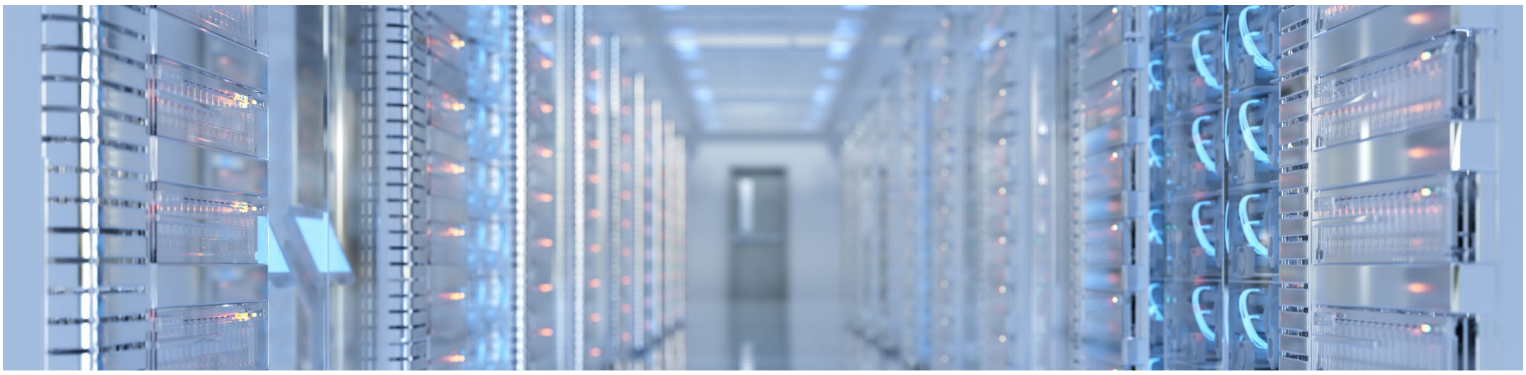
MICHIGAN STATE UNIVERSITY | Extension



Data Center Resources

What is a data center?

Data centers are buildings that house computers, servers, and equipment used to support digital services, and they are built in different ways to serve different needs. They range from hyperscale (the largest) to on-site, retail, or industry specific sites which might be referred to as edge, enterprise, or co-location data centers.

Some data centers are designed for advanced computing, including artificial intelligence (AI). AI data centers handle very intensive computing tasks and require higher levels of electricity and more robust cooling systems. Because of these needs, AI data centers are often located in areas with access to large power supplies and high-capacity data networks, while other types of data centers can be located in a wider range of communities.

Why the focus on data centers now?

Hyperscale data centers are getting a lot of attention in the news right now. These types of data centers can create community and regional concerns around energy consumption, water usage, size, and site location.

The U.S. Department of Energy Advisory Board notes that electric utilities are receiving requests for a single hyperscale campus of between 300-1000MW (2024); 300 MW is enough energy to power about 250,000 homes for a year.[1] All of that energy produces heat, and water is used as a cooling source. A100 MW facility may consume the same amount of water as 2600 households.[2] As an example of size, the data center campus proposed in Saline Township was designed for 1.65 million square feet with potential expansion up to 2.2 million square feet (roughly 38 football fields). The size of hyperscale data centers will vary based on location and computing needs.

Erik Nordman, Ph.D., Institute of Public Utilities, MSU
nordman7@msu.edu

Jean Hardy, Quello Center, MSU,
jhardy@msu.edu

MSU Extension
(Planning and Zoning Information)

Tyler Augst (SW MI) agusttyl@msu.edu

Harmony Gmazel (Central)
gmazelh@msu.edu

Mary Reilly, (Northern Lower)
reillym8@msu.edu

Eric Warman (SE MI)
warmaner@msu.edu

Supplemental resources on the second page

MICHIGAN STATE UNIVERSITY | Extension

Data Center Resources (updated as new resources become available)

Resources

- Data centers in Michigan, what you need to know. Michigan Public Radio. November 2025.
- What Michigan Local Governments Should Know About Data Centers. UM Center for EmPowering Communities. February 2026.
- A Primer for Local Governments: Understanding Data Centers. National League of Cities. 2025.
- [2]Data Centers and Their Energy Consumption: Frequently Asked Questions. Library of Congress. January 2026
- Local Guidelines for Data Center Development. Urban Land Institute. 2024.
- Local Ordinances for Climate Adaptation & Mitigation » Local Ordinances to Help Bring Data Centers into Alignment with Climate Goals. Georgetown Climate Center.
- Data Center Development in the Great Lakes Region. The Joyce Foundation. September 2025.
- Washtenaw County Data Center Resource Website *(resources below)*
  - What Happens When Data Centers Come To Town? University of Michigan Ford School of Public Policy. July 2025
  - Data Centers and the Great Lakes. Presentation by Dr. Michelle Martinez. May 2025
  - At The Crossroads: A Better Path to Managing Data Center Load Growth. NRDC. September 2025
- Catching Heat: Using Waste Heat Generated from Data Centers: Appalachian Responsible Development Opportunities, Challenges, and Policy Options. Stine, D., January 2026

American Association of Planning

- [1]The Physical Footprint of Artificial Intelligence October 2025.
- Data Centers Evolved: A Primer for Planners July 2021.

Mapping

- Data Center Demand Mapping Tool. National Laboratory of the Rockies (formerly NREL).

Community Benefit Agreements

- Building Community-First AI Infrastructure Microsoft on Issues, January 2026.
- Community Benefits Brief Final Version MSU Center for Community and Economic Development. 2024.

Disclaimer: MSU Extension provides these resources for reference purposes only. Their inclusion does not constitute an endorsement of the information, interpretations, or conclusions contained within the documents.