

GTRAC – Groveland Township Resident Advisory Committee

Data Center Impact Assessment

Groveland Township — Oakland County, Michigan
Evidence Based and Fact Driven



Marshall Aquifer at Risk



Rural & Recreation Character



Community Protection First

Presented to the Groveland Township Board & Planning Commission · August 2026



🚩 **ACTIVE MORATORIUM — Expires February 2027 | Ordinance must be adopted BEFORE this deadline**

Agenda

Groveland Township Residents Advisory Committee · August 2026

01



Why Now — The Urgency

Active moratorium · Developer targeting · February 2027 deadline

05



Emergency Services Gap

Fire, BESS, HazMat — GTFD not resourced for heavy industrial scale



Case Studies — What Other Communities Learned

18 communities · lessons learned

07



The Economics

Low job creation · Tax erosion · \$200M+ decommission liability · negative property tax impact

02



Who We Are

Evidence based findings of Groveland's land, water, character, and economy

08



Recommended Protective Ordinance

17 articles · Surety bonds · Threshold protections · Special land use permit

03



Water & Environmental Assessment

Marshall Aquifer · Arsenic risk · No municipal backup

09



Action Required before February 2027

Key decisions the Board must make now

04



Energy, Noise, Light, Air & Grid Impacts

Rate hikes · 24/7 industrial noise · Diesel Generator Emissions

06

18 Case Studies — Evidence-Based Lessons for Groveland Township

Michigan & National Precedents | Sources: Bridge MI · Forbes · Politico · Michigan Public Radio · MIT Technology Review · GovTech · Politico

⚠️ MI — IN CONSTRUCTION PHASE

Saline Twp. — Exclusionary Zoning Trap

Township voted 4–1 to deny rezoning. Developer sued 2 days later. Legal insurance: \$500K vs. ~\$28.75M damages. Settlement forced construction. At least 19 MI municipalities enacted moratoriums in response.

▶ **Lesson:** *Never designate a Special Land Use Zone with no applicable land. Never adopt ordinance standards without documented factual basis. Hydrogeological impact studies are critical to Groveland Township.*

⚠️ MI — OPERATIONAL

Gaines Twp. (Switch) — Job Promises

1,000 jobs promised. 26 permanent jobs created by deadline. Michigan redefined 'job' rather than claw back incentives. Developer saves ~\$1M/yr in tax exemptions. National avg: \$2M per subsidized data center job.

▶ **Lesson:** *Require binding employment clawbacks — not aspirational targets that can be retroactively redefined after the fact.*

⚠️ MI — OPERATIONAL

Dowagiac — Inadequate Ordinances

65–85 dBA continuous cooling tower noise. Resident: 'Who'd want to buy the house with that noise? No one.' First noise ordinance adopted only AFTER residents complained — reactive rules provide weaker protection.

▶ **Lesson:** *Adopt noise and performance standards before any application is filed. Proactive ordinances are far stronger than reactive ones.*

✓ MI — DEVELOPER WITHDREW

Howell Twp. — Organized, expert backed credible opposition

\$1B Meta-backed 1,000-acre hyperscale campus proposed. Township enacted moratorium. Residents formed LCCRD with expert-backed environmental & infrastructure findings. Developer voluntarily withdrew without any court fight.

▶ **Lesson:** *Expert-backed, financially credible organized opposition — established BEFORE any application is filed — is what causes developers to walk away.*

✓ MI — DIRECT NEIGHBOR

Springfield Twp. — Groveland's Neighbor

Immediately adjacent to Groveland Township. Enacted 180-day moratorium citing no municipal water or sewer. Supervisor Ric Davis: 'We would halt any project posing risk to natural resources or residents.'

▶ **Lesson:** *Both townships share the same aquifer and grid constraints. Coordinate ordinance language — consistent regional standards to ensure development protections.*

⚠️ NATIONAL — CAUTIONARY

Fayetteville, GA — Unauthorized Water Use

Data center secretly drew 29M gallons through 2 undisclosed connections over 15 months. Residents were told to stop watering lawns. County refused to fine developer — 'our largest customer.' No enforcement action taken.

▶ **Lesson:** *Independent third-party monitoring of all water connections — publicly reported — is non-negotiable. Self-reported compliance is insufficient when fiscal dependency is present.*

✓ NATIONAL — GOLD STANDARD

Mansfield, MA — Proactive Zoning

Proactively capped data center electrical load at 2 MW before any application was filed. Three-tier system uses energy demand thresholds — not building size. Planning Board requires utility written confirmation before any permit.

▶ **Lesson:** *Finalize Groveland's ordinance before Feb. 2027 moratorium expires. An ordinance in place before the moratorium lifts means developers take land acquisitions subject to new standards.*

✓ MI — MODEL

Mason, MI — 30-Day Moratorium-to-Ordinance

Enacted moratorium January 2026. Lifted it February 2026 — just 30 days later — after adopting a new M-3 zoning district with rigorous, study-backed performance standards. Speed and preparation over delay.

▶ **Lesson:** *Target October 2026 adoption — 4 months before Feb. 2027 moratorium expires. A completed ordinance before the deadline is the strongest legal protection available.*

⚠️ GLOBAL — DEMAND WARNING

China — 80% of New Capacity is Unused

500+ data centers built 2023–24 on government mandates. By 2025, up to 80% of capacity sat unused. GPU rental prices collapsed. Facilities built for AI training became mismatched to actual market demand overnight.

▶ **Lesson:** *Global AI investment pressure does not guarantee local demand. Require independently verified demand projections and binding financial performance obligations — not developer forecasts.*

The Pattern: Communities that built expert-backed records BEFORE applications were filed — secured public health, safety and environmental protections or caused developer withdrawal. Communities that reacted after — lost in court or forced to accept unfavorable settlements.

GTRAC's 10 Key Findings

01

Groveland is a Target — Act Now

Moratorium expires Feb 2027. 1000+ acres near the ITC grid are being eyed. Ordinance must be in place BEFORE any application.

03

A Dedicated Ordinance is Required

Define data centers as a single use. Require Special Land Use approval, cumulative impact analysis, anti-expansion provisions.

05

Our Aquifer and Wells Are at Risk — No Backup Exists

A single hyperscale center uses more water per day than all 6,000 residents. Require the Environmental Impairment Bond.

07

Your Electric Bill Goes Up Either Way

9% rate hike May 2026 + 10% more filed for 2027. Data center grid demand is the documented national driver of rate increases.

09

When Operator Leaves — Bill Stays

\$50M–\$200M+ decommission exposure. Require 125% bond held by Oakland County in escrow, refreshed every 5 years.

02

Preparation Wins — Reaction Loses

Every community that built an expert-backed record before an application arrived — won. Every community that reacted — lost.

04

Hire an Independent Hydrogeologist

Commission Marshall Aquifer study including arsenic modeling. This creates the only legally defensible denial grounds.

06

Mt. Holly Ski Resort Could Be Threatened

Cooling raises air temps up to 4°F within 1/3 mile. Even 1 degree devastates snowmaking. Ordinance protects against this.

08

Job & Revenue Promises Are Overstated

Switch: 1,000 promised, 26 created. Dark Store valuation erodes tax revenue. \$2M per subsidized data center job nationally.

10

Ordinance Must Be In Place BEFORE Feb. 2027

An ordinance adopted during the moratorium applies to land already acquired. One adopted after may not. Act now.

Groveland Township – Who We Are



35%+

Protected public
recreation land



40%

Zoned Rural Estate
& Farm



8,600

Acres of public
woodlands & parks



6,000

Residents — all on
private well water



70+yrs

Mt. Holly Ski Resort
— anchor recreational business

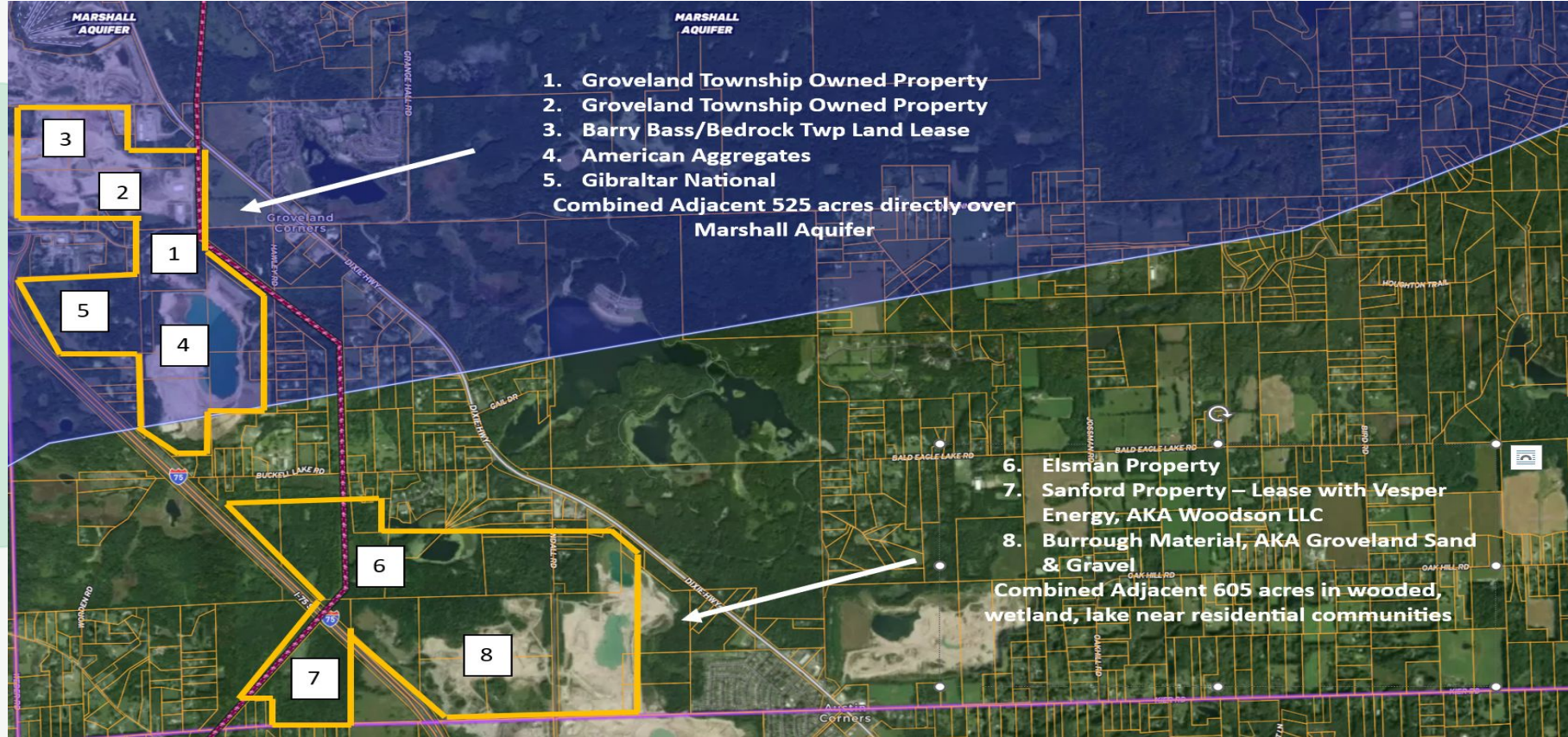


Marshall
Aquifer

52 Michigan counties share the aquifer

More than 1/3 of Groveland is already protected public recreation land — data centers are heavy industrial and fundamentally incompatible with this community.

Developer Interest— Possible Parcels



*Developer site acquisition typically precedes any public announcement by 6–18 months.
Shell company purchases are already documented nationally.*

Data Centers are Heavy Industrial Facilities

Based on energy consumption and storage, as well as noise and light pollution, data centers are comparable to large-scale utility infrastructure and are increasingly zoned accordingly.

Groveland Township Today	Automotive Assembly Plant Heavy Industrial Zoning	Hyperscale Data Center
Single home: 2.5 acres	Footprint: 300+ acres	Campus: 100–500+ acres
All 6,000 residents: 300K gal/day	Plant: 200K-500K gal/day	One facility: 500K–5M+ gal/day
Residential power: 3–5 MW total	Plant: 50 – 200MW	One facility: 100–1,400 MW
Rural noise: 40–55 dBA	Noise levels: 75-85 dBA	Cooling system/Generator Noise: 65–85 dBA 24/7/365
40–100 trucks/day (farm/gravel)	500-1000 trucks/day	500–2,000 heavy trucks/day, 18–30 months
Residential fire response	3-6 diesel backup generators w/ strict EPA Tier 4 Particulate Emission Standards	50+ diesel generators air emissions + BESS thermal runaway risks

Groveland has some existing LIGHT Industrial zoning — no HEAVY Industrial designation exists anywhere in the Township.

Our Drinking Water - The Marshall Formation Aquifer

SOLE SOURCE

Groveland Township's only drinking water.
NO municipal system exists.

500K–5M+

Gallons per day – ONE data center
All 6,000 residents together use 300,000
gal/day.

DECADES

Contamination will persist
Industrial pumping forces oxygen into stable rock,
mobilizing more arsenic into water table



Aquifer Facts

- Sole or primary drinking water source for Groveland Township — NO municipal backup exists
- Primary aquifer recharge zone, 52 counties and Millions of Residents affected, affecting water table and wetlands (*MSU Extension, USGS*)
- Any contamination will persist for decades
- Naturally occurring arsenic is already a documented risk in Groveland Township
- Heavy industrial pumping alters water pressure and forces oxygen into previously stable rock layers, pushing arsenic directly into the water table



Data Center Water Impact – Evidence

- Data Center water usage balances two efficiency metrics: **Power Usage Effectiveness (PUE)** and **Water Usage Effectiveness (WUE)**. There is a trade off between water versus power. Maximizing energy efficiency requires evaporative cooling, using high volumes of water. Minimizing water usage demands higher energy and electricity loads to power mechanical chillers (*AirSys, Environmental and Energy Institute*)
- Both evaporative and closed loop systems present hazardous risks of aquifer contamination due to open loop blow down brine – or – closed loop drain down or system leaks (*CAES Field Report, US EPA, Alliance for the Great Lakes*)



GTRAC RECOMMENDS: Irrevocable Environmental Impairment & Infrastructure Surety Bond

Equal to 125% of the estimated cost to design, engineer, and construct a Township-wide public water system — callable immediately if the Marshall Aquifer is impaired by facility operations.

Heat, Noise, Light & Air Pollution— Quality of Life Impacts



Heat Island Effect on Mt. Holly Ski Resort — 70+ Year Anchor Business

- ❑ Cooling Systems raise local air temps up to 4F within 1/3 mile
- ❑ Mt Holly General Manager: “1 degree of change devastates snow production”
- ❑ Thermal modeling required for all facilities within 1 mile of Mt Holly



24/7/365 Industrial Noise Cooling towers: 65–85 dBA continuous

- ▶ Rural ambient today: 40–55 dBA
- ▶ Dowagiac, MI resident: "You can't open your windows in summer. It never stops."
- ▶ Ordinance requires : ≤ 45 dBA nighttime at any Sensitive Receptor property line



Diesel Generator Air Pollution — PM_{2.5}, NO₂, CO 50-300+ diesel generators per large facility

- ▶ PM_{2.5} linked to respiratory, cardiovascular disease & cancer risk
- ▶ Greatest risk to children, elderly & outdoor recreation users
- ▶ EPA Tier 4 generators + independent air quality monitoring required



Dark Skies & Recreation Land

35%+ of Groveland is protected public recreation.

- ▶ Sky glow disrupts camping, stargazing, wildlife habitat & rural character
- ▶ Security lighting causes residential light trespass & wildlife disruption
- ▶ DarkSky International Model Lighting Ordinance required



GTRAC RECOMMENDS: In addition to the above recommendations, as a condition of site plant approval and prior to building permit, applicant must deposit an **Irrevocable Letter of Credit or Surety Bond** in an amount equal to **125% of the total estimated cost** of all environmental mitigation structures (including sound walls, specialized landscaping, and baffling systems)

Emergency Services — A Critical Gap

GTFD is well-matched to Groveland's current residential, agricultural, and recreational profile.

A data center is a different world.



IMPORTANT

High-Voltage & Substation Fires

No specialized training for 34.5–138 kV systems. Utility isolation dependent on outside personnel.



IMPORTANT

BESS Thermal Runaway / HF Gas

No dedicated BESS team. HF gas detection, long-duration cooling, decontamination all absent.



IMPORTANT

Large Building Fire — No Water

No municipal water. Fire flow needed: 2,000–10,000+ gpm for 12–72 hrs. No facility can use the aquifer.



IMPORTANT

Long-Duration Operations (24–72 hr)

No Regional Incident Management Team. Callback staffing depletes normal Township coverage.



SIGNIFICANT

Transformer Fire / HazMat Release

No industrial foam trailer. Limited spill containment. HazMat agreements absent.



IMPORTANT

PPE Contamination & Runoff

No technical decontamination. Contaminated runoff near Marshall Aquifer = catastrophic risk.

GTRAC RECOMMENDS: Independent Fire Protection Engineering Study · Developer Emergency Services Fund (Oakland County escrow) · Developer-funded annual training · Dedicated on-site firefighting water supply — 2,000 gpm / 72 hours — independent of the aquifer

Economic Considerations



Job Creation

Category	 Automotive Assembly Plant	 Typical Manufacturing Facility	 Hyperscale Data Center
Permanent Jobs Created	2,000 – 7,000	200 – 500	30 – 300
Facility Size	1M – 5M sq ft	150K sq ft typical	500K – 5M+ sq ft
Acreage Required	300+ acres	5 – 15 acres	100 – 500+ acres
Water Use / Day	200K – 500K gal	10K – 50K gal	500K – 5M+ gal
Power Demand	15 – 50 MW	2 – 10 MW	100 – 1,400 MW
Construction Jobs	Permanent workforce buildout	Scaled to facility	Temp. 18–24 months; outside labor
Community Integration	Deep — supply chain, services, schools	Moderate — local hiring common	Minimal — automated, remote management
MI Tax Incentives Required	Standard incentive packages	Standard incentive packages	\$2M per job in state/local subsidies

Data centers consume the land footprint, power, and water of automotive-scale heavy industry — while creating a fraction of the jobs.

Sources: NERC RD 2026, JLL 2025, michiganpublic.org

Economic Considerations



Tax Revenue

Dark Store Valuation

- ▶ Operators challenge assessed value as if the building were vacant industrial land
- ▶ Value reductions of 40–70% documented in comparable MI cases
- ▶ A \$500M facility can be assessed like a \$150M–\$300M vacant building
- ▶ **MI Public Acts 181 & 207 (2024) exempt construction & equipment from sales tax through 2050**

Equipment Depreciation Cliff

- ▶ Server infrastructure loses 80–90% of value within 5 years of installation
- ▶ Operators file aggressive tax appeals every reassessment cycle
- ▶ A server room worth \$100M today may be assessed at \$10–20M within 5 years
- ▶ **Concentration risk: if data center exceeds 10% of township tax base, fiscal stability is compromised**

Residential Property Value

- ▶ 24/7 industrial cooling noise (65–85 dBA) is the #1 documented driver of adjacent property value decline
- ▶ Dowagiac resident: 'Who's going to want to buy the house with that noise? No one.'
- ▶ Construction phase (18–30 months): heavy traffic, dust, noise — not compensable under MI law without litigation
- ▶ **Properties within sight lines of cooling towers & security lighting show documented value decline**



GTRAC RECOMMENDS: Binding employment clawback provisions · No Dark Store valuation · PILOT guaranteed annually · Independent financial audit of ALL developer projections

Economic Considerations



Decommissioning Liability

Data Center Component Lifespans

Sources: DC Decom, C7 Data Centers, Hexatronic, State of Michigan

Component	Lifespan
Data Center Buildings	20–25 years
Servers & IT Hardware	3–5 years
UPS Batteries	3–10 years
Diesel Generators	15–20 years
BESS (battery storage)	10–15 years
BESS Cell Augmentation	Every 5–7 yrs

Every data center will eventually be decommissioned.

The question is not whether — it is who pays.

\$50M – \$200M+

estimated total decommissioning & remediation cost for a large facility

Without a fully-funded escrow bond required UPFRONT, Groveland Township bears this risk if the operator walks away

Brownfield remediation on gravel pit parcels adjacent to the Marshall Aquifer could be catastrophic and permanent

Michigan has NO mandatory decommissioning bond law for data centers — this protection must be in the ordinance



GTRAC RECOMMENDS: Oakland County escrow model. Decommission Bond = 125% of independent cost estimate, refreshed every 5 years

Mandatory, Non-Negotiable Surety Bonds

Bonds may not be waived, deferred, or reduced without a 4/5 supermajority Board vote. Both must be confirmed BEFORE any permit is issued.



Environmental Impairment & Infrastructure Surety Bond

REQUIRED BEFORE: SLUP ISSUANCE

- ▶ 125% of cost to design, engineer & build a Township-wide public water system connecting every parcel to a verified alternative municipal water source
- ▶ Callable immediately by Township Board resolution — NO court order required
- ▶ Irrevocable Letter of Credit (A-rated bank) OR Surety Bond (AM Best A-) — NOT held by developer
- ▶ Remains in force throughout operations + 20 years after closure
- ▶ Refreshed every 5 years — \$50,000/day if lapses



Payment and Performance Bond

REQUIRED BEFORE: BUILDING PERMIT / GROUND DISTURBANCE

- ▶ Performance Bond: As condition of site plant approval and prior to building permit
- ▶ Applicant must deposit an Irrevocable Letter of Credit or Surety Performance Bond in an amount equal to 125% of the total estimated cost of all environmental mitigation structures (including sound walls, specialized landscaping, and baffling systems)



Decommissioning & Site Restoration Bond

REQUIRED BEFORE: BUILDING PERMIT / GROUND DISTURBANCE

- ▶ 125% of cost for complete facility removal, hazardous waste disposal, soil/groundwater remediation, and ecological restoration
- ▶ Held EXCLUSIVELY in escrow by Oakland County — not the Township, not the developer
- ▶ Tri-Party Escrow Agreement between Operator, Groveland Township, and Oakland County
- ▶ Callable upon closure, bankruptcy, SLUP revocation, or 12-month cessation
- ▶ Refreshed every 5 years — Certificate of Occupancy suspended if lapsed

WHY THIS MATTERS: Without a pre-funded, independently bonds, Groveland Township could be left with a \$50M–\$200M+ cleanup bill if an operator declares bankruptcy or abandons the site.

GTRAC Recommended Protective Ordinance — 17 Articles

Groveland Township Data Center and Energy Storage Protection Ordinance · Special Land Use Permit Required for any facility ≥ 1 MW



Special Land Use Permit

Master Plan compatibility finding required. Two public hearings. No SLUP without surety bonds confirmed.



Aquifer Protection

$\leq 25,000$ gpd withdrawal cap. Arsenic mobility study. Neighbor well testing within 5,000 ft. Closed-loop cooling only. Environmental and hydrogeology impact studies required.



Air Quality Standards

$PM_{2.5} \leq 8 \mu g/m^3$ (33% stricter than EPA). $NO_x \leq 0.50$ g/bhp-hr. 4 continuous fence-line monitors. Live public data.



Noise, Vibration & Light

≤ 45 dBA nighttime at sensitive receptors. Generator testing restricted to weekdays only. DarkSky compliant lighting.



Fire & Emergency Services

Independent fire engineering study. Developer Emergency Services Fund (Oakland Co. escrow). 2,000 gpm on-site supply.



Three Mandatory Surety Bonds

- ✓ Environmental Impairment Bond (aquifer replacement)
 - ✓ Payment and Performance Bond
 - ✓ Decommissioning Bond
- All at 125% of expert estimated cost, held independently, and refreshed every 5 years



Tax & Jobs Accountability

Binding employment clawback. No Dark Store valuation. PILOT minimum. Independent audit of all developer projections.



Post-Mining Parcel Standards

Maintain Extractive zone parcels to auto-revert to Rural Estate/Farm. Open-aquifer parcels = Critical Resource Protection.



NDA Prohibition & Transparency

No NDAs with officials from first contact. Open meetings required. Shell company beneficial ownership disclosed.

What We're Asking the Board & Planning Commission to Do

IMMEDIATE



Commission Independent Studies — Applicant-Funded

Hydrogeologic study · Arsenic mobilization · Fire protection engineering · Noise baseline · Grid capacity impact · All costs borne by any applicant; Township selects experts.

BY OCT 2026



Adopt the Protective Data Center Ordinance

Special Land Use Permit · Surety Bond requirements · Air, water, noise, and lighting standards · NDA prohibition · Post-mining parcel protections · Ordinance must pre-date any application. Send to legal for final review and adoption.

BY NOV 2026



Amend the Master Plan

Data Center incompatibility policy statement · Source Water Protection language · Post-mining parcel Rural Estate/Farm designation · Infrastructure cost policy (100% developer-funded)

ONGOING



Monitor Developer Activity Now

Watch MISO interconnection queue · Oakland County property records · EGLE pre-application filings · Shell company acquisitions · Early warning = maximum time to act.



February 2027 Moratorium Expiry | Ordinance adopted during the moratorium applies to land already acquired. One adopted after may not.

Protecting What Makes Groveland Township Special



Our Water

Marshall Formation Aquifer — sole source, no backup, protected for every resident and every future generation.



Our Land

8,600 acres of parks & recreation. 35%+ protected public land. A rural recreational character 70+ years in the making.



Our Community

Evidence-based, transparent, legally defensible recommendations — protecting residents first, always.

GTRAC — 7-Member Volunteer Committee | Chair / Project Lead · Environmental Lead · Zoning & Legal Lead · Economic Lead · Research Analyst · Public Engagement Lead · Communications Lead

Questions & Discussion

Groveland Township Residents Advisory Committee · August 2026 · Prepared for the Joint Board and Planning Commission Meeting

We respectfully ask that questions and comments from the public about this presentation are submitted via email to: gtrac2026@gmail.com by

September 1st, 2026.

This information will be compiled and responded to in a Q & A document that will be emailed prior to the joint Groveland Township Board and Planning Commission to be held on September 21st, 2026.