



April 13, 2022

Texas Sunset Advisory Commission
P.O. Box 13066
Austin, Texas 78701

Dear Commission Staff,

Sunset review of the Texas Water Development Board offers a unique opportunity to make a lasting impact on the water policy of Texas. Texas is facing a water crisis, with yet another dry year already underway. The outlook for relief is remote, and it is time to face some hard, dry truths.

- Drought is becoming the norm not the rarity.
- Our population continues to grow at an accelerated rate.
- Our water needs will far outstrip our water resources sooner rather than later.

To better address our future water needs, improving the way TWDB supports water desalination as a sustainable supply option is a great first step. We are including some specific recommendations for your consideration during this review.

If you have any questions, please feel free to contact us at any time. The members and staff of the Texas Desalination Association look forward to working with the Texas Sunset Commission staff and the Commission members to ensure Texas' water future.

Sincerely

Kyle Frazier
Executive Director
Texas Desalination Association



Texas Water Development Board Self-Evaluation Report – Submitted to the Texas Sunset Advisory Commission September 1, 2021

Comments Regarding: IX. Major Issues – Desired Future Conditions and Modeled Available Groundwater in Groundwater Management Plans

The Texas Water Development Board’s identification of Desired Future Conditions and Modeled Available Groundwater in Groundwater Management Plans as a Major Issue is self-inflicted. Statute and practice created and promotes the fundamentally-flawed process of using planning tools to calculate groundwater management policies known as Desired Future Conditions.

Texas Desalination Association (TX Desal) desires modification of statutes and regulations to remove barriers and encourage the use of brackish groundwater resources to meet the state’s growing water needs. While our focus is brackish groundwater, our concerns are applicable to groundwater in general. Clearly this was the original intent of the Texas Water Code (TWC) Chapter 36 and it has been consistently upheld by the Texas Supreme Court:

*36.0015.(b) ... Groundwater conservation **districts created** as provided by this chapter are the State’s preferred method of groundwater management **in order to protect property rights, balance the conservation and development** of groundwater **to meet the needs of this state**, and **use best available science** in the conservation and development of groundwater through rules developed, adopted, and promulgated by a district in accordance with the provisions of this chapter. (Emphasis added)*

“Development of brackish groundwater, if carried out responsibly, can augment supplies and relieve growing stress on freshwater resources.”¹ However, current groundwater conservation district (GCD) practices often discourage prudent brackish groundwater resource development. Common use-based management* practices incorporated by many GCDs and groundwater management areas (GMAs) often infringe on private property owners’ rights to either access “their fair share of brackish groundwater” or pursue conservation of the same in place as a property right. Use-based management practices also contribute to flawed processes used to

¹ Buono, R. M., K. R. Zodrow, P. J.J. Álvarez, and Q. Li. 2016. “Brackish Groundwater: Current Status and Potential Benefits for Water Management.” Issue Brief no. 04.11.16. Rice University’s Baker Institute for Public Policy, Houston, Texas.

develop desired future condition (DFC) / modeled available groundwater (MAG) . These flawed processes limit the application of science in the DFC processes, promoting inefficient management of Texas’ aquifers that discourages the production of brackish groundwater, undervalues the benefits of brackish water development, and greatly understates the amount of brackish water available for production.

- **Circular Logic in DFC/MAG Processes** - Most GMAs have adopted DFCs without properly demonstrating that the DFCs fulfill the statutory requirement of achieving a balance between the highest practicable level of groundwater production and the conservation and preservation of groundwater. Instead of evaluating the nine factors described under TWC Section §36.108(d) to achieve the aforementioned statutory requirement, these GMAs have developed DFCs through a process that can, at best, be described as reverse engineering. In these situations, the GMA performs predictions of future groundwater conditions based on different projections of groundwater pumping until one of the future pumping scenarios produces an amount of production desired to establish a DFC to the GMA’s liking. Thence, the GMA submits the selected groundwater model files to the TWDB and the TWDB repackages the projected future pumping as a MAG. A concern associated with this reverse engineering process is that DFCs and MAGs are adopted without proper consideration to the limitation, uncertainty, and error in the GAM predictions used to produce them. Another concern with the reverse engineering process is that DFCs can be based too much on groundwater model predictions and too little on actual aquifer conditions. In both cases, an undesired, but currently inescapable result is flawed regional and state water planning in as much as the DFC, which informs the MAG and thus water availability for planning, when reverse engineered, carries these errors to the very instruments they are supposed to inform. The same is true for the flawed development of management plans by GCDs.

“It is important that stakeholders and others are aware of uncertainties in GAM data and calibration and do not try to use the GAMs beyond the level at which the data can support them.”²

“Acquiring better knowledge and understanding of hydrogeological resources will allow policymakers to make better decisions about how to manage brackish groundwater resources and protect aquifers, both brackish and fresh.”³

Lack of recognition of fair share of brackish groundwater - The current application of the DFC/MAG, “use-based management,” and/or political subdivision of common groundwater reservoirs by GMAs and GCDs is inappropriate for determining an equitable allocation of a property owner’s fair share or ownership in place. Use of these practices in management of brackish groundwater is against the finding of the Texas Supreme Court in the Day Case – “As with oil and gas, one purpose of groundwater

² Brady, R., W. Beckermann, A. Capps, B. Kennedy, P. McGee, K. Northcut, M. Parish, A. Qadeer, S. Shan, and J. Griffin. 2016. "Reorganizing Groundwater Regulation in Texas." Final Report. Texas A&M University, Bush School of Government and Public Service, College Station, TX.

regulation is to afford each owner in a common, subsurface reservoir a fair share.”³ Fair share is achieved by following the “Fair Chance” or Correlative Rights Principle. Any denial of fair chance to access property amounts to confiscation and obstructs the development of brackish groundwater when a property owner is denied equal opportunity to produce. Denial or reduction of new groundwater production based on an improperly derived MAG is an example of denying the inherent benefits of developing brackish groundwater resources. This is especially the case when the MAG and resulting DFC are selected to protect “historic or existing” use. Similarly, permitting decisions by GCDs that ignore sound and best science as it relates to available water can lead to either overly restrictive production limits or over drafting of a source of water – either representing an infringement of a property right to water.

*Explanation of Use-Based Management

- **Use-Based Management** - Some GCDs have adopted rules and regulations that do not recognize that the right to produce groundwater is vested in ownership of private property. Such rules have been referred to as use-based because their evaluation criteria rely on a particular attribute of a permit such as the intended use or requested amount of groundwater. Among the concerns regarding use-based rules is the opportunity for unequal and discriminatory treatment of permit applicants and an inappropriate framework for determining an equitable allocation of a property owner’s fair share. Creating a management policy (DFC) from a predetermined amount of pumping desired is a use-based management policy. Management policy which provides historic or existing-use protections is another example of denying “fair chance” based on use.

RECOMMENDATIONS

- Clarify statute to require that GCDs/GMAs manage groundwater solely by actual aquifer condition(s) rather than estimated available water.
- Reinstate the original processes for **planning/funding** purposes of TWDB estimating availability of groundwater based upon scientific knowledge and tools applied to the independently derived groundwater management policies. We believe that this process would establish a needed verification or identification of error in how groundwater is managed locally. The ability of TWDB to withhold funding for projects that cannot be justified on actual aquifer conditions and best available science serves as an added incentive.

³ See *Elliff v. Texon Drilling Co.* 210 S.W.2d 558, 562 (Tex. 1948)

(“... our courts, in decisions involving well-spacing regulations of our Railroad Commission, have frequently announced the sound view that each landowner should be afforded the opportunity to produce his fair share of the recoverable oil and gas beneath his land, which is but another way of recognizing the existence of correlative rights between the various landowners over a common reservoir...”)

These changes would bring efficiencies and greater certainty to the users, buyers and sellers of water and GCDs. We do not expect this to cost the State money. However, if nothing is changed, we expect the following:

- More property owner/GCD lawsuits, which is a highly inefficient method of establishing public policy. Texas is better served with a legislatively vetted direction.
- Artificially limiting or eliminating by management practices the supply options and reliability available to water users, buyers and sellers.
- Reduced economic development in the State.

For more information, please contact:

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