

Prairielands eLine

The Newsletter of the Prairielands Groundwater Conservation District

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What You Need to Know About COVID-19 and Your Water Supply

Despite quarantine protocols altering other parts of our lives to minimize risk of contracting the COVID-19 virus, the delivery of safe drinking water is not at risk, according to a news release from the Texas Water Conservation Association. The Centers for Disease Control and Prevention, the Environmental Protection Agency, and the Texas Commission on Environmental Quality report the COVID-19 virus has not been detected in drinking water. The virus is highly susceptible to conventional water treatment and disinfection methods such as those in most municipal drinking water systems.

Water and wastewater operators across the state are working around the clock to continue to supply treated water or wastewater services to homes and businesses. There are no delays or restrictions related to regular water and wastewater service.

We recommend you monitor updates with your state and local media outlets or contact your water provider with any concerns. For the latest from the CDC on COVID-19 and water transmission, visit [Water Transmission and COVID-19](#). Here are some common myths that have been going around that we would like to clear up to help put your mind at ease and provide some clarification about:

Myth: The COVID-19 virus can spread through drinking water.

Fact: The virus that causes COVID-19 has not been detected in drinking water. Conventional water treatment methods that use filtration and disinfection, such as those in most municipal drinking water systems, should remove or inactivate the virus that causes COVID-19.

Myth: If my utility company has issued a Boil Water Advisory then it is not safe to wash my hands with tap water.

Fact: In most cases, it is safe to wash your hands with soap and tap water during a Boil Water Advisory. Follow the guidance from your local public health officials. If soap and water are not available, use an alcohol-based hand sanitizer containing at least 60% alcohol. Tap water is also important for handwashing, which is encouraged as one of the most effective ways to prevent the spread of COVID-19.

Myth: The COVID-19 can be spread through pools, hot tubs, spas and water playgrounds.

Fact: There is no evidence that COVID-19 can be spread to humans through the use of pools, hot tubs or spas, or water playgrounds. Proper operation, maintenance, and disinfection (e.g., with chlorine and bromine) of pools, hot tubs or spas, and water playgrounds should inactivate the virus that causes COVID-19.

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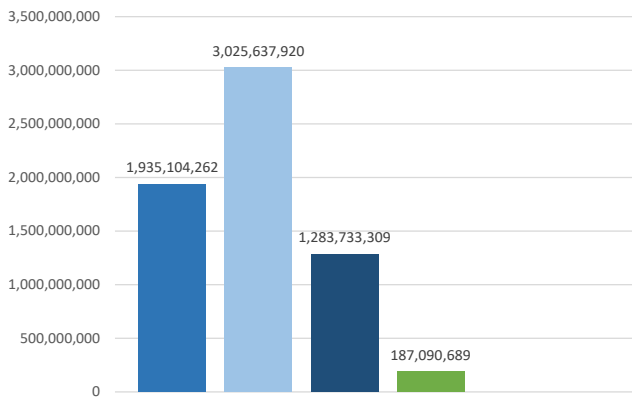
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2019 Water Usage by County



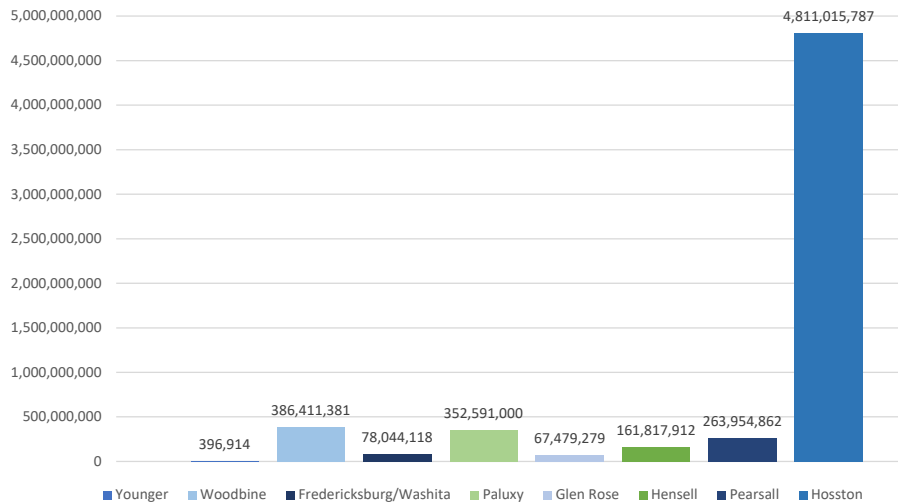
By the end of 2019, an additional 224 wells were registered with the Prairielands GCD bringing the total number registered to 1,743. Non-exempt well owners in the District reported that they pumped a total of 6,431,566,181* gallons of groundwater in 2019. Owners in Ellis County pumped the most of the four counties followed by Johnson, Hill, and Somervell. The months with the greatest usage was September for Johnson, Hill and Ellis and December for Somervell. The lowest usage across the District varied with February being the lowest in Johnson County, Hill County, and Ellis County, and October in Somervell County.

**Data received as of April 1, 2020. The reported pumping for 2019 is incomplete due to incomplete reporting by a small number of permittees*

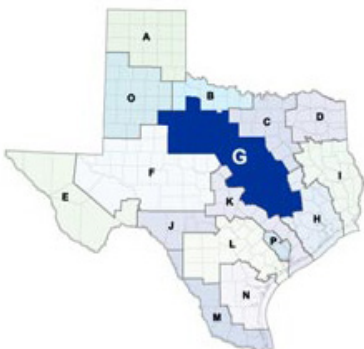
2019 Water Usage by Aquifer

Of the wells with available screen interval data, the most water usage by aquifer was 4,811,015,767* gallons pumped from the Hosston, followed by the Woodbine with 386,411,381* gallons, and then the Paluxy with 352,591,000* gallons. The Younger formation had the least amount of groundwater pumpage for 2019, with 396,914* gallons.

**Data received as of April 1, 2020. The reported pumping for 2019 is incomplete due to incomplete reporting by a small number of permittees.*



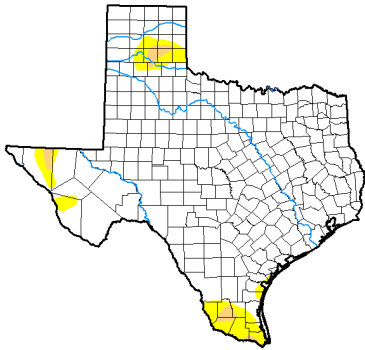
2019 State and Regional Water Planning



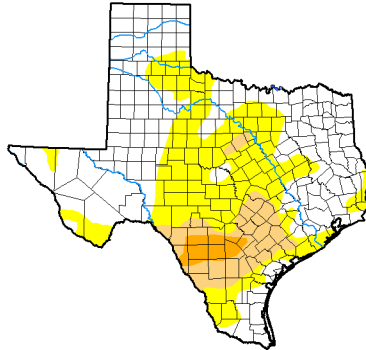
The Board of Directors, General Manager, and PGCD staff all strive to stay informed on any matters related to groundwater supply in Ellis, Hill, Somervell and Johnson counties. Critical sources of pertinent information include familiarity and understanding of regional and state water plans, and attendance and participation in the Region C and Region G Water Planning Groups quarterly meetings. 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.

2019 Drought Monitoring Maps

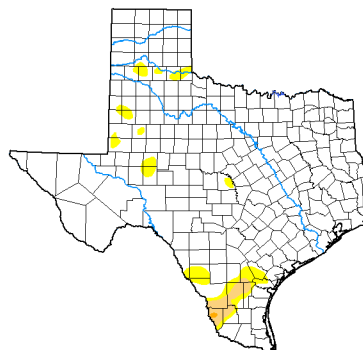
January 1, 2019



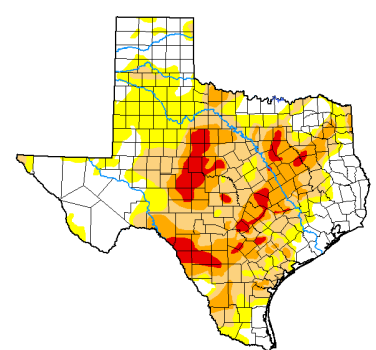
April 4, 2019



July 2, 2019



October 1, 2019



Throughout 2019, Prairielands GCD staff and board members 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. There appeared to be little correlation between drought conditions and increased pumpage, as pumpage in the District follows annual seasonal needs. Drought maps indicated the significant period of drought within the District and the state cumulated in the last quarter of the year. In the graph of monthly water use by each county, pumping rates decreased during the last three months of 2019. The Board and District staff continue to monitor drought impacts on aquifer outcrops and subcrops, including the effects of increased pumping.

2019 Education and Outreach



In 2019, District staff were present at 16 public outreach events, interacting with 1,580 people about groundwater and conservation. There were also seven educational presentations delivered to schools within the District, which reached over 1,000 children. The District sponsored the 2019 Texas Water Conservation Fall Conference, and was a Legacy Sponsor for the Texas 4-H Water Ambassador Program. The District also distributed four press releases about District news and conservation efforts to newspapers across the four-county District.

2019 Groundwater Monitoring and Addressing Desired Future Conditions

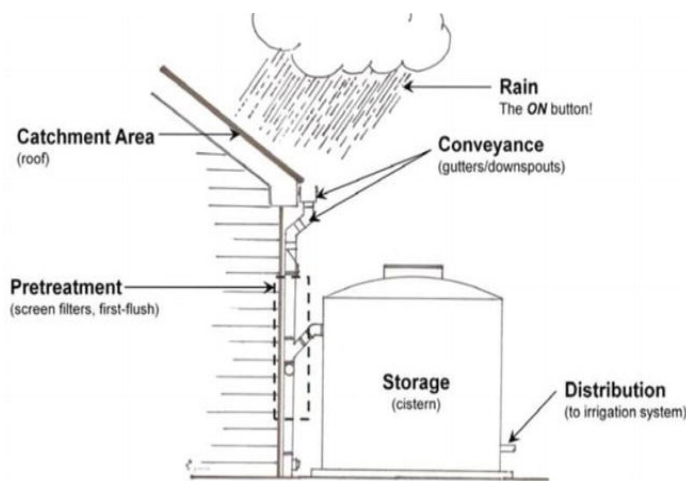
The primary goal of the monitor program in 2019 was to continue increasing the number of aquifers, or layers of an aquifer, represented in each county. The field staff accomplished this through talking with well owners in all counties regarding the monitor program and underlying geological layers of their area, seeking well data on prospective new sites. Wellntel monitoring equipment was added to seven wells into the monitor program, with five in Johnson County, one in Hill County, and one in Somervell County. Field staff completed the annual measurement of all 201 wells in the four-county area and continued to work with the District's consulting hydrologist, WSP, to increase the amount of monitor wells within the District.

Rainwater Harvesting 101

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 basic components, which include a catchment surface, conveyance system, storage, distribution, and treatment.



Basic Components



A domestic rainwater harvesting system comprises six basic components:

- **Catchment surface:** the collection surface from which rainfall runs off
- **Gutters and downspouts:** channel water from the roof to the tank
- **Leaf screens, first-flush diverters, and roof washers:** components which remove debris and dust from the captured rainwater before it goes to the tank
- **Storage tanks,** also called cisterns
- **Delivery system:** gravity-fed or pumped to the end use
- **Treatment/purification:** for potable systems, filters and other methods to make the water safe to drink

Why harvest rainwater?

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. Plus, rainwater is free!

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-county District 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

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.

Statewide Support

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.

What are some of the benefits of rainwater harvesting?

There are a number of benefits to using water from rainwater harvesting systems:

- The water is practically free: the only cost is to collect and treat it.
- The end use is located close to the source thereby eliminating the need for costly distribution systems.
- Rainwater provides a source of water when a more traditional source such as groundwater is unavailable or the quality unacceptable.
- 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 reduces flow to storm sewers and the threat of flooding.
- Rainwater harvesting helps utilities reduce peak demands during summer months.
- By harvesting rainwater, homeowners can reduce their utility bills.



Quarantine and Conservation: How to Use Your Time at Home to Enhance Your Yard and Conserve Water

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 and get out of the house while still maintaining healthy practices. The good news in this whole situation is that this time of year is the perfect time to get outside in your yard and get it ready for spring and summer weather. Here are some great tips for watering your yard and plants to get them green, healthy, and thriving while conserving water.

Start at the Root: How to water efficiently and effectively

Lets start with the way that plants absorb water, which is through the roots. Plant roots are opportunistic. They will grow where there is water. If your city or water supplier were to declare a 5-day outdoor watering restriction or ban, which type of plant/root system would survive and thrive? Deep, infrequent watering helps plants thrive. Deep infrequent watering creates deep roots, which helps plant to absorb water from the deeper soil over a longer period of time. This approach also reduces disease, helps insure good air movement down to the root system, and conserves water. Water lawns slowly, allowing water to reach a depth of 6 inches. Avoid shallow frequent watering, which creates short roots. As water evaporates from the soil surface, short rooted plants and lawns will need water more often. Avoid runoff by adjusting watering duration, volume of spray heads or direction of sprinkler/spray heads.

Watering to establish new plants

“Water the plant, water the hole, water the plant in the hole” is an effective rule of thumb when transplanting. Watering the new plant before removing it from its container helps the soil stick to the roots while ensuring that the root ball is well-irrigated and all the available roots have moisture. Watering your newly dug hole allows you to check for any drainage problems that you might need to correct, ensures that the surrounding soil is moist, and reduces the possibility of water being wicked away from the new plant’s root ball into surrounding soil. Watering the plant in the hole after it has been transplanted helps the root ball and surrounding soil to settle and reduces the number of air pockets.



How can I tell how long to water?

How long depends on the type of irrigation you are using, such as automated sprinklers, drip lines, or hand watering. Rather than going by a set time, a better guideline is to check soil moisture and track rainfall amounts. Invest in and use a moisture meter to check the moisture level around your plants. This will tell you when plants need water and when they dont - You don’t want to over water! Prairielands GCD now has moisture meters that are available for residents within the District. Contact our office at 817-556-2299 to find out about receiving a moisture meter!

Now that we've covered some information on the way plants absorb water, how to effectively water to build thriving root systems, how to establish new plants, and how long to water, let's talk about different types of irrigation systems. After reading about these systems and how to best implement them to conserve water and irrigate most efficiently, your yard, garden and flowerbeds will be ready for that much-anticipated social gathering at your home once this all clears up! 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.

Texas Well Owner Network Helps Well Owners be “Well” Informed

Wells provide high-quality drinking water, and about half the U.S. population receives its drinking water from wells. But with well ownership comes the responsibility of keeping the water well in good working order. Just as you check your furnace or smoke detector batteries seasonally, spring is a good season to have an annual water well checkup before peak water use season begins. An annual checkup by a qualified water well contractor is the best way to ensure problem-free service and quality water.

Preventative maintenance usually is less costly than emergency maintenance, and good well maintenance — like good car maintenance — can prolong the life of your well and related equipment. It is recommended you test your water whenever there is a change in taste, odor, or appearance, or when the system is serviced.

A great resource for well owners is through the Texas Well Owner Network's (TWON) education sessions regularly held across the state. The TWON ‘Well Educated’ Day Session is a free, one-day educational training for Texas residents who depend on household wells for their water needs. Well Educated 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. ‘

The TWON ‘Well Informed’ 1 hour Session is an education program that gives well owners the opportunity to have their well water samples to be screened for common contaminants including fecal coliform bacteria, nitrates, and high salinity. The screening of the water sample is followed by a 1 hour explanation of the screening results and water well protection practices and focuses on wellhead protection and recommendations for remediating well contamination. Find out more about upcoming sessions by visiting www.twon.tamu.edu

A check of your well by a qualified water well contractor may include:

- A flow test to determine system output, along with a check of the water level before and during pumping (if possible), pump motor performance (check amp load, grounding, and line voltage), pressure tank and pressure switch contact, and general water quality (odor, cloudiness, etc.).
- A test of your water for bacteria and nitrates, and anything else of local concern. Other typical additional tests are those for iron, manganese, water hardness, sulfides, and other water constituents that cause problems with plumbing, staining, water appearance, and odor.

The Texas Well Owners Network also recommends that well owners:

- Keep hazardous chemicals, such as paint, fertilizer, pesticides, and motor oil far away from your well, and maintain a “clean” zone of at least 50 feet between your well and any kennels and livestock operations and maintain proper separation between your well and waste systems.
- Periodically check the well cover or well cap on top of the casing to ensure it is in good repair and securely attached.
- Keep your well records in a safe place. These include the construction report, and annual water well system maintenance and water testing results.

Upcoming Events and Meetings

**April
20**

**PGCD Board Meeting -
*Cancelled***

**May
1**

**Texas 4-H Youth Water
Ambassador Applications Close**

**May
15**

**Groundwater Management
Area 8 Meeting**
10:00 a.m.
Cleburne Conference Center

**May
25**

Memorial Day
PGCD Office Closed

**May
18**

PGCD Board Meeting
9:00 a.m.
Liberty Hotel Board Room
Cleburne, TX

**June
15**

PGCD Board Meeting
9:00 a.m.
Liberty Hotel Board Room
Cleburne, TX

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!

Stay in the Know: State and Local Water News at a Glance

- **OSU Develops Potentially Ground-breaking Approach to Cleaning Contaminated Groundwater** - Researchers from Oregon State University have come up with a new, and potentially ground-breaking, way to clean up groundwater contaminated with toxic substances, according to a recent study. [Read more.](#)
- **Judges Recommend Approval of Lower Colorado River Authority's Groundwater Pumping Plan** - The LCRA's plan to pump and sell groundwater in Central Texas came one step closer to being realized after two State Office of Administrative Hearings judges recommended that the Lost Pines Groundwater Conservation District issue the LCRA a permit to annually pump and export up to eight billion gallons of groundwater from Bastrop County. [Read more.](#)
- **Texas Regulators Vote to Ban Residential Utility Shut-offs During Pandemic**- The Texas Public Utility Commission approved an order on March 26 that would ban disconnections of water and power service for Texans financially impacted by COVID-19 and put them on deferred payment plans. [Read more.](#)
- **Don't Fall for It: Water Tests for COVID-19 are Frauds** -The City of Sweeny, TX is issuing a warning after it believes two people attempted to scam a resident after attempting to gain access to the home to test their water for COVID-19. [Read more.](#)

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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