Introduction

With the rise of artificial intelligence in Utah, environmental concerns are surfacing. Reports of significant water usage, energy output and intake, carbon emissions and claims of harmful air quality have left some Utah residents wondering how this will affect them.

Over the past two decades, data centers have been built in northern Utah, especially in Silicon Slopes, so this is not a new concept. However, most of these data centers are being built in previously developed areas within Salt Lake and Utah counties, not in agricultural areas.

A few of the data centers in northern Utah have been built in repurposed abandoned buildings within industrial districts. It is a new idea to build data centers miles away from largely populated areas. Many of the proposed data centers are being built on purchased farmland, previously owned land or, in some cases, government land.

According to Planet Tracker, almost a third of data centers in the United States are located in areas with high or extremely high water stress.

Per research by the Environmental and Energy Study Institute, large data centers can consume up to five million gallons of water per day, about 1.8 billion gallons annually, which is enough to supply a town of up to 50,000 people. Every 100-word prompt uses approximately one bottle of water, with thousands of prompts being processed every minute. An estimated 163.7 billion gallons of water were consumed annually as of 2021.[1]

Although this ordinance wasn't specifically targeting data centers, earlier this year, Salt Lake City adopted a city ordinance restricting any new nonresidential property from using over 200,000 gallons of water per day. Properties used for agriculture, education, religious practice, social services or hospitals are exempt.[2]

"I think everyone is concerned about water usage in data centers, especially here in Utah where our water supply is limited and already stretched thin," said professor Erich R. Mueller, associate professor of hydrology at Southern Utah University. "That said, there are a lot of different numbers floating around as to exactly how much water these data centers need."

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[1] Environmental and Energy Study Institute (EESI). (n.d.). Data Centers and Water Consumption | EESI.
[2] Salt Lake City wants to limit nonresidential water use to 200,000 gallons daily, Carter Williams KSL.com

In March 2026, Utah House Bill 76 was signed into law, requiring data centers over 10,000 square feet that are planning to use more than 75 acre-feet of water annually to notify the Utah Division of Water Rights about plans and report their water use.

Pre-construction reporting is required under this law, requiring data center operators to file a report at least 90 days before construction begins.

For already operating data centers, the report requires actual water withdrawals, verifiable efforts to reduce water consumption and proven efforts to protect the environment from polluted water. An annual report is required from each data center and due on July 1 of each year.[3]

The pre-construction report includes estimated annual water withdrawal, discharge water treatment plans, estimated discharge water temperature adjustment and a plan for water reuse and replacement efforts.

Pre-constructed data centers are required to purchase water rights from a previous owner. The state engineer then needs to approve the conversion.

“Presumably, any water use would have to come in the form of obtaining water rights following Utah law,” Mueller said. “In many parts of Utah, no new water rights are being issued — including Iron County — so if those water rights were to be used for data centers, they would have to be purchased from existing users.”

The state water rights division oversees the transfer and is required to allow the public and other concerned groups to submit a formal complaint or protest.

Due to the rise in demand for data centers, the existing centers are requiring more energy to run. In desert environments like Utah, many companies are switching to a water-conscious model for their data centers. However, closed-loop cooling systems require higher amounts of energy.

Active data centers in northern Utah

Bumblehive

The Bumblehive Data Center in Bluffdale is a National Security Agency data center located in Camp Williams State Military Reservation. According to Grist and The Salt

[3] Visit the Utah Division of Water Rights official website for more information on report requirements

Lake Tribune, between October 2024 and September 2025, Bumblehive consumed more than 126 million gallons of water, or 390 acre-feet.[4]

Novva

The Novva data center in West Jordan only uses 3 to 4.7 million gallons of water a year, with two-thirds of it used for its landscaping. According to the Novva website, they use a closed-loop refrigeration system that initially required 55,000 gallons of water and outdoor ambient air to naturally cool the servers.

Meta

Meta's data center in Eagle Mountain uses about 13.5 million gallons of water annually. They recycle the water multiple times through the cooling system rather than single-use discarding. When the water is discarded, it is treated and used in the city's green spaces like Cory B. Wride Memorial Park.[5]

Meta operates a multi-building campus that is still under construction, although it became operational in 2021.

Aligned

Aligned's West Jordan data center became operational in 2024 and used 47.4 million gallons of water between October 2024 and September 2025. Although they claim to use a closed-loop system, they are still drawing from the municipal water supply to avoid corrosion.

Oracle

The Oracle data center, also located in West Jordan, was completed in 2011 but implemented AI in 2024. This data center used 23.1 million gallons of water between October 2024 and September 2025. The water is allocated to their cooling tower operations and heat-rejection maintenance.[6]

QTS

[4] A unit of volume measurement defined as the amount required to cover an acre of land in one foot of water. Converts to exactly 325,851 U.S. gallons.
[5] Ireland, K. (2024, October 24). Datacenter water now re-used for Wride park grass. Eagle Mountain City.
[6] According to the data center stress index's Utah live snap energy loadout

The QTS campus in Eagle Mountain is planned to be completed later this year. Water is pushed through a closed-loop system with a required initial amount of about 600,000 gallons. QTS claims that their design will save over 300 million gallons of water annually.

Proposed data centers

Antelope

The Antelope campus, approved in June 2026, will be located about 8 miles west of Cedar City on county land. The campus is predicted to be 6.75 million square feet with a power load of about 1,500 MW. The developers plan to build a 40-acre gas power plant that feeds directly from the Kern River Interstate natural gas pipeline.

The developers are planning on using a closed-loop system, with their website claiming that it won't use more water than a few households.

Stratos

The Stratos data campus is proposed to be about 40,000 acres, 62 square miles, with only 5% of the land being used for the actual data halls. The campus is located about 10 miles north of the Great Salt Lake in unincorporated Box Elder County.

The estimated water consumption for Stratos is dependent on which cooling method is used. If a reciprocating internal combustion engine is used, it will consume about 2 billion gallons of water a year, primarily for power generation. However, if powered by combined-cycle gas turbines, it will consume up to 16.6 billion gallons of water per year, according to the Utah Clean Energy website.

Due to its proximity to the Great Salt Lake, many environmental groups are worried about the potential waste-heat impacts on the basin, along with effects on the water levels.

The rise of AI in Utah brings many significant environmental trade-offs. While the Stratos project has drawn specific concerns about the potential impact on the Great Salt Lake, communities throughout the state are facing similar concerns over how the demand of the data centers will drain local water tables.

Moving forward, many state and local agencies are requiring the data companies to prioritize strict environmental standards, long-term water conservation and honest

reporting to guarantee the data centers don’t come at the cost of Utah’s environmental health and that of its citizens.