

DATA CENTERS AND WEST MICHIGAN

WHAT ARE DATA CENTERS?

A data center is a large industrial facility that houses thousands of computer servers and networking equipment used to store, process, and transmit digital information. These facilities support digital technologies and online services, including cloud computing, video streaming, email, online banking, social media, and artificial intelligence (AI) applications.

As demand for digital services continues to grow, so does the number and size of data centers. Their rapid expansion has raised questions about how they affect the communities where they are built.

WHY ARE DATA CENTERS CONCERNING?

ENERGY DEMAND

Energy demand refers to the amount of electricity needed to power homes, businesses, and large facilities like hyperscale data centers.

- Unlike many buildings, data centers operate around the clock and **require significant amounts of electricity** to keep thousands of servers running
- The growing demand for data centers is increasing pressure on Michigan's energy system and local communities. Meeting this demand may require new power generation, transmission lines, and upgrades to the electric grid. These **investments can be costly**, and in some cases, utility customers may bear some of those costs through **higher energy bills**.
- **Additional strain on the electric grid** during periods of high demand could affect reliability and require costly upgrades.
- The type of energy used to power data centers can **affect local air quality** and Michigan's ability to meet its clean energy goals.

WATER USAGE/IMPACT TO THE GREAT LAKES

Water is an important part of how many hyperscale data centers operate. Large facilities generate significant heat from the thousands of computer servers they contain.

- Some cooling systems use water to help manage temperatures and keep equipment running. **Large water withdrawals for cooling** could place additional pressure on local water resources, especially during periods of drought or low water levels.
- Warm water discharged back into rivers or streams can **change local water temperatures**, which may affect the fish population, aquatic insects, aquatic plants, and other wildlife that depend on stable conditions.
- Increased demand for groundwater or surface water could **affect how communities manage shared water resources** for homes, farms, businesses, and ecosystems.
- Changes to local water availability **can affect activities people value**, including fishing, swimming, boating, and access to clean drinking water.

WHY DOES WATER MATTER IN WEST MICHIGAN?

West Michigan is a region defined by water. Our communities are connected to Lake Michigan, the Grand River, the Muskegon River, and hundreds of smaller rivers, streams, lakes, and groundwater systems that support drinking water, recreation, agriculture, tourism, and local ecosystems.

When large facilities use water for cooling, the impacts are not limited to the facility itself. The amount of water withdrawn, where it comes from, and how it is returned to the environment can affect the waterways that communities rely on.

WHAT SHOULD COMMUNITIES KNOW ABOUT DATA CENTERS?

The impacts of data centers are not always visible from the outside of the facility. The decisions made about energy use, water use, and infrastructure can affect everyday life in ways that communities may notice over time.

WATER USE

- **Communities deserve transparency** from local decision makers, water resource managers, and data center companies about how proposed facilities will use water. Residents should understand where the water will come from, how much will be used, how withdrawals will be monitored, and how potential impacts to local water resources will be addressed.
- The impact of data center water use depends on factors such as the cooling systems selected, the source of the water, and the conditions included in permits and approvals. In communities across Michigan and the Great Lakes region, **protecting rivers, streams, groundwater, and the Great Lakes is essential to maintaining healthy ecosystems, supporting communities, and ensuring long term access to clean water.**
- As data center development grows, communities should consider **whether water use is being managed responsibly** and whether new projects are designed to minimize impacts on shared water resources.

ENERGY DEMAND

- Communities deserve transparency from the local decision makers, utility providers, and data center companies involved in these projects. **Residents should understand how new data centers will be powered, who will pay for needed infrastructure, and how the benefits and costs of development will be shared.**
- As Michigan works toward its clean energy goals, communities should also consider **whether new electricity demand is being met through investments in renewable energy and energy efficiency.** These solutions can help reduce pollution, improve reliability, and support a more sustainable energy future while ensuring that the costs and benefits of new development are shared fairly.

Decisions about water use today can affect the health of these resources for future generations.