

**Post Oak Savannah Groundwater Conservation District  
*Finding Balance Between Regulation, Management and  
Property Rights in the Central Carrizo-Wilcox***

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## Overview

The primary and over-riding purpose of all groundwater conservation districts is to regulate the production of groundwater to protect and conserve the aquifers as a continuing, long-term supply of water for the benefit of the residents of the district and the State of Texas. However, if this were the only purpose of groundwater districts that could be readily accomplished in much simpler ways than providing state agencies or groundwater districts to regulate the drilling of wells and production of groundwater. As a result, The Post Oak Savannah Groundwater Conservation District (“Post Oak”) is committed to accomplishing this purpose in a manner to permit the public and the landowners to realize the benefits of the aquifers both now and in the continuing future. Post Oak has, from its inception, emphasized the fact that conserving and protecting the aquifers requires actual management of the aquifers to realize the benefits and values of the resource and the rights of the owners of the water on an on-going basis, while assuring the aquifers are a viable resource fifty years and thereafter in the future. Accomplishment of the purposes of the districts consistent with State law requires an emphasis be placed on both conservation and management.

It is now clear, and should have been clear before the opinion in the *Day*<sup>1</sup> case, that landowners own the water that is in place beneath the surface of their land. The fact that the value of this property right was subject to being diminished under the rule of capture did not modify that ownership because the landowner had the right to produce as much water as was available subject only to it being used for a beneficial purpose. However, as with all property rights, when necessary to accomplish a public purpose, those rights are subject to reasonable regulation. As a result, Post Oak has recognized from its inception that groundwater districts were created not to take property rights but to regulate the use of those rights for the benefit of the property owner, other similarly situated owners, and the public.

As most of our sister groundwater districts believe of their approach, Post Oak believes its approach is the best answer to the question presented for this panel. We proceed with the intent and actions to do those things necessary to assure the aquifers within the district remain viable and substantially equal resources fifty years from now and thereafter. To accomplish this purpose Post Oak continues to conduct studies to ascertain the best hydrogeological information available, maintain and benefit from 88 monitoring wells and to add monitoring wells as appropriate to collect information needed to manage and protect the aquifers. Based on this information, on-going studies, monitoring, and adjustments regarding specific aquifers, Post Oak regulates and manages the use and production of groundwater in a manner to protect the aquifers, enable landowners and the public to benefit from the property rights and resource, and preserve the aquifers so the groundwater will continue to benefit the landowners and the public on substantially the same basis as now, for future generations.

Post Oak’s Rules and the permits issued by Post Oak provide for each owner of land that overlies an aquifer or management zone to share equally on an acre for acre basis in the groundwater that is in place within their property and the applicable aquifer or management zone. Under the Rules there is no motivation for a “land rush” approach to obtaining permits. Excluding *historic use permits* no priority

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<sup>1</sup> Edwards Aquifer Authority vs. Day, 369 S.W.3<sup>rd</sup> 814 (Tex. 2012)

right or benefit is established by obtaining an earlier dated permit. Essentially, the Rules and permits allow Post Oak to decrease the production permitted under previously issued permits as necessary to allow landowners that overlie an aquifer to apply for and obtain a permit in the future that will allow them to produce their pro-rata share of the groundwater in place within their property and available for permit within the aquifer. The Rules and permits issued under those Rules also provide the basis for adjusting permitted production as reasonably necessary to limit production on a proportionate basis to a sustainable level, e.g. reducing permitted production within a Management Zone based on measured water drawdown levels.

The *Day* case recognized that regulation of groundwater by the exercise of police powers was authorized by the Constitution and the landowner has absolute title to the groundwater in place under his land subject to the rule of capture and police regulations, i.e. the landowner owns all of the water in place under his land separately, distinctly and exclusively. The Court further recognized that: "Groundwater regulation must take into account not only historical usage but future needs, including the relative importance of various uses, as well as concerns unrelated to use, such as environmental impacts and subsidence." We believe a careful reading of this case supports the policies and rules followed by Post Oak since its inception, and have not yet identified any Rule or policy of the District that should be amended in response to this case.

Similarly, the Court's opinion and ruling in the *Bragg*<sup>2</sup> case was consistent with Post Oak's policies and rules, i.e. generally stated: (1) groundwater is the property of the landowners, (2) groundwater can be regulated to preserve the aquifer and the interests of the landowners in the groundwater, but (3) the use of groundwater cannot be unreasonably restricted or taken, except as necessary to allow all owners to share proportionately in the available groundwater. However, Post Oak does have concerns about the customary method of valuing in takings applied by the Court in the *Bragg* case, i.e. the difference in the value of the land with unlimited access to water and the value of the land with (1) 2 acre/ft/acre of water and (2) no access to groundwater. This method of calculating damages should be modified to reflect a calculation based on the number of acre feet of water available per acre if all properties are granted a proportionate share of the water available under a valid regulatory program.

We believe these cases support the basis for the regulatory program established by Post Oak, i.e. approve documented historical use permits, and allow other landowners up to 2 acre feet/acre until overall usage within the District increases to a point that a reduction in the permitted amounts is required to protect the aquifer or provide reasonable protections for other landowners, and allow all landowners to equitably share in the groundwater that is in place within their property that may be produced without damaging the aquifer. In that manner, each landowner receives the benefits of reasonable regulation, i.e. continues to receive a pro-rata share of the available water in place. Any limit on production that is not necessary to protect the aquifer or assure landowners an equitable, pro-rata share of the available groundwater will be suspect.

Adopting policies and rules structured to comply with the *Day* and *Bragg* opinions, policies that authorize modification of permits issued for the production of groundwater as may be required when more landowners seek to produce their proportionate share of the groundwater in place under their

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<sup>2</sup> Edwards Aquifer Authority v. Bragg, 421 S.W.3d 118 (Tex. C.A. -San Antonio 2013)

land, or the water level in one or more aquifers declines more than anticipated, or that is acceptable to accomplish the primary purpose and obligation to conserve the aquifer for future generations, may be one answer to the question before this panel.

### **Discussion Points- where the rubber meets the road**

#### Background and History

POSGCD includes all of Milam and Burleson Counties and was created by the 77<sup>th</sup> Legislature in 2001 through HB 1784 due to interests in marketing of groundwater resources from the central Carrizo-Wilcox aquifers. It was estimated that by that time between 30,000 and 35,000 acres of water rights had been leased or secured in these two counties. The District adopted its first set of Rules in March, 2004. Main concerns at that time were conservation and preservation of the aquifers, respect for property rights, protection of existing users, availability of the resource for future use and growth, lack of accurate scientific data, and reasonable management of the resource.

#### Protection & Preservation of Resources, or, "How do you allow production by landowners who desire to produce their property, while protecting the property of those who do not?"

The District first adopted limits to allowable aquifer impacts in its Rules and Management Plan in 2005. In that process the District thoroughly considered and evaluated the nature of the aquifers in the District, with shallow up-dip regions which become deeper, or down-dip, as the formations run towards the coast, (see Figure 1) and evaluated the height of the water column above well screens of registered wells. As Chapter 36 affords a GCD the ability to protect existing wells, the District has adopted separate shallow and deep management zones for each aquifer, and different limits of allowable drawdown impacts for the different zones. This approach provided for allowance of greater drawdown of artesian pressure in the confined aquifers, where appropriate, than decline in the water level in the unconfined aquifers. In addition, the management zones allows for consideration of areas most sensitive to hydraulic head changes due to production, These Rules and strategies were adopted prior to the Legislature's passage of HB1763 during that same year, which was the beginning of the joint planning process as we know it today. Later, during the joint planning process, the District worked with other GCDs in Groundwater Management Area 12 (see Figure 2) to morph its adopted management limits on allowable water level decline into Desired Future Conditions, which provide for overall protective management of the aquifers of the District and the GMA. These DFCs for GMA 12 were expressed as an average reduction in hydraulic head across an entire District from 2010 to 2060. However, POSGCD continued to provide protection for the more shallow wells in the District by continuing to designate separate Management Zones in the shallow or unconfined areas of each aquifer, and adopting a separate limit, or threshold, for drawdown for those zones, which are used in conjunction with the overall DFCs adopted by GMA 12. In this way the District maintains overall regional GMA DFC goals, which help to regulate impacts from pumping outside the District and across the entire region, while affording POSGCD the ability to add the necessary detail at the local, or District, level (see Figure 3). Also of note is recent action by the POSGCD Board to request other GCDs in GMA 12 to adopt DFCs for the shallow areas of the aquifers in the GMA.

As previously stated, the District manages with respect and recognition of property rights as modified by reasonable regulation to prevent adjoining landowners from causing excessive impacts to one another, or production from the deeper confined portions of the aquifer affecting availability of groundwater in the more shallow unconfined areas. This approach to management utilizes correlative rights and is accomplished with several management tools. One such tool is well spacing requirements which include both horizontal and vertical offsets specifically tailored to each aquifer based on hydrologic evaluations. One of the purposes for well spacing requirements is to spatially distribute the pumping across the areal and vertical extent of the aquifers. Next, the District employs a contiguous acreage requirement to regulate overall volumes of annual production. Currently this limit is set at a fairly conservative maximum allowable production of 2 acre feet per acre of groundwater annually. This requirement will be one tool used to adjust allowable production should curtailment of permitted production in the future become a necessity to protect the resource. Additionally, The District recognized historic users through the issuance of Historic Use permits. These permits protect the investments of producers prior to the District's creation, and can be curtailed at a different rate than other permits. Among key aspects of these Historic Use permits is production being specific to use, amount, location of withdrawal, and term limits to with the life of the well.

To insure proper evaluations for management of the aquifers, POSGCD maintains an active water level monitoring program and detailed monitoring network of water wells throughout all aquifers and management zones in the District. In deeper areas of aquifers where water wells are not readily available to provide a monitoring presence, POSGCD is aggressively involved in entering into agreements with landowners in converting abandoned oil & gas wells to water wells. POSGCD also partners with county agencies to obtain access to strategic locations for monitoring groundwater conditions.

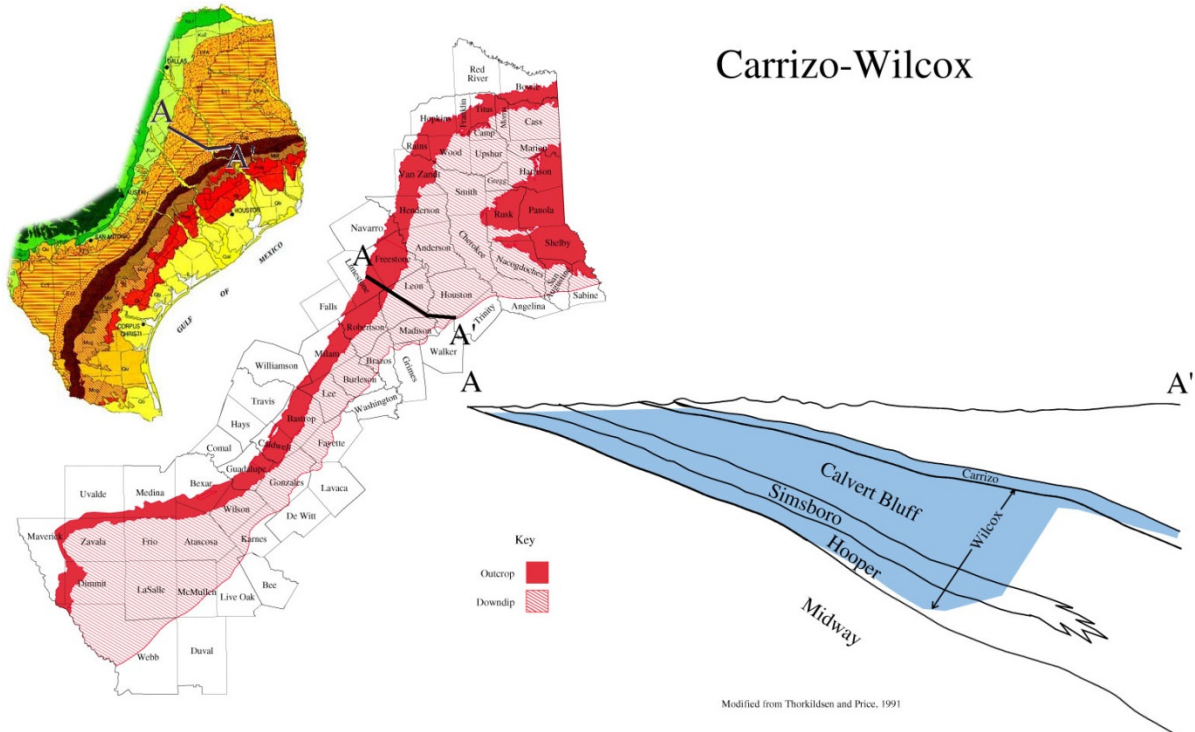
#### Permitting Structure

With due considerations to the characteristics of the aquifers in the Central Carrizo-Wilcox area, the District has developed a permitting structure that allows for long-term permits. Because patterns of use by producers fluctuate from year to year, and because of the large volume of water in storage of the regional aquifer system, it is anticipated that large regional changes in hydraulic head will develop with sufficient lead time to take corrective measures before undesirable groundwater conditions evolve. Therefore, the District issues 40-year production permits which can be adjusted as needed according to Section 16 of the District's Rules. The District also employs a 5-year review of all permits which allows sufficient opportunities to adjust permits so they are in line with changes to DFCs or the Management Plan. Any necessary adjustment or curtailment of production will be enacted simultaneously to all permits of the same class in the same management zone, thereby avoiding necessity of denial of a permit application even during times of curtailment, and treating any and all property owners the same on any given day. Since the District will manage based on actual water levels, as well as relying on the GAM for insightful evaluations and interpretations of the most current field data, this management strategy also allows the District to achieve the requirements of Chapter 36, Sec. 36.108 (d-2) by allowing the aquifer to determine the "highest practicable level of groundwater production" while providing for "the conservation, preservation, and protection" of the resource by protecting the "at risk" areas.

## Conservation

Because the District is fee based, and assesses fees on permitted amounts, POSGCD has funded \$7.8 million in groundwater conservation programs since 2006 which includes, among other items, reduction of losses in transmission.

**Figure 1**



**Figure 2**

**Groundwater Management Area 12**

**#55- Mid-East Texas GCD**

**#8- Brazos Valley GCD**

**#68- Post Oak Savannah GCD**

**#48- Lost Pines GCD**

**#23- Fayette County GCD**

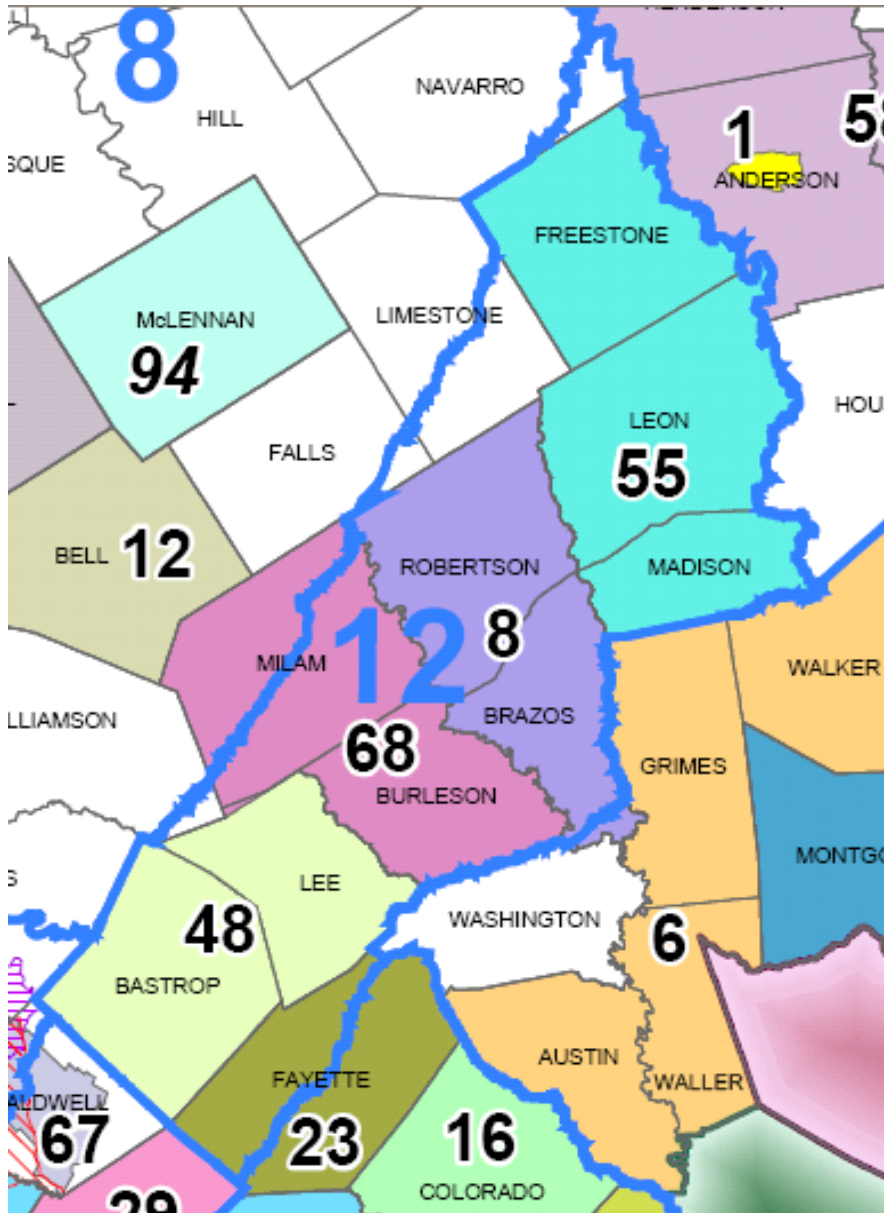




Figure 3 (Provided for discussion of DFCs)

## Schematic Cross Section Simsboro Drawdown

