

Prairielands eLine

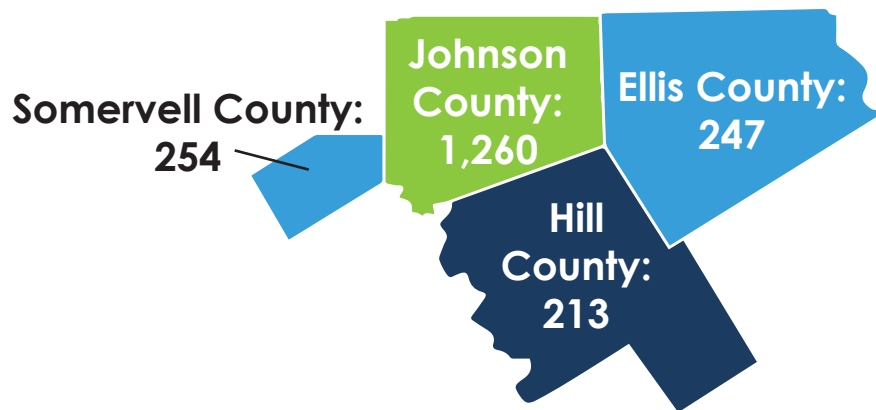
The Newsletter of the Prairielands Groundwater Conservation District

Spring 2021 | Vol. 7, Iss. 2

Highlights from the 2020 Annual Report

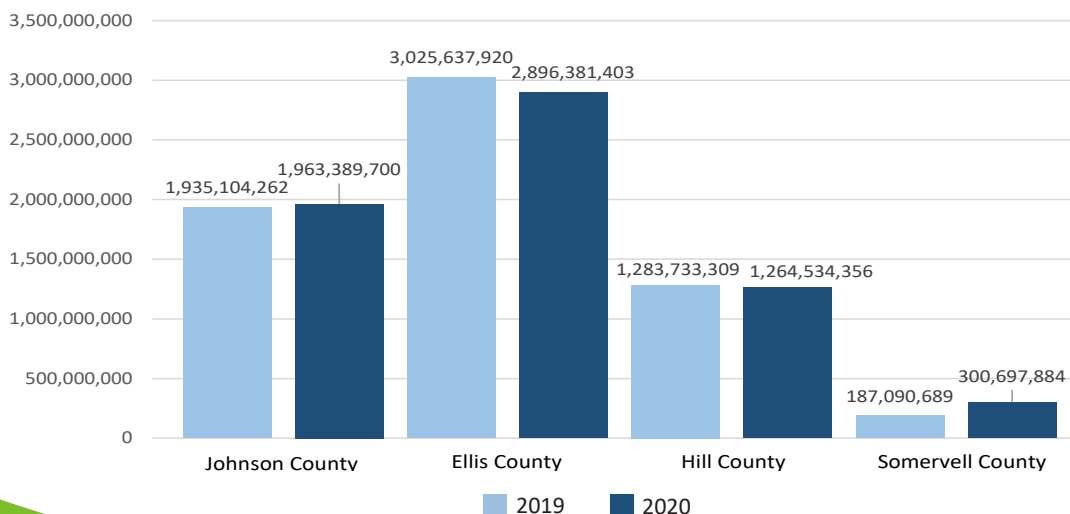
District Well Registrations

By December 31, 2020 a total of 232 additional wells were registered with the District in 2020, bringing the total number of registered wells to 1,974. Of the new registrations, there were 219 new wells and 13 existing wells. These 2020 well registrations were comprised of 226 exempt wells and six non-exempt wells, of which four were granted Operating Permits and two are not in operation.



District Well Production

Non-exempt well owners in the District reported that they pumped a total of 6,425,003,343 gallons of groundwater in 2020. Owners in Ellis County pumped the most of the four counties followed by Johnson, Hill, and Somervell. However, there was a decrease in pumping from 2019 to 2020 shown in Ellis and Hill Counties, and an increase in pumping reported in Johnson and Somervell Counties.



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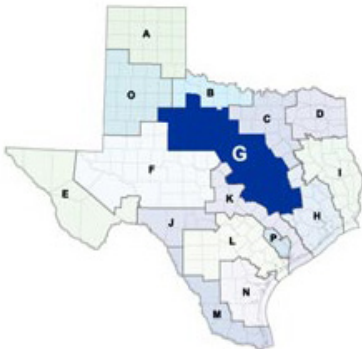
Highlights from the 2020 Annual Report

2020 Education and Outreach



In 2020, District staff were present at 13 public outreach events, interacting with 371 people about groundwater and conservation. There were also three educational presentations delivered to schools within the District, which reached over 339 children. The District sponsored the 2020 Texas Water Conservation Association Fall Conference, and was a Signature Sponsor for the Texas 4-H Water Ambassador Program. The District also distributed three press releases about District news and conservation efforts to newspapers across the four-county District.

2020 State and Regional Water Planning



The Board of Directors, General Manager, and District staff strive to stay informed on any matters related to groundwater supply in Ellis, Hill, Somervell and Johnson counties. Critical sources of pertinent information include familiarity and understanding of regional and state water plans. The Board President and General Manager continued to stay abreast of proposed amendments to the Region C and G regional water plans so that supply strategies impacting groundwater resources in the District were properly identified. The District's interactions with the RWPGs not only included participation in meetings but coordination with the groups to keep them up-to-date on groundwater-related activities in Ellis, Johnson, Hill and Somervell counties as well. The District's groundwater regulations directly impact

the planning activities of the RWPGs, so the District works collaboratively with the RWPGs and its consultant team to incorporate the District's groundwater management goals into the regional water planning process.

2020 Groundwater Monitoring and Addressing Desired Future Conditions

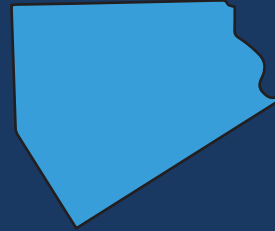
The District's monitoring program is still in development, but has seen a 22% growth in monitoring wells added to the program since 2017. The District's field staff installed two Sutron pressure transducers to two wells in Johnson County, bringing the total number of wells in the Groundwater Monitoring Program to 203. District staff continued to work with the District's consulting hydrologist, WSP USA, to identify the most needed areas in the District for monitoring in order to plan future development of the monitoring well network.

District field staff conducted water level measurements from 180 of the 203 wells in the monitoring network and sent the measurement readings to the District's consulting hydrogeologist and reported the readings to the Texas Water Development Board for their Water Data Interactive database. Due to some COVID-19 restrictions, a select few monitoring wells were not accessible for measurement. The District continues to develop its monitoring program, and upon full implementation, District staff will work with consultants to analyze water level measurements to determine trends and evaluate these trends in relation to the achievement of desired future conditions.

2020 Water User Group Pumping Amounts by County

Ellis County

Commercial/Small Business: 7,940,780 gal
 Filling a Pond or Surface Impoundment: 1,166,126 gal
 Golf Course Irrigation: 29,833,100 gal
 Industrial/Manufacturing: 669,595,637 gal
 Municipal/Public Water Supply: 2,187,845,760 gal



Hill County

Commercial/Small Business: 2,760,410 gal
 Filling a Pond or Surface Impoundment: 7,242,700 gal
 Municipal/Public Water Supply: 1,254,531,246 gal

Johnson County

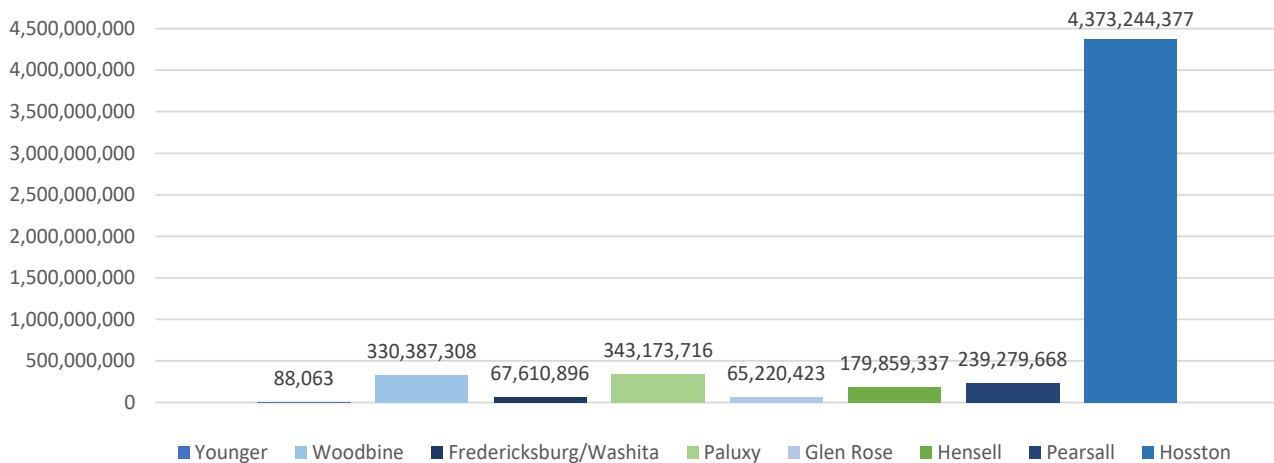
Commercial/Small Business: 1,722,300 gal
 Filling a Pond or Surface Impoundment: 74,746,547 gal
 Golf Course Irrigation: 7,889,100 gal
 Industrial/Manufacturing: 32,949,900 gal
 Municipal/Public Water Supply: 1,843,661,536 gal
 Oil & Gas Production: 4,142,617 gal



Somervell County

Commercial/Small Business: 37,525,137 gal
 Golf Course Irrigation: 400 gal
 Industrial/Manufacturing: 141,464,500 gal
 Municipal/Public Water Supply: 121,582,267 gal
 Oil & Gas Production: 125,580 gal

2020 Water Usage by Aquifer



Conserving Water Outdoors this Spring

Because Texas enjoys a vibrant economy and continued population growth, ensuring we have enough water for current and future Texans remains a top priority in the state. Fortunately, all Texans can play a role in conserving water. Outdoor water can constitute a large portion of overall residential water use so wise landscape watering is an important place to start. If we cultivate good watering habits just as we cultivate our gardens, we can use water to sustain our plants and promote healthy growth while conserving supplies for future use. The key to watering the Texas landscape wisely is threefold: 1) Choose plants adaptive to conditions in your area of the state; 2) Measure the amount of water needed to irrigate your landscape; 3) Use the right tools and methods to deliver the optimal amount of water.

Choose Native Plants

Native and adapted plants are the ideal choice for an aesthetically pleasing water efficient landscape. Native plants have evolved in our climate, thrive in our soils and are more resistant to local pests. Adapted plants are also very hardy but have been developed and introduced to Texas landscapes through the horticulture industry. Whether you are interested in well-manicured looks or a more naturalistic landscape design, there are a number of native and adapted plants with various structures, textures and colors to meet the needs and to help you save time and money. Some of the characteristics that lead Texans to incorporate native or adapted plants include their tolerance for drought and heat, water efficiency, and low pesticide and fertilizer requirements. Vitex, lantana, and red yucca are just a few of the native plants you can plant in your yard that have low water demands and also provide a gorgeous pop of color to your landscaping. They can also attract bees and butterflies as well!



Calculate Your Watering Needs

Once you've chosen plants and grass well suited to your area, how do you know when and how much to water your landscape? Typically, grass takes on a dull, dark appearance, and leaf blades begin to roll when they need water. Healthy, properly irrigated lawns rarely need more than one inch of water per week during the summer months. The best time to water all landscape plant material is early morning or late evening when winds are calmer and temperatures are lower, resulting in less water loss to evaporation. It's important to give leaf surfaces time to dry before nightfall to deter disease and decay. A good rule is to wet the soil to a depth of 4 to 6 inches to reach the root system of the plants. Use a soil moisture probe or screwdriver to determine the depth the water reaches. Soil type, amount of rainfall, and season of the year all affect the amount of water you need to apply.

After you've made your selection of plants, determined the schedule for watering based on their needs, the next important decision is to select the appropriate way to water your landscaping. One of the most important ways you can help conserve water outdoors is to know the most efficient approaches to applying water to your lawn, flowerbeds, trees and shrubs. Here are three of the most common lawn and garden irrigation methods:



Sprinklers

These systems are popular because they are convenient and supply large areas of a landscape with plenty of water. With careful timing of zone watering and proper selection of spray nozzles, these systems can be adjusted to water in a reasonably efficient manner. Monitor the zone settings and adjust throughout the year to meet changing weather conditions and landscape needs. If settings are not monitored and changed, at some time during the growth season a landscape will be either under or over watered.



Drip Irrigation

Drip irrigation systems are very efficient (use up to 60% less water) at supplying water to smaller areas of a landscape. Drip irrigation places a small amount of water (and, as an option, nutrients) close to the roots. Almost 95% of drip irrigation water can reach a plant, while traditional automatic sprinklers are much less efficient. The simplest and least expensive example of drip irrigation is the use of soaker hoses. These are especially useful in flower beds and around trees. They can also be placed next to the house to stabilize soil next to the foundation.



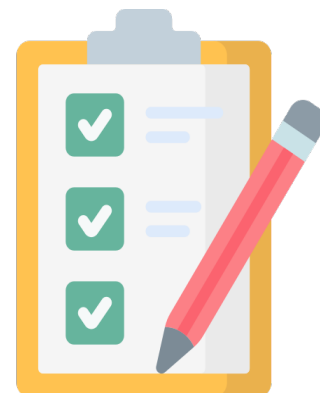
Hand Watering

Hand watering means using a combination of hose-end yard sprinklers that have to be moved and the use of a handheld hose, or even using a watering can. For most applications, the first thing to consider is using a sprinkler or spray nozzle that does not produce a fine mist. Fine mist evaporates more quickly and is easily blown out of the area you want to water. When using a sprinkler on your lawn, be sure that you deliver the amount of water needed. Make sure and set a timer or set up a reminder so you don't forget to move the sprinkler and over water.

Six Simple Steps to Report Meter Readings

January 1, 2021 marked the beginning of the requirement for monthly submission of water production reports, meter readings, and meter logs for non-exempt wells in the District. To help with the transition, we've put together a list of simple steps you can follow to report your meter readings through our online database:

1. Visit www.prairielandsgcd.org and select "Need to register or report on your well?" It should be in a light blue box on the righthand side of the homepage. You can also find this link on the top of the District Fees page of the website.
2. Login using your database credentials. If you cannot remember your username or password, call the District office, or use the "Request new password" tab on the login screen.
3. After you have logged in, select the "My Wells" tab to pull up a list of your registered wells.
4. Select the option for the current reporting period.
5. Select "Report Last Month Usage". These meter readings must be submitted by the 15th of the following month. For example, February meter readings would be due by March 15, March meter readings are due by April 15, and so on. Your meter reading should be taken as close to the end of the month as possible and on a regularly scheduled day to ensure accuracy.
6. Enter the meter reading for each well and then click "submit". The number you will report is the actual reading on the meter itself, there is no need to calculate the production amount from the previous month as our database will do that automatically.



Reading an Analog Display

The large sweep hand on the dial measures water use in gallons, one gallon of water passes through the water meter as the sweep hand moves from one number to the next (e.g., 0 to 1). Every time the sweep hand makes a full rotation, that is 10 gallons, 100, 1,000 etc...The last number on the right is a static zero (does not change). When you record your reading to report to the District, make sure to add the stationary zero(s) as the final digit.

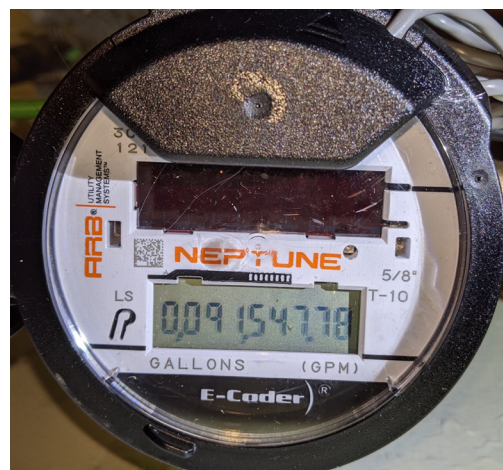
Example: The analog meter display to the right would read as 300 gallons.



Reading a Digital Meter

If you have a digital meter, it may need light for activation so you may need to shine a flashlight on it. The display typically alternates between the meter reading and the flow rate. The meter reading equals the gallons used while the flow rate equals the number of gallons per minute flowing through the water meter.

Example: The digital meter display on the right would read as 91,547 gallons.



Texas 4-H Youth Water Ambassador Program

Applications for 2021-2022 Now Open

Applications are now open for the 2021-2022 cohort of Texas 4-H Youth Water Ambassadors. Now in its fourth year, the 4-H Water Ambassadors Program continues to grow in number and is gaining recognition and support from the Texas water industry. To date, 110 youth have participated in the Program representing more than 65 counties. The District is proud to support this youth leadership organization and provide an opportunity for young people to nurture their passion and knowledge for management of natural resources in Texas.

Founded in 2017, The Texas 4-H Water Ambassadors Program provides high school youth an opportunity to gain advanced knowledge and develop leadership skills related to the science, technology, engineering, and management of water across the state. The District currently has five ambassadors representing Ellis, Hill and Johnson Counties.

Through the program, ambassadors gain insight into water law, policy, planning, and management as they interact with representatives from state water agencies, educators, policy-makers, and water resource managers. Ambassadors also gain an appreciation for the complexity of managing Texas surface and groundwater resources, its importance to local, regional, and state economies, and the importance of protecting this valuable resource for future generations.

Water Ambassadors commit a minimum 40 hours of service over a 12-month period following a Leadership Academy. Service hours include delivering water education at local 4-H clubs, schools, and community events. Many ambassadors have been accomplishing this goal through virtual presentations and meetings.



Please visit www.prairielandsgcd.org/education/texas-4-h-water-ambassadors/ for more information!

Eligibility:

- Be in high school or entering high school in the 2021/2022 academic year
- Be at least 14 years of age by August 31, 2021
- Be a current 4-H member, or be willing to join a local 4-H club if selected

Expectations:

4-H Water Ambassadors accept the responsibility of educating youth and adults in their communities. They commit to advancing their water knowledge throughout their 12-months of service. Those selected will participate in the summer 2021 Tier I 4-H2O Leadership Academy (June 27 – July 1) and commit to a minimum of 40 hours of education/service.

How to Apply:

Visit www.texas4hwaterambassadors.com for application instructions

Prairielands GCD Launches TexMesonet Data Page on Website

The TexMesonet Program was established by the Texas Water Development Board (TWDB) in 2016 following the severe flooding that affected regions of Texas. According to the summary on the TexMesonet website, a mesonet is a network of weather stations spaced close enough to each other to observe and track weather events, and collect data on atmospheric conditions, solar energy, soil moisture, and soil temperature. This data is used for weather forecasting, alternative energy development, agriculture, and for fire, flood, and freeze warnings. Measurement readings are updated every 15 minutes to the database.

There are currently four TWDB TexMesonet stations within the boundaries of the District and are located in Alvarado, Blum, Aquilla, and Glen Rose. The other stations you see below on the map include National Weather Service and Federal Aviation Administration mesonets. These stations help Prairielands GCD monitor weather patterns and rainfall amounts in the District through the near real-time readings the TexMesonet network provides. Other benefits are drought monitoring, flood forecasting, irrigation recommendations for urban and rural areas, and enhanced agricultural productivity and water conservation. Please visit www.prairielandsgcd.org/education/texmesonet/ to view the map and data.

Navigating Losses and Leaks: Resources to Help Maximize Revenue and Minimize Water Loss

Did you know the Texas Water Development Board provides resources for public retail water systems to help make the most of their water loss audit, reduce and repair leaks, and conserve water? Even with the warmer weather we have experienced lately, many of us are still feeling the aftershock of Winter Storm Uri. We at Prairielands GCD know the public retail water systems have been working diligently since the “snowpocalypse” to continue providing safe and reliable water to their customers, all while potentially dealing with damages incurred due to the unprecedented freeze. The good news is there are resources available for these kinds of situations, and we wanted to ensure you were aware of these opportunities provided by TWDB to help mitigate water loss and sustain revenues.



Free Leak Detection Equipment

Knowing there is a leak is one thing, but locating it can sometimes be tricky, especially with large systems. As a conservation initiative, TWDB loans acoustical leak detection and ultrasonic flow meter testing equipment to help assist utilities identify leaks and determine flow rates. This program is designed to aid utilities in reducing water loss by locating leaks within the distribution system and verifying flow rates from production meters. The equipment ranks among the industry's best current technology and can filter out unwanted sound frequencies that would otherwise prevent you from pinpointing the leaks. This equipment can be borrowed for 30-days and as many times as necessary throughout the year. The equipment is free to borrow, the utilities only cost is to prepay for return shipping. For more information on the resources listed above, please visit www.twdb.texas.gov/conservation/resources/waterloss-resources.asp.

Upcoming Events and Meetings

May 4 Deadline to Submit Operating Permit Applications to be Heard at May Board Meeting

May 15 Texas 4-H Youth Water Ambassador Applications Close

May 17 PGCD Board Meeting
9:00 a.m.
208 Kimberly Dr
Cleburne, TX 76031

May 31 Memorial Day
PGCD Office Closed

June 8 Deadline to Submit Operating Permit Applications to be Heard at May Board Meeting

June 21 PGCD Board Meeting
9:00 a.m.
208 Kimberly Dr
Cleburne, TX 76031

Be sure to visit the homepage of our website to sign-up to receive our e-blast notifications so you never miss out on the latest news, events or updates about Prairielands GCD!

Texas Well Owner Network “Well Educated” Workshop Hosted by Prairielands GCD Scheduled for June 18, 2021

“Well Educated” is a free, half-day educational training for Texas residents who depend on household wells for their water needs. The workshop is for private well owners who want to become familiar with groundwater resources, septic system maintenance, well maintenance, water conservation, water quality and water treatment. Please visit our website and social media for updated details about the event.

As part of the Well Educated Program participants can bring their well water samples to be screened for common contaminants including fecal coliform bacteria, nitrates, arsenic and salinity. For directions and information on collecting water samples, please visit www.twon.tamu.edu/well-educated/

Photos from recent educational outreach events at local schools



About Prairielands GCD

The Prairielands Groundwater Conservation District was created in response to a finding by the Texas Commission on Environmental Quality that groundwater shortages were expected in Ellis, Hill, Johnson, and Somervell counties over the next 25 years. The TCEQ finding required local residents to create a groundwater conservation district, or else TCEQ would mandate one. Enabling legislation for the Prairielands GCD was passed in 2009.

The Mission of the Prairielands Groundwater Conservation District is to develop rules to provide protection to existing wells, prevent waste, promote conservation, provide a framework that will allow availability and accessibility of groundwater for future generations, protect the quality of the groundwater in the recharge zone of the aquifer, insure that the residents of Ellis, Hill, Johnson, and Somervell Counties maintain local control over their groundwater, and operate the District in a fair and equitable manner for all residents of the District.

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817- 556-2299

208 Kimberly Dr

Cleburne TX, 76031