

# North Plains Water News



A Publication of the NORTH PLAINS GROUNDWATER CONSERVATION DISTRICT

VOLUME 63, NO. 3

FALL 2017

## President Harold Grall's Address



*Harold Grall, district board president*

It is with much heartfelt sincerity that I say what a privilege it is to be President of the North Plains Groundwater Conservation District. This honor is something I never strived for or thought to attain. So I thank my fellow board members and staff for their vote of confidence. To work with such a diverse group who are bound to represent their counties is always an exhilarating experience. The North Plains is fortunate to have such strong leadership representing the area. I am humbled that I am least, but again fortunate to serve with them.

Unlike our national leaders, we do not enjoy the luxury of “kicking things down the road,” and at the “end of the day,” we are required to make decisions

that often require compromise. We realize that in our efforts to do the “right thing” as individuals we are bound by one common denominator, and that is, we are all on the same team. We understand fully that decisions have consequences that include us as producers and our communities, so we take this personally because we know that any decision that impacts people economically is very personal.

The people of the area should feel confident that their board will never settle for mediocrity, and we will constantly challenge ourselves in this effort. Hopefully now we can move past the emotion that regulation brings about and work on constructive ways to help us all prosper now and in the future. We know that we



*Harold Grall speaks at the Perryton Grower's Meeting on September 20, 2017.*

will continue to live in a world of scarcity, and even at an accelerated pace, and that it will be innovation not regulation that will equip us more in the years to come.

So, in the future, we will continue our efforts to partner with private industry and government agencies, bringing everyone to the table to come up with new ideas, which includes our most valuable resource... our Stakeholders. We will be relentless in our efforts to explore new technologies and farming practices that will be of benefit to the area. We undertake all of these efforts, with the expectation of countering any burdens placed upon the people, while meeting our number one mandate... to conserve water for future generations. 💧

## Water Conservation Grower Meetings 2017

Growers in the district had the opportunity to attend two water conservation grower meetings on September 7 in Dumas and September 20 in Perryton. By attending one of these field days in its entirety, growers qualified to apply for a portion of the district's new \$300,000 cost share fund for water management tools. Based on their participation in the two meetings, 29 growers are qualified to apply for the cost share funds provided by the Texas Water Development Board. This program, the Irrigation Conservation Initiative, will provide cost share for up



*Growers observe the field at the North Plains Water Conservation Center where North Plains GCD and Crop Production Services provide updates on the 2017 “3-4-5” program at the Dumas field day.*

to 50-percent of the equipment cost for soil moisture probes, pivot monitoring and control systems, telemetry, plant stress monitoring and on-farm weather stations.

The Dumas field day, in cooperation with Crop Production Services (CPS), was held at the North Plains Water Conservation Center ten miles north of Dumas. Presentations covered a variety of topics including water efficiency and fertility, cotton and corn varieties based on gallons per minute on drip and pivot, and updates on the district's “3-4-5 Gallon Production Maximization (GPM)” project. The program was rounded-out by Russ Hodges from AquaSpy, Inc., discussing best practices for soil moisture probes.

In Perryton, Alan Brugler, sponsored by Plains Land Bank, discussed late season corn marketing. Plains Land Bank gave away two 6-month subscriptions to Brugler's marketing consulting services as door prizes. Representatives from the Israeli company, Phytech, Inc., presented information about their water efficient, plant-based practice applications, and district board member, Danny Krienke and project lead, Leon New gave an update on Krienke's “3-4-5 GPM” project. Participants submitted their best guesses at the what the yields will be on Krienke's demonstration fields. Cash prizes will be awarded after harvest for the closest guesses for each category. Russ Hodges also presented information about soil moisture probes.

The district's “3-4-5 GPM” 2016 final report can be found on the district's website at <http://northplainsgcd.org/conservationprograms/agricultural-conservation/3-4-5-demonstration-project/>, or a hard copy of the report can be picked up at the district's office at 603 E. 1<sup>st</sup> St, Dumas, TX. The grower day presentations were recorded and are available for viewing on the district's YouTube channel at <https://tinyurl.com/y7fpewg2>. 💧



# 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 decline in groundwater by maintaining a network of over 435 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. The district has drilled or owns 62 dedicated monitor wells and has installed monitoring equipment in 46 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 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, however, overall 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 2016 production season have been gathered, tabulated and published in the “2016-2017 Hydrology and Groundwater Resources” report, which is available in the district office and on the district’s website <http://northplainsgcd.org/aquifer-data-maps/hydrologic-report/>. A summary of the results is also presented in the following table and illustrations. 💧

Annual county declines in water levels calculated from groundwater production reports.

| County     | Average Annual Feet of Decline |
|------------|--------------------------------|
| Dallam     | 2.0                            |
| Hansford   | 1.6                            |
| Hartley    | 2.7                            |
| Hutchinson | 2.2                            |
| Lipscomb   | 0.4                            |
| Moore      | 2.5                            |
| Ochiltree  | 0.8                            |
| Sherman    | 2.7                            |

*Average annual declines in water level are calculated values created using reported annual groundwater production and an estimated aquifer specific yield of 18 percent.*

*Average county declines and average declines observed in monitor wells differ because district monitor wells are predominately located near areas of high pumping. This bias in monitor well location causes an over estimation of declines when used to calculate county averages.*

Average depth to water and comparisons of average declines in **select** district water level monitor wells.

| County        | Avg. Depth to Water (Feet) | 2016 Avg. Well Decline (Feet) | 2015 Avg. Well Decline (Feet) | Current 5-Year Avg. Well Decline (Feet) | Previous 5-Year Avg. Well Decline (Feet) | Current 10-Year Avg. Well Decline (Feet) | Previous 10-Year Avg. Well Decline (Feet) |
|---------------|----------------------------|-------------------------------|-------------------------------|---|--|--|---|
| Dallam        | 284                        | 3.85                          | 3.75                          | 3.73                                    | 3.48                                     | 3.95                                     | 3.05                                      |
| Hansford      | 304                        | 2.42                          | 2.37                          | 2.32                                    | 2.01                                     | 2.19                                     | 1.58                                      |
| Hartley       | 363                        | 4.62                          | 4.48                          | 4.38                                    | 4.20                                     | 4.27                                     | 3.33                                      |
| Hutchinson    | 349                        | 2.12                          | 2.09                          | 2.06                                    | 1.95                                     | 2.05                                     | 1.72                                      |
| Lipscomb      | 162                        | .89                           | .86                           | .88                                     | .79                                      | .89                                      | .58                                       |
| Moore         | 354                        | 3.07                          | 3.00                          | 2.93                                    | 2.30                                     | 2.59                                     | 1.71                                      |
| Ochiltree     | 332                        | 1.56                          | 1.54                          | 1.4                                     | 1.26                                     | 1.38                                     | 1.00                                      |
| Sherman       | 303                        | 3.11                          | 3.06                          | 2.99                                    | 2.71                                     | 2.94                                     | 2.71                                      |
| District-wide | 306                        | 2.71                          | 2.64                          | 2.59                                    | 2.34                                     | 2.53                                     | 1.96                                      |

## Time Flies When You’re Having Fun

The district celebrated with many of its employees this year, as they were recognized for their commitment to helping protect and preserve groundwater resources here in the northern Texas Panhandle. We appreciate your hard work, enthusiasm, loyalty, and commitment to excellence of service to the North Plains Groundwater Conservation District!



Name: Pauletta Rhoades  
Position: Finance/Administration Manager  
Years of Service: 20 Years



Name: Steve Walthour  
Position: General Manager  
Years of Service: 10 Years



Name: Shari Stanford  
Position: Natural Resource Specialist-Meter Program  
Years of Service: 5 Years



Name: Jerry Green  
Position: Natural Resource Specialist  
Years of Service: 5 Years



# WaterWise Program Saves Millions of Gallons of Water

The district began the WaterWise Conservation Education Program for fifth graders in 2010, offering water conservation kits and education free of charge to teachers, students and their families throughout the district.

“The WaterWise Program was chosen to be offered by the district because of its unique combination of in-class conservation education and interactive, home-based conservation activities,” said Kirk

Welch, the district’s assistant general manager for outreach. “This year 620 teachers, students and their families made changes in their behavior that will result in almost 4-million gallons of water being saved annually.” WaterWise achieves additional results that are difficult to measure by causing families to adjust their attitudes and actions regarding our most precious resource.

The program begins with classroom discussions teaching the importance of using water and energy efficiently, followed by hands-on, creative problem solving. Next, participants take home a WaterWise Kit that contains conservation tools. With the help of their parents/guardians, they install the tools in their home and complete a home survey. Here are a few samples of questions asked on the home survey.

**Did you install the high efficiency showerhead? Yes - 42%**  
**Did you work with your family on this program? Yes - 71%**  
**Did your family change the way they use water? Yes - 68%**

Before installing the conservation tools in their homes, parents/guardians and students measured the efficiency of pre-existing devices so they could calculate savings generated using the new devices. Using the family habits collected from a home survey as the basis for this calculation, six hundred twenty (620) households are expected to save the following resource totals. Savings from these actions and new behaviors will continue for many years to come.

## PROJECTED ANNUAL SAVINGS

|                  |                             |
|------------------|-----------------------------|
| <b>3,981,672</b> | gallons of water saved      |
| <b>14,990</b>    | therms of gas saved         |
| <b>128,521</b>   | kWh of electricity saved    |
| <b>3,981,672</b> | gallons of wastewater saved |

## PROJECTED LIFETIME SAVINGS

|                   |                             |
|-------------------|-----------------------------|
| <b>24,100,366</b> | gallons of water saved      |
| <b>94,177</b>     | therms of gas saved         |
| <b>808,893</b>    | kWh of electricity saved    |
| <b>24,100,366</b> | gallons of wastewater saved |

By installing and monitoring the new efficiency tools in their own homes, students can measure what they learned with actual water, energy, and monetary savings! These savings benefit both the participating student households and their communities.

The school-based WaterWise Program is fully implemented and designed to generate immediate and long-term savings by bringing interactive “real world”



*WaterWise kit provided to fifth graders in the district that contains conservation tools.*

education home with motivated students. The program staff identifies and enrolls students and teachers within the designated service territory. Materials meet state and national educational standards, which allow the program to easily fit into teachers’ existing schedules and requirements. Dona Smith from Dalhart Intermediate School said “I love the whole thing. Home and school can get involved.”

Students were asked to complete a ten-question test before the program was introduced and then again after it was completed to determine the knowledge gained through the program. On average students answered 60-percent of the questions correctly prior to being involved in the program and improved to answer 79-percent correctly following participation.

*This article was compiled from excerpts from the 2016-2017 North Plains GCD WaterWise Program Summary Report.* ♦

## Jones Joins North Plains Groundwater Conservation District

Karen Jones is the new Administrative Support Specialist for the district, assisting with permitting, production reporting and monitoring programs, grant reporting and other aspects of the district.

Originally from Amarillo, Jones moved to Dumas in May 2015 after working for First Street Church for eight months. “I just got tired of the drive and decided to make it permanent!” Jones said.

Prior to working for First Street Church, Jones was employed by a medical software company as a product specialist and software trainer for three years training and supporting over 3,000 medical offices nationwide.

After moving to Dumas, Jones worked at Ag Producers Co-Op initially as seasonal office help during harvest; however, the position became permanent. “I learned so much,” Jones said. “I met landowners and farmers throughout Moore County. I listened to them discuss the benefits and problems with farming in this area. I was introduced to the agriculture way of life and enjoyed it immensely!”

Jones became aware of the job opening at the district, and said “the job description just screamed my name!” Based on her previous track record of maintaining reporting and tracking data and documentation, the district is pleased to welcome Karen Jones to the team and excited about her current and future contributions to the mission.

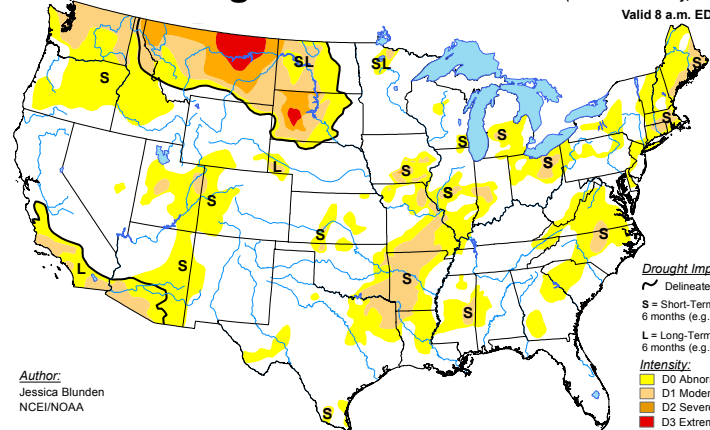
“I have lived in the Panhandle my entire life, but never in the agricultural world. Diving into this field is exciting. You never realize how much work goes on behind the scenes, until you see it first-hand. It brings a greater appreciation for what all of our farming families do for us.” ♦



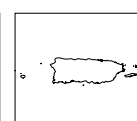
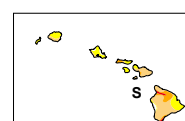
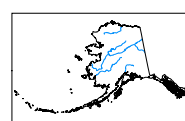
*North Plains GCD welcomes Karen Jones as the new Administrative Support Specialist.*

## U.S. Drought Monitor

October 17, 2017  
(Released Thursday, Oct. 19, 2017)  
Valid 8 a.m. EDT



Author:  
Jessica Blunden  
NCEI/NOAA



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



<http://droughtmonitor.unl.edu/>





North Plains GCD volunteered in the Dalhart and Perryton communities this summer. Dalhart’s famous XIT Rodeo was August 3-5 where the district worked at drink stations all three days during the free feeds for their community. The district also ran a concession stand Friday night during the rodeo. Perryton’s annual Wheatheart Block Party brought the community together on August 17, where the district set up their canopy and handed out free water, along with water-saving kits and other free giveaway items. Thank you to both communities for allowing the district to participate! We enjoyed our time getting to know more of you and joining in the celebrations! 💧

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# Rainwater Harvesting Workshop

The district will partner with Texas A&M AgriLife Extension and Research to offer a workshop exploring the topic of rainwater harvesting. Charles Hillyer, Ph. D., Assistant Professor, Extension Specialist – Irrigation Engineer, will present the workshop that is scheduled for 9 am – 12 pm on Saturday, October 28 at North Plains Groundwater Conservation District at 603 East 1<sup>st</sup> St. Rainwater harvesting systems can be as simple as a rain chain positioned over a planter box, or as complex as multiple integrated catchment areas and storage facilities with treatment systems to produce a potable drinking water supply. Hillyer will give an overview of the principles of rainwater harvesting to inform the mildly interested and provide a head start to anyone wanting to plan their own system. Please RSVP by Thursday, October 26 by calling the office at 806-935-6401, or emailing [info@northplainsgcd.org](mailto:info@northplainsgcd.org). Registration for the workshop is limited. 💧



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