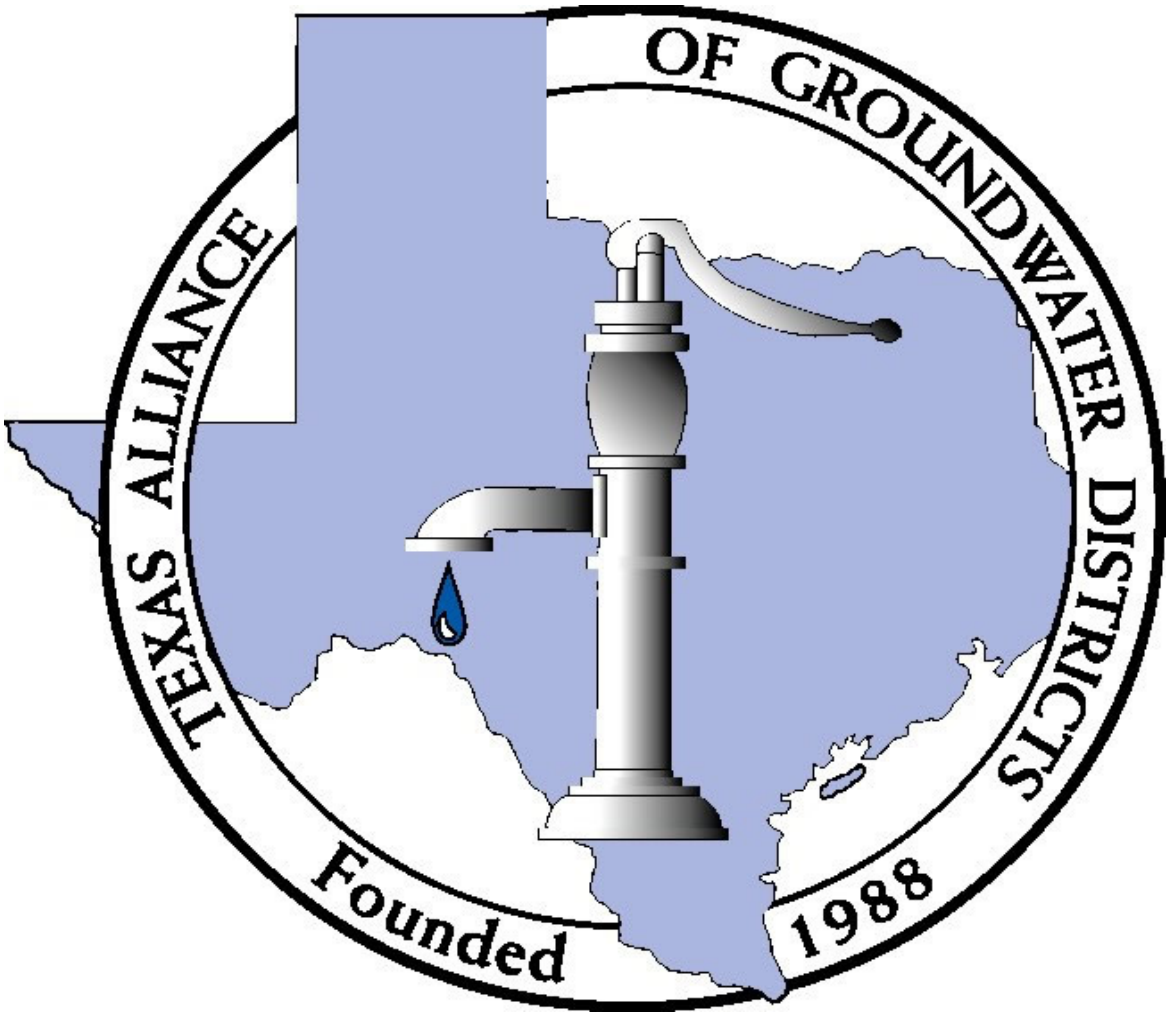
TEXAS ALLIANCE OF GROUNDWATER DISTRICTS

POSITION PAPER FOR
THE 82nd LEGISLATURE



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TAGD Position Paper on Groundwater

It is clear that there is an ownership right in groundwater. § 36.002 of the Texas Water Code states "*The ownership and rights of the owners of the land and their lessees and assigns in groundwater are hereby recognized, and nothing in this code shall be construed as depriving or divesting the owners or their lessees and assigns of the ownership or rights, except as those rights may be limited or altered by rules promulgated by a district.*" It is the extent and quantification of that right that is confusing and complicated.

It is important to begin this discussion with areas of commonality. Very few (if any) people disagree with the following statements:

- ✓ Texas follows the Rule of Capture, which means any landowner may pump as much groundwater as they can put to a beneficial use (without waste) even if in so doing they deprive their neighbors of water. *Houston* & *Tex. Cent. Ry. v. East*, 81 S.W. 279 (Tex. 1904).
- ✓ Groundwater, as opposed to surface water that is owned by the state, is privately owned by the landowner and is a severable estate that may be bought or sold. *City of Del Rio v. Hamilton Trust*, 269 S.W.3d. 613 (Tex.App.—San Antonio 2008 (pet. denied).
- ✓ Because of the Rule of Capture, landowners have no means to protect their groundwater from drainage. *Sipriano v. Great Spring Waters of America, Inc.*, 1 S.W.3d 75 (Tex. 1999).
- ✓ Texans granted the legislature the duty of protecting and conserving natural resources through the "Conservation Amendment." Tex. Const. art. XVI, § 59.
- ✓ The legislature declared the preferred method of protecting groundwater is through locally controlled groundwater conservation districts. § 36.0015, Water Code.
- ✓ Groundwater Conservation Districts are created for "the conservation, preservation, protection, recharging, and prevention of waste of groundwater". § 36.0015, Water Code.
- ✓ Groundwater Management Areas were designated to require the groundwater conservation districts therein to jointly establish a Desired Future Condition for the aquifers in their area. § 36.108(d), Water Code.
- ✓ Each groundwater conservation district must ensure that its management plan contains goals and objectives consistent with achieving the desired future conditions of the relevant aquifers in its jurisdiction. § 36.108(d-2), Water Code.

Unfortunately not everyone agrees that groundwater should be managed or how it should be managed, and there seems to be a lot of disagreement over the extent that aquifers should be protected. Unlike oil and gas, a commodity for which the goal is to retrieve and consume every economically available molecule, groundwater is a resource required for life and should be preserved to ensure a continuing supply in the future. To varying

degrees, most (but not all!) aquifers recharge with rainfall and from streams flowing over recharge zones. Groundwater management affords protection to those Texans who depend upon aquifers for their supply.

Groundwater conservation districts must consider all users that rely on groundwater supplies when formulating plans and rules for management. The water users that reside in Texas range from vast open ranches to densely populated cities. Aquifer conditions are affected by the total amount of groundwater withdrawn, the location of wells or well fields to withdraw that groundwater, and the rate at which it is withdrawn. Water demand in an urban area may be very different from water demand in rural ranching communities on an aerial basis; moreover, the timing of groundwater withdrawals in farming areas may be very different than those in urban communities. All of these factors must be considered before approving plans, rules and ultimately groundwater withdrawal permits, and groundwater conservation districts are required to be fair and impartial when making these decisions.

The Rule of Capture, outside of a groundwater conservation, is clearly *not* a management strategy for groundwater; it is a non-management strategy that eventually may result in over production, faltering springs, and dry wells without legal consequence. This rule of nonliability for damaging a neighbor's well was adopted in *Houston & Tex. Cent. Ry. v. East,* 81 S.W. 279 (Tex. 1904). In that case the Texas Supreme Court cited the inability of courts to determine the meanderings of groundwater and ruled that Texas would follow the English common law, which is called the Rule of Capture. Based on that decision the Court held the defendant Railroad owed no duty of care to Mr. East or his well. The Court's opinion was based primarily on the fact that the State was bound to follow the English Common Law, but the Court did mention the property law basis for the English decision, which is that landowners "absolutely owned" their property and could do with it as they saw fit. In essence, the Railroad absolutely owned all the groundwater they pumped, but Mr. East had no legal means to protect the groundwater beneath his property that he also "absolutely" owned. The Texas Supreme Court reaffirmed the Rule of Capture in 1999 in the case of *Sipriano v. Great Spring Waters of America, Inc.*, 1 S.W.3d 75 (Tex. 1999) (commonly called the *Ozarka* case because Great Springs Waters of America, Inc. is owned by the Ozarka bottled water company).

Many Texas cases discuss the "Absolute Ownership Doctrine," and unfortunately, but understandably, the use of that phrase has caused a lot of confusion. Many believe the "absolute ownership doctrine" guarantees every landowner a vested property right in the groundwater beneath their land, and that is the issue currently before the Texas Supreme Court.

As a result of the *East* case the people of Texas passed the Conservation Amendment to the Texas Constitution, which allows the Texas Legislature to create groundwater conservation districts. The purpose of any groundwater conservation district is to preserve, conserve and protect groundwater resources and to protect individual property rights from encroachment by their neighbors. Each district must tailor its rules to properly address both the hydrology of their aquifers and all those who depend upon those

aquifers, now and in the future. (Attached is a table of Regulatory Methodologies that lists a variety of regulatory strategies currently being used by groundwater conservation districts across the State.)

Although almost everyone, including groundwater conservation districts, agree that groundwater in place is privately owned, the amount of groundwater physically available to a particular landowner changes as the aquifer recharges and discharges, and it changes even more should a neighbor begin producing large amounts of groundwater. Outside a groundwater conservation district, that production is limited only by the water physically available, including the groundwater beneath the neighboring property. The privately owned groundwater that is available to be produced is contingent upon the neighbor's actions on their property. Accordingly, under Texas law groundwater ownership represents the right to produce groundwater to the extent available and becomes quantified at the moment of capture. Groundwater conservation districts can help create more certainty for all land owners by investigating the amount of available groundwater, setting reasonable production limits and spacing wells to prevent interference between neighbors. Simply put, there is more certainty in groundwater availability for all landowners within a groundwater conservation district than without one.

Typically ownership encourages good stewardship. Certainly landowners have incentives to protect their land. One of the ways landowners protect their property is by building a fence, both to keep their own stock inside and to keep intruders out. Unfortunately it is just not possible to fence groundwater, so landowners do not have all the tools necessary to protect their groundwater. Outside a groundwater conservation district the Rule of Capture instead creates a rush to the pump that encourages pumping in amounts at least large enough to offset pumping from neighboring wells. The spacing requirements, production limits and permits issued by groundwater conservation districts help create those protections—those fences—that individual landowners cannot legally create on their own. By limiting the amount of groundwater a neighbor may produce under certain conditions, the groundwater conservation district prevents unreasonable interference between wells and gives landowners the tools they need to protect their private property in groundwater. But that process also requires accepting that the production limits must apply to everyone (other than exempt users that have their own statutorily defined limits based on well capacity). Protecting private property rights requires protecting all rights of all users who want to pump their groundwater and those who want to conserve the resource for later use.

Each groundwater conservation district in the state must determine the most appropriate method to protect and preserve their aquifer(s), and to issue drilling and operating permits for the available supplies. The districts must consider aquifer conditions, weather patterns, water demands and the economic needs of their communities and region that rely upon the aquifers within the district.

In promulgating rules to regulate groundwater production a district may use one or a combination of the methodologies in attachment A. Reliance on any single method everywhere for groundwater management may not provide sufficient groundwater for all

Texans that are now dependent on it. Again, any single approach may be the most appropriate regulatory system for some parts of Texas, but not others.

These are the types of questions groundwater conservation districts are now facing: If a developer wants to build a neighborhood development, should other well owners such as farmers and public water supply systems have to reduce their pumping to make room for the new wells? Who should get the highest preference when dividing up available supplies—those with existing demand, as evidenced by investment-backed expectations, or those landowners who do not currently have an existing well but now want to pump groundwater from beneath their land in the future? These are some of the hard questions that are not amenable to easy answers, especially on a state-wide basis.

With a few exceptions the goals seem to be the same for everyone:

- ✓ Protection of groundwater resources through reasonable and equitable management by locally controlled groundwater conservation districts.
- ✓ Protection of private property rights.
- ✓ Effective integration with regional water planning, utilizing sound science, for the future that includes water supplies for urban, suburban and rural areas, as well as municipal, industrial and agricultural uses.

Achieving those goals, however, may require significant compromise, and those compromises will differ across the state. Groundwater conservation districts work to achieve those goals through reasonable and fair regulations that recognize and respect all private property rights by protecting the property rights of all.

ATTACHMENT “A”

OVERVIEW OF REGULATORY METHODS AVAILABLE TO GROUNDWATER CONSERVATION DISTRICTS*

By Jace A. Houston and Gregory M. Ellis

Description	Goal / Burden	Comments
Method: Permitting only; no spacing or production limits		
District establishes a permitting program and begins collecting data and studying aquifer, but does not immediately establish any substantive regulations for spacing or production.	Goal is to establish the foundation for future management decisions. Enables district to begin compiling data on the types and quantity of groundwater use. Does not place a regulatory burden on any groundwater users other than basic permitting and reporting requirements.	Permitting and permit fees, if applicable, are regulatory tools in and of themselves. They make groundwater users more aware of waste prevention and conservation. Substantive regulations, once established by the district, would be implemented through the existing permitting system. Gives permittees advance notice of future regulations and ability to participate in decision-making process. Permits can be issued on a term basis, such as one, five, or ten years; or permits can be issued on a long-term basis, like a permanent groundwater right.
Method: Spacing of wells		
District establishes minimum spacing requirements, or setbacks from: - other nearby wells - property lines - areas of potential contamination. Spacing requirements often vary by well capacity, pump size, or casing diameter; i.e. the larger the well or capacity, the larger the spacing requirement.	Primary goals are to prevent interference or encroachment between wells and/or to ensure that the groundwater being pumped from a well is coming from beneath that well owner's land. Also used to prevent the movement of poor quality or contaminated water. Can be used in some aquifers as an indirect method of limiting production; i.e. if wells in the area have a limited capacity due to aquifer characteristics, then larger spacing requirements will limit amount that can be produced.	Appropriateness of spacing as a regulatory tool depends greatly on hydro-geologic conditions of the aquifer. Spacing works well in unconfined, relatively homogenous aquifers. Under these circumstances, spacing basically creates a condition where each well owner is pumping water from under his own land. In karst aquifers, spacing is generally not appropriate. In semi-karst aquifers, each district will have to investigate the pros and cons of spacing to determine if it is appropriate. Spacing is generally not workable in urban or developed areas. Spacing is limited as a regulatory tool because it only applies to new wells. Often used in conjunction with production limits.

* **This paper was written in May 2004**

Method: Production limits in general		
District determines the amount that may be withdrawn by each permitted well. Many variations for implementing production limits (see below).	Goal is to manage or control the amount of groundwater withdrawn from an aquifer to prevent: - any declines in water levels, or - unacceptable declines in water levels. In many cases, the district is trying to prevent other problems caused by water-level declines such as decreased spring flow, subsidence, or drying up other wells.	Establishment of production limits should not occur until a district has researched and developed its goals for an aquifer; i.e. what amount of decline is acceptable, if any? Determining the amount of groundwater available from the aquifer depends on numerous factors such as: - what would be the impact from water-level declines? - would shallower wells be affected? - would spring flows be impacted? - would subsidence occur? - would the impacts from water-level declines be limited to the well owner's property or would they extend to other areas? Establishment of production limits also involves consideration of economic impacts. - are there alternative supplies available to meet demands? - in the absence of a district, shallower, up-dip wells would naturally be depleted by the lower, down-dip wells. Is it appropriate to maintain the water levels in the shallower wells at the expense of those with deeper wells? What about the stored water that is left untapped? - if a policy of maintaining water levels in shallow wells is adopted, who will bear the burden of the production limits?
Method: Production limits based on acreage or tract size		
District establishes a certain quantity of water that can be withdrawn per acre or section of land owned, leased, or irrigated. District may limit production based on contiguous acreage.	This method essentially sets up a correlative rights approach where each landowner is entitled to withdraw a certain amount of water from beneath his property. This method tends to facilitate the marketing of groundwater by creating more certainty regarding how much water can be withdrawn from beneath each acre of land.	This method is commonly used by districts in the Ogallala Aquifer because of the tremendous amount of water in storage and the desire to allow each landowner to use his portion of the groundwater under his land. This method is well-suited to the hydrogeologic conditions of the Ogallala, i.e. unconfined aquifer, fairly homogeneous. Of course, this method also means the aquifer will be slowly mined if recharge is limited. This method is difficult to implement in an aquifer where the district is trying to maintain a certain water level and recharge is limited. Once the available recharge is divided across all the acreage in the district, it's not enough water to sustain most forms of agriculture. Districts should keep in mind that a correlative rights approach generally favors owners of large tracts of land, and it does not necessarily work well for large water users. For example, farmers may own relatively large tracts of land, but it still may not equate to enough water for the particular crop they are raising. Also, municipalities may have a difficult time because they are large water users, but they generally do not own

		large tracts of land. Also, if the water in an aquifer is not spread relatively uniformly across the district, such as in a karst aquifer, a correlative rights method would allocate the same amount of production to all landowners regardless of whether they have producible groundwater beneath their property or not.
Method: Production limits based on proportionate reduction		
District establishes a cap on withdrawal from the aquifer, and once the cap is reached, each permittee is proportionately reduced to make room for new permits. Another variation is to assign a percent reduction that applies to all permittees, including new permittees, and then periodically (perhaps every few years or when the mgmt plan is updated) adjust the percent reduction if the cap is being exceeded. Until the cap is reached, permits would be issued based on proven, non-wasteful, beneficial use.	Goal is to maintain a certain water level in the aquifer by requiring each permittee to reduce his groundwater usage a certain percent until the total groundwater pumpage for the district is approximately equal to recharge or sustainable yield. Although the percent reduction required may be the same for each permittee, the burden of meeting that goal is by no means equal. Reducing groundwater usage generally requires finding an alternative water supply, and some permittees cannot afford more expensive alternative supplies.	Any regulatory method that requires permittees to reduce their groundwater usage generally requires the existence of some form of alternative supply. Some permittees may be able to simply reduce their groundwater usage through conservation or other means, but most will have to seek alternative supplies to meet their total water demand. When requiring permittees to seek out alternative supplies, the district must consider the economic impacts of their proposed regulations. The regulations must be feasible to implement. The district should provide as much flexibility as possible to permittees in meeting the district's requirements. For example, allowing one permittee to buy out another permittee's permit can provide an alternative means of keeping total pumpage below the cap. If one permittee is located close to an alternative water supply, he could reduce his groundwater pumpage more than the required amount so that other permittees could stay on groundwater. However, transferring pumpage this way can result in localized areas of decline if pumpage becomes too concentrated. Gray water and effluent reuse can also provide flexible alternatives. In adopting any regulations that involve limiting production, districts must consider the economic impact and feasibility of their regulations. Stakeholders should be involved in the development of the regulations because they can offer important insights regarding the availability of alternative supplies, and their participation can often lead to gaining their buy-in and support for the regulations.

Method: Production limits based on "first in time, first in right"		
District establishes a cap on withdrawal from the aquifer, and once the cap is reached, no new permits are issued. Until the cap is reached, permits would be issued based on proven, non-wasteful, beneficial use.	Goal is to maintain a certain water level in the aquifer by not issuing any new permits once the total groundwater pumpage for the district is approximately equal to recharge or sustainable yield. This method places the burden of meeting the goal on new groundwater users or existing permittees who need to increase their groundwater use. This method also requires finding some alternative water supply, and some groundwater users cannot afford more expensive alternative supplies.	See comments above for production limits based on proportionate reduction.
Method: Production limits based on protecting historical use		
Chapter 36 states that when implementing production limits, a district may implement rules to preserve historical use. There are a variety of different ways to implement historical use rules, but the basic premise involves the following: - at a point in time, generally at the time of rule adoption, the district defines a specified class of users as historical users - a certain amount of groundwater is then allocated to each historical user, generally based on the annual amount of groundwater the user can prove he put to a non-wasteful, beneficial use during some historical use period of time - then when the district decides it is necessary to implement production limits, historical users can be allowed to continue pumping their historical use amount while production limits are applied only to new users	The basic goal of historical use regulations is to place the burden of production limits on new users within the district while protecting the historical users. However, this method also places a burden on landowners with no historical use or no evidence to support their historical use. In some variations of historical use rules, the historical user receives a permanent, marketable groundwater right. This means that the historical user has the option of selling his groundwater right if he so chooses. This variation still places the burden of regulation on new users, but it creates an additional option for the new user by creating a market where he can buy groundwater rights. Another variation of the historical use method would define historical users and establish a historical use amount, but the historical user's permit is neither permanent nor transferable. For example, a district could limit a historical use permit to the specific type of historical use. This means that the historical agricultural user can continue to pump his historical amount for his agricultural operations, but he cannot sell his permitted quantity to another type of user.	Historical use rules are generally implemented in conjunction with other types of production limits. For example, once the cap has been reached, new users may face a proportional reduction limit or some other type of limit, while historical users are allowed to pump their historical amount. If the aquifer cap is less than the total amount of historical use (eg. Edwards Aquifer Authority), then the district may choose not to permit any new users and may also have to limit historical users. Historical use rules do not mean that the district cannot regulate historical users; it simply means that the district can restrict new users differently than historical users. Historical users generally must prove their historical use. Evidence used to prove historical use may include items such as: - pumpage records, such as meter logs, electric bills, or fuel bills - records of irrigated acreage, such as aerial photos, crop records, receipts for seed, fertilizer, or other chemicals that would corroborate farmed acreage - manufacturing or production records for industrial or commercial users - meter records from sale of water Grandfathering is another variation of the historical use method in which existing wells are simply exempted from the district's regulatory or permitting requirements.

Method: Production limits based on rate of withdrawal		
District establishes a maximum rate at which water may be withdrawn from each permitted well. Rate is typically based on gallons per minute or gallons per day. District may establish different rates of withdrawal for different aquifers or for different geographic areas or geologic strata within an aquifer.	Goal is to maintain a certain water level in the aquifer by limiting each permittee to a specified maximum rate of withdrawal.	Regulations that establish a maximum rate of withdrawal without specifying a maximum quantity are fairly rare. Generally rate of withdrawal regulations are used in conjunction with other regulatory methods such as spacing or density requirements. Also, permittees would still be limited to the amount they can prove will be put to a non-wasteful, beneficial use. The maximum allowable withdrawal rate is generally determined based on the amount of water that can be withdrawn from the aquifer without causing unreasonable drawdowns. In some cases, this method is coupled with an additional production limit requirement that only applies if a certain amount of water-level decline is detected in the area.
Method: Production limits based on preventing well interference or unreasonable drawdown		
This category encompasses a number of regulatory methods designed to address well interference or aquifer drawdown on a more specific, well-by-well approach. For example, a district may require a permit applicant to perform a hydrologic pump test on the well to determine the maximum area of influence, and then the district will set the maximum allowable production at a level that minimizes negative impacts to nearby wells. Another variation involves the district establishing unique production limits for wells located in a particular geographic area that is experiencing unacceptable water-level declines.	The general goal of the various methods in this category is to prevent well interference and unreasonable drawdowns. However, the secondary goal is to accomplish the regulation in the most limited or site-specific manner possible; i.e. using a rifle approach instead of a shotgun. Instead of adopting district-wide production limits that apply equally to all well owners (regardless of the fact that they may live in an area that has plentiful groundwater supplies or very little demand), the district reviews applications on a case-by-case (or area-by-area) basis and only applies production limits when they are needed to prevent well interference or unreasonable drawdown.	This method is similar to those described below under "Regulations tailored to specific geologic strata or geographic areas," but the various methods within this category are typically more site-specific than just dividing the district into different geographic areas. (But see the comments below for more discussion of the benefits of tailoring regulations to specific areas where management is needed.) One important consideration in implementing any method that is site-specific or area-specific is the need for the district to be consistent in how it applies its regulations. Districts must not be arbitrary or capricious in applying their rules. Tailoring a district's regulations to a specific well or area can be very logical and beneficial, but the district's discretion in permitting must be guided by specific, well-defined factors or criteria. For example, if a district is going to review each application and limit an individual well's production based on impacts on neighboring wells, the district should consider defining the factors that will be reviewed and considered by the board and specifying the amount of impact that is considered acceptable or unacceptable.

Method: Regulations tailored to specific geologic strata or geographic areas		
Districts have the authority to adopt different rules for different aquifers or geologic strata located within the district or for different geographic areas within the district.	Goal is to improve the management of the groundwater resources by tailoring the district's rules to the areas where problems are occurring, such as geographic areas where water levels are declining or particular aquifers that are being over-pumped.	Tailoring groundwater regulations to the areas that need to be managed allows the district to meet its management goals in a more efficient manner without burdening pumpers in areas of the district that are not expected to have any problems. Another example would be a district with multiple aquifers stacked one on top of another that are not interconnected. If the only aquifer experiencing water-level declines is the shallow aquifer, it would be logical to apply regulations only to the shallow aquifer. Pumpers in the deeper aquifer would remain unregulated until such time as the district determines that regulation is necessary. If a district is split geographically by more than one aquifer, or if the conditions in, or use of, an aquifer differ substantially from one geographic area to another, the district could apply different rules in each aquifer or geographic area.

Method: Regulations based on prioritizing types of use		
In appropriating surface water, the state gives a preference to applications based on type of use in the following order of priority: - domestic and municipal - agricultural and industrial - mining and recovery of minerals - hydroelectric power - navigation - recreation and pleasure - other beneficial uses Districts do not have express statutory authority to limit production based on type of use, but one theoretical method of limiting production would be to restrict or prohibit the lower priority uses when certain amounts of water-level declines are experienced.	Goal is to prevent or mitigate water-level declines in an aquifer by restricting lower priority types of use.	The Edwards Aquifer Authority is the only groundwater district that currently implements this type of regulation. The EAA implements water use restrictions that increase in severity as the water level in the aquifer declines.
Method: Well construction and closure standards		
Some districts establish specific well construction standards and well closure standards in order to address certain water quality concerns.	Goal is to prevent contamination of aquifers, which may be caused by such things as: - surface contaminants flowing down through the well bore, - cross-contamination between different aquifers or geologic strata, or - movement of contaminants caused by pumpage.	Requiring wells to be spaced a certain distance from sources of contamination is a common method of preventing contamination. The Texas Department of Licensing and Regulation establishes minimum well construction standards that apply statewide, but several districts have rules that require additional or more stringent standards of construction, such as additional cementing requirements. Typically these are adopted in areas that are susceptible to water quality problems due to the hydrogeology of the aquifer (eg. karst aquifers) and to the existence of natural or man-made areas of contamination (eg. oil field wastes or salt water).

Method: Reporting requirements: well registration, drilling logs, and groundwater production reports		
Districts collect a variety of information and data that are important to the district's management programs.	Goal is to compile the information necessary to support the district's programs and decisions from both a technical and legal perspective.	Chapter 36 requires districts to collect certain types of information such as drilling logs. Data collection is one of the district's most important functions. All regulatory and policy decisions must be supported by accurate data and modeling. Implementing data collection and reporting requirements makes permittees more aware of the amount of groundwater they are using and the importance of groundwater resources, and it also lends more credibility and support to the district's management efforts because permittees know that the district is actively using scientific information to back up its decisions.

Notes:

1. It is very difficult to put all the options for managing groundwater into a single formula or box. This table is simply intended to serve as an overview of some of the more common methods of groundwater regulation currently available to groundwater conservation districts. Most existing districts use some variation or form of the methods listed above, but districts are encouraged to work with an attorney who specializes in groundwater district law to investigate other methods that meet the specific needs of that district while fitting within the statutory authority granted in Chapter 36 or the enabling act of that district.

2. There are numerous possible variations for each method listed. For example, under the method of production limits based on tract size or acreage, a district could establish a certain amount of groundwater that could be withdrawn per section without specifying the number of wells allowed. This would give the landowner the flexibility to withdraw the specified amount of groundwater from either one large well or several small wells.

3. The primary citation for groundwater district authority related to spacing and production limits is found in Section 36.116, Water Code.