
POLICY MEMORANDUM

SUBJECT: GCDs: The Rush to Reserve Groundwater

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Topic & Purpose

To analyze and assess the current groundwater management system in Texas and the effect of the increase in water marketing in Texas on groundwater resources.

Background

There are two types of water that quench the thirst of millions of Texans, the industries that employ them, and the energy the state produces and uses – surface and groundwater. Two differing laws govern these two sources of water in the state. Surface water is considered a public resource and is regulated by the State. Groundwater is governed by an old English common law doctrine known as the rule of capture. In the *Houston & Texas Central Railroad Co. v. East* (1904) decision the Texas Supreme Court formally established the rule of capture, which held that landowners could pump vast amounts of groundwater under their property so long as the intent was not malicious (i.e., purposely wasting water to deprive an adjoining landowner). Following droughts in 1910 and 1917, Texas voters approved the Conservation Amendment to the Constitution, which granted the Legislature the authority to pass laws that would preserve and conserve the natural resources of the state. The framework for the creation of Groundwater Conservation Districts (GCDs) was established in 1949. This framework sought to curb the unregulated pumping that could occur under the rule of capture system. These districts were designed to act as regulatory agencies, ensuring the conservation of their regional groundwater. The first conservation district created was the High Plains Conservation District in 1951. The Legislature passed additional laws in 1985, 1997 and 2001 to encourage the establishment of additional GCDs. The first GCDs were created in the western half of the state where typically dry and arid conditions necessitate heavy reliance on groundwater. Since then there has been a steady push east through the rest of the state to establish GCDs. Most recently a large number of districts have been established in East Texas where the water-rich portion of the state has realized the value and need for proper management of their water resources. As of 2013, there are 97 confirmed GCDs that govern the 32 aquifers in Texas, with four currently awaiting approval and establishment.

Since the establishment of GCDs in Texas, many other states in the U.S. have abandoned the rule of capture. Several cases were brought to the Texas Supreme Court to review the rule of capture, but each time the Court declined to rescind the rule, instead leaving it up to the Legislature to decide how to manage groundwater resources. *Sipriano v. Ozarka* (1999) involved a claim by a private citizen who owned a well on their property and claimed that Ozarka's pumping nearby had dried up his well. The landowner wanted protection of the groundwater under his property and asked the court to impose liability on Ozarka. While many thought that the Texas Supreme Court would protect rural homeowners by modifying the rule of capture, the Court instead affirmed the rule of capture. It did, however, strongly suggest that the Legislature needed to address groundwater overpumping.

The Role of Groundwater Conservation Districts

As indicated by Stacey Steinbach, Executive Director of the Texas Alliance of Groundwater Districts, GCDs have the job of balancing environmental concerns such as conservation, preservation, protection, recharge, etc. with groundwater production. Chapter 36 of the Texas Water Code, strengthened after the *Sipriano* ruling, allows GCDs to manage groundwater by giving them power to establish registration requirements, production standards, well spacing requirements, reporting requirements, permit requirements, and production limitations. GCDs typically have an elected board, but when a GCD is first established the board is appointed until an election is held. Districts may use various financing methods including property taxes, well production fees, and administrative fees for well permits and export permits. The basic duties of GCDs were laid out in the original 1949 legislation. They must create and implement a comprehensive management plan for that district, permit large wells, and keep records of well activity within its borders. Once a district is confirmed by an election it has two years to map its water resources and gather data to draft its water management plan to include rules and goals. Rules for GCDs must address conservation, presentation, protection, prevention of water waste, control of land subsidence and recharge of water resources in the district. Regulations and record keeping of well drilling in the district are used to ensure sustainable management of water resources. Additionally, wells may be monitored for levels and quantity. A district may also conduct research on their water sources such as injecting dye into aquifers to better understand water flow. Research typically centers on water quality and quantity. There are many abandoned wells across the state and GCDs can assist property owners in closing and sealing abandoned wells to ensure water sources are not contaminated. GCDs can also require certain distances between wells, or well spacing. This helps to ensure cones of depression do not pop up in well areas that can severely deplete neighboring wells and water supplies.

Districts vary in size and funding, and in many cases the divisions of the districts make little sense. In some areas of the state there are multiple GCDs governing one aquifer, and in other regions no GCDs exist. For example, the Texas Panhandle sits over the Ogallala Aquifer and is managed by six different districts. These different districts vary in size and still do not encompass the entire Ogallala aquifer. When districts were first created they mostly followed the known geographical boundaries of the aquifers. The late 1980s through 2000s saw a huge spike in the creation of districts and these newly created districts mostly followed county boundaries. These county boundary lines were due to influence of county governments, an administrative convenience, a reaction to the *Sipriano* case, and a concern from rural communities of resource takings by urban communities. Most aquifers are not confined to the created county boundaries, and may be governed by various GCDs in different counties, which makes governing resources in single aquifer difficult.

In response to the fragmentation of single aquifer management by multiple GCDs, the Legislature has taken actions to strengthen single aquifer managements through Groundwater Management Areas (GMAs). These entities were first created in 1949 and have had various name and responsibility changes over the years. However, in 2001 GMAs were overhauled to ensure each area's geographical boundaries were in line with more recent hydrological studies of aquifers. In 2005 the Legislature, in HB 1763, required joint planning between GCDs within a GMA. A key aspect of joint planning is determining Desired Future Conditions (DFCs) for a GMA. DFCs are desired, quantifiable conditions of groundwater resources (e.g. water quality, spring flows or volumes, and water levels) at a certain time in the future. DFC determinations are modeled and result in a Modeled Available Groundwater (MAG) for an aquifer that suggests the groundwater available for pumping. GCDs in a management area must come together to decide what they want their groundwater resources to look like in the future and must agree on what an acceptable amount of reductions in water level would be for their aquifer. This process currently lacks meaningful functionality due to lack of adequate funding and

scientific resources to support the effort as well as the lack of a mechanism to ensure that all GCDs in an aquifer follow the same strategies in addressing DFCs and MAGs.

Assessment of Groundwater Management Strategies

The rationale behind the GCD structure is related to the benefit of having local control of the groundwater resources. One size truly does not fit all when it comes to regulation of groundwater in Texas. Aquifers across the state vary widely in terms of quantity, quality, hydrogeological structure, and geographical size. Local decision-making for groundwater allows diverse management strategies more tailored to that particular resource as opposed to a statewide “one-size-fits all” management strategy. It also allows for property and industry owners in that district to have a voice in the process affecting their resources. Local control does, however, have its own challenges. GCDs have limited funding and resources for their operations and GMAs are grossly underfunded when it comes to fulfilling their mission. Additionally, local control leads to claims of conflict of interests; local politics and opinions can negatively penetrate the management process. By statute, most districts may levy taxes if the tax is approved by majority vote of the citizens residing in the proposed district. Districts may also accept outside funding for their operations in the form of loans and grants. The general ad valorem tax rate may not exceed \$0.50 on each \$100 of assessed property valuation. However, many districts end up limited by their enabling legislation on funding options. Many are created without being given taxing authority to fund operations. Others have lower ceilings on their tax rate and their production fees than allowed in the Texas Water Code. Others are limited on the types of fees they can collect.

The Creation of a Water Market

As Texas cities, industries, and the economy continue to grow at a fast pace we have seen our water resources shrink. In many regions, surface water is the primary available resource, and in most cases the resource has been over allocated. Most rivers in Texas have more permits for use than water available, even if the rivers are at the expected maximum capacity. Due to the inability to use surface water in some cases, to ensure water availability, communities are turning to groundwater resources to provide water for their citizens. Growing communities, as well as communities developing in rural and unincorporated areas, has prompted the search for new methods of obtaining water. The formation of private companies, with their primary business focused on the buying and selling of Texas water resources for future municipal use, has exploded in recent years as large municipalities have been forced to examine how to meet future water demand due to rapid population growth and recent droughts. Additionally, the value of water rights has rapidly increased, all leading to attractive business ventures in water marketing. In some areas this new enterprise is being welcomed with open arms. Examples of this include the ability of landowners to profit from identified excess water supplies. Some GCDs do not allow the landowners to profit off of the additional resources, while many have allowed this to occur. Although there is the appearance of excess water, the GCD should still focus on conservation and preserving the water for future generations as opposed to pumping additional water for profit alone. Although GCDs are allowed to have rules for water ownership transfers within and outside their district, the landowner solely determines the contracts and profits. If a landowner wished to sell all of their groundwater allotted by their permit, they could do so. Many would argue that the purpose of the groundwater use should be based solely on proper use, as indicated by the law, not the use of profiting on the resource. However, GCDs can establish pumping fees and limits on pumping, well-spacing requirements, and fees on groundwater exported outside of the boundaries of the district. In areas

outside of GCDs, water pumped can be sold, leased, or transferred for use anywhere the rights owner allows, with virtually no restrictions.

Legal Rulings open up a Sea of Water Marketers and Suits

The ability for the individuals or water marketers to pump available resources to be used in other locations was strengthened by the *Day* and *Bragg* cases. In the *Bragg* case, the Texas Fourth Court of Appeals ruled that the Edwards Aquifer Authority owes landowners money for “taking” their groundwater by limiting pumping. This came on the heels of the *Day* case, where the Texas Supreme Court defined, for the first time, the precise nature of groundwater ownership in Texas. The Court ruled that the landowner has an absolute vested property right to groundwater in place, similar to oil and gas. The Court also ruled “landowners do have a constitutionally compensable interest in groundwater.” This meant that landowners could argue that groundwater districts could owe them money when they limited or denied permits to pump. The *Bragg* case became the first time the *Day* ruling was applied in a ruling. This led to GCDs’ hesitation to deny anyone when it comes to groundwater pumping permits. The *Day* ruling and subsequent *Bragg* case opened up a flood of suits against conservation districts that deny permits to landowners and water marketers who buy up their water rights. One such suit is the battle over water resources in a portion of the Carrizo-Wilcox Aquifer that runs beneath Lee and Bastrop counties. Two water marketing firms, Forestar and End Op, are currently proposing to pump annually more than three times the current amount withdrawn by all the existing permitted wells in the district put together. Forestar is one of the nation’s largest publicly traded real estate companies with massive assets and resources and is aggressively pursuing a permit application to deliver 14.6 billion gallons a year to Hays County. The Lost Pines Groundwater Conservation District rejected this application and authorized only 3.9 billion gallons per year, stating the original request was unsustainable and could eventually cause other wells in the district to dry up; Forestar attorneys are requesting a rehearing. Other GCDs across the state are subject to similar issues and fights, illustrating the difficult situation of GCDs, with little resources to combat hugely profitable companies coming in to make money off of their natural resources. These lawsuits have also become a deterrent in other parts of the state that have yet to form a GCD due to worry that formation would open up the local taxpayers to lawsuits they cannot afford. Yet, without a GCD, there is no hope of preventing, or even curbing, excessive water takings in their area.

Case Study: Carrizo-Wilcox

A stark example of the conflicting governance and ideology of GCDs over the same aquifer is the case of another GCD that governs a portion of the Carrizo-Wilcox Aquifer—the Post Oak Savannah GCD. In this GCD, water marketers were able to easily secure permits to pump 20 million gallons of water yearly out of the aquifer. BlueWater now holds the rights to that water and recently negotiated a \$3 billion deal to send 16 million of those gallons to the San Antonio Water Supply (SAWS). The deal with SAWS effectively locks up more than the estimated available water on an annual basis in the aquifer and perhaps will foster its depletion. This questions the future availability of the resource, should Forestar and other companies prevail with their current lawsuits. Post Oak GCD has taken the position that groundwater is a private property right and that limiting pumping before it happens naturally could result in a lawsuit, a viewpoint held by many after the *Day* ruling. Most urban cities and water marketers prefer the approach taken by Post Oak where large pumping permits are issued readily for long periods of time. Post Oak has also not required immediate pumping of permitted water. Water marketers believe this is more beneficial as it allows them to provide certainty to customers that large quantities of water

will be available far into the future, making it easier to find willing customers, secure funding and invest billions of dollars in infrastructure to transport their water to customers. It is questionable on how well the marketers, and potentially even how well the GCD Boards understand the relationships as well as the differences between the MAGs, DFCs, recharge values, and depletion rates. Lost Pines GCD only issues permits for five-year periods and only for the amount of water that will actually be pumped in that time period. Coupled with the uncertainty of future permit approvals from Lost Pines is the frustration with readily approved permits from Post Oak for huge quantities of water from the exact same water source that Lost Pines governs. These conflicting management strategies illustrate the difficulty in allowing multiple entities authority over the same resource.

Recommendations

As discussed previously, surface water is regulated by the State of Texas and therefore there are more options for policy makers to utilize. The “rule of capture” for groundwater does not provide many tools for policy makers. Changing the “rule of capture” is likely not a realistic option. However, strengthening the GCDs can provide more regulation of groundwater. Currently, GCDs are limited in their duties, protections, and collaboration. The following suggestions could provide more power to GCDs to regulate groundwater and be a productive step towards sustainable groundwater management:

- Provide standardized and detailed requirements for exercising the responsibilities of GCDs with regard to how they coordinate management of their respective districts in ways fitting to an aquifer and its science.
- Provide more legal protection to GCDs so that they may act with improved confidence in their regulatory duties.
- Allow districts more opportunities and flexibility to raise revenues to more effectively fulfill their required responsibilities. In particular, newly created GCDs should have the ability, if their electorate chooses, to fully use funding options allowed in Chapter 36.
- Require GCDs to create further regulations regarding water quality, which may be more easily regulated than quantity with respect to groundwater.

These recommendations provide potential options to improve groundwater regulation through the GCDs. Improving groundwater regulation is a necessary evil when considering the inter-connection between surface and groundwater. Overall, the improvement of the regulatory system would allow the two resources to be conserved and significantly improved, which would level the playing field between surface and groundwater, as they are essentially the same resource. However, in such a complicated regulatory environment it is difficult for groundwater managers to have the proper tools and enforcement capabilities necessary to ensure the protection of the resource for many generations to come. As Texas has chosen to regulate groundwater in this manner, the state should provide assistance through funding in order for the GCDs to meet their responsibilities. Due to the *Day* and *Bragg* cases, many landowners, specifically those in regions without GCDs, may doubt the effectiveness of a governing body such as a GCD. If the individuals are unwilling to have a GCD or do not trust their current GCD to actually manage the water properly, proper management of the aquifer is virtually impossible. This is due to the lack of power and influence that GMAs may have on the GCDs in question, and the leniency found within the DFCs and MAG processes. If the GCD has little assumed control over their own future, many individuals may be hesitant to trust their GCD, may choose to use what they feel is owed to them, or that they have the best interests in mind. Further concerns involve sustainable management of this natural resource. Some aquifers are considered to be a non-renewable resource, based on slow recharge rates. With this

in mind, proper management must be considered while keeping in mind the increasing water demands and the long-term implications and possible regulations on water marketing. The purpose of these improved regulatory suggestions should be heavily considered for Texans to ensure groundwater supplies that will last for generations to come.

Resources

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