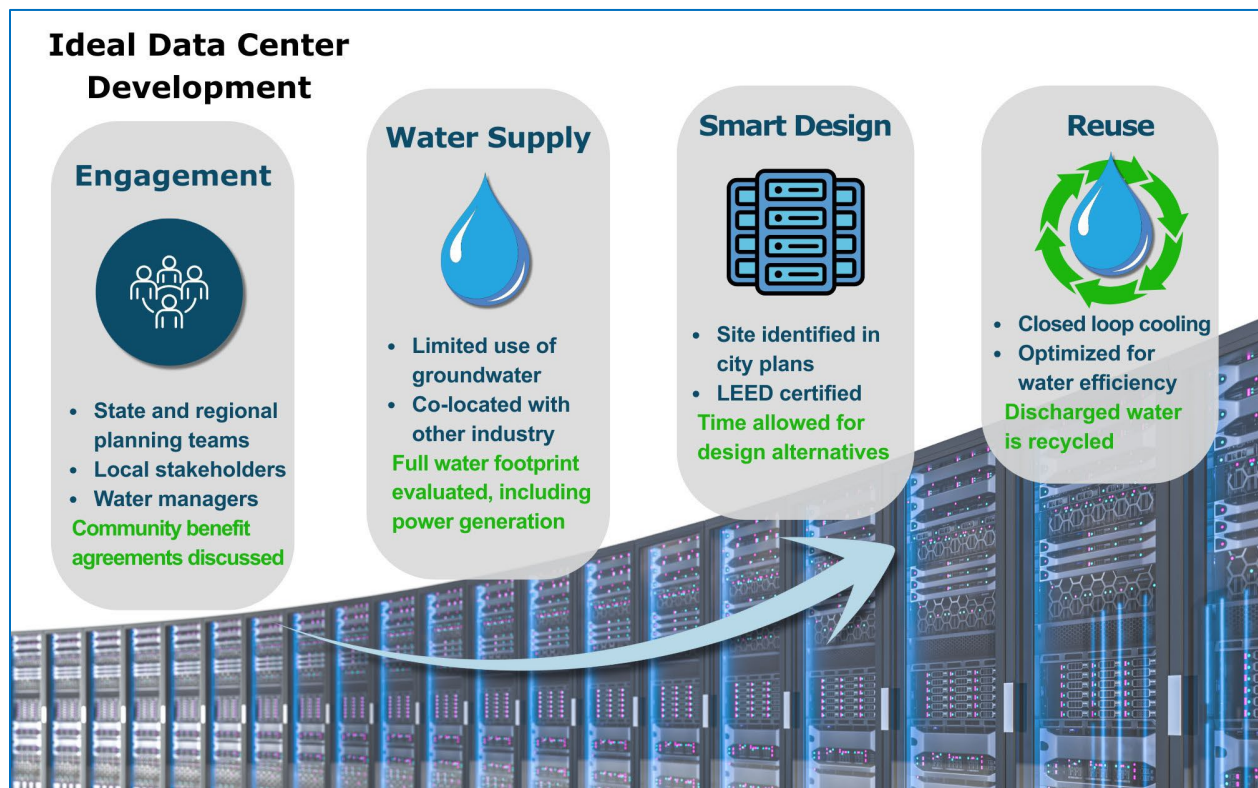


FRESHWATER

Best Practices for New Data Center Developments

The opportunity

The increased demand for data centers and other high-volume water users in Minnesota and the Great Lakes region provides an opportunity for advancing water-smart design while reducing water risk for all. Siting large water-use facilities where there is reliable and sufficient long-term water supply is **good for businesses, good for surrounding communities, and good for healthy ecosystems**. Below are some general best practices we recommend for the scoping, siting, and design processes.



Smart Siting:

- Review regional hydrogeology, water availability and risks during screening.
- Locate the facility in an area that is identified in local planning documents for an industrial high-volume water user.
- Consider brownfield redevelopment or mineland reclamation sites.
- Co-locate near a facility that has water discharge that can be used for water supply, or who will accept the facility discharge for reuse.
- Consider sites where ongoing remediation or dewatering provides water supply.
- Use a water supply that is replenished on a timescale similar to its use to have the highest long-term water sustainability and reduce risk. This includes surface water and unconfined groundwater.

Water Supply Considerations:

- Understand the specific seasonal average and peak-day water use and how this aligns with existing demand and ecosystem vulnerability.
- Understand the required water quality and ideal temperature and which water sources meet these needs.
- Understand the footprint of both direct and indirect water use, including energy production.

Stakeholder Engagement:

- Connect economic development teams and water teams early in the process.
- Clarify what a non-disclosure agreement (NDA) covers and what it may exclude; keep these agreements (if needed) narrow in terms of scope and timescale.
- Discuss the proposed development with state and regional water planners to understand short term and long-term risks to the community and those sharing the water.
- Hold public meetings outlining general development information, the permitting process and timeline. Solicit public feedback early, before permits are submitted, NDAs are signed and concepts are finalized. Provide opportunities for authentic community engagement.
- Meet with residents and local units of government, including cities, counties and watershed organizations, to discuss what to include in a Community Benefit Agreement.

Smart Design:

- Achieve [LEED](#) and [Energy Star](#) certification for the facility.
- Follow the Federal Energy Management Program's [best practices for data center design](#).
- Include [ASHRAE standards and guidance for data centers](#).
- Include sustainable design principles such water-efficient equipment, closed-loop cooling, water reuse and recycling, sustainable site design, green infrastructure, stormwater reuse, green roofs, renewable energy, and waste heat use.
- Allow time to identify sustainable design alternatives and to develop partnership opportunities such as wastewater reuse.

Developer Agreements:

- Include costs for infrastructure upgrades, both capital costs and operational costs.
- Develop a Community Benefit Agreement that covers the lifespan of the project, including operation and decommissioning of the proposed facility.
- Specify whether the project may expand in size or water/energy consumption.

Resources:

1. [Economic, Fiscal, and Energy-related Impacts of Data Centers in the Great Lakes Region](#) (University of Virginia's Weldon Cooper Center for the Joyce Foundation, January 2026)
2. [Water Sustainability in Data Centers](#) (Veralto, December 2025)
3. [Cooling the Cloud: Water Utilities in a Data-Driven World](#) (AWWA, October 2025)
4. [Water AI Nexus: Principles For Sustainable Water Use By Data Centers](#) (WEF, Amazon, Water Center at University of Pennsylvania, Leading Utilities of the World, September 2025)

5. [A Finite Resource Managing the Growing Water Needs of Data Centers, Critical Minerals Mining, and Agriculture in the Great Lakes Region](#) (Alliance for the Great Lakes, August 2025)
6. [Applying LEED to data center projects](#) (US. Green Building Council)
7. [Energy Efficient Data Center Design](#) (U.S. Department of Energy)

Questions to consider

If you are evaluating a data center or new large water user in a specific location in Minnesota, here are some questions to ask early in the evaluation process:

- ✓ **Does my city or utility want a data center? If so, how can I evaluate sites that will be suitable early, before a proposal?**
- ✓ **Who else should I coordinate with now to get ready?**
- ✓ **Am I talking to an end user or a developer?**
- ✓ **What is the water source and what are the limits to how much water I can supply?**
- ✓ **What is the full water balance of the proposal? Review specific onsite direct water use, and offsite indirect water use. What is average and peak use?**
- ✓ **Are there opportunities for geothermal, closed loop cooling, or water recycling and reuse?**
- ✓ **Are there circular water opportunities to co-locate with a complementary industry or land use?**
- ✓ **Have water-use projections been reviewed by a regional planning team?**
- ✓ **What does my NDA cover?**
- ✓ **What can I communicate early with community members?**
- ✓ **Has the community been informed and given a chance to comment?**
- ✓ **Have community benefit agreements and decommissioning plans been discussed?**
- ✓ **How can I cover my costs, manage risks, and provide community and ecosystem benefits?**

Freshwater is a Minnesota-based nonprofit organization working to inspire and empower people to value and protect water. Since 1968, Freshwater has used science to engage communities on how to equitably improve water today and for future generations. Contact us at freshwater@freshwater.org, 651-313-5800.