CURRENT STATE OF THE WATER
2025 HYDRO REPORT

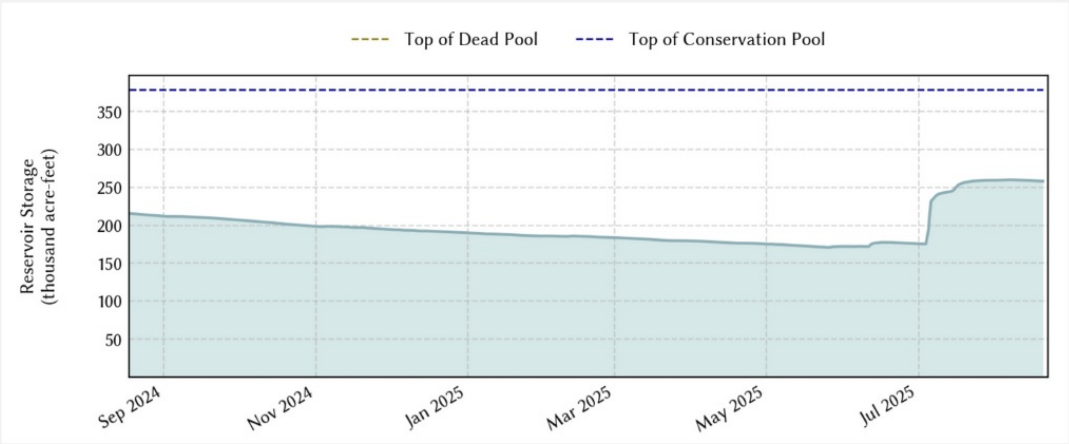
Written for those who who rely on the clear, clean, and flowing…wells, springs, and streams

Central Texas is in the midst of a multiyear water crisis. Despite brief relief from destructive July 4th floods, the region's drought continues. Reservoir levels in some major lakes have rebounded, but local aquifers and streams are still severely depleted. Rising temperatures, significant population growth and increasing water demand are compounding the situation, and climate models indicate more frequent and intense droughts in the coming decades. The path forward requires immediate commitment to stronger water conservation measures, nature-based stormwater solutions, integrated smart-growth planning and ecosystem protection. Without decisive action, the Edwards and Trinity aquifers could reach critical lows by the 2040s, permanently altering the region's springs, rivers and communities. Central Texas stands at a crossroads: continued business-as-usual will intensify water scarcity, whereas an integrated strategy focused on conservation, diversified supplies and watershed protection could build the long-term resilience the region desperately needs. **The 2025 Hydrology Report reveals the stark reality facing Central Texas water resources and what we can do to conserve and protect our water for future generations.**

CURRENT STATUS

2025 DROUGHT CONDITIONS

As of November 2025, drought conditions persist across much of Central Texas. According to the U.S. Drought Monitor, 20% of Texas is experiencing abnormally dry (D0) to exceptional drought (D4) conditions, representing a modest recovery from the heavy July rains.



After months of abnormally dry weather and destructive July 4th floods, Central Texas remains locked in a drought that has worsened over the past five years. Although Canyon Lake has recovered to about 68% of capacity and the Highland Lakes are nearing 90–100%, local aquifers and streams are still struggling.

Canyon Lake: 68.1% full as of 08/25
Source: Water Data For Texas

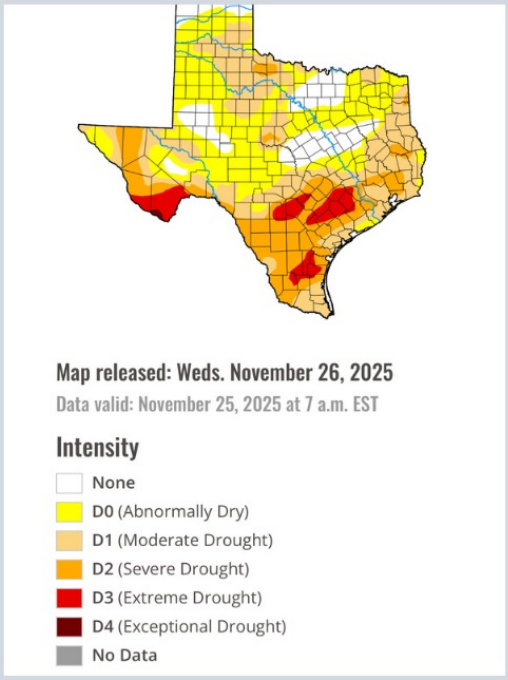
Because the July storms were concentrated near the Guadalupe River headwaters rather than across aquifer recharge zones, they provided little relief for groundwater levels. **The Edwards Aquifer Authority's Stage 4 critical drought declaration in August confirms the severity of current conditions.**

While the current drought hasn't matched the sustained intensity of the 1950s "drought of record," the similarities are real. High temperatures coupled with rapid population growth and rising water demand are compounding factors that will continue to prolong and intensify the current drought. Climate models predict more frequent and severe drought conditions in both the near term (2025-2030) and mid-term (2030-2045), necessitating urgent and comprehensive action. As one of Texas' fastest-growing counties, Hays County faces rapid land use changes and limited water resource protections; without stronger regulations, its aquifers are on track to become among the state's most stressed.

REMARKABLE WATER LEVEL RECOVERIES

The July floods served as a dramatic counterpoint to years of drought, offering eye-opening, rapid recovery—but the long-term sustainability of water sources remains in question. There were several recoveries from the July floods worth noting:

- Lake Travis surged from 44% to about 90% full, reopening for recreation.
- Lake Buchanan bounced back to 100% capacity, allowing dam operations to resume after six years.
- Canyon Lake rose from 46.6% to 67.9%, leading to public boat ramp reopening.
- Medina Lake improved modestly to 6.3%, though it remains critically low.



GROUNDWATER DISTRICTS
& Their Drought Announcements

Most of the surrounding groundwater conservation districts have declared increasingly serious drought conditions over the summer. Each authority based these announcements on their own data, yet the trend is very clear:

Central Texas is experiencing a water emergency.

Hays Trinity Groundwater Conservation District, which bases their metrics largely on the flow of the Blanco River, has declared an Emergency Stage of Drought, urging 40% curtailment of pumping permits from the Trinity Aquifer. This also includes a 30% curtailment in the Jacob's Well Groundwater Management Zone.

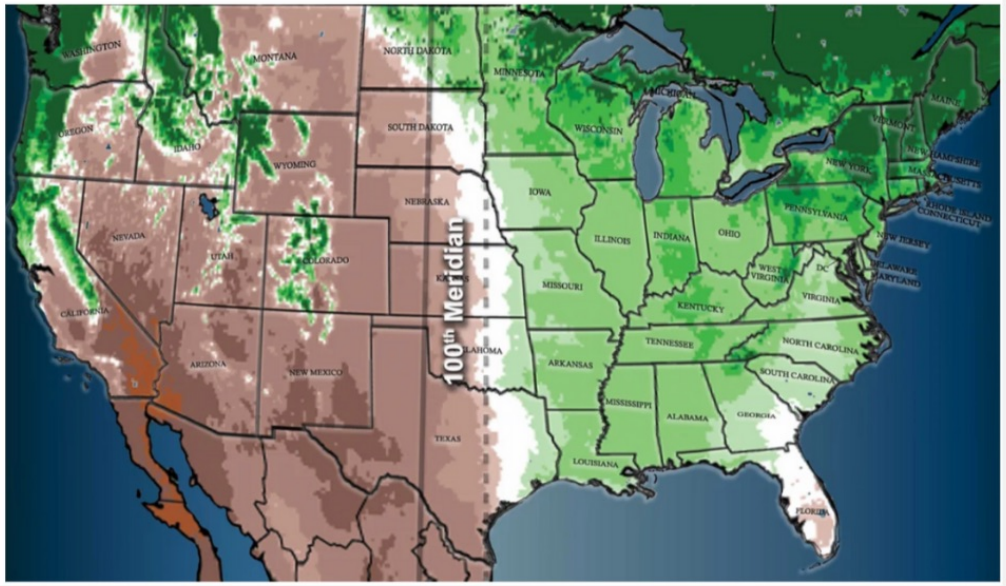
These conditions affect all of Wimberley and most residential wells. A 40% reduction may be challenging to grasp, but it can be reached by implementing a variety of measures including curtailing outdoor watering through the summer, for example. Water conservation in our region is extremely important, particularly in the recharge zones of Western HaysCounty.

Barton Springs Edwards Aquifer Conservation District has been in Stage 3 Critical Drought since beginning of summer, and due to the fluctuating nature of Barton Springs flow and their Lovelady Monitor Well, a Stage 4 exceptional drought could arise by fall.

The Edwards Aquifer Authority, which serves the greater San Antonio area, recently declared in Stage 4 Critical Drought. This is based on the levels of their index wells, as well as average flows at Comal Springs and San Marcos Springs. Some groundwater permit holders are required to curtail their usage to 44% of their usual annual withdrawal rates.

Climate studies show that the 100th meridian—the historic boundary between the arid West and the humid East—is shifting eastward, threatening to bring more desert-like conditions to the vital watersheds that sustain Central Texas.

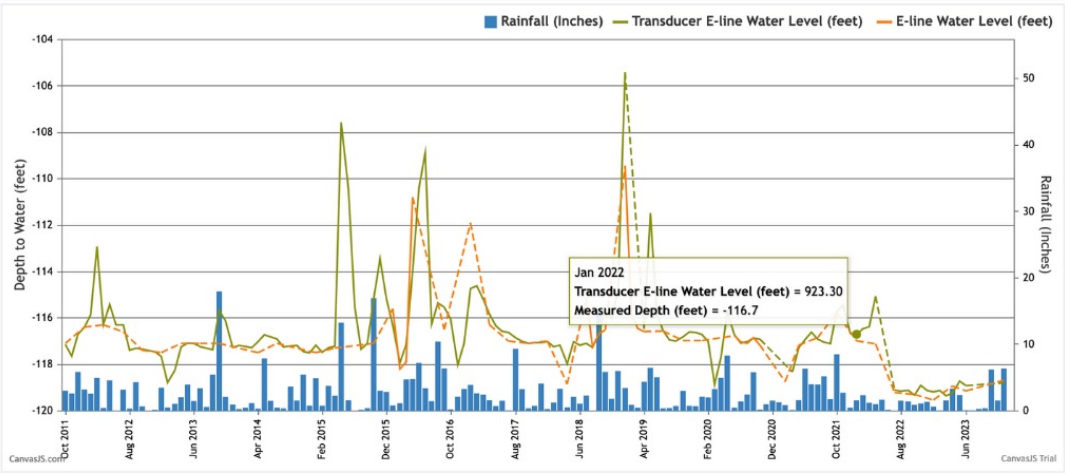
Source: tucsonwaterrunsdeep.org



GROUNDWATER CONDITIONS

The best way to understand groundwater conditions is to watch how our aquifer's wells respond to change. A test well in Burnett Ranches, just outside of Wimberley, is seeing sharp decline. Despite being deep in the Cow Creek aquifer, the well has dropped 20 feet in 5 years and stayed at that level. The Watershed Association has received reports of wells going dry in this area, and many landowners are not financially equipped to drill deeper wells. Creative solutions like rainwater collection are a potential strategy, however there are challenges to mobilizing quickly given the decreased rainfall levels. Water conservation is the most impactful and important act we can do as citizens and neighbors as all water is a shared resource and in limited supply.

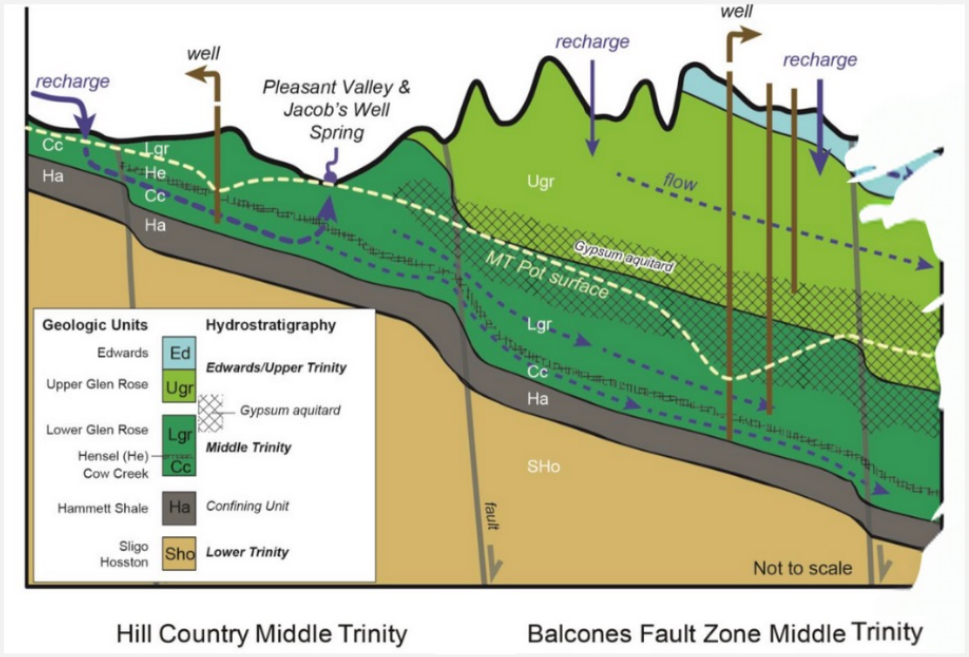
Canyon Lake water level is 16 feet lower than expected, most of the tree trunks pictured are usually submerged. Image courtesy of Michael Harwell.



The low points on this monitoring graph correspond with extremely low flow periods.

HTGCD indicator well known as Section 25 is 300 ft below the land surface and is a key metric for the confined system feeding Jacob's Well. Compared to other wells, this area is uniquely affected by groundwater pumping. Just one foot of drawdown can stop Jacobs Well flow. Since 2007, pumping from Aqua Texas testing wells has directly correlated with halting flow at the spring.

Declining Edwards and Trinity aquifer levels affect Cypress Creek, the Blanco River, and even the San Marcos and Guadalupe rivers further downstream. **Jacob's Well in Wimberley has been closed to swimming since June 2022 due to severe drought, degraded water quality, and depleted water flow from the Trinity Aquifer**—marking three consecutive summers without swimming access, a historic first for longtime residents. While the natural area remains open for hiking and viewing the spring, swimming is not permitted.



MAJOR HISTORICAL DROUGHT COMPARISON

Lake Travis near Austin, Texas (prior to July 2025 flooding)

Key Points of Comparison:

The current drought is occurring during a period of higher average temperatures than the 1950s drought of record, exacerbating evaporation of reservoirs and increases in irrigation use.

Importantly, current drought is also taking place amid significantly higher populations with higher water demands across the entire region.

The most catastrophic drought in Texas' recorded history, known as the "drought of record," occurred from 1950-1957. The drought began in late spring of 1949 in the Lower Rio Grande Valley region, then it spread to western portions of the state by fall and covered nearly all of Texas by the summer of 1951. This seven year drought instigated the formation of the Texas Water Development Board and fundamentally changed water planning and management in Texas.

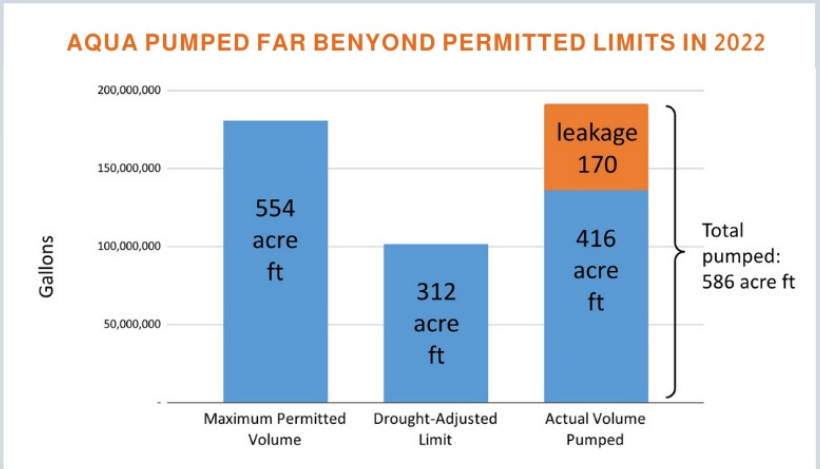
The current drought (2020-2025) shares similarities with both the 1950s and 2010s droughts in terms of how the conditions have encompassed a multiple year period. However, this drought cycle has shown more variability, with periods of temporary relief through sporadic flooding followed by drier prolonged conditions. In short, the floods are getting worse. Near term projections show a slight decrease in average annual precipitation for Central Texas, but more importantly, a marked shift in the timing and intensity of rainfall events. Long term climate models predict fewer steady, soaking rains and more intense, flash precipitation events - rainfall events that contribute less effectively to groundwater recharge and reservoir storage. These conditions underscore the need to build more resilient systems for managing our water resources.

While the 1950s drought affected virtually all of Texas simultaneously for an extended period, the current drought has shown more regional variability, with Central Texas being hit particularly hard. Unlike during the 1950s drought, Texas now has extensive water infrastructure it has developed in response to previous droughts. However, the current drought, occurring after decades of groundwater depletion, has reduced the resilience of critical water systems, particularly in the Edwards and Trinity aquifers. Climate research indicates that the 100th meridian, a climatic divide between the arid West and humid East, is shifting eastward. This shift could lead to more desert-like conditions over the critical watershed areas that supply Central Texas.

Central Texas has experienced significant rainfall deficits, with Austin recording a 30-inch deficit since the start of 2022 and the Hill Country missing 40 inches of rain during the same period.

WATER CRISIS BY THE NUMBERS

- **Growth & Pressure**: Comal county alone saw a 46.5% increase in water consumption from 2018-2022 and water costs rising 218.7%
- **Crumbling Infrastructure**: Texas needs $80 billion for water infrastructure outlined in the 2022 State Water Plan, but faces a $47 billion funding shortfall
- **Shocking Waste**: In one year, Aqua Texas leaked more water than Jacobs Well flowed, highlighting how infrastructure failures compound our water crisis.



One single foot of drawdown in this area has proven to stop the flow of Jacobs Well, and since 2007 we have been able to correlate the pumping of Aqua Texas testing wells with the halting of flow at the spring.

THE TEXAS DATA CENTER BOOM: A THREAT TO WATER, POWER, AND LOCAL CONTROL

A historic industrial boom is underway along Texas' I-35 corridor, driven by tech companies seeking affordable land, low taxes, and minimal regulation. While local victories, like the denial of the *Highlander SM One* project in San Marcos, do occur, ongoing challenges highlight a larger systemic crisis. State incentives and regulatory gaps are facilitating the rapid proliferation of data centers, posing severe threats to vital resources and local governance.

Key Drivers of the Boom

- State Incentives: Texas offers tax breaks and promotes an "open for business" environment with low regulation.
- Cheap Energy: The state's push for fracked-gas power plants provides a seemingly abundant, though environmentally costly, energy source.
- Regulatory Gaps: Large areas of unincorporated land exist outside city limits and Extraterritorial Jurisdictions (ETJs), creating a legal no-man's-land for industrial development with minimal oversight. Recent state laws have further reduced county authority to regulate these areas.

Threats to Water Supply and Electrical Grids

The operational demands of data centers create a dangerous feedback loop that strains Central Texas' most vital resources

The Energy-Water Nexus: While some new facilities use less direct water, their massive energy consumption creates immense indirect water use (often 8 times more than the typical data center itself). Fracked-gas power plants require significant water for cooling, effectively outsourcing the water footprint.

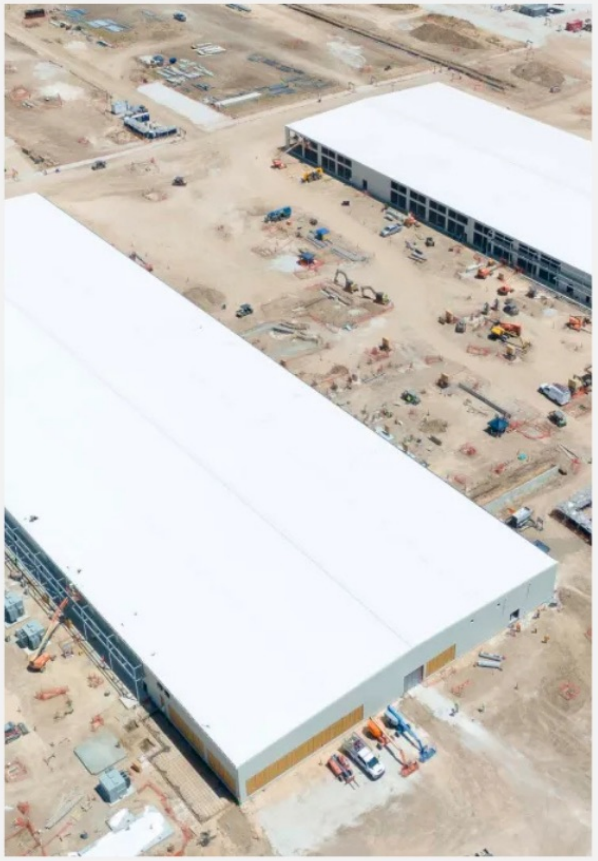
"Oil Boom" Mentality: Texas' Modified Rule of Capture water law treats groundwater as private property, allowing landowners to pump vast quantities with no regard for neighboring wells or aquifer sustainability. This is creating a "race to the bottom" for aquifers.

Massive Grid Demand: Data centers place an unprecedented load on the state's fragile electric grid, increasing blackout risks and requiring rapid construction of new, often fossil-fueled, power generation. For example, the proposed *CyrusOne* project would use roughly 2.5 times the electricity of the entire City of San Marcos.

False Solutions: Piping in water from other regions (like the Carrizo Aquifer) to solve local scarcity is a dangerous "silver bullet" mentality that creates new environmental justice problems without addressing infinite demand on finite resources.

Ruptures in Local Governance:

The current system is unequipped to manage the scale of industrial development now arriving in the region. Counties like Hays still carry a rural ethos of minimal regulation, leaving them without the authority to zone or mitigate the impacts of 21st-century industrial projects. Cities, meanwhile, are left with blunt and costly tools—most often reactive lawsuits rather than proactive planning. At the same time, data centers operate around the clock to fulfill global contracts, exempt from the water and power curtailments that local residents must observe. This privileged consumption undermines community-wide conservation efforts and highlights the imbalance between global industry and local capacity.



Microsoft facility construction near San Antonio
Photo by: Scott Ball / San Antonio Report

Local Pushback in San Marcos

The San Marcos City Council rejected a proposed data center after two hours of public testimony, voting down a rezoning request for a 64-acre site near the Hays Energy Power Plant. Council members Amanda Rodriguez and Saul Gonzales cited the project's massive resource demands and environmental impact. Utilities Director Tyler Hjorth warned that just two of the five planned buildings would consume 2.5 times the city's peak power use. Despite developers' claims of reduced water consumption, concerns over noise and river impacts led the council to deny the project, triggering a one-year waiting period before a similar proposal can return.

Photos by: Matthew Guthrie

THE PATH FORWARD: FROM CRISIS TO TRANSFORMATION

Central Texas faces a fundamental shift in its water future. Climate models predict not just less rainfall, but a dramatic change in how rain falls—fewer steady, soaking rains that recharge aquifers and more intense flash events that rush off the landscape without replenishing groundwater. Without significant management changes, the Edwards and Trinity aquifers will reach critically low levels by the 2040s, permanently affecting municipal supplies and the spring flows that define our region's character.

Yet within this challenge lies opportunity for transformation. Central Texas must pivot from a supply-focused approach to one centered on conservation and efficiency. This means breaking down silos between water sectors, recognizing healthy watersheds as essential infrastructure, ensuring equitable access, and building adaptive systems for changing climate conditions.

We stand at a critical juncture-continue managing water as a commodity to be extracted, or embrace it as the foundation of ecological and human wellbeing. The region's future depends on choosing transformation over business as usual.

COMMUNITY-FOCUSED WATER ACTIONS

Community actions for clean, clear, flowing water

- **Water conservation is the most important step we can take as neighbors.** Simple changes like watering during cool hours, repairing sprinklers, and using native plants can save *30% of household water use.*
- **Every roof becomes a water source when we harvest rainwater**—a typical home can collect *1,000+ gallons per inch of rain.* Texas law protects this right, and greywater systems extend our water supply even further.
- **Green infrastructure like rain gardens and pervious pavement manage floods while recharging aquifers.** Smart growth limits pavement in sensitive areas, and fixing leaking pipes stops waste at the source.
- **The One Water approach connects it all**—treating every drop as part of a single system that serves our community while restoring the springs and rivers that define our region.