2020 ANNUAL REPORT

PGCD

PRAIRIELANDS GROUNDWATER CONSERVATION DISTRICT

JOHNSON • ELLIS • HILL • SOMERVELL

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Letter from the General Manager

Kathy Turner Jones
General Manager

We will always be thrown curveballs in life, but what matters is how we react to them. No statement can better explain the unprecedented change that the year 2020 brought with it, and the importance of positive attitude and perseverance needed to adjust to that change. No matter what might be going on in the world, we still have a responsibility to protect groundwater resources for current and future generations, and while 2020 was not the year many had predicted, it did hold many milestones and accomplishments for the District and for groundwater management in this region.

The year marked the continuation of the implementation to the District's permanent rules through the developments on Historic Use Permits and Operating Permits. District staff have been able to work with permittees and well owners to best preserve and manage groundwater resources while meeting the demands of a growing and thriving population. Throughout 2020, District staff and directors also worked to identify improvements to support the District's efforts in managing our groundwater resources. As a result November 2020, the Board of Directors adopted amendments to the District's Rules, which included clarifications to well spacing regulations and calculations, the ability for contested case hearings for spacing of exempt wells, change of ownership provisions for public water systems, elimination of early payment incentives and flushing discounts in favor of an up to twenty percent refund for conserved water, establishing fees by resolution rather than costly public hearings, and changes to increasing the meter verification guidelines, as well as other non-substantive and conforming changes.

The year also saw the completion of the District's new office facility in September 2020. This new building has been a much-needed addition for the District as our staff grows. Through this new office, the District and its' staff are able to better serve its residents and help accomplish the directive to conserve, protect and enhance the groundwater resources of Ellis, Johnson, Hill and Somervell Counties.

We also mourned the passing of longtime board member, Dennis Erinakes, in July 2020. Mr. Erinakes had represented Johnson County on the District's board since its inception and was an integral part of the District's success and growth over the years. Director Tod Sandlin resigned his position on the Board after serving as a representative of Somervell County since 2017, and the District welcomed a new member to the Board of Directors with the swearing in of John Curtis in January 2020 to represent Somervell County. The District has benefitted from Mr. Curtis' guidance and expertise since he joined the Board.

While 2020 presented many challenges, the success of the joint planning process among Groundwater Management Area 8 is a testament to the commitment and dedication groundwater

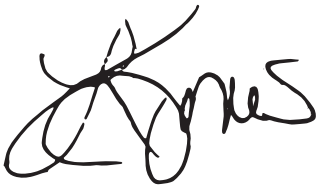
conservation districts have for conserving, protecting, and enhancing groundwater resources. Prairielands GCD and our neighboring districts within GMA 8 worked together collaboratively via audio and visual meetings to keep up with considering and developing proposed Desired Future Conditions which were approved for public hearing in November 2020.

The District and other groundwater managers and leaders across the state also had to embrace change and adaptation when it came to interim legislative session. Due to the continued impacts of COVID-19, stakeholders will face uncertain access and protocols for interacting with members of the legislature and even entering the Capitol during the 87th session. The District continues to be actively involved with legislative committees through statewide water associations and organizations to stay ahead of the legislation that impacts the District and its constituents. We can likely expect a renewed focus on groundwater policy issues in 2021, especially with respect to GCDs over the same aquifer adopting similar rules, attorneys' fees, permit moratoriums, consideration of a water provider's service area in groundwater permitting, and the standard of review for an appeal of GCD's decision on a groundwater permit.

Other efforts by the District this year included planning and development of the District's new groundwater management database, public outreach and educational events, and growing the District's monitoring well program. Our office also welcomed several new staff members to the team to help accomplish the goals and management objectives of the District.

2020 was a year full of uncertainty and unexpected change. However, even through the trials of the year, we still saw the ability to overcome obstacles through perseverance and adaptation. I look forward to continuing these developments in 2021 and the opportunity to work with our communities, business leaders, and local and state officials on water conservation and supply matters.

Sincerely,



Kathy Turner Jones

General Manager

Mission Statement

The Mission of the Prairielands Groundwater Conservation District (“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.

Brief District History

Prairielands Groundwater Conservation District was formed in response to a finding by the Texas Commission on Environmental Quality (TCEQ) 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 the TCEQ would mandate one, enabling legislation for the Prairielands GCD to be created in 2009 by the 81st Texas Legislature.

The Prairielands GCD is located in the north prairies of Texas, encompassing a four-county area. The District spans 2,870 square miles and overlays the Trinity Aquifer and Woodbine Aquifer.

District Creation

The Prairielands Groundwater Conservation District (“District”) was created by the 81st Texas Legislature under the authority of Section 59, Article XVI, of the Texas Constitution, and in accordance with Chapter 36 of the Texas Water Code (“Water Code”), by the Act of May 3rd, 2009, 81st Leg., R.S., Ch. 1208, 2009 Tex. Gen. Laws 3859, codified at TEX. SPEC. DIST. LOC. LAWS CODE ANN. Ch. 8855. (“The District Act”). The District is a governmental agency and a body politic and corporate. The District was formed to serve a public use and benefit and is essential to accomplish the objectives set forth in Section 59, Article XVI, of the Texas Constitution.

Board of Directors

The Prairielands Groundwater Conservation District's Board of Directors is composed of two members per county, appointed by the counties' Commissioners' Courts. The 2020 directors are:

President – Charles Beseda
Term Expires August 31, 2023
Represents Hill County

Secretary/Treasurer – Maurice Osborn
Term Expires August 31, 2023
Represents Ellis County

First Vice-President – Dennis Erinakes
Term Expires August 31, 2023
Represents Johnson County

Director – Marty McPherson
Term Expires August 31, 2021
Represents Somervell County

Director – Kent Smith
Term Expires August 31, 2021
Represents Hill County

Second Vice-President – Randel Kirk
Term Expires August 31, 2021
Represents Ellis County

Director – Paul Tischler
Term Expires August 31, 2021
Represents Johnson County

Director – John Curtis
Term Expires August 31, 2023
Represents Somervell County

District Staff

Kathy Turner Jones
General Manager

Michael Heath
Field Operations Coordinator

Annette Kinney
Permitting Coordinator

Karol Bowers
Permitting Assistant

Sinclaire Newby
Public Relations and Education Director

Accounting

Rusty Zent
Field Technician

Kaylin Garcia
Office Assistant

Amendments to District Rules

The Board of Directors held a public hearing on November 16, 2020 to adopt amendments to the District Rules regulating water wells within the boundaries of the District, including Ellis, Hill, Johnson and Somervell Counties.

Over the months leading up to the meeting, the District staff and directors worked diligently to identify needed rules improvements in the course of implementing the District Rules that were adopted on December 17, 2018 and previously amended on October 21, 2019, and the Board's Rules and Bylaws Committee worked to develop recommended amendments to the District Rules to address such improvements.

The adopted amendments to the District Rules included ending the early payment incentive for water use fees that was established in the District's original Temporary Rules, as well as water use payment exemptions for certain flushing requirements required by the Texas Commission on Environmental Quality and for emergency purposes, in favor of an annual refund on conserved water under a permit. The amendments also authorize the Board to establish certain administrative fees presently set forth in the rules instead by resolution, clarifying hearings procedures on applications for exceptions to well spacing and minimum tract size requirements, clarifying methods for calculating well spacing requirements, making minor typographical, formatting, and clarifying corrections to the transfer of well ownership rules, the definition of "maximum historic use," and other rules, as well as other non-substantive clarifying and conforming changes. The adopted amendments to the District Rules are necessary to support the District's efforts in managing the groundwater resources within the boundaries of the District.

Honoring Director Dennis Erinakes

In July 2020, the Prairielands GCD Board of Directors 1st Vice President, Dennis Erinakes, unexpectedly passed away. Director Erinakes was a founding member of Prairielands GCD, and proudly represented Johnson County for over ten years. He was also the committee chair for the District's Groundwater Monitoring, Desired Future Conditions, and Database Committee, as well as a member of the Conservation and Public Awareness Committee and Budget and Finance Committee. Director Erinakes' years of service and commitment to the District were recognized on October 16, 2020 at the open house event held at the District's new offfice facility with an honorary plaque presented to Director Erinakes' family members.

Management Plan Objectives, Performance Standards, and Annual Activity Report

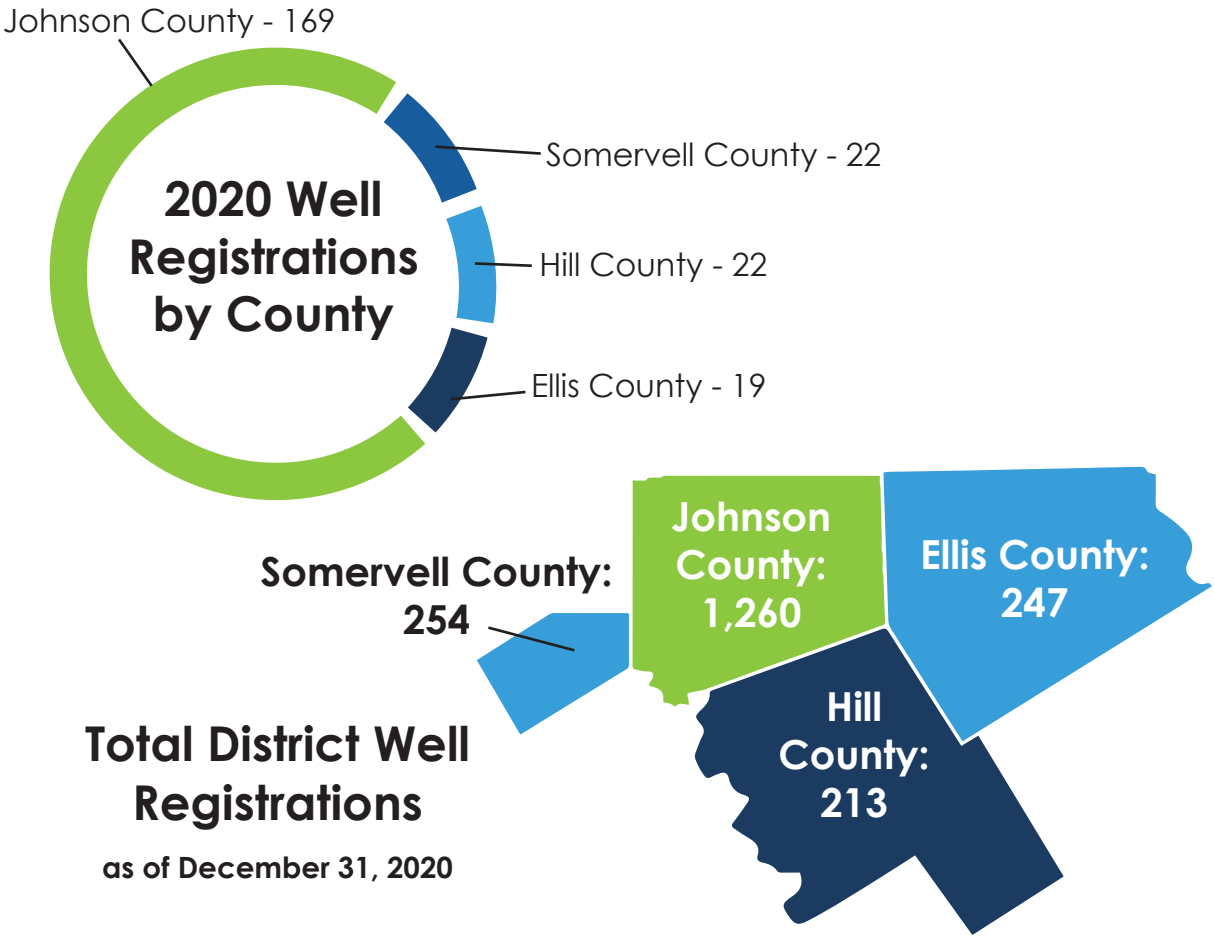
Providing the Most Efficient Use of Groundwater

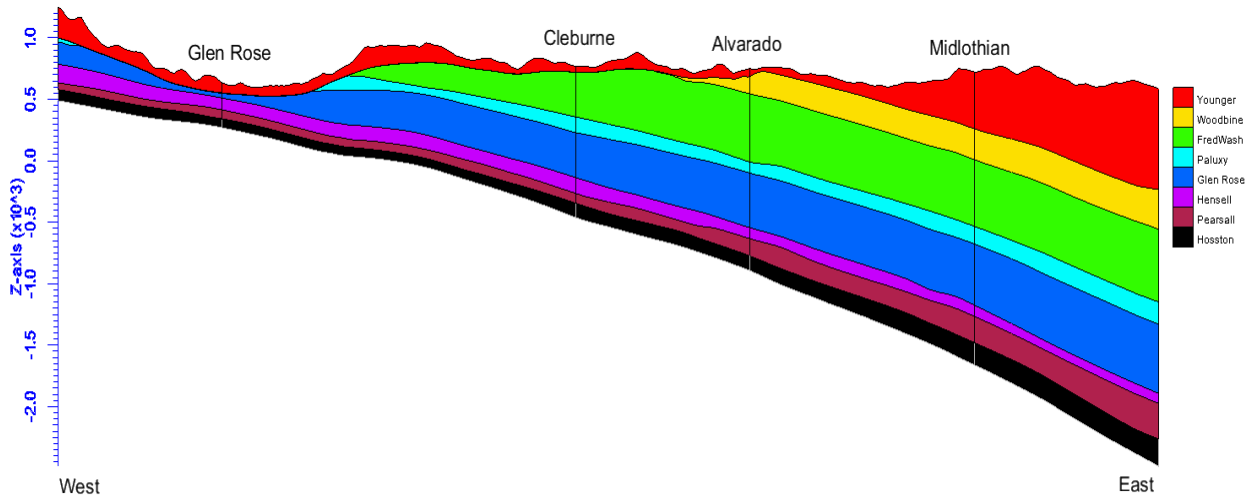
Well Registration

A.1. Management Objective: *The District will require that all wells be registered in accordance with its rules.*

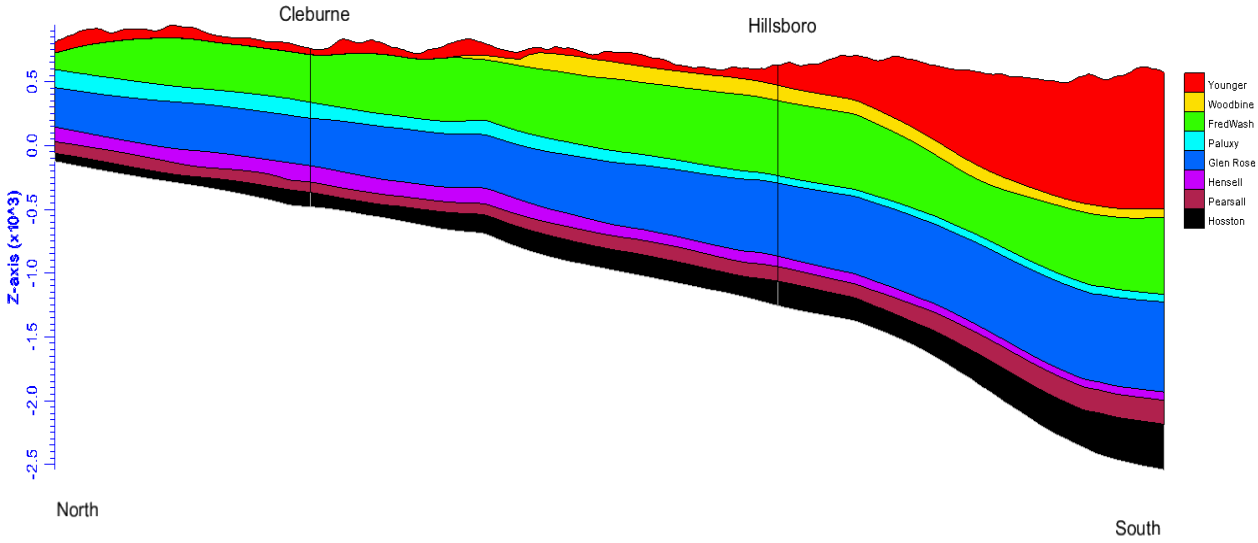
Performance Standard: *Each year the staff will report well registration statistics. A summary of registration activity by county and aquifer will be included in the District's Annual Report.*

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.





West to East Cross Section Stratigraphy Map of the District

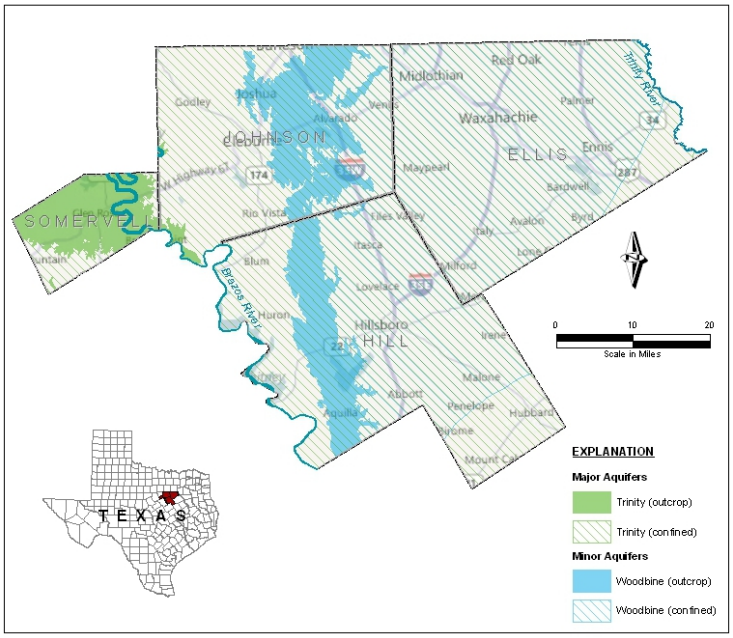


North to South Cross Section Stratigraphy Map of the District

Well Registrations by Aquifer

To register wells by aquifer formation, the District used data from the update of the Northern Trinity/Woodbine Groundwater Availability Model (NTWGAM). The District uses the data in its online registration and reporting geo-database to apply aquifer formations to registered wells based on location, depth, and screen interval. Many wells, however, are screened across multiple formations in the Trinity aquifer. For this report, the layer with largest percentage of the screen was chosen for those wells. The breakdown of wells with available screen interval data registered in 2020 by stratigraphy is as follows:

Younger Aquifer – 7 · Ellis County – 1 · Hill County – 1 · Johnson County - 3 · Somervell County – 2	**Woodbine Aquifer** – 39 · Ellis County - 16 · Hill County – 4 · Johnson County – 19
Washita/Fredericksburg Group – 67 · Ellis County – 2 · Hill County – 6 · Johnson County – 59	**Paluxy Aquifer** – 55 · Hill County – 7 · Johnson County – 47 · Somervell County – 1
Glen Rose Formation – 38 · Hill County – 1 · Johnson County – 33 · Somervell County – 4	**Hensell Aquifer** – 2 · Somervell County – 2
Pearsall Formation – 0	**Hosston Formation** – 19 · Hill County – 2 · Johnson County – 3 · Somervell County – 14



Installation of Meters and Annual Production of Groundwater from Non-Exempt Wells

A.2. - Management Objective: *Each year the District will monitor annual production from all non-exempt wells within the District. The District will compile records and develop a database of non-exempt wells to help assess the aquifer units from which groundwater production occurs.*

Performance Standard: *The District will require installation of meters on all non-exempt wells and reporting of production to the District.*

The District's Rules require all non-exempt well owners to install and maintain accurate water meters on their wells. Based upon the meter readings, the Rules further require well owners to record the amount of groundwater produced from their wells and to report the amount of groundwater production to the District on either a semi-annual or monthly basis. Beginning in 2019, the District required all non-exempt wells to either hold an Operating Permit or a Historic Use Permit to help regulate groundwater usage.

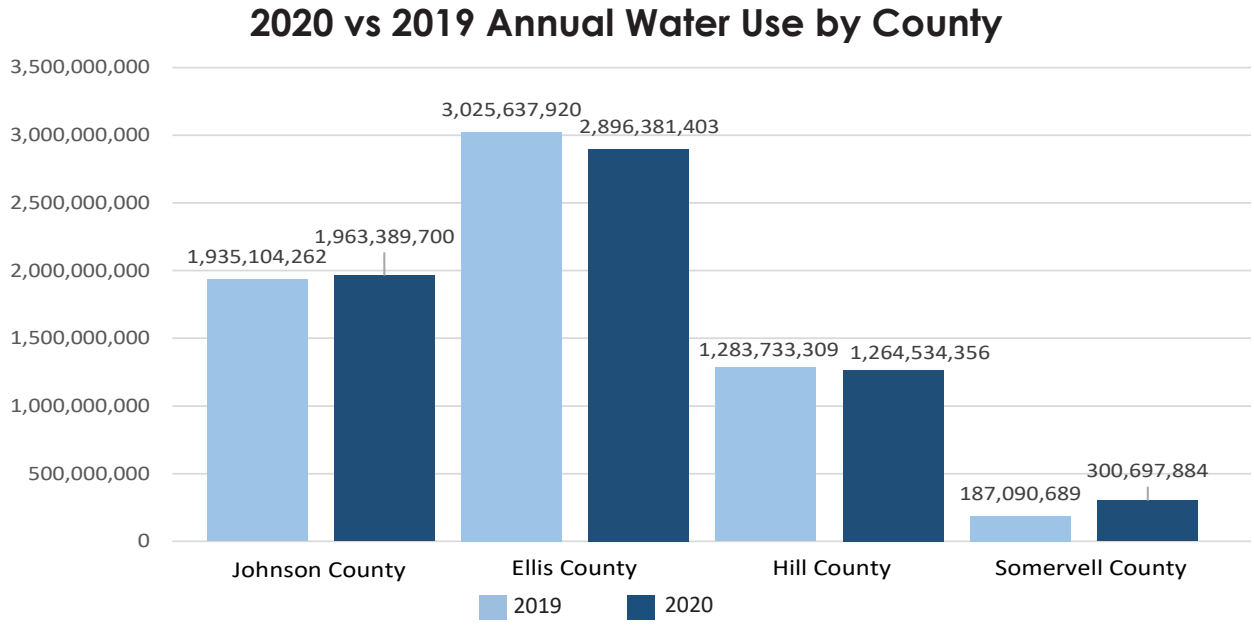
A.3. - Management Objective: *The District will compile records and develop a database of non-exempt wells to help assess in which aquifer units groundwater production occurs.*

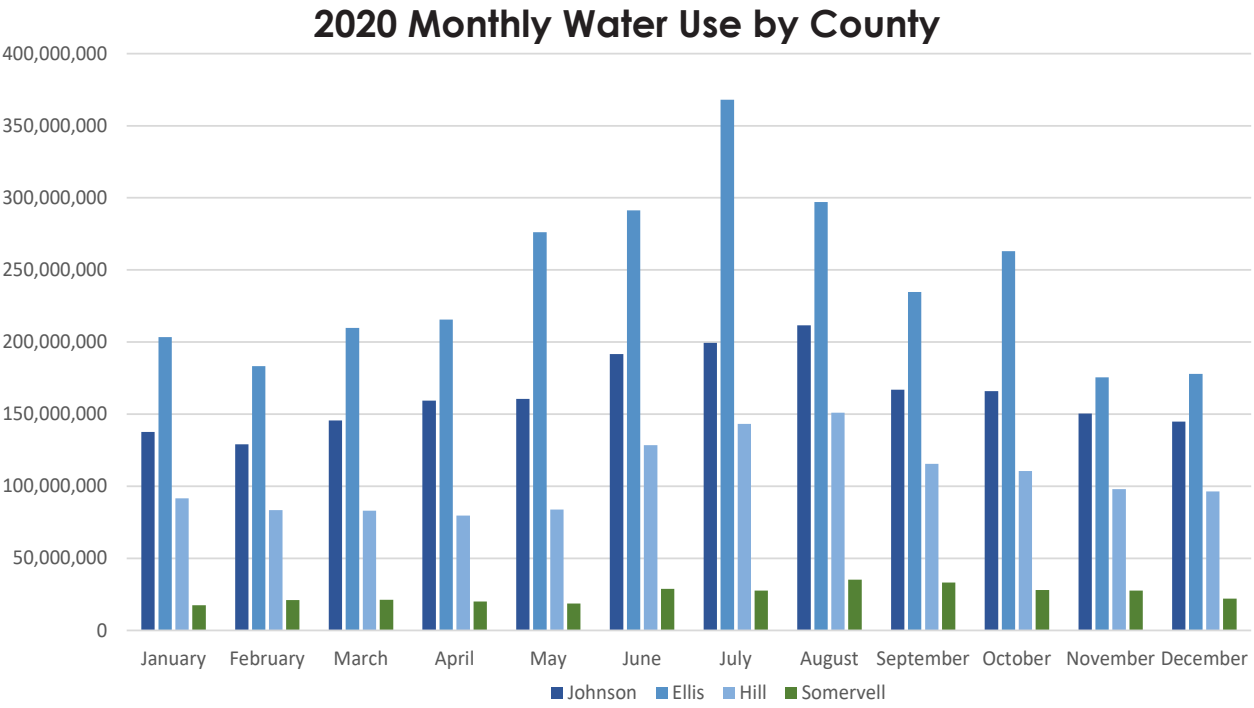
Performance Standard: *The District will require installation of meters on all non-exempt wells and reporting of production to the District. The annual production of groundwater from non-exempt wells will be included in the Annual Report provided to the Board of Directors.*

The District operates an extensive geo-database that houses all well and water usage information. This database is used by the District to classify wells as exempt/non-exempt, verify coordinates of well locations, input/verify meter readings, easily assess the quantity of water pumped by county, well owner, or use, locate wells, and approve new well registration applications. It is also available to well drillers and well owners to apply for new wells or report meter readings, and to pay for their non-exempt water usage. Not only can non-exempt well owners report their meter readings, but they have 24/7 access to their meter readings archive, past water use fee orders, and driller's reports. Furthermore, they have access to a change-meter tool in situations in which their meter is malfunctioning. This improves accuracy of the readings without having to contact the office.

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. The months with the greatest usage were July for Ellis County and August for Johnson, Hill and Somervell Counties.The lowest usage across the District varied with January being the lowest for Somervell County, February for Johnson County, April for Hill County, and November for Ellis County.





District Water User Groups

Most of the groundwater used in the District is for municipal/public water supply systems with a reported 5,407,620,809 gallons pumped in 2020. The Industrial/Manufacturing sector reported the second greatest usage at 844,010,037 gallons. There was an increase in groundwater production for Commercial/Small Business use and Golf Course Irrigation, but a reduction in groundwater production amounts for filling a Pond or Surface Impoundment and Oil and Gas Production groups.

Municipal/Public Water Supply
2020 Usage: 5,407,620,809 gal
2019 Usage: 5,373,025,036 gal

Industrial/Manufacturing
2020 Usage: 844,010,037 gal
2019 Usage: 877,097,106 gal

Filling a Pond or Surface Impoundment
2020 Usage: 81,433,073 gal
2019 Usage: 81,855,498 gal

Commercial/Small Business
2020 Usage: 49,948,627 gal
2019 Usage: 45,014,230 gal

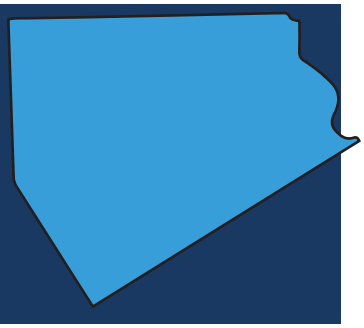
Golf Course Irrigation
2020 Usage: 37,722,600 gal
2019 Usage: 11,256,400 gal

Oil & Gas Production
2020 Usage:4,268,197 gal
2019 Usage: 38,459,150 gal

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

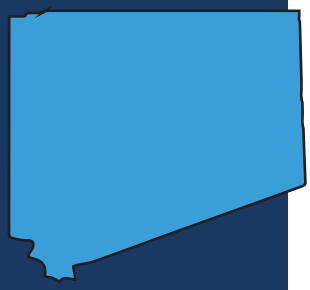


Hill County

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

Methodology to Determine Production from Exempt Wells

A.4. - Management Objective: *The District will develop a methodology to quantify current and projected annual groundwater production from exempt wells.*

Performance Standard: *The District will provide the TWDB with its methodology and estimates of current and projected annual groundwater production from exempt wells. The District will also utilize the information in the future in developing and achieving desired future conditions and in developing and implementing its production allocation and permitting system and rules. Information related to implementation of this objective will be included in the Annual Report to the Board of Directors.*

It has been recommended by the District's consulting hydrogeologist, WSP, that the District use the same methodology and estimates of current and projected annual groundwater production from District-defined exempt wells as was used in the TWDB-adopted Northern Trinity/Woodbine Groundwater Availability Model ("NTWGAM"). This methodology is consistent with that used by the TWDB, historically, and based on projected changes in population and the distribution of domestic and livestock wells in the area using census block data to estimate population distribution. In addition, TWDB and Texas Department of Licensing and Regulation ("TDLR") well and geospatial land use databases are utilized in determining spatial distribution of exempt water use.

Controlling and Preventing Waste of Groundwater

Metering, Reporting, Usage Fees, and Compliance Monitoring

B.1. - Management Objective: *Each year the District will monitor annual production from all non-exempt wells within the District.*

Performance Standard: *The District will require installation of meters on all non-exempt wells and reporting of production to the District. The annual production of groundwater from non-exempt wells will be included in the Annual Report provided to the Board of Directors.*

The District requires all non-exempt wells to have meters installed and maintained on each wellhead. The District Rules require well owners to record the amount of groundwater produced from their wells and to report the amount of groundwater production to the District on either a semi-annual or monthly basis for the year 2020.

B.2. - Management Objective: *The District will encourage the elimination and reduction of groundwater waste through the collection of a water use fee for non-exempt wells within the District.*

Performance Standard: *Annual reporting of total groundwater used and total water use fees paid by non-exempt wells will be included in the Annual Report provided to the Board of Directors.*

In 2020, Prairielands GCD encouraged elimination and reduction of groundwater waste by collecting water use fees for non-exempt wells, identifying and investigating compliance issues, and looking for instances of potential waste of groundwater. The District charges a fee rate of $0.20 per 1,000 gallons for non-exempt usage. There is an additional $0.10 per 1,000 gallons for transporting water out of the District. The District collected an estimated pre-audit total of $1,285,000 in water use fees in 2020.

B.3. - Management Objective: *The District will identify well owners that are not in compliance with District well registration, reporting, and fee payment requirements and bring them into compliance.*

Performance Standard: *The District will compare existing state records and field staff observations with the well registration database to identify noncompliant well owners.*

There were fourteen compliance issues encountered in 2020, six of which were for failure to report water production and pay water use fees on time. There were also six non-exempt wells that were determined to either need a meter installed or replaced. There was one instance of a non-exempt well which was required to register and obtain a permit. One well was determined to be operating without a permit under an improper classification of primary use and was failing to report pumpage and pay necessary water use fees. All cases of compliance issues were resolved amicably and were closed prior to the end of 2020.

B.4. - Management Objective: *The District will investigate instances of potential waste of groundwater.*

Performance Standard: *Report to the Board as needed and include the number of investigations in the Annual Report.*

During 2020, the District investigated one report of potential groundwater waste regarding a domestic well owner in Ellis County who was reported by a neighbor to be using their well to fill a pond that was discharging onto a neighboring property. District staff performed a field check of the well and confirmed the well was capped and not in use. District staff provided the well owner with a letter describing the regulations established under District Rules regarding filling a pond. Since the letter was submitted by the District, there have been no other complaints made by the neighboring property owner.

Addressing Conjunctive Surface Water Management Issues

State and Regional Water Planning Review and Participation

C.1. - Management Objective: *The District will actively participate in the Region C and Region G regional water planning processes to stay abreast of water demand projects and supply strategies in the District and to coordinate the District's groundwater management strategies with the regional water planning groups and foster an understanding of regional management practices.*

Performance Standard: *The District will review the most recently approved State Water Plan to gain an understanding of water demand projections and supply strategies in the District. The District will monitor future proposed amendments to the Region C and Region G regional water plans as they pertain to the District and ensure that supply strategies impacting groundwater resources in the District are identified in the appropriate regional water plan. The District's General Manager or designated representative will attend meetings of the Region C and Region G regional water planning groups when feasible. A summary of the District's interactions with the regional water planning groups will be included in the Annual Report provided to the Board of Directors.*

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 General Manager participated in the Region C meeting on February 10 and September 21. The Board President serves as a voting member of the Brazos G Regional Water Planning Group and participated in meetings on February 12, February 26, and August 12. The General Manager also participated in Brazos G Regional Water Planning Group meetings on February 12, August 12, and October 28.

C.2. - Management Objective: *The District will: 1) seek to better understand groundwater and surface water interactions, including groundwater base flow discharges to surface water courses and aquifer recharge from surface water flows; 2 identify existing and planned surface water and other alternative supplies to meet anticipated demand growth; 3 explore possible groundwater to surface water conversions in the District and facilitate the process, and 4 understand current and planned surface water supplies and how they affect groundwater demands.*

Performance Standard: *A summary of the progress and interaction with RWPGs will be included in each Annual Report.*

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 it's consultant team to incorporate the District's groundwater management goals into the regional water planning process.

Addressing Natural Resource Issues

Injection Wells and Oil and Gas Compliance

D.1. - Management Objective: *The District will develop a program to monitor and assess injection well activities in the District.*

Performance Standard: *The District will monitor and review injection well applications filed with the Railroad Commission of Texas and the Texas Commission on Environmental Quality that propose injection wells to be located within the boundaries of the District to identify contamination threats to groundwater resources in the District. The General Manager will bring to the attention of the Board any applications that the General Manager determines in their discretion threaten the groundwater resources in the District, and any outcomes of actions taken by the District will be included in each Annual Report.*

In 2020, Prairielands GCD addressed natural resource issues that impacted the use and availability of groundwater and which are impacted using groundwater. District activities fell into three categories:

1. Monitoring and assessing injection well activities in the District;
2. Monitoring compliance by oil and gas companies with District registration, metering, production reporting, and fee payment requirements; and
3. Participating in interim activities prior to the 87th Session of the Texas Legislature.

The District utilizes an effective Underground Injection Control ("UIC") monitoring program that included the review of all applications for injection wells proposed to be located within the District's boundaries to ensure injection well activities do not endanger groundwater resources. Because the Railroad Commission of Texas ("RCC") does not provide notification of injection well applications filed with the RCC to groundwater conservation districts, the District retained an outside contractor, Statewide Plat Services, to monitor all injection well applications filed with the RCC and notify the District and District's legal counsel of each injection well application proposed to be located within the District's boundaries.

Upon receiving a copy of an injection well application, District staff performs an internal review of the injection well application to identify the GPS location and examine the pressures, depths, and volumes relative to the completion of the well. If the District's legal counsel determines the injection well application warrants further technical review, it is submitted to the District's UIC technical consultants to perform an in-depth review of the application to determine whether the proposed injection well is a possible source of contamination of protected groundwater resources. In the event such a risk does exist, the District's legal counsel seeks authorization from the District to initiate a protest on behalf of the District at the RCC against the injection well application. The District works with injection well applicants to modify or abandon the application in a manner that ensures that groundwater resources are adequately protected. During 2020, the District did not receive any UIC applications.

D.2. - Management Objective: *The District will monitor compliance by oil and gas companies of the well registration, metering, production reporting, and fee payment requirements of the District's rules.*

Performance Standard: *As with other types of wells, instances of non-compliance by owners and operators of water wells for oil and gas activities will be reported to the Board of Directors as appropriate for enforcement action. A summary of such enforcement activities will be included in the Annual Report.*

The oil and gas companies have continued to comply with the well registration, metering, production reporting, and fee payment requirements of the District's rules. In 2020, with the contiuation of the District's new permitting program, the oil and gas companies have generally complied with the requirements of the District Rules to the best of the District's knowledge. Only three enforcement actions were initatied in 2020 for three seperate oil and gas companies who had failed to report and/or pay for production. All three enforcement cases were resolved amicably and were closed prior to the end of 2020.

Addressing Drought Conditions

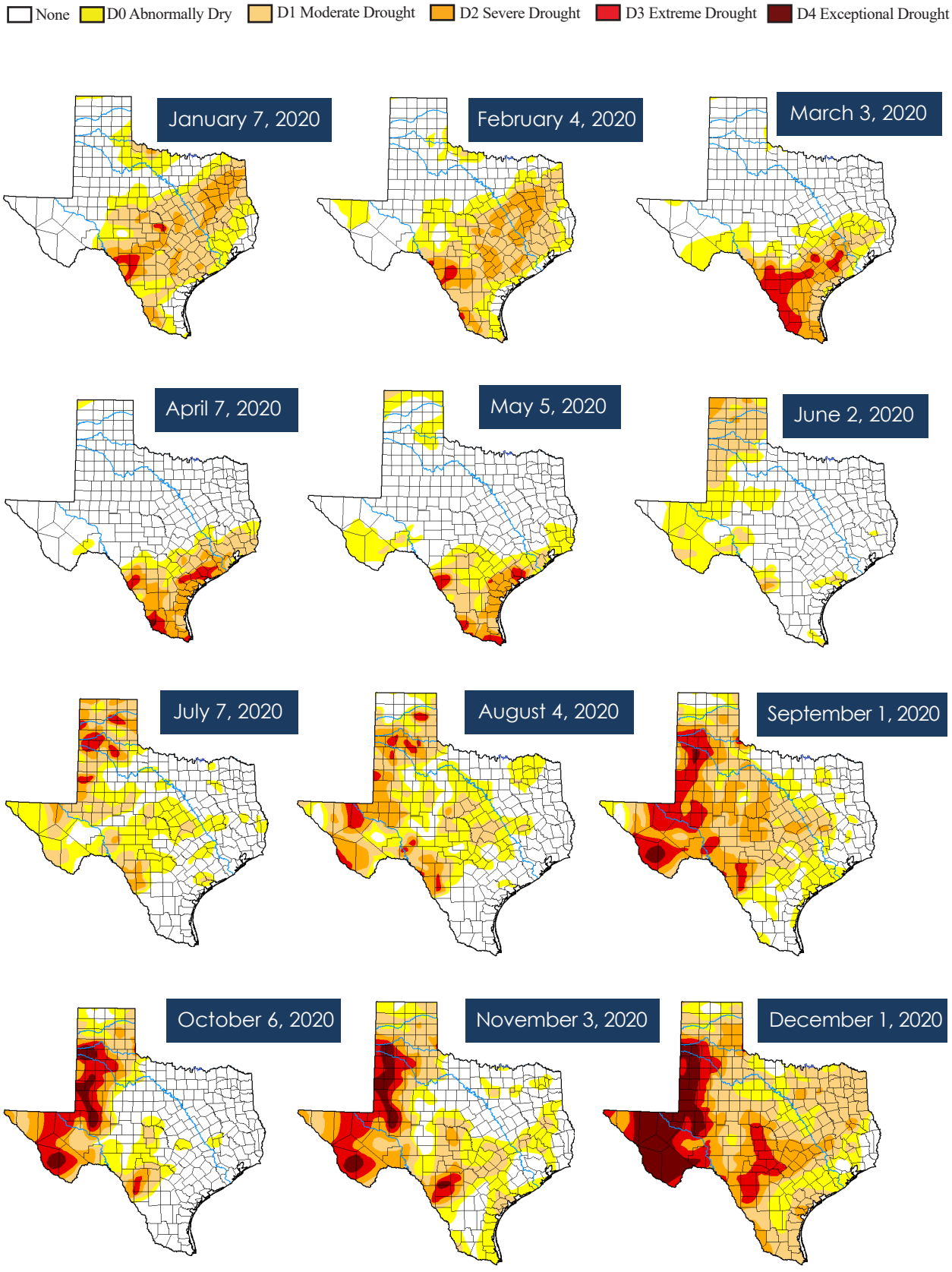
Drought Conditions and Monitors

E.1. - Management Objective: *Monthly review of drought conditions within the District using the Texas Water Development Board's Monthly Drought Conditions.*

Performance Standard: *An annual review of drought conditions within the District will be included in the Annual Report provided to the Board of Directors. Reports will be provided more frequently to the Board as deemed appropriate by the General Manager to timely respond to drought conditions as they occur.*

Throughout 2020, Prairielands staff provided U.S. Drought Monitors for Texas and water usage reports to the Board of Directors during each month's Regular Board Meeting. The Board and staff are kept up to date on drought conditions not only in the District, but also in the state of Texas and southern region of the United States. The following page includes examples of the monthly Texas Drought Monitor Maps that are used by the District for addressing drought conditions.

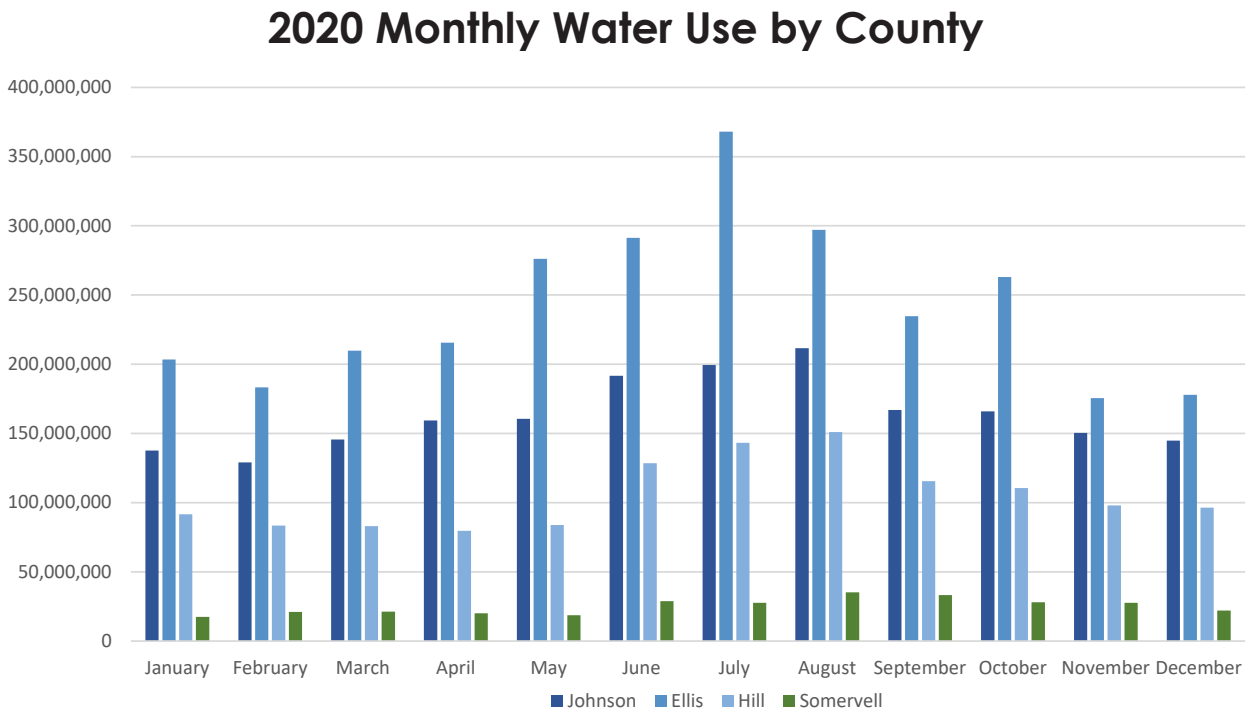
2020 Monthly Texas Drought Monitor Maps



E.2. - Management Objective: *The District will develop information to understand the relationships between drought conditions, increased pumping, and the impacts of both on water levels and shallow wells in the outcrops and subcrops of the aquifer subdivisions in the District. The District will also determine areas where it may be suitable for the District to implement pumping restrictions during drought times in order to protect public safety and welfare, as well as areas in which the District may wish to allow overpumping during drought periods to promote conjunctive management when surface water supplies become unavailable to water user groups due to drought conditions.*

Performance Standard: *The District will monitor and assess drought impacts on aquifer outcrops and subcrops, including effects of increased pumping. By 2022, the District will complete studies and rules and regulatory plan development for drought pumping restrictions or over-pumping allowables.*

Throughout 2020, Prairielands GCD staff provided U.S. Drought Monitors for Texas and water usage reports to the Board of Directors during each month's Regular Board Meeting. The Board and staff are kept up to date on drought conditions not only in the District, but also in the state of Texas and southern region of the United States. The monitors and usage reports were compared periodically to look for any correlation between the drought conditions and pumping amounts within the District. In the monthly drought maps shown on the previous page, the significant periods of drought within the District were indicated during the first two months of 2020 and then again in September and December. In the graph of monthly water use by each county, pumping amounts follow seasonal trends in water demand, with less water being pumped in the first and fourth quarter of the year and more withdrawn in the summer months. The District will continue to study the correlation between drought conditions, pumping, and aquifer levels and develop appropriate drought pumping restrictions or over-pumping allowables by the end of calendar year 2022.



Addressing Conservation, Recharge Enhancement, Rainwater Harvesting, Precipitation Enhancement, and Brush Control

Conservation and Public Awareness Articles

F.1. - Management Objective: *The District will annually submit at least one article regarding water conservation, rainwater harvesting, or brush control for publication to at least one newspaper of general circulation in the District counties.*

Performance Standard: *Each year, a copy of each conservation article will be included in the District's Annual Report to be given to the District's Board of Directors.*

Press releases of various District activities were sent to newspapers in all four counties throughout the year: Cleburne Times-Review, Glen Rose Reporter, Hillsboro Reporter, Ellis County Press and the Waxahachie Daily Light.

A copy of the conservation-related article is included in the following pages. This article provides an educational overview of rainwater harvesting basics and information about the components of a rainwater harvesting system, the benefits of rainwater harvesting, and incentives and support for harvesting rainwater. This article was published in the Glen Rose Reporter on May 22, 2020 and the Hillsboro Reporter on May 25, 2020.

In additon to submitting the following articles, the District also continued with its digital and social media initiative in 2020 with the the District's Facebook, Twitter, and LinkedIn profiles and utilizing email campaign software to distribute e-blasts to non-exempt and exempt well owners, elected officials, business owners, educators, and media contacts and anyone in the public who had requested to receive them. The content in these social and digital media posts include conservation tips, groundwater awareness, important meetings or events in the District, education event information, and general information about the District. These approaches provide an excellent resource for networking, distributing educational materials, sharing important news and information, and building identity and recognition among the public.

Press Release

Now is the Time to Save Money and Invest in Rainwater Harvesting

May 19, 2020 – For Immediate Release

During this unexpected time of quarantine and self-isolation, there has been some definite adjustments in our day-to-day lifestyle. You may find yourself looking for some ways to pass the time, improve your lawn and garden, and get out of the house while still maintaining healthy practices. This time of the year is the perfect time to install a rainwater harvesting system, which is a recommended water-conserving measure by the Texas Water Development Board.

What is rainwater harvesting?
Rainwater harvesting is an innovative alternative water supply approach anyone can use. Rainwater harvesting captures, diverts, and stores rainwater for later use. Implementing rainwater harvesting is beneficial because it reduces demand on existing water supply, and reduces run-off, erosion, and contamination of surface water. Rainwater can be used for nearly any purpose that requires water. However, it is important to check any city or county ordinances regarding the use of harvested rainwater. These include landscape use, stormwater control, wildlife and livestock watering, in-home use, and fire protection. A rainwater harvesting system can range in size and complexity. All systems have basics components, which include a catchment surface, conveyance system, storage, distribution, and treatment.

Why harvest rainwater?
Rainwater harvesting systems are being installed by gardening enthusiasts, business owners, and homeowners with the intent of making their home more eco-friendly. Rainwater harvesting is recognized as an important water conservation practice and is best implemented in conjunction with other efficient water-conserving measures in and outside of the home, according to the Texas Water Development Board.

Rainwater is of superior quality: zero hardness, sodium free, and nearly neutral pH. Harvesting rainwater can reduce demand on traditional water supplies and can provide water in areas without access to a conventional water supply system. The zero hardness of rainwater helps scales from building up on appliances and so extends the life of appliances. Rainwater is superior for landscape use and plants thrive on rainwater. Rainwater harvesting also reduces flow to storm sewers and lowers the threat of flooding. Additionally, rainwater harvesting helps utilities reduce peak demands during summer months. By harvesting rainwater, homeowners can reduce their utility bills.
How much rainwater can I harvest?

As a general rule of thumb, for every inch of rain that falls on a 2,000-square-foot roof, about 1,000 gallons of water can be collected. The average rainfall across the four counties within Prairielands GCD is approximately 37 inches, so about 37,000 gallons of water could be collected in this area annually on a 2,000-square-foot roof.

Incentives and Statewide Support

The Texas Legislature allows the exemption of part or all of the assessed value of the property on which approved water conservation initiatives, such as rainwater harvesting, are made. Individuals planning to install rainwater harvesting systems should check with their respective county appraisal districts for guidance on exemption from county property taxes. In addition, the Texas Tax Code exempts rainwater harvesting equipment and supplies from state sales tax. To claim this exemption, present a Texas Sales and Use Tax Exemption Certificate to the supplier of the equipment at the time of purchase. Some municipalities, local water providers, and counties also offer rebates and financial incentives to promote rainwater harvesting as part of their water conservation initiatives.

Texas has several laws supporting rainwater harvesting. Texas Property Code prevents a homeowner's association from prohibiting the use of rainwater harvesting systems (Texas Property Code §202.007). The state also requires certain new state facilities to incorporate rainwater harvesting systems in their design. Municipalities and counties are also encouraged to promote rainwater harvesting at residential, commercial, industrial, and educational facilities through incentives such as discounts for rain barrels or rebates for water storage facilities.

The Prairielands Groundwater Conservation District, which was created by the 81st Texas Legislature to conserve, protect and enhance groundwater resources in Johnson, Hill, Ellis and Somervell Counties, recommends rainwater harvesting as a way to conserve water resources. To find out more about rainwater harvesting, as well as other water conservation practices you and your family can implement in and outside your home, please visit www.prairielandsgcd.org. Another great resource is to visit www.morningchores.com/rainwater-harvesting/ for a guide to 23 DIY rainwater harvesting ideas you can do around your home.

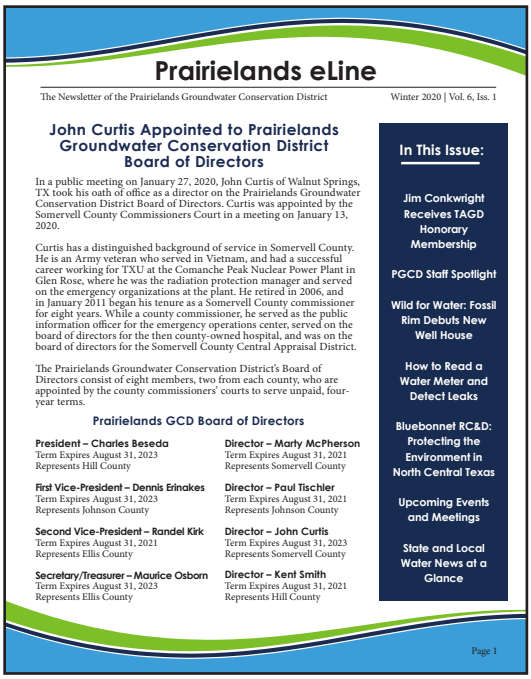
F.2. – Management Objective: *Each year, the District will include at least one informative flier on water conservation, rain water harvesting, or brush control within at least one mail out to groundwater non-exempt users distributed in the normal course of business for the District. The District will also consider additional fliers or initiating other public awareness campaigns and outreach efforts on water conservation during drought conditions.*

Performance Standard: *Each year, a copy of each mail-out flier and a summary of all other public awareness water conservation campaigns and outreach efforts will be included in the District's Annual Report to be given to the District's Board of Directors.*

The District develops and produces its own quarterly newsletter, the Prairielands eLine, that is distributed in print and electronically and made available to the public in the District's office. The Winter 2020 issue was mailed out to all non-exempt well owners in February 2020. Water conservation topics and other items covered in the Prairielands eLine issues in 2020 included the following:

Winter 2020

- Jim Conkwright Recieves TAGD Honorary Membership
- Wild for Water: Fossil Rim Debuts New PWS Well House
- Applications for the Texas 4-H Water Ambassadors Program Open March 15
- National Groundwater Awareness Week: March 9 - 13, 2020
- How to Read a Water Meter and Detect Leaks
- Bluebonnet RC&D: Protecting the Environment in North Central Texas



Prairielands eLine

The Newsletter of the Prairielands Groundwater Conservation District — Winter 2020 | Vol. 6, Iss. 1

John Curtis Appointed to Prairielands Groundwater Conservation District Board of Directors

In a public meeting on January 27, 2020, John Curtis of Walnut Springs, TX took his oath of office as a director on the Prairielands Groundwater Conservation District Board of Directors. Curtis was appointed by the Somervell County Commissioners Court in a meeting on January 13, 2020.

Curtis has a distinguished background of service in Somervell County. He is an Army veteran who served in Vietnam, and had a successful career working for TXU at the Comanche Peak Nuclear Power Plant in Glen Rose, where he was the radiation protection manager and served on the emergency organizations at the plant. He retired in 2006, and in January 2011 began his tenure as a Somervell County commissioner for eight years. While a county commissioner, he served as the public information officer for the emergency operations center, served on the board of directors for the then county-owned hospital, and was on the board of directors for the Somervell County Central Appraisal District.

The Prairielands Groundwater Conservation District's Board of Directors consist of eight members, two from each county, who are appointed by the county commissioners' courts to serve unpaid, four-year terms.

Prairielands GCD Board of Directors

President – Charles Beseda
Term Expires August 31, 2023
Represents Hill County

First Vice-President – Dennis Erinakes
Term Expires August 31, 2023
Represents Johnson County

Second Vice-President – Randel Kirk
Term Expires August 31, 2021
Represents Ellis County

Secretary/Treasurer – Maurice Osborn
Term Expires August 31, 2023
Represents Ellis County

Director – Marty McPherson
Term Expires August 31, 2021
Represents Somervell County

Director – Paul Tischler
Term Expires August 31, 2021
Represents Johnson County

Director – John Curtis
Term Expires August 31, 2023
Represents Somervell County

Director – Kent Smith
Term Expires August 31, 2021
Represents Hill County

In This Issue:

Jim Conkwright Receives TAGD Honorary Membership

PGCD Staff Spotlight

Wild for Water: Fossil Rim Debuts New Well House

How to Read a Water Meter and Detect Leaks

Bluebonnet RC&D: Protecting the Environment in North Central Texas

Upcoming Events and Meetings

State and Local Water News at a Glance

Page 1

Spring 2020

- What You Need to Know About COVID-19 and Your Water Supply
- Rainwater Harvesting 101
- How to Use Your Time at Home to Enhance Your Yard and Conserve Water
- Texas Well Owners Network Helps Well Owners be "Well Informed"

Summer 2020

- PGCD's New Office Building Nears Completion and Prepares to Host Board Meeting
- Twelve Ways to Conserve Water and Your Wallet This Summer
- Aquaponics vs Hydroponics: Using Soilless Systems to Grow Plants
- Wondering When to Water Your Yard? There's an App for That
- Protect Your Groundwater Day - September 1, 2020
- National Groundwater Association Debuts New and Improved WellOwner.org Website

Fall 2020

- Prairielands GCD Board of Directors Set Water Use Fee Rates for 2021
- Prairielands GCD Honors the Life and Service of Director Dennis Erinakes
- Don't "Fall" Into Bad Habits: How to Conserve Water This Time of Year
- Groundwater Conservation Districts Embrace Long History of Collaboration

District staff also made several presentations to community and civic groups, as well as making appearances at public events. These outreach initiatives with public organizations and events are a productive way to educate individuals about water conservation, promote awareness, and build relationships and recognition within the four counties of the District. A summary of public events and presentations is listed below:

Date	Event	Location	County	Participants
2/6/20	Fossil Rim Wildlife Center PWS Well Open House	Glen Rose	Somervell	30
2/18/20	Cleburne Kiwanis meeting	Cleburne	Johnson	8
2/25/20	Alvarado Lions Club meeting	Alvarado	Johnson	10
3/12/20	Water Education Trailer at Dinosaur Valley State Park	Glen Rose	Somervell	102
6/9/20	Grandview Lions Club meeting	Grandview	Johnson	8
6/11/20	Johnson County Association of Realtors Luncheon	Cleburne	Johnson	32
6/23/20	Midlothian Rotary Club meeting	Midlothian	Ellis	13
8/24/20	Johnson County Commissioners Court Meeting	Cleburne	Johnson	17
9/8/2020	Ennis Rotary Club meeting	Ennis	Ellis	18
9/10/20	Cleburne Rotary Club	Cleburne	Johnson	25
10/19/20	Prairielands GCD Open House	Cleburne	Johnson	87
11/4/20	Brown Bag Lunch Series Presentation	Glen Rose	Somervell	9
11/19/20	Ovilla Garden Club meeting	*(Virtual)*	Ellis	12
			Total	371

F.3. - Management Objective: *The District will investigate the feasibility of recharge enhancement and aquifer storage and recovery projects in the District.*

Performance Standard: *By 2022, the District will complete studies and an initial assessment regarding the feasibility of recharge enhancement and aquifer storage and recovery projects in the District.*

During the interim session pior to the 87th Texas Legislature, the District was active in working on proposed legislation related to recharge enhancement and aquifer storage and recovery projects in addition to staying abreast of legislation addressing the development of brackish groundwater. The District will continue to study the feasibility of recharge enhancement and aquifer storage recovery projects and complete an initial assessment by the end of calendar year 2022.

F.4. Management Objective: *The District will peridocially support or sponsor an education seminar addressing conservation, recharge enhancement, rainwater harvesting, precipiation enhancement, or brush control.*

Performance Standard: *The District will support or sponsor such a seminar at least once every other year. A summary of such educational acitivites will be included in the District's Annual Report.*

The District was a Signature Sponsor for the Texas 4-H Youth Water Ambassador program in 2020. This is a program for 9th and 11th grade students to encourage their interest in the water industry. The program seeks to bring students of varying backgrounds together to gain advanced knowledge and practice leadership skills related to the science, technology, and management of water in Texas. Through an application process, up to 30 high school youth are selected each spring to participate in a summer 4-H2O Leadership Academy and commit service hours annually in a variety of ways. 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. Water Ambassadors commit a minimum 40 hours of service over a 12-month period following the Academy. Service hours include delivering water education at local 4-H clubs, schools, fairs, and community events. The District had five students serve as Water Ambassadors in 2020.

In 2020, The District was a Platinum Level sponsor for the Texas Water Conservation Association Virtual Fall Conference on October 21-23, 2020. The Texas Water Conservation Association is an association of water professionals and organizations in the state of Texas representing river authorities, municipalities, navigation and flood control districts, drainage and irrigation districts, utility districts, municipalities, groundwater conservation districts, all kinds of water users, and general/environmental water interests. The 2020 Fall Conference included an update on the future of municipal water supply in Texas, keynote addresses by Senate Water & Rural Affairs Chairman Charles Perry and TCEQ Office of Water Deputy Director Earl Lott, a groundwater panel meetng, policy committee meeting, and many other relevant and informative sessions.

F.5. - Management Objective: *Each year, the District will seek to provide an educational outreach regarding water conservation to at least one elementary school in each county of the District.*

Performance Standard: *Each year, a list of schools that participate in the educational outreach will be included in the District's Annual Report to be given to the District's Board of Directors.*

Increasing public awareness about groundwater conservation through education and outreach is one of the main goals of the District. The WET, or Water Education Trailer, is a mobile classroom that features exhibits that provide demonstrations about rainwater harvesting, indoor water conservation tips, pollution prevention, how a water well works, and features a working aquifer model. The presentations included in the WET meet TEKS standards and provide STEM-based learning activities. In 2020, due COVID-19, only three schools were able to participate in educational outreach activities prior to the onset of the pandemic. The District originally had scheduled educational presentations for ten schools before the schools had to cancel due to COVID-19 precautions.

Date	School	County	Grade	Participants
1/15/20	Keene Elementary	Johnson	5th	84
1/21/20	Grandview Junior High	Johnson	7th	125
1/22/20	Grandview Junior High	Johnson	8th	130
			Total	339

Groundwater Monitoring Program and Desired Future Conditions

G.1. - Management Objective: *The District will develop a Groundwater Monitoring Program within the District to monitor water well levels (and baseline water quality) in wells in each aquifer and subdivision thereof in the District. The District will review the geographic and vertical distribution of existing monitoring wells in the District with historical data from the TWDB, USGS, TCEQ, and other agencies and develop a plan to partner with those agencies as appropriate to ensure continued availability of the monitoring wells and data from them to the District. The District will also develop a plan to acquire or install new monitoring wells to fill in gaps in geographic or vertical distribution. The District will then develop an annual goal of how many monitoring wells it will add each year and a priority system for their installation based upon data deficiencies and needs for the geo-database. The District will take periodic readings from the monitoring wells and input the data into the District's geo-database. The District will utilize the information to help implement its regulatory and permitting program and monitor water level trends and actual achievements of DFCs.*

Performance Standard: *Upon development, a summary of the District Groundwater Monitoring Program will be included in the District's Annual Report to be given to the District's Board of Directors.*

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, to identify the most needed areas in the District for monitoring in order to plan future development of the monitoring well network.

G.2. - Management Objective: *Upon approval of the District Monitoring Program, conduct water level measurements within the District as specified in the Monitoring Program.*

Performance Standard: *Annual evaluation of the water-level trends and the adequacy of the monitoring network to monitor aquifer conditions within the District and to monitor achievement of applicable desired future conditions. The evaluation will be included in the District's Annual Report to be given to the District's Board of Directors.*

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.

G.3. - Management Objective: *The District will monitor non-exempt pumping within the District for use in evaluating the District's compliance with aquifer desired future conditions.*

Performance Standard: *Annual reporting of groundwater used by non-exempt wells will be included in the Annual Report provided to the District's Board of Directors.*

In 2020, non-exempt wells in the District reported groundwater use of 6,425,003,343 gallons.

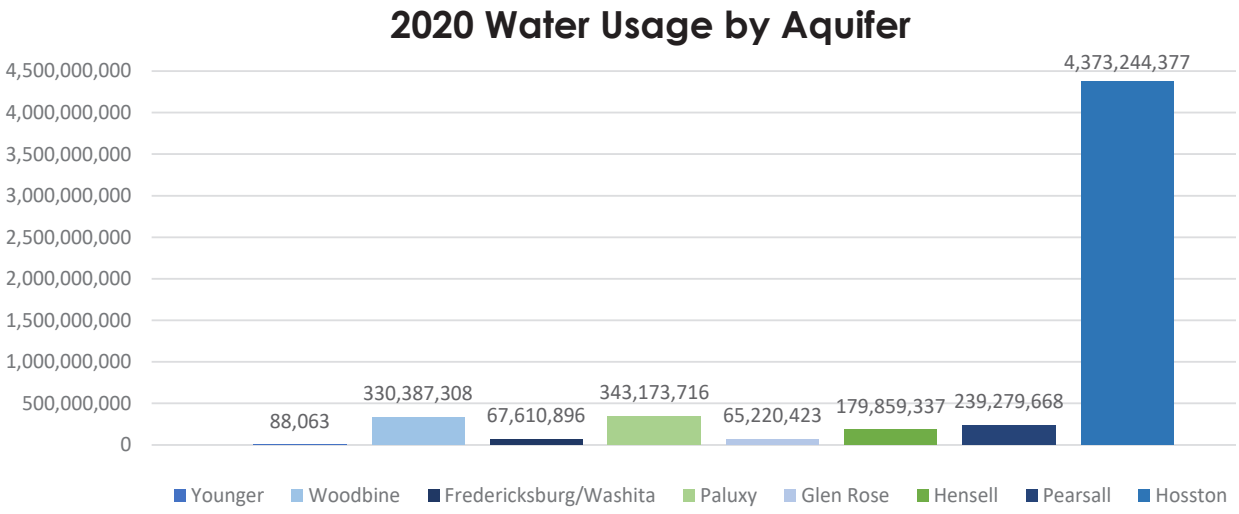


Table 1. Summary of Desired Future Conditions in Prairielands GCD

	Woodbine	Paluxy	Glen Rose	Hensell	Hosston
Ellis	61	107	194	263	310
Hill	20	38	133	186	337
Johnson	2	-61	58	126	235
Somervell	Not present	1	4	26	83

Note: All values are in feet.

Table 2. Summary of Modeled Available Groundwater in Prairielands GCD

	Woodbine	Paluxy	Glen Rose	Hensell	Hosston
Ellis	2,078	443	50	0	5,040
Hill	588	353	115	226	3,281
Johnson	1,985	2,447	1,636	1,086	3,863
Somervell	Not present	14	146	1,978	845

Note: All values are in acre-feet per year.

PGCD

PRAIRIELANDS GROUNDWATER CONSERVATION DISTRICT

JOHNSON • ELLIS • HILL • SOMERVELL

208 Kimberly Dr
Cleburne, TX 76031

817-556-2299

www.prairielandsgcd.org