

Interim Report

TO THE EIGHTY-NINTH TEXAS LEGISLATURE

HOUSE COMMITTEE ON NATURAL RESOURCES JANUARY 2025

HOUSE COMMITTEE ON NATURAL RESOURCES TEXAS HOUSE OF REPRESENTATIVES INTERIM REPORT 2024

A REPORT TO THE HOUSE OF REPRESENTATIVES 89TH TEXAS LEGISLATURE

> TRACY O. KING CHAIRMAN

COMMITTEE CLERK SAM BACARISSE



Committee On Natural Resources

January 10, 2025

Tracy O. King Chairman

P.O. Box 2910 Austin, Texas 78768-2910

The Honorable Dade Phelan Speaker, Texas House of Representatives Members of the Texas House of Representatives Texas State Capitol, Rm. 2W.13 Austin, Texas 78701

Dear Mr. Speaker and Fellow Members:

The Committee on Natural Resources of the Eighty-eighth Legislature hereby submits its interim report including recommendations and drafted legislation for consideration by the Eighty-ninth Legislature.

Respectfully submitted,

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INTERIM STUDY CHARGES

CHARGE I: Monitoring: SB 28	 Monitoring: Monitor the agencies and programs under the Committee's jurisdiction and oversee the implementation of relevant legislation passed by the 88th Legislature. Conduct active oversight of all associated rulemaking and other governmental actions taken to ensure the intended legislative outcome of all legislation, including the following: SB 28, relating to financial assistance provided and programs administered by the Texas Water Development Board.
CHARGE II: Water Reuse Expansion	Water Reuse Expansion: Examine opportunities to expand the reuse of waters in Texas as an additional water supply and identify funding deficiencies for water reuse projects and regulatory impediments that make expansion of water reuse difficult in Texas.
CHARGE IV: Groundwater Infrastructure	Groundwater Infrastructure: Examine Texas groundwater data infrastructure, data collection, and monitoring practices and identify policy solutions for improvement in the areas of understanding local groundwater conditions; groundwater modeling for planning and decision-making; and resource management

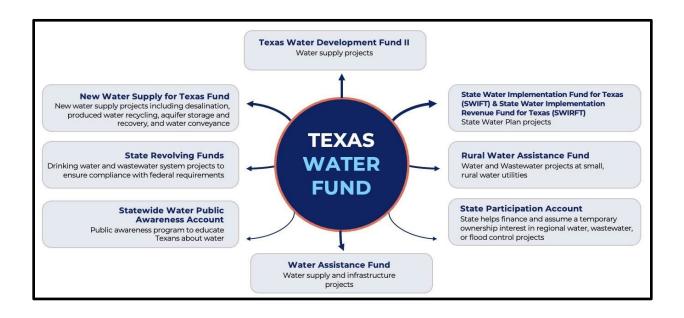
CHARGE I: Monitoring SB 28

The Speaker directed the Committee to "monitor the agencies and programs under the Committee's jurisdiction and oversee the implementation of relevant legislation passed by the 88th Legislature. Conduct active oversight of all associated rulemaking and other governmental actions taken to ensure the intended legislative outcome of all legislation, including the following: SB 28, relating to financial assistance provided and programs administered by the Texas Water Development Board." The Committee held a hearing on September 24, 2024 to receive testimony on this topic.

BACKGROUND

The 88th Legislature approved Senate Bill 28 as part of a legislative package creating the Texas Water Fund. The other bills in this package included Senate Joint Resolution 75 and Senate Bill 30. SJR 75 proposed to amend the Texas Constitution to create the Texas Water Fund administered by the Texas Water Development Board (TWDB) for providing financial assistance for water infrastructure projects. The proposed amendment authorized TWDB to distribute money from the Texas Water Fund to other funds or accounts administered by the agency without further legislative appropriation. In addition, the amendment required that TWDB allocate no less than 25% of the initial appropriation to the Texas Water Fund towards the newly-created New Water Supply for Texas Fund.

SJR 75 appeared as Proposition 6 on the constitutional amendment ballot for the election held on November 7, 2023. Proposition 6 was approved by 77.7% of voters in the November 2023 election. Voters' approval of Proposition 6 triggered the contingency rider in Senate Bill 30 authorizing the appropriation of \$1 billion to the Texas Water Fund.Senate Bill 28 established the Texas Water Fund within the Texas Water Code. These provisions took effect on January 1, 2025, contingent upon voters' approval of Proposition 6 in November 2023. Monies within the Texas Water Fund may be transferred to other TWDB-administered funds and accounts, including the New Water Supply for Texas Fund, Water Assistance Fund, State Water Implementation Fund for Texas (SWIFT), State Water Implementation Revenue Fund for Texas (SWIFT), state revolving funds, Rural Water Assistance Fund, Texas Water Development Fund, the state participation account within the Texas Water Development Fund, and the Statewide Water Public Awareness Account. This structure is depicted within the illustration below.



SB 28 instructs that TWDB ensure that a portion of the money transferred from the Texas Water Fund be used for certain designated purposes. These purposes include: (1) water infrastructure projects to prevent or repair water main failure, prioritized by risk or need, for rural political subdivisions and cities with a population of 150,000 or less; (2) projects for which all required state or federal permitting has been completed; (3) statewide water conservation public awareness programs; and (4) water conservation strategies for new residential construction. Texas Water Fund monies transferred to other funds or accounts may be used to provide low interest, zero interest, or negative interest loans, loan forgiveness, or grants.

SB 28 also created the New Water Supply for Texas Fund. TWDB shall use this fund to provide financial assistance to political subdivisions for water supply projects that create new water supplies – those that expand the inventory of water molecules comprising the state's water supply portfolio. Eligible projects include seawater and brackish water desalination, produced water recycling, aquifer storage and recovery, and the development of transportation infrastructure to convey water from the aforementioned projects to where it is needed. SB 28 requires that TWDB undertake, by rule, to finance projects through the New Water Supply for Texas Fund that will lead to seven million acre-feet of new water supplies by December 31, 2033. Proposition 6 (SJR 75) stipulates that at least 25% of the initial \$1 billion appropriated to the Texas Water Fund be allocated to the New Water Supply for Texas Fund. In addition to the creation of the Texas Water Fund and the New Water Supply for Texas Fund, SB 28 expands the state's technical assistance outreach capacity. Technical assistance often works to help small or rural communities assess problems with their drinking water and wastewater systems, recommend solutions, and work with eligible communities towards obtaining state financial assistance. SB 28 authorizes TWDB to use the Rural Water Assistance

Fund for outreach, financial, planning, and technical assistance to assist rural political subdivisions in obtaining and using financing from other funds and accounts administered by TWDB. The bill also requires that TWDB establish a program to provide technical assistance to retail public utilities in conducting water loss audits and in applying for financial assistance from TWDB for mitigating water loss.

Lastly, SB 28 created the statewide water public awareness account for the purpose of implementing the statewide water public awareness program. This program is required to educate Texas residents about water. The statewide water public awareness account is eligible to receive funding from the Texas Water Fund.

FINDINGS

TWDB has taken prudent, timely measures toward implementing Senate Bill 28. After soliciting and receiving public input in early 2024, on July 23, 2024, the Board voted to approve an implementation plan for the Texas Water Fund. The approved plan outlines the apportionment of the initial \$1 billion appropriation to the Texas Water Fund and the agency's anticipated timeline. The initial apportionment is as follows:

Funding Description		Target Amount
Rural Water Assistance Fund	100 percent grant for conservation/water loss projects from SRF solicitation (under 1,000 population)	\$45,000,000
	90 percent grant/10 percent loan or local match for conservation/water loss projects from SRF solicitation (1,000 to 10,000 in population)	\$130,000,000
	High risk or need projects (100 percent grant)	\$20,000,000
Rural Water Assistance Fund subtotal		\$195,000,000
Water Loan Assistance Fund 70 percent grant/30 percent loan or local match for conservation/water loss projects from 2025 SRF solicitation (10,001 to 150,000 in population)		\$90,000,000
Statewide water public awareness program		\$15,000,000

SWIFT program support	\$300,000,000
Potential bond leveraged funding through existing financial assistance programs	\$150,000,000
New Water Supply for Texas Fund	\$250,000,000
Total:	\$1,000,000,000

On November 9, 2023, the Board approved rules for providing technical assistance to qualified utilities for conducting water loss audits. These rules were adopted before the January 1, 2024 deadline prescribed by SB 28. The agency has also taken steps towards allocating the \$1 billion within the Texas Water Fund towards eligible program funds.

The committee heard testimony on this interim charge on September 24, 2024. The comments provided during the hearing identified other key challenges to implementing SB 28. TWDB Chairwoman Brooke Paup and Executive Administrator Bryan McMath testified on Texas' significant water infrastructure needs, with financial assistance requests and needs that exceed the \$1 billion appropriated to the Texas Water Fund. Chairwoman Paup, Director L'Oreal Stepney, and Executive Administrator McMath further testified that the agency faces challenges recruiting and retaining qualified personnel to administer the agency's financial assistance programs. Mary Alice McKaughan with the Texas Rural Water Association testified that while the Texas Water Fund will benefit rural Texas, the \$195 million allocated towards the Rural Water Assistance Fund will fall short of the amount needed to address rural utility needs. Perry Fowler with the Texas Water Infrastructure Network shared survey data of water utilities indicating substantial needs for further infrastructure investment, including repairing aging systems and developing new water supply projects. Jeremy Mazur with Texas 2036 testified that the \$1 billion in the Texas Water Fund, combined with the projected effort from other state and federal financial assistance programs, will fall over \$110 billion short of meeting Texas' longterm water infrastructure needs.

Stacey Steinbach with the Texas Water Association (fka Texas Water Conservation Association) identified the funding gaps for state water plan projects, state flood plan projects, and drinking water and wastewater needs. Heather Harward with the Texas Water Supply Partners testified with regard to the need for additional investment in the Texas Water Fund, and the need for additional state investment in order to develop the projects identified within the State Water Plan. Lastly, Cyrus Reed with the Lone Star Chapter of the Sierra Club testified on the need for an effective regulatory framework for new water supply projects, including produced water recycling and seawater desalination, as well as the need for securing water supplies for

environmental purposes.

The testimony received indicates that the \$1 billion appropriation to the Texas Water Fund will fall short of meeting Texas' long-term water infrastructure needs. According to a recent report by Texas 2036, Texas will need to invest at least nearly \$154 billion over the next 50 years in order to address its water infrastructure challenges. This figure reflects the inflation-adjusted cost estimates included in the 2022 State Water Plan and the US Environmental Protection Agency's (EPA) recent community needs assessments for drinking and wastewater infrastructure. Of the state's long-term \$154 billion water infrastructure needs, \$59 billion in state financial assistance will be required for projects identified in the 2022 state water plan, \$74 billion for fixing drinking water systems over the next 20 years, and \$21 billion for upgrading aging, deteriorating wastewater systems. The Texas 2036 report projects that the efforts from the state's existing financial assistance programs, including the \$1 billion appropriated to the Texas Water Fund, will fall over \$110 billion short of meeting the \$154 billion required in the coming decades.

Several witnesses testified with regard to the need for additional investment in the TWF, including dedicated funding similar to that used for transportation projects. Reliable, consistent funding for the Texas Water Fund is essential towards closing the state's long-term water infrastructure funding gap and meeting the projected \$154 billion in water project needs.

RECOMMENDATIONS

The 89th Legislature should consider the following actions to ensure that Texas' can address its long-term water infrastructure funding needs:

- In order to fund Texas' long-term water infrastructure needs, which include developing a diversified water supply portfolio and fixing aging, deteriorating water and wastewater systems, the Legislature should consider approving a dedicated funding source for the Texas Water Fund.
- The 89th Legislature should consider making an additional, \$5 billion appropriation to the Texas Water Fund. (This is in addition to establishing a dedicated revenue stream to the Texas Water Fund.)
- The Legislature should ensure that TWDB receives the appropriations necessary to maintain the staff capacity required for administering financial assistance through the Texas Water Fund.

CHARGE II: Water Reuse Expansion

The Speaker directed the Committee to "Examine opportunities to expand the reuse of waters in Texas as an additional water supply and identify funding deficiencies for water reuse projects and regulatory impediments that make expansion of water reuse difficult in Texas." The Committee held a hearing on September 24, 2024 to receive testimony on this topic.

BACKGROUND

Water reuse is an important water supply strategy in Texas. The State Water Plan shows that Texas will see an almost 10-fold increase in the utilization of reuse from 2020 to 2070, with estimates for Water Management Strategies increasing from 121,000 acre-feet per year to over 1 million acre-feet per year (1,106,000 MAFY). The State Water Plan projects that 15% of the state's future new water supply will come from Reuse (Direct Potable Reuse, Indirect Reuse, Other Direct Reuse). These strategies will be implemented by Water User Groups representing all water use categories (Municipal, Irrigation, Manufacturing, Electric Power Generation, Livestock, and Mining).

Water reuse can take many forms and there are different options and strategies available depending on community or development need. The specific type of water reuse utilized by a utility or development depends on many factors such as water supply source and availability, location and type of infrastructure in place, the type of water need and where that need is happening, and the technical and financial resources that a community has available. Water reuse is generally categorized into potable or non-potable uses and the treatments and end uses will vary.

Potable reuse is where the source water is treated to meet or exceed federal drinking water standards and is distributed to customers through the centralized drinking water systems. The source water in this case is typically derived from highly treated wastewater effluent that is delivered directly to the water treatment plant (DPR) or is delivered to a body of water such as a reservoir, constructed wetland or groundwater basin prior to arriving at the water treatment plant (IPR).

Examples:

- Big Spring's direct potable reuse (DPR) system produces 1.5 MGD.
- North Texas Municipal Water District's indirect potable reuse (IPR) system is a manmade wetlands system (East Fork Water Reuse Project) that helps clean highly treated wastewater effluent prior to being deposited into the waters of Lake Lavon.

Non-potable reuse is where the water is treated to be safe for landscape irrigation, industrial

uses, cooling towers, and other non-drinking water uses such as irrigation of golf courses, sports fields, and landscapes, toilet flushing, and cooling tower makeup water. This water can be delivered through a Centralized, Decentralized, or Onsite system. *Centralized systems*, typically referred to as "Purple Pipes", are composed of dedicated infrastructure to deliver this water to end users. *Decentralized systems* are smaller in scope and may serve a subdivision or campus. *Onsite systems* are designed to serve the non-potable water needs of a building or group of buildings.

Examples:

- Centralized non-potable Reuse (purple pipe) Austin and San Antonio have extensive centralized reuse systems and serve customers located near those lines.
- Onsite Non-potable Reuse Austin (Central Library, Permitting and Development Center, ACC Highland) San Antonio (Credit Human), Wimberly (Blue Hole Primary School)

The *source water* for reuse can come from air conditioning condensate, graywater, blackwater, foundation drain water, stormwater, and other sources. The type of treatment will depend on the source water and end-use.

Texas should support the development of reuse in order to meet the water supply needs of its communities. In addition, the legislature should continue to take steps to ensure that the rules and regulations governing the development and utilization of water reuse, in all its forms, supports the continued development of this important source of water. This will help ensure the state has sufficient water supplies to meet the needs of future generations.

RECOMMENDATIONS

The 89th Legislature should consider taking the following actions to:

- Support the Development of Demonstration Projects: State Buildings and Higher Education Facilities are already required to include water conserving features in new construction or major renovation project. New construction should also require the inclusion of reuse components and serve as demonstrations for this practice. This will reduce the use of water supplies and show that these systems work. In addition, they can be used to gather data and for training purposes.
- SB 28 created the Texas Water Fund and New Water Supply for Texas Fund. This investment is vitally important and will help Texas communities become water resilient. Additional investment is needed and reuse should get special attention in future appropriations to the Texas Water Fund.

- Ensure that TCEQ and TWDB have sufficient specialized staff to support thoughtful policy implementation and effective outreach/technical assistance as the utilization of water reuse continues to grow.
- TCEQ does not expressly regulate some of the more innovative water reuse strategies and their policy is to permit those projects on a case-by-case basis. As innovative water reuse strategies continue to grow in popularity the agency should consider creating clear regulatory guidance for these strategies. Cataloging these strategies and determining which are in need of attention (regulations and/or guidance) is worthy of focus.
- The state should develop incentive programs to encourage the development of water reuse throughout the state.

CHARGE IV: Groundwater Infrastructure

The Speaker directed the Committee to "examine Texas groundwater data infrastructure, data collection, and monitoring practices and identify policy solutions for improvement in the areas of understanding local groundwater conditions; groundwater modeling for planning and decision-making; and resource management." The Committee held a hearing on September 24, 2024 to receive testimony on groundwater data infrastructure in Texas.

BACKGROUND

Groundwater provides over 60% of the state's water supply and an average of 30% of the water flowing in Texas rivers. In some parts of Texas, such as the Hill Country where a majority of the state's rivers begin as headwater springs, 100% of the water flowing in most streams and rivers originates as groundwater. As Texas' population continues to grow and our water demands increase, accurate groundwater science is critical to ensuring robust water planning in Texas. Both the Texas Water Development Board (TWDB) and Groundwater Conservation Districts (GCDs) have important, statutorily-mandated roles related to the determination of groundwater availability for water planning in Texas. This planning informs the management decisions made by GCDs, who are tasked with balancing the conservation and development of groundwater to meet the state's current and future needs while protecting private property rights in groundwater. Thus, accurate and thorough groundwater data is essential to planning and managing groundwater in Texas.

GCDs must utilize the best available science in carrying out their statutorily mandated duties. Local data and modeling are essential for GCDs to make informed decisions in both management and planning. This data and science inform the groundwater models that are at the core of the state's "groundwater infrastructure." TWDB assists GCDs with groundwater planning by developing regional groundwater availability models (GAMs) as required by Tex. Water Code 16.012(1). It is critical that TWDB continually update and enhance GAMs with new modeling codes and localized hydrogeologic data to ensure that GCDs are utilizing the best available science and tools to determine groundwater availability estimates.

The GAMs are critically important tools for understanding and managing Texas's groundwater resources. These models simulate aquifer behavior to estimate groundwater availability, predict the impacts of pumping and drought, and ultimately inform decision-making at local, regional, and state levels. GCDs collect and analyze the data necessary for GAMs, such as water levels and aquifer properties derived from pumping tests. The accuracy and utility of GAMs are directly tied to the quality and quantity of this data that are used in their development and refinement. High-quality, localized data is essential to ensure GAMs accurately represent aquifer behavior. However, gaps in data and limited understanding of aquifers can reduce their precision.

This ultimately can undermine the reliability of water planning and management decisions across Texas.

Robust data and science are also necessary to ensure groundwater management is grounded in the best available science, as GCDs rely on groundwater data to understand and manage their local resources. Comprehensive and accurate datasets are important for addressing challenges such as identifying localized groundwater flow patterns, determining sources of contaminants, and estimating recharge rates. Ultimately, improved understanding of our aquifers through increased data and science equips GCDs to make better-informed decisions and safeguard Texas's groundwater resources for future generations.

FINDINGS

The Committee heard testimony from TWDB, the Upper Trinity Groundwater Conservation District, Hays County, City of Carrizo Springs, Texas Corn Producers Association, and Environmental Defense Fund. This provides a general summary of key points and themes presented in that testimony.

The TWDB provided a high-level overview of groundwater infrastructure in Texas, focusing on the data and systems necessary for understanding and managing groundwater resources. This infrastructure supports activities such as accessing available water well information, designating brackish groundwater production zones, assessing aquifer storage and recovery projects, estimating groundwater pumping for water planning, and developing projected water demands. This information is also used by regional water planning groups, local GCDs, local and regional water suppliers, and researchers.

Groundwater infrastructure involves data collection, monitoring networks, data management systems, and groundwater models. Effective infrastructure helps answer questions about long-term groundwater availability and the impacts of pumping over time. While Texas has a significant amount of data, there are data gaps, particularly in water well locations and groundwater pumping volumes, which complicate understanding, modeling, and managing groundwater resources. Additionally, the majority of Texas groundwater data is not findable, accessible, interoperable, and reusable (FAIR) due to siloed data management systems across all entities collecting groundwater data.

Improvements to existing data collection and management could include expanding spatial coverage of networks, conducting local-scale studies, and establishing easier ways to connect the data from disparate networks. The TWDB is mapping out what is needed to improve data connectivity and create an authoritative well inventory database. Resource limitations hinder the expansion of programs like the Springs Monitoring and Recorder Well programs. The TWDB Legislative Appropriations Request for the 89th legislature includes an exceptional item request

that would help to expand these programs and increase data in these areas.

Other testimony demonstrated that there is a need for more sustainable groundwater management in Texas. Stable and secure groundwater supplies are essential for Texas' communities if they are to thrive and grow into the future. This is particularly true in rural areas of the state where groundwater is the sole source of water. Currently, most aquifers in Texas are not being sustainably managed but instead are being managed in a way that will result in their eventual depletion. This will mean worsening economic and community impacts and increasingly fewer management options in the future, until groundwater supplies are either exhausted or no longer feasible to pump due to cost. The reason groundwater management is on an unsustainable path is complex, but it boils down to a lack of mandates in Chapter 36 of the Texas Water Code that require GCDs to sustainably manage groundwater, a lack of data and science that groundwater districts can use to inform sustainable management and planning, and finally, a fear by GCDs that limiting groundwater pumping to achieve sustainability will result in lawsuits over confiscation of property rights. While overcoming these challenges are significant, accurate data and modeling are critical for GCDs to develop local strategies to protect property rights and sustain groundwater levels. Testimony reminded the committee that while the state provides funds for both the regional water planning process and the flood planning process, it does not fund groundwater planning even though groundwater availability, through the adoption of desired future conditions, is integral to state water planning.

All testimony supported the notion that the State should provide consistent, reliable funding for groundwater data and modeling both at the TWDB and at the local GCD level to ensure the reliability of the GAMs and the State Water Plan, as well as groundwater management decisions. GCDs are best suited to collect groundwater data at the local scale and to develop localized models, but there is little state funding directly available to GCDs for this type of science that serves to inform management and planning decisions. This includes being able to monitor the DFCs through a dedicated monitoring well network - ideally equipped with continuous recording equipment. Better data ultimately means districts are able to better protect private property rights, and without groundwater there would not be a thriving rural Texas.

Some testimony focused on the rapid growth being experienced in some parts of the state and the reliance on exempt wells sourced by groundwater to provide the water supply for this growth. These exempt wells are not subject to GCD permitting and data on their production or use cannot be required under existing provisions in the Water Code, Section 36.114. While some counties contribute to support the development of more science to better understand the aquifer by local GCDs, it was expressed that the state should also be investing and seeking solutions to reconcile differences in funding levels between districts to ensure that there are not scientific gaps in decision-making.

Indeed, with limited budgets, GCDs across the state do not have the resources to consistently develop reliable science and to develop tools to evaluate this science. Of the ninety-nine GCDs in Texas, over half have budgets under \$500,000, with sixteen districts with annual budgets under \$100,000 and twenty-three with budgets between \$100,000 and \$250,000. This amount of funding is not enough to meaningfully invest in groundwater science. While the Legislature has created a good framework for managing groundwater, premised on a robust planning process, local regulation, and best available science, the state is not adequately investing in this science.

Other testimony highlighted the critical role groundwater plays for Texas agricultural producers and how these producers act as stewards of the resource. An example was shared to illustrate the great discrepancies in funding of GCDs. In this example, two agricultural producers also serve as directors for two different GCDs. While one of those districts has a robust budget and can regularly collect and analyze key data on the aquifer they manage, the other district has such a small budget they cannot afford to have even a single full-time employee and does not have the resources to collect data or otherwise conduct science to better understand their aquifer conditions. In that example, salinity levels from saltwater intrusion are of significant concern, but this water quality is not currently being monitored due to a lack of resources.

While varying perspectives on groundwater data infrastructure were shared through testimony, virtually all testimonies expressed strong support for Texas to make a greater investment in groundwater science, research, and data and recognized the key roles both GCDs and the TWDB play in these efforts. The Committee agrees with this assessment, as indicated in the recommendation section, below.

RECOMMENDATIONS

The 89th Legislature should consider taking the following actions to improve the groundwater data infrastructure by increasing understanding of local groundwater conditions; groundwater modeling for planning and decision-making:

- Ensure TWDB has sufficient funding to continually maintain and update the GAMs, including approval of the TWDB Legislative Appropriations Request to provide funding for its recorder well and springs monitoring programs.
- Provide funding for local groundwater science, preferably through a grant program administered by the TWDB for GCDs to conduct local aquifer science and research, and increase/improve groundwater data collection networks.
- Clarify that under 36.114, GCDs should consider impacts to registered exempt wells when making permitting decisions; and improve the ability of GCDs and TWDB to monitor exempt well use.