throughout the district, the Rita Blanca aquifer in Dallam County and the Dockum aquifer.



This graphic of the Lipscomb County 3-D Stratigraphic Visualization is an example of the visual model of the aquifer that will be created for the entire district through the 3-D Modeling project now underway.

On-line Water Level Data

The district has joined with the Texas Water Development Board (TWDB) to install telemetry in one of its wells in Dallam County located a few miles north of Dalhart. The TWDB maintains a website that has an interactive map where water level measurements are available for viewing from wells throughout the State. That web address is: www.twdb.texas.gov/groundwater/data/waterlevel.asp. The district is exploring the feasibility of adding additional wells to the online program for the benefit of its monitoring program and residents.





Danny Krienke named to the Regional Water Planning Group

Danny Krienke, North Plains GCD director for Ochiltree County has been selected as a member of Planning Group A of the Panhandle Regional Water Planning Group (RWPG). The legislature created the RWPG's in 1997, to develop water supplies and prepare plans to meet the state's future water needs. The Groundwater Management Area (GMA) Joint Planning Committee selected Krienke for this position because of his familiarity with the joint planning process and his demonstrated ability to represent all of the GMA. Danny served as the GMA -1 president for five years during the area's initial joint planning process.

There are 16 planning groups made up of about 20 members. The planning groups allow for direct public involvement in planning and determining which water management strategies to recommend. This process has resulted in greater public participation, public education and public awareness, underscoring the benefits of directly involving local and regional decision makers and the public in water planning.

Krienke has been a member of the North Plains Groundwater Conservation District Board of Directors for 12 years. He has served as president of North Plains GCD board and has served as chairman of the Texas Grain Sorghum Association, chairman of the Panhandle-Plains Land Bank audit committee and is a member of the USDA Natural Resource Conservation Service's Texas State Technical Committee.

Danny Krienke's family has been involved in farming in Ochiltree County since his grandfather purchased the land in 1923. He has farmed himself in the county for 35 years.

New Name and Renewed Focus for Research Field

For years it was known as the North Plains Research Field, but the unique farm, established in 1962 as part of a mandate from the state to study groundwater conservation strategies, has a new name. The North Plains Research Field is now the North Plains Water Conservation Center (the Center). District officials say the new name better describes the purpose of the facility. "The board of directors desires to increase the groundwater conservation emphasis at the field by demonstrating farm practices, new technology and seed varieties that farmers can use to manage their crops today," said General Manager, Steve Walthour. "The addition of the word 'conservation' to the name will help clarify its intended purpose."

With the rapid expansion of irrigation in the early 1950's there was a need for information about what irrigated crops and varieties were best suited to the conditions north of the Canadian River. In 1956, approximately 25 farmers, businessmen and county agents met at the Sneed Hotel in Dumas to discuss the possibility of establishing a research field in the area. In 1961, the Texas Legislature directed the Texas Agricultural Experiment Station

(TAES), a part of the Texas A&M University System, to spend not less than \$30,000 annually to study the economic use of water north of the Canadian River.

At the founding of the farm a memorandum of understanding was signed by both the district and TAES in which the district agreed to provide the land and certain other facilities necessary to complete the work required. The research field operated on leased land from 1962 until 1987 when the district purchased a new and expanded farm at the current location.

TAES, later renamed Texas A&M AgriLife Research, has leased the field from the district since 1987, performing agricultural research. The current lease will expire in 2014. The district will begin managing the field at the end of the lease with an increased emphasis on water conservation research and demonstrations. The Center will be available for Texas A&M AgriLife Research and other cooperators to conduct water conservation research and demonstrations that will assist farmers in staying economically viable and prolonging irrigated agriculture in the area.

"The board of directors believes the Center should be primarily involved

in demonstrating the best practices in conservation of groundwater," said Walthour. "While the board recognizes the value of research and will welcome research projects that contribute to the district's conservation objectives, they want the Center to highlight solutions that are available to stakeholders today."

Possible future projects at the Center include: a "200-12 Project" demonstration, testing drought resistant seed technologies, demonstration of more efficient irrigation technologies and management tools, and conservation tillage programs. Demonstrations of non-agricultural water conservation strategies including rainwater harvesting and a low water-use landscaping will also be developed. "The Center will be a focal point for the district's community education initiatives by providing a place to engage stakeholders in conservation on multiple levels," said Assistant General Manager – Outreach, Kirk Welch.

The district has retained current "200-12 Project" Coordinator, Leon New to assist with the transition. New will continue managing the "200-12 Project" on-farm water conservation demonstration program, while working with district staff to facilitate development of the North Plains Water Conservation Center.

Hydrologic Atlas of North Plains Groundwater Conservation District Available to the Public

North Plains Groundwater Conservation District has completed the annual Hydrologic Atlas of the district. The Atlas uses current and historical data to map groundwater information throughout the district on a county-by-county basis.

The atlas is titled "Hydrology and Groundwater Resources 2012-2013" and contains information that landowners often request about the Ogallala aquifer and the water resources of areas within the district.

The document contains maps

depicting water-level monitor well locations, estimated depth to water, estimated aquifer thickness and estimated average declines by county. In addition to the maps section, the atlas also contains sections outlining the geographical extent of the district and general information on the geology and hydrology of the district. It features information on the current volume of water in storage in the aquifer, estimated annual water usage, recharge, and other inflows and outflows of the aquifer, as well as water quality.

Each year district residents request this type of information for groundwater investigations of different areas of the district. The atlas is a resource that allows them to easily compare general geologic and hydrologic characteristics of properties.

Copies of the atlas can be obtained free of charge at the North Plains Groundwater Conservation District office at 603 East 1st Street in Dumas, or it may be downloaded from the district website at www.northplainsgcd.org by clicking on the link for "Maps".

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Water Conservation Artwork Contest Winners Announced

Taylor Heiser, son of Travis and Sara Heiser of Dalhart, was this year’s grand-prize winner in the Water Conservation Artwork Contest sponsored by North



Public Relations Assistant, Rebekah Purl, presents a certificate to the 2013 Conservation Calendar Art Contest winner, Taylor Heiser.

NORTH PLAINS GROUNDWATER CONSERVATION DISTRICT
BOX 795
DUMAS, TEXAS 79029

Plains Groundwater Conservation District. The annual contest is open to all fourth, fifth, and sixth grade students who reside within the district.

Taylor’s artwork titled “Don’t Waste the Water You Need” features a fire hydrant spraying water on the grass with clouds sharing “Test fire hidrents on the grass not the sidewalk.” Taylor received a certificate of recognition, a \$50 cash prize, and his artwork will be featured on the cover of the 2014 North Plains Groundwater Conservation District Water Conservation Calendar. Taylor was in Mrs. Ellis’s fourth grade class at Dalhart Intermediate School last school year when students submitted their entries.

Other winners in this year’s contest were:

Trista Martinez – artwork titled “Save Water! When It Rains Please Turn Of Sprinklers!”. Trista is the daughter of Amy and Rudy Martinez and was in Mrs. Olson’s class at Dalhart Intermediate School.

Amisadai Zendejas – artwork titled “Don’t Put One Shirt, Put a Full Load”. Amisadai is the son of Fildla and Somar Zendejas and was in Mrs. Olson’s class at Dalhart Intermediate School.

Brailey Green – artwork titled “Turn Off the Water”. Brailey is the daughter of Wendy Green and was in Mrs. Henley’s class at Hillcrest Elementary School in Dumas.

Breanna Cooper – artwork titled “Turn Off Sink When Brushing Teeth”. Breanna is the daughter of Gary and Lisa Cooper and was in Mrs. Thatcher’s class at Hillcrest Elementary School in Dumas.

Haylee Barragan – artwork titled “Water the Grass by Giving a Dog a Bath”. Haylee is the daughter of Kevin Barragan

and was in Mrs. Olson’s class at Dalhart Intermediate School.

Hope Word – artwork titled “Don’t Waste Water”. Hope is the daughter of Michael and Jennifer Word and was in Mrs. McOmber’s class at Hillcrest Elementary School in Dumas.

Hunter Tate – artwork titled “Save”. Hunter is the son of Blake Tate and was in Mrs. Thatcher’s class at Hillcrest Elementary in Dumas.

Jaden Nicholas – artwork titled “Turn Off Water When Not Using It”. Jaden is the daughter of Ashley Brown and was in Mrs. Thatcher’s class at Hillcrest Elementary School in Dumas.

Joceline Hernandez – artwork titled “Save Our Planets Water”. Joceline is the daughter of Manuel and Lorena Hernandez and was in Mrs. Henley’s class at Hillcrest Elementary in Dumas.

Lexi Loper – artwork titled “Turn Me Off When Brushing Your Teeth”. Lexi is the daughter of Tammi Musrave and

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was in Mrs. Olson’s class at Dalhart Intermediate School.

Lizbeth Avila – artwork titled “Don’t Waste Water for Poor People Around the World”. Lizbeth is the daughter of Gabriela Marquez and was in Mrs. Thelander’s class at Dalhart Intermediate School.

Talliz Blanco – artwork titled “Save Water”. Talliz is the son of Brandy and Eddie Blanco and was in Mrs. Thelander’s class at Dalhart Intermediate School.

The calendars will be available at the district offices and also at water utility offices within the district. You can also request copies of the calendar.

The district would like to thank all of the students who participated in this year’s contest. If you would like to participate in the 2015 Water Conservation Calendar Art Contest, please send in your landscape drawing to the office. They can be mailed to PO Box 795 Dumas, TX 79029 or dropped off at 603 E 1st St. Dumas, TX 79029.

2013 “200-12 Project”

(continued from page 1)

“control fields” are managed based on the cooperators’ normal practices. The goal of 200 bushels of corn on 12 inches of irrigation water is based on historical average seasonal rainfall of 8 inches, 6 inches of soil moisture and 12 inches of irrigation, for a total water allocation of 26 inches for the crop. Preliminary numbers from one demonstration site show that the “200-12 Project” field produced 739 pounds per acre inch of irrigation on just 23.5 inches of total water.

The final report for this fourth year of the “200-12 Project” will be released after the first of the year. 2014 will be the final year of the original five-year, “200-12 Project” but the district board of directors is committed to continuing demonstrations that show how producers can save water and stay in business.

