Infrastructure:

Securing Texas' Water Future

August 2026

Top Line

1. **Texas' growing population and economy are increasing pressure on the state's water supply.**

2. **Without urgent action, water shortages will threaten public health, economic growth, and drought resilience.**

3. **The Texas Legislature and voters took important action in 2025, but the new funding does not match the scale of Texas' water needs.**

4. **Texas must invest in new water supply, repair aging infrastructure, manage major industrial water demands, and expand conservation and reuse.**

Water is critical to our future growth and success. However, with current resources Texas faces a large and growing gap between supply and demand. We need to build on the initial steps taken in 2025 and invest to secure Texas' water future.

CPP Policy Research Analyst Nichole led the research and writing for this paper.

Note: This paper uses Phase I of the 2027 State Water Plan, adopted by the Texas Water Development Board on July 23, 2026 (https://www.twdb.texas.gov/waterplanning/swp/2027/index.asp). The Board developed this initial, abridged plan on an accelerated schedule to support 2026 SWIFT financial assistance commitments. A more detailed Phase II amendment is expected before the January 5, 2027 statutory deadline. [1]

Backup

1. **Texas' growing population and economy are increasing pressure on the state's water supply.**

    a. **Texas' population is projected to grow from 34.2 million in 2030 to 52.3 million in 2080. [1]**
    - This represents **a 53 percent increase** over 50 years. [1]
    - **More than 80 percent** of this growth is expected to occur in Regions C, G, H, and L, which include major growth areas around Dallas–Fort Worth, Waco–Temple–Killeen, Houston, and San Antonio. [1]

    b. **Texas' water-demand mix is shifting from irrigation toward cities and industry. [1]**
    - Total water demand is projected to **increase by about 6 percent** between 2030 and 2080, even as Texas' population **grows by 53 percent.** The slower growth in overall demand is largely driven by declining irrigation demand.
    - Irrigation demand is projected to **fall by 26 percent**, from about 8.4 million acre-feet per year in 2030 to 6.2 million in 2080. Over the same period, **municipal demand is projected to rise by 48 percent and manufacturing demand by 28 percent.**
    - As population growth shifts more water demand toward cities, municipal users account for **20 percent** of the state's projected unmet water needs in **2030** and **57 percent by 2080.**

    c. **Texas relies primarily on surface water and groundwater.**
    - **Surface water** includes rivers, lakes, and reservoirs. These supplies depend heavily on rainfall, runoff, and reservoir storage. [1]
    - **Groundwater** is drawn from underground aquifers. In many parts of Texas, groundwater is being used faster than aquifers can naturally recharge. [1]
    - Existing water supplies that can be relied on during drought are projected to fall by **about 10 percent between 2030 and 2080**, from **15.5 million acre-feet per year to about 14.0 million acre-feet per year.** [1]
    - This decline is driven mainly by aquifer depletion, with smaller losses from reservoir sedimentation. [1]

d. Supply is declining while long-term needs grow, creating a widening gap.

- Water is measured in **acre-feet**, the amount of water needed to fill an acre of space to a depth of one foot. An acre-foot of water is equal to 325,851 gallons or 43,560 cubic feet. A typical backyard pool holds about 20,000 gallons of water, so one acre-foot of water could fill about 16 backyard swimming pools. [1]
- **Under drought-of-record conditions, Texas water users face potential shortages of 3.6 million acre-feet per year in 2030 and 5.8 million acre-feet per year in 2080. [1]**
- This gap exists not only because demand is rising and supply is declining, but also because much of Texas' water is not always located where it is needed. [1]

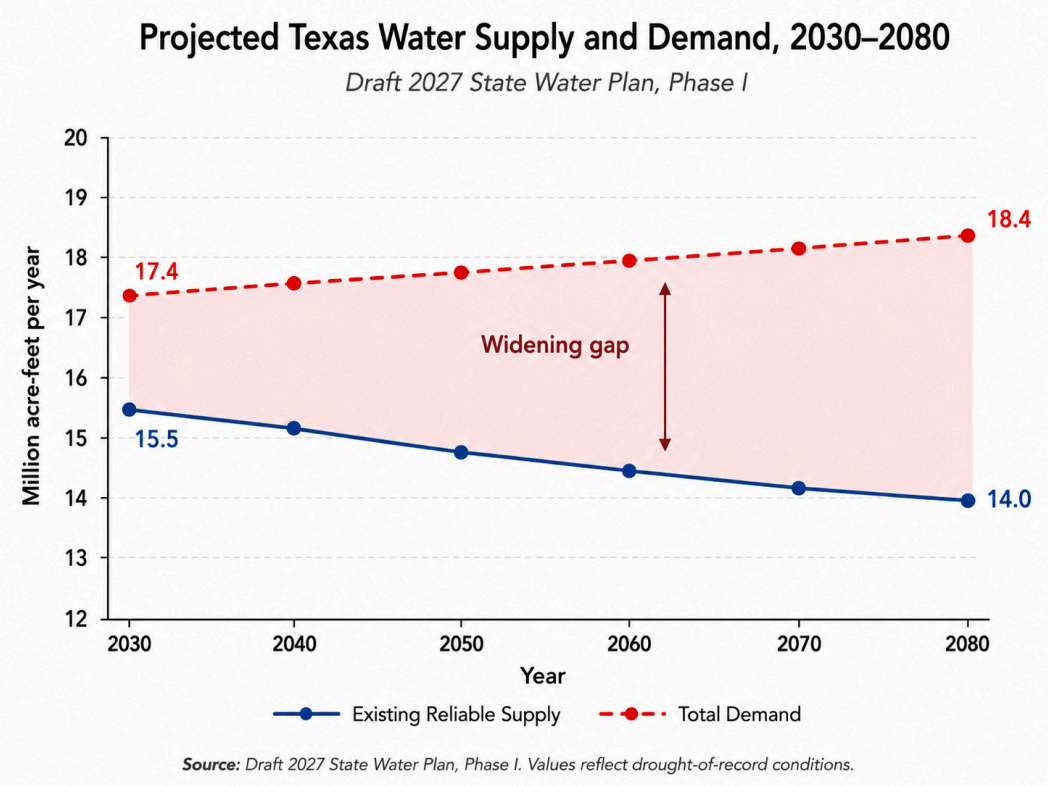

Figure 1. Projected Texas water supply and demand, 2030–2080. Values reflect drought-of-record conditions from the 2027 State Water Plan, Phase I. [1]

Note: A map of the 16 Texas Water Planning Regions is in Appendix 1. Appendix 2 provides regional strategy supply data from the Interactive 2027 State Water Plan. Appendix 3 shows existing major reservoirs and recommended new major reservoir projects.

The source that provides data by planning region can also be used to easily access **supply, demand and shortfall data at the county level** - Texas Water Development Board, Texas State Water Plan, https://2027.texasstatewaterplan.org/

2. Without urgent action, this growing supply and demand gap will threaten health, the economy, and drought resilience.

a. Water shortages threaten public health and basic community stability.

- If recommended water strategies are not implemented, approximately one **out of four Texans** in 2080 would have **less than half** the municipal water supplies they need during a drought of record. [1]
- Water shortages can also increase the risk of local supply failures, boil-water notices, and emergency restrictions. [12]

b. Water shortages also threaten the growth of the Texas economy, especially manufacturing sectors.

- Manufacturing is at risk. The Texas Association of Manufacturers has warned that insufficient water supply could put up to **400,000 jobs and $55 billion** in new development at risk. [5]
- If Texas does not implement the water supply strategies and projects in the state water plan, a severe drought could cause an estimated **$91 billion in economic damages in 2030**, rising to **$177 billion per year by 2080**. [1]
- **The economic cost of inaction far exceeds the investment required to address Texas' water needs.** The 2027 State Water Plan estimates nearly $174 billion in recommended water-management projects through 2080. Averaged over 55 years, that is about **$3.2 billion per year**, compared with potential economic losses of **$91 billion in 2030** alone and **$177 billion per year by 2080.** [1] (*See 2027 State Water Plan, Phase I, Key Points and Quick Facts, p. viii; Section 4.2, pp. 28–29; Table B-6, p. 69.*)

c. Rapid growth in AI data centers is creating a major water demand that Texas does not yet fully measure or plan for.

- Data centers use water directly to cool servers and indirectly through the electricity generation needed to power them. Their water use varies widely depending on the facility's size, cooling technology, energy source, and location. [28] [29]

- Houston Advanced Research Center (HARC) estimates that existing Texas data centers consume approximately **25 billion gallons of water annually** through onsite cooling and electricity generation. Depending on how quickly the industry grows and which technologies it uses, that amount could rise to **29 billion to 161 billion gallons per year by 2030**, or approximately 0.5 to 2.7 percent of statewide water use. [28]
- The statewide percentage can understate the local effect. Large facilities concentrated in drought-prone communities can place much greater pressure on local utilities, aquifers, and infrastructure than the statewide share suggests. [28] [29]
- Phase I of the 2027 State Water Plan does not fully account for future data-center growth. TWDB said limited information was available during this planning cycle, and none of the 16 regional planning groups requested data-center adjustments to their water-demand projections. [1] [30]
- Reporting gaps make the problem harder to measure. At a June 2026 legislative hearing, TWDB reported that **83 percent of the 341 data centers that were sent annual water-use surveys did not respond**. [30]

d. Aging water and wastewater systems are already failing Texas communities.

- Texas earned a **D+ for drinking water and a D– for wastewater** in the 2025 American Society of Civil Engineers infrastructure report card, below the national grades in both categories. [12][32]
- **Boil-water notices doubled from 2020 to 2023**, while 571 systems imposed water-use restrictions in 2023. Together, these actions affected **6.4 million Texans.** [12]
- In Toyah, a small West Texas town, residents lived under a boil-water notice for **more than six years** before the system was restored to safe drinking standards. [14]

e. Hydraulic fracturing adds another demand on Texas' water supply and produces large amounts of wastewater.

- **Hydraulic fracturing, or fracking, is used to increase oil and natural gas production by injecting water, sand, and other substances under pressure into underground rock formations to create fractures.** The Railroad Commission of Texas says a hydraulic fracturing treatment can use about 70,000 barrels of water for a vertical well and more than 90,000 barrels for a horizontal well. [34]

- **Fracking can place additional pressure on groundwater supplies, particularly in major oil-producing areas.** A Texas Water Development Board study estimated that hydraulic fracturing used about **320,000 acre-feet of water in 2019**, with approximately **89 percent coming from groundwater**. The study was specifically conducted to improve Texas' long-term water-demand projections for oil and gas development. [35][36]
- **Oil and gas production also generates large quantities of "produced water," creating both a potential water source and a water-quality challenge.** The Railroad Commission defines produced water as **brine brought to the surface during oil and gas extraction that can include formation water, hydraulic-fracturing flowback, and chemicals used during drilling and production.** The agency says produced water may contain minerals, organic compounds, and other substances that make it unsuitable for most human, agricultural, environmental, or industrial uses without treatment. [34]

3. The Texas Legislature and voters took important action in 2025, but the new funding does not match the scale of Texas' water needs.

a. SB 7 expanded the Texas Water Development Board's (TWDB) authority to finance, coordinate, and set standards for water projects [16].

- Eligible projects include brackish-water desalination, aquifer storage and recovery, wastewater reuse, certain reservoirs, and water-conveyance infrastructure. [17]
- The law prioritizes rural and underserved communities with populations under 150,000 [17].
- SB 7 raised the cap on the grant component of the Economically Distressed Areas Program from 70 percent to 90 percent. [17]

b. Voters also approved Proposition 4, which dedicates up to $1 billion in state sales-tax revenue to the Texas Water Fund each year.

- The constitutional amendment was proposed through House Joint Resolution 7 and approved by voters in November 2025. [19]
- The annual deposits begin in fiscal year 2028 and continue through fiscal year 2047, providing up to about $20 billion for water projects. [19]

c. The 2025 actions are important, but they do not fully meet the scale of Texas' water needs.

- Proposition 4 could provide up to **about $20 billion** through fiscal year 2047. [19]
- The 2027 State Water Plan estimates nearly **$174 billion in 2023 dollars** to design, construct, and implement more than 3,000 recommended water-management projects by 2080. [1]
- The $174 billion estimate covers projects that create additional future water supplies, including new reservoirs, aquifer storage and recovery, desalination, reuse, and other water-management strategies. It generally **does not include** replacing, rehabilitating, or maintaining water-supply infrastructure that already exists, so Texas' total investment need is larger. [1]

4. Texas must invest in new water supply, repair aging infrastructure, manage major industrial water demands, and expand conservation and reuse.

a. Increase funding to fully meet supply and infrastructure needs.

- Build on Proposition 4 with sustained state investment sufficient to implement priority water-supply projects and repair aging water and wastewater systems.
- Equitable project funding must address disparities between urban and rural systems.
    - According to the 2025 Texas ASCE Infrastructure Report Card, rural wastewater systems are especially vulnerable because many lack adequate staffing, financial capacity, and regulatory-compliance infrastructure. [12]

b. Plan for and manage major new industrial water demands. [28] [29]

- **Require large data centers and other major industrial users to report projected and actual water use**, including water sources, cooling technologies, electricity requirements, wastewater discharge, and reuse.
- **Include forward-looking data-center demand forecasts in regional and state water plans**, with mid-cycle amendments when major facilities are announced after a plan is adopted.
- **Require water-efficient facility design in water-stressed areas**, including dry or hybrid cooling, energy efficiency, reclaimed water, brackish water, and other non-potable supplies where feasible.

- **Require developers to contribute fairly to new water and wastewater infrastructure costs** so existing residents and utility customers do not bear the cost of serving major new industrial users.
- **Evaluate proposed facilities based on local conditions**, including drought risk, available supplies, groundwater impacts, competing community and agricultural needs, and the long-term reliability of the proposed water source.

c. Expand water supply.

- Recommended water management strategies and projects in the 2027 State Water Plan would provide 2.7 million acre-feet per year in additional water supplies by 2030 and almost 7.6 million acre-feet per year by 2080. [1]
- **Increase aquifer storage**
  - Expand Aquifer Storage and Recovery (ASR) projects that store excess surface water underground during wet years. [1]
  - Use ASR to reduce evaporation losses compared to surface reservoirs.
  - Prioritize ASR in fast-growing regions and areas with declining groundwater supplies. [1]
  - Use ASR to increase drought resilience and long-term water reliability.
- **Build major surface water projects**
  - Major surface water reservoirs continue to play a significant role in the 2027 State Water Plan, even though they require substantial time and resources to build. [1]
  - Surface-water strategies account for about 36 percent of recommended water-management strategy supplies in 2080, making surface water the largest broad supply category. [1]
  - Prioritize projects serving high-growth metropolitan areas and regions with large projected shortages.
  - See **Appendix 3** for maps of existing major reservoirs and recommended new major reservoir projects.
- **Develop desalination**
  - **Desalination** refers to removing salt and minerals from seawater or brackish groundwater to create usable water. [1]
  - Expand brackish-water desalination projects in West and South Texas.
  - Continue long-term planning for seawater desalination along the Gulf Coast.
  - Use desalination to create drought-resilient water supplies that are not dependent on rainfall. [1]

- Provide grants and financing support to help communities manage high startup costs.

d. Treat water loss as a major water-supply strategy. [26] [31]

- Texas water systems lose at least **572,000 acre-feet of water per year—approximately 186 billion gallons**. That is enough to meet the combined annual municipal water needs of Austin, Fort Worth, El Paso, Laredo, and Lubbock. [31]
- If utilities improved to the performance level already achieved by the top quarter of comparable Texas systems, the state could save nearly **250,000 acre-feet per year**. That is more than four times the water supplied by new reservoirs completed since 2010. [31]
- More recent Water Conservation Plans from over 500 utilities identify more than **272,000 acre-feet in potential annual savings by 2034**, including approximately 134,000 acre-feet from reducing water loss. [26]
- **Prioritize funding for systems with high water loss** for leak detection, pressure management, accurate meters, targeted pipe replacement, and repair of aging water mains.
- **Expand grants, affordable financing, and technical assistance** so utilities—especially small and rural systems—can complete validated audits and carry out effective water-loss plans.

e. Increase conservation and reuse.

- **Water reuse means treating wastewater to a high standard so it can be used again** for purposes such as irrigation, industry, or drinking water supplies. [4]
- **Conservation and reuse together account for 43 percent of the water provided by recommended strategies in 2080.** [1]
- **Conservation alone could provide about 2.2 million acre-feet per year**, or approximately 30 percent of all recommended strategy supplies in 2080. [1]
- **Residential conservation and efficiency improvements account for 44 percent of the potential savings** identified in recent municipal Water Conservation Plans. [26]
- **Strengthen efficiency standards** for residential, commercial, and industrial water use.
- **Expand incentives** for water-efficient appliances, irrigation systems, landscaping, and industrial water recycling.

- **Expand water-reuse projects** for municipal, industrial, agricultural, and drinking water needs, and provide grants and financing to help communities manage high startup costs. [4] [26]

Water is critical to Texas' future growth and success. The state must build new supplies, repair aging systems, reduce water loss, expand conservation and reuse, and manage major new industrial demands before the gap between supply and demand becomes a crisis.

More Information

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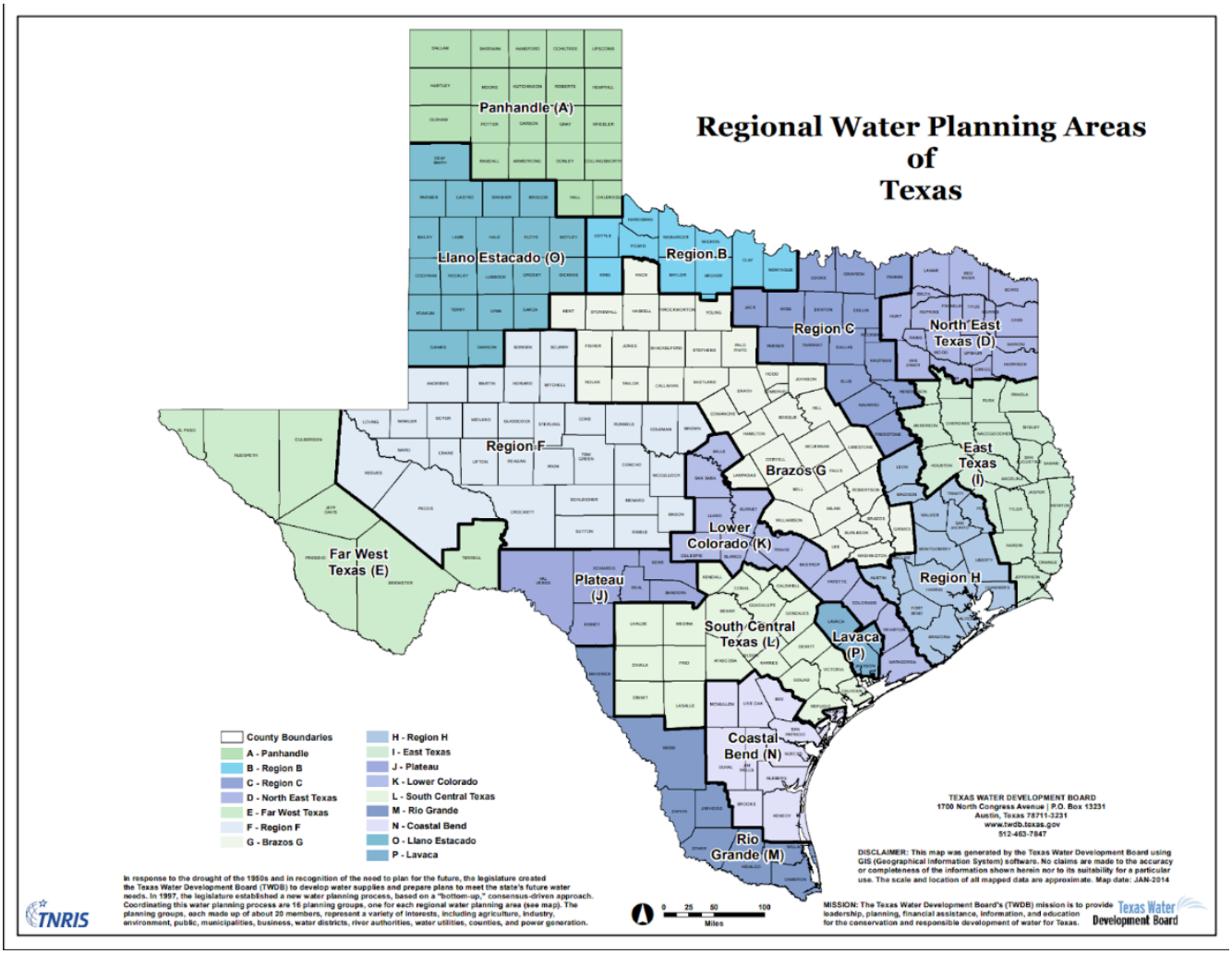
Appendix 1 – Map of the 16 Texas Water Planning Regions



Source: https://www.twdb.texas.gov/mapping/doc/maps/RWPAs_8x11.pdf

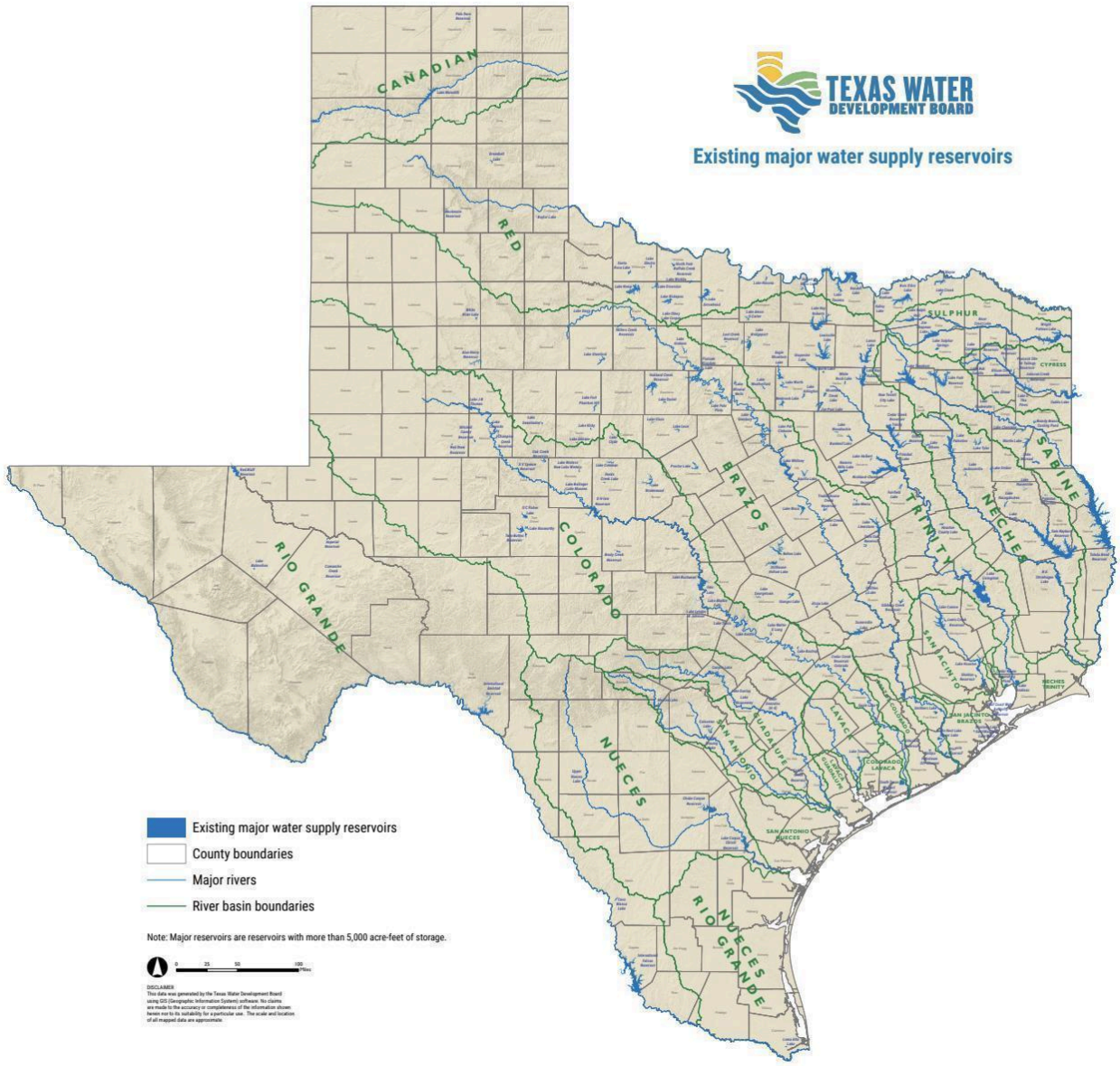
Appendix 2 – Water Projections by Water Planning Region

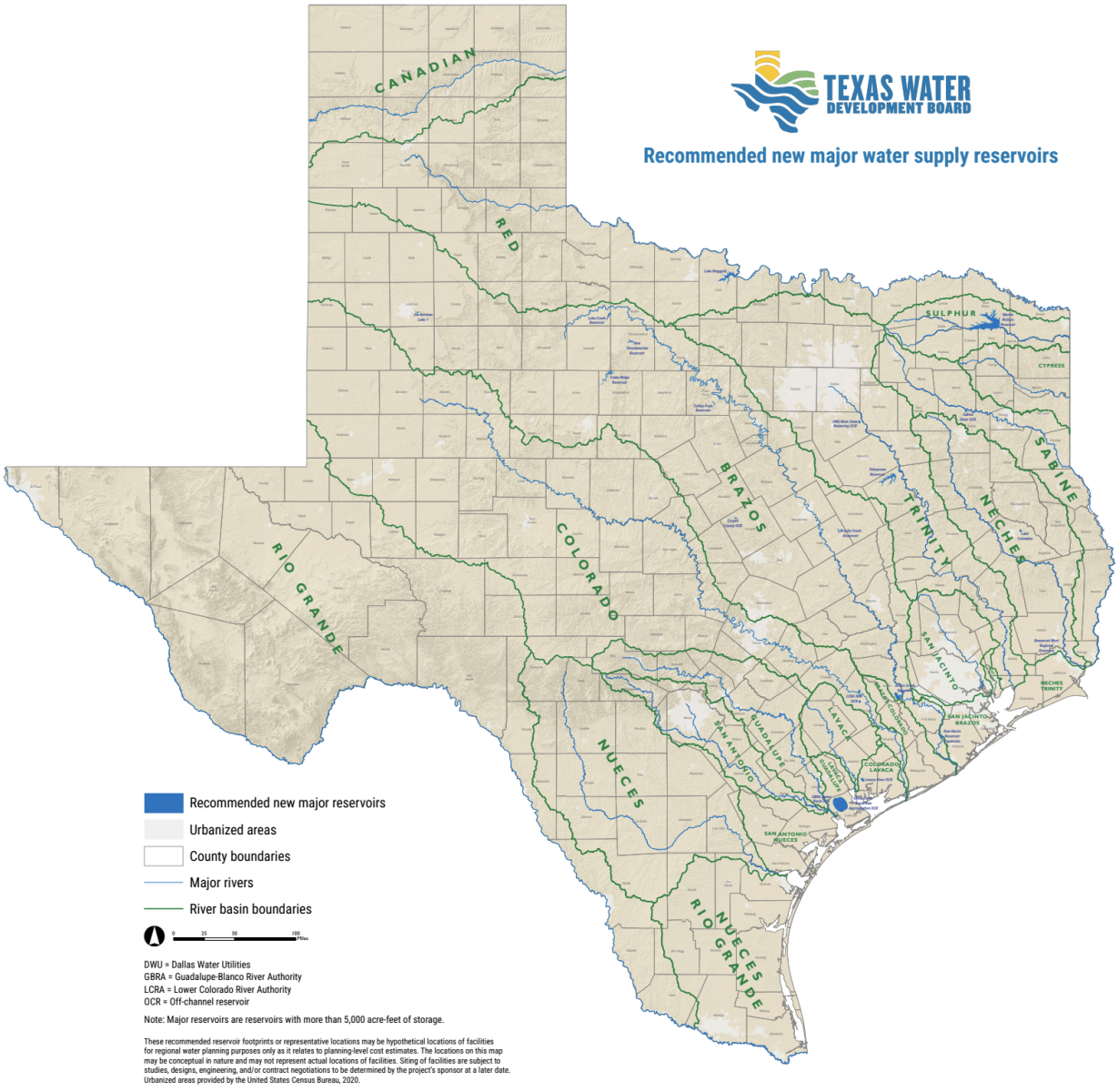
Regional Summary Data - 2030 - Strategy Supplies (acre-feet/year)

Region	Irrigation	Municipal	Manufacturing	Steam Electric Power	Livestock	Mining	Total
A	91,683	10,903	2,880	0	10,702	0	116,168
B	13,024	2,631	0	0	0	36	15,691
C	1,324	259,089	7,566	1,753	0	138	269,870
D	9,236	44,700	36,611	0	1,009	1,890	93,446
E	48,247	55,655	0	1,680	543	1,571	107,696
F	30,894	19,510	117	2,925	108	8,604	62,158
G	14,502	183,512	4,881	1,359	0	12,544	216,798
H	119,262	443,130	237,725	18,290	1,117	3,517	823,041
I	220	19,342	22,743	2,300	0	850	45,455
J	214	20,193	0	0	151	340	20,898
K	29,342	76,200	1,616	0	0	2,894	110,052
L	81,073	186,912	0	5,000	12	1,400	274,397
M	48,148	119,574	807	1,063	0	948	170,540
N	0	56,065	200,129	0	0	299	256,493
O	107,380	24,886	1,121	0	0	0	133,387
P	14,245	1,203	5,257	0	0	0	20,705
Total	*608,794*	*1,523,505*	*521,453*	*34,370*	*13,642*	*35,031*	*2,736,795*

Source: Texas Water Development Board, 2026, *Interactive 2027 State Water Plan*, https://2027.texasstatewaterplan.org/

Appendix 3 - Existing and Recommended New Major Reservoirs





Recommended New Major Reservoir Projects

Lake Ringgold	Recommended new reservoir
Marvin Nichols Reservoir	Recommended new reservoir
Tehuacana Reservoir	Recommended new reservoir
Brushy Creek Reservoir	Recommended new reservoir

Cedar Ridge Reservoir	Recommended new reservoir
Coryell County OCR	Off-channel reservoir
Lake Creek Reservoir	Recommended new reservoir
New Throckmorton Reservoir	Recommended new reservoir
Turkey Peak Reservoir	Recommended new reservoir
Allens Creek Reservoir	Recommended new reservoir
Dow Harris Reservoir Expansion	Reservoir expansion
Beaumont West Regional Reservoir	Recommended new reservoir
GBRA Lower Basin New Appropriation OCR	Off-channel reservoir
GBRA Lower Basin OCR	Off-channel reservoir
Jim Bertram Lake 7	Recommended new reservoir
Lavaca River OCR	Off-channel reservoir
Sabine River OCR	Off-channel reservoir
DWU Main Stem Balancing OCR	Off-channel reservoir
Lake Columbia	Recommended new reservoir
LCRA New OCR	Off-channel reservoir

Note: OCR means off-channel reservoir. Recommended reservoir footprints or locations may be conceptual and are shown for planning purposes only.

Source: Texas Water Development Board, 2026, *2027 State Water Plan*, https://www.twdb.texas.gov/waterplanning/swp/2027/index.asp