

## **FAWCETT NOTES from the LWRA WATER and LAND STEWARDSHIP WORKSHOP Part 3**

*Third Speaker (of 3)*

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### **“GROUNDWATER LAWS”**

The Kimble County Groundwater Board is a five-member locally elected body based on five precincts within the county, serving staggered four-year terms.

#### **Definitions:**

Surface water (rivers and streams) is owned by the State of Texas and governed by the Texas Commission of Environmental -Quality (TCEQ), while groundwater is governed by groundwater districts, or if there is none, then by the concept of “rule of capture,” meaning the owner controls of the use of water on the land with few caveats. Surface water and groundwater are inexorably connected, however, so this dual control can often be problematic.

A groundwater conservation district can limit how much and what for by the creating and enforcement of rules. The Texas legislature likes the local control, therefore most Texas counties are now in groundwater districts. Many of those counties left don't have enough population and/or not enough groundwater to need one, so they are still akin to the “Wild West” in regards to water usage.

The Groundwater Conservation District acts as a mediator, open to all types of uses: agricultural, household, and industrial, but not all are equal. The goal is to balance conservation of water to economic use. Multiple factors to keep in mind:

- Some uses are daily, others seasonal.
- Historic use versus newer ideas.
- Competing interests of those who have lived here a long time versus new absentee landowners.
- Population growth in unincorporated areas.
- The effects of out-of-district municipal growth.
- Groundwater NOT evenly distributed in Kimble County

## TOOLS of GCDs

Groundwater districts use a set of rules and policies governing 1) production limits, 2) well spacing, and 3) type of water usage. GWD Districts also maintain records, issue permits, and have a growing monitoring network (currently, 14 wells in Kimble County have the water level checked on a quarterly basis).

**Groundwater districts have a specified Desired Future Condition (DFC).** For example, the Kimble County GCD has a goal of drawing down the aquifer water level only 1 foot in 50 years. Many factors can affect a DFC, such as how much irrigation is necessary. All factors lead to a management plan with a list of goals and instructions on how to achieve those goals. An annual report to the GWD Board must prove that the GCD is achieving their DFC.

In particular, a very important tool of a GCD are the rules governing **well spacing**, that has to include consideration of vertical as well as horizontal well spacing. Vertical spacing is especially applicable when there are overlapping aquifers. Another factor is what is the volume of water to be pumped and how often. There are also well construction rules.

Other considerations for well placing/spacing: tract size and the number of wells already there. The GCD might require the applicant to pay for a hydrologic study to model the effects of the proposed well on the other wells.

**Well production and permits:** generally, two types of usage: 1) Exempt wells for domestic use and livestock if on land 10 acres or more – does not require a permit, 2) Non-exempt Industrial use – requires a permit. In addition, *any type of use on less than 10 acres of land* is non-exempt and requires a permit. There are also “change of use” forms if, for example, domestic use becomes industrial.

Most non-exempt permits have a Public Hearing, so that neighbors can chime in and these interactions can make a difference.

With all this in mind, in 2022, **Kimble County Subdivision Rules** were adopted, demonstrating a good working relationship between GCD and the county. Primarily, the developer must complete a **groundwater sufficiency report** to prove there is enough water to support the development proposal (this is good for both the developer and the buyers!) This rule helps insure SMART development in Kimble County, enforced by intensive testing. It should also mitigate the detrimental effects of big ranches being divided up into too many tracts, with buyers not even knowing if there is water on their little tract.

**An important part of the subdivision permit application is the pump test**, largely because karstic aquifers are not uniform.

**What is an aquifer pump test?** This test requires two wells (one called the 'pump well' and the other, the 'observation well'), spaced 300 feet or less apart, that are run for a minimum of 24 hours in order to stress or draw-down the aquifer, that must occur before pumping stops. A calculation is made of pump rate, how long it took to begin to deplete the aquifer, plus projections of the effects on the aquifer in 5, 10 and 30 years. The resulting calculation determines the number of tracts allowed in the subdivision and how far apart they must be. Licensed engineers review subdivision proposals and pump tests; Kimble County uses Collier Consulting.