

“Data Center Analysis Through Rational Evaluations and Performance Based Zoning”

Submitted by the Citizen’s Voluntary Committee on Data Centers [CVAC]

I. COMPOSITION AND ORGANIZATIONAL PURPOSE:

CVAC is a non-governmental voluntary association of community members representing a broad array of stakeholders in the Macon County community requesting the opportunity to offer an informed perspective on Data Center development within Macon County, inclusive of its cities and villages. Motivated to act in the aftermath of “moratorium” discussions, promoted by existing agenda based non-profit organizations, timely efforts to address issues from a *fact-based perspective* informed the origins of CVAC. The Macon County Board Chairman accepted the invitation to prepare a presentation and reported a desire to hear the perspective from CVAC. Other Macon County community leaders joined in that desire.

To the local stakeholders, the concern was that imported ideology, not accurate facts, was proffered as a pretext to kill Data Centers before an opportunity for reasoned response was available. While “Soy City Indivisible” and “Illinois People’s Action” protest “Nothing About Us Without Us”, ironically, the same groups were ready to kill Data Centers without “US”, that is, local Macon County stakeholders- the “US” should be local. We are confident that the composition of CVAC represents informed local stakeholders with an unimpeachable desire to advance that which is best for our County- not a political ideology.

CVAC was assembled by its Chair, Jerry Stocks, with comment, in part, from Chairman Greenfield. The goal was to identify persons with leadership experience, varied perspectives in the community, relevant experience on the issues presented and a stake in the question to be determined. The audience to these recommendations will determine whether the composition of the CVAC has merit and whether the content of the findings better informs the decisions each local governmental officer must make.

CVAC members:

1. Tom Brinkoetter, owner of Brinkoetter Realty, Decatur/Macon County’s highest volume real estate brokerage.
2. Dan Caulkins, former State Representative and Decatur City Council member. As State representative, Dan served on the House Energy and Utilities Committees. Business experience in nursing and long-term care industry.
3. Jerry Culp, Executive Director of the Macon County Conservation District.

4. Lacie Elzy, City of Decatur Director Economic & Community Development.
5. Kris Lutt, Vice-President Innovation & Growth and President Sustainable Materials, Archer Daniels Midland Company; Trustee, Illinois State University (Pritzker Appointee).
6. Julie Miller, Village Administrator Mt Zion, IL.
7. Duane Noland, former State Representative and State Senator, Executive Director/President Illinois Association of Rural Electrical Cooperatives, owner/operator Noland Farms- multi generational family farm.
8. Dan Smallwood, Trustee Decatur Sanitary District, labor representative.
9. Jerry Stocks (Chair), Attorney experienced in land use and constitutional litigation, land use transactions, farmland owner and principal in multi-generational family farm.
10. Stacey Young. Trustee Decatur Park District, Ameren executive.

CVAC IS NOT a public body. CVAC was not appointed pursuant to any ordinance, regulation or governing legislation. Public funds did not support CVAC. No governmental entity is obligated to consider or act upon the advice of CVAC. In this respect, CVAC is no different than any other organized group or voluntary association requesting input on a public issue. The hope is that CVAC presents a profile of stakeholders invested in our community whose input can assist the elected zoning authorities in our County.

II. GENERAL RECOMMENDATIONS:

CVAC asks policy-makers to evaluate how data center development can work for us based on a rational factual basis relevant to our infrastructure strengths. CVAC is confident that Macon County offers much to site selectors and the development of data centers in our County can work to our collective benefit. We have the tools. We just need the confidence. Our perspective is:

A. *Moratoria* resolutions risk unforced error by any zoning authority defeating economic opportunity for our County as site selectors for development are unlikely to investigate the advantages presented by our County. Site selection and antecedent [to Data Center developers] infrastructure suppliers must have confidence in the certainty of local government where development may manifest. Political uncertainty is damaging to prospects as uncertainty is contagious. The foregoing view is shared with our EDC:

A Path Forward

- A moratorium should be reserved only for **clear and present threats to public health or infrastructure** and should **not act as a pause button to do research**.
- Economic opportunity cost heavily outweighs the benefits of the delay.
- Projects still have to survive a rigorous, technical review process; an application does not guarantee approval.
- Companies want clarity. Focus on creating clear, predictable zoning pathways rather than turning away the business development opportunities Macon County cannot afford to lose.

Economic Development Corporation of Decatur & Macon County

B. Macon County enjoys comparative advantages and is capable of hosting Data Centers. Our water supply and water treatment capabilities are comfortably adequate. Grid infrastructure, power supply, fiber availability and natural gas access present local advantage. The comparative strengths are marketable to site selectors and promise substantial private and public benefits to taxpayers when development is permitted. At a time when zoning authorities in other counties or cities are yielding to fear to close their respective jurisdictions to siting, opportunity for Macon County to capture the industry could be strong. Here, CVAC recommends not following the crowd, but leading to claim the benefits of the advantages our County offers. Here, (compared to others), the “path less traveled can make all the difference in the world.”

C. Data Centers are evolving as the equivalent to a utility pervasive in all aspects of life, health, employment, banking, business, industry, entertainment, communication, National security and education. Data management is fast becoming vital to existence. Local siting, including associated infrastructure, hosts broader economic expansion.

D. Balanced evaluation of the demands on public infrastructure, health and welfare do not credibly justify regulation that arbitrarily interferes with development. The pace of technological improvements in the Data Center industry, and regulatory/statutory requirements at state and federal levels are advancing which abate reasonably feared nuisance. Data Center land use can be managed positively and negative impacts from

worse-case scenarios can be mitigated without arbitrary zoning effectively repelling the investment related to Data Center.

E. Local governments have significant and increasing financial needs and duties to deliver public services. Development Agreements enable developer contributions to infrastructure which benefits the public, generally. Further, development expands the property tax base that has yielded property tax rate reduction in the experience of other communities, in addition to the availability of increased funds to the governmental entities for their operations. Directly involved private landowners receive the highest best value for their property. The economic benefits ripple through a local economy positively impacting all residents.

F. Local zoning fixing strict quantitative standards restrains technical review on each permit application. Data Centers take many forms which define the demands on public infrastructure and services. Pollution (noise and emissions) are regulated at the state and federal level- consistent for industry, generally, and specific to data centers. A local ordinance should adopt those standards and not render Macon County less competitive compared to other Illinois counties. Power supply from the grid exceeds the purview or ability of local government to impact. In this respect, power issues self-regulate. Local, behind the grid power supply, primary or secondary, must be sited appropriately and meet state and federal pollution standards.

G. Adopt definitions for Data Centers as : (1) LOW IMPACT DATA CENTERS [LIDC], and (2) HIGH IMPACT DATA CENTERS [HIDC]. A HIDC, irrespective of underlying zoning classification (Industrial or Agricultural) would REQUIRE a Special or Conditional Use Permit incorporating each Mitigation and Development Agreement recommended herein. A LIDC would be a permitted use under an Industrial zoning category subject to the same requirements as other permitted uses under an industrial zoning category.

HIGH IMPACT DATA CENTER: > than 50 MW OR RWCI Level 4 or more (see Part V.A, supra. For RWCI Level based on cooling design), modeled average water use (after charge) exceeding 250 KGD or any Data Center on Agricultural zoned property;

LOW IMPACT DATA CENTER: ≤ 50MW AND RWCI Level 3 or less with 250 KGD or less modeled average water consumption, after cooling system charge.

In all applications, approvals subject to utility adequacy proof consistent with requirements already stated in County/City zoning ordinances. Amongst many considerations, the distinction is designed to accommodate Brownfield transitions as a host to scalable modular LIDC.

III. CVAC PROCESS:

CVAC conducted weekly meetings from late June to the date of issuance of this report. Representatives from opposing perspectives presented their views. Many volumes of publications and state/ federal regulations specific to the germane topics were shared by and between CVAC members. Materials provided by Data Center opposition groups were shared and reviewed for concerns, CVAC members attended meeting of others (including Soy City Indivisible), public comments at City and County regular meetings, shared his or her unique expertise/experience with other CVAC members, communicated with MISO officials, industry representatives, city officials in other communities, directors and managers of public works- all to secure a heightened and County relevant understanding of the issues presented in the Data Center debate.

The only “authority” of CVAC arises from who comprises CVAC , what CVAC recommends and why CVAC makes such recommendations. Notwithstanding, CVAC has the right to be heard by the decisionmakers on the issue as its, collective, First Amendment right, equal to any other person or organization.

IV. GENERAL LIMITS TO LAND USE REGULATION:

Zoning authority is not absolute and must conform to constitutional requirements. Zoning is upheld if the regulation is a rational means to accomplish a legitimate governmental purpose. Zoning regulations will fail to meet constitutional standards if the regulation is shown to be arbitrary, unreasonable, or bearing no substantial relation to public health, safety, morals, comfort or general welfare.

County zoning is enabled only by statute which is codified at 55 ILCS 5/5-12001, et seq. County Boards possess no inherent zoning authority and, as such, are strictly bound by the powers, conditions, and restrictions enacted by the state legislature. A potentially relevant consideration for County consideration is the “Public Utility Exemption” that denies counties the power to specify or regulate the type or location of poles, towers, wires, cables, conduits, laterals or other distribution equipment of a public utility. In a general sense, the County may be limited in scope because the utility infrastructure transmission to the property (electric, water, sanitary, fiber) may exceed authority to regulate. An additional consideration is that the county cannot be more restrictive than state standards nor provide relief from state standards, which informs the recurrent CVAC recommendation for adoption of state and/or federal standards in this Report.

Relevant to our issues, Macon County Zoning Ordinance §155.029 is particularly important. A special use cannot be recommended unless adequate “utilities, access roads, drainage, and/or other necessary facilities” are or will be provided. More importantly,

§155.029(D) expressly permits the County Board to impose conditions and restrictions concerning the construction, maintenance, and operation of a special use that are necessary to protect the public interest. The County can also require “evidence and guarantees” demonstrating continuing compliance with those conditions. In this sense, relatively modest amendments to existing ordinances can regulate effectively.

Similarly, non-home-rule villages/municipalities exercising zoning authority in the County have no inherent power to regulate and restrict land-use except through powers derived from 65 ILCS 5/11-13-1, et seq. “Illinois Municipal Code- Division 13.” Because the County has adopted zoning, the non-home-rule- unit lacks extraterritorial zoning authority. A non-home-rule unit of government cannot prohibit what state statute expressly permits. Like Counties, the zoning cannot conflict with state law or infringe on an active state statutory scheme. Again, CVAC recommendations for adoption of state standards are informed by applicable limits to zoning authority.

Illinois home rule municipalities possess broad, constitutionally derived zoning powers within their corporate boundaries, freeing them from the strictures of the state's statutory Zoning Enabling Act. However, this authority is strictly limited to their territorial boundaries unless explicitly extended by the legislature, remains subject to constitutional reasonableness standards, and is subject to express statutory preemption by the General Assembly, such as restrictions on extraterritorial telecommunications zoning. Thus, for the City of Decatur, the authority is broader.

One pervasive consideration by CVAC was comparisons to other uses permitted in current zoning, especially for Heavy Industrial or Light Industrial classifications¹, that likely present greater demands on public infrastructure than a modern engineered and constructed data center. Is it arbitrary regulation to separate “Data Centers” (of one type or all) in these zoning classifications for more restrictive regulation than current or future non-data industrial uses? Under these zoning categories, should “Data Centers” (of one type or all)² simply be allowed as an additional “permitted” use free from the requirement of a “special use or conditional use” permit within that classification? For example, data center development in DeKalb, IL proceeded under existing zoning classification- not under a “Data Center” permit. It is CVAC understanding that the trend is for special or conditional use permitting within existing classifications. Certainly, for Agricultural Zoned property (or other zoning classifications- excluding residential- the authority deems appropriate), the

¹ Brownfields come to mind. No ordinance should unintendedly negate the win-win from a data center use on brownfields in an industrially zoned property

² See discussion *supra* where types of data center may present limited demand on infrastructure (and potential nuisance to adjoining uses) and could be assigned different application. The proposed distinction: LIDC and HIDC stated in Part II. G. *infra*.

ordinance should amend to allow as a special or conditional use that satisfies the recommendations below.

V. SPECIFIC ISSUES/RECOMMENDATIONS TO BALANCE COMPETING CONCERNS:

As a general approach, CVAC recommends that a “**Data Center Development and Mitigation Agreement**” [interchangeable herein with “Development Agreement” or “Agreement”] should be incorporated into the requirements for a special (or conditional) use permit under those zoning categories appropriate for HIDC and available for adoption by zoning authorities throughout the County.³ The objective is to maximize uniformity and to recognize that impact to local public infrastructure is shared throughout the County. An example approach is the use of Illinois Department of Agriculture *Agricultural Impact Mitigation Agreements* in solar/wind and other zoning applications specific to farm protections. Here, the approach is contemplated for the protection of local public infrastructure, nuisance protection and a cost shift to the developer/operator of the improvements necessary to host the HIDC. The spirit behind our recommendations is to illustrate that our County need not fear or say no to the opportunities and to show that we can handle this for the benefit of all County residents. Each local government is served by skilled professionals well versed on the issues and working on the content of ordinances as this report is released. Elements suggested for an Agreement or the adopting Ordinance will be discussed as follows:

A. WATER: Any ordinance should select a metric(s) by which various types of Data Centers are defined. The term “Data Center” broadly sweeps vastly diverse operations into one label. Each type presents different infrastructure demand. In most definitions, data centers are divided into categories based on electrical MW and/or type of data handled. [cloud storage/computing, co-location, enterprise, managed service, AI, mining, hybrids of the foregoing, etc.⁴] Ultimately, the purposes for the data are not the variable for reasonable discrimination. However, as will be illustrated herein, electrical MW assortment does not align with the locally supplied infrastructure that a local authority controls, that is water [supply, treatment and waste]. A closed-loop non-evaporative cooling design consumes very little water on a daily basis. Other designs require substantial daily water consumption. Stated differently, data centers of greater MW may use less water than data centers consuming lesser MW of energy supply as a function of cooling design. CVAC recommends categorization of data centers based on a combination of the cooling design

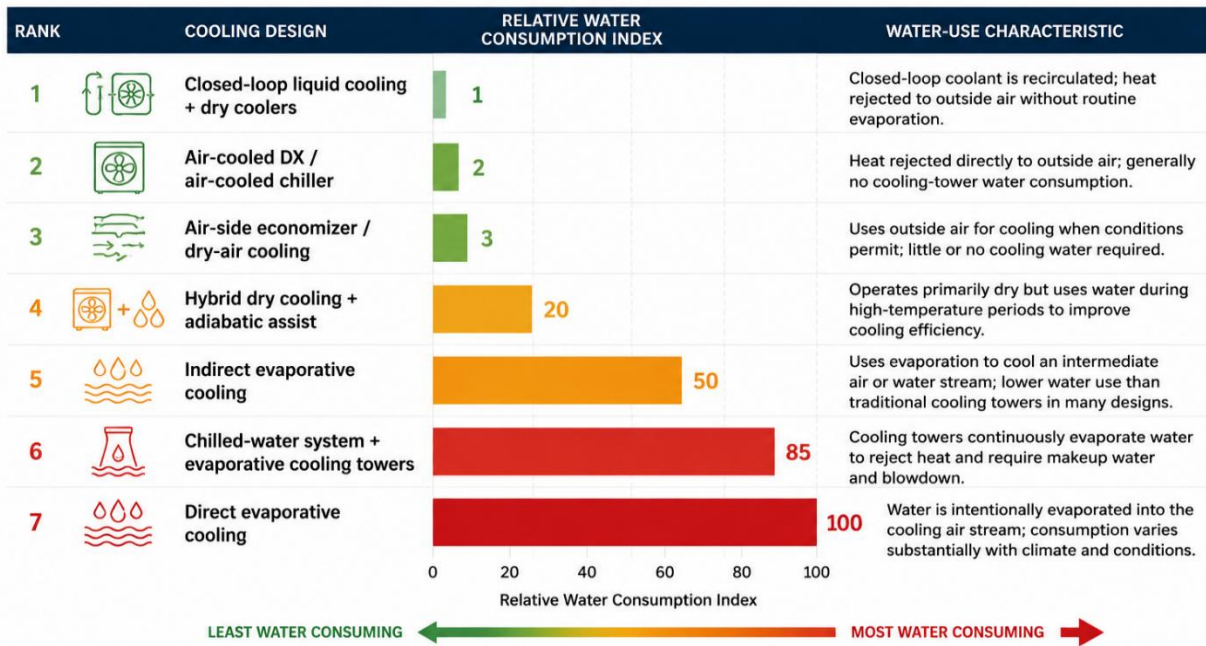
³ LIDC could be identified as a permitted use (or similar use determination) in M-2.

⁴There are more than 250 data centers in Illinois. However, AI Data Centers [AIDC] are not currently among that group. Developers resist Illinois for AIDC because of the potential legal liabilities under the Illinois Biometric Personal Privacy Act. AIDC tend to demand the greatest energy and cooling, at present technology, and animate the most intense objection from the special interest groups.

directly impacting water demand (as the most appropriate discernment for a local zoning authority) to establish a Relative Water Consumption Index- [**RWCI**] and power MW. Thus, the definition divides data centers into LIDC and HIDC as described in Part II. G. above. The trend is that the industry is responding with increasingly efficient water use designs.

DATA CENTER COOLING DESIGNS – LEAST TO MOST WATER CONSUMING

Relative Water Consumption Index (Lower = Less Water)



Note: Index is illustrative, not gallons per unit of energy. Actual water use depends on climate, design, operating temperatures, controls, and whether any evaporative assistance is used.

Water Consumption: Becoming More Efficient

Air-Cooled Chillers – Like giant ultra-efficient AC units, they use outside air to cool the system.

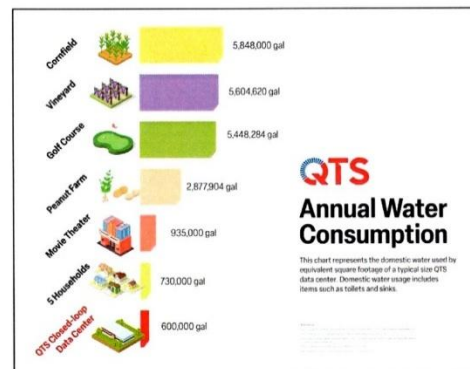
Closed-Loop Water System – The same water circulates endlessly, cooling air (or refrigerant fluid for liquid cooling) without waste.

Estimated U.S. water use, select industries



Data: Overview analysis of government, industry and academic sources, including 2024 Lawrence Berkeley National Laboratory study. Note: Power plants include fossil fuel and nuclear facilities. Data centers include on-site cooling and associated electricity generation. Chart: Amy Harder/Axis

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But What About Hyperscalers?

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INNOVATION

Microsoft reaches water efficiency milestone

The company is more than halfway toward fulfilling its pledge to reduce the water-use intensity of its data centers by 40 percent by 2030.

By Heather Clancy | June 24, 2026

Key Takeaways:

- Microsoft's disclosure comes as community scrutiny of data center water use intensifies.
- Amazon boasts a better score than Microsoft for water-usage effectiveness.
- Microsoft invests in on-site equipment such as rainwater harvesting and water purification systems to supplement municipal recycled water supplies.

Microsoft will use more recycled and reused water to cool its data centers as part of its broad commitment to become "water positive" by 2030.

Microsoft, like rivals Amazon and Google, is under pressure to justify the water withdrawals typically required to keep equipment cool in massive data centers that support cloud computing and artificial intelligence services.

All three companies are prioritizing design approaches that have lower requirements for water in the face of heightened community scrutiny. Examples of increasingly common approaches include massive fans that pull in outside air in mild climates and liquid technologies that directly cool the powerful chips running AI servers.

Amazon, Google and Microsoft are also switching to recycled and non-potable sources where possible to reduce freshwater withdrawals.

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The City of Decatur (most likely public water supplier in Macon County) has abundant supply of 9.7 BG water from Lake Decatur, 12.5 MG ground storage tanks, 7.5 MG/day from Mahomet Aquifer (90 day limit), 900 MG at Vulcan Pit, 3 MGD at Vulcan Water Mine. According to the 2026 Budget, the City of Decatur hosts the following key infrastructure for water:

PUBLIC WORKS DEPARTMENT - WATER OPERATIONS

Program Description

Organization: The functions of the City of Decatur's water utility are performed by three separate divisions: Water Production and Water Services, both in the Public Works Department; and Utility Customer Services, in the Finance Department. All three functions are funded by water utility revenues. The water utility also receives support from other divisions and departments, including some water-related positions in the Engineering Division.

Infrastructure: Key infrastructure required to provide clean water to the City includes:

- Lake Decatur, its dam, and its 925-square-mile watershed. Overall capacity of Lake Decatur is 9.7 billion gallons (BG).
- The Oakley Sediment Basin, which holds 10 million cubic yards of sediment dredged out of Lake Decatur between 1993 and 2019.
- The raw water intake structure, including the dam gates, pipes, pumps and fish screens.
- The City's South Water Treatment Plant, which has a maximum water processing capacity of 36 million gallons per day (MGD).
- Five lime residual storage lagoons, which are emptied by contract, with the lime land-applied to agricultural acreage, improving nutrient uptake.
- Two large ground storage tanks with an overall capacity of 12.5 million gallons (MG) plus high volume pumps and control valves.
- The water distribution system, including two pressure zones, three elevated storage tanks, 536 miles of water main ranging in diameter from 4 inches to 48 inches, 30,600 metered service connections, and connections to Mount Zion, Long Creek, and Harristown.
- The Utility Customer Service center, located at the Civic Center.
- The supervisory control and data acquisition (SCADA) system, used to control the system.
- The DeWitt Wellfield, a 120-acre site with eight wells tapping into the Mahomet Aquifer. It has an agreed-upon maximum withdrawal rate of 10 MGD for 90 days. Models indicate that the wellfield could support a steady-state withdrawal rate of 7.5 MGD.
- The Harristown Vulcan Pit, a 473-acre site on Lincoln Trail Homestead Parkway with ponds holding 900 million gallons (MG) of water and significant potential for river recharge, even during drought conditions.
- The Vulcan Water Mine, a 60-acre site adjacent to the City's lime residual storage lagoons, which can supply up to three MGD of water supply through a dedicated pipeline during periods of drought or poor water quality.

If there is a “choke point” for water supply, it likely would manifest at the South Water Treatment Plant [SWTP]. The SWTP has processing capacity at 36 MGD (Million Gallons per Day). The City also says the plant was originally designed for expansion from 36 MGD to 54 MGD and is now obtaining engineering plans for that expansion. Current daily processed water consumption is:

Scenario	Existing 36-MGD plant	After 54-MGD expansion [Est. Proj]
2026 YTD average demand	18.95	18.95
Mathematical capacity above average	17.05	35.05
Historical high monthly-average withdrawal (26.3 MGD)	26.30	26.30
Capacity above historical high monthly average	9.70	27.70

In 2026, slightly more than ½ of processing capacity has been required. However, in historic high scenarios, 9.70 MGD capacity remains, and after projected (study pending) improvements, 27.7 MGD would be available. Two instructive points, SWTP improvements are a strong target for developer contributions as part of a Community Benefits Agreement. Second, assuming up to 2 GW of Major Data Centers [2,000 MW- probably 5 times reasonable expectations]⁵ using **RWCI** Level 1 above Cooling Design [Best Case Scenario], after one time system charging, would yield a daily consumption demand allowance on infrastructure at 250,000 GPD (gallons per day) or about 1.32% of the SWTP production. If only 200MW of data center manifests (still a single hyperscale size), only 0.132% of daily SWTP production.

Assume a worse-case scenario, embracing antiquated cooling technology for new construction, **RWCI** category 7 above Cooling Design- Direct Evaporative Cooling Towers, estimated 15 MGD (assuming 2,000 MW) which would exceed a reasonably prudent consumption. If only 200 MW facility, a 1.5 MGD demand which would fall well within current production capacity at SWTP with 7.0 MGD + additional for other “yet to develop” industry.

However, processed water from the SWTP may not be the only source. “[A] proposed center in Nodaway County, MO, would use **municipal wastewater** in a **closed-loop cooling system** that, according to the project website, requires an initial 1.5 million gallons to charge. Continuous water is needed for bathrooms and kitchens for the 130 employees on site, and additional water to cool the power-generation system, but the center’s water requirements are on par with those of many small to medium-size factories.⁶ The point is that the industry is meeting the demands for water preservation.

The Special Use Permit Application [Application] should identify the Data Center cooling design and model⁷ the expected average daily water consumption. An Application must be supported by a supply contract with a public water supplier(s) in which the Developer⁸ accepts the terms, conditions and drought management plan of the public water supplier.⁹

⁵ 235 MW is largest data center in IL currently

⁶ Wall Street Journal, August 14, 2026.

⁷ Modeling is an important factor for enforcement discussed *supra*.

⁸ The term “Developer” also includes “Operator”

⁹ See <https://decaturil.gov/587/Drought-Updates#docaccess-5e2428ec2f8a6bbef7ceca99c26ba777cdc47a9da3b312d53cd2f9b677ea6d1b>



City of Decatur

Water Rationing Monthly Action Plan Based on the Level of Lake Decatur

	Voluntary Conservation	Stage 1 Rationing	Stage 2 Rationing	Stage 3 Rationing	Stage 4 Rationing	Stage 5 Rationing	Stage 6 Rationing
Industrial Customers	YES	YES	5% Total Reduction	15% Total Reduction	25% Total Reduction	35% Total Reduction	100% Reduction
High Water Use Customers	YES	YES	YES	10% Total Reduction	20% Total Reduction	30% Total Reduction	100% Reduction
Residential/Commercial Customers	YES	YES	YES	Continue Stage 2 Rationing	Continue Stage 2 Rationing	Continue Stage 2 Rationing	Continue Stage 2 Rationing
June ϕ	< 613.7	< 613.4	< 613.1	< 612.9	< 612.6	< 612.1	< 611.7
July	< 613.8	< 613.4	< 613.1	< 612.8	< 612.5	< 612.0	< 611.5
August	< 613.3	< 612.7	< 612.2	< 611.6	< 611.0	< 610.0	< 609.1
September	< 612.9	< 612.1	< 611.4	< 610.6	< 609.8	< 608.5	< 607.2
October	< 612.4	< 611.5	< 610.7	< 609.8	< 608.9	< 607.4	< 607.0
November	< 612.0	< 611.1	< 610.2	< 609.2	< 608.3	< 607.0	< 607.0
December	< 611.5	< 610.5	< 609.6	< 608.6	< 607.6	< 607.0	< 607.0
January	< 611.1	< 610.0	< 608.9	< 607.8	< 607.0	< 607.0	< 607.0
February	< 610.7	< 609.5	< 608.2	< 607.0	< 607.0	< 607.0	< 607.0
March	< 610.8	< 609.4	< 608.1	< 607.0	< 607.0	< 607.0	< 607.0
April	< 612.5	< 610.8	< 609.1	< 607.3	< 607.0	< 607.0	< 607.0
May	< 613.8	< 612.2	< 610.6	< 609.0	< 607.4	< 607.0	< 607.0

revision 8/28/2013

 ϕ Plan assumes Lake Decatur is full on June 1st.

4

H:\Drought files\2020 Draft Water Rationing Monthly Action Plan - Attachment A

In terms of a zoning ordinance, the requirement for a Public Water Supply Contract where Drought Action Plan is adopted based on the findings of the Public Water Supplier that supply is adequate for the modeled Cooling Design should be sufficient. The water supplier will engage the technical review in the contracting process. Arbitrary quantifications in the ordinance should be avoided because each Data Center is different and presents demonstrably incomparable water demands- all a matter for technical review approval as a condition to the issuance of the Special Use (or Conditional- terms used interchangeably herein) permit. Decatur already has “adequacy of utility/infrastructure requirements in its zoning.”

B. **ENERGY:** Often, Data Centers are categorized by energy demand.

DATA CENTER SIZES ILLUSTRATING ELECTRICAL SUPPLY NEEDS			
DATA CENTER SCALE	TYPICAL IT LOAD (RANGE)	ESTIMATED TOTAL FACILITY LOAD (With ~1.10 PUE)	TYPICAL ELECTRICAL SUPPLY IMPLICATION
 Small / Enterprise	1 – 5 MW	1.1 – 5.5 MW	 Distribution system; dedicated feeders
 Medium / Colocation	5 – 20 MW	5.5 – 22 MW	 Multiple distribution feeders / dedicated substation increasingly likely
 Large	20 – 50 MW	22 – 55 MW	 Dedicated substation; substantial utility capacity
 Very Large	50 – 100 MW	55 – 110 MW	 High-voltage utility service; dedicated substation
 Hyperscale	100 – 300 MW	110 – 330 MW	 Major substation; transmission-level supply increasingly important
 Large Hyperscale Campus	300 – 500 MW	330 – 550 MW	 Transmission interconnection; multiple transformers / substations; redundancy
 Mega-scale AI Campus	500 MW – 1 GW (500 – 1,000 MW)	550 MW – 1.1 GW (550 – 1,100 MW)	 Major transmission infrastructure; potentially multiple substations / transmission feeds
 2-GW AI Campus	2,000 MW (2 GW)	~2,200 MW (2.2 GW)	 Regional-scale electrical project; multiple high-voltage transmission sources / substations and major new generation or grid capacity likely required
Notes: PUE (Power Usage Effectiveness) ~1.10 reflects efficient liquid-cooled data centers. Actual values vary by design.		TOTAL FACILITY LOAD = IT LOAD × PUE (Includes cooling, power losses, lighting and other support loads)	
		Sources: EPRI “Powering Intelligence” (2024), DOE, CRS Report R48646	

In addition, secondary power supply often supports Data Centers.

APPLICATIONS OF SECONDARY ENERGY SUPPLY TO SUPPORT DIFFERENT TYPES OF DATA CENTERS

Secondary energy systems provide resilience, reliability, and efficiency by supplementing or backing up primary utility power.

DATA CENTER TYPE	EDGE / SMALL (1 – 5 MW)	MODULAR / MICRO (5 – 20 MW)	ENTERPRISE / MEDIUM (20 – 50 MW)	LARGE / HYPERSCALE (50 – 300 MW)	MEGA / AI CAMPUS (300 MW – 1 GW)	GIGAWATT CAMPUS (1 GW+)
PRIMARY ENERGY SOURCE (EXAMPLES)	 Utility Grid (Local Distribution)	 Utility Grid (Local / Substation)	 Utility Grid (Substation)	 Utility Grid (Transmission)	 Utility Grid (Transmission) + Multiple Feeds	 Utility Grid (Multiple Transmission Feeds)
APPLICATIONS OF SECONDARY ENERGY SUPPLY (EXAMPLES)	 Diesel Generators  Battery Energy Storage System (BESS)  UPS Systems  Rooftop Solar PV (optional)	 Diesel Generators  BESS  UPS Systems  Solar PV (on-site)  Small Wind (where feasible)	 Diesel Generators  BESS  UPS Systems  Solar PV (on-site)  CHP / Natural Gas Generators  Fuel Cells (optional)	 Natural Gas Generators (dual fuel capable)  Large-scale BESS  UPS Systems  Solar PV (on-site)  CHP (Cogeneration)  Microgrids / Islandable Systems	 Natural Gas Generators (Dual Fuel)  Utility-scale BESS  Solar PV (Utility-scale)  Wind Power (Utility-scale)  Nuclear SMR / AMR (When Available)  Green Hydrogen / Fuel Cells	 Natural Gas Generators (Dual Fuel)  Multi-hour to Multi-day BESS  Solar PV (Large Scale)  Wind Power (Large Scale)  Nuclear SMR / AMR  Green Hydrogen + Fuel Cells  Hydro / Pumped Storage (Where Available)
TYPICAL ROLE	Backup power for outages and short-duration resilience.	Increase reliability and support limited sustainability goals.	Enhance resilience, reduce operating cost and carbon footprint.	Ensure high availability, optimize cost, support sustainability targets.	Provide grid services, long-duration resilience, and carbon-free energy.	Enable self-sufficiency, meet massive loads, support decarbonization and grid stability.
DURATION / CAPABILITY	 Minutes – Hours	 Hours	 Hours – Day	 Day – Several Days	 Several Days – Weeks	 Weeks – Seasonal

KEY BENEFITS OF SECONDARY ENERGY IN DATA CENTERS



ENHANCED RESILIENCE
Protects against outages and grid disturbances.



COST OPTIMIZATION
Reduces demand charges and takes advantage of energy arbitrage.



SUSTAINABILITY
Enables clean energy integration and emissions reduction.



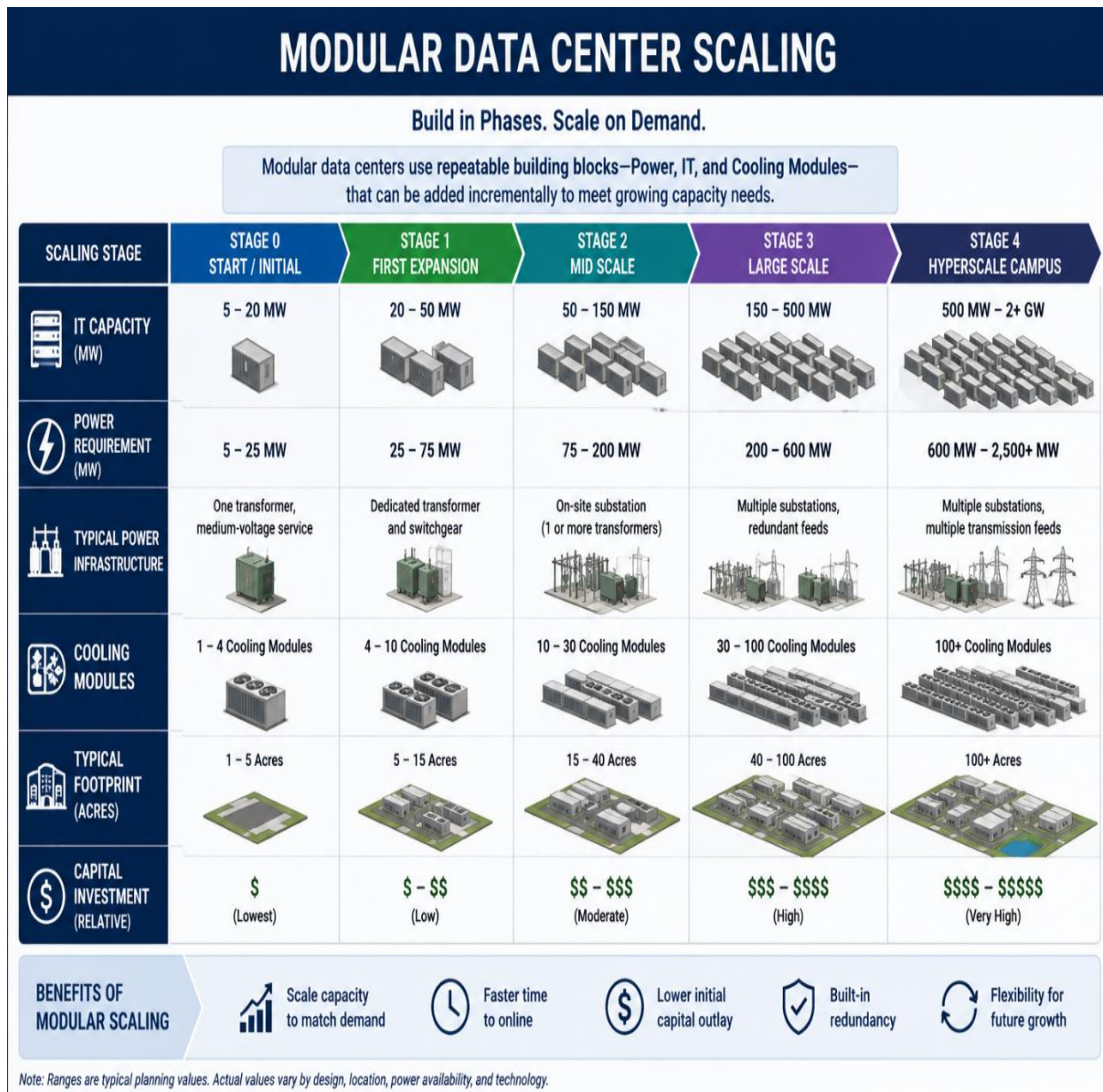
SCALABILITY
Supports phased growth and future capacity expansion.



GRID SUPPORT
Provides ancillary services and strengthens overall grid reliability.

Note: Technologies and applications depend on site conditions, regulatory requirements, fuel availability, and operator strategy.

Modular Data Centers¹⁰ may scale over time, presenting demands for energy supply, illustrated as follows:



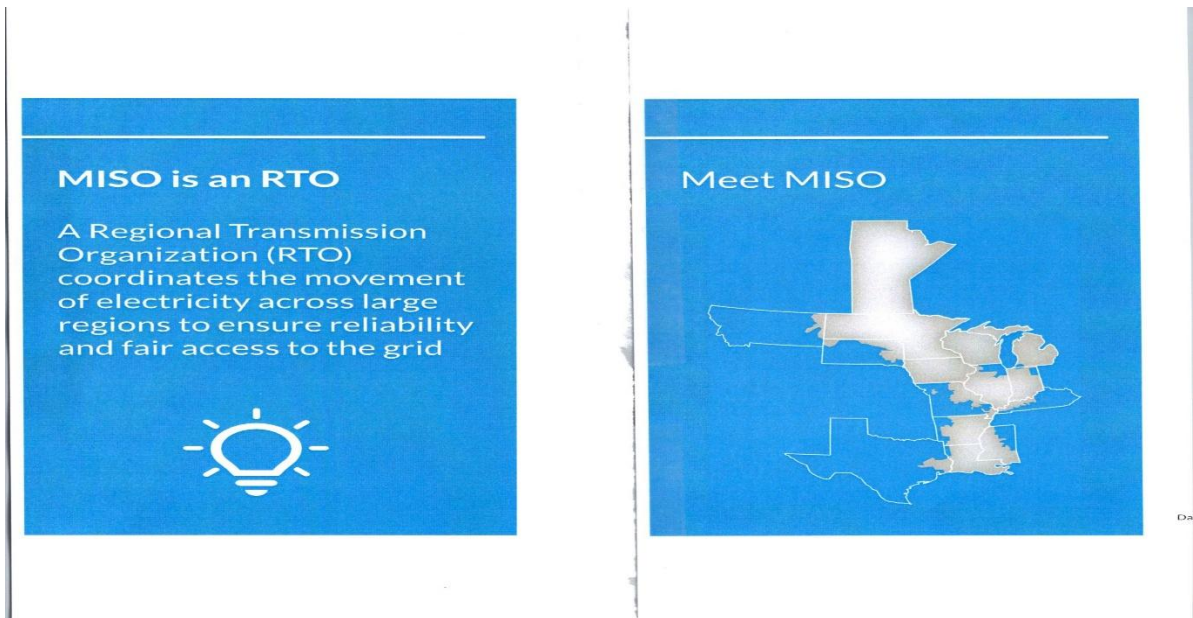
The factor within local control for regulation likely involves the secondary energy (behind the grid) source for supply.

Primary energy is presumed supplied from the grid or on-site power, except as to Edge/Small/Enterprise applications (local distribution) which should be exempted from the

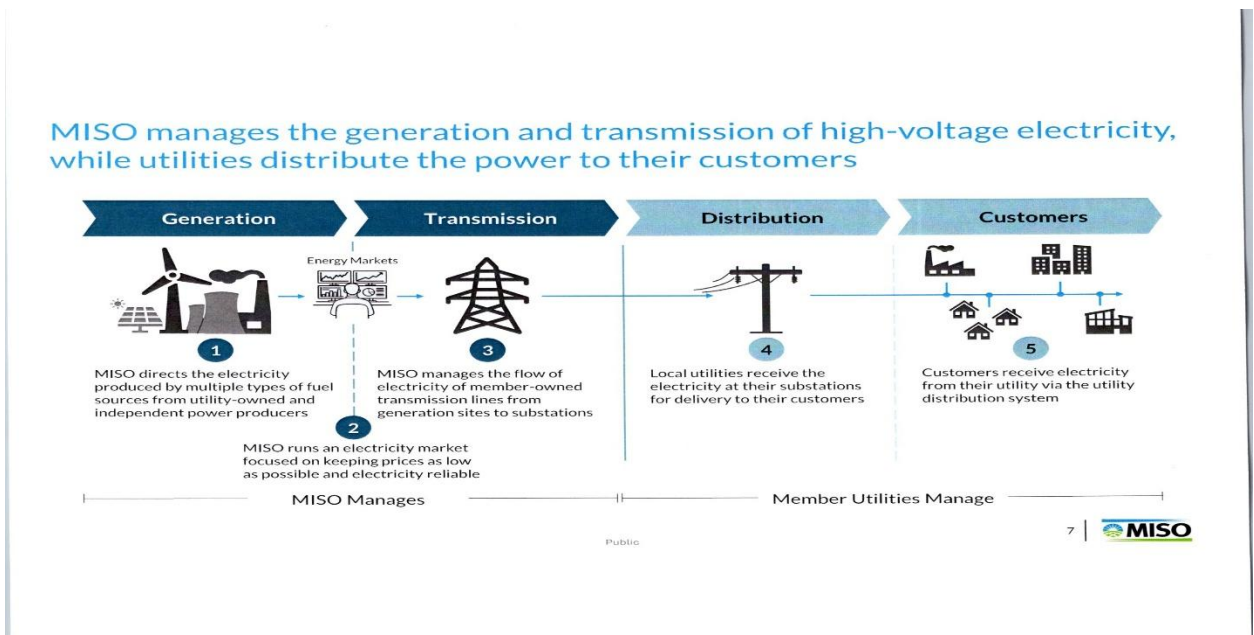
¹⁰ Brownfield conversions in this respect aligns with City revitalization policies.

requirement for a Special/Conditional Use Permit or the definition of “HIDC.” Macon County enjoys relatively modernized transmission infrastructure for the delivery of energy from the grid to a Data Center attractive in the site selection process.

Macon County is in the MISO [Midwest Interconnection Service Organization] electrical supply region and MISO has the energy to provide, now and projected to more than double in the next two decades.



MISO’s role is generally illustrated as follows:



The “MISO Difference” is grounded in a strong partnership; although roles are distinct, we have a common interest – efficient reliability



Data Center opponents often misapprehend the intricacies of power supply and the impact on local cost and continuity of service (rolling brown-outs etc.) Residential electricity rates are not an isolated function of localized demand that a Macon County Data Center may create. Rather, the cost of residential electrical rates is a cost determined by the market that aggregates energy supply across parts of 15 states and Alberta, CN. In other words, a HIDC in Peoria (or Indiana) will impact the market cost of energy similar to a HIDC in Macon County. The only difference is that Peoria would secure the revenue benefits by allowing the HIDC and free-riding, in part, on the higher rates Macon County customers pay without revenue generation from a Macon County HIDC. Burdens without direct benefit. Likewise, exposure to brown-outs or rolling service interruption, if any, will distribute across the regional grid, influenced by local transmission infrastructure. Development in Macon County likely yields more transmission infrastructure which more likely abates local exposure to service disruption compared to other in MISO region.

Behind the grid, primary or secondary, energy supply may be impacted by local regulation. Here, one would anticipate green (solar, wind) or fossil fuel (natural gas, diesel¹¹) power generation. In Illinois, fossil fuel power generation is transitioning to operate

¹¹ Diesel generators are allowed as “Emergency or Standby Units” under ILL. Adm. Code Section 211.1920 where conditions for operation are set. Further P.A. 104-0747 signed into law July 31, 2026 and effective January 1, 2027 for permits issued on or after July 1, 2027 regulates, under an emissions or pollution basis, substantially curtailing availability for use.

behind the grid based on requirements of Illinois law. The evolving standard across the nation is for a Data Center to self-supply the energy or operate off-grid. President Trump Executive Orders (EOs 14318, 14262)- Incremental Energy Supply & Ratepayer Protection, set federal policy for a HIDC (100MW+) to build, bring, or buy all increased energy demand and pay all costs (transmission included) associated with it.¹² The policy animates the construction of fossil fuel sources (ie: Broadwing) behind the grid and, Macon County, is well-positioned with sites that can host, in particular, natural gas power generation. Illinois is taking fossil fuel plants (coal) out of production and only placing green and nuclear energy sources on the grid. Ultimately, developers are poised to spend hundreds of millions to a billion plus dollars to construct HIDC and will not do so absent confidence that adequate, non-competitive, power supply and supporting infrastructure exists. In this sense, the question is self-regulating. A likely positive externality is that HIDC power on site could yield more power to the grid for residential users. The regulatory trend at federal and state level is to protect ratepayers.

The permitting of fossil fuel sources will trigger regulation at federal and state levels, especially in the context of emissions, noise pollution and accessibility. These factors are discussed below, along with siting compatibility considerations for power generation locations discussed below.

Illinois, long term, is attractive siting because of nuclear capacity (in our backyard) and incentives to enhance infrastructure around that capacity. The Illinois advantage is absolute. As the “data utility” grows, Macon County should be ready to seize our advantage.

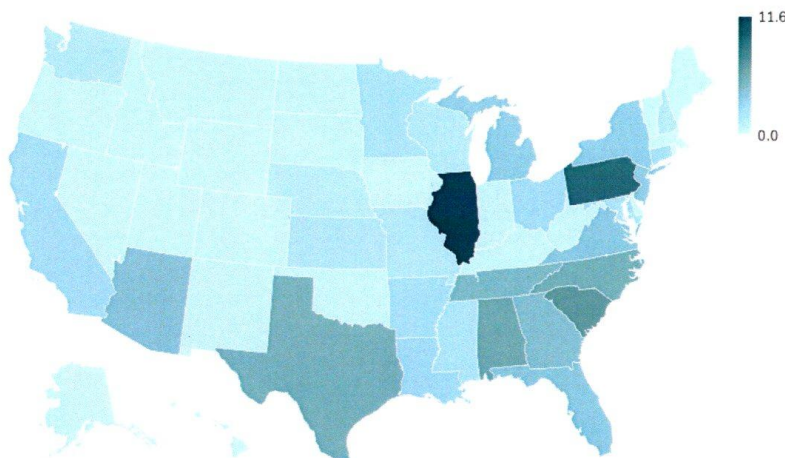


Figure 3-1. Current installed U.S. nuclear capacity in gigawatts, by state.

Two existing NPPs have announced that their existing output will be used to power a 11.6 GW (1,000 MW) data center.

¹² In Illinois, the ICC is investigating similar cost shift as State policy.

No other Macon County/City of Decatur zoning classification regulates customer access to electricity (only requires a showing of adequate supply). Here, the local zoning authorities do not supply the electricity and it would be arbitrary to do so as applied to Data Centers. The County does not have the statutory enablement to zone under the Public Utility Exemption- “[t]he statutory powers granted to counties do not include the right to specify or regulate the type or location of poles, towers, wires, cables, conduits, vaults, laterals, or any other similar distributing equipment of a public utility.

Similar to Water, CVAC recommends that any developer demonstrate adequate utility capacity before any building permit issues.

C. FIBER COMMUNICATION: High-capacity, reliable telecommunications infrastructure is an essential component of larger scale HIDC. A suitable data center site generally requires access to substantial fiber-optic capacity, low-latency connections to major telecommunications networks, and redundant communication paths capable of maintaining operations following the failure or interruption of an individual fiber route.

Unlike certain other infrastructure demands associated with HIDC, such as electric generation and transmission capacity, water consumption, wastewater treatment, and road improvements, increased fiber infrastructure generally presents limited long-term adverse impact to the host community. Properly planned, data center fiber construction may instead create a significant long-term economic development opportunity by expanding the telecommunications infrastructure available within Macon County.

CVAC recommends that County policy seek to facilitate adequate and redundant fiber service to data centers while coordinating construction so that, where economically and technically reasonable, private data center investment contributes to a broader telecommunications infrastructure capable of supporting future economic development and improved broadband connectivity.

CVAC does not recommend requiring data center operators to provide retail broadband service or compelling public access to proprietary data center networks. Community telecommunications benefits should instead be obtained through coordinated conduit construction, negotiated fiber capacity, carrier access, broadband partnerships and development agreements.

The following provision could be included for a HIDC as special-use permit standards:

Fiber-Optic and Telecommunications Infrastructure.

A HIDC shall be served by telecommunications infrastructure of sufficient capacity and reliability for its proposed operations. The applicant shall submit a Telecommunications Infrastructure Plan demonstrating the availability or reasonable feasibility of adequate fiber-optic service.

The Plan shall identify the general location of primary and redundant telecommunications routes and shall demonstrate geographically diverse telecommunications access where reasonably practicable.

Telecommunications construction affecting public rights-of-way, drainage facilities or agricultural property shall comply with an adopted AIMA agreement..

The County may require reasonable coordination of telecommunications construction to reduce unnecessary repeated excavation of public rights-of-way and may, through a Development Agreement, provide for additional conduit, fiber capacity or related infrastructure where such improvements are reasonably related to the development or are voluntarily agreed upon as an economic-development or community benefit.

Nothing herein shall require disclosure to the general public of telecommunications information that the County determines presents a legitimate cybersecurity, physical-security or proprietary concern.

D. SANITARY TREATMENT: As a comparative measure, sanitation is less restrictive than the water supply considerations, by substantial measure. The same processes that reduce water demand also reduce sanitation demand because not all water cycles back to sanitation.

The Sanitary District of Decatur appears to put the Decatur/Macon County area in a comparatively strong position for data-center development, but the answer changes substantially with the cooling technology. The critical point is that a data center's water demand and sanitary-sewer discharge are not the same number. The District's plant is designed for 41 MGD dry-weather flow and 125 MGD wet-weather/full secondary-treatment capacity. Its FY2021 average flow was 33.18 MGD; Illinois EPA reported average flows of approximately 35 MGD in 2021 and 36 MGD in 2022. The District itself continues to describe its facilities as a 125-MGD wastewater treatment facility.

An HIDC should be required to model as a condition to the permit, the projected average day, maximum day and peak-hour wastewater flow and wastewater chemistry and

obtain from the District certification of the adequacy of the District to serve the HIDC. Any additional infrastructure should be a cost borne by the developer, unless a concurrent independent public benefit attaches to the infrastructure improvement.

E. EMISSIONS: Air emissions are regulated at State and federal levels. On-site power, including natural gas and temporary diesel generation are regulated (and discussed elsewhere). The most restrictive of those standards would prevail over any relaxed local standard. Accordingly, adoption is recommended.

F. NOISE: Decatur allows M-2 sound of up to 80 dBA measured at the property line: *“1. Noise. No person shall operate or cause to be operated any source of sound in such a manner as to create a sound level which exceeds 80 dBA, when measured in accordance with the American Standard for the Physical Measurement of Sound. Such measurement shall take place at the property line of the noise-intensive use. Emergency vehicles, sirens, communications; as well as aircraft operations, construction and worship bells or chimes, are exempt from these requirements. A Special Use Permit shall be obtained from the City Council to operate where sounds may exceed 80 dBA.”* If a Data Center is permitted on an M-2 property, it is difficult to justify arbitrary standards. Nonetheless, for measurable sound, measurement at property lines is the standard to adopt.

OSHA and NIOSH set standards, generally applicable in employment context influenced by peak and duration. Illinois has established the most comprehensive noise “pollution” standards that should be adopted by any ordinance or development agreement. See: Illinois Pollution Control Board’s general noise regulations, principally 35 Ill. Adm. Code Parts 900 and 901. The latter standards are more restrictive and adoption is consistent with Illinois law and the limits on zoning authority.

State of Illinois rules are more sophisticated than a dBA-at the property-line standard. Land is classified. Assuming Class C industrial type land emitting toward Class A residential type land, limits are set on an Octave-band frequency. The Illinois standards protect against low frequency, tonal and impulsive sounds. Thus, the concern about a sound measured in dBA, only, is not the test, alone. CVAC would recommend making the Illinois Pollution Control Board standards the regulatory floor and adding a data-center-specific predictive acoustic study (modeling) requirement. Section 901.102 says the limit applies when measured at any point within the receiving Class A land, subject to the requirement that the measurement not be made within 25 feet of the property-line noise source. For example, if a data center owns 500 acres and places the mechanical plant in the center of the property, that internal separation can materially reduce the sound reaching adjoining residential property. That provides a strong policy reason to favor performance standards over arbitrary building setbacks.

The County should require the applicant's acoustical engineer to model (performance standards):

- all cooling equipment operating simultaneously;
- transformers;
- pumps;
- chillers/dry coolers/cooling towers;
- normal electrical equipment;
- emergency generators under testing conditions;
- cumulative sound from multiple data-center buildings;
- octave bands from 31.5 Hz through 8,000 Hz;
- one-third-octave analysis where tonal characteristics are predicted;
- daytime and nighttime conditions;
- the nearest Class A receiving properties within the zoning jurisdiction; and
- **then require the engineer to certify that the completed facility is designed to comply with 35 Ill. Adm. Code Part 901 at all Class A receiving properties within the zoning jurisdiction, unless an owner of a receiving property(ies) waives his/her protections.**

Accordingly, CVAC recommends the adoption of the Illinois Administrative Code on the noise issues.

Opponents claim that “infrasound” exists, that cannot be heard or measured. First, the Illinois testing regimen does test on elements of the alleged “infrasound.” Second, “infrasound” assertions have been ruled inadmissible under evidentiary tests for reliability in federal court. Additional restraints on “sound” unreasonably elevates the peculiar circumstances of one (or a few), which cannot be measured, over the property rights of others and denies the public the benefits of development- an unreasonable balancing of interests against the public good.

G. LIGHT/VISUAL NUISANCE:

The HIDC special (conditional) use application should include a professionally prepared photometric lighting plan that models impact. The plan should identify:

1. location and mounting height of each exterior luminaire;
2. fixture type;
3. lumen output;
4. correlated color temperature;
5. shielding and BUG rating where applicable;
6. illumination levels throughout the site;
7. illumination at all property boundaries;

8. nearby residences and other sensitive receptors;
9. lighting controls and anticipated nighttime operating condition; and
10. maximum anticipated illumination during normal nighttime operation.

The photometric analysis should extend beyond the property boundary sufficiently to demonstrate the effect upon adjoining properties.

Here, again, Illinois law provides a regulatory standard. *Illinois' Responsible Outdoor Lighting Control Act* requires covered State/IDNR lighting to be fully shielded, limits light trespass to 1 lux at the property boundary (about 0.093 foot-candle), and limits correlated color temperature to 2,700 K for covered installations, moving to 2,200 K after June 30, 2032. CVAC recommends the adoption of State standards with the performance warranty based on modeling.

Screening for industrial categories, generally should apply. Landscaping and visual-screening requirements should be considered for HIDC adjoining residences or public roads that incorporate appropriate combinations of:

- preserved existing vegetation;
- evergreen screening;
- deciduous trees;
- landscaped berms;
- opaque fencing;
- equipment screening; and
- building setbacks.

Landscaping should be positioned so that it intercepts views of illuminated buildings, parking areas and equipment without creating security conflicts. Where practicable, existing mature vegetation should be preserved because established vegetation can provide substantially greater immediate screening than newly planted landscaping.

H. NATURAL HABITAT: The Applicant should provide a **Natural Resources and Habitat Assessment** covering the entire project site and associated infrastructure before special (conditional) use approval, addressing:

1. EcoCAT consultation and state-listed species;
2. federal threatened/endangered species;
3. INAI sites and nature preserves within 500 feet of lot line;
4. wetlands and jurisdictional waters;
5. streams, drainageways and riparian corridors;

6. woodlands and mature tree stands;
7. native prairie or remnant grasslands;
8. wildlife corridors;
9. migratory bird habitat;
10. habitat fragmentation;
11. construction-period impacts;
12. permanent fencing impacts on wildlife movement; and
13. proposed avoidance, buffers, restoration and mitigation.

The Assessment should identify designed practices for the development and model compliance with applicable Federal and State law on the subject matter. The balance of remaining recommendations on noise, emissions, lighting, and AIMA adoption serve supplemental mitigation of any adverse impacts. Open areas within the development should be planted in native pollinators where feasible. Feasible design alternatives should be incorporated in the design. The submitted design and Assessment shall be incorporated into the Agreement and be part of the performance warranty subject to enforcement.

I. PUBLIC ROADS: During construction, substantial burdens on road infrastructure are contemplated. Developer shall propose reasonable terms acceptable to the zoning authority for mitigating road impacts after consultation with the impacted road authority(ies).

J. FIRE PROTECTION: With particular reference to hyperscale or other levels of large data center (where you elect to require special or conditional use permits), zoning ordinance should consider an enforceable Fire and Emergency Services Plan as a condition precedent to the building permit or commencement of construction. The provision could require the applicant to submit a Protection Plan, approved by the County (or zoning authority), acceptable to the fire protection district(s) having jurisdiction that addresses:

- fire-flow and on-site water storage requirements;
- hydrants, fire mains, pumps and redundant water supply;
- apparatus access roads, turning radii, gates and emergency access;
- specialized electrical, transformer, battery/BESS and generator fire hazards;
- hazardous-material and fuel-storage response;
- pre-incident planning and annual joint training;
- specialized firefighting equipment, foam or other suppression capability where appropriate;
- mutual-aid requirements;
- reimbursement of extraordinary training, equipment and response costs attributable to the facility;
- periodic review as the data center expands or changes technology; and
- proof of continuing compliance as a condition of the Special (Conditional) Use.

The Plan cannot effectively delegate zoning approval to the fire protection district. Rather, that remains the province of the zoning authority.

K. SITING (LOCATION/LOT SIZE) CONSIDERATIONS: Practically, siting will be a function of access to infrastructure, that is, proximity to substation(s) (grid and transmission infrastructure), proximity to public water, proximity to fiber, adequate roads or rail for construction, proximity to natural gas resources, proximity to sanitary sewer, adequate acreage, and adequate buffer from Class A (residential) property. In this respect, prospective locations self-regulate to areas presenting comparative advantages to a developer. Macon County has significant infrastructure advantages making areas in Macon County attractive targets to developers.

1. Brownfield Conversions: The immediate attraction for Brownfields is that many of the potential invasions to adjoining landowners already abated as a consequence of the previous industrial use. For example, if assume developing interest in Brownfield sites for scalable modular data center, then sweeping data center regulation treating all centers as similar or declaring moratoria likely would terminate the prospect. There are multiple locations with potential. If a Brownfield in an Industrial Zoning Classification proposes a 50MW or less modular Data Center designed at RWCI levels 1,2 or 3, requiring less than 250 KGD average water consumption (after charge) then the data center should be an enumerated “permitted use” subject to like regulations for any other permitted use in that industrial classification.

2. Rural Siting/ Farm Drainage and AIMA: Access to infrastructure best limits siting. However, a HIDC could conceivably locate more remotely (to a public water supply). The broader scheme discourages remoteness from village or municipal boundaries because a water supply contract is required and infrastructure for water delivery and sanitary conveyance are required. On the other hand, a relatively remote location could catalyze the extension of public water service to rural areas as an incident to the development. Site development is unlikely to manifest remotely from a substation. Large acreage better enables compliance with Noise regulation. Common ownership of larger tracts for development presents a more realistic expectation a development could manifest. Set-backs should be based on performance or modeling to comply with noise regulation, but, in no instance less than 330 feet from any residence on receiving property or State, Township or County highway/roadway.

Preservation of prime farmland is often an argument stated against any form of non-crop/livestock land use on agricultural zoned real estate. The 2022 USDA Census of Agriculture reports 251,582 acres of cropland (out of 259,085 acres classified as “land in farms”) in Macon County. By way of illustration, a 250 MW HIDC would be projected, all

structures, to site on an approximate 200-acre footprint. 200 acres comprises only 0.08% of Macon County cropland. Prime farm land is not under material threat through rural development of data centers.

Locally sited wells on rural land, supplementing public water supply, would require review by the Illinois State Water Survey to identify potential impacts reported to the County Board for consideration in the special or conditional use permitting process. Each developer and operator must adopt Illinois Department of Agriculture's Agricultural Impact Mitigation Agreement terms to prevent negative impacts on farm drainage. Because it is likely that security and access will restrict adjoining landowner(s) entry to improve or repair mutual drains or other drainage structures on his/her farm, a farm drainage plan certified by a Professional Engineer to assure the protection and/or improvement of all farm drainage obligations imposed on the Data Center land shall be prepared and published to the owners of the dominant drainage estates for his/her comment within sixty (60) days of submission.

CVAC requested and received a statement of policy from the Macon County Farm Bureau and was provided the Policy Statement of the American Farm Bureau Federation [AFBF]. The totality of the CVAC recommendations align substantially with the AFBF Policy Statement.

L. LABOR/EMPLOYMENT:

1. Employment Impact: The given is that Data Center development brings direct employment opportunities related to construction. Once operations commence, the permanent jobs directly related to the Data Center are fewer than the construction phase. However, each permanent direct job is more than before.

Workforce: Construction + Operations

- **Phase 1: Construction Jobs**

- **All construction jobs are “temporary” jobs.** Goal: continuous construction. Attraction & Expansion provides BOTH job phases.
- Data center construction is an economic windfall for construction companies and their workers.
- Construction work is often:

**Qualified
Electricians**

**Construction
Managers**

**HVAC
Technicians**

Inspectors

**Heavy
Equipment
Operators**

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On the Cusp of Construction Acceleration

The Brookings study ("Data Centers and Local Labor Markets" by Dany Bahar and Greg Wright [LINK](#) published March 2026) evaluated 770 US data center facilities and linked them to county-level BLS employment data from 2003–2024, covering 93 counties that received their first large data center between 2008 and 2024 against ~3,000 control counties. Their findings:

Counties that receive their first datacenter see Construction employment increases of 11% 5-6 years following the opening of the datacenter. Private employment grows 4-5%, Wages +3-4%.

There is a difference between Hyperscalers and Colocation – the Hyperscalers create very meaningful growth in IT/tech jobs locally (broadening the economic effect of the datacenter), less for Colocation.

The 11% jump in construction employment outlined in the study is among the cleanest empirical evidence we have seen that data center megaprojects generate sustained spillover construction activity beyond the data center build itself.

The Georgia Tech study ("The Local Economic Effects of Data Center Entry" by Daniel Yue and Yiyang Zeng [LINK](#) published March 2026) studied the local economic effects of data center entry using comprehensive facility-level data merged with county-level economic outcomes (447 counties from 2000-2024, 2,846 control counties). Their findings:

AI-related spending now equals ~1.2% of US GDP, larger than the 2000s fiber-optic boom and rivaling the 19th-century railroad build-out.

Building permits increase 16% in the wake of a datacenter build, Wages +5%, business establishments (restaurants, retail, etc.) +4.7%. Statistically speaking, all effects are significant at the 1% level.

Metro counties saw the strongest Construction spillover effects (rural counties less so), clustered entries (multiple datacenters) amplify growth effects. Similar to the Brookings study, Hyperscaler investments had higher overall economic spillover effects.

As we move towards 2027, the broader economic ripple effects of datacenter buildouts will start to be felt (a datacenter built in 2022 will reach "full economic" ripple effect in 2027 as the Brookings study points out).

Economic Development Corporation of Decatur & Macon County

Critics tend to gloss over the indirect jobs created by economic expansion. Better funded local government, usually yields more permanent jobs in the public sector. Better funded local governments spend more on physical plant and improvements, demanding more skilled labor. Secondary or support employment grows as the permanently employed result in more service jobs, more demands for housing, and the subtle ripple of positive economic impact. A common community benefit that may be negotiated in the development agreement is support for trades and workforce education.

2. Project Labor Agreement [PLA]. For HIDC, a condition of the permit's issuance should be a Project Labor Agreement for the construction and development to commencement of operations. An open approach to Data Center development can serve the promotion, support, and sustainability of local union skilled trades and labor. Encouraging and creating opportunity for gainful employment in these fields best serves our community and reflects a past time when both Macon County and the trades flourished.

M. PUBLIC BENEFIT:

1. Water Sales to Customer: The LIDC/HIDC pay for water. Any increased water infrastructure demand to service developer can allocate cost, in whole or part, under the Public Water Supply Contract. The City could borrow with long-term debt service to fund its share of infrastructure at an annual debt service cost less than the annual water sales to the data center. The potential for a debt-service step-down reducing the pressure to increase residential water rates likely occurs.

2. Property Tax Base Expansion and Increased Revenue to Local Government: There is a measure of debate on the proper calculation of the extent of base expansion resulting from data centers. There is a combination of permanent structure and equipment/fixture in the build-out. The latter should be included in the cost of construction. The assessment question is not resolved for CVAC purposes, but, expansive valuation, to the extent lawfully allowed, should be the approach. What is not debated is the fact that the tax base expansion is substantial and potentially transformative for a community. The EDC prepared projected calculations for additional direct local property tax revenue for Macon County or any City/Municipality hosting the development within its zoning jurisdiction for an exemplar 100MW facility:

Example: Local Tax Revenue Estimates

Mega Watt Scale		
100		
Data Center - CapEx		
Low	Mid	High
\$800,000,000	\$1,800,000,000	\$3,000,000,000
CapEx to Market Value		
90%		
Market Value		
Low	Mid	High
\$720,000,000	\$1,620,000,000	\$2,700,000,000
Estimated Tax Rate Assuming Annex		
0.081162027		
Estimated Annual Property Tax (NO ABATEMENTS)		
Low	Mid	High
\$19,478,886	\$43,827,495	\$73,045,824

***Disclaimer:** The property tax figures presented are hypothetical estimates for illustrative purposes only. I am not an assessor or property tax professional. Actual tax revenues will vary based on final project scope, actual assessed land and facility valuation, local tax rates, and the specific terms of any economic development agreements or state incentive programs.

Example to the left would occupy 50-100 acres.

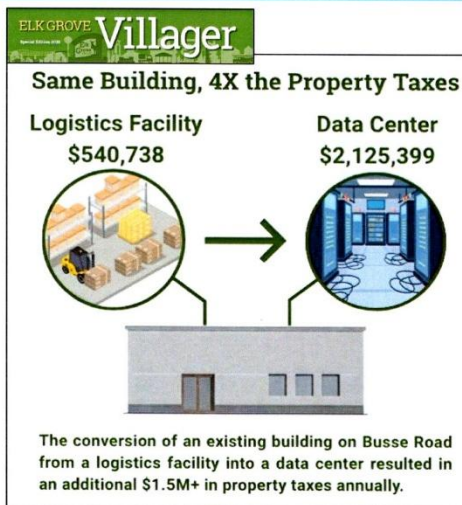
The following examples illustrate the potential revenue advantage to HIDC development:

Property Tax Revenue

- A study on the impact of data centers on the **Ohio economy** has found they increased state GDP by \$11.8B and **generated \$5.1B in state and local tax revenue** from 2017-2024.
- A case study by the Northern Virginia Technology Council found that the state of **Virginia collected more than \$600M in state and local taxes** from data centers in 2018.
- A report from the Washington Technology Industry Association studying the six rural counties with data centers in that state found that from 2017 to 2021, data centers generated **\$238.5M in property, sales, and utility taxes in Washington**.
- **Localities can also set up Payment in Lieu of Taxes (PILOT) arrangements to gain revenue from data center construction outside of traditional property taxes.**
 - West Feliciana Parish, LA set up a PILOT arrangement with a data center project that could create \$90M in revenue.
- **Construction takes years; PILOT is a way to potentially collect property tax on increased value before occupancy. For example, the agreement might require:**
 - **\$X** upon the closing of construction financing.
 - **\$Y** when the foundation is poured.
 - **\$Z** when the building shell is "dried in" (weatherproofed).

Economic Development Corporation of Decatur & Macon County

Securing Vital Property Tax Revenue



- We need more property tax revenue to **fund the public works and infrastructure projects** slated.
- **Data centers are highly unique municipal assets that significantly boost the local property tax base without placing a heavy burden on local services.**
- Pausing development **delays the influx** of commercial tax revenue.

The task before the County/City is to assure that the costs of infrastructure development to host a data center is borne, reasonably, by the data center with additional revenues for the benefit of the taxpayer. In all respects, net revenue positive is readily achieved by a minimally competent taxing authority.

Loudon County VA is situs for many data centers (far more than ever could manifest or be hosted here), however, data centers account for over 45% of the collected property tax. And, the public cost to realizing the revenue benefits compare well to other industry:

County estimates indicate it [Loudon County] spends about four cents supporting a data center for every tax dollar collected, a far lower cost than the roughly 25 cents needed to support typical commercial property. Those margins allow Loudoun to underwrite local services while keeping homeowner rates comparatively low. From a fiscal conservative perspective, leveraging private investment and high-value commercial tax bases to reduce the burden on residents is sound policy.

Here, many units of local government are in stressed economic position. Macon County School Districts have approximately \$210,000,000 in long-term debt obligations.

Local governmental entities (excluding schools) have an aggregate sum of approximately \$250,000,000 in future pension obligations funded at or about 50%. As of 12/31/24, City of Decatur had non-pension debt obligations exceeding \$140,000,000- a large part of which is water infrastructure. Public roads need improvement. Public safety could use more funding. Hundreds of properties are falling off tax rolls in the City of Decatur, essentially abandoned

Our County is not growing. Job prospects are not expanding. Yet, Macon County has many assets to exploit, including those attractive to data center site selectors. Lake Decatur was constructed to host industrial grain processing which forged the identity of our City/County. While, the state of Illinois may be the biggest obstacle to new development, Macon County should be ready and open for business.

3. Opportunity for Property Tax Rate Cuts: CVAC received anecdotes where taxing authorities abated property tax and reduced property tax rates because of the property tax revenues received from the Data Center, and indirect tax base expansion on other properties. Elk Grove Village, IL reduced from an effective 11% rate to 7%- a 36% cut. Ultimately, the decision to reduce property tax resides with the unit that levies the tax. The point is that shared benefit for all property tax payers is available.

4. Community Benefit Agreements. Common elements in the developer agreements are community benefit commitments by the developer. The imagination is the limit on this subject. However, contribution to SWTP improvement/expansion is a common benefit (inclusive of Developer) or other water infrastructure aligns contribution to needs to debt. Developer investment opportunity yielding benefit to all customers could be in one or more of the following water infrastructure needs: Northeast Quadrant capacity expansion; DeWitt Wellfield improvements; DeWitt raw-water pipeline; West Clarifier rehabilitation; Harristown/Vulcan reservoir work; annual water-main replacement; and other treatment improvements. Rural or secondary water transmission improvements serve shared benefit and extended access for other customers.

As noted under Fiber above, a Community Benefit Agreement could include fiber expansion available for the community, future expansion, etc., in addition to the dedicated build out for the HIDC. A longer-term vision extending fiber infrastructure access for future development could serve the community well.

Fire Protection District contributions enhance readiness for data center response capabilities, as well as response capabilities for the public generally. Villages, school districts, Town Road Districts may have needs that enable the entity to leverage for public benefit. Now, the special/conditional use permit is not a vehicle for a “shakedown” of an

applicant, but, to the extent the Developer burdens public infrastructure or services, benefits can be provided to improve circumstances above the *status quo*.

Work force training and education support could be a focus to a development agreement. To the extent natural habitat is impacted, contribution to our Conservation District or Parks could represent impact mitigation.

5. Benefit to Other Business in Community

Rising incomes yield investment, purchases, tax revenue and positive economic growth. As an example, U.S. manufacturing is booming thanks to data centers, and industrial companies such as **Caterpillar** is pivoting its business to seize the moment, The Wall Street Journal reports. Manufacturing last month rose to its highest level since 2022, when the recovery from the Covid-19 pandemic fueled a factory-production frenzy. Power-hungry data-center developers have turned Caterpillar's once-prosaic business of electricity generators into the equipment maker's leading source of profit. The company is investing \$725 million to expand generator production at an Indiana plant and it converted another plant in Kansas to produce turbine engines popular with data centers. That which is good for Caterpillar, is good for Macon County, the Caterpillar workers and retirees with Caterpillar stock in Macon County.

Property values for existing homes are sustained and improved by enhanced economic vitality, and reduced property tax burdens. New jobs increase housing demand and could encourage new home construction.

N. PRIVATE PROPERTY RIGHTS: A pervasive consideration in the recommendations is the balancing of private property rights against public rights. Indeed, if a land use only impacted the developed property, then the private rights of that property owner should prevail. Here, however, any data center development is dependent on the publicly funded infrastructure and does risk nuisance to neighbors that should be abated to reasonable levels. Further, a property owner, if reasonable development balancing the public burden is attainable, then that owner is entitled to realize the full economic value of his/her property.

O. MODELING/COMPLIANCE REVIEW/ENFORCEMENT: CVAC noted concern about enforcement post-operation, a major concern expressed to CVAC in the presentation made by Illinois People's Network. Creeping expansion of a data center network and diminishing compliance with special use conditions are a mischief both proponents and opponents should seek to prevent.

Here, establishing performance-based standards determined by modeling of the proposed data center in the permitting process is critical. Two objectives are served: (1) promote an accurate projection of the HIDC demands and impact on community before

approval, and (2) secure a **performance warranty** from the Developer that actual performance will be within those modeled parameters, including a reasonable tolerance thereof. Enforcement will mandate operating within the tolerances or non-compliances abated within a fixed period of time. If non-compliance fails reasonable abatement, then the permit is suspended or revoked. A reasonable schedule for testing regimen and review for compliance should be established, annually or biennially.

Special (conditional) use permits should include a “vacancy” trigger that terminates the permit when use is disrupted for a term to be determined by the zoning authority.

P. DECOMMISSIONING: Upon termination or expiration of special (conditional) use permit, including any renewal thereof, the site should be restored to pre-development conditions, except to extent that Adaptive Reuse Architectural Standards for structures are specified and accepted by the zoning authority in the Development Agreement. A Decommissioning Bond in the representing the present value of future cost to effect the restoration should be posted at commencement of construction. The sufficiency of the Bond should be reviewed (and adjusted, if necessary) at five (5) year intervals. The County should sunset a special use permit after a set time period (ie: 20 to 30 years) which would require a renewed Application under then existing ordinances if the use is to extend.

VI. CONCLUSIONS:

For the past decade, our community has focused on revitalization to attract new industry. The challenges presented by data center development can be accepted by the County and responsibly mitigated. The benefits for all County residents positively balance toward reasonable data center development. Proactive local leadership that provides developers with certainty that Macon County (and its communities) seek to cultivate strong partnerships with those developers IS the best interest of the public, as a whole. While others take a sideline, we should seize any opportunity to improve our community, responsibly. We need the growth. We want a better future and a return to a growing, vibrant economy. In the end, these decisions reside with the elected and to the extent our voice has volume, please hear that Macon County/Decatur can meet the challenge of development, protection of resources and deliver for all citizens.