

Artificial intelligence companies have flocked to the Great Lakes region to build data centers because the region provides the freshwater needed to cool AI data centers, but locals and environmentalists are concerned with energy use and water consumption.



Image By: [Cameron Schneider](#)

Wisconsin's new AI data centers spark transparency, environmental concerns

By [Avery Chheda](#) | November 6, 2025 3:00 am

Artificial intelligence and the data centers that train, install and maintain it have found a new home in the Great Lakes region, whose abundance of freshwater is vital in cooling down the servers that power these facilities. But as tech giants like Microsoft descend on Wisconsin, experts and community members alike question if the environmental impact of these facilities is worth it.

The United States is [home](#) to over 4,000 data centers, with Wisconsin currently [hosting](#) 47 of those sites, a number that is only growing. Major data centers have been planned for Beaver Dam and Port Washington, and Microsoft announced a \$3.3 billion data center project in Mount Pleasant, Wisconsin in September.

“We’re very concerned,” Emily Park, the co-executive director of 350 Wisconsin, an independent climate action group, told The Daily Cardinal. “This pace at which we are expanding our data center capacity is frankly alarming.”

Wisconsin Conservation Voters, an environmental advocacy group, have called for more transparency when local governments vote to approve these data centers.

“Many of the discussions [regarding data centers] are done quietly, behind closed doors, or in closed session, and transparency is limited almost until it is too late for the public to get involved or really influence the decision at a local level,” Dr. Brittany

Keyes, a clean air policy manager at Healthy Climate Wisconsin, a climate organization of healthcare professionals, said. “It seems like the transparency has been quite poor thus far with these developments in different communities.”

AI data centers pose environmental risks in two primary areas: power and water consumption. The AI industry is increasingly outpacing electrical [companies](#). Rising electricity demands increase consumer costs and make it difficult for electrical companies to accurately predict future needs. Needs that they might not even be able to meet.

“These data centers require an enormous amount of energy and enormous amounts of water to operate,” Communications Director Ryan Billingham said. “One of the main concerns is just how thirsty these data centers are. If we’re going to say yes to these data centers, we have to [set clear guidelines to] make sure they’re being done [with clean energy].”

Constraints on electricity push AI companies to seek alternative sources of energy. One power alternative is nuclear energy, but as AI companies continue to [outpace](#) renewable energy companies, solar, wind and nuclear energy become more unattainable.

In the meantime, AI companies continue to utilize fossil fuels, [adding](#) to global CO2 emissions.

Keyes said even with alternative energy sources, fossil fuels will still be the answer for meeting data centers energy needs during blackouts and brownouts.

“To my understanding, in Wisconsin, [data centers] are going to meet their backup needs through large diesel generators,” Keyes said. “The pollution from diesel generators are known carcinogens, so [they’re] harmful to human health [and are] known to cause cancer.”

While some AI companies claim they will replace energy consumed from a public grid, it’s unlikely companies will be held to this standard due to a lack of regulations around grid use and the federal government’s [opposition](#) to regulate tech companies. An executive order by President Donald Trump said “Artificial intelligence (AI) will play a critical role in how Americans of all ages learn new skills, consume information, and navigate their daily lives,” and implied that “woke AI” is a main contributor in AI misuse.

Billingham is highly doubtful that these companies will rein in their fossil fuel usage as they continue to spend large sums of money on fossil fuels.

“There’s no company in the world that would put a billion dollars in infrastructure if they didn’t intend to make a lot of money off of it and increase their profits,” Billingham said.

The search for freshwater

Microsoft announced the [\\$3.3 billion](#) Fairwater project in September, which will power Microsoft AI services like Copilot. The Fairwater site will house three large buildings with a combined 1.2 million square feet on a 315 acre plot off of Highway KR in Mount Pleasant, Wisconsin, just 25 miles from Lake Michigan. Microsoft [called it](#) the “largest and most sophisticated AI factory” they’ve ever built.

In addition to the astronomical energy consumption, which Billingham said rivals entire counties, water use will also be a concern. Data centers require freshwater to cool their servers. In an attempt to minimize water consumption, 90% of Fairwater’s infrastructure will be cooled by a [closed-loop system](#). The system is filled with water once during construction and continually reused by pipes directly integrated into the facility. The remaining 10% of servers only use water during peak temperatures, relying on outdoor cooling for the majority of the process.

While closed-loop water systems are sealed, there’s still possibilities for the machinery to fail due to leaks or overflow, [forcing](#) additional water to be added to the system. Impure water added to the circuit can in turn lead to microbiological

growth and corrosion, further damaging systems, increasing costs and wasting large amounts of water.

To prevent this, chemicals like nitrates, azole and sulfite can be added to the water, creating a protective layer from the pipes, but contaminating freshwater with toxic substances.

“Biocides, corrosion inhibitors, those kinds of things [are added] because the water just stays in the system, and so it gets more and more contaminated,” Park said.

And Park, a former water treatment analyst, said there are still too many unanswered questions.

“I think there’s also questions about, are they planning on drawing from aquifers, are they drawing from surface sources,” Park said. “If they are drawing from surface sources, are we making sure that those [bodies of water] are able to recharge at a rate that is still supportive of local wildlife?”

Experts have also questioned how much water data centers will take from lakes in the first place. After the City of Racine withheld public records on a new data center’s water consumption from Midwest Environmental Advocates (MEA), an environmental lobbying organization, they sued, saying it’s impossible to properly evaluate the true environmental impact on Lake Michigan without knowing the amount of water used.

MEA Communications Director Peg Schaeffer said the City of Racine had not been transparent, only releasing information after seven months and a lawsuit. Two days after the suit was filed, the city released documents stating the data center’s Area 3B – the current planned campus – would [require](#) 2.8 million gallons of water but would return just over 2 million gallons back to the lake.

If Microsoft expands the data center to include Areas 3B and 2, however, a predicted 8.4 million gallons of Lake Michigan’s water will be used in the project [annually](#), with only 6 million gallons reentering the lake.

[According](#) to the Wisconsin Department of Natural Resources, the 6 million gallons of discharged water will only be returned to the Great Lakes Basin after being treated in the Racine Wastewater Treatment Plant. Microsoft hasn’t explained how the water will be treated before being discharged back into the lake.

“The treatment [and] cooling [of] water is not as simple as people think,” Park said. “That water is full of chemicals. You [also] can’t just discharge warm water into an ecosystem where the water is fairly cool because that will cause massive imbalances in the lakes.”

Ultimately, what many experts and community members want from these massive corporations is transparency.

“Imagine the Great Lakes as a pitcher of water,” Matuska said. “One thing that we kind of need going forward is a more holistic view of how many straws are going in that pitcher [and] how much water is going out of those straws.”

Corporations and communities

In response to many of the environmental criticisms companies have faced, Microsoft has campaigned to strengthen ties with communities they want to build data centers in. In an effort to keep energy prices stable for locals, the company pre-paid for the energy and infrastructure and pledged to match “every kilowatt hour of fossil fuel energy used with carbon-free energy supplied back to the grid,” [according](#) to Data Center Magazine.

Microsoft also [established](#) a partnership with the Root-Pike Watershed Initiative Network to restore several creeks in Southeastern Wisconsin. The Root-Pike Watershed Initiative Network was founded with the Wisconsin Department of Natural Resources in an effort to “restore, protect and sustain the Root-Pike Basin,” an important watershed in southeastern Wisconsin.

But Billingham said it's not enough, and the scale of Microsoft's environmental impact — funding local creek restoration versus building 350 acres worth of data centers — isn't a fair trade.

“Anything that a corporation or somebody like Microsoft would do to help is obviously welcome, but the ratio and scale of these things really makes something as small as help with creek restoration almost laughable,” Billingham said.

Park said even if individuals in conservation roles at these companies care about the environment, that same care isn't translated to their executive actions.

“The reality is, these are multi-billion dollar corporations. What they care about is money, and they're not necessarily [motivated] to actually, genuinely care about the environment,” she said.

Fifty miles away up the coast from Racine in Port Washington, Wisconsin, Denver-based Vantage Data Centers announced plans to break ground on a 3.5-gigawatt AI campus this fall. Part of the Stargate program, President Trump's \$400 billion dollar [investment](#) into AI infrastructure, the campus will span 672 acres and feature four buildings to expand the reach of tech giants' OpenAI and Oracle.

One point of concern for locals is how the project's use of Lake Michigan water will affect the 12 million people living on the lakeshore.

[Vantage](#) said their facilities will be “water positive,” cleaning and improving the quality of more water than it uses. An average of 22,000 gallons of water a day — the equivalent usage of 65 houses — is [expected](#) to be cleaned each day.

Despite officials from the company and city [promising](#) to maintain nearby residents' water and energy costs, Port Washington's Common Council meeting earlier this month was overflowing with locals opposed to the project. The need for substantial resources, environmental impacts and criticism toward AI were among their most pressing concerns.

“What we're seeing in communities across Wisconsin, here in Dane County and also in Rock County [and] Janesville, where there was another [data center] proposed, is a grassroots movement to say no to these projects,” Billingham said. “I think the people that live in the communities in particular are the ones that should have the loudest voice. They know what's best for their community.”

While Park and other experts consider the benefits of projects, such as job creation and economic gain, they noted the importance of balancing those benefits with potential environmental drawbacks.

“It's not that we're anti AI and anti technology, it's just that we want to see AI and tech solutions in a way that is actually ethical...and reasonable to the environment,” Park said. “How are we using [these tools] that have a lot of potential to bring a lot of good to humanity [without] further [ruining] the planet and [making] the spread of disinformation worse? That's a big question that I don't know the answer to.”