Under Trump, the EPA Will No Longer Consider Human Lives When Setting Pollution Limits

The Environmental Protection Agency (EPA) was created for an important reason: to **protect our health and the environment we live in.** The EPA is tasked with keeping the air we breathe, the water we drink, and the land where we grow our food, clean and healthy for all generations.

But the agency just announced a shocking change. **The EPA says it will stop counting human lives and health when setting limits on deadly air pollution.**

Instead, it will only look at how much pollution rules ***cost businesses.***

Air pollution is not abstract. Tiny particles called PM2.5 and smog-forming ozone slip deep into our lungs and bloodstream. They **trigger asthma attacks, heart and lung disease, and even early death.** Modest amounts can harm our lungs as much as smoking does.

By ignoring these harms, Trump's EPA is telling us that profit matters more than breathing.

This move fits **a disturbing pattern under the Trump administration: roll back safeguards, please polluters, and tell communities to deal with the fallout.** But the EPA's declared mission is to protect human health and the environment. Ignoring health to cut costs breaks that promise.

Considering that Berlin township has I-75 and I-275 with thousands of cars and diesel vehicles traversing the area, Meijer Warehouse with it's 24 hour diesel vehicle traffic, the two new FORD parts depots, the daily deluge of gravel haulers that file through the township 9 months out of the year, and all of the semi trailer parking lot dumps which require diesel trucks to bring them in and out, the gravel pit with all their diesel trucks and equipment, then the farming community that also use diesel vehicles and Fermi and other facilities that employ the use of diesel generators this area of Monroe county is probably already at or above the legal limits for particulate releases for clean air. Given this new directive above – does Berlin Township even have the expertise, processes and funding to clean up additional particulate releases that a data center that could be very large given the land they are requesting and potentially house 100's of diesel generators as other facilities it's size require to operate.

In reviewing Viriginia's upcoming House Bill submittals we should learn from their mistakes, the following are in regards just to EPA related bills from this 5 page article attached:

Review the bills they (state of Virginia) are just now putting into force for data centers that have been in place for a good amount of time.


https://virginiamercury.com/2026/01/19/these-bills-aim-to-regulate-virginia-data-center-siting-generator-use-and-scc-oversight/

https://virginiamercury.com/2026/01/19/these-bills-aim-to-regulate-virginia-data-center-siting-generator-use-and-scc-oversight/

LoadSpring Cloud P... Nuclear Project Con... Nuclear Project Ma... Spend Change Req... Centralized Power A... SMRT - Nuclear - Po... Outage Project Con...

ABOUT SUBSCRIBE DONATE PART OF STATES NEWSROOM

VIRGINIA MERCURY

CRIMINAL JUSTICE + POLICING ENERGY + ENVIRONMENT GOV + POLITICS EDUCATION HEALTH COMMENTARY

ENERGY + ENVIRONMENT GENERAL ASSEMBLY 2026 GOVERNMENT + POLITICS TECHNOLOGY VIRGINIA'S CLEAN ENERGY TRANSITION

These bills aim to regulate Virginia data center siting, generator use and SCC oversight

BY: SHANNON HEGKT - JANUARY 19, 2026 5:25 AM

Photo credit: Sepia - stock.adobe.com

The impossibility of an environmentally friendly data center

Data centers cannot fully operate on renewable energy alone. Renewable energy sources like solar and wind are inconsistent and cannot meet the uptime (time during which a machine, especially a computer, is in operation) requirements of data centers. Tier 1 data centers require 99.671% uptime while Tier 4s demand 99.995%. These factors make it impossible for data centers to depend solely on renewables without compromising reliability.

As demand for cloud computing and AI-driven technologies accelerates, data centers are being constructed at a rapid pace, often in areas where existing power infrastructure is insufficient to meet their enormous energy needs. **To ease concerns about environmental impact, data center operators frequently pledge that their facilities will eventually run on clean energy, including next-generation nuclear sources such as small modular reactors (SMRs). However, these SMRs remain largely theoretical, with no commercially viable models yet in operation.**[7] In the interim, companies claim they will rely on fossil fuels as a temporary "bridge" until greener solutions become available. Yet in practice, this transition is often delayed or abandoned altogether, resulting in the direct commissioning of new fossil fuel power plants to keep these facilities online.

This gap between promise and reality underscores the fundamental contradiction in labeling data centers as "environmentally friendly." Battery storage is essential for balancing the intermittent nature of renewable energy generation, but batteries rapidly degrade and are reliant on rare minerals like lithium, nickel, cobalt, manganese, lead, and copper. These minerals are already in short supply due to high demand from the electric vehicle industry. Data centers will also always have an environmental footprint through material resource consumption, water usage, and electricity demands. This makes it unfeasible for them to be completely environmentally friendly.

To further the work of the Hayes Township Planning Commission regarding the issue of data center regulation, it has been recommended by the Board of Trustees that the PC appoint a work group to develop information that can be used by the PC in developing such regulations. This group will consist of 5 members and one alternate.

A member of the Planning Commissio and the Board of Trustees along with three members of the community with relevant experience in the information technology industry will make up the work group. Interested parties are urged to submit completed the application attached to the Township Clerk by February 27, 2026. The work group members will be selected by the PC and Board Representatives. Those selected will be announced on the township website. As an advisory work group this group has no formal decision making role regarding the utilization of their work but serves to help the township develop a common frame of reference on the topic.

All those who wish to provide input to the committee are welcome to do so. Written comments are preferred as they allow the committee members time to review and reflect on the comments made. The committee is being asked to provide is initial report to the PC and the Board within four months of its initial meeting. Further decisions made by the PC and the Board will occur after the report is received and reviewed.

Application for Service on Data Center Advisory Work Group

Hayes TOWNSHIP

09195 Major Douglas Sloan Road, Charlevoix, MI 49720 (231) 547-6961

Applicant Name: _____

Street Address: _____

City, State & Zip: _____

Telephone No.: _____ ☐ **mobile** ☐ **home** ☐ **work**

Email Address: _____

Are you a registered voter in Hayes Township? ☐ Yes ☐ No

Are you a property taxpayer in Hayes Township? ☐ Yes ☐ No

Education:

_____

_____

_____

Please briefly describe your employment history:

_____

_____

_____

_____

_____

Explain why you want to volunteer and what makes you a good candidate.

_____

_____

_____

_____

State any particular experiences or skills you believe would further qualify you for this position:

Do you believe you will have any conflicts of interest? _____

You may attach a separate letter of interest, resume or other summary of your background and experience for appointment to the body you are interested in.

Reference(s) (Name, Address, Telephone):

Signature _____ **Date signed** _____

Please return to: Hayes Township, 09195 Major Douglas Sloan Road, Charlevoix, MI 49720. Or by e-mail to: clerk@hayestownshipmi.gov

Hayes Township is an Equal Opportunity Employer and will not discriminate among applicants or employees with regard to race, religion, sex, age, national origin, height, weight, marital status, non-disqualifying disability, veteran status or on the basis of any characteristic that is protected by state or federal law.

Application for Service on Data Center Advisory Work Group

09195 Major Douglas Sloan Road, Charlevoix, MI 49720 (231) 547-6961

Applicant Name: Brandon Vigliarolo

Street Address: 8102 Upper Bay Shore Road

City, State & Zip: Charlevoix, MI 49720

Telephone No.: 5179800356 ☒ **mobile** ☐ **home** ☐ **work**

Email Address: bviglia@gmail.com

Are you a registered voter in Hayes Township? ☒ Yes ☐ No

Are you a property taxpayer in Hayes Township? ☒ Yes ☐ No

Education:

Bachelors degree in English and Philosophy from Michigan State University

Please briefly describe your employment history:

I worked as an IT professional in college and after graduation, and am now a journalist covering technology for an international publication (The Register).

Explain why you want to volunteer and what makes you a good candidate.

I have extensive experience covering datacenters as a technology journalist, and I believe I can bring a unique perspective on the broader impacts of datacenter operations on communities, the environment, power grids, etc.

I'm also a professional communicator and can illustrate these points in a well-researched, accessible manner.

State any particular experiences or skills you believe would further qualify you for this position:

Please see professional experience sections - I've worked in the IT space and now report on public sector technology projects for a living.

Do you believe you will have any conflicts of interest? No

You may attach a separate letter of interest, resume or other summary of your background and experience for appointment to the body you are interested in.

Reference(s) (Name, Address, Telephone):

Julie Stoppel, 8475 High Meadow Trail, Charlevoix MI 49720, (231) 881-4745

Jon Purdy (not sure his exact address - he lives on Major Douglas Sloan Road near the BC-Char side. 231-675-2112

Signature Brandon Vigliarolo **Date signed** 27 FEB 26

Please return to: Hayes Township, 09195 Major Douglas Sloan Road, Charlevoix, MI 49720. Or by e-mail to: clerk@hayestownshipmi.gov

Hayes Township is an Equal Opportunity Employer and will not discriminate among applicants or employees with regard to race, religion, sex, age, national origin, height, weight, marital status, non-disqualifying disability, veteran status or on the basis of any characteristic that is protected by state or federal law.

Compose

Inbox 1
Starred
Snoozed
Sent
Drafts
Purchases 24
More

Labels

2018-19 Summer & Wint...
2019 Taxes
2020 Taxes
2021 Taxes
2022 Taxes
2023 Taxes
2024 Taxes
2025 Taxes

Begin forwarded message:

From: "Gorney, Joseph" <Joseph.Gorney@fairfaxcounty.gov>
Subject: RE: [EXTERNAL]Join us on March 31 for a Conservation Cafe on Nuclear Deregulation!
Date: March 4, 2026 at 11:40:47 AM EST
To: Ann Gorney [redacted]

Annie,
You can give him my contact information. There's a lot of information I could pass along. The Piedmont Environmer start (Data Centers & Energy Demand - The Piedmont Environmental Council). Fairfax County is doing some land address the full range of issues that must be considered. I also plan to investigate what Frederick County, Marylanc various regulatory standards for pretreatment of effluent and reporting. Whatever you do, do not agree to non-discl accountability.

More to come.
Joe

Joseph C. Gorney, AICP, Chief, Planning & Policy Section
Department of Public Works & Environmental Services - Stormwater Planning Division
Fairfax County, Virginia
ISA Certified Arborist, MA-7095A

Reply Reply all Forward

Search mail

Compose

Inbox 3
Starred
Snoozed
Sent
Drafts 1
Purchases 24
More

Labels

2018-19 Summer & Wint...
2019 Taxes
2020 Taxes
2021 Taxes
2022 Taxes
2023 Taxes
2024 Taxes 1
2025 Taxes

From: Donald Gregory [redacted]
Date: February 21, 2026 at 5:26:33 PM EST
To: clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>
Subject: Re: Data Center Subcommittee: Hat In the Ring

Agh yes! A little about myself. I am retired from a career in Information Technology (IT). I put together "data centers" back when th manage the systems running in them. I worked as programmer in various languages, analysis and design, database and network small and medium organizations, and very large ones. I like to think I bring to the table good analytical and research skills, as well oriented manner with other people. Cuidate

On Wed, Feb 18, 2026 at 7:37 AM Donald Gregory <[redacted]> wrote:

> Hi Kristin, Please put my name forward for the Data Center Subcommittee. Cuidate
> --
> **Donald Gregory**
> [redacted]
>
> *On two occasions I have been asked by members of Parliament, 'Pray, Mr. Babbage, if you put into the machine wrong figures, will the right answers come out?' I am not able rightly question. - Charles Babbage*

--
Donald Gregory

Reply Forward

Application for Service on Data Center Advisory Work Group

Hayes Township

09195 Major Douglas Sloan Road, Charlevoix, MI 49720 (231) 547-6961

Applicant Name: Mandie McKay

Street Address: 7741 Bella Vista Drive

City, State & Zip: Charlevoix MI 49720

Telephone No.: [redacted] ☑ mobile ☐ home ☐ work

Email Address: [redacted]

Are you a registered voter in Hayes Township? ☑ Yes ☐ No

Are you a property taxpayer in Hayes Township? ☑ Yes ☐ No

Education:

Highschool

Please briefly describe your employment history:

Secretary 2000-2005
Admin. Asst. 2005-2009
Admin. Asst 2009-2017
House Mgr. 2017- present
Biz Owner 2006- present

Explain why you want to volunteer and what makes you a good candidate.

I see the need for the generation who will be benefiting or hurt by the decisions made regarding the data center to be involved in this decision.

Application for Service on Boards, Commissions and Committees

09195 Major Douglas Sloan Road, Charlevoix, MI 49720 (231) 547-6961

Applicant Name: Joe McHugh

Street Address: 06738 North Horton Creek Road

City, State & Zip: Boyne City, MI 49712

Telephone No.: [redacted] ☒ **mobile** ☐ **home** ☐ **work**

Email Address: [redacted]

Are you a registered voter in Hayes Township? ☒ Yes ☐ No

Are you a property taxpayer in Hayes Township? ☒ Yes ☐ No

Which Board, Commission or Committee would you like to serve on? ☐ Board of Review

☐ Cemetery Committee ☐ Library Board ☐ Parks & Recreation Committee
☒ Planning Commission ☐ Road Committee ☐ Zoning Board of Appeals
Data Center Subcommittee Work Group

Education:
BS Computer Information Systems Minor Electrical Engineering Cleveland State University

Please briefly describe your employment history:
Instrumentation and Communication Technician Wolverine Power Cooperative
Electrical Engineer Great Lakes Energy 4
Fiber Project Engineer / Manager 3
Supervisor Technical Services Great Lakes Energy 3
Manager system Operations Great Lakes Energy 3 Years -- Current

Explain why you want to volunteer and serve on a board or commission and what makes you a good candidate.
I want to help my township develope a plan that meets all applicable regulations and laws that protect the citizens and businesses of the township. My thorough knowledge and expertise will help to share kno and guide the committe with input.

Have you served on other boards in the past? NO **If yes, please describe:** _____

tate any particular experiences or skills you believe would further qualify you for this position:

Managed and Colaborated on Large Projects ex. Fiber / Internet GLE TrueStream

In Depth knowledge of the Electric Utility and Large Comercial and Industrial Customers

Engineering and Management Expierence

Do you believe you will have any conflicts of interest? NO

For Board of Review, please indicate what experience you have in the following, if any:

☐ Finance ☐ Real Estate ☐ Property Appraisal/Assessing ☐ Taxes ☐ Other _____

For Planning Commission, please indicate which segments of the community you would represent or have experience in: ☐ Agriculture ☐ Natural Resources ☐ Recreation

☐ Education ☐ Public Health ☐ Government ☐ Transportation ☒ Industry

☐ Commerce ☒ Other Utility / Engineering

You may attach a separate letter of interest, resume or other summary of your background and experience for appointment to the body you are interested in.

Reference(s) (Name, Address, Telephone):

[redacted]

[redacted]

Signature Joseph M McHugh **Date signed** 3/11/2026

Please return to: Hayes Township, 09195 Major Douglas Sloan Road, Charlevoix, MI 49720. Or by e-mail to: clerk@hayestownshipmi.gov

For appointments to **Planning Commission** and **Zoning Board of Appeals**, return to above address or by email to: supervisor@hayestownshipmi.gov

Hayes Township is an Equal Opportunity Employer and will not discriminate among applicants or employees with regard to race, religion, sex, age, national origin, height, weight, marital status, non-disqualifying disability, veteran status or on the basis of any characteristic that is protected by state or federal law.

Application for Service on Data Center Advisory Work Group

Hayes Township

09195 Major Douglas Sloan Road, Charlevoix, MI 49720 (231) 547-6961

Applicant Name: LuAnne Kozma

Street Address: 9330 Woods Road

City, State & Zip: Charlevoix MI 49720

Telephone No.: [redacted] ☒ mobile ☐ home ☐ work

Email Address: [redacted]

Are you a registered voter in Hayes Township? ☒ Yes ☐ No

Are you a property taxpayer in Hayes Township? ☒ Yes ☐ No

Education:

M.A. Western Kentucky University – 1984 – Folk Studies, Hist. Preservation
B.S. Michigan State University – 1981 – Park & Recreation Resources
paralegal certificate – Oakland County Community College – 2012

Please briefly describe your employment history:

25 years professional at Michigan State University Museum and MSU Extension

Explain why you want to volunteer and what makes you a good candidate.

- Interested in data centers
- Master Citizen Planner certificate from MSU Extension
- paralegal and other research on planning and zoning issues
- On legal team for residents opposed to Saline Township data center
- Have taken part in 6 webinars on data centers.
- Zoning perspective.

State any particular experiences or skills you believe would further qualify you for this position:
Since November have been studying data center issues as it relates to zoning; I read court cases on zoning issues; paralegal experience with Saline Township data center. Master Citizen Planner. TOOK "Data Center Know-How" webinar from Mich Association of Planning.

Do you believe you will have any conflicts of interest? NO

You may attach a separate letter of interest, resume or other summary of your background and experience for appointment to the body you are interested in.

Reference(s) (Name, Address, Telephone):
[redacted] 512-569-4200

Signature LuAnne Kozma **Date signed** 2/25/26

Please return to: Hayes Township, 09195 Major Douglas Sloan Road, Charlevoix, MI 49720. Or by e-mail to: clerk@hayestownshipmi.gov

Hayes Township is an Equal Opportunity Employer and will not discriminate among applicants or employees with regard to race, religion, sex, age, national origin, height, weight, marital status, non-disqualifying disability, veteran status or on the basis of any characteristic that is protected by state or federal law.

Gmail clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>

Application for data center advisory committee

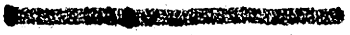
1 message

LuAnne Kozma <[redacted]> Fri, Feb 27, 2026 at 2:17 PM
To: kristin baranski <clerk@hayestownshipmi.gov>
Cc: Hayes supervisor <supervisorhayestownshipmi@gmail.com>

Kristin,
Attached is my application for the advisory committee on data centers. I think it's key to have someone on the committee knowledgeable about zoning and planning as it relates to data centers, not soley people involved in the IT industry with no zoning experience. I have now taken six webinars on data centers. Since November I have been involved in data center zoning issues and two court cases on data centers, so I would be an asset to this committee.

LuAnne Kozma

Kozma application DC advisory.pdf
431K



TOWNSHIP OF MARSHALL

CALHOUN COUNTY, MICHIGAN

Resolution No. 2026-___

At a meeting of the Board of Trustees of Marshall Township, held at the Marshall Township Hall, 13551 Myron Avery Drive, Marshall, Michigan 49068, on January ____, 2026 at 7:00 p.m.:

PRESENT:

ABSENT:

RESOLUTION TO ADOPT A NON-ZONING TEMPORARY MORATORIUM ORDINANCE REGULATORY ORDINANCE, BEING ORDINANCE No. ___ ON DATA CENTERS AND BATTERY ENERGEY STORAGE SYSTEMS AND TO DIRECT THE PLANNING COMMISSION TO PREPARE ZONING ORDINANCE TEXT AMENDMENTS FOR A TEMPORARY MORATORIUM ORDINANCE ON DATA CENTERS AND ON BATTERY ENERGY STORAGE SYSTEMS

WHEREAS, Data Centers may present unique and significant land use considerations, including but not limited to electrical demand, water usage, stormwater management, noise, heat discharge, building scale, visual impacts, public safety concerns, and long-term effects and impacts on a sited project and surrounding properties and infrastructure; and,

WHEREAS, Battery Energy Storage Systems ("BESS") may present unique and significant land use considerations, including but not limited to electrical demand, stormwater management, noise, heat discharge, building visual impacts, public safety concerns, and long-term effects and impacts on a sited project and surrounding properties and infrastructure; and,

WHEREAS, the Township Board and Planning Commission have received substantial comments and information from the public raising public health, safety, and welfare concerns about the impacts of Data Centers and BESS on the residents and property owners of the Township; and,

WHEREAS, the Township's existing zoning regulations and land use policies may not adequately or specifically address the siting, scale, intensity, and operational impacts of Data Center Systems BESS projects within the Township; and,

WHEREAS, the Township Board finds that additional time is necessary to study Data Centers and BESS uses, review best practices from other jurisdictions, evaluate infrastructure capacity, and consider whether updates to the Township's Zoning Ordinance, Master Plan, or other regulatory tools are warranted; and,

WHEREAS, a temporary non-zoning police power zoning moratorium regulatory ordinance and a moratorium zoning ordinance text amendment on new Data Center applications and new BESS applications allows the Township to conduct this review in a deliberate and transparent manner without prejudicing future development decisions; and,

WHEREAS, the Township Board recognizes that a temporary moratorium is a useful planning tool intended to preserve the status quo while thoughtful policy review and regulatory evaluation are undertaken; and,

WHEREAS, the Michigan Zoning Enabling Act, Public Act 110 of 2006, as amended, authorizes local units of governments, including townships, to provide for the adoption of zoning ordinances regulating the use of land within its territorial boundaries; and,

WHEREAS, the Marshall Township Planning Commission is charged under the Michigan Planning Enabling Act, Public Act 33 of 2008, as amended, with making, preparing and submitting recommendations concerning land use planning, zoning, and orderly development within Marshall Township; and

NOW, THEREFORE, BE IT RESOLVED, that the Marshall Township Board of Trustees hereby adopts Ordinance No. _____, a Non-Zoning Police Power Regulatory Ordinance, titled, "An Ordinance to Enact a Temporary Moratorium on Data Centers and Battery Energy Storage Systems," attached hereto as Exhibit A in order to address public interests and provide sufficient time for the Township to study Data Centers and BESS land uses and consider potential amendments to the Township's Zoning Ordinance, Master Plan, and related policies to ensure compatibility with community goals, infrastructure capacity, and public health, safety, and welfare.

BE IT FURTHER RESOLVED, that pursuant Section 18-2, of the Township Zoning Ordinance, the Township Board of Trustees is hereby authorized and directs the Planning Commission to research and prepare a Temporary Moratorium Zoning Ordinance Text Amendment on Data Centers and BESS in order to provide sufficient time for the Planning Commission to study such land uses and consider potential amendments to the Township's Zoning Ordinance, Master Plan, and related policies to ensure compatibility with community goals, infrastructure capacity, and public health, safety, and welfare; and, submit recommendations to the Township Board of Trustees after a public hearing.

BE IT FURTHER RESOLVED, that the purpose of Ordinance No. _____ and the Township Board of Trustee's direction to the Planning Commission to prepare a Temporary Moratorium Zoning Ordinance Text Amendment, is to preserve the status quo while the Township Planning Commission researches Data Centers and BESS as a land use within the Township and submit a recommendation to the Township Board for consideration after public hearing.

The forgoing resolution offered by Board Member _____ and seconded by Board Member _____ to adopt Resolution No. ___ as presented and hereby adopt the Non-Zoning Temporary Police Power Moratorium Regulatory Ordinance, being Ordinance No. _____, titled, "An Ordinance to Enact a Temporary Moratorium on Data Centers and Battery Energy Storage Systems."

Upon roll call vote, the following voted:

"Aye":

"Nay":

Absent:

The Supervisor declared the resolution adopted.

_____
Jeff Albaugh
Marshall Township Clerk

CERTIFICATE

I hereby certify that the foregoing is a true and complete copy of a resolution adopted by the Board of Trustees of Marshall Township at a meeting held on the date first stated above.

_____
Jeff Albaugh
Marshall Township Clerk
13551 Myron Avery Drive
Marshall, Michigan 49068
https://www.marshalltownship.org/
jeff@marshalltownship.org
269-781-7976

MARSHALL TOWNSHIP

COUNTY OF CALHOUN, STATE OF MICHIGAN

ORDINANCE NO. _____

ADOPTED: _____

EFFECTIVE: Upon publication after adoption

AN ORDINANCE TO ENACT A TEMPORARY MORATORIUM ON DATA CENTERS AND BATTERY ENERGY STORAGE SYSTEMS

An Ordinance to protect the public health, safety, and welfare by establishing regulations relating to a temporary moratorium on considering applications for Data Centers and Battery Energy Storage Systems ("BESS") within the Township, while Marshall Township completes a study of the ordinances and regulations pertaining thereto and considers possible subsequent revisions to current ordinances pertaining thereto; to provide for severability; to repeal all ordinances or parts of ordinances in conflict therewith; and to provide an effective date.

MARSHALL TOWNSHIP

CALHOUN COUNTY, MICHIGAN

ORDAINS:

SECTION I
FINDINGS

In accordance with Public Act 1945 PA 246, MCL 41.181 *et seq.*, as amended, Marshall Township has determined the following:

1. The Township Board of Marshall Township determines that the approval of Data Centers and BESS may result in or produce negative impacts on permitted land uses and development and may harm the public health, safety and general welfare of property owners and residents of Marshall Township.

2. Recently, the Township Board has received significant comments and information from the public raising public health, safety, and welfare concerns about the impacts of Data Centers and BESS on the residents and property owners of the Township.

3. The Township has a legitimate public purpose in assessing the regulation of the establishment and use of Data Centers and BESS within the Township to ensure that Data Centers and BESS do not interfere with other land uses, or have substantial negative impacts on the environment, public health and safety.

4. The Township Board finds that adopting a temporary moratorium is reasonable and necessary for, among other reasons, the following reasons:

   A. Michigan courts have recognized that a temporary moratorium is a common and legitimate tool to preserve the status quo while formulating a development strategy.

   B. The Township Board desires to review and study the public health, safety, and welfare concerns regarding Data Centers and BESS, and any Township regulations that may impact and/or regulate such projects.

   C. The adoption of a temporary moratorium will allow the Township Board adequate time to study and possibly implement revisions to the Township's ordinances and regulations, including attention to and consideration of citizen input and involvement, public debate, and full consideration of all issues and points of view.

5. The Township Board accordingly determines that it is desirable and in the public interest for the reasons set forth above that the Township Board adopt a temporary moratorium on the acceptance and/or processing of any applications for Data Centers and BESS.

SECTION II
MORATORIUM/TERM OF MORATORIUM

The Township Board adopts a temporary moratorium on the acceptance and/or processing of any applications for a Data Center and BESS. The temporary moratorium is for six (6) months from the effective date of this Ordinance, or until the effective date of any amended or new Township ordinances or regulations addressing Data Centers are effective, whichever date occurs first.

SECTION III
EXTENSION OF MORATORIUM

Before this moratorium expires, the Township Board may extend the temporary moratorium for Data Centers and BESS by resolution of the Township Board as appropriate to allow sufficient time to complete amendments or additions to its ordinances and regulations.

SECTION IV
SEVERABILITY

The provisions of this ordinance are hereby declared to be severable. If any clause, sentence, word, section or provision is hereafter declared void or unenforceable for any reason by a court of competent jurisdiction, it shall not affect the remainder of such ordinance which shall continue in full force and effect.

SECTION V
REPEAL

All ordinance or parts of ordinances in conflict herewith are hereby repealed.

SECTION VI
EMERGENCY ORDINANCE/EFFECTIVE DATE

This Ordinance shall take effect upon publication, after adoption.

MARSHALL TOWNSHIP
Jeff Albaugh, Clerk
13551 Myron Avery Drive
269-781-4403
jeff@marshalltownship.org
https://www.marshalltownship.org/

police power ordinance

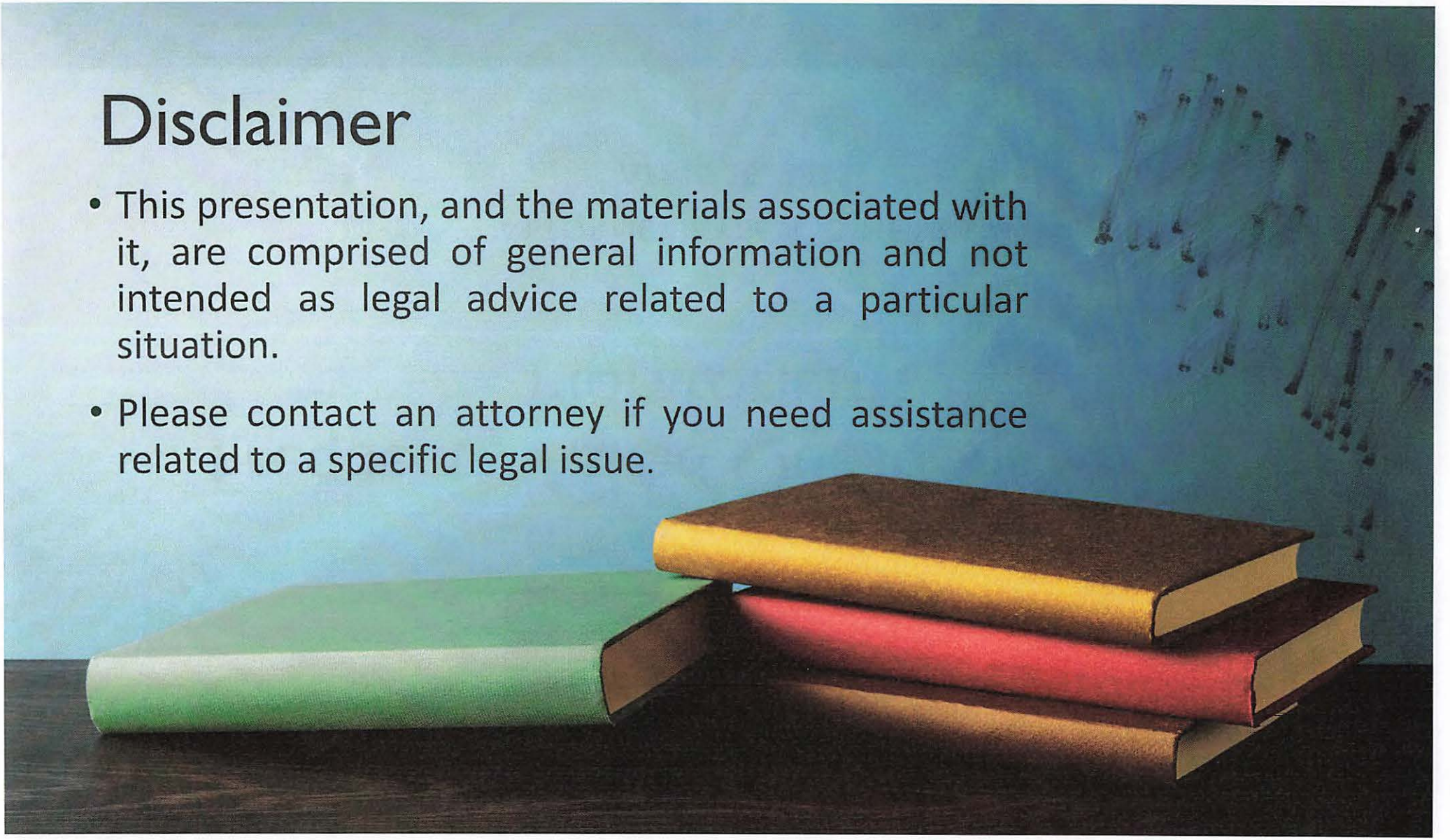
Fahey Schultz Burzych Rhodes

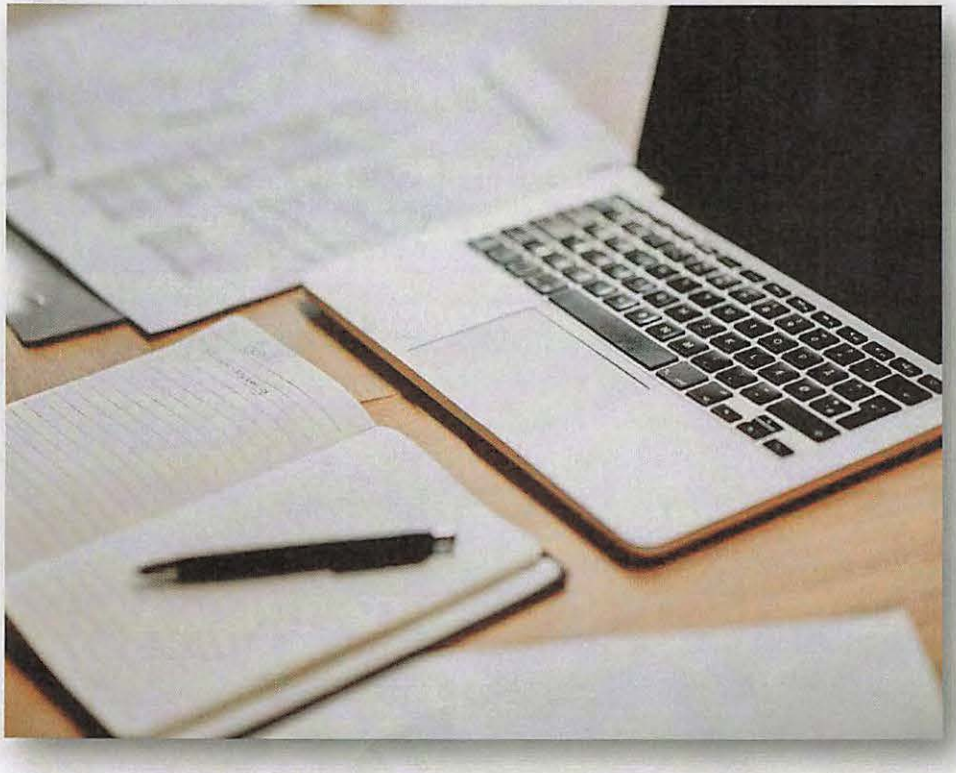
EXPERT COUNSEL REAL SOLUTIONS

Frequently Asked Questions About Moratoriums

ATTORNEY KYLE A. O'MEARA

APRIL 26, 2023


Disclaimer
• This presentation, and the materials associated with it, are comprised of general information and not intended as legal advice related to a particular situation.
• Please contact an attorney if you need assistance related to a specific legal issue.



Presentation Goals

1. Know what a moratorium is
2. Learn how to enact a moratorium
3. Understand challenges to moratoriums
4. Discuss best practices and moratorium "pitfalls"

What are moratoriums?

Stems from the Latin word *moratorius* that is defined as "tending to delay."

"[A] suspension of an activity." *Merriam-Webster Dictionary*

The plural of "moratorium" is either moratoriums or moratoria.

In the township context, generally means the pause of considering and issuing some permit (e.g., zoning approvals) for a time period to study and potentially adopt new regulations for a particular topic.

What moratoriums are not!

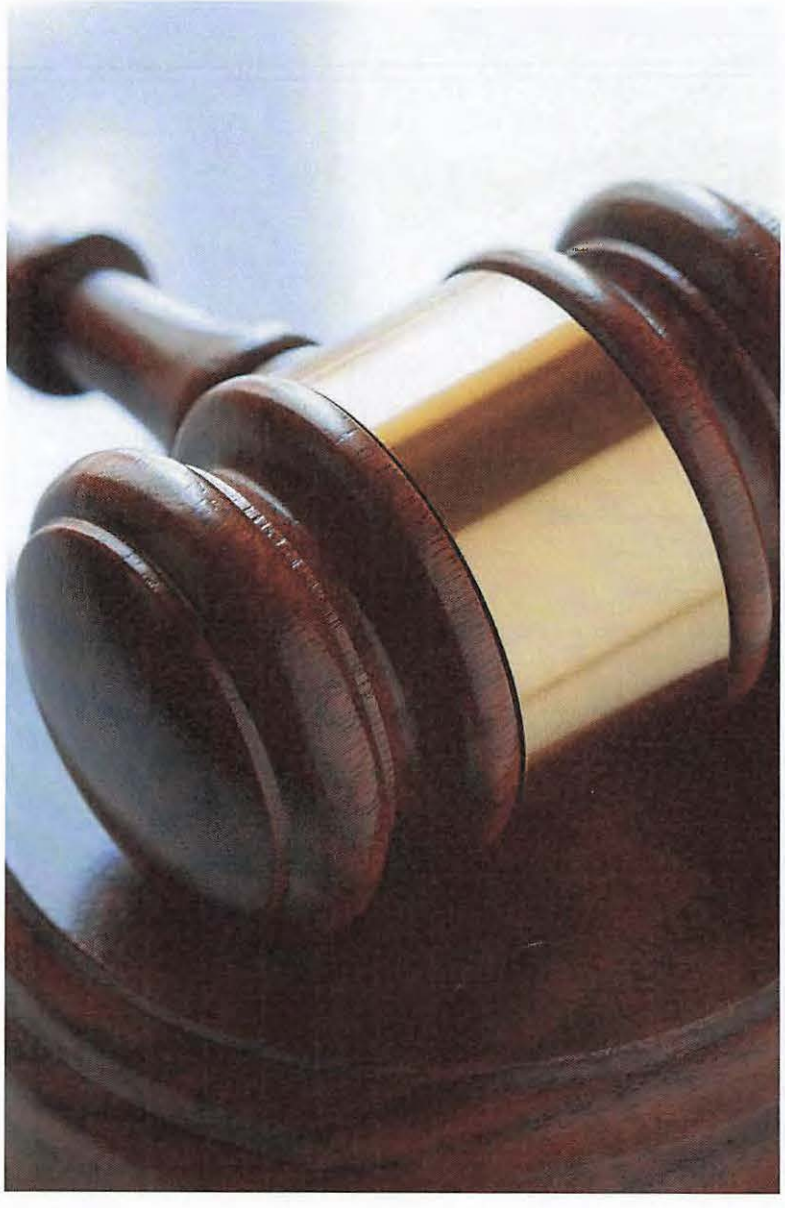
- Bans
- Unlawful (if enacted properly)
- A "magic" solution to all of a township's problems

What are moratoriums used for?

- Pausing consideration of a certain issue / approvals to allow a township to study the issue and to potentially adopt new or amended ordinances.

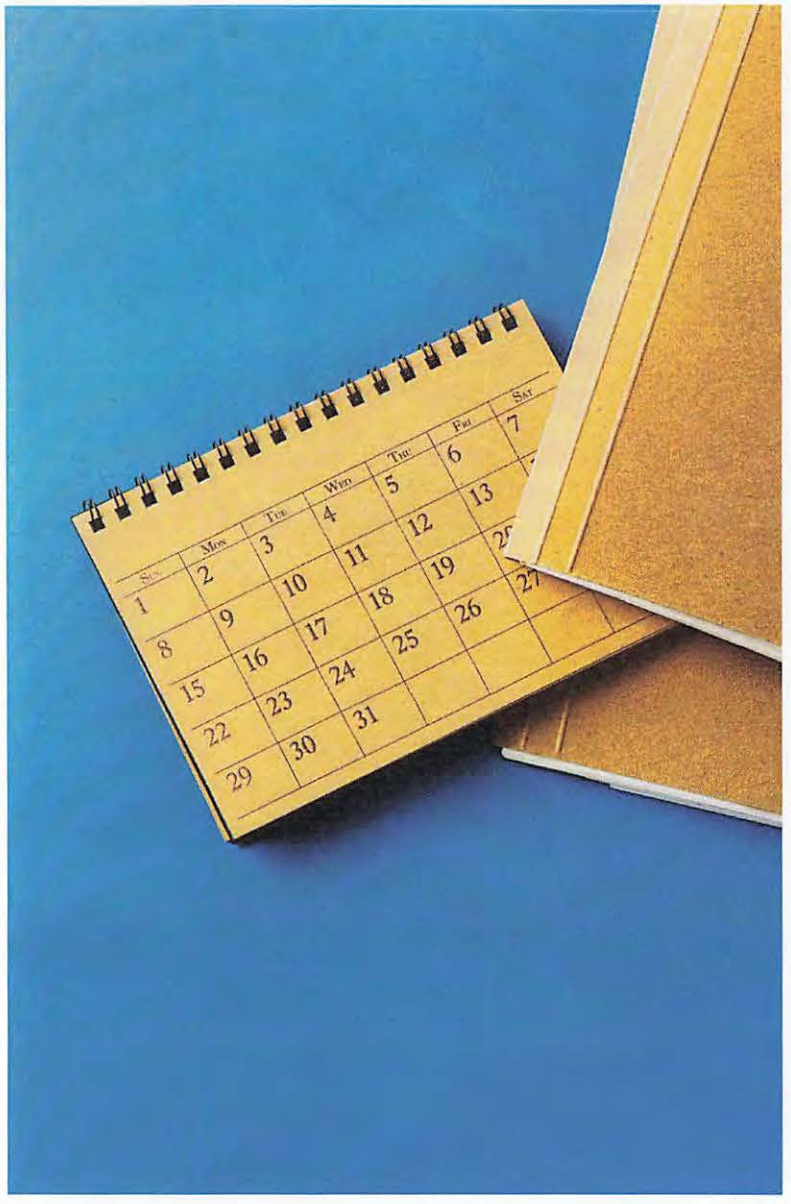
Examples

1. Pausing consideration of utility-scale renewable energy zoning applications to study existing wind and solar regulations.
2. Pausing consideration and issuance of marihuana licenses to study marihuana regulations.



How does a township enact a moratorium?

- It depends....
- Mixed case law
  - **By Resolution.** See *Metamora Twp v Am Aggregates of Michigan, Inc*, No. 349069, 2021 WL 1236108, p *15 (Mich Ct App, April 1, 2021).
  - **By Police Power Ordinance**
  - **By Zoning Ordinance Amendment?** *Tuscola Wind III, LLC v Ellington Twp*, No. 17-CV-11025, 2018 WL 1291161 (ED Mich, March 13, 2018)



How long can a moratorium last?

- "[A] moratorium lasting more than one year should be viewed with special skepticism." *Tahoe-Sierra Pres Council, Inc v Tahoe Regl Planning Agency,* 535 US 302, 304 (2002).

- **BUT** – Same case upheld a 32-month moratorium of development in the Lake Tahoe Basin during development of a land use plan for the area.

Common Challenges #1 - Formation

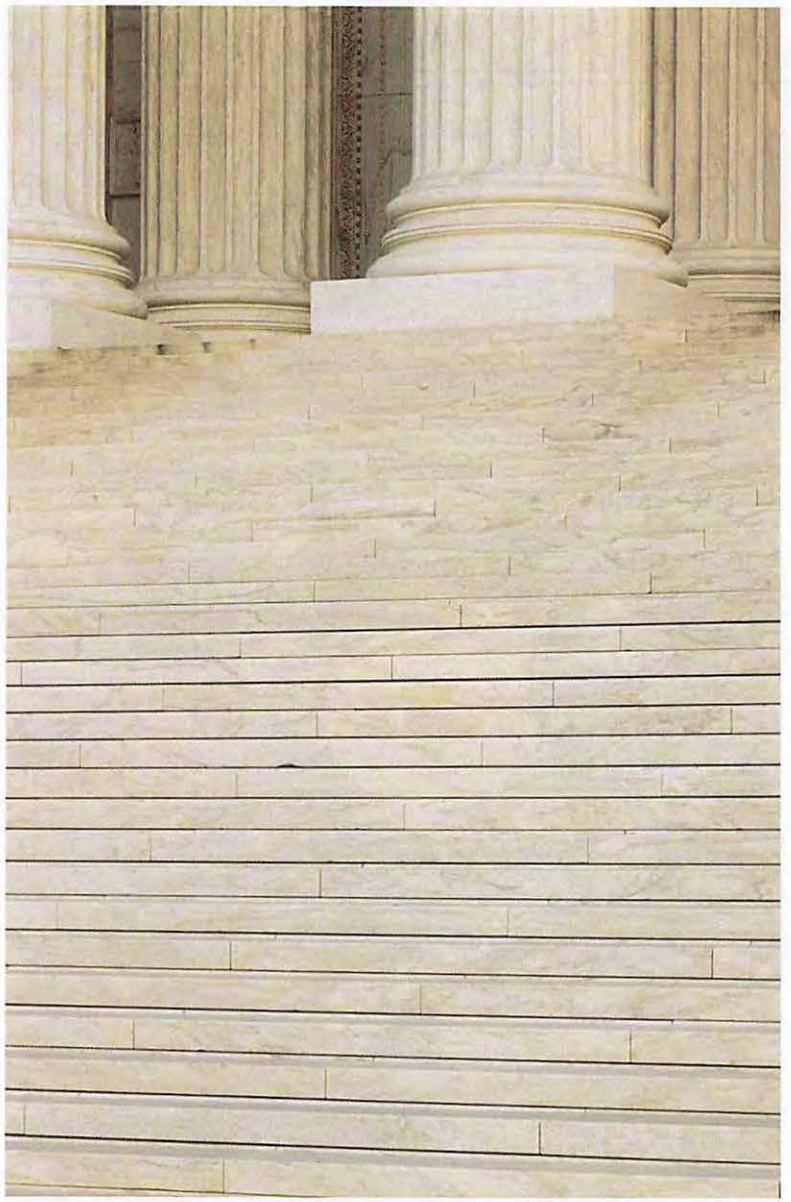
- Especially for moratoriums related to zoning regulations and approvals, developers may challenge a moratorium based on how it was adopted.
- Similar challenges for moratoriums adopted by resolution.

Solutions

1. Adopt by police power ordinance.
2. Adopt corresponding zoning ordinance amendment (after police power ordinance) for moratoriums related to land-use issues.
3. Ensure that your township's zoning ordinance <u>does not</u> require action on applications within a set period of time.

Zoning Moratorium Safeguard?

- Given the *Tuscola Wind* case, a township may want to insert a provision in its Zoning Ordinance allowing adoption of moratoriums similar to fee schedules.
- This (although not fully tested) may allow a township to avoid the long adoption times associated with Zoning Ordinance amendments.



Common Challenges #2 - Takings

- Regulatory Takings
- "[N]or shall private property be taken for public use, without just compensation[.]" US Const, Amend V.

Solutions

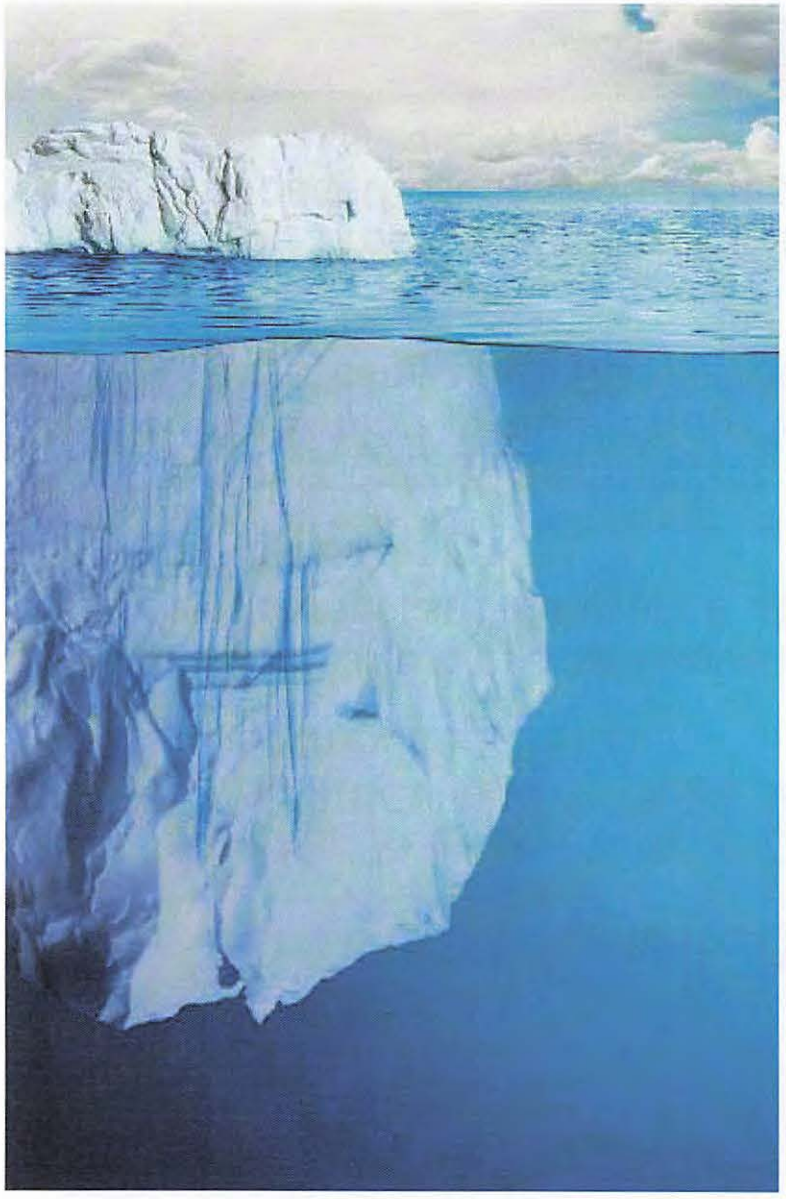
1. Make moratorium temporary
2. The moratorium should treat people equally
3. If possible, allow other uses of land
4. Allow limited waiver mechanism

Common Challenges #3 – Other Constitutional Claims

- **Substantive due process** - Government actions must have a rational basis and not deprive citizens of life, liberty, or property. US Const, Amend XIV.
- **Procedural due process** - Adequate procedures were followed related to a constitutionally protected interest. US Const, Amend XIV.
  - Open Meetings Act Obligations!
- **Equal Protection** – Government must avoid disparate treatment of similarly situated persons. US Const, Amend XIV.
- **Tips**
  - ✓ Prepare findings outlining "why" your township is enacting a moratorium
  - ✓ Follow ordinance adoption processes in state law
  - ✓ Follow Open Meetings Act
  - ✓ Do not treat similar entities or individuals differently

Common Challenges #4 – Preempting Statutes

- *Amber Reineck House v City of Howell, Michigan*, No. 20-CV-10203, 2022 WL 17650471 (ED Mich, December 13, 2022).
- Moratorium in case above enacted on land uses that encompassed substance abuse disorder transitional housing.
- Court did not dismiss case and found appropriate to determine if moratorium violated Fair Housing Act, Americans with Disabilities Act, and similar state statutes.
- **Tip:** Proceed with caution if a moratorium may impact those in protected classes!



Common Moratorium Pitfalls

- Townships should avoid the following pitfalls if enacting a moratorium:
  1. Enacting a moratorium with no plan to study or revise ordinance regulations.
  2. Thinking the moratorium will cause the controversial issue to "go away."
  3. Allowing a moratorium to expire before new regulations are adopted.
  4. Adopting a moratorium by motion.
  5. Not articulating "findings" for enacting a moratorium.

Best Moratorium Practices

1. Ensure your township adopts the moratorium correctly.
2. Develop a plan of action to enact/study new regulations.
3. Do not impose a moratorium for longer than a year unless special circumstances.
4. Avoid enacting moratoriums that will restrict all purposes for a parcel unless the moratorium has a waiver provision.
5. **Be transparent** – A moratorium may make some upset but encourage their participation when studying new regulations.
6. Don't target (even unintentionally) protected classes with a moratorium.
7. Outline reasons for enacting a moratorium.

Questions

Kyle O'Meara

Fahey Schultz Burzych Rhodes PLC

4151 Okemos Rd., Okemos, MI 48864

Tel: 517-381-0100

komeara@fsbrlaw.com

www.fsbrlaw.com

This presentation, and the materials associated with it, are comprised of general information and not intended as legal advice related to a particular situation. Please contact an attorney if you need assistance related to a specific legal issue.

WHAT MICHIGAN LOCAL GOVERNMENTS SHOULD KNOW ABOUT DATA CENTERS

February 2026

GRAHAM SUSTAINABILITY INSTITUTE
CENTER FOR EMPOWERING COMMUNITIES
UNIVERSITY OF MICHIGAN

Table of Contents

Background & Purpose

While data centers have operated in Michigan for some time,[1] they have largely existed without debate or public scrutiny. With the growth of AI and cloud computing, however, demand for larger, more resource-intensive data center facilities has surged. Following the recent expansion of state-level tax incentives for data centers, developers have begun looking to Michigan to identify new siting opportunities for significantly larger facilities.

Much has been written about the opportunities and risks that AI and data centers pose to society at large.[2] **This guide is not intended to resolve or mediate this society-wide debate; instead, it focuses on local-level considerations.** Like all land uses, data centers bring both positive and negative local impacts to the communities that host them. These impacts can vary depending on the specific technology used within a data center, the state regulations that shape its development, and its location within the host community. For example, there is a trade-off between the amount of water and energy a data center consumes, which depends heavily on the cooling technology used. State and local policy can also shape data center impacts on water and energy, as well as the direct economic impacts on the host community, including property taxes and job creation.

This guide is intended to provide Michigan local government officials and planners, particularly those with zoning authority, with the information they need to effectively participate in data center siting conversations. The first section of this guide provides a basic introduction to the environmental and economic impacts of data centers and links them to the current Michigan policy context. In the second section, we offer planning and zoning recommendations applicable not just to data centers but to a range of industrial land uses. Wherever possible, we draw on lessons from data center development in other states and from other industrial development, including our own expertise with large-scale renewable energy projects. **Since policies, technologies, and best practices for data center siting are rapidly evolving, readers should treat this guide as a working document. We plan to revise it or add supplementary guides as we learn more.**

---

[1] Estimates range on the number of data centers currently in Michigan, likely due to the broad definition of what constitutes a data center. The U.S. Department of Energy's Office of Scientific and Technical Information's Data Center Atlas lists nine data centers in Michigan. Recent local reporting has noted approximately 44 data centers in the state. Mongird, K., Thurber, T., Vernon, C., Burleyson, C., Akdemir, K. Z., & Rice, J. (2025). *lm3 open source data center atlas*. Pacific Northwest National Lab (United States). https://doi.org/10.57931/2550666; *Your guide to Michigan's data center boom—And the growing backlash*. (2025, November 18). WKAR Public Media. https://www.wkar.org/wkar-news/2025-11-17/your-guide-to-michigans-data-center-boom-and-the-growing-backlash

[2] *Data centers are amazing. Everyone hates them.* (n.d.). MIT Technology Review. Retrieved February 5, 2026, from https://www.technologyreview.com/2026/01/14/1131253/data-centers-are-amazing-everyone-hates-them/; Copley, M. (2025, October 14). Data centers are booming. But there are big energy and environmental risks. *NPR*. https://www.npr.org/2025/10/14/nx-s1-5565147/google-ai-data-centers-growth-environment-electricity

Data Center Basics

A data center is any physical room or facility that houses information technology infrastructure. Many data centers provide computing services that keep websites running, enable video streaming, and support the software used by banks, hospitals, and human resources departments. With the rise of technologies such as cloud-based services and the Internet of Things (e.g., "smart" appliances, building systems, and other equipment that send data and can be controlled via the internet), we have seen the construction of newer, larger data centers to accommodate these increasingly popular technologies.[3] In particular, the advent of generative artificial intelligence (genAI) and large language models (LLMs) has driven the development of very large data centers.

A data center's infrastructure includes not just the servers (i.e., computers) that store and process information, but also networking equipment to get information to and from the internet, power supply equipment to protect the computers against fluctuations in electricity, and environmental control equipment to cool and maintain humidity.[4] The graphic on the next page includes a useful depiction of the components of a data center.

While a data center supporting a small business's operations, for example, may be as small as a closet, most of the current attention – and the rest of this guide – focuses on large, "hyperscale" data centers. Hyperscale data centers house over 5,000 servers, and have a footprint ranging in size from 10,000 to millions of square feet.[5] Generally, the digital services enabled by hyperscale data centers benefit a national or multi-region customer base rather than just the community or business property where the facility is located.

Data center companies choose sites for new development based on a variety of factors. In addition to needing to find a site with enough land to house the data center, they also require sites near an electric transmission line with sufficient capacity to provide power to the facility and high-capacity, low-latency fiber-optic cable to connect to the internet.[6] [7] If the data center plans to use water for cooling, it must also be sited near an adequate water source. From a financial perspective, developers are also more likely to build new facilities in localities that offer tax exemptions or other financial incentives.

---

[3] Center for Sustainable Systems, University of Michigan. 2025. "Artificial Intelligence Factsheet." Pub No. CSS25-22. https://css.umich.edu/publications/factsheets/built-environment/artificial-intelligence-factsheet

[4] *What is a data center? | ibm.*

[5] *What is a hyperscale data center? | IBM.* (2024, March 21). https://www.ibm.com/think/topics/hyperscale-data-center

[6] CallisonRTKL, R. B., Vice President and Director, Mission Critical Group. (2015, January 19). *Parameters to consider in the data center location decision.* Area Development. https://www.areadevelopment.com/data-centers/data-centers-q1-2015/data-center-location-decision-parameters-46734866.shtml

[7] A recent trend in hyperscale data center development is for hyperscalers to build their own privately-owned, low-latency fiber networks if their preferred site lacks reasonable access to backbone fiber. Datacenters.com. (2025, September 3). *Who's Building the Next 200MW Colocation Campuses—And Why?* . https://www.datacenters.com/news/who-s-building-the-next-200mw-colocation-campuses-and-why

Components of Data Centers

Data centers consist of several critical components that ensure efficient operation and reliability.

Source: https://datacenteruniversity.be/whats-inside-a-data-center To view this interactive graphic visit the Data Center University website

1 Servers
The backbone of data processing and storage, servers are computers connected together to run applications and computing tasks.

2 Storage Systems
Data centers house vast amounts of digital information, stored on solid-state drives or hard disk drives.

3 Networking Equipment
Includes routers, switches and firewalls that manage data traffic and security.

4 Cooling Systems
Prevent overheating by using air or liquid cooling methods to maintain optimal operating temperatures for computers.

5 Power Infrastructure
Includes backup generators and uninterruptible power supplies to ensure continuous operation.

6 Security Systems
Physical and cyber security measures such as biometric access controls, surveillance cameras and fire suppression systems.

Source: National League of Cities

Environmental Impacts and Michigan Policies

This section details a summary of key environmental impacts; generally, the most environmentally-friendly data centers are those that:

- Use water- and energy-efficient equipment and practices within the data center
- Are powered by electricity sources that have low water use and reduced emissions[8]
- Have thoughtful site selection that avoids important habitats and sensitive lands
- Commit to decommissioning - removing infrastructure at the end of the facility's useful life

Energy and Water Consumption

Questions about water and energy consumption frequently arise in data center discussions. Because the numbers associated with data center resource consumption are so large, it may be helpful to put them in context. Some of the most water-intensive hyperscale data centers, for example, can require up to five million gallons of water per day.[9] Putting this into perspective within Michigan's context, the Great Lakes Water Authority's five freshwater treatment plants have maximum rated capacities between 240 and 540 million gallons per day, and currently have an estimated combined maximum demand of 1 billion gallons per day.[10] Using an example within the context of Michigan's energy consumption, the proposed data center in Saline Township would require 1,400 megawatts of power capacity. By comparison, the state's total generation capacity in 2024 was just over 32,000 megawatts.[11]

Energy and water consumption are presented here together because they are linked. While there is currently a gap in publicly available data on energy and water use by specific computing and cooling technologies,[12] we do know that there is typically a trade-off between energy and water use. Technologies like evaporative cooling are more energy-efficient but more water-intensive. Meanwhile, air-cooled or closed-loop chillers use minimal to no water, but are energy-intensive.[13] Both types of cooling systems are common, and often the developer may choose between them based on availability of water and cost; the water-efficient closed-loop systems are currently more costly than open-loop evaporative cooling.[14] As noted in this document's state-level tax abatement section, the sales and use tax exemptions for "enterprise" data centers, which were

---

[8] Xiao, T., Nerini, F.F., Matthews, H.D. *et al.* Environmental impact and net-zero pathways for sustainable artificial intelligence servers in the USA. *Nat Sustain* 8, 1541–1553 (2025). https://doi.org/10.1038/s41893-025-01681-y

[9] Wroth, K. (2025, October 17). *Data drain: The land and water impacts of the ai boom*. Lincoln Institute of Land Policy. https://www.lincolninst.edu/publications/land-lines-magazine/articles/land-water-impacts-data-centers/

[10] GLWA 2022—2026 CIP Appendix D: System Background Information. (n.d.). Great Lakes Water Authority. https://www.glwater.org/wp-content/uploads/2020/12/GLWA-2022-2026-CIP_AppendixD.pdf

[11] https://www.eia.gov/electricity/state/michigan/

[12] Shehabi, A., Smith, S.J., Hubbard, A., Newkirk, A., Lei, N., Siddik, M.A.B., Holecek, B., Koomey, J., Masanet, E., Sartor, D. 2024. 2024 United States Data Center Energy Usage Report. Lawrence Berkeley National Laboratory, Berkeley, California. LBNL-2001637. https://escholarship.org/content/qt32d6m0d1/qt32d6m0d1.pdf

[13] *Google's Water Risk Framework Assessing watershed health in data center communities*. (2023, December).

[14] *Chilling out: Data centers find new ways to reduce cooling costs | news & insights*. (n.d.). Gray. Retrieved February 4, 2026, from https://www.gray.com/insights/chilling-out-data-centers-find-new-ways-to-reduce-cooling-costs/

signed last year, include requirements related to water and energy. However, these same provisions are not required for the "qualified" data center exemption category, which has been available since 2015.

When thinking about a data center's sustainability, something to note is that even in data centers that have minimal *direct* use of water for cooling, there may still be *indirect* use of water. That is because most U.S. power plants are thermoelectric[15] and require significant amounts of water to operate.[16] This indirect water impact is no different from that of other high-demand electricity users, and can be minimized when data centers are located in electricity grids that have less reliance on thermoelectric power plants or when the data centers themselves are powered by electricity sources that do not require water for operations (e.g., wind and solar power). Consequently, this water use is rarely in the community hosting the data center, but rather in communities that host power plants that supply electricity to the grid. While Michigan's electricity fleet has been reducing its reliance on thermoelectric power plants as it adds renewables to the grid, in 2024, Michigan's electric power plants withdrew roughly 5.4 billion gallons of water per day for power plant cooling.[17]

Like the federal government, Michigan does not have policies specifically governing data center energy use.[18] However, the Michigan Public Service Commission (MPSC, also known as the Commission) regulates several policies relevant to data centers. Primarily, the MPSC regulates both the investor-owned utilities that charge data centers for electricity and natural gas and the terms of service under which those utilities operate. The Commission also requires all entities that provide electricity to customers in Michigan, including investor-owned utilities, cooperatives, municipal utilities, and alternative electric suppliers, to prove each year that they have adequate resources planned four years ahead to meet their customers' electricity needs.[19] Furthermore, the Commission has the power to require additional customer protections in special contract requests submitted by investor-owned utilities seeking to work with data centers, and to attach conditions to any approval it grants. However, the Commission cannot control where data centers are built, approve their construction, or issue permits related to their water consumption.[20]

---

[15] A thermoelectric power plant uses an energy source (e.g., coal, natural gas, or nuclear) to heat water to create high-power steam which is then used to spin a turbine to generate electricity.

[16] In 2023, data centers directly consumed approximately 17 billion gallons of water in their operations and indirectly consumed 211 billion gallons through their energy use. Sadasivam, N. (2025, November 24). *How to make data centers less thirsty*. Grist. https://grist.org/energy/how-to-make-data-centers-less-thirsty/

[17] Annual Report of the Great Lakes Regional Water Use Database. (2024). Great Lakes Commission. https://cms.waterusedata.glc.org/media/2024-Water-Use-Report-FINAL.pdf

[18] There is currently federal guidance (not requirements) on data centers used by the federal government. Offutt, M., & Zhu, L. (2025). *Data Centers and Their Energy Consumption: Frequently Asked Questions*. Library of Congress. https://www.congress.gov/crs-product/R48646#fn59

[19] *Resource planning*. (n.d.). Retrieved January 4, 2026, from https://www.michigan.gov/mpsc/regulatory/electricity/resource-planning

[20] *Issue Brief:Case No. U-21990, DTE Electric's Application for Approval of Special Contracts*. (2025, December 18). Michigan Public Service Commission. https://www.michigan.gov/mpsc/-/media/Project/Websites/mpsc/consumer/info/briefs/Issue_Brief_U_21990_DTE_12_18_25-(002).pdf

The MPSC also manages the implementation of Michigan's clean energy standard, legislation that shapes the types of power plants that provide electricity to Michigan utilities.[21] This law requires utilities to obtain 15% of their power from renewable energy resources each year through 2029, and then 50% in 2030. In 2035, an 80% clean energy standard will take effect, with a target of 100% in 2040. During this transitional period, the MPSC is responsible for reviewing each utility's renewable energy plan to ensure compliance with the standard and for approving cost-recovery mechanisms for regulated utilities. The Commission also has the ability to grant a utility an extension for compliance under certain circumstances.[22]

While the MPSC has jurisdiction over the state's utility rates and customer protections, the Department of Environment, Great Lakes, and Energy (EGLE) regulates water withdrawals. Within EGLE, the Geologic Resources Management Division (GRMD) oversees Michigan's regulation of large quantity water withdrawals, with the goal of protecting the state's environment from significant impacts caused by large-volume water consumers. Specifically, Michigan landowners, such as a data center using traditional evaporative cooling, must obtain prior approval before operating pumps capable of withdrawing at least 70 gallons per minute.[23] The permitting process relies on GRMD's Water Withdrawal Assessment Tool (WWAT) for wells or surface water intakes from streams, rivers, or ponds with less than five acres of surface area. GRMD grants approval when no Adverse Resource Impact (ARI) on nearby streams and rivers is determined, resulting in a Water Withdrawal Registration that becomes void if the withdrawal isn't operational within 18 months.[24] Further permitting is required in sensitive areas or when large-quantity withdrawal owners seek new or increased withdrawals exceeding 2,000,000 gallons per day (pumps with flow rates of 1,389 gallons per minute or more).[25] These regulations apply to any on-site water producers in the state, from agriculture to public water supplies, and would apply whether a data center seeks to withdraw water via a well or if its increased demand would prompt a public water supply to increase its water withdrawals.

In the case of a data center seeking supply through a public water utility, Michigan's Safe Drinking Water Act requires these facilities maintain adequate capacity and reliability for existing customers.[26] Further, EGLE will reject water treatment plant construction permits if capacity assessments reveal a proposed expansion or alteration will leave a system with inadequate technical, financial, or managerial capacity to meet requirements.[27]

---

[21] *Clean energy standard*. (n.d.). Retrieved January 4, 2026, from https://www.michigan.gov/mpsc/commission/workgroups/2023-energy-legislation/clean-energy-standard
[22] MCL 460.1032 (2). https://legislature.mi.gov/documents/mcl/pdf/MCL-ACT-295-OF-2008.pdf
[23] *Wwat*. (n.d.). Retrieved October 7, 2025, from https://www.egle.state.mi.us/wwat/home
[24] *Wwat*. (n.d.). Retrieved October 7, 2025, from https://www.egle.state.mi.us/wwat/home
[25] *Wwat*. (n.d.). Retrieved October 7, 2025, from https://www.egle.state.mi.us/wwat/home
[26] Safe Drinking Water Act, Mich. Comp. Laws § 325.1005(1)(e) (1976).
[27] Safe Drinking Water Act § 325.1004(2), (7).

Wastewater

Data center cooling systems influence not only water consumption but also the overall quality and volume of wastewater produced. Some cooling systems, like evaporative cooling, can generate wastewater with altered pH, and high concentrations of conditioning chemicals and biocides that are used to reduce the growth of bacteria such as *legionella*.[28] While these chemicals are important for minimizing
public health risks, they could strain local treatment plants that are not equipped to handle them. Other next-generation data center designs, such as closed-loop and dry cooling, are moving toward minimal or near-zero wastewater discharge.

EGLE's Water Resources Division (WRD) regulates waste or wastewater discharging into the waters of the state. Waters of the state are defined in law as groundwaters, lakes, rivers, and streams, along with all other watercourses and waters, including the Great Lakes. The regulations applicable to wastewater discharges can be divided into three permitting categories: discharges directly into surface water, discharges directly onto the ground or subsurface into the groundwater, and indirect discharges into nearby municipal wastewater treatment systems.

The first category applies to anyone discharging, or proposing to discharge, waste or wastewater into the state's surface waters. This type of permit is required by law under the National Pollution Discharge Elimination System (NPDES) program. This applies to any type of wastewater, including commercial, industrial, and sanitary sewage. The NPDES program is intended to control direct discharge into the surface waters of the state by imposing effluent limitations and other conditions to meet state and federal requirements.

The second category applies to anyone discharging, or proposing to discharge, waste or wastewater directly onto the ground or into groundwater. This type of discharge would require a Groundwater Discharge Permit or an exemption. A groundwater discharge permit imposes effluent limitations and/or groundwater limits set to protect the groundwater for the intended purposes. The intended purposes include protecting nearby drinking water wells, along with groundwater seeping into nearby surface water, to ensure the groundwater is safe for all who use it. This permit type applies to any wastewater, including commercial, industrial, and sanitary sewage. There are other regulating authorities, such as the Local Health Departments, that may become involved through the issuance of construction permits for discharges containing only sanitary sewage generating less than 10,000 gallons per day.

The third category applies to any indirect discharges (those who discharge to a municipal wastewater treatment facility via a sanitary sewer) and does not require an NPDES or groundwater discharge permit. Discharge to a separate storm sewer (i.e., does not go to a municipal wastewater treatment facility) is considered a direct discharge and may require either

[28] CDC. (2024, May 8). *Strategies for identifying cooling towers*. Investigating Legionnaires' Disease. https://www.cdc.gov/investigate-legionella/php/public-heaMichiganlth-strategy/identifying-cooling-towers.html

an NPDES or a groundwater discharge permit. Discharge to a municipal wastewater treatment facility may require a permit from the municipality under the Industrial Pretreatment Program.

Air Quality

The main air quality impact of data centers stems from emissions associated with electricity production, specifically nitrogen oxides and fine particulate matter (PM2.5).[29] Data centers typically draw most of their power from the grid, so the majority of these emissions are generated off-site in the communities hosting the power plants serving the power grid at large. Thus, when data centers are built in regions with cleaner power plants, these air emissions are lower. This impact can be furthered through the adoption of flexible operational strategies, such as load shifting, dynamic scheduling, and participation in virtual power plant (VPP) programs, which can help reduce emissions during peak demand periods. While these strategies are not yet widespread, research indicates that they most effectively reduce emissions when utilized in regions where renewables are already abundant and cost-competitive.[30]

Even when connected to the grid, data centers have on-site back-up generators, typically fueled by natural gas or diesel, to maintain operations during outages.[31] Actual emissions at the data center will depend on the number of generators, their size, and permitted runtime hours, and will vary based on individual data center operational standards. In Michigan, EGLE's Air Quality Division (AQD) requires air use and installation permits for equipment emitting air contaminants unless exempted explicitly under Part 2 of the air quality rules (Rules 277-291). While Rule 285(g) exempts the sort of small internal combustion engines that might be used in emergency back-up generators, data centers must also comply with Rule 278, which prohibits using exemptions when total project emissions exceed significance thresholds (e.g., 40 tons/year of nitrogen oxides, 100 tons/year of carbon monoxide, or 10 tons/year of particulate matter 2.5 micrometers or smaller). If aggregate emissions from all back-up generators exceed these thresholds, individual engine exemptions become invalid, and the site must obtain a permit for the entire fleet of generators on-site and any other air-emitting equipment.[32]

Land

As with other land uses, the environmental impact of a data center on its site largely depends on site characteristics, the land management practices used during construction, and what happens to the site at the end of the facility's lifespan.

---

[29] Mitigating the public health impacts of ai data centers. (2025, November 5). *Harvard Business Review.* https://hbr.org/2025/11/mitigating-the-public-health-impacts-of-ai-data-centers

[30] Tran, T. (2025, October 29). Flexible data centers and the grid: Lower costs, higher emissions? -. *CEEPR.* https://ceepr.mit.edu/flexible-data-centers-and-the-grid-lower-costs-higher-emissions/

[31] *A primer for local governments: Understanding data centers.* (2025, April). National League of Cities. https://www.nlc.org/wp-content/uploads/2025/04/Data-Centers-Fact-Sheet.pdf

[32] Insights from Liesl Clark, Director of Climate Action Engagement at the University of Michigan

Data centers may cause environmental harm if sited in areas with sensitive natural features, such as steep slopes, wetlands, floodplains, and unique habitats. Construction activities, such as grading or heavy equipment use, can lead to soil compaction, topsoil removal, and changes in natural water flow, which can hinder the site's future plant growth and water-holding capacity.[33] Furthermore, if infrastructure is abandoned at the end of the project's life, it may result in the creation of a brownfield or make future redevelopment challenging. Such impacts, however, are not unique to data center development, and there are already state and local policies in place to address these common concerns with other industrial developments.

Sometimes there is a concern about whether data centers will impact other land uses, for example, by converting agricultural land. Even if many data centers are constructed, at the national- or state-level, they are only expected to be a minuscule fraction of total land area.[34] At the local level, however, there could be noticeable impacts if multiple large data centers are built in close proximity, or if data center development is combined with land-use changes from other sectors (e.g., housing development, energy infrastructure).

Quality of Life

In addition to direct impacts on land, data centers can raise several quality-of-life concerns for neighboring properties. Drawing on lessons from data centers in both Loudoun County, Virginia's "Data Center Alley," and Linn County, Iowa, we have learned that many of these issues can be mitigated through attentive siting.

Many quality-of-life concerns arise from other similar types of industrial development. Construction activities, for example, often have exceptionally high levels of disruption for neighbors, with heavy truck traffic, construction-related noise, and dust.[35] When foundations are being constructed, the developers may need to dewater, raising concerns of temporary impacts on local water tables or soil erosion.[36] As with other construction activities, soil erosion permits issued by the county or municipality would be required for "any earth change activity that disturbs one or more acres of land or which is within 500 feet of a lake or stream."[37] Similarly, when data centers or other industrial activities are developed on previously undeveloped sites,

---

[33] Augst, T., Fierke-Gmazel, H., Gould, M. C., Krol, M., Mills, S., Neumann, B., Reilly, M., & Stoetzer, O. (2025). Planning and Zoning for Solar Energy Systems: A Guide for Michigan Local Governments (Updated ed.). Michigan State University Extension, Michigan State University School of Planning, Design and Construction, and University of Michigan Center for EmPowering Communities.

[34] Power Play: The Emerging Powered Land Opportunity (n.d.) Hines. Retrieved January 5, 2026,https://www.hines.com/powered-land/power-play-full-report

[35] *Data Centers in Virginia.* (2024). [Report to the Governor and the General Assembly of Virginia]. Joint Legislative Audit and Review Commission. https://jlarc.virginia.gov/pdfs/reports/Rpt598.pdf

[36] *$750m iowa data center's unpermitted wells draw $20k fine against dewatering contractor | engineering news-record.* (n.d.). Retrieved February 4, 2026, from https://www.enr.com/articles/61162-750m-iowa-data-centers-unpermitted-wells-draw-20k-fine-against-dewatering-contractor

[37] Soil Erosion and Sedimentation Control Program (SESC). (n.d.). Retrieved February 6, 2026 from https://www.michigan.gov/egle/about/organization/water-resources/soil-erosion/sesc-overview

there is a visual change to the landscape. This is apparent not just during the day, but also at night when parking lot and security lighting may create a notable change to the nighttime character of the property.

Other impacts, though, are more unique to data centers. One of the primary complaints of existing data centers in Loudoun County, for example, is the associated noise.[38] Unlike many industrial facilities with variable operational patterns, data centers operate continuously, producing consistent noise that can be problematically disruptive for neighboring residents. In particular, Loudon County found that inaudible low-frequency sounds were a nuisance to some data center neighbors.[39]

[38] *Data Centers in Virginia.* (2024)
[39] *Data Centers in Virginia.* (2024).

Economic Impacts and Michigan Policies

The primary draw of data centers as a land use, at both the state and local levels, is the economic activity they generate. There are, however, concerns about whether data centers will increase electricity costs for consumers. Here, we outline the potential economic impacts of data centers and the policies in Michigan that shape them.

State-level Tax Abatements to Attract Industry

Data centers, like other industries, drive economic activity in the states and communities where they are located. This includes, notably, the direct economic impacts of the surge in construction activity and the initial investment in data center equipment. But it also includes indirect economic benefits to the suppliers of the equipment and other materials that go into data centers, as well as induced effects when data center workers spend their wages on goods and services.[40] While new economic activity in a state expands the tax base and can fund state and local government services, states often reduce certain taxes to attract industry. Today, 36 states have laws approving state tax incentives for new data center development.[41]

For the past decade, the state of Michigan has offered a state-level sales and use tax exemption for "qualified" data centers, with new legislation adopted in 2024 aimed primarily at attracting hyperscale or "enterprise" data centers. The policies governing the sales and use tax exemption are from three key pairs of laws:

- Effective December 23, 2015, **PA 251 and 252 of 2015** added Michigan Compiled Law (MCL) 205.54ee and MCL 205.94cc to Michigan's General Sales Tax Act and Use Tax Act to create sales and use tax exemptions through December 31, 2035, for the sale, use, or consumption of data center equipment for qualified data centers. Under these Acts, a "qualified data center" is "facilities of one or more buildings located in Michigan that are owned or operated by an entity whose primary business is operating a data center for itself and colocated businesses; the entity must also receive 75% or more of its revenue from unaffiliated colocated businesses." The Acts required the creation of 400 new data center-related jobs by January 1, 2022, and 1,000 by January 1, 2026. Data center-related jobs include "jobs created at qualified data centers, by colocated businesses, and by contractors making improvements to realty that constitute a qualified data center."[42]

---

[40] *DataCenters-JoyceFoundation_2026-01-13_Final.pdf | Powered by Box.* (n.d.). Retrieved February 4, 2026, from https://virginia.app.box.com/s/8qq2ggbdgwhf4atrorghtrcqsq64wd74

[41] *An overview of state data center-related tax incentives | naiop | commercial real estate development association.* (n.d.). Retrieved January 12, 2026, from https://www.naiop.org/research-and-publications/magazine/2024/Winter-2024-2025/development-ownership/an-overview-of-state-data-center-related-tax-incentives/

[42] *Notice Regarding Data Center Exemption.* (2016, March 14). State of Michigan Department of Treasury. https://www.michigan.gov/treasury/-/media/Project/Websites/taxes/Notices/Data_center_exemption_notice.pdf?rev=e6f7d971f9bd4eccba3f208b3fe9d862&hash=DF4CBADC90F299058E7F2F3358A823A2

- Effective February 13, 2020, **PA 29 and 30 of 2020** amended MCL 205.54ee and MCL 205.94cc to establish reporting obligations for sales and use tax exemption claims regarding the sale or purchase of data center equipment.[43] Under these Acts, persons seeking exemptions in a particular calendar year must file Form 5726 by January 31 of the following year. Form 5726 requires information on the sales or purchase price of all exempt equipment, and any information needed by the Department of Treasury to calculate School Aid Fund revenue loss as a result of tax exemption claims.
- Effective April 2025, **PA 181 and 207 of 2024** amended MCL 205.54ee and MCL 205.94cc to extend the original tax exemption period from 2035 to 2050 (and to 2065 for data centers built on brownfields), and to establish a new "enterprise data center" facility type that must meet more stringent requirements compared to "qualified data centers" to receive tax exemptions.[44] In August 2025, the Michigan Strategic Fund (MSF) published formal implementation guidelines for the new amendments, including related to clean energy, water, and green building standards.[45] Since then, several organizations have submitted comments to the MSF Board requesting changes, particularly related to the interpretation of the clean energy requirements, asking for that standard to be applied from the outset of the data center's operations rather than a future date.[46, 47]

Table 1 summarizes key features of these incentives. While both incentive categories have job-creation requirements, their other requirements vary considerably. While smaller, non-hyperscale data centers may only meet the definition of a "qualified" data center, many of the current larger data center development proposals may meet both definitions. Notably, while "enterprise" data centers have many more requirements than "qualified" data centers, the certification process provides greater certainty for developers because the certificate is granted by MSF before they purchase the equipment. By contrast, the "qualified" data center incentive is provided by the retailer at the point of sale, but subject to a Treasury audit which introduces some risk that the exemptions may have been invalid. It is difficult to determine which of the two exemptions data center developers will seek.

---

[43] *Notice: Report for qualified data center exemptions - form 5726.* (n.d.). Retrieved from https://www.michigan.gov/treasury/reference/taxpayer-notices/notice-report-for-qualified-data-center-exemptions-form-5726

[44] *Enterprise Data Center Sales & Use Tax Exemption.* (2025, August 26). Michigan Economic Development Corporation. https://www.michiganbusiness.org/globalassets/documents/data-center/enterprise_data_center_information.pdf

[45] *Enterprise Data Center Sales & Use Tax Exemption.* (n.d.). Michigan Economic Development Corporation. https://www.michiganbusiness.org/services/data-centerreitissuegulate/

[46] *2025-11-13 letter to msf re data center tax exemption guidelines.* (n.d.). Retrieved from https://www.documentcloud.org/documents/26285411-20.25-11-13-letter-to-msf-re-data-center-tax-exemption-guidelines/

[47] Lyijynen, N. (2025, December 11). *Comments on data center generation » mieibc.* MIEIBC. https://www.mieibc.org/comments-on-data-center-generation/

Table 1. Summary of Sales and Use Tax Exemptions for Qualified and Enterprise Data Centers

	Qualified Data Center	**Enterprise Data Center**
Key definitional feature	Must receive 75% or more of revenue from colocated businesses that are not affiliates of the owner/operator	Must have a minimum of $250M equipment investment
Job Requirements	400-1,000 aggregate statewide	30 per facility at 150% median prosperity wage
Clean Energy	No requirements	90% of usage (interpretation unclear, see below)
Green Building Standards	No requirements	One or more certified standards within 3 years
Water Source	No requirements	Municipal
Property Tax	No requirements	Cannot receive sunset, state, or local property tax benefits without local approval
Certification Requirements/Details	To claim the exemption when purchasing eligible data center equipment, the purchaser must provide a completed Michigan Sales and Use Tax Certificate of Exemption (Form 3372) to its seller. Must also file Form 5726	Must receive Michigan Strategic Fund certification before making purchases that are qualified for the exemption. No new certifications after December 31, 2029.
Revocation	No requirements	If certification is revoked, repayment of all related tax exemptions is required (if the revocation occurs 10 years after certification, 50% of the tax exemptions must be repaid).

Local Taxes and Employment

Job creation is a primary focus of state-level tax incentives. While state-level estimates of Michigan-specific job creation suggest there will be significant employment opportunities,[48] it is unclear how many direct or indirect data center jobs could be filled by residents of the host community. The vast majority of direct data center jobs are temporary construction positions. Once completed, there would be on-site operational and security positions, but estimates of how many range from dozens[49] to hundreds.

The more significant economic incentive for the host community would likely be the property taxes paid by the data center developer and operator. Because data center equipment is costly, data centers can significantly increase the property tax base. However, these increases may shift year-to-year.

The State Tax Commission lists data centers as a commercial use,[50] and the equipment within the data center would be taxed as commercial personal property. Most of the equipment, including servers and networking equipment, would likely be reported in Section F of the Personal Property Statement, which has a relatively fast depreciation.[51] The 2026 multipliers for Section F assess true cash value at 60% of the installed cost of that equipment in year 1, but just 8% of the true cash value when that equipment is 7 years old. As older equipment in the data center is replaced with newer equipment, that new equipment would again start out at a 60% multiplier, but–as is the case with many classes of personal property–there may be years when the taxable value of the personal property is less than the previous year. If there is a large increase in the real property on the site (for example, from new buildings or significant site improvements), these swings in tax revenue may be more muted. Regardless, local governments may need to think strategically about how to utilize these new personal property tax revenues. Lessons might be gleaned from our recent guide on renewable energy revenue streams.[52]

---

[48] Group, T. B. (n.d.). *Michigan data center jobs 2026: Openai stargate hiring update*. Retrieved February 4, 2026, from https://thebirmgroup.com/michigan-data-center-jobs-2026-stargate-project-brings-thousands-of-opportunities-to-washtenaw-county/; *Gov. Whitmer submits public comment in support of stargate project, creating thousands of jobs, meeting strong environmental standards*. (n.d.). Retrieved February 4, 2026, from https://www.michigan.gov/whitmer/news/press-releases/2025/12/03/whitmer-submits-public-comment-in-support-of-stargate-project-creating-thousands-of-jobs

[49] Chung, W. (2025, October 6). *Data center staffing levels: How many people does a facility need?* Broadstaff. https://broadstaffglobal.com/data-center-staffing-levels-how-many-people-does-a-facility-need

[50] Michigan State Tax Commission Property Classification MCL 211.34c. (2018) https://www.michigan.gov/treasury/-/media/Project/Websites/treasury/MISC_4/ClassificationRealProperty.pdf?rev=efb8cc4963494e1393d2675b4fab9092&hash=B7240AE93E5ABE808D0CDC7FD8AB38BE

[51] 2026 Personal Property Statement (Form L-4175), https://www.michigan.gov/taxes/-/media/Project/Websites/taxes/Forms/Property-Tax/632/632_ty2026.pdf?rev=9bd5f68f4fda4d828cc4306ea6ba749b&hash=F72987A0B2EC0E2795E0C065E33E265D

[52] Stoetzer, O., Krol, M., & Mills, S. (2025). Strategies for Renewable Energy Revenue: A Guide for Michigan Local Governments. University of Michigan Center for EmPowering Communities. https://graham.umich.edu/project/renewable-energy-revenue

Local governments do have discretion to offer data center property tax incentives, including via PA 198 agreements.[53] In certain situations, data centers may also be eligible for property tax exemptions via the Michigan Renaissance Zone Act, which are not approved at the local level but instead approved by the Michigan Strategic Fund.[54] In order to qualify for the "enterprise" data center sales and use tax exemption, however, any local property tax incentive must be approved by each local unit of government affected by the incentive. This is not a provision to qualify for the "qualified" data center sales and use tax exemption.

Impacts on Electricity Rates

Another common data center question is whether they will increase electricity costs, given the reports on electricity rate increases in some states like Virginia and Ohio that have undergone significant data center development.[55, 56] There is also, however, nationwide data finding the opposite impact: that looking across all states, those that had increased electricity load typically saw decreases in electricity rates compared to the others.[57]

There are multiple reasons that conflicting observations can be true at the same time. One key point is that it is challenging to assess what would have happened to electricity rates in the absence of data center load growth. Across the country, U.S. average retail electricity prices have been rising faster than inflation for residential consumers due to costs associated with grid maintenance and capacity expansion.[58] On the one hand, the load growth that data centers bring can help spread these fixed grid-related costs over more kilowatt-hours of electricity consumed, thereby reducing increases or the rates themselves for residential customers. On the other hand, if grid expansion is only needed to bring data center load online, data centers may be contributing to cost increases.

In Michigan, customer utility rates and ratemaking policy are set by the MPSC. By statute, Michigan abides by cost-of-service ratemaking, which means that utility rates assign "costs to customer classes based on usage patterns."[59] Additionally, Michigan's recent legislation on enterprise data center use and sales tax exemptions dictates that these data centers can only qualify if they use an electric service rate that prevents residential customers from subsidizing

---

[53] 1974 PA 198, MCL 207.551 to 207.572

[54] 1996 PA 376, MCL 125.2681 to 125.2696

[55] As data centers for AI strain the power grid, bills rise for everyday customers. (n.d.). Washington Post. https://www.washingtonpost.com/business/2024/11/01/ai-data-centers-electricity-bills-google-amazon/

[56] Saul, J. Nicoletti, L. Pogkas, D. Bass, D. and Malik, N. (2025, September 29) AI data centers are sending power bills soaring. Bloomberg Technology. https://www.bloomberg.com/graphics/2025-ai-data-centers-electricity-prices/

[57] Wiser, R., O'Shaughnessy, E, Barbose, G., Cappers, P., & Gorman, W. (2025) Factors influencing recent trends in retail electricity prices in the United States. The Electricity Journal. https://www.sciencedirect.com/science/article/pii/S1040619025000612#sec0020

[58] New Berkeley Lab report summarizes trends in retail electricity prices and price drivers. (2025, January 6). Energy Markets & Planning Berkeley Lab; Lawrence Berkeley National Laboratory. https://emp.lbl.gov/news/new-berkeley-lab-report-summarizes-trends-retail-electricity-prices-and-price-drivers

[59] Putnam, C. (n.d.). Cost of Service Ratemaking. Michigan Public Service Commission Department of Licensing and Regulatory Affairs. https://pubs.naruc.org/pub.cfm?id=53889A44-2354-D714-5158-979D43EA47CF

their facilities' electric costs.[60] Some of the Commission's recent decisions were designed to ensure that large-load customers, such as data centers, contribute significantly to the new and embedded costs associated with expanding Michigan's electric grid.

[60]Enterprise Data Center Sales and Use Tax Exemption Guidelines. (2025).

Considerations for Local Government Policy-Making

The primary tool that local governments have to shape data center development is zoning. The Michigan Zoning Enabling Act (MZEA) sets out the minimum procedures that local governments must follow when making amendments.[61] It, along with past state and federal court cases, also sets parameters for zoning authority. For example, the MZEA states that local zoning ordinances "shall not have the effect of totally prohibiting the establishment of a land use," with only a few rare exceptions.[62] While local governments have broad latitude to direct land uses to particular districts and set development standards or conditions on land uses, those standards and conditions must be reasonable and should be based on facts.[63]

Furthermore, while there is much attention to the significant community benefits that a data center may be able to bring (e.g., financial contributions to park or open-space funds, fire departments, or other community priorities), there are limitations to making these agreements required as part of zoning approval, or enforcing them if the developer decides not to make-good on the agreement.[64] Agreements with developers for community benefits are more solidly enforceable if entered into in exchange for a public subsidy of the project, such as a local property tax abatement or some other publicly-funded improvement that will benefit the project.[65] As a result, we also briefly discuss property tax abatements below. Enforceable community benefits may also result from settling a lawsuit with the data center developer, but that path comes along with additional legal fees for the local government.[66]

We offer the following considerations for local governments, but advise municipal officials to consult their local planner and municipal attorney before making any changes to their plans or zoning ordinances.

---

[61] Michigan Zoning Enabling Act, MCL 125.3101 to 125.3702 (2006). https://www.legislature.mi.gov/documents/mcl/pdf/mcl-Act-110-of-2006.pdf

[62] MCL § 125.3207

[63] MCL § 125.3504

[64] Review, T. R., & Elia, E. (2024, July 18). *Legislative exactions | the regulatory review*. https://www.theregreview.org/2024/07/18/elia-legislative-exactions/

[65] Community Benefit Planning and Agreements: A Summary Overview. (2024). Michigan State University Center for Community and Economic Development. https://ced.msu.edu/upload/community%20benefits/Community%20Benefits%20Brief_FinalVersion.pdf

[66] Consent Judgment, RD Michigan Property Owner I LLC v. Saline Township, No. 2025-001577-CZ (Washtenaw County Circuit Court Oct. 15, 2025). https://salinetownship.org/uploads/notices/SalineDataCenterConsentJudgmentFinalExecutionCopy492124804975v1.pdf

#1: Consider whether your industrial zone is appropriate for data centers

The footprint of a data center and the state regulations that apply to this land use are not significantly different from those of other large industrial activities, so it may be logical for local governments to use their approach to industrial development as a starting point for data center policymaking. However, given limited greenfield industrial development in Michigan over the last three decades and the comparatively large footprint of data centers relative to other light industrial uses, we recognize that few Michigan communities have had robust conversations about their industrial zones. Now is the time for such a conversation.

The first step should be to review the spatial footprint of your industrial district(s) and the infrastructure capacity to serve them. Many industrial uses–not just data centers–require electricity infrastructure and access to water (even if only a well). Your community's master plan (sometimes called a comprehensive plan) may have already considered where infrastructure is most suitable for industrial development, and so you should compare the spatial extent of your current industrial zoning with what is suggested in the Master Plan. This will help you determine whether it is appropriate to expand your industrial district.

In addition to dictating where industrial uses may be permitted in your community, zoning also lays out which processes developers must follow if they wish to develop their properties. It is very common to allow industrial development "by-right" in industrial zones - that is, with limited discretion by the planning commission or Township board / City Council, so long as the developer meets all of the standards in the zoning ordinance (see Consideration #2). Given the increased scale of industrial developments, it may be appropriate to treat larger industrial uses (e.g., those greater than 15,000 square feet, or whatever has been typical in your community) as special land uses, which affords the Planning Commission and board the opportunity to give proposals additional review and apply conditions to their approval.

#2: Include quality-of-life impacts in industrial zoning regulation

Historically, industrial uses have been concentrated near other industrial uses to minimize impacts on surrounding land uses from emissions, noise, and light pollution. Industrial districts were commonly buffered from residential districts either through public infrastructure, such as roads or waterways, or through less sensitive uses, such as office or commercial zones. But in communities that have seen limited industrial activity, or in those where existing industrial zones are not large enough to accommodate new industrial activity like data centers, there may not be ample space to buffer from other land uses. As a result, a community might consider updating the standards in industrial zones to ensure that any new industrial activity–data centers included–is protecting quality-of-life in neighboring districts. Your community's most important quality-of-life

impacts to regulate may be informed by your comprehensive plan. Common considerations might include:

- Visual screening: While it is common to require vegetative screening in some districts, this requirement may not apply in industrial districts, particularly if your zoning ordinance did not anticipate that an industrial district would expand to abut residential areas.
- Sound: Some communities have community-wide sound standards that exist outside of zoning codes. These often apply to all noise emitters and may differentiate sound levels by time of day or day of the week (with a higher expectation of quiet on weekends). This approach sets a constant expectation for all land uses, not just industrial uses. If this is not practical, it is also possible to include sound standards for specific land uses or land-use classes. Standards that apply to large-scale renewable energy projects may be a useful starting point, as sound standards are common in the regulation of these facilities.[67]
- Light: Another common concern about industrial activities, particularly in rural areas, is the light pollution they may cause, especially when they are developed in areas without streetlights. Some communities, including Emmet County,[68] have dark-sky ordinances that limit light pollution from all land uses. These same concepts can be applied specifically to industrial uses if that is the concern. Another option is to require dark-sky-compliant light fixtures for all proposed site plans.
- Decommissioning: Many industrial facilities have specialized designs with limited opportunities for reuse at the end of their life. From our brownfield experience, when a company is no longer in business or decommissioning the facility is too costly, these facilities are sometimes abandoned, creating an eyesore and public health hazard in the community and increasing redevelopment costs. As a result, it is increasingly common that industrial facilities enter into a decommissioning agreement that includes a financial guarantee that the facility, and any infrastructure that no longer has a useful purpose, will be removed at the end of its life. Again, it may be instructive to look to large-scale renewable energy projects for sample language.

These regulations would be in addition to the setbacks, height, lot-area coverage, and parking standards that are common in most zoning ordinances. While it is possible to use these more customary regulations to help buffer or minimize the impacts of industrial uses, there may be unintended consequences (e.g., industrial uses actually requiring more land to comply with large setback requirements) and so you may wish consider directly addressing the quality-of-life concern (e.g., sound, visual impact, light), rather than using setbacks as a proxy for those concerns.

---

[67] Krol, M., and Mills, S. (2024). Planning & Zoning for Battery Energy Storage Systems: A Guide for Michigan Local Governments. University of Michigan Center for EmPowering Communities. https://graham.umich.edu/project/bess-guide; Augst, T., Fierke-Gmazel, H., Gould, M. C., Krol, M., Mills, S., Neumann, B., Reilly, M., & Stoetzer, O. (2025). Planning and Zoning for Solar Energy Systems: A Guide for Michigan Local Governments (Updated ed.).

[68] Emmet County. (2023). *Emmet County zoning ordinance* (Ordinance No. 15-1, updated through April 28, 2023). https://www.emmetcounty.org/UserFiles/Servers/Server_3942756/File/Ordinances,%20Bylaws%20&%20Rules/Zoning%20Ordinance/Emmet-County-Zoning-Ordinance-4_28_2023.pdf

#3: Get commitments in writing

While it is ideal to use your zoning ordinance to set clear standards and thresholds that apply to data centers or industrial districts, you may be able to get some commitments or added specificity on particular impacts in writing. For example, if your community wants on-site generators to only run during power outages or for weekly testing, it may be beneficial to obtain that commitment in writing and specify permitted operating hours to minimize noise impacts on residents. If there are other commitments that matter to your community, such as delivery truck routes or transparency on water or energy usage, etc., consider getting them in writing as well.

The appropriate mechanism to secure written commitments for your community will depend on the specific agreement at hand and whether it is tied to zoning (for example, special land-use conditions or willingly offered terms by the developer as part of a conditional rezoning), a development agreement, or a discretionary property tax incentive. A municipal attorney can help identify the most appropriate mechanism, though guidance from the Michigan Municipal League is instructive for municipalities seeking community benefits commitments.[69]

#4: Request a Property Tax Guarantee

A primary community-wide benefit of hosting a data center is the increase in the property tax base that accompanies the project. It is not uncommon, however, for the personal property tax tables to change over the life of an industrial project such as a data center, which can prompt disputes between the local government and the taxpayer over the property tax valuation. Having a written commitment that the developer will pay the property tax revenues they discuss during the permitting process may help reassure the community that these benefits will materialize.

This approach has proven successful in Dickinson County, which accepted a Property Tax Guarantee from the developers of the Groveland Mine Solar project.[70] In the guarantee, the developer committed to a floor for property tax payments to the local governments. If the tax tables change in a way that reduces their required payments, they will still pay the committed amount. If, however, the tax tables change in favor of the local government, the developer is still responsible for paying the higher taxes.

#5: Explore data center integration with other industrial infrastructure

While a data center developer likely views the heat generated by their facility as a waste stream, other industries see it as an input and invest in generating it. Thus, there may be local

[69] *Handbook for General Law Village Officials* (p. 71). (2024). Michigan Municipal League . https://mml.org/wp-content/uploads/2024/07/CH-14-Planning-and-Zoning.pdf

[70] Stoetzer, O., Krol, M., & Mills, S. (2025). Strategies for Renewable Energy Revenue: A Guide for Michigan Local Governments.

opportunities for the data center to create a circular economy and put at least some of that heat to beneficial use. Opportunities include greenhouses, other industrial processes, and district heating systems, as is being proposed in Lansing.[71] Your local government can encourage the use of this waste stream by proactively identifying existing land uses in your community that require heat and sharing those with potential data center developers.

Similarly, local governments can explore with the data center developer the possibility of co-locating data centers with electricity infrastructure, like solar or battery energy storage. While a data center is unlikely to be able to fully power itself with on-site energy generation due to a mismatch between the footprints of large-scale renewables and data center technologies, siting some infrastructure on-site at the data center can reduce the need to build power plants elsewhere. Furthermore, this electricity infrastructure might boost the local property tax base.

[71]Kaplan, L. V. (2025, November 5). *Proposed downtown data center focused on sustainability.* City Pulse. https://www.lansingcitypulse.com/stories/proposed-downtown-data-center-focused-on-sustainability,164052

AUTHORS & COLLABORATORS

This publication was developed by:

- **Sarah Mills**, PhD, Director, Center for EmPowering Communities, Graham Sustainability Institute, University of Michigan; Associate Professor, Urban and Regional Planning, Taubman College of Architecture & Urban Planning, University of Michigan (sbmills@umich.edu)
- **Ann Wilkinson**, Research Assistant, Center for EmPowering Communities, Graham Sustainability Institute, University of Michigan; Master of Public Policy Candidate, Gerald R. Ford School of Public Policy; Master of Urban and Regional Planning Candidate, Taubman College of Architecture & Urban Planning, University of Michigan

We extend our heartfelt gratitude to the following reviewers for their time and expertise. Their review should not be considered an endorsement; rather, it ensures the value and relevance of this guide for local governments.

- **Judy Allen**, Michigan Townships Association
- **Mike Auerbach**, AICP, Carlisle Wortman
- **Alessandra Carreon**, Michigan Department of Environment, Great Lakes, & Energy
- **Liesl Clark**, University of Michigan
- **Beth Gibbons**, Washtenaw County
- **Brandon Hofmeister**, Consumers Energy
- **Ann Larson**, Michigan Department of Environment, Great Lakes, & Energy
- **Xiaofan Liang**, PhD, University of Michigan
- **Daniel Mahoney**, DTE Energy
- **Mary Reilly**, AICP, Michigan State University Extension
- **Amy Vansen**, Michigan Association of Planning

Acknowledgement

This material is based upon work supported by the Department of Energy and the Michigan Department of Environment, Great Lakes, and Energy (EGLE) under Award Number EE0008653. The views expressed herein do not necessarily reflect those of the United States Government or any agency thereof. Find this document and more about the University of Michigan Center for EmPowering Communities that supported this project at graham.umich.edu/empowering-communities.

EGLE

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Gmail clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>

Data Center Proposal

1 message

Janey Wagner [redacted] Wed, Feb 11, 2026 at 12:16 PM
To: clerk@hayestownshipmi.gov

Hi Ms. Baranski,

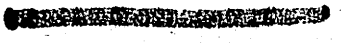
I hope you're having a great week so far! I wanted to reach out about my concerns regarding the potential data center proposal in Hayes Township.

My family has had a home in Ellsworth on Grand Traverse Bay for almost 30 years now. It is our haven, the place we cherish most and want to keep as natural as possible for as long as we possibly can. We take our roles as stewards of the Great Lakes incredibly seriously and cannot fathom losing the natural habitats and resources for something as detrimental as a data center.

I urge the Board to continue the moratorium on stopping any development plans for the old nuclear plant site. I see no genuine upsides to transforming this site into a data center; it will only cause destruction, death, and harm to our community.

Thank you so much for taking the time to read my concerns. I love this beautiful state with everything in me, and I hope you will also do what is in the best interest of ALL Michiganders, today and in the future!

Have a lovely Wednesday,
Jane Wagner



Gmail clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>

Board of Trustees (BoT) Meeting, 2026-Feb-09: Public Comments

1 message

Donald Gregory [redacted] Mon, Feb 9, 2026 at 9:30 PM
To: clerk@hayestownshipmi.gov

Please enter the following as Public Comments for the 2026-Feb-09 meeting of the Board of Trustees. These are the full comments, with references, of what I brought up briefly at the meeting. Cuidate

Data Centers

Do data centers create jobs?

Industry, e.g., Amazon, Google, Microsoft, etc., claims that data center projects are safe and good for the public interest. They generate jobs, local income, and are a boost to local business. These claims are dubious at best and often simply made to provide local and state governments with talking points for their public. Do data centers create jobs? Not very many, once they've been built. There is a lot of construction work up front but even that work doesn't last very long. There is a "boom" of jobs in the data center construction phase and a "bust" when they leave. [02] There are a lot of machines in a data center, but not a lot of people. The machines can be, and are, monitored and controlled remotely. Few if any onsite personnel are generally needed. Onsite maintenance or repairs can be done by contractors or other persons who seldom reside in the area. It's cheaper that way, for the data center business owner.

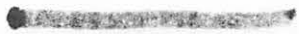
Gaines Township, MI, Learns the Hard Way: Data Centers Don't Create a Lot of Jobs
"In 2015, Nevada-based **Switch** promised to create 1,000 jobs and investment totaling $5 billion by building a data center in the 663,671-square-foot former Steelcase furniture company building in **Gaines Township** [south of Grand Rapids, MI]. Instead, Switch had made only 26 jobs by a 2022 deadline." - *2024-Jun-19, Bridge Michigan* [01]

Here's the specific ask: **Hayes Township needs a strong 12-month, Data Center Moratorium Ordinance, not just a Resolution, understanding that permanent jobs will not materialize.**

Do data centers consume a lot of electricity?

In 2024 Data Centers Accounted for More Than 4%, some 183 TWh, of All U.S. Electrical Consumption [03]
On their current electrical consumption trajectory data centers are expected to account for more than 8%, or 426 terawatt-hours, of total U.S. electrical consumption by 2030. Because the U.S. power grid is integrated with power companies buying energy from each other to meet local demands, what happens in one part of the country can affect rate payers elsewhere.

The Pennsylvania-New Jersey-Maryland (PJM) grid serves as a good example. PJM services all or part of the electric needs for thirteen states from Illinois to the Atlantic. The PJM 2024/25 capacity futures market cleared at $28.92/megawatt-day; the 2025/26 market cleared at $269.92/MW-day; and the 2026/27 market cleared at $329.17/MW-day - a more than 1000% increase in just three years. Companies such as Amazon, Google, and Microsoft, to name just a few are extremely profitable but rate payers are footing the bill with a 63% rate increase in the 2025/26 market. [04]



Then just this week Consumers Energy, Michigan's second largest investor-owned electric utility, announced over $17 billion in capital spending over the next five years. What's driving that spending? "Consumers will need all that generation and more to serve new industrial and data center loads", says its CEO Garrick Rochow. The utility is close to finalizing a 1-GW data center contract with an unnamed hyperscaler. In the last month, two more data center proposals have been floated joining two industrial loads already in the pipeline. "Everything is headed in the right direction here," according to Rochow. [07] Coming to your local electric bill soon, rate hikes. The data center market has become a speculative venture which must be contained by tying all risks of expansion directly to the companies and investment firms fueling that speculation.

Here's the specific ask: **Hayes Township needs a strong 12-month, Data Center Moratorium Ordinance, not just a Resolution, allowing time to review and discuss our current zoning ordinance to see what changes, if any, need to be made, and if it permits the kinds of industrial uses that are demonstrated to be needed by the community.**

What do data centers do?

Traditional data centers served business or academic computing needs that could be traced to their products or services, business profits and losses. Land, water, electrical, and business computing needs were on a par with other industrial uses in that they served the needs of the business. Cloud computing, however, began to change that traditional single business focused nature of data center services. With cloud computing a business didn't have to build a data center. They could rent virtual servers in a physical data center built and maintained to provide computing services to hundreds or thousands of customers. Artificial Intelligence (AI) didn't change the cloud computing model but it did bring a capability to marshall massive amounts of data to a specific purpose. Purposes far beyond answering our Google questions about life, the universe, and just about anything else. So a legitimate question emerges, To what end are these enormous storage and computing requirements of AI being placed in service of?

An April, 2024, news report describing AI enabled warfare is revealing. The report describes a variety of systems that work together delivering AI enabled warfare. *Lavender*, is one such system responsible for perusing "massive amounts of surveillance data—metadata, phone records, social networks, behavioral patterns, and unverified associations—to generate a 'kill score'" between 1 and 100. [06.1] The kill score is used by another AI system called *Where's Daddy* which is responsible for tracking the persons of interest and determining where they should be killed, this is usually at home with their families where the kill rate is maximized. Hence the name, *Where's Daddy*. *Lavender* determines *who* and *Where's Daddy* determines *when* a person is killed. A third AI system, *The Gospel*, is responsible for analyzing associations between persons of interest and mapping those associations into aggregates which can be used to target multiple individuals in one strike - preferably in a civil structure such as a hospital or school, thus minimizing ordinance expenditures and maximizing infrastructure destruction.

Together, these and other AI systems such as *Gospel Plus* and *Fire Factory* have accelerated target generation from 50 a year to 100 a day and massively increased the killing and destructive power of any given strike. Theoretically, human oversight is supposed to temper the AI decisions. In practice, however, when AI generates the target and calls for the strike, the Israeli Defense Forces (IDF) drop the bombs, fire the artillery, send in the drones, or whatever else the AI systems have determined is needed to accomplish the AI objective. [06.1] Many of these AI systems are hosted in Amazon, Google, Microsoft or other cloud based services here in the U.S.

So what does all that have to do with the United States? What do you think an ICE or Border Patrol agent is doing when they hold their phone to someone's face? They are using an AI facial recognition system called *Mobile Fortify* to match the person in front of them with more than 200 million government-held photos in federal databases, i.e., data centers. Agents are told Mobile Fortify is more accurate than a person's identification documents. That is not true.

Data centers are being used to build the Surveillance State.

Here's the specific ask: **Hayes Township needs a strong 12-month, Data Center Moratorium Ordinance, not just a Resolution. We may not have much effect on the building of a Surveillance State, but we should understand what we're doing.**

References

01) Data centers create few jobs. Michigan wants to give them big tax breaks (BridgeMI)

02) Do data centers create few permanent jobs? (The Nevada Independent)

03) What we know about energy use at U.S. data centers amid the AI boom (Pew Research Center)

04) Projected data center growth spurs PJM capacity prices by factor of 10 (IEEFA)

05) What Happens When Data Centers Come To Town? (UofM)

06) Lavender & Where's Daddy: How Israel Used AI to Form Kill Lists & Bomb Palestinians in Their Homes (Democracy Now!)

06.1) Where's Daddy? Israel's AI Kill-Chain (MK Sensei)

07) Consumers Energy plans over $17B in capital spending in next 5 years (Utility Dive)

Data Center Moratorium

Here's the specific ask: **Replace the proposed Hayes Township Data Center Moratorium Resolution with the Marshall Township Data Center Moratorium Ordinance.**

The Hayes Township Data Center Moratorium Resolution is deficient in at least three respects:

1. Resolution #4 opens a window for a data center request to be approved by the Hayes Township Board *in a single meeting* with only public comment at the meeting being used to inform the decision. Industry would like to avoid scrutiny and public debate. Responsible township governance welcomes it.
2. The source of the Hayes Township Data Center Moratorium is unknown at this time. If the authors represent the data center industry, or have material interests in that area, this would be a conflict of interest. Even if it cannot be shown the authors represent the data center industry, or have material interests in that area, Resolution #4 gives the industry an influence in our local governance they do not need to have.
3. The wording of the Data Center Moratorium Resolution is needlessly stilted. It appears to have been taken from the Springfield Charter Township Data Center Moratorium, or from a person or organization who provided that wording to Springfield Charter Township. Other Township Data Center Moratoriums such as Marshall and Sylvan are much clearer in their language.

Appendix I: Data Center Moratoriums for Other Townships

Moratorium Without Deferral Option

Marshall Township Planning Commission (PC), 2026-Feb-03: Resolution and Ordinance to Enact a Temporary Moratorium on Data Centers and Battery Energy Storage Systems

Sylvan Township, County of Washtenaw, State of Michigan, Ordinance No. 26-01, 2026-Jan-28: AN ORDINANCE TO ENACT A TEMPORARY MORATORIUM ON DATA CENTERS

Moratorium With Deferral Option

It appears from the wording of the Springfield Charter Township Data Center Moratorium Resolution #5, i.e., omission of "economic" in the third phrase of "viable use", that the Hayes moratorium was taken from Springfield Charter Township or from a source that provided the moratorium for Springfield Charter Township.

Howell Township, Township Board, 2025-Nov-20: Data Center Moratorium - It's unclear whether this ordinance passed or not. The waiver (deferral) in this ordinance rests solely with the Township Board.

Pittsfield Charter Township, Board of Trustees, 2025-Nov-20: RESOLUTION INSTITUTING A TEMPORARY MORATORIUM ON APPROVAL OF DATA CENTERS

Springfield Charter Township, Township Board, 2025-Dec-11: Resolution Instituting a Temporary Moratorium On Approval of Data Centers

--

Donald Gregory

[redacted]

On two occasions I have been asked by members of Parliament, 'Pray, Mr. Babbage, if you put into the machine wrong figures, will the right answers come out?' I am not able rightly to apprehend the kind of confusion of ideas that could provoke such a question. - Charles Babbage

Gmail clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>

data centers

1 message

Vickie Laskey <[redacted]> Tue, Feb 10, 2026 at 11:16 PM
To: clerk@hayestownshipmi.gov

When industrial-scale data centers entered the conversation, residents didn't argue ideology. They argued permanence.

Once farmland is rezoned, it rarely comes back.

Once utility corridors are built, they shape everything around them.

Once water systems are sized for hyperscale demand, the township lives with that decision forever.

That framing changed the debate.

Cohoctah is not anti-development. It is agricultural by design. The land supports farms, families, and long-term continuity. What residents pushed back on was the idea that a data center is just another industrial user.

It isn't.

A hyperscale data center doesn't behave like a factory or warehouse. It consumes power without producing goods. It draws water without cycling it back into the local economy. It employs very few people relative to the land and infrastructure it occupies.

Residents started asking questions that don't show up on glossy proposal decks.

How many acres are permanently removed from agricultural use?

What happens to neighboring wells during peak cooling demand?

Who upgrades the transmission lines, and who maintains them decades from now?

And most importantly.

What does the township gain once the tax abatements expire?

In Cohoctah Township, the answers didn't justify the trade.

Local opposition focused less on fear and more on math. Farmland produces value year after year. It supports local businesses, equipment suppliers, truckers, and multi-generation families. A data center concentrates value elsewhere while externalizing costs locally.

That mismatch matters when you plan for the next fifty years, not the next budget cycle.

Infrastructure strain was only part of the concern. Residents also raised alarms about precedent. Approve one large-scale facility, and future proposals point back to it as justification.

"You allowed it before."

That sentence ends local control fast.

Cohoctah Township's resistance slowed the process early. Officials and residents emphasized that zoning exists to protect land character, not to be reinterpreted under pressure from outside capital.

This wasn't loud.

It wasn't theatrical.

It was methodical.

And that's why it worked.

What's happening in Cohoctah mirrors a broader shift across Michigan. Rural communities are realizing that hyperscale infrastructure is not neutral. It reshapes land use, utilities, and governance in ways that can't be undone.

Once that realization clicks, the conversation changes.

It stops being about whether data centers are "good" or "bad."

It becomes about whether the costs align with the community's long-term priorities.

In Cohoctah Township, the answer was clear.

Protect the land first.

Because once it's gone, no amount of future tax revenue can buy it back.

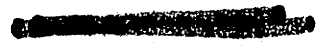
Gmail clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>

data center areal view

1 message

Vickie Laskey <[redacted]> Tue, Feb 10, 2026 at 11:25 PM
To: clerk@hayestownshipmi.gov

This is a data center, At the end of its life cycle what can it be used for, the buildings are massive 200' x 550', the little black rectangles are the backup diesel generators spewing diesel particulates into the air. Imagine the noise at 70dB - 24/7, Think about the light pollution at night from a site this size - it's massive and typically employs less than 50 people. Notice you don't see massive parking lots...because they are not needed.



Gmail clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>

data center water use

1 message

Vickie Laskey <[redacted]> Tue, Feb 10, 2026 at 11:30 PM
To: clerk@hayestownshipmi.gov

Many Data centers are moving to "closed-loop" systems—basically giant radiators that reuse the same liquid over and over. They say it's a zero water facility which is a falicy. Data centers require massive amounts of electricity which uses millions of gallons of water. It also causes higher electricity bills to regular homeowners. But that liquid in the closed system doesn't last forever. When it's time to change the "coolant," it cannot go down the drain because it's toxic waste. It gets burned. Here's the breakdown of what that actually means for our environment:

It's not a backyard bonfire. This happens in high-tech "Thermal Oxidation" units at over 2,000°F. If it works perfectly, it's one of the cleanest ways to destroy hazardous waste. Most coolants are glycol-based (like antifreeze). At extreme heat, they break down into simple water vapor and CO2. This supposedly protects our groundwater from toxic leaks as long as the leftovers don't leak from the truck, filter at the burn plant or the toxic waste site.

The Air Quality Risk:

The liquid isn't the only thing in the pipes. Over time, it picks up "hitchhikers" like copper, lead, and tin from the equipment. If the incinerator's filters (scrubbers) aren't top-notch, these heavy metals make for air pollution and toxic ash. Once a farm is paved over for a data center, that food production capacity is gone forever. While some pesticides are harmful, many modern agricultural chemicals break down over months or years. PFAS (Forever Chemicals) in data center coolants do not break down naturally. The regulatory environment for "forever chemicals" (PFAS) and industrial emissions has shifted significantly due to the Trump administration which makes the "responsible" promises made by data center corporations much harder to verify. The DNR report relies on EPA standards that are currently being dismantled. In early 2025, the administration withdrew proposals for industrial PFAS emissions standards in wastewater and delayed drinking water limits for years. We are being asked to trust a 'regulated' process at the exact moment the regulators are being told to stand down. The data center says they'll be 'responsible,' but the EPA has officially stopped considering whether a community is already overburdened by pollution when approving these sites. If things go wrong, there is no longer a federal mandate to protect our specific neighborhood from being the next 'poisoned community. The 'high-tech' burning of data center waste is being reclassified to bypass the Clean Air Act's strictest requirements. By labeling these processes as 'manufacturing' rather than 'waste incineration,' companies can emit more particulates (soot) and toxic metals like mercury and lead with less monitoring. This isn't about being 'efficient'; it's about making it cheaper for them to pollute our air.

This is about a permanent shift to industrial toxicity. Plus, we have to look at the reality of 2026: the current administration has frozen PFAS regulations, gutted the EPA's enforcement wing, and stopped considering 'environmental justice' for local communities.

When the federal government is actively dismantling the rules that keep these 'closed-loop' systems from leaking or off-gassing, we can't just take a DNR report at face value. We're being asked to trade our land for an industry that uses the most energy, provides the fewest jobs, and is currently being 'deregulated' into a black box of toxic waste.

They make it sound likev Closed-Loop Cooling has no issues. The liquid inside can't be run forever, and what's inside is definitely not something you'd want to pour down a drain. The liquid itself eventually breaks down or gets contaminated. Because of those chemical additives (nitrites, molybdates, or glycols), the liquid is often classified as hazardous waste. It's rarely just pure water. They use specialized fluids designed to move heat efficiently and protect the expensive equipment. Water + Glycol: This is the most common. The glycol (antifreeze) prevents the water from freezing or boiling and helps lubricate the pumps. Dielectric Fluids: In high-tech "immersion" cooling, they use a special oil-like liquid that doesn't conduct electricity. You could drop a running iPhone into a bucket of this stuff and it wouldn't short out. Chemical Additives: They add "inhibitors" to stop algae from growing and to prevent the metal pipes from rusting (corrosion).

They use heavy-duty magnetic and mesh filters to catch any tiny metal flakes or "sludge" that might build up over time so they don't have to replace the whole batch. How is that disposed of? If the liquid can't be recycled, it goes to a high-heat incineration facility or a specialized chemical treatment plant. It is never supposed to be dumped into municipal sewers or the soil.

A major emerging concern in 2026 is the use of PFAS in liquid cooling. When these fluids—or the filters that touched them—are burned, they can release TFA (Trifluoroacetic acid) into the atmosphere, which eventually falls back as rain.

As of January 2026, there are over 270 data centers in the states bordering Lake Michigan (Wisconsin, Illinois, Indiana, and Michigan) that utilize the lake's water via municipal systems.Getting a precise total for of water for all 270+ data centers is difficult because many companies use Non-Disclosure Agreements (NDAs) to keep their exact utility bills secret. However, using 2025–2026 environmental data from groups like Clean Wisconsin and the Alliance for the Great Lakes, we can calculate a very high-confidence estimate for the "Lake Michigan Fleet." For

the roughly 270 data centers in the states bordering Lake Michigan (WI, IL, IN, MI), the total direct withdrawal from the lake is estimated at 30 to 45 billion gallons per year. Across the four states bordering Lake Michigan (WI, IL, IN, MI), data centers are projected to withdraw roughly 150 billion gallons of water over the next five years, & this doesn't even include the water used in the making of the electricity to run the plants so the use is much much higher. For older centers about 80% of the water they take is lost to the atmosphere as steam and never returns to the lake. This means Lake Michigan "loses" about 24 billion gallons of water a year just to server steam. The "steam" you see isn't guaranteed to fall back down as rain over Lake Michigan. Atmospheric currents can carry that moisture hundreds or even thousands of miles away before it condenses into rain or snow. Your "data center water" gets mixed with evaporated water from the ocean, forests, and the lake itself. While some of it might eventually fall back into the Great Lakes Basin as "lake-effect snow" or rain, there is no direct back to the source. Even though the Great Lakes seem infinite, they are a sensitive system. Only about 1% of the water in the Great Lakes is renewed annually through rain and runoff. Many data centers in the region actually pull from groundwater/aquifers rather than the lake directly. When this water evaporates, it is effectively "stolen" from the underground reserves that local residents and farmers rely on, as it doesn't soak back into the ground in the same spot. The water that doesn't evaporate (called "blowdown") becomes highly concentrated with minerals and cleaning chemicals. This is sent to wastewater plants, which then have to process it before it returns to the lake. For data centers not on municipal lake water, pulling from aquifers can cause "cones of depression." This lowers the water table for surrounding farmers and residents, forcing them to dig deeper, more expensive wells. Many Michigan and Wisconsin towns have aging water mains. Adding a "hyperscale" user (consuming up to 5 million gallons/day) can cause pressure drops or require taxpayers to fund massive pipe upgrades.

Because this water is cycled through cooling towers multiple times, it becomes a "brine" concentrated with minerals and anti-fungal chemicals. If a local wastewater plant isn't equipped to handle this chemical load, it can lead to higher levels of phosphorus or chlorides being dumped back into local streams.

1. When a massive draw (like a factory or a large fire hydrant) is shut off suddenly, it creates a shockwave known as water hammer.

- This pressure surge can reach many times the normal operating pressure.
- The resulting vibration can loosen joints, rattle pipes against their supports, and cause immediate bursts in older or weakened sections of the city main.

2. Velocity and Erosion

When demand is extremely high, water must move through the pipes at much higher speeds (velocity).

- Erosion: High-velocity water can physically wear down the inner lining of pipes, especially at bends and elbows.
- Sediment Stirring: Fast-moving water can kick up rust and sediment that has settled at the bottom of old iron pipes, leading to "brown water" at the tap and potentially clogging smaller residential valves. Once the water leaves the data center, it enters the municipal system. The city—and your tax dollars—become responsible for the final cleaning.

The Problem: Standard municipal plants are designed to treat human waste (sewage), not industrial chemicals and high mineral loads. If the data center uses specific industrial biocides or chemicals, the city's plant might not be equipped to filter them out. They could "pass through" the plant and be discharged directly into Lake Michigan. The high mineral content of data center water can lead to faster wear and tear on the city's treatment equipment. This often leads to higher maintenance costs for the municipal utility—costs that are eventually passed back to residents in their monthly water bills.

Gmail clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>

data center water use

1 message

Vickie Laskey <vlaskey10@gmail.com> Tue, Feb 10, 2026 at 11:30 PM
To: clerk@hayestownshipmi.gov

Many Data centers are moving to "closed-loop" systems—basically giant radiators that reuse the same liquid over and over. They say it's a zero water facility which is a falicy. Data centers require massive amounts of electricity which uses millions of gallons of water. It also causes higher electricity bills to regular homeowners. But that liquid in the closed system doesn't last forever. When it's time to change the "coolant," it cannot go down the drain because it's toxic waste. It gets burned. Here's the breakdown of what that actually means for our environment:

It's not a backyard bonfire. This happens in high-tech "Thermal Oxidation" units at over 2,000°F. If it works perfectly, it's one of the cleanest ways to destroy hazardous waste. Most coolants are glycol-based (like antifreeze). At extreme heat, they break down into simple water vapor and CO_2. This supposedly protects our groundwater from toxic leaks as long as the leftovers don't leak from the truck, filter at the burn plant or the toxic waste site.

The Air Quality Risk:

The liquid isn't the only thing in the pipes. Over time, it picks up "hitchhikers" like copper, lead, and tin from the equipment. If the incinerator's filters (scrubbers) aren't top-notch, these heavy metals make for air pollution and toxic ash. Once a farm is paved over for a data center, that food production capacity is gone forever. While some pesticides are harmful, many modern agricultural chemicals break down over months or years. PFAS (Forever Chemicals) in data center coolants do not break down naturally. The regulatory environment for "forever chemicals" (PFAS) and industrial emissions has shifted significantly due to the Trump administration which makes the "responsible" promises made by data center corporations much harder to verify. The DNR report relies on EPA standards that are currently being dismantled. In early 2025, the administration withdrew proposals for industrial PFAS emissions standards in wastewater and delayed drinking water limits for years. We are being asked to trust a 'regulated' process at the exact moment the regulators are being told to stand down. The data center says they'll be 'responsible,' but the EPA has officially stopped considering whether a community is already overburdened by pollution when approving these sites. If things go wrong, there is no longer a federal mandate to protect our specific neighborhood from being the next 'poisoned community. The 'high-tech' burning of data center waste is being reclassified to bypass the Clean Air Act's strictest requirements. By labeling these processes as 'manufacturing' rather than 'waste incineration,' companies can emit more particulates (soot) and toxic metals like mercury and lead with less monitoring. This isn't about being 'efficient'; it's about making it cheaper for them to pollute our air.

This is about a permanent shift to industrial toxicity. Plus, we have to look at the reality of 2026: the current administration has frozen PFAS regulations, gutted the EPA's enforcement wing, and stopped considering 'environmental justice' for local communities.

When the federal government is actively dismantling the rules that keep these 'closed-loop' systems from leaking or off-gassing, we can't just take a DNR report at face value. We're being asked to trade our land for an industry that uses the most energy, provides the fewest jobs, and is currently being 'deregulated' into a black box of toxic waste.

They make it sound likev Closed-Loop Cooling has no issues. The liquid inside can't be run forever, and what's inside is definitely not something you'd want to pour down a drain. The liquid itself eventually breaks down or gets contaminated. Because of those chemical additives (nitrites, molybdates, or glycols), the liquid is often classified as hazardous waste. It's rarely just pure water. They use specialized fluids designed to move heat efficiently and protect the expensive equipment. Water + Glycol: This is the most common. The glycol (antifreeze) prevents the water from freezing or boiling and helps lubricate the pumps. Dielectric Fluids: In high-tech "immersion" cooling, they use a special oil-like liquid that doesn't conduct electricity. You could drop a running iPhone into a bucket of this stuff and it wouldn't short out. Chemical Additives: They add "inhibitors" to stop algae from growing and to prevent the metal pipes from rusting (corrosion).

They use heavy-duty magnetic and mesh filters to catch any tiny metal flakes or "sludge" that might build up over time so they don't have to replace the whole batch. How is that disposed of? If the liquid can't be recycled, it goes to a high-heat incineration facility or a specialized chemical treatment plant. It is never supposed to be dumped into municipal sewers or the soil.

A major emerging concern in 2026 is the use of PFAS in liquid cooling. When these fluids—or the filters that touched them—are burned, they can release TFA (Trifluoroacetic acid) into the atmosphere, which eventually falls back as rain.

As of January 2026, there are over 270 data centers in the states bordering Lake Michigan (Wisconsin, Illinois, Indiana, and Michigan) that utilize the lake's water via municipal systems.Getting a precise total for of water for all 270+ data centers is difficult because many companies use Non-Disclosure Agreements (NDAs) to keep their exact utility bills secret. However, using 2025–2026 environmental data from groups like Clean Wisconsin and the Alliance for the Great Lakes, we can calculate a very high-confidence estimate for the "Lake Michigan Fleet." For

the roughly 270 data centers in the states bordering Lake Michigan (WI, IL, IN, MI), the total direct withdrawal from the lake is estimated at 30 to 45 billion gallons per year. Across the four states bordering Lake Michigan (WI, IL, IN, MI), data centers are projected to withdraw roughly 150 billion gallons of water over the next five years, & this doesn't even include the water used in the making of the electricity to run the plants so the use is much much higher. For older centers about 80% of the water they take is lost to the atmosphere as steam and never returns to the lake. This means Lake Michigan "loses" about 24 billion gallons of water a year just to server steam. The "steam" you see isn't guaranteed to fall back down as rain over Lake Michigan. Atmospheric currents can carry that moisture hundreds or even thousands of miles away before it condenses into rain or snow. Your "data center water" gets mixed with evaporated water from the ocean, forests, and the lake itself. While some of it might eventually fall back into the Great Lakes Basin as "lake-effect snow" or rain, there is no direct back to the source. Even though the Great Lakes seem infinite, they are a sensitive system. Only about 1% of the water in the Great Lakes is renewed annually through rain and runoff. Many data centers in the region actually pull from groundwater/aquifers rather than the lake directly. When this water evaporates, it is effectively "stolen" from the underground reserves that local residents and farmers rely on, as it doesn't soak back into the ground in the same spot. The water that doesn't evaporate (called "blowdown") becomes highly concentrated with minerals and cleaning chemicals. This is sent to wastewater plants, which then have to process it before it returns to the lake. For data centers not on municipal lake water, pulling from aquifers can cause "cones of depression." This lowers the water table for surrounding farmers and residents, forcing them to dig deeper, more expensive wells. Many Michigan and Wisconsin towns have aging water mains. Adding a "hyperscale" user (consuming up to 5 million gallons/day) can cause pressure drops or require taxpayers to fund massive pipe upgrades.

Because this water is cycled through cooling towers multiple times, it becomes a "brine" concentrated with minerals and anti-fungal chemicals. If a local wastewater plant isn't equipped to handle this chemical load, it can lead to higher levels of phosphorus or chlorides being dumped back into local streams.

1. When a massive draw (like a factory or a large fire hydrant) is shut off suddenly, it creates a shockwave known as water hammer.

- This pressure surge can reach many times the normal operating pressure.
- The resulting vibration can loosen joints, rattle pipes against their supports, and cause immediate bursts in older or weakened sections of the city main.

2. Velocity and Erosion

When demand is extremely high, water must move through the pipes at much higher speeds (velocity).

- Erosion: High-velocity water can physically wear down the inner lining of pipes, especially at bends and elbows.
- Sediment Stirring: Fast-moving water can kick up rust and sediment that has settled at the bottom of old iron pipes, leading to "brown water" at the tap and potentially clogging smaller residential valves. Once the water leaves the data center, it enters the municipal system. The city—and your tax dollars—become responsible for the final cleaning.

The Problem: Standard municipal plants are designed to treat human waste (sewage), not industrial chemicals and high mineral loads. If the data center uses specific industrial biocides or chemicals, the city's plant might not be equipped to filter them out. They could "pass through" the plant and be discharged directly into Lake Michigan. The high mineral content of data center water can lead to faster wear and tear on the city's treatment equipment. This often leads to higher maintenance costs for the municipal utility—costs that are eventually passed back to residents in their monthly water bills.

Gmail clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>

data center battery storage issues

1 message

Vickie Laskey <[redacted]> Tue, Feb 10, 2026 at 11:47 PM
To: clerk@hayestownshipmi.gov

You are introducing a permanent hazardous material site capable of catching on fire at any time of day or night that is inextinguishable, not containable and consequently exposing an entire region to forever toxins that will affect every natural resource in Skagit county and all neighboring counties.

My former department has had two Lithium battery fires, one on land and one on a container ship. Both ended up having to burn themselves out which took 4 WEEKS. We tried using thousands of gallons of water which ended up creating toxic runoff that was never contained. The container ship had to be hauled out of the port by tug boats past the breakwater where it was left to burn for 4 weeks. It was unrecognizable after the fire. The entire ship burned, metal turned to liquid. All that was left was an open hull full of liquid metal.

Water didn't do a thing to the superheated flammable gasses that kept reigniting and burning.

The current guidelines for suppressing a Lithium Battery Storage Facility fire falsely use structure firefighting standards, which do not work in this application.

A common structure fire such as a house or a commercial building advise fire department units to stage 100-300' feet away from the burning structure to protect firefighters from heat and toxic smoke while the engine pumps water to firefighters who wear protective gear and advance charged hose lines to the seat of the fire.

But Battery Storage Facility fires create an excessive amount of heat ranging from 3,000F to 6,000F (EPA.gov) Fire engines would melt and the personnel would burn to death if they tried to get within 100'-300' of the incident.

That amount of heat is equivalent to a nuclear explosion or spacecraft reentry. (Center for Domestic preparedness.gov)

A safe distance would be 3,200' - 5,000' away which is not a plausible distance to spray water. Water would just evaporate and turn into steam when in contact with such high heat.

Pictures of these facilities on Nextera's website show them sitting on a slab of concrete out in the open with rows of metal containers sitting feet away from each other.

There are no fire proof concrete walls to buffer them from sun, rain, snow and salty air.

There are no statistics about the long term integrity of the metal containers or how they are insulated or treated to prevent corrosion.

Putting hundreds of units of temperature sensitive, flammable batteries in a metal box sitting outside exposed to the extreme temperatures we experience annually is a short sided idea.

They use water to cool them down. What happens to the water when it snows here? Can you imagine a fire breaking out in freezing conditions?

Nextera, the company based in Juno Florida, has only just recently started building Litihum Ion Battery Storage Facilities. They only have 50 across the United States. They are aggressively seeking property across the nation to build as many as they possibly can. They made 7 Billion dollars last year.

Once these are built all liability is on the responsible party: the land owner. Their Claims Department is so busy they advise callers to LEAVE A MESSAGE and someone will get back in 48 hours due to high call volume. That is a big RED FLAG.

Their builds show no infrastructure to contain the toxic water that is a bi product of trying to cool and extinguish a fire. The toxic smoke would blow by prevailing winds hundreds of miles away while the site would burn and hopefully not spread, but then how would you prevent spread to nearby target hazards with heavy fuel loads such as the LUMBER YARD and the SKAGIT REGIONAL AIRPORT that has ABOVE GROUND FUEL TANKS?

By comparison, the oil refinery on March Point has large flammable liquid above ground storage tanks. The grounds around them are designed to capture their contents should they fail. Fire suppression systems are designed to pump water or extinguishing agents at pressure necessary to extinguish their contents. Security and personnel are on duty 24 hours a day 7 days a week. The storage tanks are monitored physically and visibly. A responsible party is onsite at all times. All personnel are trained annually to handle an emergency.

The type of energy storage you are creating has no redundancy to prevent catastrophic damage or prevent spreading. These are major discrepancies left to emergency response agencies that are under funded, under staffed, under trained and ill informed.

You are creating an unprecedented situation that has more potential to do irreversible harm than good.

How would this county handle a wildland fire fueled by high winds involving a battery storage facility placed near a lumber yard and an airport?

That's not an opening to a joke.

I urge you to reconsider this decision and save this area from having to recover from a major disaster."

Gmail clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>

Data centers

1 message

Vickie Laskey <[redacted]> Tue, Feb 10, 2026 at 11:07 PM
To: clerk@hayestownshipmi.gov

Do yourselves and your constituents a favor and become very familiar with the downside to data centers in communities before you just invite them in. When one comes in - it sets the precedence and you can't go back or say no to another. A toxic leak of their coolant into LakeMichigan would be devastating. (Check out the new EPA stance as of July2025) If you allow it in your area - then you can pay to clean it up is essentially the new direction... Property values will plummet and property taxes will have to decrease as well... Data Centers use millions of gallons of water weekly, this has to be processed in the sewer system, Most sewer plants are not equipped to process water with the coolant contaminates. Several existing data center areas show an increase in cancer rates near the facilities traced back to the water treatment plants. Read the UofM study on data centers, they increase electrical costs by 32% within 5 years and climb more after that. Substations require upgrades approximately every 5 years which that cost get baked into the electrical rate case yearly increases so everyone pays for them BUT the DATA CENTER OWNERS... The lifespan is 15-20 years, then what - your left with is massive buildings that have no future purposeful use based on the configuration on the property. Someone has to pay to remediate that area for resale after that...The data center will walk away and write it off as a loss - why do you think they fight any sort of demolition escrow in ordinances downstate? You can't return the land to pristine condition when they are done - due to.the coolant and diesel use. There is so much light pollution from the security lighting that you wouldn't see stars or northern lights living near the facility. There's a constant 65-70dB sound emitted 24/7 for the duration of the facility life. Who wants to come north for the peace, quiet and beauty only to see these large monstrosities, emitting a loud hum 24/7 and be blinded by the lights at night. Not to mention the damage to local animals and migratory birds that pass through this area. The large data center can require 500 or so backup diesel generators - calculate how much diesel particulates that would put into the PURE MICHIGAN air up there!!! Not to mention the interior heat they produce which penetrates into the ground beneath the facility drying up wells, underground streams and aquifers. Where will these people get their water from when that happens? As township officials you are tasked with promoting what's best for the constituents -this is not what's best!!! Follow Michigan Citizens Against Data Centers and see how the rest of the state feels about the damage they cost!! There's plenty of unanswered questions this state's legislators are asking - including to halt all data centers actions while they get more reliable info - not the propaganda the developers put out. It's not the pretty picture the real estate developers feed you!!! Once the property is sold anything they said is NOT binding.or enforceable. I'll be forwarding info.

Thank you,
Vickie Laskey

[redacted]

LOCAL IMPACTS OF DATA CENTERS

Communities must recognize the real costs and hidden dangers behind data centers.

Water Usage

Data centers consume millions of gallons of water daily for cooling. This stresses local watersheds and aquifers already affected by other uses. Even the "environmentally friendly" closed-loop systems consume millions of gallons. There's no such thing as a "sustainable" data center. The technology just isn't there (yet).

Land Use & Habitat Loss

Data centers require hundreds of acres for server buildings, substations, & backup infrastructure. This affects the natural habitats of many deer, bird, amphibian, and native species.

Groundwater Contamination

Runoff from impervious surfaces carries oils, metals, and heat into local water sources. Risks of groundwater contamination from HVAC chemicals and fire suppression systems (including increased PFAS).

Energy Demand

These AI Data facilities draw massive amounts of electricity, often up to 30-100 MW per center--often the equivalent of one city (scaled to match). Each AI training model can emit up to 500 tons of CO_2.

Air Quality

Diesel generators for backup power release particulate matter and NOx, contributing to asthma and lung issues. Construction activities raise dust levels, affecting local communities.

Noise Pollution

A low-frequency constant hum from cooling systems and transformers creates chronic noise exposure for nearby neighborhoods, which in turn affects the health of local citizens.

Potential Ecological & Public Health Impacts of AI Data Centers

Impact Category	Specific Consequences
Water Use	Millions of gallons per day for cooling. Depletes aquifers and surface water sources.
Thermal Pollution	Warm water discharges can harm fish and aquatic life. Alters stream temperature regimes.
Water Contamination	Risk of leaks from HVAC, fire suppression, or fuel systems (e.g., antifreeze). Pollutants can enter groundwater due to sandy soils. Risks affecting public health greatly. PFAS increased.
Habitat Disruption	Large land clearings fragment forests and wetlands. Loss of biodiversity and wildlife corridors (affects hunting).
Air Quality	Diesel backup generators emit particulates and nitrogen oxides. Worsens asthma and respiratory illness.
Noise Pollution	Constant hum from cooling systems and transformers. Affects sleep and mental health nearby.
Energy Consumption	Heavy demand on grid may increase fossil fuel use. Indirect rise in greenhouse gas emissions. Can impact energy prices in nearby areas.
Soil Erosion & Runoff	Paved areas and cleared land increase stormwater runoff. Carries sediment and pollutants into rivers.
Health Equity Risks	Often sited near rural, low-income areas. Communities bear risks without fair benefit.

WHY MICHIGAN?

Big Tech developers are choosing Michigan for a variety of reasons: (1) Water abundance, (2) Cold climate, (3) Rural, unzoned communities are easier for Big Tech to exploit, (4) State tax exemptions, meaning that Big Tech doesn't have to pay it's fair share (i.e., corporate welfare).

Data centers around Michigan. Taken from Michigan Public NPR.

The Truth They Won't Tell You

Big Tech developers come into local communities often promising economic growth and many high-paying jobs, but the last few years have shown these to be lies. The benefits of data centers rarely trickle down to local communities. They strain local watersheds and aquifers already burdened by other demands, pollute the very water and air we rely on for survival, require enormous amounts of energy to power (thereby driving up consumer prices), and increasingly, they disrupt the quiet life of the communities they enter. And jobs? They are some of the most heavily automated industries in the world. For example, the Switch data center in Grand Rapids promised at least 1k jobs. Today, only 26 workers are employed (typically high-tech and outsourced).

Big Tech developers are operating in bad faith. In Saline, for example, the first hyperdata center passed through local political channels amid limited public transparency, behind a mountain of NDAs and redactions. The Saline township board voted to reject fast-tracking the data center, yet Oracle, the Big Tech company hiding behind an LLC to skirt accountability, sued the township into submission. This is not the action of a good neighbor operating in good faith. Every one of their actions shows they know the true danger behind data centers (hence why they hide behind LLCs and Microsoft recently admitted they need a "community-first approach").

In short, don't trust the false promises of Big Tech developers. The health and safety of our local communities comes before the financial gain of corporate America and Big Tech. This isn't "progress". This is anti-progress. Let the CEOs build the data centers in their backyards, not ours.

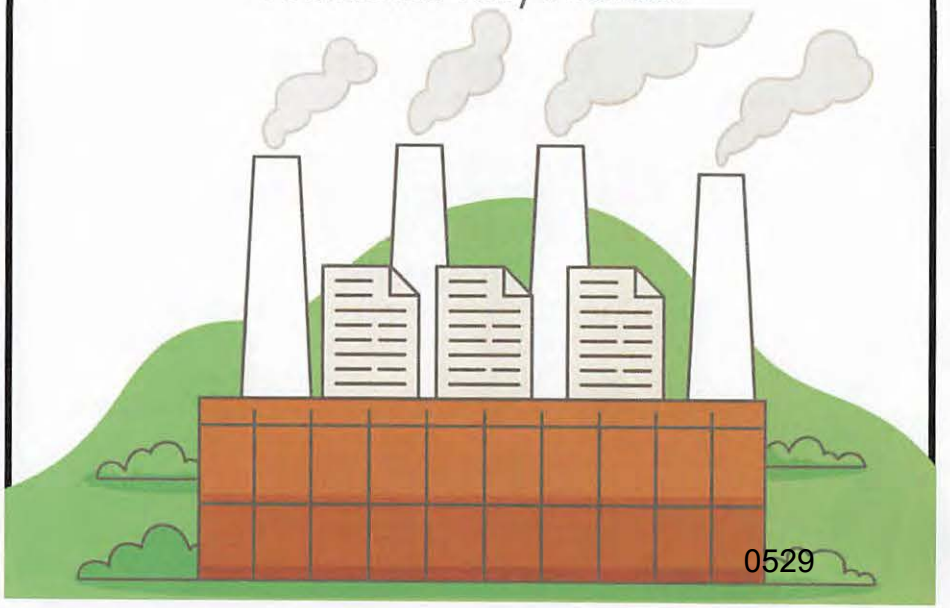
Want to learn more or help support the fight against data centers across Michigan? Contact Dr. Mitchell Ryan Distin. Director of The New People Foundation, by email: Mitchell@thenewpeople.org

THE NEW PEOPLE FOUNDATION

DATA CENTERS

COMMUNITY CONCERNS

Water is Michigan's most precious resource. As artificial intelligence grows rapidly, so does the demand for massive digital infrastructure, and Michigan is becoming a highly sought after area for the next wave of AI data centers due to a mixture of water abundance plus major tax subsides at the state level (i.e., corporate welfare). While these facilities promise economic growth and high-tech jobs (both falsely), **they also bring hidden environmental and public health costs**. Data centers may seem clean and quiet, but behind their walls lie vast needs for electricity, land, and millions of gallons of water — all of which can quietly stress ecosystems, pollute air and water, and reshape rural communities in ways that few residents fully realize.



Data Centers

In **2024** Michigan joined some 35 other states passing **bipartisan legislation exempting large data centers**, investments of $250 million or more, from the **state's 6% sales and use tax**. [15] Many Michigan township zoning ordinances were unprepared for the electric and water demands and noise abatement requirements entailed by data center projects and have imposed moratoriums on these proposals until they understand them. [16]

How should Michigan townships approach writing data center zoning ordinances? *Wait until you understand what they are and the experiences of other municipalities, in or out of the state, in dealing with corporations wanting to build them. Modify the Marshall Township Data Center Moratorium Resolution and Ordinance to fit your township specific needs and pass at your next meeting of the Board of Trustees.* The Marshall *Resolution and Ordinance are on pages three thru eight of the Marshall Township Planning Commission Packet.*

We have perused the Data Center Moratoriums of Marshall, Sylvan, Howell, Pittsfield Charter, and Springfield Charter Townships and believe the **Marshall ordinance** to be the **strongest and best written**. All township moratoriums mentioned here are linked in the addendum below so you can do your own comparisons. The **major issue** with the moratorium Resolution and/or Ordinance of **Howell, Pittsfield Charter, and Springfield Charter Townships** is the **Waiver** provision which gives organizations wanting to build a data center a "back door" to getting around the moratorium before the Township has finished work on zoning policies.

The sections below elaborate somewhat on what data centers are and why strong, well written, zoning ordinances need to be put into place to manage them. Terms of Engagement at the end of each section are general guidelines for building protections into local and state planning for data centers.

What is a data center?

"A data center is **a specialized facility designed to house and manage an organization's IT infrastructure**, including servers, storage systems, networking equipment, and other hardware essential for processing, storing, and distributing vast amounts of data. These facilities serve as the **backbone of modern digital services**, enabling everything from cloud computing and online transactions to streaming platforms and artificial intelligence (AI) applications. Data center designs incorporate advanced cooling systems, backup power, and in-house cybersecurity measures to ensure efficiency, reliability, and security. As data centers continue to grow in scale and complexity, their energy use and environmental footprint are also expanding." [05]

Data centers require five things: Land, water, power, high speed communication links, and compliant governing policy. Data centers should be thought of as **both infrastructure and industry.** As infrastructure data centers are a necessary part of our information technology world. As industry data centers consume enormous amounts of resources in the form of power and water in the production of information services. As with almost any other infrastructure or industry, data centers **need to be regulated for the public welfare.**

Terms of Engagement [05]

No rate hikes

Data centers must pay for their own energy demand — costs cannot be passed onto ratepayers.

Community transparency

Communities must have a meaningful say in project approvals and community benefits packages.

Energy reliability guarantees

Energy reliability cannot worsen because of data center projects. Projects must include enforceable commitments from utilities to improve energy reliability, funded by data center revenues.

Jobs guarantee

Data centers must create the local jobs they promise, or face penalties, and must be built by Michigan contractors with DOL registered apprenticeship programs.

Water protection

Data centers must commit to closed-loop cooling systems to avoid stressing or polluting local water resources.

Community benefits agreements

Projects should include binding agreements that deliver real benefits, including local infrastructure investments, improvements to the electrical grid, burying power lines, and upgrading water treatment facilities and piping.

No clean-energy loopholes

Utilities cannot use data center projects to weaken or sidestep clean energy laws.

Enforceability

All agreements must be enforceable through actionable penalties.

How much land do data centers require?

"Data centers vary significantly in size and function. Hyperscale facilities require large land parcels and robust infrastructure. Colocation centers may be in suburban business parks, while edge or micro data centers can be housed in retrofitted retail spaces or near telecom hubs." [12]

Examples of the "large land parcels" mentioned above range from the 173 acre Lyon Township, Michigan, data center to the 1,050 acre Saline Township hyperscale facility. Farmland is often selected as it's already cleared.

Terms of Engagement

Community transparency
Communities must have a meaningful say in project approvals and community benefits packages.

Do data centers create jobs?

The short answer, not really. [15] At least not in the way they are typically sold to governments. **Corporations** such as Amazon, Google, Microsoft, and others, interested in building data centers claim the projects are safe and good for the public welfare. They claim data centers generate good paying jobs, tax revenues, and are a boost to local business. These **claims are dubious at best** and often simply made to provide local and state governments with talking points for public consumption.

Data center jobs follow a "boom" and "bust" cycle with job creation typically front-loaded in the construction phase. Once construction is complete, however, there is little need for the onsite presence of people. [05] Data center computers and equipment can be, and are, monitored and controlled remotely. What onsite maintenance is needed can be contracted out with the occasional visit. The experience of Gaines Township, Michigan, is instructive.

Gaines Township, MI, Learns the Hard Way: Data Centers Don't Create a Lot of Jobs
"In **2015**, Nevada-based **Switch promised to create 1,000 jobs** and investment totaling $5 billion by building a data center in the 663,671-square-foot former Steelcase furniture company building in **Gaines Township** [south of Grand Rapids, MI]. Instead, Switch had made only **26 jobs by a 2022 deadline**." - *2024-Jun-19, Bridge Michigan* [01,05]

Terms of Engagement

Jobs guarantee
Data centers must create the local jobs they promise, or face penalties, and must be built by Michigan contractors with DOL registered apprenticeship programs. [08]

Do data centers consume a lot of electricity?

The short answer, yes. In **2024** data centers accounted for **more than 4%, some 183 TWh, of all U.S. electrical consumption.** [03] On their current electrical consumption trajectory data centers are expected to account for more than 8%, or 426 terawatt-hours, of total U.S. electrical consumption by 2030. In February, 2026, to feed the AI venture

the U.S. is pumping more than $175 million into coal fired power plants. [14] "Fossil fuel-fired power plant development is roaring back to life in the US". [13]

Because the U.S. power grid is integrated with power companies buying energy from each other to meet local demands, what happens in one part of the country can affect rate payers elsewhere. The **Pennsylvania-New Jersey-Maryland (PJM) grid** serves as a good example. PJM services all or part of the electric needs for thirteen states from Illinois to the Atlantic. The PJM **2024/25 capacity futures market** cleared at **$28.92/megawatt-day**; the **2025/26 market cleared at $269.92/MW-day**; and the **2026/27 market cleared at $329.17/MW-day - a more than 1000% increase in just three years**. Companies such as Amazon, Google, and Microsoft, to name just a few, who are creating this increase in demand are extremely profitable but **rate payers are footing the bill** with a **63% rate increase** in the **2025/26 market.** [04,05]

In **February, 2023, Consumers Energy**, Michigan's second largest investor-owned electric utility, announced over **$17 billion in capital spending over the next five years**. What's driving that spending? "Consumers will need all that generation and more to serve **new industrial and data center loads**", says its CEO Garrick Rochow. The utility is close to finalizing a 1-GW data center contract with an unnamed hyperscaler. In the last month, two more data center proposals have been floated joining two industrial loads already in the pipeline. "Everything is headed in the right direction here," according to Rochow. [07] Coming to your local electric bill soon, rate hikes. The data center market has become a speculative AI venture which must be contained by tying all risks of expansion directly to the companies and investment firms fueling that speculation.

The experience of **Memphis, Tennessee** is instructive. **"They essentially set up a power plant without getting a permit." - *Amanda Garcia, senior attorney, Southern Environmental Law Center***
$25 million a year in property taxes, a new wastewater treatment plant, a cooperative business with deep pockets. Big incentives for the Greater Memphis Chamber of Commerce and Boxtown, TN, mayor's office to work with xAI in building the world's biggest data center about a half-mile from the Mississippi River on an industrial zoned lot southwest of Memphis, Tennessee. A lot vacated in 2019 by a former Electrolux plant after promises of good paying jobs and some $188 million in municipal subsidies.

Memphis Gas Light and Water (MGLW) agreed to deliver 50 MW of power which was about a third of what the 230K Nvidia GPUs in the Colossus 1 data center would need to train and run *Grok* so **35 "temporary" methane gas powered turbines** were brought in. Turbines that have the potential to **emit between 1,200 and 2,000 tons of smog-forming nitrogen oxides (NOx) a year**, more emissions than the Memphis airport. By **September, 2024, Colossus 1** was **online.** A few miles away in Whitehaven **Colossus 2**, the first GW (gigawatt) data center ever built, **went online in January, 2026**, with some 550K Nvidia GPUs. By April, 2026, power requirements for Colossus 2 are expected to be 1.5 GW. Requirements that exceed the peak demand of San Francisco. The power is supplied, in part, by another 66 natural gas powered turbines. **xAIs goal? 50 million Nvidia GPUs in five years. A more than 5,000 percent increase from what is already in place.** [19]

Terms of Engagement

No rate hikes

Data centers must pay for their own energy demand — costs cannot be passed onto ratepayers.

Energy reliability guarantees

Energy reliability cannot worsen because of data center projects. Projects must include enforceable commitments from utilities to improve energy reliability, funded by data center revenues.

No clean-energy loopholes

Utilities cannot use data center projects to weaken or sidestep clean energy laws.

Do data centers consume a lot of water?

The short answer is, almost always yes. It should not be surprising that Michigan is one of the more attractive data center locations due to its abundant supply of water. A November, 2025, Cornell University study estimated that **annual U.S. data center water consumption**, depending on how fast AI demand is brought online, could reach the equivalent of **10 million persons by 2030**. [11]

Water is typically the primary cooling agent for data center equipment. Pollution effects depend on how the heat is dissipated. From a cost perspective pumping into and out of the local water table is an attractive option. Energy consumption is lower but higher water table temperatures can change the biology of the aquifer. Closed systems, where water is recycled use less water but require more power for cooling. Water usage can be reduced with the use of refrigerants, but refrigerants must be disposed of.

Every data center must cool the equipment within its walls. Local governments should understand the cooling lifecycle of a proposed data center, including disposal of any refrigerants if those are being used.

Terms of Engagement

Water protection

Data centers must commit to closed-loop cooling systems to avoid stressing or polluting local water resources.

No clean-energy loopholes

Utilities cannot use data center projects to weaken or sidestep clean energy laws.

What do data centers do?

The short answer, more than answering Google questions or managing social interactions. Traditional data centers served business or academic computing needs that could be traced directly to business and academic products and services, they were cost centers. Land, water, electrical, and business computing needs were on a par with other industrial uses. **Cloud computing**, however, opened the door for data center virtualization and monetization. With cloud computing a business didn't have to build a physical data center. A business could rent virtual servers in a physical data center built and maintained to provide computing services to hundreds or thousands of customers. These are the capabilities systems like Amazon Web Services (AWS) or Microsoft Azure provide. **Artificial Intelligence (AI)**

didn't change the cloud computing model but it did bring a capability to marshall massive amounts of data for a specific purpose at the cost of enormous storage and computing resources. The purposes to which AI systems can be applied go far beyond answering our Google questions about life, the universe, and just about anything else. So a legitimate question emerges: To what end are these enormous storage and computing requirements of AI being placed in service of?

An April, 2024, news report describing AI enabled warfare is revealing. The report describes a variety of systems that work together delivering AI enabled warfare. *Lavender*, is one such system responsible for perusing "massive amounts of surveillance data—metadata, phone records, social networks, behavioral patterns, and unverified associations—to generate a 'kill score'" between 1 and 100. [06.1] The kill score is used by another AI system called *Where's Daddy* which is responsible for tracking the persons of interest, the persons identified by *Lavender*, and determining where they should be killed, this is usually at home with their families where the kill rate is maximized. Hence the name, *Where's Daddy*. *Lavender* determines *who* and *Where's Daddy* determines *when* a person is killed. A third AI system, *The Gospel*, is responsible for analyzing associations between persons of interest and mapping those associations into aggregates which can be used to target multiple individuals in one strike - preferably in a civil structure such as a hospital or school, thus minimizing ordinance expenditures and maximizing infrastructure destruction as well as kill rates.

Together, these and other AI systems such as *Gospel Plus* and *Fire Factory* have accelerated target generation from 50 a year to 100 a day and massively increased the killing and destructive power of any given strike. Gaza and the West Bank are proving grounds for these capabilities which are marketed to the rest of the world at arms shows as being "battle tested". Theoretically, human oversight is supposed to temper the AI decisions. In practice, however, when AI generates the target and calls for the strike, Israeli Defense Forces (IDF) drop the bombs, fire the artillery, send in the drones, or whatever else the AI systems have determined is needed to accomplish the AI objective. [06.1] Many of these AI systems are hosted in Amazon, Google, Microsoft or other cloud based services here in the U.S.

Aside from profiting off warfare, what does all that have to do with the United States? As the saying goes, injustice anywhere is a threat to justice everywhere. Surveillance systems of the sort described above are running on U.S. soil and profits are being plowed back into building, well, data centers. When an ICE or Border Patrol agent, for example, is holding their phone to someone's face they are using an AI facial recognition system called *Mobile Fortify*, produced by NEC, to match the person in front of them with more than 200 million government-held photos in federal databases, i.e., data centers. [17] Agents are told *Mobile Fortify* is more accurate than a person's identification documents. That is not true.

One of the biggest "players" in AI surveillance is Palantir with 2024 revenues of $2,9 billion, 55% of which is from government contracts. What does Palantire do?

> "Integrates surveillance data, financial transactions, communications intercepts, travel records, criminal databases into one unified platform. Used by CIA, Pentagon, ICE, and local police (predictive policing)." [18]

How is this surveillance data used? *Maven* is a Palantir AI system used by the Pentagon and capable of target identification, i.e., identifying "persons of interest", and tracking. Note the similarity to the IDF *Lavender* AI system. *TITAN* is the Army's next-generation AI targeting system. Current capabilities use satellite or drone sensory data for target identification and targeting coordinates which a soldier then uses for engagement, i.e., kill, decisions. Note the similarity to the IDF AI systems described above. Local police surveillance capabilities are delivered by Palantir's *Gotham* AI system which delivers "predictive policing". That is flagging individuals as "potential" criminals before any crime has occurred.

In summary, local governments zoning for data center projects might be well advised to require transparency as to what is running inside the data center. In his farewell address to the nation President Eisenhower warned us about the military-industrial complex. AI and cloud computing have become integral parts of that complex.

References

01) Data centers create few jobs. Michigan wants to give them big tax breaks (BridgeMI)

02) Do data centers create few permanent jobs? (The Nevada Independent)

03) What we know about energy use at U.S. data centers amid the AI boom (Pew Research Center)

04) Projected data center growth spurs PJM capacity prices by factor of 10 (IEEFA)

05) What Happens When Data Centers Come To Town? (UofM)

06) Lavender & Where's Daddy: How Israel Used AI to Form Kill Lists & Bomb Palestinians in Their Homes (Democracy Now!)

06.1) Where's Daddy? Israel's AI Kill-Chain (MK Sensei)

07) Consumers Energy plans over $17B in capital spending in next 5 years (Utility Dive)

08) Terms of Engagement for Data Centers

11) U.S. Data Centers Could Consume as Much Water as 10 Million Americans by Decade's End (Yale Environment 360)

12) Zoning and Land Use Considerations for Data Centers (Data Center Knowledge)

13) AI datacenter boom triples US gas power builds, filling the air with more CO2 (The Register)

14) Trump directs Energy Department to issue funds to keep coal plants online (Reuters)

15) Data centers eyed in at least 10 Michigan towns. How they might change state (Bridge Michigan)

16) Local governments pass moratoriums to slow down data center frenzy (The Midwesterner)

17) Here's the Company That Sold DHS ICE's Notorious Face Recognition App (Wired)

18) Palantir: The $2.9 Billion Surveillance Company Behind ICE, Pentagon, and Your Local Police (State of Surveillance)

19) 'We Are the Last of the Forgotten:' Inside the Memphis Community Battling Elon Musk's xAI (Time)

Appendix I: Township Data Center Moratoriums

Moratorium Without Deferral Option

Marshall Township Planning Commission (PC), 2026-Feb-03: Resolution and Ordinance to Enact a Temporary Moratorium on Data Centers and Battery Energy Storage Systems

Sylvan Township, County of Washtenaw, State of Michigan, Ordinance No. 26-01, 2026-Jan-28: AN ORDINANCE TO ENACT A TEMPORARY MORATORIUM ON DATA CENTERS

Moratorium With Deferral Option

It appears from the wording of the Springfield Charter Township Data Center Moratorium Resolution #5, i.e., omission of "economic" in the third phrase of "viable use", that the Hayes moratorium was taken from Springfield Charter Township or from a source that provided the moratorium for Springfield Charter Township.

Howell Township, Township Board, 2025-Nov-20: Data Center Moratorium - It's unclear whether this ordinance passed or not. The waiver (deferral) in this ordinance rests solely with the Township Board.

Pittsfield Charter Township, Board of Trustees, 2025-Nov-20: RESOLUTION INSTITUTING A TEMPORARY MORATORIUM ON APPROVAL OF DATA CENTERS

Springfield Charter Township, Township Board, 2025-Dec-11: Resolution Instituting a Temporary Moratorium On Approval of Data Centers

Fwd: Hayes Twp: Terms of Engagement for Data Centers

1 message

Hayes Trustee2 <trustee2hayestownshipmi@gmail.com> Mon, Apr 20, 2026 at 12:18 PM
To: Clerk Hayes Township <clerk@hayestownshipmi.gov>

Sent from my iPhone

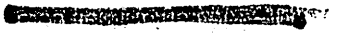
Begin forwarded message:

From: Roy Griffitts <rwgriffitts3@gmail.com>
Date: January 19, 2026 at 7:05:38 AM EST
To: Mark Snyder <snyderhtp@outlook.com>, Carey Cuddeback <clcuddebackPC@gmail.com>, Rex Greenslade <greensladerex@gmail.com>, CT Martin <ctmagnetics@aol.com>, Roy Griffitts <rwgriffitts3@gmail.com>, Matt Cunningham <trustee2@hayestownshipmi.gov>, Alexander Curley <acurley.pc@gmail.com>
Subject: Fwd: Hayes Twp: Terms of Engagement for Data Centers

FYI
---------- Forwarded message ---------
From: **Donald Gregory** <[redacted]>
Date: Sun, Jan 18, 2026 at 5:58 PM
Subject: Hayes Twp: Terms of Engagement for Data Centers
To: <rwgriffitts3@gmail.com>
Cc: <snyderhtp@outlook.com>

Hi Roy, Mark suggested that the best way to commence substantive dialog with the Planning Commission on a topic such as Data Centers would be to put together a DRAFT proposal and brainstorm around that. Mark can correct me if I got that wrong. At any rate, Abdul El-Sayed, one of the people running for Michigan U.S. Senate, published Terms of Engagement for Data Centers earlier this month, serendipitously perhaps. This, I think, would be a good starting point.

> *Our Communities, Our Terms*
>
> Throughout the last year, Michiganders have watched as at least 15 data center projects have been proposed in communities across our state. And we demand transparency. Michiganders want to understand the impact this could have on our electricity rates, grid reliability, water sources, and jobs. Utilities companies like DTE and Consumer's Energy, with a long history of hiking rates without improvements in reliability, are pushing to greenlight projects without any accountability. All while state and local government regulators are being steamrolled by corporations. The people deserve to know their rights when a data center comes into our communities. Abdul outlines the following rights for Michiganders as we navigate the inception of data centers here Michigan and across the country:
>
> - **No rate hikes**
>   - Data centers must pay for their own energy demand — costs cannot be passed onto ratepayers.



- **Community transparency**
  - Communities must have a meaningful say in project approvals and community benefits packages.

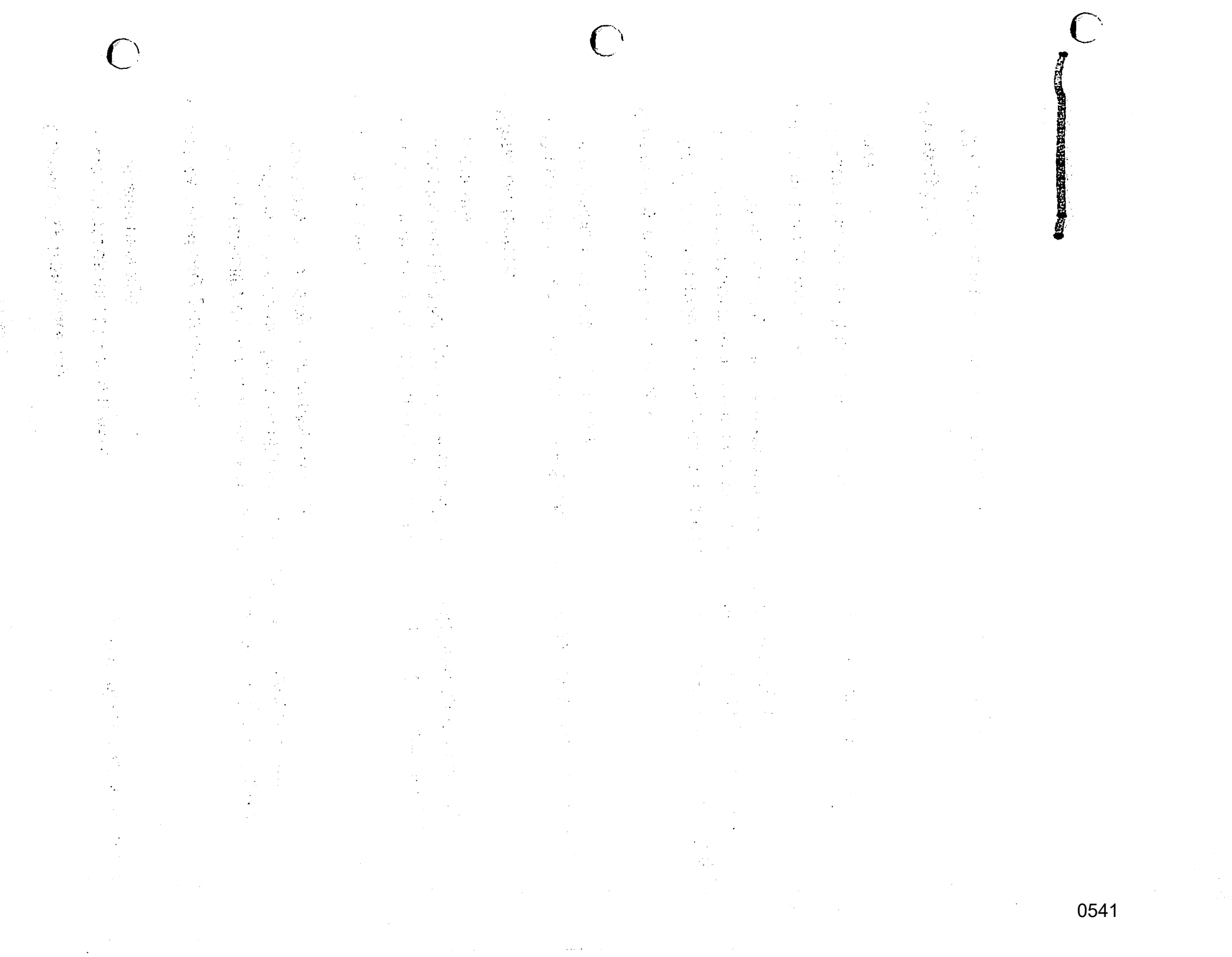
- **Energy reliability guarantees**
  - Energy reliability cannot worsen because of data center projects. Projects must include enforceable commitments from utilities to improve energy reliability, funded by data center revenues.

- **Jobs guarantee**
  - Data centers must create the local jobs they promise, or face penalties, and must be built by Michigan contractors with DOL registered apprenticeship programs.
- **Water protection**
  - Data centers must commit to **closed-loop** cooling systems to avoid stressing or polluting local water resources.

- **Community benefits agreements**
  - Projects should include binding agreements that deliver real benefits, including local infrastructure investments, improvements to the electrical grid, burying power lines, and upgrading water treatment facilities and piping.
- **No clean-energy loopholes**
  - Utilities cannot use data center projects to weaken or sidestep clean energy laws.

- **Enforceability**
  - All agreements must be enforceable through actionable penalties.

--
Donald Gregory
Email: [redacted]



Gmail clerk hayestownshipmi <clerkhayestownshipmi@gmail.com>

Fwd: Data Centers - Foster Swift Newsletter

2 messages

Hayes Trustee2 <trustee2hayestownshipmi@gmail.com> Mon, Apr 20, 2026 at 12:18 PM
To: Clerk Hayes Township <clerk@hayestownshipmi.gov>

Sent from my iPhone

Begin forwarded message:

From: Roy Griffitts <rwgriffitts3@gmail.com>
Date: January 31, 2026 at 5:58:12 PM EST
To: Carey Cuddeback <clcuddebackPC@gmail.com>, Matt Cunningham <trustee2@hayestownshipmi.gov>, Alexander Curley <acurley.pc@gmail.com>, CT Martin <ctmagnetics@aol.com>, Mark Snyder <snyderhtp@outlook.com>
Subject: Fwd: Data Centers - Foster Swift Newsletter

FYI

---------- Forwarded message ---------
From: **Jenn Cram** <jcram@bria2.com>
Date: Sat, Jan 31, 2026 at 11:39 AM
Subject: RE: Data Centers - Foster Swift Newsletter
To: Bill Conklin <supervisorhayestownshipmi@gmail.com>, Roy Griffitts <rwgriffitts3@gmail.com>, Rex Greenslade <greensladerex@gmail.com>, Kristin Baranski Clerk <clerk@hayestownshipmi.gov>

Bill, see link to what Garfield Township in Grand Traverse County is doing.

We at BRI will be discussing so that we can support the communities that we work in.

https://app.9and10news.com/2026/01/28/garfield-township-planners-move-to-regulate-data-centers-amid-ai-boom/content.html

Warm regards,

Jenn Cram, AICP

Associate

Beckett&Raeder, Inc.
Making Great Places for over 55 Years

148 E. Front St., Suite 207
Traverse City, MI 49684

Office: 231.933.8400

Direct Line: 231.974.2047

Ann Arbor, MI 734.663.2622

Grand Rapids, MI 616.585.1295
Petoskey, MI 231.347.2523
Toledo, OH 419.242.3428

Please visit us at www.bria2.com

From: Bill Conklin <supervisorhayestownshipmi@gmail.com>
Sent: Friday, January 23, 2026 12:42 PM
To: Roy Griffitts <rwgriffitts3@gmail.com>; Rex Greenslade <greensladerex@gmail.com>; Kristin Baranski Clerk <clerk@hayestownshipmi.gov>; Jenn Cram <jcram@bria2.com>
Subject: Data Centers - Foster Swift Newsletter

Hello All --

I received the MTA information last week re: webinar about Data Centers - before I received the Hayes Voters for Change brochure about a possible Data Center, which was unfounded - then I received this today - attached.

This is of particular interest given the "push" for data centers; I do not want to rush into another ordinance like we did with renewable energy but it is worth the effort to discuss and research to determine what the Twp wants to do ---

For historical purposes, I was in Traverse City in the 1990s and two contentious issues arose causing hundreds of thousands of dollars being paid by "outlying townships" in which the Townships did not have any Ordinance about a particular establishment - well, since it was not considered, the establishment applied and was denied by the Township by a split vote, but there was no ordinance which prevented it or regulated it or could diminish its proposed use - the people were upset and outspoken about it, held demonstrations and rallies but as it worked its way through the Courts, the establishments prevailed..... I would hate to have that happen on our watch, without being advised, taking precautions and the proper steps, that is all - as I have no expertise as a Planner.

Since I know Laura, if you think it advisable, I can give her a call and ask if she can send me whatever they are sending to their municipal clients and I will pass it along.....

Thanks

Hayes Trustee2 <trustee2hayestownshipmi@gmail.com> Mon, Apr 20, 2026 at 12:19 PM
To: Clerk Hayes Township <clerk@hayestownshipmi.gov>

[Quoted text hidden]