

Clearwater
Underground Water
Conservation District

CUWCD Directors & Terms:

Leland Gersbach—Precinct 1
2004-2008 (Secretary)

Horace Grace—Precinct 2
2006-2010 (President)

Wallace Biskup—Precinct 3
2004-2008 (Vice President)

Judy Parker—Precinct 4
2006-2010 (Director)

John Mayer—At large
2006-2010 (Director)

**CUWCD Public Advisory
Committee:**

Vince Cortese—Precinct 1

Rosann Feagin—Precinct 2

Marvin Green—Precinct 3
(Committee chair)

Henry Bunke—Precinct 4

David Cole—At Large

DISINFECTING YOUR WATER WELL

Heavy rainfall this spring and summer has prompted many well owners to have their water tested for possible bacteria contamination. During the month of July, Clearwater conducted bacteria testing on 31 samples, of which 20 tested positive for coliform bacteria. In some cases, the positive result may have been due to the sample being incorrectly collected or handled. In others, the bacteria, including fecal matter, was truly present.

The Texas Commission on Environmental Quality (TCEQ) recommends the following procedures to disinfect a water well.

1. Locate the wellhead and remove the access plug or bolt.
2. Using a funnel, pour in plain liquid chlorine bleach.
3. With a garden hose, run water through the funnel into the well for one hour. This will

circulate the chlorinated well water to all fittings and equipment.

4. After one hour, remove garden hose and funnel.

5. Turn on nearest faucet and run water until the bleach odor is detected, then turn it off. Do the same for all other faucets. Allow water to sit in the plumbing system overnight or for 24 hours. Do not use the water during this time.

6. Flush all faucets until the bleach odor is gone and the water is clear. Flush outside faucets first—do not flood the septic system.

7. Submit another sample for testing to determine if disinfection has been successful.

These instructions for well disinfection are available on the TCEQ website at www.tceq.state.tx.us (search for "well disinfection").

Water Quality Testing

The District's in house lab offers registered well owners free testing for common constituents and bacteria. Testing bottles are available in our office. Annual testing is recommended.

Wells Not in Use

Remember wells not in use should be capped or plugged to help protect water quality.

Well Depth	Amount of Bleach
100' or less	1 quart
100 – 200'	1/2 gallon
200 – 300'	3 quarts
300' or more	1 gallon or more

MESSAGE FROM THE PRESIDENT



President Horace Grace

supply for the future and will ensure more money in your pocketbook. Saving water is really quite easy. Here are some simple tips:

- Every month check for leaks in taps, pipes and hoses and repair them. One slow drip can waste 20 gallons/day (7,000 gallons/year).
- Wash dishes by hand but don't let the water run—fill one side of the sink with rinse water. This can save 2,400 to 6,000 gallons/year.

- Raise your lawnmower blade and cut grass to a height of 3 inches. This will shade the soil and reduce evaporation and allows roots to grow deeper.
- Use soaker hoses instead of sprinklers to water trees, shrubs, and flower beds more efficiently.

More water conservation tips are available on our website and at the "Water IQ" website at www.wateriq.org.

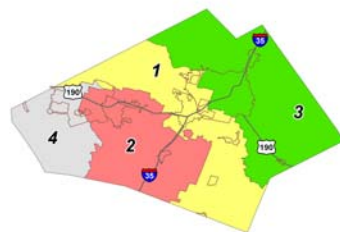
Thank you for your trust and support,

Horace Grace

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(NAME)
(STREET)
(CITY)

CUWCD Precincts



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THE CLEARWATER SOURCE

2007 Annual Newsletter

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**UPCOMING
EVENTS**

- **Bell County Water Symposium on November 8, 2007** featuring Keynote Speaker State Representative Jimmie Don Aycock. Check our website for more details as event nears.
- **Household Hazardous Waste Collection Days at the Copperas Cove Transfer Station on September 29, 2007 and the Temple Solid Waste Service Center on October 27, 2007.** For more info, call Jennifer at 254-770-2364.
- **GMA 8 Meeting at the Bellmead City Hall on November 15, 2007.**
- **CUWCD Election for Precincts 1 & 3 on May 10, 2008.**

??? Did You Know ???

The Trinity aquifer consists of 3 layers...

- Upper Trinity**—Glen Rose fm.
- Middle Trinity**—Hensell fm.
- Lower Trinity**—Hosston fm.

**80TH LEGISLATIVE SESSION—
SUMMARY OF WATER BILLS**

Several water bills were passed during the past legislative session, the most notable being Senate Bill 3 (SB 3). SB3 is broken into 13 Articles. Following is a brief summary of the topics covered in SB3.

Article I: Environmental Flows and Watermaster Advisory Committee.

Article II: Water Conservation Advisory Council.

Article III: Landowner protection associated with construction of new reservoirs.

Article IV: Designation of Reservoir Sites.

Article V: Joint Interim

Committee on State Water Funding.

Article VI: TWDB funding in economically distressed areas.

Article VII: Conservation and Reclamation Districts and setting of rates.

Article VIII: BRA and LCRA study of Lake Somerville.

Article IX: Creation of Agua Special Utility District in the Rio Grande Valley.

Article X: Creation of True Ranch Municipal Utility District No. 1 in Hays County.

Article XI: Creation of Tablerock Groundwater Conservation District in Coryell County.

Article XII: Edwards Aquifer Authority rights, powers, and withdrawal caps.

Article XIII: Boundary revision for Culberson County Groundwater Conservation District.

Other water bills of interest include:

SB 662: Groundwater availability assessment when subdividing property.

SB 714: Production reports to groundwater conservation districts for certain wells.

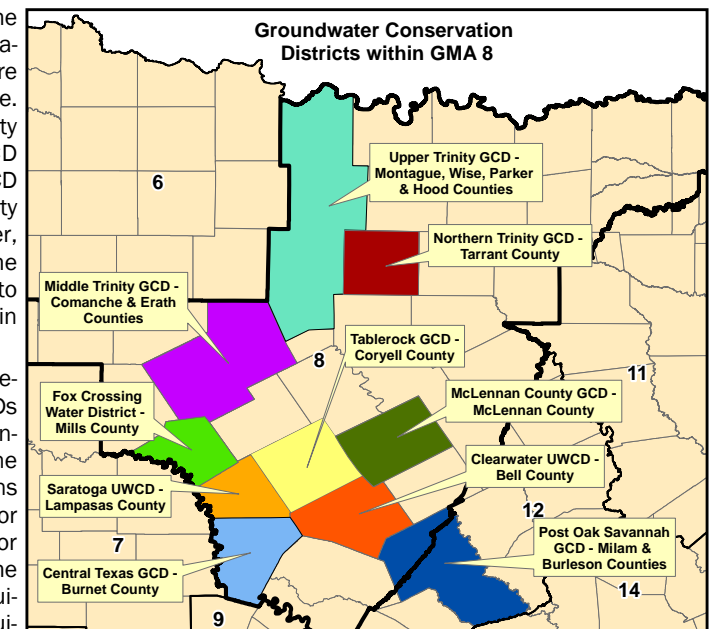
SB 1037: Prevention of surface water or groundwater pollution from certain evaporation pits.

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GMA 8 MOVING FORWARD TO MEET DEADLINE

Groundwater Management Area 8 (GMA 8) is happy to welcome four new groundwater conservation districts (GCD) that were created by the 80th Legislature. These include McLennan County GCD; Northern Trinity GCD (Tarrant Co.); Tablerock GCD (Coryell Co.); and Upper Trinity GCD (Hood, Montague, Parker, and Wise Co.). This brings the total number of GCDs in GMA 8 to 10, with 14 of the 45 counties in GMA 8 protected by a GCD.

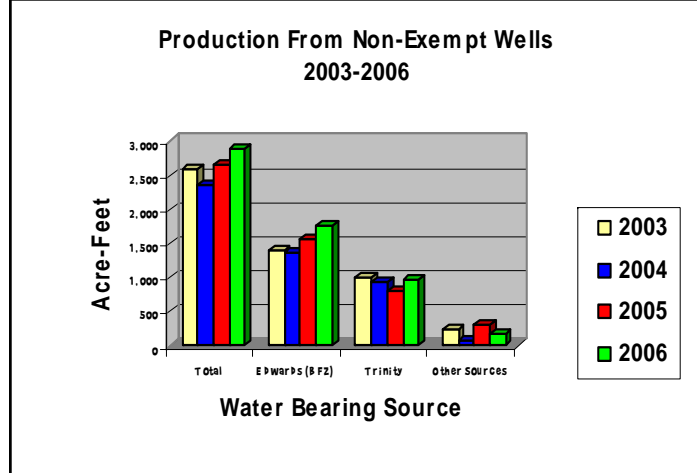
GMA 8 is one of 16 GMAs created by the state. The GCDs within a GMA are required to conduct joint planning to determine the desired future conditions (DFC) of the major and minor aquifers within the GMA. Major aquifers in GMA 8 include the Edwards BFZ and the Trinity aquifer. There are seven minor aquifers in GMA 8.



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WELL PRODUCTION/REGISTRATION REPORT

During 2006, the District issued operating or historic use permits for 68 non-exempt wells and required monthly production reports from these wells. Total production from non-exempt wells in 2006 was higher than production in previous years as shown in the comparison table. Non-exempt wells are capable of producing a large volume of groundwater (over 17 gallons per minute), located on less than 10 acres, or are used for purposes other than Domestic, Livestock or Poultry. Of these wells, 31 are producing from the Edwards BFZ, 27 from the Trinity aquifer, and 10 from other groundwater sources.



Production from Permitted Wells January through June

Edwards (BFZ):

2005: 707 ac-ft
2006: 796 ac-ft
2007: 667 ac-ft

Trinity:

2005: 345 ac-ft
2006: 427 ac-ft
2007: 387 ac-ft

Other:

2005: 294 ac-ft
2006: 115 ac-ft
2007: < 1 ac-ft

Notes: One acre-foot of water will cover one acre of land to a depth of one foot (325,851 gallons). That is roughly the amount of water used by 5 people in one year.

Well registration for 2007 through June is reported at 44.

With regard to production so far in 2007, permitted wells produced 1,054 acre-feet of water during the first six months of 2007. This is about 283 ac-

ft less than the amount of water produced at this time last year.

Since the District's opening in 2002, a total of 4,463 wells have been registered. In 2006, 104 wells were registered, 8 of which were non-exempt and 96

exempt. Annual production from exempt wells has been estimated based on registrations received through 2006. Estimates are as follows: Edwards BFZ, 304 ac-ft; Trinity, 864 ac-ft; and Other Sources, 912 ac-ft.

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GMA 8 Deadline

The DFCs must be set by the year 2010. These DFC statements will be used by the Texas Water Development Board to calculate managed available groundwater (MAG) figures. Once calculated, these numbers must be included in future Regional and State Water Plans and be used by groundwater districts for their permitting process.

Although the DFCs do not have to be set until 2010, GMA 8 is working toward a January 1, 2008 deadline so that the resulting MAGs may be included in the 2011 Regional Water Plan and the 2012 State Water Plan. If this deadline is missed, then the MAG figures will not appear until the 2016 Regional Water Plan and the 2017 State Water Plan.

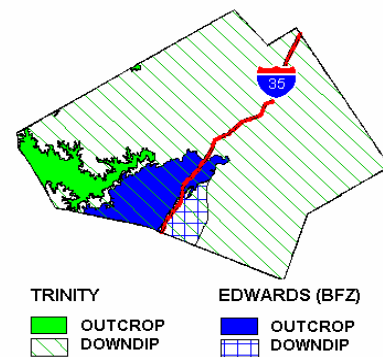
Engineering firm, TCB, Inc. is under contract with GMA 8 to assist in developing the DFCs. The methodology used to develop the DFCs involves using the TWDB groundwater availability model (GAM) to determine the projected effect that various levels of pumping will have on an aquifer. The pumping levels used in the GAM runs are basically the groundwater availability figures in the regional water plans for the unprotected counties (counties without a GCD) in GMA 8, with the exception of 11 counties that are affected by the production of Barnett Shale. These 11 counties will use more recent figures available in a TWDB report.

Counties with a GCD have an option of using the regional water plan figures or their own figures that have been developed through other studies. For instance, Clearwater's management goal, or DFC, for the Edwards BFZ is to maintain a preferred spring flow of 200 ac-ft/month, during a repeat of the 1950s drought of record. For confined portions of the Trinity aquifer, the goal is to maintain 50% of the available drawdown (artesian head) after 50 years, while the objective for unconfined portions is to leave 95% of the saturated thickness of the aquifer after 50 years.

Results of the GAM run for the Trinity aquifer is available on the GMA 8 website at www.gma8.org. Results for the Edwards GAM run is still pending but will be posted on the website as soon as it is available.

The GMA process allows for local GCDs to coordinate management of shared aquifers and to consider pumping in areas without GCD regulation. The GCDs determine groundwater availability whereas before this was done by the regional water planning groups. The resulting product will be groundwater availability figures in State Water Plans that are created by the entities managing the resources. The next meeting of GMA 8 will be held in Bellmead, hosted by the McLennan County GCD on November 15, 2007. Meeting information will continue to be posted on the GMA 8 website.

Bell County Major Aquifers



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Water Legislation

SB 1383: District hearings and citizen suits for illegally drilling or operating a water well.

For more information on these bills and others passed by the 80th Legislature, a legislative summary by Lloyd Gosselink Attorney at Law is provided in their July Newsletter—Environmental & Municipal Update. You may access this at www.lglawfirm.com or visit our website and click on the legislative update link.

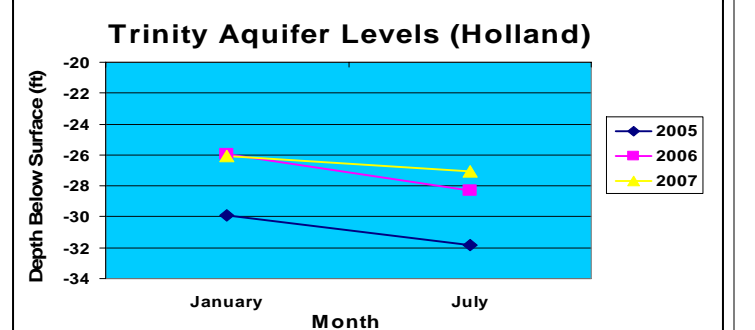
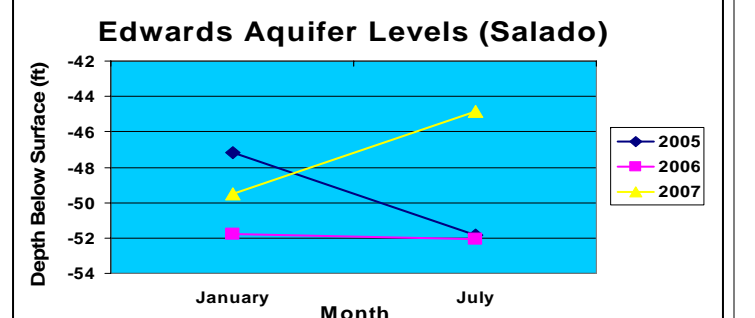
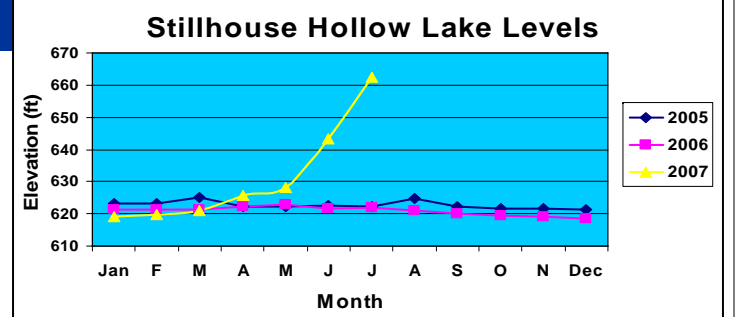
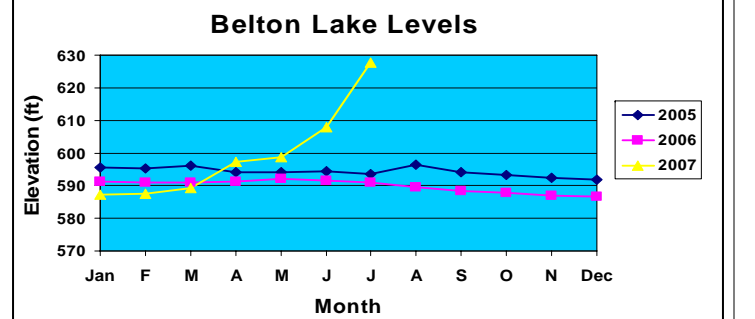
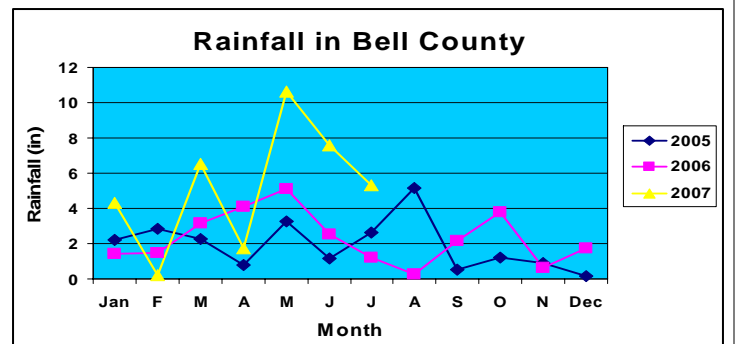
FROM DROUGHT TO DELUGE

They say in Texas that if you don't like the weather, don't fret because it will change tomorrow. This is usually true except during the summer-time when the weather is predictably hot and dry. Not so this summer! Heavy rains during spring/early summer brought an end to the drought that has plagued Central Texas for the past two years. The charts provided show the changes in rainfall, lake levels, and aquifer levels for 2005 through July 2007. The rainfall data was provided by Farm Service Agency. The lake level data was obtained from the US Army Corps of Engineers Fort Worth District. Aquifer levels were measured by District staff.

The charts show a positive correlation between rainfall and lake levels. There is also a posi-

tive correlation between rainfall and changes to the aquifer levels, more clearly shown by the Edwards BFZ well. This supports the premise that the Edwards recharges quickly with rainfall events. The Trinity aquifer also shows higher levels during 2007 when rainfall has been high.

Due to the unpredictable nature of Texas weather, drought contingency planning is a very important part of managing the water resources of Texas. When surface water resources dwindle due to lack of rainfall, the focus often shifts to developing more groundwater resources. However, these resources are impacted by drought conditions as well. The combination of drought and higher demand will inevitably result in declining aquifer levels.



DISTRICT PROJECTS

Clearwater has several projects underway to monitor changes in the Edwards BFZ aquifer. One project is the installation of stream flow gauges in Salado Creek to compare the stream flow level above the springs with flow level below the springs. This will give an indication of the amount of water the springs are contributing to Salado Creek and help us to monitor changes in the Edwards aquifer.

Another project involving the Edwards BFZ aquifer is the installation of a continuous monitoring system in a well located south of Salado along IH 35. This will allow changes in the water level to be constantly monitored. This will bring the total number of continuously monitored wells in the Edwards BFZ to two; a second well is located along FM 2843 near the Hidden Springs Subdivision.

With regard to the Trinity aquifer, the District is seeking new wells in the westernmost part of the county that are being drilled in the lower portion of the aquifer (Hosston formation). A geophysical log will be made to ac-

curately define the location of the middle and lower layers. This information will be useful as the District determines management strategies for the Trinity aquifer.

Clearwater is also collecting samples from select wells for testing at a certified lab. A total of nine samples (eight from wells and one from Salado Creek) will be collected and sent to the LCRA Environmental Laboratory Services in Austin. The samples will be tested for fifteen different parameters. The sample wells are being selected to enhance testing conducted by the Texas Water Development Board (TWDB). The TWDB collects samples from six wells in Bell County for testing about once every five years.

Data from these projects and others will assist the District in fulfilling its responsibility of managing groundwater. But equally important, the data from these projects provide private well owners useful information about the aquifers they rely upon for their water source.