



Data Centers in Texas: Overview and Recommendations

Groundwater Summit – POSGCD

Rachel Hanes
Greater Edwards Aquifer Alliance
August 6, 2027

Who are we?

Greater Edwards Aquifer Alliance:

Dedicated to the protection and preservation of the Edwards and Trinity aquifers and the watersheds and land that sustains them.

<https://aquiferalliance.org/wp-content/uploads/2025/11/Data-Centers-in-Texas-A-Review-and-Call-for-Innovation-and-Regulation-GEAA-April-2026.pdf>



Data Centers in Texas: A Review and Call for Innovation and Regulation

April 2026

GEAA Greater
Edwards
Aquifer
Alliance

What is a Data Center?

"Data Centers"



On-Site

Smaller server rooms on-site of the business that uses them



Enterprise and Cloud

Larger off-site location relied on by one business or a few business. Can be used for cloud storage.



Cryptocurrency

Facility dedicated solely to mining cryptocurrency, like bitcoin.

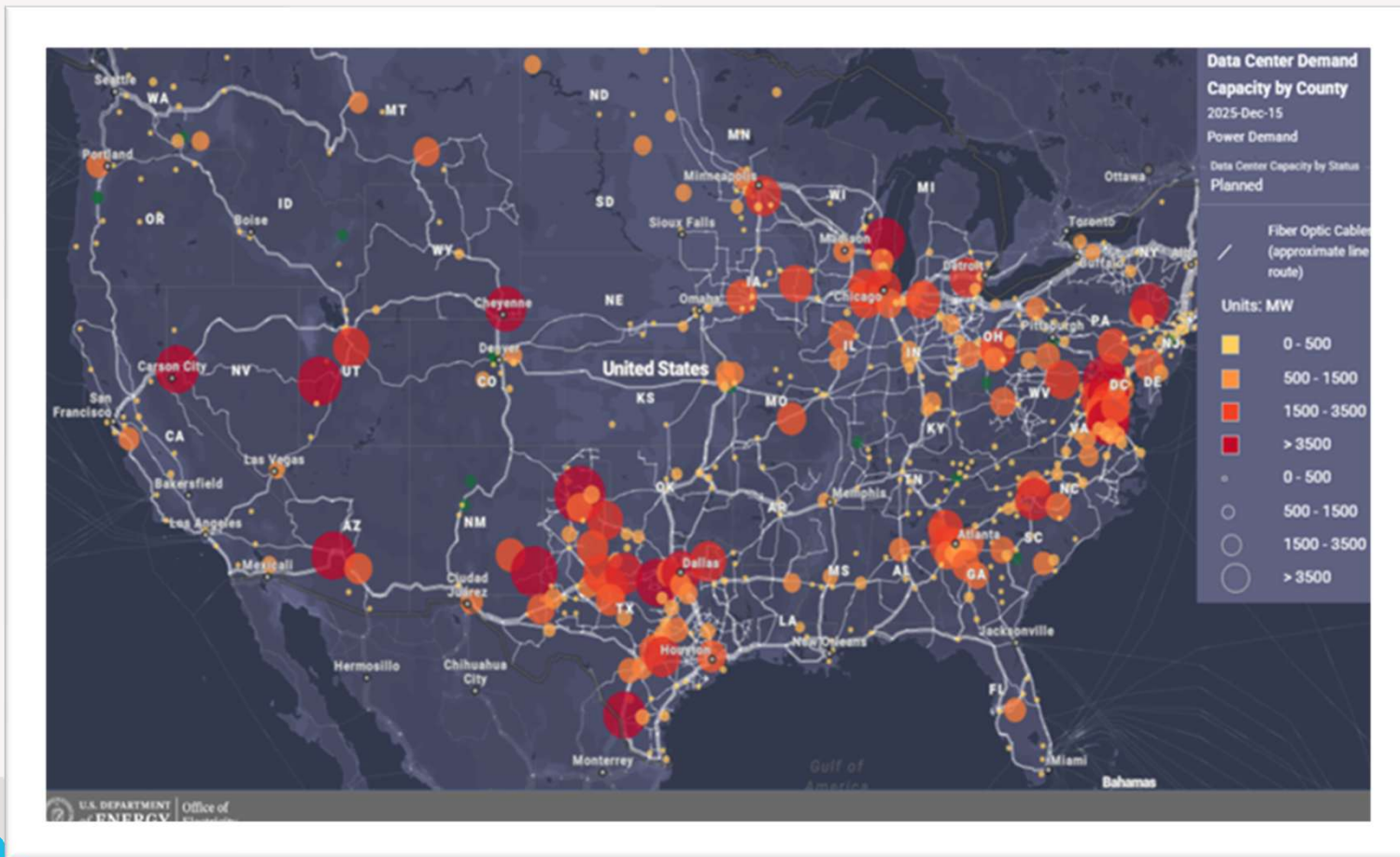


Hyperscale and AI

Massive off-site facilities often used exclusively by one company and often for AI purposes.

A Changing Landscape

The rise in high compute artificial intelligence has resulted in an explosion of hyperscale data centers across Texas.



Water Challenges and Considerations

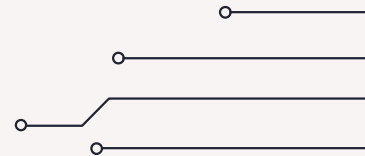
Apply similarly to hyperscale data centers, cryptocurrency mines, chip manufacturers, & other emerging industries.

Direct vs. Indirect Use

- Direct: On-site water use, primarily for cooling purposes, around **17-25%**
- Indirect: Water used to generate electricity used by facility, around **75-83%**

Water-Energy Nexus

- The most water-efficient solutions tend to use more electricity & vice versa
- Closed loop vs evaporative cooling systems
- Energy sources influence water demand



Water Challenges and Considerations

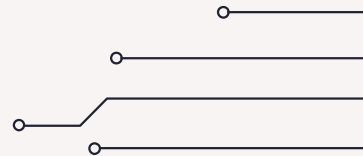
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Water & Wastewater

- Municipal (potable) water
- GCD-permitted groundwater
- Non-permitted groundwater
- Construction *and* operation
- Wastewater challenges

Governance

- State Water Plan gaps
- Reporting gaps
- Transparency requirements
- Enforcement
- Local control



Water-Related Solutions

Apply similarly to hyperscale data centers, cryptocurrency mines, chip manufacturers, & other emerging industries.

- **Improve Transparency:** require reporting of water & power uses and sources, cooling tech, peak consumption, etc.; limit scope of NDA's; increase state enforcement
- **Require non-potable water use:** recycled wastewater, stormwater/rainwater capture, atmospheric harvesting, recycled produced water, liquid immersion
- **Require water & power efficiency:** require adoption by industry; strengthen statewide standards and building codes; invest in statewide efficiency
- **Protect groundwater:** technical & financial resources for local governments and Groundwater Conservation Districts; require proof of availability; option for expanded GCD authority; expand GCDs into "white spaces"

The above recommendations are proposed by the Greater Edwards Aquifer Alliance and do not necessarily represent the views of the host organization or other panelists.

Water-Related Solutions Cont'd

Apply similarly to hyperscale data centers, cryptocurrency mines, chip manufacturers, & other emerging industries.

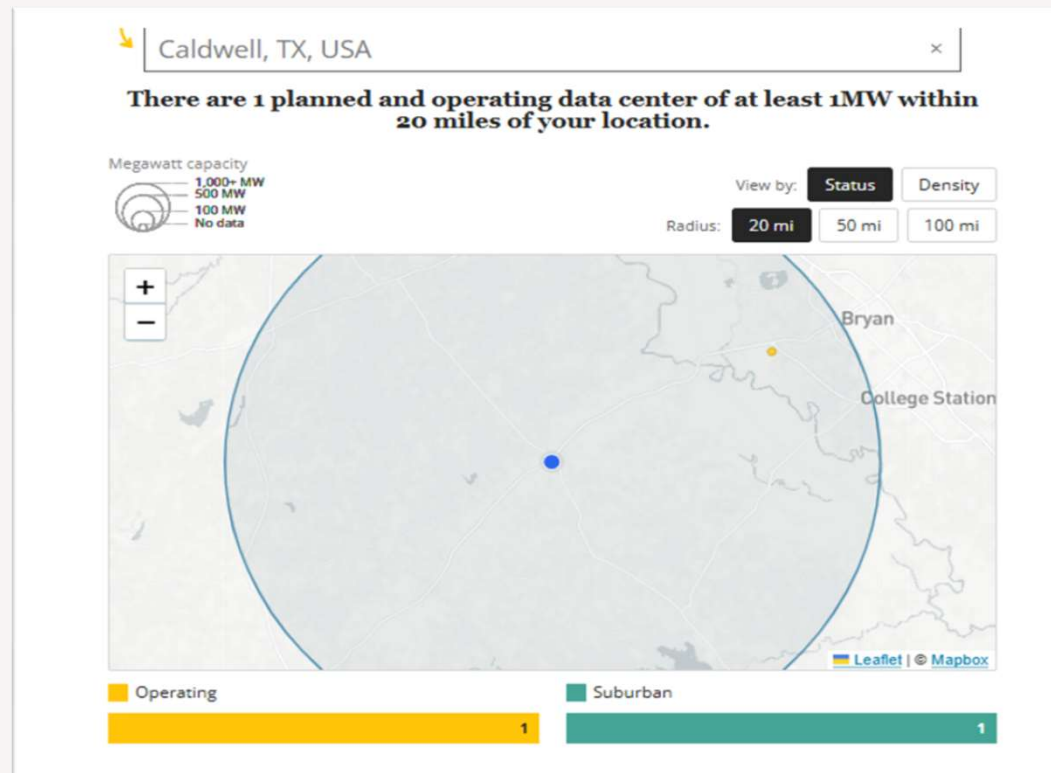
- **Improve State Water Plan:** establish mechanism of including emerging industry water use into state planning process
- **Increase investment in low-water use energy** and reduce dependence on higher water use energy sources
- **Require best available cooling technologies** for lowest water and energy use
- **Wastewater standards:** meet drinking water or Type 1 recycled wastewater standards and recycle on-site; increase public disclosure and enforcement
- **Support local utilities** in developing appropriate water/energy rates

The above recommendations are proposed by the Greater Edwards Aquifer Alliance and do not necessarily represent the views of the host organization or other panelists.

Other Challenges and Considerations

Apply similarly to hyperscale data centers, cryptocurrency mines, chip manufacturers, & other emerging industries.

- Land Use
- Air and Noise
- Investment
- Technology



Other Solutions

Apply similarly to hyperscale data centers, cryptocurrency mines, chip manufacturers, & other emerging industries.

- **Provide County Authority Options** for floodplain management, impervious cover limits, watershed protection ordinances, incompatible land use limits, buffer/open space requirements, noise pollution limits, and development moratoriums
- **Community Benefit Agreements:** water use and source restrictions, air/noise pollution limits, monitoring/metering, public reporting/disclosure, decommissioning bond, local investment, cumulative impacts assessment, revenue commitments
- **Impact Fees and Investment:** eliminate state sales/use tax; establish higher industrial water/electricity rates; assess fees proportional to impact on local/state resources to be paid into TWDB/TCEQ programs or local government funds
- **Data Centers to Adopt Best Management Practices** for best available cooling technologies, non-potable sources, and wastewater treatment/reuse; locate site on existing industrial/brownfield sites; invest in low-water energy sources; limit air and noise pollution sources

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THANKS!

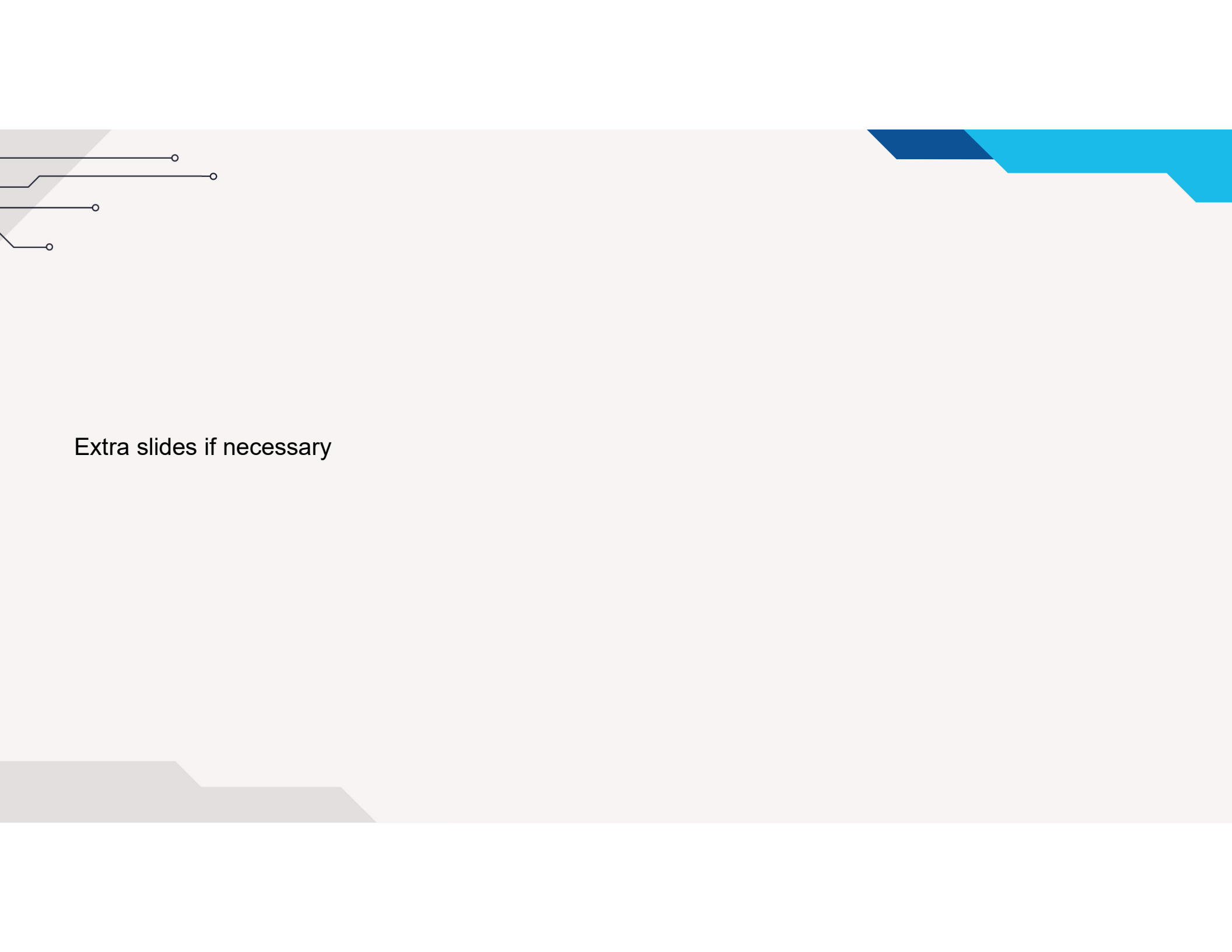
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April 2026

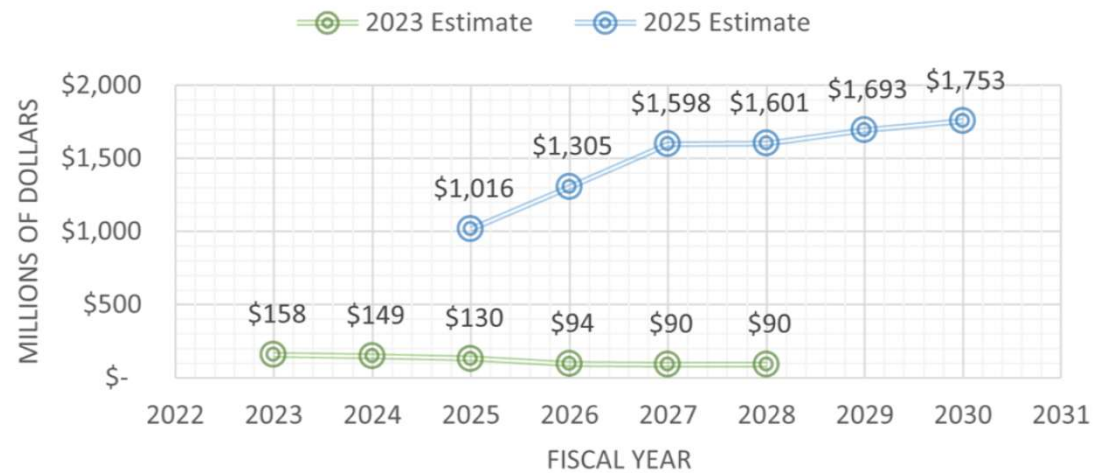
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Extra slides if necessary

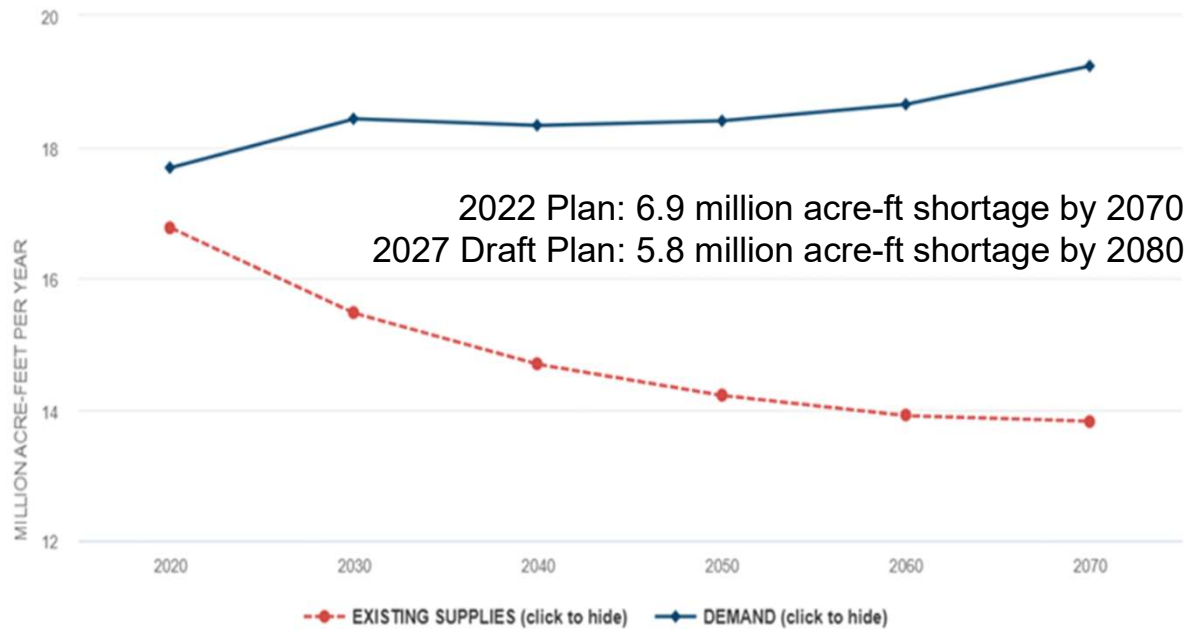
Data Centers: A Case Study of Explosive Growth without Preparation

"Property Used in Certain Data Centers" Tax
Exemption Estimates for Texas



Water Challenges

EXHIBIT 1: TEXAS' EXISTING WATER SUPPLY AND PROJECTED WATER DEMAND, 2020-2070



Sources: Texas Water Development Board; Texas Comptroller of Public Accounts

THE TEXAS TRIBUNE

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Texas Floods

2026 Texas Elections

Paxton vs. Talarico

Schools Explorer

TribFest 2026

ENVIRONMENT

Texas needs at least \$174 billion to avoid water crisis, state says

That new amount is more than double the amount predicted four years ago. The new forecast comes as supply is already drying up.

BY CARLOS NOGUERAS RAMOS AND COLLEEN DEGUZMAN
APRIL 16, 2026, 4:30 P.M. CENTRAL

REPUBLISH SHARE

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Texas leaders are asking data centers how much water they use. Most aren't responding.

Data centers use water to cool their massive arrays of computer servers. A state agency sent out a survey to figure out how much, but less than a third of the companies responded.

BY ALEJANDRA MARTINEZ
MAY 19, 2026, 6:45 P.M. CENTRAL

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TribFest 2026

ERCOT: Texas' power grid meeting record demand now, but could falter when it doubles by 2032

Solar and battery power generations have helped bolster ERCOT's grid, but data center, population and economic growth is slated to surge demand.

BY PAUL COBLER
MAY 19, 2026, 6:45 P.M. CENTRAL

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Other Challenges

AI boom could cause 600,000 asthma cases, \$20 billion in health costs by 2030

Researchers estimate the public health cost of data centres in the US could exceed \$20 billion by 2030.

by Sujita Sinha

Energy

Dec 11, 2024 08:31 AM EST



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BY ALEJANDRA MARTINEZ

JUNE 23, 2026, 6:45 P.M. CENTRAL

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Texas is giving data centers more than \$1 billion in tax breaks each year

The tax break is one of the state's costliest incentive programs and soon to be the most expensive of its kind in the nation.

BY PAUL COBLER, GRAPHIC BY APURVA MAHAJAN

APRIL 8, 2026, 5:00 A.M. CENTRAL

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How Data Centers Are Eating Up Rural Texas

Do they spell doom for local farmers?



by Sammie Seamon

APRIL 30, 2026



CHRON

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NEWS

Texans say AI boom sounds like a 'washing machine' that never turns off

"The noise rattles you to the core 24/7."

By Macy Meinhart, Multimedia reporter

May 17, 2026



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Eight data centers threaten to transform this small Texas county. Local officials say they have no power to stop them.

At least 248 data centers are planned to be built in Texas. Of those, nearly half will be built in unincorporated areas, where county officials are limited in their ability to regulate development, according to a Texas Tribune analysis.

BY ALEJANDRA MARTINEZ, DATA ANALYSIS AND GRAPHICS BY ALEX FORD AND APURVA MAHAJAN, VISUALS BY SHELBY TAUBER

REPUBLICSHARE

Challenges

The rise in high compute artificial intelligence has resulted in an explosion of hyperscale data centers across Texas.

Energy

- No mandatory energy standards
- Requested more than 5x all-time peak power demand
- Avg facility uses same energy as small town
- Power demand increasingly met by natural gas and backup diesel

Water/ Wastewater

- Power plants supplying energy have significant water demands
- Avg traditional facility uses equivalent gpd of 1,000 homes
- Closed loop systems not necessarily perfect, issues with peak demand
- Wastewater discharge and makeup often unknown

Public Health

- On-site backup diesel generators release harmful particulate matter
- Delayed retirement of coal plants + new natural gas plants increases harmful particulate matter
- Noise pollution linked to health concerns
- Localized heat impact

Good Governance

- Gaps in State Water Plan Accounting (existing 5.8 million AF shortage by 2080)
- Massive jump in foregone revenue due to state tax breaks
- Proliferation of non-disclosure agreements
- General lack of transparency
- Groundwater governance

Recommendations

Apply equally to hyperscale data centers, cryptocurrency mines, chip manufacturers, & other emerging industries.

Energy

- Require annual reporting of energy use, maximum demand, and energy sources
- Direct PUC to develop guidance on large energy user rates
- Increase investment in solar + battery and wind power
- Increase investment in energy efficiency and require energy standards

Water/ Wastewater

- Require annual reporting of cooling systems, peak water consumption, and water sources
- Require use of non-potable sources for cooling and other processes
- Extend GAC requirement to large industrial users
- Require local water replenishment
- Require limits on waste-water discharge and strengthen pretreatment regulations
- Direct PUC to develop guidance on large water user rates and update TWC to require fair cost share

Public Health

- Limit use of backup diesel generation
- Cap noise pollution at U.S. EPA limits
- Increase investment in solar + battery and wind power

Good Governance

- Require publicly accessible state agency website w/ water and energy use info
- Limit state tax exemptions
- Make certain NDAs unenforceable or void
- Clarify and strengthen local government tools
- Expand GCD coverage in “white spaces,” clarify and strengthen GCD tools
- Encourage community benefit agreements