



Data Centers and Water Use

The data center industry is committed to responsible water use, and it prioritizes efficient water practices and responsible management across operations and development. Collectively, the industry used significantly less water than other essential industries in 2025, including the food and beverage, and semiconductor sectors.

The data center industry continues to invest in water management, deploy water efficiency practices, and pilot advanced solutions, including AI-driven cooling optimization and on-site water recycling systems, to further reduce consumption and maximize water efficiency. DCC member companies are also engaging in public-private partnerships such as co-investing in water reuse infrastructure, utility leakage detection, agricultural partnerships, and watershed replenishment projects to support local watersheds and the communities that depend on them.

The Facts on Data Center Water Use

- According to the [Joint Legislative Audit and Review Commission](#) (JLARC) in Virginia, the world's largest data center market, 83% of data centers use as much, if not less, water than a large commercial office building. The report also found data center water use in the state is sustainable.
- A [Bluefield Research report](#) found that data centers are estimated to use approximately 39 billion gallons per year (BGY) of water in 2025. That is compared to:
 - Utility water leakage: 2,500 BGY—18% of municipal treated water is lost to leakage
 - Food and beverage industry: 533 BGY
 - Semiconductor industry: 59 BGY
- A recently released report from [Kyl Center for Water Policy at Arizona State University](#) showed that data centers in Arizona are estimated to use less acre-feet of water than:
 - Semiconductor manufacturing (which has a significant presence in the state)
 - Sand & gravel mining
 - Golf courses
 - Beverage facilities
- [Research finds](#) that data centers in the U.S. consumed approximately 0.2% of the nation's freshwater in 2023.
- The [Houston Advanced Research Center \(HARC\) report](#) estimates that between direct (on-site cooling) and indirect (electricity generation) water consumption, existing data centers in Texas consume approximately 25 billion gallons (or 77,000 acre-feet) of water—**the equivalent of 0.4% of total water use in Texas in 2025.**



Key Context for Data Center Cooling & Associated Water Use

Servers generate heat and require cooling. Many technologies, such as air cooling, liquid cooling, or some combination, can help keep data center server halls at the right temperature and humidity. There is no one-size-fits-all solution for cooling, and the best approach often depends on local factors, such as humidity, climate/temperature, and availability of water, including recycled, non-potable, or harvested rainwater sources.

Types of Cooling

- Server level cooling
 - Air cooling uses air conditioning, fans, and vents to circulate ambient air, expelling the hot air produced by computing equipment. It's the most traditional cooling method.
 - Liquid cooling systems use coolants, including water, that circulate through a pipe network, absorbing heat away from IT equipment.
 - A hybrid cooling approach integrates multiple cooling technologies to optimize thermal management based on specific IT equipment demands.
- Building level cooling
 - Non-evaporative cooling systems use fans and air conditioning to cool liquid and reject hot air from the facility.
 - Evaporative cooling systems use fans and water evaporation to draw heat away.

The tradeoff: Technologies that use less water often use more energy and vice versa. The right cooling choice depends on site specific local factors.

The Bottom Line

The Data Center Coalition and our members support responsible data center growth across the nation. Data centers represent a small share of local and statewide water use, and DCC members are pioneering technologies that are reshaping the water footprint of digital infrastructure. Through modern cooling technology and local planning, the industry is demonstrating that growth and water stewardship can go hand in hand.

About DCC

The Data Center Coalition (DCC) is the membership association for leading data center owners and operators, as well as large end users. As the voice of the industry, DCC advocates for a strong business climate, as well as policies and investments that support the growth and success of the sector.

Contact Us

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