

## CW Draft Edits & Suggestions: RRC Sources and References List

### Section A, Purpose and Intent:

- **Green Oak Township, MI** Carlisle Wortman collaborated, High Resource Demand Facilities Zoning Ordinance, Section 38-203, A. Purpose and Intent.
- **Howell Township, MI** Existing language from Industrial District, Section 13.01, Purpose.

### Section B, Applicability:

- **Green Oak Township, MI** Carlisle Wortman collaborated, High Resource Demand Facilities Zoning Ordinance, Section 38-203, B. Applicability.

### Section C, Districts Permitted:

- **Green Oak Township, MI** Carlisle Wortman collaborated, High Resource Demand Facilities Zoning Ordinance, Section 38-203, C. Districts Permitted.

### Section D, Table X- Maximum Size and Total Allowable Facilities Cap:

- **Michigan Zoning Enabling Act**, 125.3201, Section 201.(4): “A local unit of government may adopt land development regulations under the zoning ordinance designating or limiting the location, height, bulk, number of stories, uses, and size of dwellings, buildings, and structures that may be erected or altered, including tents and recreational vehicles.”; <https://www.legislature.mi.gov/documents/mcl/pdf/mcl-110-2006-II.pdf>
- **City of Morrice, MI** limits adult entertainment to Industrial District, and put a limit of 1 facility per block, inherently creating a cap on the number of facilities.
- **Grass Lake, MI** limits maximum size and distance between “Economy Efficient Dwellings” (Tiny Homes), which was the original approach suggested to effectively limit the total number of facilities to prevent clustering/high densities of impactful land uses.
- **Ann Arbor, MI** limits the number of marijuana facilities permits allowed in the city.
- **Arlington Township, MI** limits the number of different types of licenses related to marijuana facilities.
- **Fabius Township, MI** limits the total number of Short Term Rentals within the township, as well as sets minimum distances between units.

### Section E- Application Requirements:

- **E.1:** The intent is to require proof of a demonstrated need and proof that such a land use will not result in community harm; Inspired by **City of Morrice, MI** whose Adult Entertainment zoning language requiring proof of a demonstrated need & proof of no harm, was adapted to suit Data Centers.
- **E.2 & 3: Milan Township, MI** allows the township to set application fee and escrow amounts by resolution; **Michigan Regulation and Taxation of Marijuana Act** (MCL 333.27956) allows annual application fees up to \$5,000 to cover the cost of “application, administration, and enforcement costs”; Data Centers are magnitudes larger in terms of oversight so a larger fee may well be justified as “reasonable” per the **MZEA**; <https://www.legislature.mi.gov/Laws/MCL?objectName=mcl-333-27956>

- **E.4: Cohoctah Township, MI** bans NDAs.
- **E.5 & 6: Chandler, AZ; Cass County, MO.**
- **E.7: Chicago, IL** requires disclosure of ownership interests for actions requiring city approval (such as zoning, permitting, etc);  
[https://codelibrary.amlegal.com/codes/chicago/latest/chicago\\_il/0-0-0-2603947](https://codelibrary.amlegal.com/codes/chicago/latest/chicago_il/0-0-0-2603947)
- **E.8:** While an IDD must first be approved by the township, and the township has absolute authority to deny creating one, should Howell Township wish, in the future, to create an IDD to incentivize industrial development which brings jobs, it may be prudent to explicitly and preemptively exclude Data Centers (which do not bring employment to justify the tax abatement) from any future or potential IDDs;  
[https://www.michigan.gov/-/media/Project/Websites/taxes/MISC/2015/2015\\_IFE\\_FAQs\\_Final2.pdf?rev=9b439b1c0920465b8d0a67ce3e4a644b](https://www.michigan.gov/-/media/Project/Websites/taxes/MISC/2015/2015_IFE_FAQs_Final2.pdf?rev=9b439b1c0920465b8d0a67ce3e4a644b)
- **E.9: Cass County, MO; DeKalb County, GA; Henrietta, MI; Howell Township's** own ordinances allow the Planning Commission to request certain analysis—such as the market feasibility analysis—we suggest making it a standard requirement, not just at the PC's discretion, for HILU
- **E.10: Cass County, MO; DeKalb County, GA**
- **E.11: DeKalb County, GA**
- **E.12:**
- **E.13:**
- **E.14:**
- **E.15: DeKalb County, GA**

## Section F-Site, Design, and Use Standards

- **F.1:** See **Building Design** and **Site Design** RRC research reports
- **F.2:** See RRC **Decibel Limits and Noise** Report; **Henrietta, MI** gives PC right to amend dimensional and design requirements at any time
- **F.3: Cass County, MO; Chandler, AZ; Albemarle, VA; DeKalb County, GA**
- **F.4, 5, 6:** See RRC **Building Design** and **Site Design** research report
- **F.7:** See RRC **Cooling Systems** report;
- **F.8: Milan Township, MI**
- **F.10:** Does the Township fully understand the risks of groundwater contamination due to cooling system water additives, and know what requirements (ie, regulations above & beyond federal & state, and specific options that will be best suited for the type of chemicals in the detention pond) will prevent contamination? **Green Oak Township's** supervisor mentioned their intention to add a requirement to have discharged cooling system water hauled off rather than sent to municipal treatment.
- **F.11: Fauquier County, VA; Milan Township, MI; Albemarle, VA**

## Section G. Sustainability and Energy Use Requirements

- **G.1:** Impact Statements would be most practical if provided at the time of initial application, to aid the Planning Commission and Board in determining whether the conditional rezoning and/or Special Use permit meets the criteria per the Township's Ordinance Book, for not having an adverse impact on public utilities.

- **G.1.a.** Service adequacy should be confirmed by all utility providers, including water.
- **G.1.e.** When thousands of gallons of fuel may need to be stored on-site, if backup generators utilize diesel instead of natural gas, additional information about the amount and storage method would be instructive for the Township from the start, rather than at some later point in the process, to determine community impact when approving a SU.
- **G.1.f.** If backup generators utilize natural gas, as we suggest in section F.3.b, anticipated Natural Gas demand should be submitted in the same way electricity and water—all of which are public infrastructure which will be impacted.
- **G.1.g.** Given the higher-than-average consumption of electricity, water (and possibly also natural gas), any infrastructure expansion and upgrades ought to be paid for by the High Impact Land Use owners. While state legislation may require this, the township should ensure they have their own language in place, should the state-level requirements change. **Henrietta, MI**, has this requirement.
- **G.2.a.** PUE alone is becoming obsolete/inadequate for capturing the true power usage picture, as more facilities are easily achieving PUE close to 1; TUE and WUE are additional metrics that help measure power use and water use effectiveness. See the following articles which explain the different metrics:
  - <https://www.akcp.com/index.php/2022/05/03/total-power-usage-effectiveness-next-gen-energy-efficiency-metrics/>
  - <https://airsynorthamerica.com/puw-vs-wue-balancing-efficiency-sustainability-in-data-centers/>
- **Loudoun County, VA:** The supervisor’s White Paper recommends a TUE limit of 1.15; given their extensive history and experience with data center impacts on the power grid, we feel it prudent to heed their advice
- **Henrietta, MI:** While they do not specify a number, they encourage utilizing WUE to ensure sustainable water use;
- **G.3.a.** “DAKET”: A Flint-based company, Enercea, produces these kinetic-energy turbines as a renewable, clean energy solution: <https://enercea.com>
- Renewable, “Green”, Hydrogen Fuel Cells: Recommended by **Loudoun County, VA**
- Blue & Gray Hydrogen Fuel Cells are not renewable or clean, and come with additional risks and concerns; see **Loudoun County, VA** White Paper for more detail.
- On-site nuclear power carries risks the Township does not currently have ordinances to adequately address.
- **G.3.c.**
- **G.3.d. Loudoun County, VA:** The White Paper recommends “Long Duration Energy Storage” systems over traditional, lithium-ion BESS. LDES options are often referred to as BESS, so we suggest focusing on the features outlined versus the label the energy storage system is given; Additionally, see the **RRC’s BESS Report** for further information.
- **G.4.b. Albemarle, VA:** Requires connection to public water and sewer;
- **G.6.c. Memphis, TN** is experiencing a high level of air pollution from the XAi data center, which is operating over a dozen gas turbines to provide baseload power to the facility.

They began operating these turbines illegally, without the proper permits, but even with permits, the air quality issues will remain and will impact the community. It seems prudent to prohibit on-site power generation, with exception for clean, renewable energy; <https://www.tba.org/?pg=Hastings2025AIX>

- **G.6.f. Loudoun County, VA White Paper;**
- **G.8. DeKalb County, GA:** Requires annual generator run-time logs;
- **G.9: Henrietta, MI** requires the owner/operator/permittee to reimburse the township for annual, professional, independent evaluations & inspections to determine compliance
- **G.10: Milan Township, MI:** Requires underground utility lines
- **Montgomery County, MD:** proposing a 100MW cap
- **St. Louis, MO:** Is proposing limiting MW by data center size/“Tiers”
- **Kochville Township, MI:** Is proposing limiting MW by tiers/size

## Section H: Security & Emergency Access

- **H.7.c. Henrietta, MI** requires the Township Fire Department to review and approve the Emergency Response Plan;
- **Milan Township, MI:** Requires the Fire Department to review the Fire Protection Plan, and requires the applicant to provide all equipment and training to address emergencies at the data center;
- **H.8. Dark Sky Ordinance Template:**  
<https://darksky.org/darksky-outdoor-lighting-code-templates/>

## Section I: Construction Phase Requirements

- **I.1-3: Chandler, AZ;**
- **I.4:** Despite ordinances limiting construction hours, Data Center developers have been known to request 24-hour construction variances/allowances, creating significant negative community impacts. It should be made clear from the start that Howell Township will not entertain such requests;  
<https://www.wpr.org/news/frustration-grows-over-24-hour-data-center-construction-port-washington>

## Section J: Decommissioning

**J.1: Livingston County Planning Commission:** When reviewing Green Oak Township’s Data Center ordinance, the question of whether decommissioning could require the full removal of the building was raised by the LivCo PC. Upon researching this question, it seems it *is* possible, and the best way to strengthen the township’s case, according to **League of California Cities**, is to include legislative findings in the ordinance: “Use of legislative findings will give a reviewing court a “roadmap”, will assist the court in its analysis, and hopefully encourage judicial deference to the legislative body’s determination.”,

**J.4:** Another way to strengthen the case for the decommissioning requirements, is to allow an alternative to full-removal. Given the findings in J.1, the Planning Commission should have the discretion to allow them to retrofit/renovate the primary buildings to be suitable for other permitted uses within the zoning district. **Chester County and Montgomery County, PA Planning Commissions** note: “The prospect of a data center building becoming vacant one day poses numerous challenges and is one which ordinances should address. For example, large scale data centers have massive buildings that are taller than most other uses, making their adaptive reuse challenging for another industry. They may also be sited in locations with access appropriate for a few dozen data center employees, but not for heavy truck traffic that another industrial use might require” They go on to recommend decommissioning language requiring removal of all above-ground structures, unless “...the property owner can demonstrate that they are actively marketing the site for a compatible replacement use”

## **Section K: Monitoring and Compliance Requirements**

**Henrietta, MI** Requires reimbursement to township for annual independent, professional review of all operations to ensure compliance with the ordinance & special use permit

**K.1, 2, 3: Milan Township, MI**

**K.4: Cass County, MO; Milan Township, MI**

**K.5: Cass County, MO; Chandler, AZ; Albemarle, VA**

**K.6: Cass County, MO**

**K.7: Milan Township, MI**

**K.8: Wayne, MI** requires industrial communication towers (which were included in the previous developers' proposed definition of “Data Processing Facilities”) to submit proof of compliance with FAA

**K.9: City of St. John's, MI** requires compliance with federal EMF limits for communications towers: “Structures shall be subject to any state and federal regulations concerning non-ionizing electromagnetic radiation. If more restrictive state or federal standards are adopted in the future, the antenna shall be made to conform to the extent required by such standard or the special use approval will be subject to revocation by the City Commission. Cost for testing and verification of compliance shall be borne by the operator of the antenna.”

**K.10: DeKalb County, GA; Milan Township, MI**

**K.11: Milan Township, MI**

**K.12: Henrietta, MI** stipulates no zoning permit shall be issued unless provisions of the Maintenance & Enforcement section have been met- and if they aren't, for some just reason, then they can get a temporary certificate of approval good for a specific number of days upon the posting of a performance bond

**K.13: Milan Township, MI**

**Additional Items:**

- Indemnification (see Henrietta)
- Change of Ownership (see Henrietta)
- E-Waste Plan (see Henrietta)

### Links to Sources:

Albemarle, VA- <https://engage.albemarle.org/data-center-regulations>

Ann Arbor, MI -

<https://www.a2gov.org/media/ihyderb1/ord-25-33-marijuana-facilities-separation.pdf>

Arlington Twp, MI -

<https://www.arlingtontownship.com/wp-content/uploads/2023/11/Nov2023Revised-Marijuana-Business-License-Ordinance-1.pdf>

Cass Co, MO -

[https://casscounty.com/AgendaCenter/ViewFile/Agenda/\\_04092025-936](https://casscounty.com/AgendaCenter/ViewFile/Agenda/_04092025-936)

Chandler, AZ -

<https://www.chandleraz.gov/sites/default/files/departments/development-services/PLH22-0053-Ordinance-No-5033-Data-Center.pdf>

Chester County & Montgomery County, PA-

<https://www.chescoplanning.org/UandI/DataCenters/pdf/DataCenterOrdinanceGuide.pdf>

Cohoctah, MI -

NDA Ban:

<https://mccmeetingspublic.blob.core.usgovcloudapi.net/cohoctahmi-meet-399ca3da4f8d48f595d419d2ee4934ce/ITEM-Attachment-001-5ff1b7ffb1b2472891c428adcde45cf8.pdf>

DeKalb, GA-

<https://engagedekalb.dekalbcountyga.gov/data-center-text-amendment>

Fabius Twp, MI -

<https://fabiustownship.org/wp-content/uploads/A-Short-Term-Rental-DRAFT-012624-V5.pdf>

Fauquier County, VA-

<https://www.pecva.org/wp-content/uploads/fauquier-data-center-policy-december-14-2023.pdf>

Grass Lake, MI -

[https://codelibrary.amlegal.com/codes/grasslakemi/latest/grasslake\\_mi/0-0-0-3507](https://codelibrary.amlegal.com/codes/grasslakemi/latest/grasslake_mi/0-0-0-3507)

Henrietta, MI-

<https://henrietatownshipmi.gov/wp-content/uploads/2026/02/2025-Data-Center-Zoning-Ordinance-1-1.pdf>

Kochville Township, MI-

<https://cms2.revize.com/revize/kochville/Kochville%20data%20center%20ordinance%20draft%201-2-2026.pdf?t=202602241503480&t=202602241503480>

League of California Cities-

<https://www.cacities.org/UploadedFiles/LeagueInternet/18/18536712-6555-47f1-8bfd-70d8aad8f32e.pdf>

Loudoun County, Va-

White Paper: <https://www.loudoun.gov/ArchiveCenter/ViewFile/Item/13979>

Milan Twp, MI -

[https://milantownship.org/wp-content/uploads/2026/02/V2\\_pg-458\\_20260203\\_Data-Center-and-Cryptocurrency-Mining-Facilities-Ord.docx](https://milantownship.org/wp-content/uploads/2026/02/V2_pg-458_20260203_Data-Center-and-Cryptocurrency-Mining-Facilities-Ord.docx)

Montgomery County, MD-

<https://www.foxesselfaster.com/blog/montgomery-county-data-center-regulations-2026/>

Morrice (City of), MI -

<https://morrice.mi.us/wp-content/uploads/2021/03/ZONING-ORDINANCE.pdf>

St. John's MI- [https://codelibrary.amlegal.com/codes/stjohns/latest/stjohns\\_mi/0-0-0-3705](https://codelibrary.amlegal.com/codes/stjohns/latest/stjohns_mi/0-0-0-3705)

St. Louis, MO-

[https://www.stlouis-mo.gov/government/departments/planning/planning/planning-commission/upload/Preliminary-Data-Centers-Zoning-Recommendations\\_February-5-2026.pdf](https://www.stlouis-mo.gov/government/departments/planning/planning/planning-commission/upload/Preliminary-Data-Centers-Zoning-Recommendations_February-5-2026.pdf)

Wayne, MI- [https://codelibrary.amlegal.com/codes/wayne/latest/wayne\\_mi/0-0-0-39507](https://codelibrary.amlegal.com/codes/wayne/latest/wayne_mi/0-0-0-39507)