

Burnet County Water Availability Requirements for Subdivisions

The Central Texas Groundwater Conservation District (the District) was created by the state legislature and passed confirmation election of the voters in Burnet County during 2005. At the time of the creation of the District, citizens of Burnet County saw a need to protect and conserve the groundwater resources of the County and to protect wells from unreasonable effects brought on from the rule of capture, which exists for areas without groundwater district protection. Forming a district in Burnet County insured that the groundwater would be held under local management by the elected 5 member Board of Directors. Rumor of consolidation with Travis and Williamson Counties further created desire to form a separate District that could have management reflective of the local economy, unique hydrology, utilization practices, and socio-political climate of the area.

In the last ten years, the District has been devoted to developing scientific understanding of the geology and hydrology within the District. A robust monitor well network, of now over 50 wells, has been developed through cooperative efforts with existing well owners and a drilling program with landowners has allowed for exploration and monitoring of a complex aquifer system. Discovery has been made through numerous studies that the District is situated over a complex geologic structure on the western edge of the Llano Uplift. More understanding of the region's groundwater aquifers, water quantity, spring flow, water quality, recharge, and discharge of the systems has been gained in the last 10 years than was previously gained in the past century.

The District has authority granted by Chapter 36 of the Texas Water Code and its enabling act that allows for the management of groundwater within the District. A District Management Plan and Rules have been adopted by the Board of Directors using management strategies that are supported by science and data while carrying out the District's statutory obligations. The District acknowledges that the groundwater held beneath the land is a property right and this was further solidified by the Texas Supreme Court in the Edwards Aquifer Authority vs Day case. The District must balance the right of property owners to access and utilize the water beneath their land for beneficial uses while also managing the well production so that no one neighbor may unreasonably affect the surrounding landowners. The District is also faced with the challenge of trying to conserve, preserve, and protect the groundwater resources for both current and future uses.

Permitting and registering wells is a primary function of the District groundwater management. Permitted wells are issued operating permits for larger production wells for any beneficial use. The District utilizes a hybrid approach of protecting historic use and/or correlative water rights (shares of groundwater rights based on acreage owned/leased) for issuing permits. The District currently has 145 approved permits, with the largest permits utilized for Public Water Supply, Industrial, and Agricultural/Livestock use.

The vast majority of wells are classified as Exempt and are easily the largest class of wells in the District. Exempt wells are equipped with a smaller capacity pump, so that it is incapable of producing more than 25,000 gallons a day. Exempt wells are registered with the District but not issued operating permits or subject to further restrictions. This collective of wells is the least regulated group due to limitations of management from exemptions granted by Chapter 36 of the Texas Water Code and the private property rights of every landowner to access the water beneath their land. This becomes problematic when

groundwater shortages, both temporary and long term, occur in an area that is populated with high density Exempt wells.

The Trinity aquifer, located primarily over prescient 2 and 3, is of particular concern due to it being a confined aquifer (under pressure) and having a small storage coefficient. The aquifer depends on hydraulic pressure to transmit water to wells. When a well is pumped, this pressure is reduced by removing the water and when the pump is turned off the pressure returns slowly. The specific rate at which it returns can vary greatly depending on the variables of the geology, depth, thickness, and effects of surrounding pumping. The water levels in the Trinity aquifer monitoring wells show a cyclic pattern of declining steadily in the spring, summer, and fall and increasing from recovering pressure in the winter. When the pressure is reduced from a group of wells, each well will suffer from a loss in their production rates and become weak or in the worst case scenarios go dry. Performing a pumping test is a reliable means to calculating these varying aquifer parameters and simulations can then be done to estimate the effects of pumping one or many wells.

Rapid growth has taken place across Burnet County recently due to the proximity to Austin Metro and the highly desirable hill country landscape. The majority of new development is occurring as rural subdivision tracts that are provided water from private Exempt wells. The District has not detected any significant areas of groundwater depletion, but is proactively concerned that the high density collective of Exempt wells in subdivisions are prone to groundwater availability issues as they are fully built out. Due to the limited management of these Exempt wells, there is little that the District is able to do before a development is adopted that will utilize private wells. Management of the groundwater is dependent on a joint effort between the District and Burnet County Commissioners Court. Approval of plats for the subdivision of a tract of land is the responsibility of the Burnet County Commissioners Court and the subdivision regulations can be further enhanced to ensure that new developments must first prove that the amount of water needed for each private well is physically attainable. The District strongly encourages Burnet County to adopt Sec. 232.0032 of the local government code requiring developments to create a water availability study:

Sec. 232.0032. ADDITIONAL REQUIREMENTS: USE OF GROUNDWATER.

(a) If a person submits a plat for the subdivision of a tract of land for which the source of the water supply intended for the subdivision is groundwater under that land, the commissioners court of a county by order may require the plat application to have attached to it a statement that:

(1) is prepared by an engineer licensed to practice in this state or a geoscientist licensed to practice in this state; and

(2) certifies that adequate groundwater is available for the subdivision.

(b) The Texas Commission on Environmental Quality by rule shall establish the appropriate form and content of a certification to be attached to a plat application under this section.

(c) The Texas Commission on Environmental Quality, in consultation with the Texas Water Development Board, by rule shall require a person who submits a plat under Subsection (a) to transmit to the Texas Water Development Board and any groundwater conservation district that

includes in the district's boundaries any part of the subdivision information that would be useful in:

- (1) performing groundwater conservation district activities;
- (2) conducting regional water planning;
- (3) maintaining the state's groundwater database; or
- (4) conducting studies for the state related to groundwater.

The District staff, expert in the local groundwater hydrology, is willing to assist in the review and evaluation of the studies and develop the language the water availability study would require. Consideration of increasing the minimum tract size for subdivisions using private wells also needs to be discussed as a tool to alleviate the effects of wells on each other and the local water table. Neighboring counties have similar restrictions already in place regarding new Exempt well development and should be a basis to establish a working document. The coordination of Burnet County and the District in future planning of the groundwater is imperative to ensure that the groundwater that we have in place today is also available to use in the future.