



GeoProjects drilling well @ FM 466 – Capote Road MWCZ-7

GCGCD NEWS



SUMMER 2019 Newsletter

DFC Monitoring Well Project

GeoProjects International just completed drilling the project's eighth well (MWCZ-8) – located in the TXDOT ROW off FM 1117 @ Country Place Road. We anticipate having the aquifer tests from MWCZ-7 & MWCZ-8 completed in the next few weeks.

The consulting geologists are compiling the data from these eight wells and will be preparing a report for the Districts.

The data from this project will be shared with the Texas Water Development Board (TWDB) as the updates for the existing Groundwater Availability Model (GAM) for the Southern Portion of the Queen City, Sparta, Carrizo-Wilcox Aquifers are underway.

Pictures from MWCZ-8 are on page 3.



WWW.GCGCD.ORG



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Visit our website for more information!

I want to thank Canyon Regional Water Authority for generously offering to fly their drone over the drilling site, capturing video and stills of the project in progress.

We appreciate your time and skills Adam!
Many thanks!!

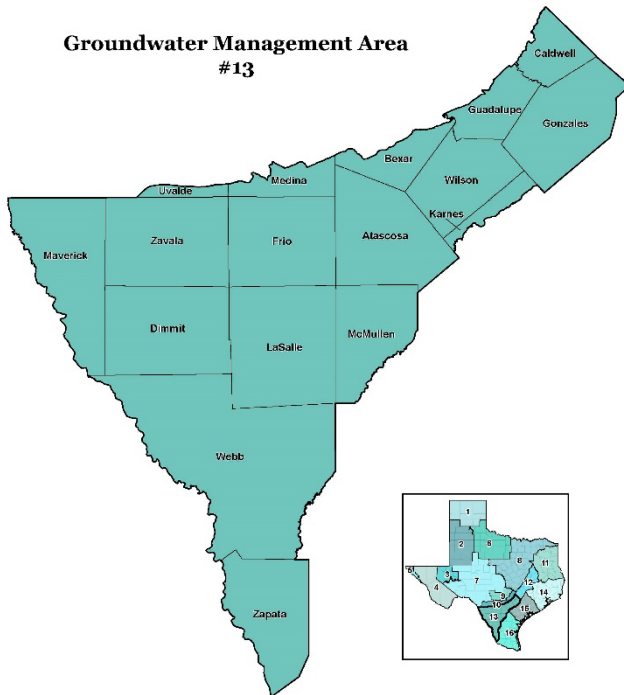


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Kelley Vickers
General Manager

Groundwater Management Area #13

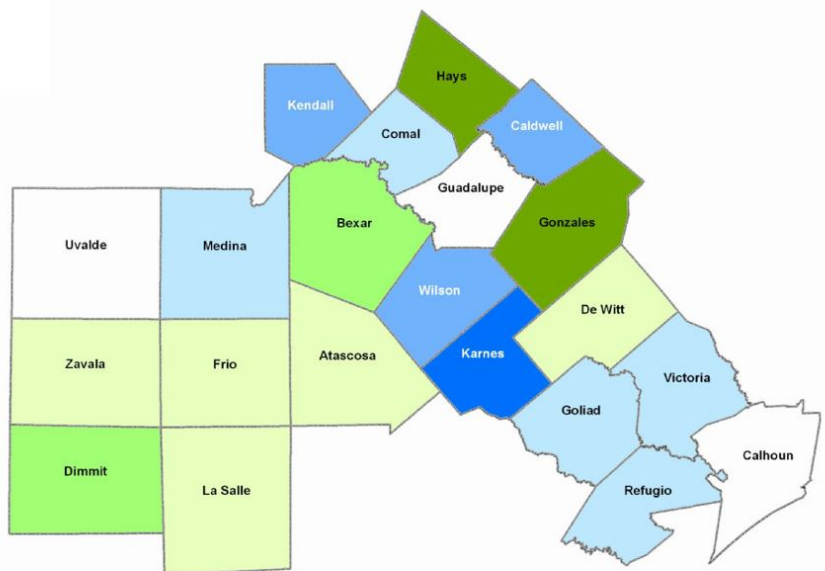
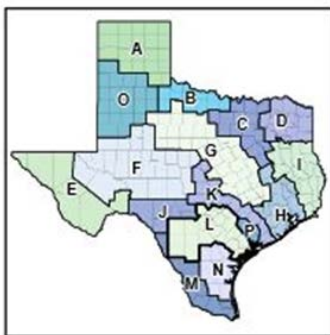


GMA 13 continues to work with LRE Water, LLC in reviewing Groundwater Availability Model (GAM) simulations. Over the next three years, LRE will be preparing the Desired Future Conditions (DFC) checklist which will document:

- Aquifer uses and conditions
- Water supply needs & water management strategies
- Hydrological conditions
- Environmental conditions
- Impacts on subsidence
- Socioeconomic Impacts
- Impacts on private property



Region L



Pictures from Monitor Well Drilling

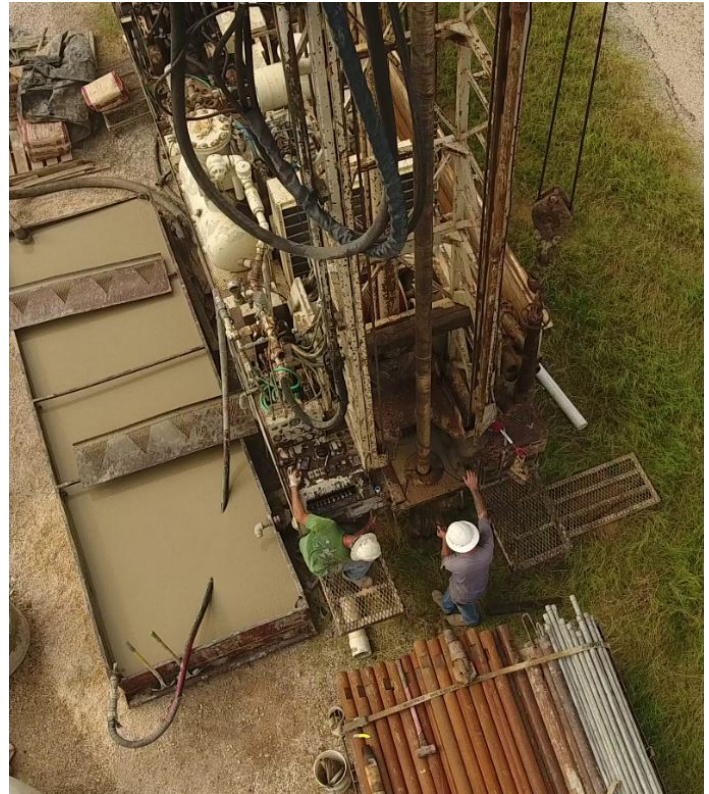


MZCW-8
FM 1117

Adam Telfer, Operations
Manager for CRWA, preparing
the drone for flight



Kelley taking pics of
drone in flight



Drone's Eye View



Very cool





GCGCD proudly supports Newspapers for Education



GCGCD supporting watershed cleanup

OUTREACH



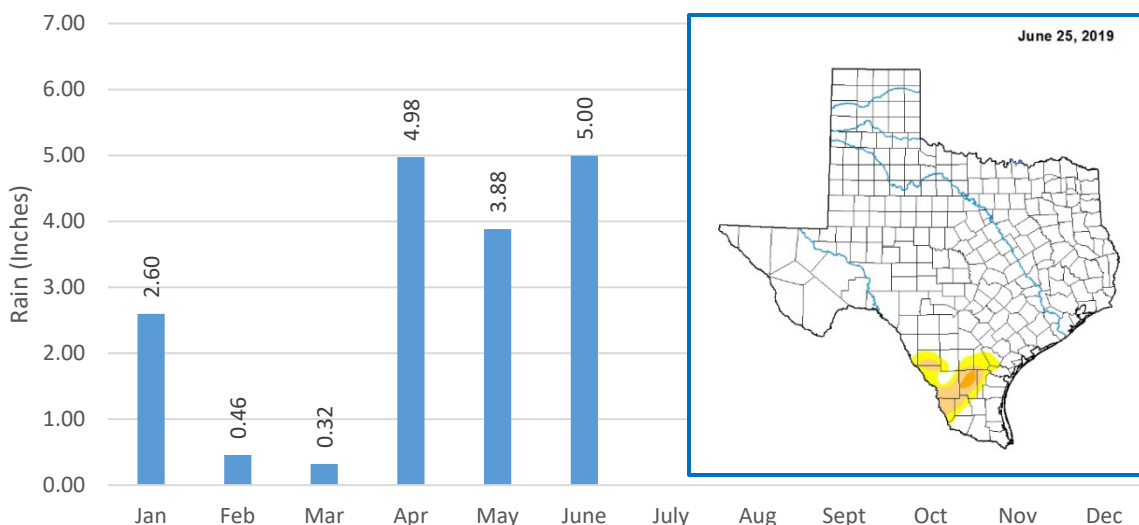
The Texas 4-H Water Ambassadors Program provides high school age youth an opportunity to gain advanced knowledge and develop leadership skills related to the science, technology, engineering, and management of water in Texas.

*Thank You Kaleb
for your
dedication
to educating
youth about
WATER*



Jeff Schuehle, Hilmar Starcke, Kaleb Herfurth, Hilmar Blumberg and Bill Jones at GCGCD July board meeting.

2019 Rainfall - GCGCD Average with TX drought map for June 2019



<https://www.drought.gov/drought/states/texas>

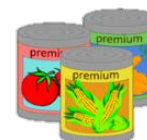
2019 List of Hurricane Names

Andrea
Barry
Chantal
Dorian
Erin
Fernand
Gabrielle
Humerto
Imelda
Jerry
Karen
Lorenzo
Melissa
Nestor
Olga
Pablo
Rebekah
Sebastien
Tanya
Van
Wendy

Hurricane Season Is Here

Are you ready?

Essential to keep handy!



In 2005 - the most active hurricane season of record - with 31 named storms - all of the names set by the National Hurricane Center (NHC) were exhausted and for the first time, NHC used the Greek alphabet for the remaining storms.



NATIONAL HURRICANE CENTER
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

The Importance of Understanding Drought

Texas is accustomed to a wide range of weather phenomena from hurricanes, tornados, flash flooding to even ice and snow. While the focus may primarily be on major precipitation events, one of the more dangerous weather conditions that we encounter is a *lack of precipitation event* known as **drought**. Drought has various meanings depending on perspective - based on lack of rainfall or water shortages.

As the [USGS defines drought](#), if the amount of precipitation in a region is below the average and it remains the same or worse for weeks or even years, then it is considered a drought. Additionally, the USGS also warns that the lack of precipitation and low water levels can negatively affect groundwater due to the lack of replenishment.

Drought impacts different aspects of our lives that it can be divided into four types based on its impacts:

1. **Meteorological Drought** – based on lack of rainfall and the length of the dry period.
2. **Hydrological Drought** – based on the impact the lack of rainfall has on bodies of water such as loss of stream flow, lake level decline, and groundwater table decline.
3. **Agricultural Drought** – based on the impacts drought has on the farming industry.
4. **Socioeconomic Drought** – based on the impacts of supply and demand of economic goods when the demand for a good exceeds its supply due to the drought-related deficit in water.

How do you know when a drought *ends*? The best relief for a drought is for soaking rains to drench a region that can permeate the soil and replenish surface and ground water sources. While showers and thunderstorms can be beneficial during a drought, it can only provide temporary relief that leads to runoff rather than long-lasting relief.

Due to its deadly impacts on life and property, the [National Integrated Drought Information System \(NIDIS\)](#) was established in 2006 in order to implement the [U.S. Drought Monitor \(USDM\)](#) to forecast and monitor possible drought conditions at federal, state, and local levels. The USDM is released weekly to provide a summary of current drought conditions using various indices to determine intensity. The table below highlights the levels of intensity for drought conditions under the USDM:

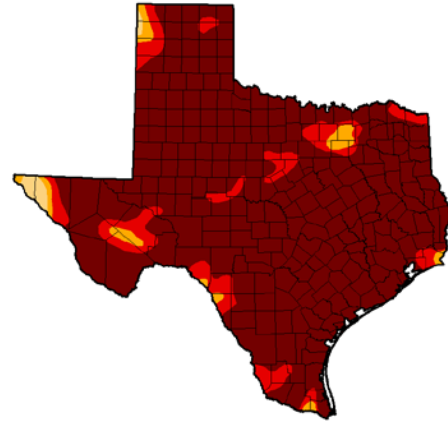
| | Description | Possible Impacts |
|----|---------------------|--|
| D0 | Abnormally Dry | Going into drought: short-term dryness slows growth of crops/pastures. Coming out of drought: some lingering water deficits; crops/pastures not fully recovered. |
| D1 | Moderate Drought | Some damage to crops/pastures; streams, reservoirs, or wells are low with some water shortages developing or imminent; voluntary water-use restrictions requested. |
| D2 | Severe Drought | Crop/pasture losses are likely; water shortages are common and water restrictions are imposed. |
| D3 | Extreme Drought | Major crop/pasture losses; widespread water shortages or restrictions. |
| D4 | Exceptional Drought | Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells creating water emergencies. |

<https://www.drought.gov/drought/states/texas>

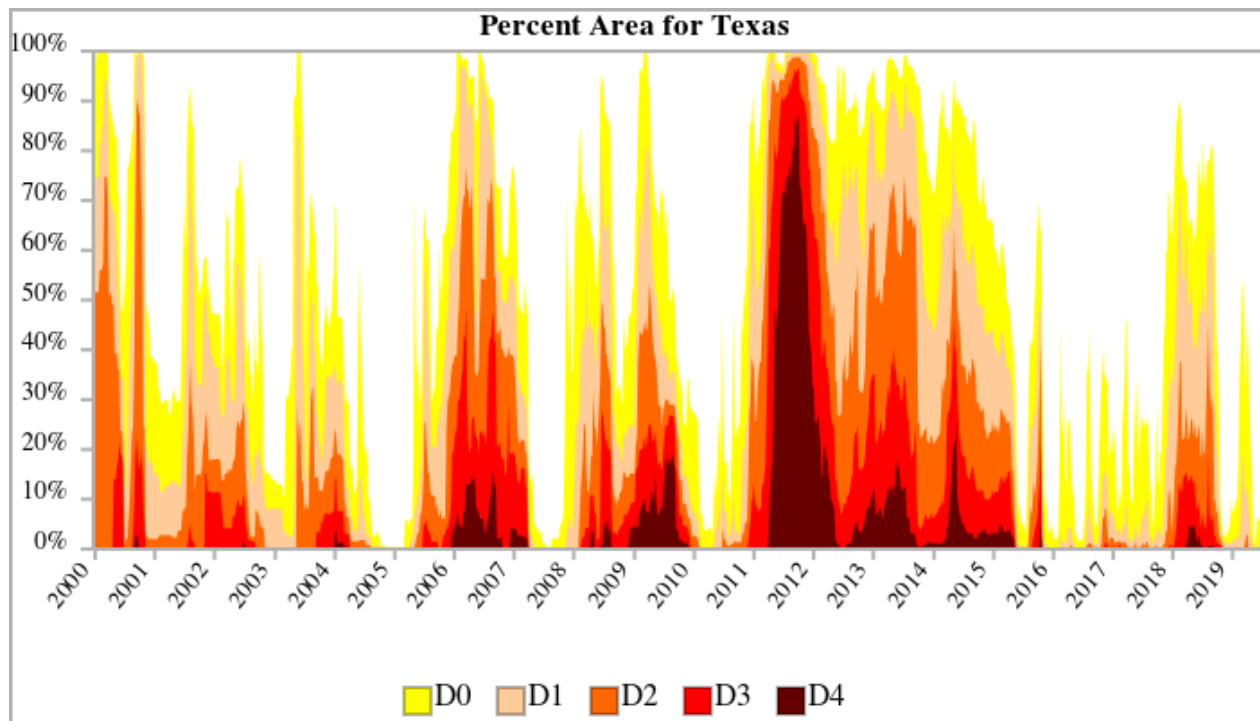
DROUGHT - continued

October 4, 2011

Texas has seen many major droughts over the last several decades that have led to water shortages, wildfires, massive crop losses, billions of dollars in damages, and even deaths. The most recent example of a major drought in Texas lasted a total of 271 weeks from May 4, 2010 to July 7, 2015. Like all droughts, it was a slow progression - as prolonged dry and hot conditions further exacerbated the situation until the whole state felt the effects. **The most intense period of drought occurred during the week of October 4, 2011 where the highest level of drought on the USDM (exceptional drought) covered 88% of the state of Texas.** (image to right)



<https://www.drought.gov/drought/states/texas>



There are multiple resources available to stay informed on possible drought events in the future and how to respond to them and seek assistance.

[North American Drought Monitor](#)

[Texas Water Development Board](#)

[Texas Department of Agriculture](#)

[National Integrated Drought Information System](#)

[Texas Commission on Environmental Quality](#)

[NOAA Climate.gov](#)

[Drought Preparedness Council](#)

[National Drought Mitigation Center](#)



Aquifer Levels

June 2019

Water Levels for the period of June 2018 – June 2019

The District's water-level observation wells were measured in June 2019. Fourteen of the District's current wells are completed in the Carrizo aquifer and ten in the Wilcox aquifer. However, only eleven of the current Carrizo wells were used for the purposes of this report because of not being able to measure or an unreasonable water level change. Eight of the Wilcox wells were used for water-level change computations.

Average Carrizo water levels declined about -0.8 feet for the period June 2018 – June 2019. These wells are either located in the outcrop or close to the outcrop.

The January 2018 and January 2019 Wilcox water-level measurements for the eight wells appear reasonable resulting in an average change of about +0.8 feet for the period June 2018 – June 2019.

In summary:

1. Water levels in the Carrizo aquifer have declined about 0.8 feet
2. The largest Carrizo measured water-level declines were in the CRWA and SSLGC areas
3. Wilcox aquifer water levels were up about +0.8 feet
4. In the Carrizo outcrop, the estimated long-term water-level decline is about -0.5 feet per year
5. Small to moderate long-term water-level declines in the Carrizo aquifer are expected over time because of SSLGC, SAWS, SHWSC, and CRWA well fields in Guadalupe and Gonzales Counties.



Verifying measuring points

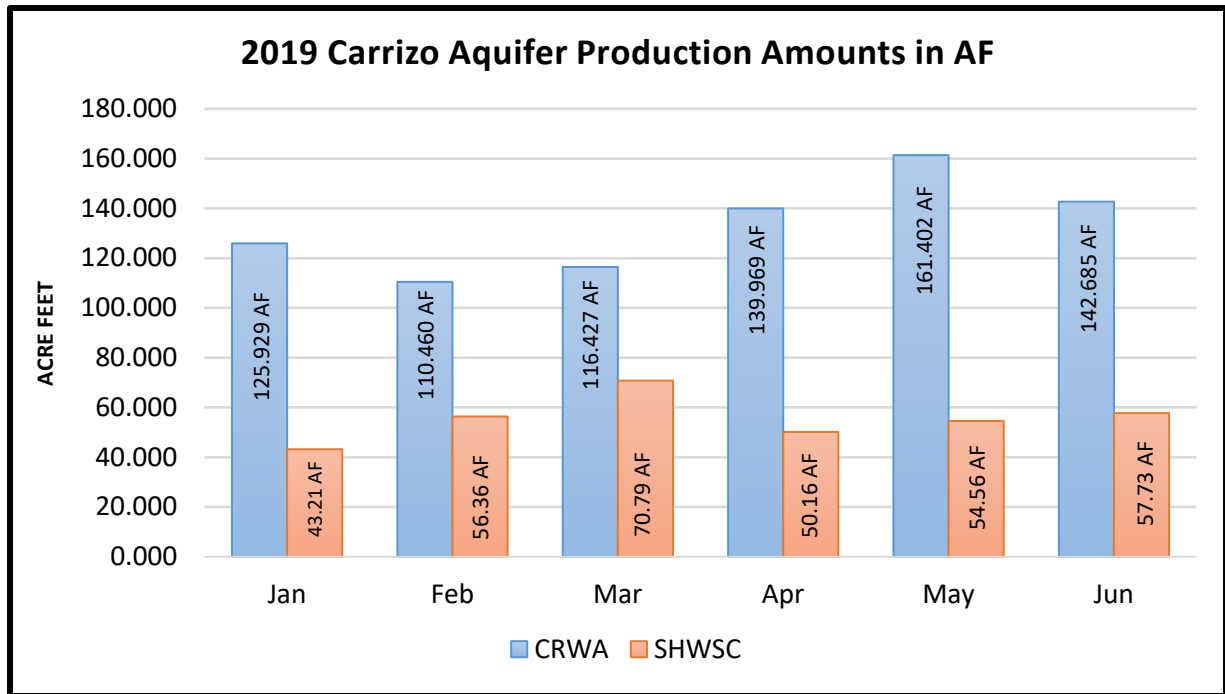


To read the full report
visit our website:

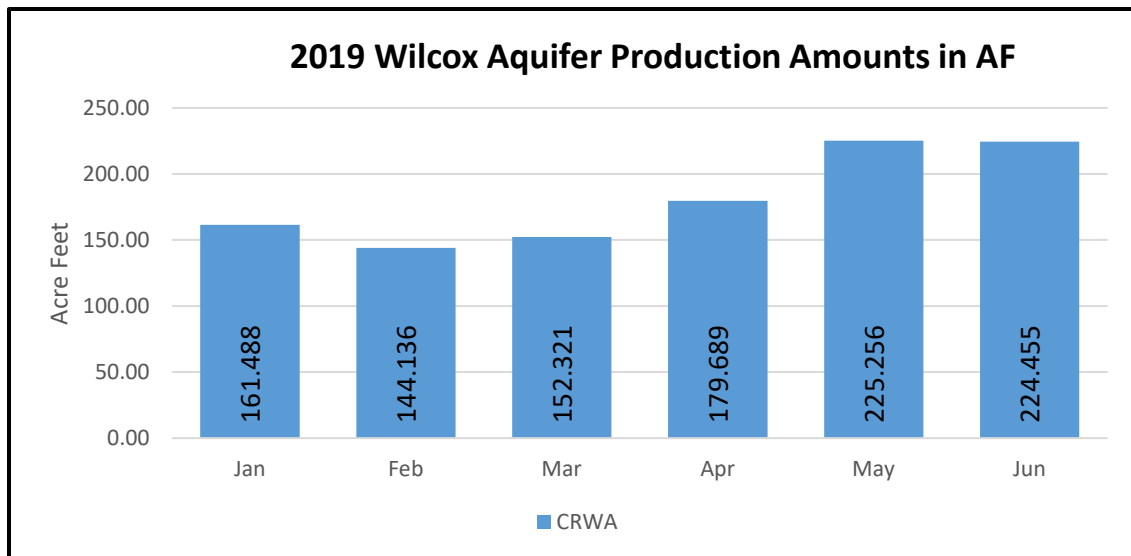
www.gcgcd.org

William B. Klemt
William B. Klemt, P.G.

2019 GCGCD Production Totals



Water Produced from the Carrizo Aquifer as reported by Canyon Regional Water Authority (CRWA) and Springs Hill Water Supply Corporation (SHWSC) for 2019



Water Produced from the Wilcox Aquifer as reported by Canyon Regional Water Authority (CRWA)



8th Annual Texas Groundwater Summit

- ❖ Groundwater Data
- ❖ Water Valuation & Water Markets
- ❖ Legislative Debrief
- ❖ Managed Aquifer Recharge from Stormwater
- ❖ Calculating Recoverability in ASR Projects
- ❖ Brackish Groundwater
- ❖ Surface Water / Groundwater Interaction
- ❖ Workshops for Board & Staff Training

REGISTER NOW

2021 Regional Water Plan (5th Cycle) Region L

August 1, 2019 – Planning Group meeting @ SAWS

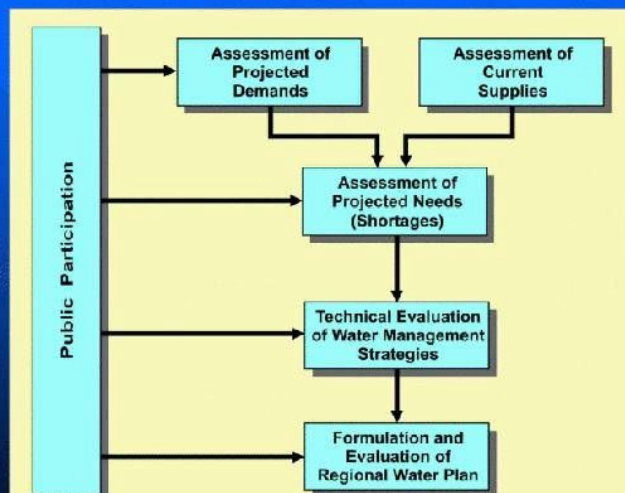
<http://www.regionltexas.org/2019-meeting-materials/>



GCGCD is part of the South Central Texas Regional Water Planning Group (SCTRWPG) – **Region L** – one of 16 water planning groups in Texas established by TWDB as a requirement established by Senate Bill 1 of the 75th Legislative Session.

“The regional plans provide for water conservation and drought management policies while ensuring the health of the public, economy, and the natural environment. The various elements that become part of the plan are developed through a series of [planning meetings](#) that take place over a four-year period. At these meetings, the planning group members review the results of various studies including population projections, existing and future needs for a number of water uses, and deliberate on potential supply options and strategies to meet the future need.” [TWDB](#)

Regional Water Planning Process



<https://www.regionltexas.org/current-planning-effort/planning-process/>

UPCOMING EVENTS –

- August 1st** GMA 13 Meeting – EUWCD 110 Wyoming Blvd. Pleasanton @ 10 AM
August 2nd Region L meeting – SAWS 2800 US Hwy 281 San Antonio, TX @ 9:30 AM
August 8th GCGCD Board Meeting – 122 W. Ireland St., Seguin, TX @ 4:30 PM
Aug. 20-22nd TAGD Groundwater Summit – Hill Country Hyatt Regency Resort - San Antonio
Sept. 12th GCGCD Board Meeting – 122 W. Ireland St., Seguin, TX @ 4:30 PM

GCGCD Board of Directors & Staff

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District 7 - Jeff Schuehle - Vice President
jeff_schuehle@gcgcd.org

William B. Klemt - Consulting Geologist
bill_klemt@gcgcd.org



*Is your well in
our database?*

As the population of our District and surrounding areas expand, the need for water will increase. To serve those residents and businesses, additional wells will need to be drilled. Proper spacing of new well fields is essential in order to protect the existing residential and livestock wells in our area. The Groundwater District's mission is to "CONSERVE, PRESERVE, PROTECT AND PREVENT WASTE OF GROUNDWATER". One way we accomplish our goal is by regulating the use of groundwater through the monitoring of aquifer levels and permitted production. Knowing the location of all wells within the District allows us to better plan spacing of large capacity wells. We maintain a GIS database of all known water wells within the District. To keep that database up to date and accurate, we ask the public to register their water wells.

**Register Your Well Today
It's Free!**

Registration form on back page of Newsletter

Need help? Just give us a call

830-379-5969

Happy to help ☺



If you have recently purchased property that has an EXISTING water well on it - Let us know so we can update our files. Simply give us a call and we will 'walk' you through the very simple process. Forms can also be found on our [website](http://www.gcgcd.org)!

WATER WELL REGISTRATION REGISTER AN EXISTING WELL



Please fill out a separate form for each well on your property

DATE _____

WELL OWNER INFORMATION

Name: _____ Phone # _____

Mailing Address: _____

Email: _____

ADDITIONAL INFORMATION *If you need help filling out this form – just give us a call 830-379-5969

Physical address of well: _____

Location of Well Description: _____

(Example: SW corner of property)

GPS Coordinates of Well (if known): _____

*Attach a Google Earth map (if possible)

Primary Purpose of Well (circle)

- Domestic/ household/home garden
- Livestock
- Irrigation/Agricultural *
- Commercial/Industrial *
- Other

*PERMIT REQUIRED; Please contact GCGCD for application procedure

*All Permits require Administratively Complete Application, Proof of Sufficient Water Rights, Proper Notification, Public Hearing and District Board Approval. Our RULES are available on our website.

www.gcgcd.org

If you have a State of Texas Well Log – please attach. If not, complete the following section if possible.

Driller: _____

Well Depth: _____ Date Completed _____

Forms can be submitted to: **PO BOX 1221 Seguin, TX 78156** or
122 W. Ireland St. Seguin, TX 78155 or by e-mail gcgcd@gcgcd.org