**NOTICE OF MEETING OF THE WOODBURY COUNTY ZONING COMMISSION**

# WOODBURY COUNTY ZONING COMMISSION

## SPECIAL MEETING – TOWNHALL – SALIX, IA

## Salix Community Center
## 317 Tipton Street, Salix, IA 51052
## Monday, November 9, 2026 at 7:00 PM

## DATA CENTER PERMITTING REGULATIONS FOR THE UNINCORPORATED AREAS OF WOODBURY COUNTY (NOT WITHIN CITY JURISDICTION)

You are hereby notified that a meeting of the Woodbury County Zoning Commission will be held on **Monday, November 9, 2026** at **7:00 PM** at the **Salix Community Center, 317 Tipton Street, Salix, IA** for the purpose of taking official action on the agenda items shown hereinafter and for such other business that may properly come before the Commission. In particular, the Zoning Commission is reviewing the potential permitting of data centers in preparation of a recommendation to the Board of Supervisors on ways to facilitate the permitting process through a zoning ordinance amendment or other ordinance. Public input is sought on potential requirements, regulations, zoning district such as General Industrial (GI), and permitting methods such as conditional use permit or similar process.

| AGENDA | |
|---|---|
| 1 | **CALL TO ORDER** |
| 2 | **ROLL CALL** |
| 3 | **PUBLIC COMMENT ON MATTERS NOT ON THE AGENDA (INFORMATION ITEM)** |
| 4 | **APPROVAL OF MINUTES FROM PREVIOUS MEETING(S) (ACTION ITEM)** |
| 5 | **ITEM(S) OF BUSINESS (ACTION ITEMS)** |
| » | **PUBLIC TOWN HALL MEETING TO SEEK INPUT FROM THE PUBLIC ABOUT THE PERMITTING PROCESS OF DATA CENTERS IN UNINCORPORATED WOODBURY COUNTY.** The Woodbury County Zoning Commission will hold a public town hall meeting (hearing/listening session) to gather citizen input on potential amendments to the Woodbury County Zoning Ordinance regarding data center facilities in the unincorporated areas of Woodbury County, Iowa. The Zoning Commission is studying data centers with the mission to prepare a recommendation to the Board of Supervisors on how to facilitate the permitting application process in the Woodbury County Zoning Ordinance as a zoning ordinance text amendment or another ordinance. The Commission will be seeking input on potential requirements and regulations, as well as zoning districts |

| | |
|---|---|
| | (locations) such as the General Industrial (GI) Zoning District, and the permitting application process itself, such as a conditional use permit or a comparable mechanism.<br><br>**<u>*IMPORTANT JURISDICTIONAL NOTICE:</u>** These town hall meetings and proposed zoning regulations apply ONLY to unincorporated areas under Woodbury County zoning jurisdiction. Incorporated cities and towns within Woodbury County regulate their own zoning ordinances and corporate boundaries independently.<br><br>All interested residents, property owners, and stakeholders are strongly encouraged to attend and share their perspectives. You may also forward your written comments and concerns by mail or email to: Woodbury County Planning and Zoning, 620 Douglas Street, Sixth Floor, Sioux City, IA 51101; Emails should be sent to Dan Priestley at: dpriestley@woodburycountyiowa.gov.<br><br>For further information, please contact Dan Priestley, Zoning Coordinator, Woodbury County Planning and Zoning at (712) 279-6609 or visit the county website at www.woodburycountyiowa.gov The next Townhall meeting is scheduled for Monday, January 18 at 7:00 PM in Correctionville. More details to come. |
| **6** | **PUBLIC COMMENT ON MATTERS NOT ON THE AGENDA (INFORMATION ITEM)** |
| **7** | **STAFF UPDATE (INFORMATION ITEM)** |
| **8** | **COMMISSIONER COMMENT OR INQUIRY (INFORMATION ITEM)** |
| **9** | **ADJOURN (ACTION ITEM)** |

***Subject to Additions/Deletions***

# Contents

Previous Meeting Minutes

*Preliminary Report – Data Center Permitting in the Unincorporated Areas of Woodbury County, Iowa

# Woodbury County Zoning Commission
# Meeting Minutes

**Date:** October 26, 2026
**Time:** 5:00 PM
**Location:** Board of Supervisors' Meeting Room, Basement, Woodbury County Courthouse, 620 Douglas Street, Sioux City, IA

**MEETING AUDIO:**

For specific content of this meeting, refer to the recorded video on the Woodbury County Zoning Commission "Committee Page" on the Woodbury County website:

County Website Link:
https://www.woodburycountyiowa.gov/committees/zoning_commission/

YouTube Direct Link:
https://www.youtube.com/watch?v=AFENDDpf2lE

**Attendees**

**Commissioners Present:** Christine Zellmer Zant – Chair, Tom Bride – Vice Chair, Jeff Hanson, Steve Corey

**Commissioners Absent:** Corey Meister

**Staff Present:** Dan Priestley – Zoning Coordinator, Dawn Norton – Senior Clerk

**Supervisor(s) Present:** Kent Carper

**Public Attendees:** Walter Greene, Alan Fagan (surveyor), Patti Garbe

**Call to Order**

The Woodbury County Zoning Commission meeting was called to order at approximately 5:00 PM on October 26, 2026. The Chair noted that the meeting would be audio taped and minutes prepared for all parties. Attendees were asked to turn off cell phones or set them to vibrate and to complete the attendance sheet. The Chair reviewed the Commission's procedures for the meeting, including handling of agenda items, public hearings, staff reports, applicant presentations, public comments (requiring speakers to state name and address at the microphone, avoid repetitious comments, and remain respectful), closing statements, closing of hearings by motion and vote, deliberation, and disclosure of any ex parte communications prior to deliberation.

**Roll Call**

Roll call was conducted. Commissioners present: Christine Zellmer Zant (Chair), Tom Bride (Vice Chair), Jeff Hanson, and Steve Corey. Commissioner Corey Meister was absent.

**Public Comment on Matters Not on the Agenda**

No members of the public offered comments on matters not listed on the agenda, either in person or via telephone.

Zoning Coordinator Daniel Priestley requested that a MidAmerican Energy grain bin clearance safety sheet, received by the office in early October pursuant to Iowa Administrative Code requirements, be received into the record for inclusion in the minutes.

Motion: A motion was made by Steve Corey to receive the MidAmerican Energy grain bin clearance safety sheet into the record.

Second: The motion was seconded by Tom Bride.

Vote: All those in favor said "aye." No one opposed. The motion carried unanimously (4-0). See appendix.

**Approval of Previous Meeting Minutes**

The Commission reviewed the minutes from the previous meeting held September 28, 2026. No additions, deletions, or corrections were offered.

Motion: A motion was made by Jeff Hanson to approve the minutes as presented.

Second: The motion was seconded Steve Corey.

Vote: All those in favor said "aye." No one opposed. The motion carried unanimously (4-0).

**PUBLIC HEARING (ACTION ITEM): CONSIDERATION OF THE PROPOSED GREENE ACRES ADDITION MINOR SUBDIVISION (SIX LOTS) APPLICATION ON PORTIONS OF PARCELS #894629300017 AND #894629300018 FROM WALTER GREENE & JANE A. GREENE AND WORD OF LIFE MINISTRIES, AN IOWA CORPORATION (1478 BUCHANAN AVE., SIOUX CITY, IA 51106.)**

Zoning Coordinator Daniel Priestley presented the staff report. Walter Greene & Jane A. Greene and Word of Life Ministries, an Iowa Corporation, submitted an application for a six-lot minor subdivision to be known as the Greene Acres Addition. The applicants seek to divide approximately 27.70 acres (25.75 acres excluding county right-of-way) from GIS Parcels #894629300017 and #894629300018, located in the Southeast Quarter of the Southwest Quarter (SE¼-SW¼) of Section 29, Township 89 North, Range 46 West of the 5th Principal Meridian (Concord Township). The property is located within the Agricultural Estates (AE) Zoning District along Buchanan Avenue at 1478 Buchanan Ave., Sioux City, IA 51106, within the Sioux City extraterritorial review area. The AE zoning district already accommodates the proposed multiple-lot residential density. Extraterritorial review was previously completed by the City of Sioux City.

Priestley requested that a revised memo from County Engineer Laura Sievers dated October 23, 2026, addressing closure requirements and access/entrance policy, be received into the record. The memo confirmed that the plat met the County Engineer's requirements.

Motion: A motion was made to receive the County Engineer's memo dated October 23, 2026, into the record by Jeff Hanson.

Second: The motion was seconded by Tom Bride.

Vote: All those in favor said "aye." No one opposed. The motion carried unanimously (4-0). See appendix.

Priestley noted limited public inquiry; Patricia (Patti) Garbe had contacted staff with general questions about the lots and was encouraged to attend the meeting. Applicant Walter Greene and surveyor Alan Fagan were present.

Mr. Greene indicated he was satisfied with the information presented and had no additional comments. Surveyor Alan Fagan explained that the primary purpose of the subdivision is to separate the existing house from the church/farm ground associated with Word of Life Ministries. Additional lots were created as part of that plan; there are currently no specific buyers. No grading is proposed. Existing septic drain fields are fully contained within the lots being created and do not extend onto remaining farm ground or other lots.

Commissioner questions addressed existing drain fields (confirmed contained on the respective lots) and minimum lot sizes. Staff confirmed that lots in the AE district must be at least two acres. Patti Garbe inquired about the larger acreages shown on the map and whether apartments or higher-density housing could be placed on the lots; staff clarified that AE zoning requires a minimum of two acres per lot and is

intended for low-density residential use compatible with the surrounding area. No further public comments or Commissioner questions were offered.

Motion to close the public hearing: A motion was made to close the public hearing by Jeff Hanson.

Second: The motion was seconded by Tom Bride.

Vote: All those in favor said "aye." No one opposed. The motion carried unanimously (4-0).

Motion: A motion was made to recommend to the Board of Supervisors approval of the proposed six-lot Greene Acres Addition minor subdivision as presented by Jeff Hanson.

Second: The motion was seconded by Steve Corey.

Vote: All those in favor said "aye." No one opposed. The motion carried unanimously (4-0).

**Public Comment on Matters Not on the Agenda**

No additional public comments were received on matters not listed on the agenda, either in person or via telephone.

**Staff Update**

Zoning Coordinator Daniel Priestley provided updates related to the ongoing data-center ordinance process. The next town-hall meeting is scheduled for November 9, 2026, in Salix at 7:00 PM. Staff is preparing materials to collect public input to support an informed recommendation to the Board of Supervisors. A subsequent town-hall meeting has been scheduled for January 18, 2027, at 7:00 PM in Correctionville (location subject to facility confirmation).

Priestley noted that the City of Sioux City is concurrently examining data-center issues. He attended a recent City Planning and Zoning Commission meeting at which staff presented information on various types of data centers. The City is expected to develop draft ordinance language ahead of the County, providing an opportunity for Woodbury County to review the City's approach. Priestley has maintained regular contact with City staff (including Chris Matson). He encouraged Commissioners interested in attending the City Planning and Zoning meeting the following evening (approximately 4:00 PM). Commissioner Jeff Hanson indicated he would be present for another agenda item and would attend the full meeting.

Priestley emphasized the multi-jurisdictional nature of the issue and the importance of understanding City processes, particularly regarding fringe areas, annexation, and industrial zoning within the two-mile extraterritorial zone. He stressed that the County's focus remains solely on permitting frameworks for unincorporated Woodbury County and that messaging must clearly distinguish County work from City of Salix or other incorporated-city matters. Staff will continue monitoring City progress.

Priestley also noted ongoing coordination with communities that control public water supplies, as those jurisdictions are likely to receive the majority of formal data-center proposals, while underscoring that the County must remain engaged on the unincorporated side.

**Commissioner Comment or Inquiry**

Commissioner Tom Bride raised the importance of clarifying at public meetings that the ordinance under development will address all categories of data centers, not solely hyperscale facilities. He noted public perception that discussions concern only large hyperscale projects, whereas the framework must also cover smaller facilities (including those as small as approximately 10,000 square feet or accessory server installations). Input on the full range of scales is needed so the ordinance does not inadvertently prohibit beneficial smaller uses that may be appropriate in Woodbury County.

Priestley agreed and explained that the initial town-hall meetings intentionally focused on listening rather than lecturing. Future meetings and work sessions will more explicitly address classifications,

definitions, and multi-line-item approaches within the land-use table. He cautioned against overly broad single definitions that could capture legitimate accessory uses (e.g., servers supporting a commercial business) or create unintended consequences. Sources such as Georgia Tech materials, Virginia resources, and existing Iowa ordinances (including those under review in other counties and by Sioux City) will continue to be examined. Definitions must be precise so that intent matches the written ordinance; conditional-use structures similar to the existing solar framework may provide flexibility while allowing differentiated standards for hyperscale versus smaller or accessory facilities.

Discussion covered the need to evaluate decommissioning, closed- versus open-loop cooling, noise, winter condensation/moisture issues, flight-path considerations in industrial areas, community-benefit agreements, and the administrative capacity of a lean unincorporated county without building codes. Commissioners and staff discussed learning from jurisdictions that already have operating hyperscale facilities and from concurrent City of Sioux City work. Care must be taken that any recommended ordinance does not impose administrative burdens beyond the County's resources.

Supervisor Kent Carper thanked attendees and staff for their work on the data-center meetings and indicated he plans to attend the November 9 Salix town hall. He inquired about the status of any specific large-scale proposal in the Salix area (approximately 900 acres annexed). Priestley emphasized that the Zoning Commission's process is limited to developing an ordinance applicable to unincorporated Woodbury County and is intentionally kept separate from City of Salix policy discussions. Public comments at Salix will be heard respectfully, yet the focus remains county-wide unincorporated permitting standards. Clear messaging that the process addresses only unincorporated areas continues to be a priority in in communications.

Priestley reiterated that a conditional-use-permit approach modeled on the existing solar process (Zoning Commission recommendation, Board of Adjustment, Board of Supervisors) remains a practical starting framework that retains current decision-making structures while providing due process and location-specific scrutiny. Staff will continue reviewing other jurisdictions' ordinances.

**Adjournment**

There being no further business, the meeting proceeded to adjournment. The meeting adjourned following the conclusion of Commissioner comments and staff updates with a motion by Jeff Hanson and second by Steve Corey. Motion approved (4-0).

**Appendix**

DRAFT




**YOUR SAFETY MATTERS**

# GRAIN BIN CLEARANCE

MidAmerican Energy is committed to providing important information to help ensure your safety when working near electrical facilities. Each year, we notify farmers, farm lenders, grain bin merchants, and city and county zoning officials of the hazards and standards for construction of grain bins near overhead power lines.

Iowa Administrative Code (IAC) Section 199-25.2(3)b requires minimum safety clearances between grain bins and electric lines in accordance with American National Standards Institute (ANSI) C2-2023 National Electrical Safety Code, Rule 234F. The enclosed diagrams show the minimum clearance distances that must be maintained around electrical lines.

- Following these clearance requirements helps protect people and equipment from serious electrical hazards, including burns, electric shock and electrocution.
- Before building, moving or modifying a grain bin, review the enclosed diagrams to ensure the proposed location meets the required clearances.
- Constructing or operating a grain bin that does not meet these standards can create a dangerous condition.
- Planning to build or modify a grain bin? Contact MidAmerican Energy at **888-427-5632** before construction begins. We can discuss your proposed location and help identify potential conflicts with nearby electrical facilities. MidAmerican can assist in any possible conflicts with nearby electrical facilities.

Your assistance and attention are appreciated and will help ensure that grain bins are properly positioned and safe to operate. For more information about farming safely around electricity and natural gas lines, visit **MidAmericanEnergy.com/farm-safety**.

Sincerely,

**Kate Davies**
Senior Engineer – Electric Compliance

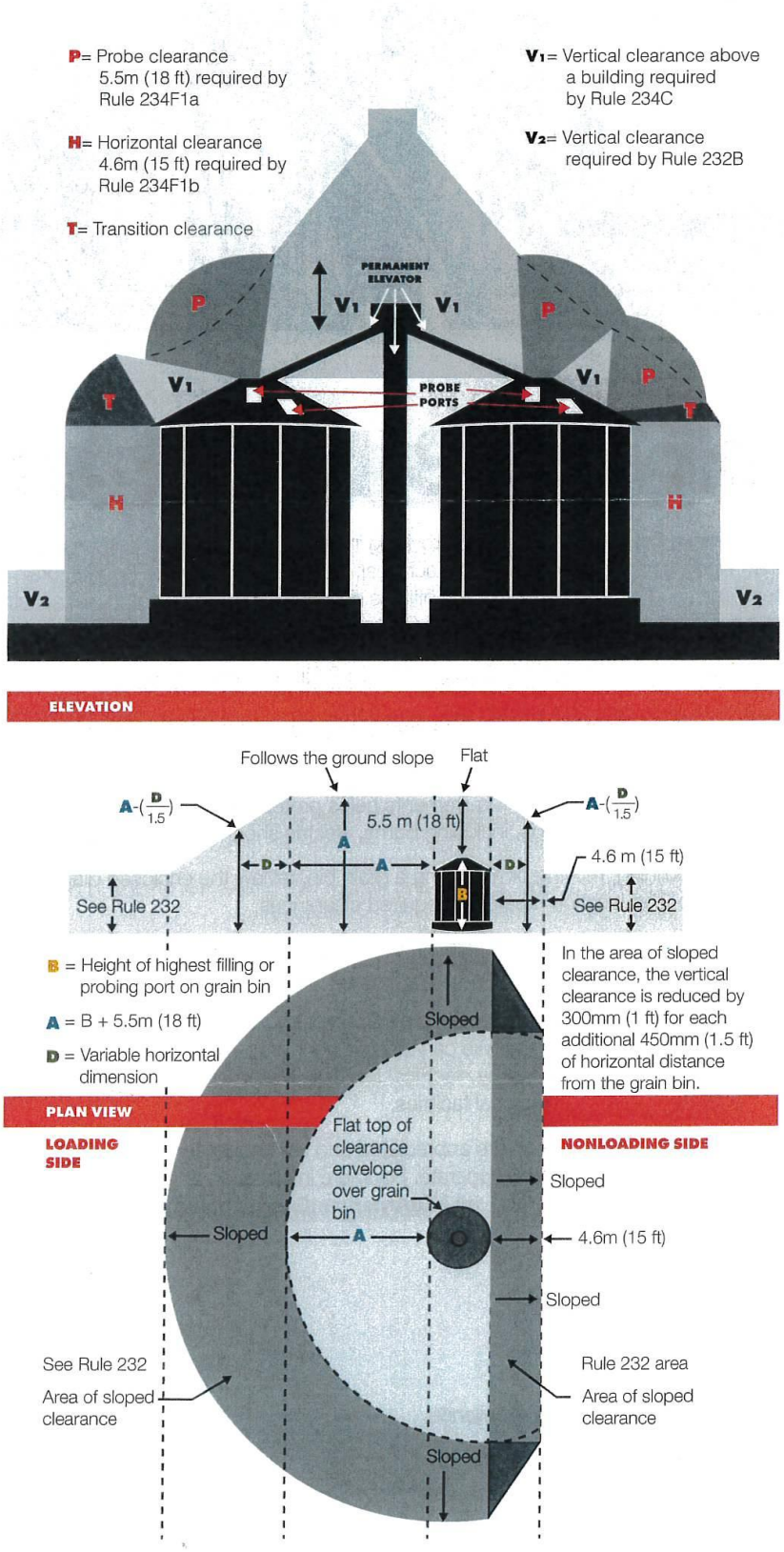
MidAmerican Energy
888-427-5632
MidAmericanEnergy.com

Received
10/5/26

# Clearance envelope for grain bins filled by permanently installed augers, conveyors or elevators.

Iowa Administrative Code
Section 199-25.2(3)

American National Standards
Institute (C2-2017 Rule 234F)



**Woodbury County Secondary Roads Department**

**759 E. Frontage Road · Moville, Iowa 51039**

Telephone (712) 279-6484 · (712) 873-3215 · Fax (712) 873-3235

To: Dan Priestley, Woodbury County Zoning Coordinator

From: Laura Sievers, PE, Woodbury County Engineer

Date: October 23, 2026

Subject: Greene Acres Addition – Minor Subdivision

The Woodbury County Secondary Roads Department has completed its review of the Greene Acres Addition Minor Subdivision.

The plat closure appears to comply with Section 355.8 of the Iowa Code, which governs subdivision plats and closure accuracy.

The plat does not identify any proposed new entrances or access points to the county road system. If a new entrance is proposed in the future, an entrance permit will be required, as noted in the application. During the permit review process, sight distance and other safety conditions will be evaluated. The property owner may be required to make improvements to provide adequate sight distance. Any modifications to an existing entrance, including widening, will also require an entrance permit and must meet current Woodbury County entrance standards.

# *Preliminary Report – Data Center Permitting in the Unincorporated Areas of Woodbury County, Iowa

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## Disclaimer:

*This is an evolving document and is subject to regular changes throughout the review process.

# Preliminary Report

This preliminary report is an evolving document prepared before and between the Woodbury County Zoning Commission town halls about data centers for the purpose of bringing clarity to the intricate debate. The Woodbury County Zoning Ordinance contains a broad framework that appears purposely equipped to empower county stakeholders with the research tools necessary to explore options on whether a proposed use is compatible or not with the plans and expectations of the public.

The foundation of any land use debate should initially rest with the **Woodbury County Comprehensive Plan 2040.** The Code of Iowa §335.5 specifically states:

1. The regulations shall be made in accordance with a comprehensive plan and designed to preserve the availability of agricultural land; to consider the protection of soil from wind and water erosion; to encourage efficient urban development patterns; to lessen congestion in the street or highway; to secure safety from fire, flood, panic, and other dangers; to protect health and the general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue

concentration of population; to promote the conservation of energy resources; to promote reasonable access to solar energy; and to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements. However, provisions of this section relating to the objectives of energy conservation and access to solar energy shall not be construed as voiding any zoning regulation existing on July 1, 1981, or to require zoning in a county that did not have zoning prior to July 1, 1981.

2. The regulations shall be made with reasonable consideration, among other things, as to the character of the area of the district and the peculiar suitability of such area for particular uses, and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout such county.
3. The regulations and comprehensive plan shall be made with consideration of the smart planning principles under section 18B.1 and may include the information specified in section 18B.2, subsection 2.
4. a. A comprehensive plan recommended for adoption by the zoning commission esta blished under section 335.8 may be adopted by the board of supervisors. The board of supervisors may amend a proposed comprehensive plan prior to adoption. The b oard of supervisors shall publish notice of the meeting at which the comprehensive plan will be considered for adoption. The notice shall be published as provided in se ction 331.305.
   b. Following its adoption, copies of the comprehensive plan shall be sent or made a vailable to neighboring counties, cities within the county, the council of government s or regional planning commission where the county is located, and public libraries within the county.
   c. Following its adoption, a comprehensive plan may be amended by the board of su pervisors at any time.

The purpose of a comprehensive plan is to provide structure and stability for the local community. Zoning is not designed to be random or political; it must be tied to a purpose that was initially agreed upon by the public. The broad enumerations of protecting land, reducing congestion, promoting health and safety, preserving neighborhood character, conserving energy, and ensuring infrastructure like roads, water, sewer, schools, and parks convey the solemn duty that each community can decide themselves on how they wish to prioritize their long-term futures. Additionally, the comprehensive plan is without a doubt, a significant legal and policy framework that must be used as the justification for any proposed zoning change that meets public needs.

Another way to describe the comprehensive plan is as a road map or an evaluative document where a community can directly question the feasibility of a proposed zoning change. The plan has the following built in mechanisms:

- shows whether a proposal fits with the county's priorities and where it should go;
- demonstrates how a proposed change better serves the area's character and suitability for land use;

- connects the proposal to public benefits like farmland preservation, housing, transportation, or environmental protection;
- brings the issue before the Board of Supervisors who have the power to adopt or amend the comprehensive plan.

In short, the comprehensive plan is the point at which community values are translated into public policy. That policy process is continuous and cyclical: problem identification, agenda setting, policy formulation, adoption, implementation, evaluation, and eventual maintenance, succession, or termination. Effective policy requires ongoing participation by the public and all relevant stakeholders. The moral of the story is that community efforts to change zoning are at their strongest when they are framed as plan-based and purpose-based. If residents can show that proposed or existing zoning supports or undermines the jurisdiction's own planning goals, they have a reasonable case for change.

# Where We Are Now

A public policy issue has been identified: data centers. Agenda setting has already occurred with the implementation of a moratorium, and the next step is to gather input to inform policy development. To create a feasible policy, we must consult public stakeholders, review the comprehensive plan and the county's long-term priorities, examine relevant literature, and assess existing ordinances and mapping. This process will help us develop a policy guided by a clear mission—one that establishes broad standards while remaining consistent with community values, expectations, and future growth.

# Criteria Themes

A potential ordinance on data centers should be clear; transparent; enforceable; impact mitigation; infrastructure ready; include community protections; and align with local conditions and long-term planning. Or more simply described – be "balanced."

## Criteria of Conditional Use

The Woodbury County Zoning Ordinance's criteria of conditional **use requirements (Section 2.02.9 F)** are a foundational starting point for formulating a new policy. The parameters are broad by design as they inevitably enable decision-makers to effectively perform a SWOT Analysis for the evaluation of the strengths, weaknesses, opportunities, and threats of land use proposals.

<u>Standards…</u>

- The conditional use requested is authorized as a conditional use in the zoning district within which the property is located and that any specific conditions or standards described as part of that authorization have been or will be satisfied.

- The proposed use and development will be in harmony with the general purpose and intent of this ordinance and the goals, objectives and standards of the general plan.
- The proposed use and development will not have a substantial or undue adverse effect upon adjacent property, the character of the neighborhood, traffic conditions, parking, utility facilities, and other factors affecting the public health, safety and general welfare.
- The proposed use and development will be located, designed, constructed and operated in such a manner that it will be compatible with the immediate neighborhood and will not interfere with the orderly use, development and improvement of surrounding property.
- Essential public facilities and services will adequately serve the proposed use or development.
- The proposed use or development will not result in unnecessary adverse effects upon any significant natural, scenic or historic features of the subject property or adjacent properties.

Other Considerations…

- The proposed use or development, at the particular location is necessary or desirable to provide a service or facility that is in the public interest or will contribute to the general welfare of the neighborhood or community.
- All possible efforts, including building and site design, landscaping and screening have been undertaken to minimize any adverse effects of the proposed use or development.

These criteria foster a solid policy framework because they require both a legal and practical fit before a proposal can be approved. The standards mean the proposal must already be allowed in a zoning district, must align with the community's comprehensive plan, and must not create significant harm to neighbors, traffic, utilities, or public health and safety. They also require the use to fit the surrounding area in design and operation, be adequately served by public facilities, and avoid damage to import natural, scenic, or historic features. The "other considerations" add flexibility by asking whether the use serves a real public need and whether the applicant has taken reasonable steps to reduce impacts through design, landscaping, and screening.

The reverse engineering of the conditional use criteria in conjunction with solid public input and respect for the comprehensive plan, consideration of other community ordinances, and a look at relevant literature can go a long way in the formulation of a balanced policy.

## Public Comments (Summary)

The following is a summary of the public comments regarding views on data center zoning and permitting in Woodbury County, Iowa.

**Summary of Key Themes Across Comments**

1. **Resource Depletion:** The most frequent concern is the strain on **water** (well depletion, contamination, cooling needs) and **electricity** (cost increases, reliability/blackouts).
2. **Rural Character:** Residents fear the loss of peace, quiet, and the agricultural landscape due to noise (generators), light pollution, and industrial infrastructure.
3. **Lack of Trust:** There is skepticism toward data center lobbyists and developers, with residents feeling that assurances of "minimal impact" are misleading.
4. **Regulatory Gaps:** Commenters argue that current zoning is insufficient and demand a strict **Conditional Use Permit (CUP)** process with heavy restrictions on location, setbacks, and ongoing monitoring.
5. **Jurisdictional Clarity:** Multiple emails highlight the distinction that these rules apply only to **unincorporated areas**, though cities like Bronson are monitoring the situation.

*See the appendix for the comments received (as of the preparation of this document). Additional comments will be added in subsequent editions or amendments as this is a working document throughout the review process.*

# Woodbury County Comprehensive Plan 2040 – Public Perception of Woodbury County's Future

## Public Priorities for the Next 20 Years

In the Woodbury County Comprehensive Plan 2024 in the public survey, residents were asked to identify the most important topics for the next 20 years. The results, summarized across multiple chapters, are as follows:

- **Economic Development (business expansion, retention, recruitment)**: **72 responses** (p. 52, Fig. 3.11)
- **Public Utilities & Infrastructure (water, wastewater, broadband, electric, renewable energy)**: **61 responses** (p. 81, Fig. 5.6)
- **Agriculture (agriculture economy, emerging technologies, farmland management)**: **61 responses** (p. 80, Fig. 5.7)
- **Housing (affordability, inventory, variety)**: **58 responses** (p. 35, Fig. 2.13)
- **Future Land Use (how land use might change)**: **58 responses** (p. 67, Fig. 4.7)

These rankings reflect a community seeking **balanced, managed growth** that creates jobs (especially in rural areas), improves infrastructure (notably broadband), maintains

affordability, and protects core values like rural character, farmland, and quality of life (Woodbury County Comprehensive Plan).

## Viewpoint on Commercial, Industrial, and Residential Development

Public input identifies several key weaknesses driving the need for economic development:

- **Lack of employment opportunities outside incorporated cities**: **165 responses** (p. 51, Fig. 3.10)
- **Lack of reliable broadband and/or cellular service**: **163 responses** (p. 51, Fig. 3.10)
- **Limited services in rural areas**: **157 responses** (p. 51, Fig. 3.10)
- **Attracting or retaining a qualified workforce**: **134 responses** (p. 51, Fig. 3.10)

Conversely, the **agricultural economy** is the most frequently cited asset, selected by **44%** of respondents (p. 49, Fig. 3.9). Importantly, **87%** of respondents agreed that preserving existing agricultural land should be a planning priority (p. 123, Fig. 7.14).

## Where Growth Should Occur

The plan envisions a **concentrated, corridor-based approach** to development:

- **Commercial and industrial activity** should be primarily located **within or near Sioux City**, the regional economic hub, and in **designated industrial areas** (p. 39, Fig. 3.1).
- Two **certified industrial sites** south of Sergeant Bluff are highlighted for development:
    - **Southbridge 27 Flags Industrial Site** (117 acres) for heavy industry.
    - **Sergeant Bluff Industrial Park** (roughly 117 acres) for light industrial manufacturing, logistics, warehouse distribution, food production, and biotech (p. 49).
- These sites offer **multi-modal access** via I-29, U.S. Highways 20/60/75, Union Pacific rail, proximity to Sioux Gateway Airport, and potential Missouri River barge access via the Big Soo Terminal (p. 49).
- A **new I-29 interchange** (Southbridge, planned for ~2027 near 235th Street) is expected to catalyze additional development in this corridor (p. 49).
- The plan explicitly discourages **"leap-frog"** or scattered development into rural/agricultural areas. Instead, it advocates for **compact, efficient growth patterns**, directing non-agricultural uses into areas with existing infrastructure and limiting interstate-adjacent development to interchanges or within city limits to preserve farmland and scenic Loess Hills views (p. 126, Goal LU3.2).

## Residential Development

Public dissatisfaction with housing is most acute regarding **affordability**, followed by **availability**, **variety of types**, and **condition/maintenance** (p. 33, Fig. 2.10). Notably:

- **Unincorporated/rural residents** report higher overall satisfaction with housing than urban residents.
- **Small rural towns and Sioux City residents** express stronger concerns, particularly around affordability and availability (p. 33).
- More than **53% of housing units were built prior to 1960**, and roughly **76% prior to 1980** (p. 25, Fig. 2.2). This older stock is valued for its character but presents maintenance challenges.
- The plan supports **diverse, affordable, and workforce housing options**, including **accessory dwelling units (ADUs)** and **upper-story units above downtown storefronts** in small towns (p. 36, Goals H2.1, H2.4).
- There is a clear preference for **infill development and rehabilitation** over new greenfield development (p. 36, Goal H3.3).
- Housing issues were ranked as a **top-5 priority** for the next 20 years (p. 35, Fig. 2.13).

## Regulation and Balance: Land Use and Zoning

Public opinion on land use and zoning policies is divided:

- **27.9%** were undecided.
- **27.7%** support **less restrictive/flexible** policies.
- **24.8%** believe policies should be **more restrictive** (with attention to where and how land develops).
- **19.6%** believe policies should **not change** (p. 125, Fig. 7.16).

In response, the plan adopts a **balanced approach**: protecting public interests and safety while allowing flexibility for private property uses. It emphasizes **buffers between industrial and residential uses**, **preservation of agricultural land**, and **compact growth patterns** (p. 126, Goal LU8).

## Wind, Solar, and Emerging Technologies

**Public Utilities & Infrastructure**, including renewable energy, ranked **second** in priority for the next 20 years (tied with Agriculture) (p. 81, Fig. 5.7). The plan references **Iowa Smart Planning principles** to promote clean, renewable, and efficient energy (p. 70).

**Wind Energy**

- **No commercial wind facilities** currently exist in Woodbury County.
- Residents have been **vocal in their opposition** to wind development, citing concerns about **aesthetic impacts on the rural landscape and Loess Hills**, **potential effects on wildlife**, and **disturbances to neighboring properties** (p. 71–72).
- The county has adopted a **commercial wind farm ordinance** with restrictions to protect residents, private property, public conservation areas, and the Loess Hills. For the creation and use of alternative and renewable energy sources, **continuously update policies that regulate renewable energy infrastructure to ensure that it does not present safety hazards and to minimize disruptions to surrounding land uses** (p. 72, 121, 127).

## Renewable Energy

- Public sentiment is **more positive** toward solar energy. One survey comment specifically urged promoting *"…renewable energy especially solar which has really just started to grow"* (p. 71, Appendix comments).
- The plan supports **landowners' individual choices** to implement renewable energy infrastructure for personal/private use (p. 127, Goal IU3.1).
- A goal is set to **plan for the creation and use of alternative and renewable energy sources**, with policies continuously updated to ensure safety and minimize disruptions to surrounding land uses (p. 127, Goal IU3.1).
- Federal and state incentives and funding are noted as key drivers for adoption (p. 71–72).

## Data Centers and Battery Storage

- These are **not specifically discussed** in the plan or prominent in public input.
- If developed, it would be prudent to examine them as **industrial uses,** based on the county's nuclear energy and solar policies, directed to **designated industrial zones** with appropriate **siting, buffers**, and **compliance with zoning ordinances**.
- Large-scale development would need to align with the broader goals of **economic opportunity** (e.g., benefits to landowners/farmers) while balancing protections for **rural character and quality of life**.

## Broader Context

- Emphasis is placed on **energy efficiency** (e.g., rebates and assessments from MidAmerican Energy and Woodbury County REC) (p. 71).
- **Electric vehicle (EV) charging infrastructure** expansion is prioritized, especially in rural areas (p. 72, 127).
- The county currently has **no major air quality crises**, but a network of **low-cost air quality monitors** is recommended for rural areas (p. 122, 127).

## Land Use and Natural Resources

The county's land use is **predominantly agricultural** (79.2% of land use in 2019) (p. 111). The plan emphasizes:

- Protecting **prime agricultural soils**, **Loess Hills**, **water resources** (surface and groundwater quality), **natural habitats**, and **air quality** (p. 126).
- Promoting **compact growth**, **limiting sprawl**, and requiring **buffers between incompatible uses** (e.g., industrial vs. residential) (p. 126, Goal LU3.1).
- **Directing non-agricultural development** efficiently through **infrastructure expansion** (p. 126, Goal LU3.3).
- **Renewable energy infrastructure** has specific planning considerations and regulations, primarily oriented toward **protecting rural character** (p. 121, 127).

Public input shows **high value for agriculture preservation and rural character**, with **divided views** on the ideal level of zoning restrictiveness (p. 125, Fig. 7.16).

## Future Land Use Map

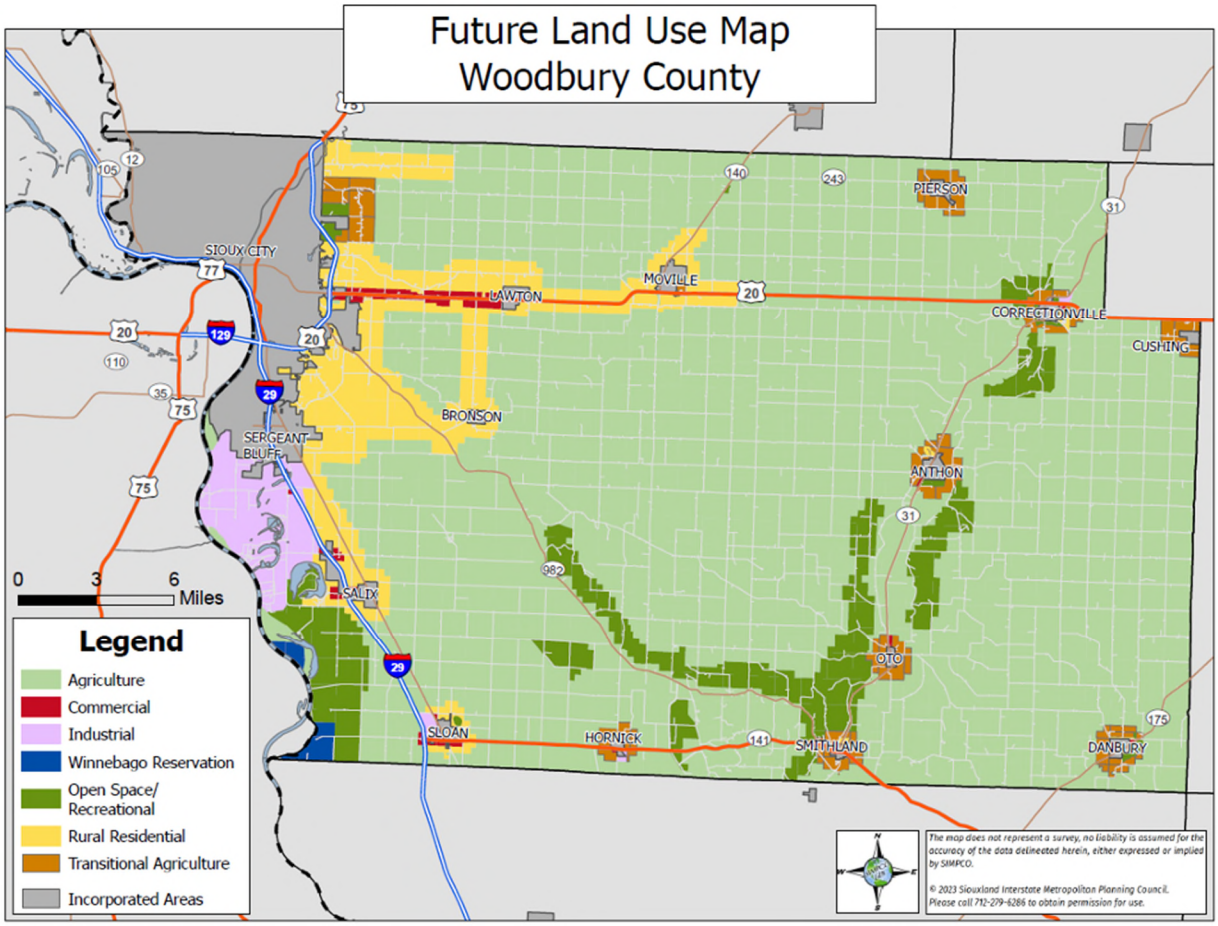



*Figure 7.4 Future land use map*

(Woodbury County Comprehensive Plan, *Future Land Use Map)*

**Legend categories and their representation:**

- **Agriculture** (light green): Covers the vast majority of the unincorporated rural county, forming continuous expanses of farmland across the central, eastern, and southern portions.
- **Commercial** (red): Appears primarily as linear corridors, most notably along Highway 20 (through Lawton) and near other transportation routes or urban edges.
- **Industrial** (light purple/pink): Concentrated in a sizable area south of Sioux City near Sergeant Bluff, adjacent to major highways and the river.
- **Winnebago Reservation** (dark blue): A distinct area in the southwest, near the Missouri River and south of Salix/Sloan.
- **Open Space/Recreational** (dark green): Scattered irregular patches and larger blocks, especially in the central-southern county (around Oto, Anthon, and southward) and some western areas near the river; these represent parks, natural areas, and preserves.
- **Rural Residential** (yellow): Prominent east and southeast of Sioux City/Sergeant Bluff (around Bronson and extending along corridors), plus smaller clusters near other towns, indicating areas for housing outside city limits.
- **Transitional Agriculture** (brown/orange): Small pockets or fringes near several rural towns (Pierson, Anthon, Oto, Danbury, and others), serving as buffer or flexible zones between pure agriculture and residential uses.
- **Incorporated Areas** (gray): City jurisdictions (Sioux City being the largest by far).

**How the map demonstrates priorities and expectations for future planning**

The comprehensive plan's future land use map prioritizes the long-term protection of agriculture as the dominant land use while directing growth in a controlled, orderly manner. The overwhelming light-green agricultural base signals an expectation that farmland will remain the economic and cultural foundation, with residential density limited to avoid fragmentation of continuous workable land. Growth is channeled into and adjacent to existing incorporated areas and transportation corridors (yellow rural residential and red commercial near Sioux City, Sergeant Bluff, and Highway 20), rather than dispersed "leapfrog" development.

Industrial uses are clustered near existing infrastructure and urban edges to minimize conflicts with other uses. Open space/recreational areas are mapped for protection and potential network expansion, supporting conservation and recreation goals. Transitional agriculture provides flexibility in fringe areas without immediately converting prime farmland. The overall pattern reflects smart-growth principles: compact development near existing services, preservation of rural character, and stewardship of natural resources (Woodbury County Comprehensive Plan 2040).

## Comprehensive Plan Analysis

Woodbury County residents envision a prosperous yet grounded future: one that leverages agricultural roots and strategic location for targeted growth in appropriate industrial and commercial hubs (particularly the I-29/Sergeant Bluff corridor), improves housing affordability through smart infill and rehabilitation, invests in infrastructure, and thoughtfully regulates renewables with a preference for solar over large-scale wind. This comprehensive plan translates that vision into actionable goals for balanced, resilient development through 2040, rigorously protecting rural character, farmland, natural resources, and community quality of life (Woodbury County Comprehensive Plan 2040).

These priorities establish a clear framework for locating industrial-scale nuclear, solar, and data center facilities where they fit best. By explicitly guarding residential and agricultural areas against leap-frog development, spot-zoning, and incompatible uses, the plan dictates that future renewable energy policies must focus squarely on the General Industrial (GI) Zoning District (Woodbury County Comprehensive Plan 2040).

## Background on Solar Requirements and Potential Application to Data Center Policy

The Zoning Commission should consider its recommendation to the Board of Supervisors on five key sources: the comprehensive plan, the future land use map, the county's existing conditional use permit process, stakeholder/public feedback, and relevant literature and ordinances. Additionally, the Commission should review how the Woodbury County Zoning Ordinance currently addresses Utility-Scale Solar Energy Systems (US-SES).

In particular, Section 5.08 of the Woodbury County Zoning Ordinance is titled Utility-Scale Solar Energy Systems, or US-SES, Conditional Use. It was added in 2024 as a new supplemental regulation in Article 5 after the Board of Supervisors directed the Zoning Commission to draft a dedicated solar ordinance in August and September 2023. Over the next five months the Commission held eight public meetings including two work sessions, taking comment from residents and stakeholders, before recommending the text on a 4-1 vote on March 25, 2024. Legislatively it did three things: it added the new title to the Table of Contents on page iii under Article 5 Supplemental Requirements, it renumbered the start of Article 6 Definitions to make room, and it inserted the full regulatory text.

The stated intent of the section is to regulate the construction, installation and operation of utility-scale solar in unincorporated Woodbury County in a manner that promotes economic development, protects property values, and ensures health, safety and welfare while avoiding adverse impacts to agricultural lands, conservation lands and other sensitive lands. The ordinance is explicit that if this section conflicts with any other provision of the Zoning Ordinance, this section shall control, and it does not apply inside incorporated cities.

What it regulates is defined narrowly. Private solar is treated as an accessory use to an existing principal use for immediate onsite use. Utility-scale solar is defined as an energy system commonly called a solar farm that converts solar energy to usable thermal, mechanical, chemical or electrical energy primarily for transmission through the electrical grid for offsite use or wholesale and retail sale, whether mounted on a structure, on ground racking, or integrated as a structural component. It specifically excludes and prohibits Concentrating Solar Power Systems that use mirrors or lenses to concentrate sunlight. In other words, 5.08 does not regulate rooftop home systems; it regulates only commercial solar farms.

It targets only one zoning district. The ordinance provides that US-SES shall require a Conditional Use Permit within the General Industrial zoning district and is prohibited in all other districts. In the broader ordinance framework, this is implemented through Article 3, Section 3.03.4, the Land Use Summary Table of Allowed Uses, where US-SES is marked as C conditional in GI and prohibited elsewhere. Section 3.04 dimensional standards still apply for setbacks, but Section 5.08 adds its own supplemental standards. As part of Article 5, it functions like other supplemental chapters such as 5.03 Floodplain Management or 5.05 Telecommunication Towers, but with its own primacy clause.

Its relationship to the rest of the ordinance is what makes it an expansion of the standard conditional use process. The base process is in Article 2, Section 2.02-9. Under that standard, an owner or person with contractual interest files an application with the Zoning Department including a description, a scaled map showing structures, a response to the approval criteria, a certified abstractor's listing of owners within 500 feet — or one mile only for airports, landfills or telecom towers — and a $300 fee. The Planning and Zoning Commission reviews it and reports findings and a recommendation to the Board of Adjustment. The Board of Adjustment then holds a public hearing and must approve, approve with conditions, or deny within 35 days, setting forth findings of fact addressing the points in 2.02-9.F. Those points are six standards: that the use is authorized as conditional in the district, that it will be in harmony with the ordinance purpose and the general plan, that it will not have substantial undue adverse effect on adjacent property, neighborhood character, traffic, parking, utilities or public health and welfare, that it will be compatible and not interfere with orderly development, that essential public facilities will adequately serve it, and that it will not cause unnecessary adverse effects on significant natural, scenic or historic features, plus two other considerations about public necessity and minimizing adverse effects through design and screening.

Section 5.08 keeps that entire foundation but builds a much larger structure on top. First, notification is expanded to a certified abstractor listing of all owners within one mile, a threshold the standard ordinance reserves only for the most intensive uses. Second, application materials are expanded far beyond the basic map and statement to include legal descriptions of all leased and owned parcels, location and size of existing and proposed structures, parking and access, number and spacing of panels, location of

underground or overhead feeder lines, a development timeline and community outreach plan, a preconstruction survey of nearby roads, flood hazard designations, an Interconnection Agreement, an Operation and Maintenance Plan, a Decommissioning Plan, a Soil Erosion and Sediment Control Plan, a setback analysis, and an Emergency Response Plan.

Third, approval is conditioned on three separate agreements that do not exist for a normal conditional use. The applicant must execute a Decommissioning, Abandonment, Financial Security and Site Restoration Plan, a Woodbury County Road Use and Repair Agreement that identifies all haul routes, requires weight and size permits, requires a preconstruction survey with photos or video, and assigns ongoing maintenance and dust control to the applicant, and a Public Drainage System Protection Agreement requiring immediate repair of damage to public drainage systems.

Fourth, development standards are specific. A panel must be at least two feet off the ground and no more than twenty feet at maximum tilt. Screening is required for all residences within 200 feet of the project boundary, with a screening plan, the ability for a residence owner to waive it in writing and have it recorded, or for the Board of Adjustment to waive it based on a viewshed study, and with maintenance obligations and planting standards of at least 1.5 inch caliper, six feet tall within three years, twelve feet mature height, and no fewer than two tree varieties. All utility connections must be placed underground where feasible, glare must be minimized so as not to interfere with adjacent properties, roadways or air traffic, appurtenant structures must meet underlying district bulk and height, solar farms are deemed maximum damage potential structures for floodplain purposes, and a security fence with gate and locking mechanism must be maintained until dismantling.

From application to approval the process is therefore two stages. The applicant files the conditional use permit application with the Zoning Director. The Zoning Director distributes it to the Planning and Zoning Commission and county departments and utilities for comment, and staff prepares reports. The Commission, which meets the fourth Monday at 5 p.m., reviews the application for compliance with both the six standard criteria and the new Section 5.08 requirements and forwards a recommendation. The Board of Adjustment, meeting the first Monday at 5 p.m., holds the formal public hearing and must make findings on each criterion. If approved, a conditional use permit is issued that requires compliance with the permit, all associated agreements and plans, and the ordinance.

That permit does not authorize construction. It expires in one year if a US-SES building permit has not been obtained from the Board of Supervisors. This is the second stage unique to solar. Under normal zoning a building permit is issued by the Zoning Director under Section 2.02-2, but under Section 5.08 the applicant must file a separate building permit application with the Board of Supervisors including a Final Development Plan with aerial images, GPS coordinates compatible with county GIS, locations of arrays, private

access roads, feeder lines and substations, property lines and setbacks, public roads and public drainage facilities, and identification of wind turbines, communication antennae and airports within five miles, city boundaries within two miles, and lakes, watercourses and conservation areas within three miles. The Board of Supervisors may approve only if the site, location and dimensions comply with zoning, the conditions of the conditional use permit, that no more than one year has passed since that permit, and that the road use, drainage and decommissioning agreements and financial security are in place. That building permit expires in one year if construction has not commenced, with possible renewals.

After approval, Section 5.08 imposes ongoing obligations absent from standard permits. The Operation and Maintenance Plan must include preventative maintenance, annual reporting, noise limits of fifty-five dBA daytime and fifty dBA nighttime measured at an occupied dwelling on adjacent property or ambient plus five dBA, with both a baseline and post-construction evaluation by an INCE board-certified professional or licensed Professional Engineer, and with the ability to waive higher levels within 500 feet by recorded waiver, plus disposal and recycling plans, low volatile organic compound cleaning requirements, and a repowering trigger where replacing more than twenty-five percent of panels in twelve months requires a new conditional use permit. The decommissioning obligation requires an estimate of cost excluding salvage value from both the applicant and an independent engineer, TCLP testing for hazardous materials, updating every five years, and financial security of one hundred twenty-five percent of estimated cost in the form of performance bond, surety bond, escrow, letter of credit or parent guarantee provided before any ground disturbance, maintained for the life of the project with annual recertification and adjustment within ninety days of a reestimate. Abandonment is defined as lease termination, one year without production, or failure to comply after ninety days notice, with exceptions for force majeure, repowering or MISO queue backlog, and site restoration must include removal of all components and decompaction and seeding. Finally, soil erosion requires a grading plan, NPDES compliance and pre- and post-development stormwater analysis, emergency response requires a detailed narrative for natural disaster, fire, security, chemical and medical events with evacuation routes and standalone battery storage protocols coordinated with local first responders and Emergency Management, and future operators are bound with ninety days notice of any sale or transfer required. Enforcement follows a Notice of Violation, citation, thirty-day cure period, stop-work order, County lien and civil or criminal remedies, with each day a separate violation.

## Potential Ordinance Amendment Framework

A potential permit framework for data centers, such as US-SES, requires significant thought and consideration. The conditional use permit process is deliberately broad, designed to assess how a project affects public health, safety, and community welfare. US-SES bridges this gap by connecting the broad conditional use framework with specific

enumerated criteria and performance standards that must be met to demonstrate compatibility with a particular area.

As the Zoning Commission examines this issue, staff should offer observations about how the existing ordinance could be applied or amended to address various types of data centers. Some of the following articles and sections would likely be impacted if there is a recommended zoning ordinance text amendment.

- **Article 1 – Table of Contents**
  - It will be expected to amend this section to point to any subsequent sections added to address data centers. It would keep the ordinance consistent and orderly.
  - The change would primarily be references to titles, articles, sections, and page numbers.
- **Section 2.02.1B(1) – Administrative Procedures**
  - A decision would need to be made about public notification standards for data center applications. Level of notice required (distance) and how the public is informed.
- **Section 3.03.4 - Land Use Summary Table**
  - A decision will need to be made about which zoning districts that data centers are to be allowed, conditionally allowed, accessory uses, and/or prohibited.
  - A decision will need to be made about the specific types of data centers and whether or not they are classified as principal uses and/or accessory uses.
- **Article 5 – Supplemental Requirements**
  - This is where likely the core ordinance would be located in likely a new Section 5.09.
  - The data center requirements would need to likely establish review criteria in concert with the conditional use permit requirements, development standards, and operational requirements.
  - This would include the bulk of the regulations.
  - Topics of Consideration (not limited to the following – included for informational / discussion):
    - District Restrictions and Use Classifications
      - Principal Data Centers
      - Accessory Data Senters
      - Server Rooms and Ordinary IT Equipment
    - Accessory Data Center – Small-Scale Cap
    - Required Application Materials
    - Separation Distances (Setbacks)
    - Operational and Environmental Standards
    - Decommissioning, Abandonment, Financial Security, Site Restoration

        - Enforcement and Violations
        - Conditions of Approval and Ongoing Compliance
- **Article 6 – Definitions**
    - Any ordinance needs definitions for regulatory clarity. Adding clear definitions will ensure data center types and related terms are defined consistently for administration and enforcement.
- **Ordinance-Wide**
    - Re-pagination. Technical housekeeping.
    - Potential clause to allow for renumbering and formatting corrections resulting from the text expansion, with no substantive changes.

This outline is intended as a preliminary guide to potential topics within an existing ordinance framework. It does not mandate inclusion of any particular item but rather provides a foundation for capturing and refining details throughout the development process.

## Bibliographic Sources

The bibliographic entries below reflect a diverse and rapidly expanding content available addressing data-center development, zoning, permitting, environmental impacts, and community governance. These sources come from legal practitioners, engineering firms, planning organizations, environmental advocates, academic institutions, and national policy groups. Together, they illustrate how data centers have shifted from a niche industrial use to a major infrastructure category requiring specialized regulatory attention. As counties confront the land-use, environmental, and infrastructure challenges posed by large-scale data-center development, these materials provide essential guidance for crafting modern, defensible, and community-responsive ordinances.

# Categorized Source Groups

## 1. Policy Toolkits & Government-Focused Guidance

These sources provide structured policy frameworks, model ordinances, and decision-support tools tailored to local governments.

- **AI Now Institute. (n.d.). *North Star data center policy toolkit*.** https://datacenters.ainowinstitute.org/
  Maps local and state policy tools for managing data center growth, including conditional use permits, zoning amendments, setbacks, moratoria, and community benefits agreements, with jurisdiction examples.
- **Cuyahoga County, Ohio. (2026). *Data center development: Recommendations for local communities*.** https://cuyahogacms.blob.core.windows.net/home/docs/default-

source/sustainability/datacenterrecommendations.pdf?sfvrsn=7d6e5664_3
Practical guidance for local officials on identifying applications, questions for developers, and issue-area recommendations during study periods or moratoria.

- **Energy Policy and Innovation Center (EPIcenter), Georgia Institute of Technology. (n.d.). *Data Center*.** https://epicenter.energy.gatech.edu/data-center/
  Interactive dashboard summarizing Georgia land-use ordinances across 15 topics, facility maps, moratoria tracking, and comparative regulatory resources.
- **Hubbell Environmental Law Initiative & Tippie College of Business Social Impact Community. (2026, July). *Iowa Data Center Decision Tool for Counties, Cities, Communities*. *University of Iowa College of Law*.**
  https://heli.law.uiowa.edu/sites/heli.law.uiowa.edu/files/2026-07/Iowa-Data-Center-Decision-Tool-HELI-July-2026.pdf?fbclid=IwRlRTSATgzOdwZG9mAWZkaWQWUL98yz8hLnBRzWvnobfIXiZqlpktzWV4dG4DYWVtAjExAHNydGMGYXBwX2lkCjY2Mjg1NjgzNzkAAR61lEULm7q9bPYb1rlZs9ReaCKPMKneWONXuRk_LjA027Rh9L0vlhjnZ_ddUQ_aem_8UJYABkBGLDgg-aeTLHLEw
  Framework of questions to help Iowa local governments evaluate data center proposals before engaging developers. Covers community considerations, planning and zoning, water and energy resources, incentives/economic development, and construction-phase issues as a neutral risk-management and conversation-starter resource.
- **Kentucky Resources Council. (n.d.). *KRC data center toolkit & frequently asked questions*.** https://kyrc.org/datacenters-toolkit/
  Two model ordinances (with and without planning/zoning authority), FAQs, and resources for regulating siting, construction, noise, environmental effects, and infrastructure.
- **National Association of Counties. (2026, February). *NACo informational primer and county considerations: Data centers*.**
  https://www.naco.org/sites/default/files/2026-02/2026%20Data%20Center%20Primer.pdf
  Framework for counties covering impacts, zoning authority, best practices (noise limits, setbacks, agreements, decommissioning), and a readiness checklist.
- **National Association of Development Organizations. (2026). *Data center planning resources for EDDs & RDOs*.** https://www.nado.org/data-center-planning-resources-for-edds-rdos/
  Curated reports, model ordinances, and analyses for regional organizations assisting local governments on planning, economic impacts, and regulatory tools.
- **Pennsylvania Department of Community & Economic Development. (2026). *Pennsylvania data center planning toolkit*.** https://dced.pa.gov/business-assistance/data-center-resources/planning-toolkit/

Guidance for municipalities on evaluating proposals from inquiry through zoning, permitting, infrastructure capacity, fiscal impacts, and community engagement.

- **Southern Environmental Law Center. (2026). *Getting it right: Local approaches to data center development*.** https://www.selc.org/resource/getting-it-right-local-approaches-to-data-center-development/
  Examines zoning strategies (special/conditional use permits, size thresholds), development requirements, Virginia examples, and community engagement tips.
- **U.S. Environmental Protection Agency. (n.d.). *Clean Air Act resources for data centers*.** https://www.epa.gov/stationary-sources-air-pollution/clean-air-act-resources-data-centers
  Centralizes Clean Air Act regulations, guidance, modeling tools, and permitting information relevant to data centers and backup generation.
- **Urban Land Institute. (2024). *Local guidelines for data center development*.** https://knowledge.uli.org/reports/research-reports/2024/local-guidelines-for-data-center-development
  Roadmap covering siting, design, infrastructure coordination, regulatory options (including model zoning guidelines), and case studies for local officials.
- **York County Planning Commission. (2025, August; revised April 2026). *Data center model ordinance*.** https://www.ycpc.org/DocumentCenter/View/5537/Data-Centers-Model-Ordinance---2026-Update-PDF
  Comprehensive model language on definitions, setbacks, noise/vibration standards, buffers, impact analysis, emergency coordination, and decommissioning bonds.

These resources offer ordinance templates, policy rationales, and structured decision tools that directly support county-level regulatory drafting.

## 2. Legal Analysis, Zoning Interpretation & Permitting Strategy

Law firms and legal scholars provide interpretations of zoning authority, entitlement processes, due diligence, and litigation risks.

- **Ballard Spahr LLP (McClure, M. N., Parks, J. S., Johnson, B. F., Clark, A. B., & De Simone, D. J.). (2025, November 17). *Data centers, local zoning, and land development: How to protect your project from costly delays*.** https://www.ballardspahr.com/insights/alerts-and-articles/2025/11/data-centers-local-zoning-and-land-development-how-to-protect-your-project-from-costly-delays
  Stresses proactive zoning due diligence, final unappealable approvals, proper notice procedures, multi-phase planning, and early land-use counsel to avoid delays from outdated codes and opposition.

- **Calabrese, A., & Promrat, K. (2026, June 19). *Data center development: Key zoning and entitlement considerations*. DLA Piper.** https://www.dlapiper.com/insights/publications/2026/06/data-center-development
  Analyzes public notice/hearing risks, appeal timelines, standing rules, vested rights, and moratoria; recommends early diligence during site selection and schedule buffers for litigation.
- **Crowell & Moring LLP. (2026, June 23). *EPA hands over AI data center regulation to states and communities to develop best practices*.** https://www.crowell.com/en/insights/client-alerts/epa-hands-over-ai-data-center-regulation-to-states-and-communities-to-develop-best-practices
  Notes EPA's decision against nationwide standards shifts responsibility to states/localities, increasing inconsistency and citizen-suit risks under existing environmental laws.
- **Cuddy & Feder LLP. (2015, December 14; content current as of 2026). *Due diligence and zoning for data centers*.** https://www.cuddyfeder.com/due-diligence-and-zoning-for-data-centers/
  Advises mapping uses to zoning definitions, understanding tiered review by size, addressing public hearings, and recognizing zoning proficiency as critical amid decentralization.
- **FitzPatrick Lentz & Bub (Morgan, S. J.). (2025, December 15). *Key data center zoning considerations for developers*.** https://www.fiblaw.com/key-data-center-zoning-considerations-for-developers/
  Explores evolving zoning in secondary markets (e.g., Pennsylvania's Lehigh Valley), emphasizing clear definitions, infrastructure access, and land-use compatibility.
- **Haines, M. S., Wilhelm, J. G., & Barnes, J. M. (2026, March 13). *Navigating permitting challenges: A practical guide for data center development in Pennsylvania*. Reed Smith.** https://www.reedsmith.com/articles/navigating-permitting-challenges-a-practical-guide-for-data-center-development-in-pennsylvania/
  Highlights advocacy scrutiny, Environmental Rights Amendment challenges, standing requirements, and the need for strong documentation and stakeholder engagement in Pennsylvania.
- **K&L Gates. (n.d./2026 context). *Your questions answered: What data centers and energy-intensive infrastructure developers and operators need to know*.** https://www.klgates.com/Your-Questions-Answered-What-Data-Centers-and-Energy-Intensive-Infrastructure-Developers-and-Operators-Need-to-Know
  Q&A covering permitting/zoning, real estate, financing, tax/incentives, and environmental/ESG issues across the project lifecycle.
- **Mayo, R. L. (2025, October). *Data center regulation in the United States*. Sheila and Robert Challey Institute for Global Innovation and Growth, North Dakota**

**State University.** https://www.ndsu.edu/challey-institute/
Analyzes fragmented federal/state/local regulation of AI-driven facilities and proposes best practices for responsible expansion amid resource intensity and overlapping requirements.

These sources discuss legal risks, entitlement pathways, and regulatory obligations critical for drafting enforceable, defensible ordinances.

## 3. Engineering, Design, and Technical Development Guidance

Engineering firms and technical consultants explain site design, infrastructure requirements, lifecycle permitting, and compliance tools.

- **Bohler. (2023, October). *Navigating the data center design and approval process* (by John Wright, PE).**
  https://bohlerengineering.com/blog/insight/navigating-the-data-center-design-and-approval-process/
  Covers land development review (site plans, traffic, utilities, stormwater), typical 6–18-month timelines, common variances, and the value of early staff engagement when codes lack data center provisions.
- **Federal Energy Management Program, U.S. Department of Energy. (2024, July 26). *Best practices guide for energy-efficient data center design*.**
  https://www.energy.gov/cmei/femp/articles/best-practices-guide-energy-efficient-data-center-design
  Outlines IT utilization, air management, cooling/electrical optimizations, heat recovery, and metrics/benchmarking for energy and water efficiency.
- **StruxHub. (n.d.). *Data center construction compliance: Top tools for streamlining permits and compliance in data center construction*.**
  https://struxhub.com/blog/data-center-construction-compliance-top-tools-for-streamlining-permits-and-compliance-in-data-center-construction/
  Surveys digital tools for permit/inspection management, environmental/energy compliance, safety systems, zoning navigation, and real-time monitoring.
- **SWCA. (n.d.). *From dirt to data: The full lifecycle playbook for data center permitting*.** https://www.swca.com/news/insights/from-dirt-to-data-the-full-lifecycle-playbook-for-data-center-permitting/
  Phase-by-phase strategies from site selection through operations, focusing on risk identification and resilient permitting pathways.
- **Trinity Consultants. (2025, June 23). *Powering the next generation of data centers: Navigating due diligence and air permitting for data center development*.** https://trinityconsultants.com/resources/powering-the-next-generation-of-data-centers-navigating-due-diligence-and-air-permitting-for-data-center-dev

Addresses environmental due diligence and air permitting pathways for large-scale facilities with significant power and emissions profiles.

These sources help counties understand the physical and technical realities of data-center development such as power demand, cooling systems, noise, site layout, and construction sequencing.

## 4. Environmental & Community Impact Advocacy

Environmental organizations highlight community risks, ecological impacts, and strategies for responsible siting.

- **Community & Environmental Defense Services (CEDS). (n.d.). *datacenter*.** https://ceds.org/
  Resource for communities seeking support on issue identification, legal strategies, and advocacy regarding land use, environmental, and quality-of-life impacts.
- **MaxLife Commercial. (2026, June). *Data centers: Community impact & permitting guide*.** https://maxlifedevelopment.com/blog/data-center-community-impact-permitting-guide/
  Details hyperscale impacts (power demand, jobs, taxes) and a step-by-step permitting roadmap from site selection to occupancy, with typical timelines.
- **Penn State Extension. (2026, April 2; updated). *Data centers: A guide to common questions*.** https://extension.psu.edu/data-centers-a-guide-to-common-questions
  Neutral checklist of fact-based questions on power, water, infrastructure, land use, economics, and resilience to support community evaluation and dialogue.

These sources emphasize environmental justice, water and air impacts, community engagement, and long-term sustainability with key considerations for counties balancing development with public welfare.

## 5. Planning & Land-Use Commentary

Planning organizations and practitioners provide broader context on how data centers fit into land-use systems and infrastructure planning.

- **Etienne, B. (2025, September 29). *Zoning and permitting challenges for data centers: A growing infrastructure dilemma*. LinkedIn.**
  https://www.linkedin.com/pulse/zoning-permitting-challenges-data-centers-growing-dilemma-etienne-2az8e
  Frames outdated codes and long permitting timelines (12–24 months) as

bottlenecks; recommends classification updates, fast-track zones, and early community outreach.

- **Farber, D. (2025, August 4). *Data center permitting: A roadmap*. Legal Planet.** https://legal-planet.org/2025/08/04/data-center-permitting-a-roadmap/
  Maps federal/state/local environmental permitting by project type and notes that renewables plus storage can reduce complexity while existing obligations remain.
- **Fluet, J. (2021, July 22). *Data centers evolved: A primer for planners*. *Planning Magazine*.** https://www.planning.org/planning/2021/summer/data-centers-evolved-a-primer-for-planners/
  Explains edge vs. hyperscale facilities, infrastructure needs (power, security, noise), economic traits, and recommendations for explicit zoning definitions and incentives.
- **Gordon, S. (2026, April 20). *Data centers are here, and more are coming. Our zoning is not ready*. Smart Growth America.**
  https://www.smartgrowthamerica.org/knowledge-hub/news/data-centers-are-here-and-more-are-coming-our-zoning-is-not-ready/
  Argues data centers function more like energy infrastructure than traditional industry; calls for performance standards, location limits, expert review, and community benefits.
- **Hall, A. (2025, June 25). *Zoning and land use considerations for data centers*. *Data Center Knowledge*.** https://www.datacenterknowledge.com/data-center-site-selection/zoning-and-land-use-considerations-for-data-centers
  Discusses zoning gaps, infrastructure/environmental impacts, preferred siting, design standards, and the competitive advantage of clear local frameworks.
- **LightBox. (2025, April 10). *Zoning and land use considerations for data centers*.**
  https://www.lightboxre.com/insight/zoning-and-land-use-considerations-for-data-centers/

These sources help jurisdictions understand national trends, infrastructure pressures, and the mismatch between traditional zoning categories and modern data-center needs.

## Why these sources support data-center research

The sources provided are not exhaustive but taken together, they are a reasonable starting point for this discussion. They highlight many of the issues counties must address, including land use compatibility, infrastructure capacity, environmental safeguards, community impacts, legal defensibility, and long-term lifecycle management. Because data centers are uniquely energy-intensive, infrastructure-heavy, and rapidly evolving, traditional industrial zoning and permitting standards may fail to address their impacts. These materials can help counties anticipate emerging trends, avoid regulatory blind spots, and adopt standards that reflect local priorities. It is important to note that this is

only a sample of widely available information. Because this is an ever-changing industry, research should continue, and qualitative data gathered from the public should be continually considered as a policy is formulated.

# Appendix

## Written Public Comments

**Daniel Priestley**

**From:** bojibay19[redacted]
**Sent:** Saturday, August 1, 2026 9:35 PM
**To:** Daniel Priestley
**Subject:** Data centers

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

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It is my opinion that there is ZERO need for any surveillance centers in or around Sioux City or anywhere in the county. Everything I have read and researched leads me to believe it would be a severe detriment to the area with respect to the environment (excessive water usage and increased ambienr tempertures), increase electrical costs to the citizens, etc. Why is it that all the sudden there is a huge "need" for these surveillance centers??? My 2 cents not that it means anything when pockets are getting lined.

Sent from my Galaxy

1

**Daniel Priestley**

**From:** Jason OTool [redacted]
**Sent:** Monday, August 17, 2026 1:22 PM
**To:** Daniel Priestley
**Subject:** Data center

**Follow Up Flag:** Follow up
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Just doing my part. I live on the 1800 block of 270th outside of salix. A mile or less as I understand from where this thing is supposed to be.
My main concerns with it are water and power usage, and pollution. Water pollution, noise pollution...ect. I can't say I've ever seen a big hyper center like this thing is supposed to be. So I dont know the ramifications first hand. I do believe the people I've seen in online videos that live near them in other locations are real people that do know first hand. I dont believe they're paid actors in staged houses. I also believe the people lobbying for it are just that, lobbyists. Telling us what we want to hear and there's nothing to be concerned about. There's very little noise...they're closed loop meaning no pollution....they won't use any more water than an irrigator...the talking points to ease residents nerves. I believe the lobbyists trying to sell the residents on it are only trying to line their own pockets. And i will believe a resident in an online video living near one in another location long before I believe a lobbyist trying to put one here.
I dont think I want one in my back yard. I run on well water and have no idea how deep it is. But I do know its clear. I can shower in it. I can do my dishes in it. It doesn't come out of the tap brown. Id like to keep it that way. Id also like to keep the peaceful life I've made out there. That's why I moved there away from the city with all the noise and traffic. Its quiet and peaceful and id like to keep it that way. I also have had no power issues. With the exception of the tornado that came through and knocked power lines down. And even then, we had power back within 3 hours. Very impressive. But if the horror stories concerning rolling blackouts caused by data centers are true, I'm not interested in that either.
It just feels like a lot of negative for the people that live in the area. More money in the powerfuls pockets at our expense.

Yahoo Mail: Search, Organize, Conquer

**Daniel Priestley**

**From:** Janet Yanak [redacted]
**Sent:** Saturday, August 22, 2026 12:04 PM
**To:** Daniel Priestley
**Subject:** Re: Data center Town Hall Meeting
**Attachments:** Town Hall Meeting Sloan.pdf

**Follow Up Flag:** Follow up
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Thank you for the information Dan, I have attached a scan of the document that you were unable to open, this one is a pdf, if it does not open I will copy and paste the notes to an email.
I currently do not have sources listed, these are just things that I have learned from researching data centers. I have found Earth Justice to be a very valuable creditable resource.

Thank you,
Janet

---

**From:** Daniel Priestley <dpriestley@woodburycountyiowa.gov>
**Sent:** Friday, August 21, 2026 3:56 PM
**To:** Janet Yanak [redacted]
**Subject:** RE: Data center Town Hall Meeting

Hi Janet,

Thank you for sharing the materials from your research on data centers. Unfortunately, I am unable to open the attached file. I would appreciate it if you could resend it as a file attachment or attachments, or alternatively copy and paste the content directly into an email reply.

We are happy to receive any and all content you are willing to provide. All information received will be shared with the Commissioners.

Regarding participation in the town hall meetings: public comment periods are typically limited to a three-minute time frame. There is, however, no restriction on the volume of written materials that may be submitted, nor on how frequently such submissions may be made. For the meeting itself, it is advisable to focus on and highlight the key points you consider most important. It is also entirely appropriate to reference the materials you have submitted and to encourage the members to review the full comments and supporting information you have provided.

Your engagement is appreciated, and I am glad you plan to attend as many of the Planning and Zoning meetings as possible. Please feel free to share any additional thoughts or materials at your convenience.

Respectfully and sincerely,

Daniel J. Priestley
Woodbury County Zoning Coordinator
620 Douglas Street #609
Sioux City, IA 51101

Phone: 712-279-6609
Fax: 712-279-6530
Website: WoodburyCountyIowa.gov

**From:** Janet Yanak [redacted]
**Sent:** Friday, August 21, 2026 3:32 PM
**To:** Daniel Priestley <dpriestley@woodburycountyiowa.gov>
**Subject:** Data center Town Hall Meeting

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Hi Dan,

I am attaching some of the information that I have learned from researching data centers. Please let me know what your thoughts are, I can revise or edit anything that you feel is getting too deep into the weeds for a town hall meeting. If you are not able to open the document please let me know and I will copy and paste it to an email.

I have not participated in a town hall meeting where I have so much information to share, in your opinion would it be best to just submit the list or should I read it similar to what is done at the Supervisor's meetings?

Please let me me know. I am happy that Planning and Zoning is holding these meetings and plan to attend as many as possible.

If you are curious about financial side of these AI companies, I have posted a Wall Street Journal Article on my Facebook page or you can find it on the Wall Street Journal website the title is Why Big Tech's AI Spending is $3 Trillion higher Than It Seems dated Aug 16,2026 by Peter Rudegeair and Peter Santilli.

Thank you,
Janet Yanak Hyperscale Data Center Notes.docx

2

Hyperscale Data Center Notes

1. Specifically define hyper scale or mega data center. For example:
   A hyperscale data center is a facility with at least 5,000 servers, 10,000 square feet of floor space, and 40 megawatts of power capacity or other specific wording.
2. State which zoned areas are compatible with hyperscale data center development. For example: heavy industrial, light industrial, commercial, mixed use. Of those areas which is optimal use and which if any others could be considered?
3. How will these centers be permitted? Recommendation would be by special use only allowing for public input.
4. No tax incentives, abatements, PILOT. This would insure that the data center, it's developers and end user will pay the same taxes as any other heavy industrial customer.
5. Environmental impact study to be completed and attached to the building permit. Building permit will not be approved if there is measurable detrimental effect on parks, wetlands, wildlife, lakes, streams, rivers or waterways.
6. Water use must be stated in initial building permit. Any change that will increase water use must be submitted to planning and zoning for review and sent to the Board of Supervisors for approval. Construction during the review and approval process is strictly prohibited. Wastewater required to be tested and treated to acceptable levels prior to being released from the facility.
7. *Noise pollution – define a level during working hours and outside hours by decibel* rating, clearly define those hours. Define infrasound level and set maximum allowable levels, state who is responsible for monitoring, define penalties for failure to comply.
8. Air pollution- no diesel generators, strict limits on times allowed and duration of backup generator testing. Define time limits that generators can be utilized during power outages and disaster occurrences.
9. Dust mitigation required during all phases of construction, dust may not leave the permitted construction area.
10. Light pollution- directional lighting required lights may not disturb traffic or properties surrounding the facility.
11. Decommissioning – the facility owner(s) must deposit into a restricted access escrow account, cash, in the amount that will be required to return the property permitted for the data center to it's original state or an acceptable equivalent. The amount of the cash escrow will be determined by a qualified, bonded and insured commercial entity with experience in the demolition and repurposing of large commercial properties. The escrow cash will be held by a professional insured escrow company and accessible only by a vote of the Board of Supervisors upon determining the facility is no longer in use.

**Daniel Priestley**

**From:** Glenn & Pam Clark [redacted]
**Sent:** Saturday, August 22, 2026 1:32 PM
**To:** Daniel Priestley
**Subject:** Re: Comments Requested about Data Center Permitting in the UnincorporatedAreas of Woodbury County
**Attachments:** SummaryOfDataCenterRecommendations.pdf; DataCenterRecommendationsEdited.pdf

**Follow Up Flag:** Follow up
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Dan, Attached find both my research and a brief summary of my findings using help from my sister who is an environmental engineer and AI. In the long version, there is some redundancy, but there are definitely many things to consider when deciding how the county should provide the best guidance and permitting process for data centers. If you have questions or need clarifications, please contact me. Pam

On Friday 08/21/2026 at 12:25 pm, Daniel Priestley wrote:

> Dear Woodbury County Stakeholders:
>
> Please provide your input regarding the potential permitting of data center facilities in the unincorporated areas of Woodbury County. The Woodbury County Zoning Commission is studying data centers with the mission of preparing a recommendation to the Board of Supervisors on how best to facilitate the permitting application process within the Woodbury County Zoning Ordinance—whether as a zoning ordinance text amendment or through another ordinance mechanism.
>
> **Your perspectives are essential.** The Commission is seeking input on potential requirements and regulations for data centers, appropriate zoning districts and locations (including consideration of the General Industrial (GI) Zoning District), and the permitting application process itself—such as whether a conditional use permit or a comparable mechanism would be most suitable. **Written comments will be especially helpful to the Zoning Commissioners as they work to craft a recommendation to the Board of Supervisors on how to address the permitting of data centers in the unincorporated areas.**
>
> **IMPORTANT JURISDICTIONAL NOTICE:** These town hall meetings and any proposed zoning regulations apply **ONLY** to unincorporated areas under Woodbury County zoning jurisdiction. Incorporated cities and towns within Woodbury County regulate their own zoning ordinances and within their own corporate boundaries independently.
>
> The Zoning Commission will host three initial public listening sessions (town hall meetings) to gather citizen and stakeholder input. Additional meetings will be scheduled in other Woodbury County communities as needed. The first of these three initial meetings will be held as follows:
>
> **FIRST TOWN HALL MEETING**
> **Monday, August 31, 2026 • 7:00 PM**
> Sloan Community Hall

423 Evans Street, Sloan, IA 51055

The remaining initial town hall meetings are scheduled as follows:

2. **Moville Town Hall** — Monday, September 21, 2026 at 7:00 PM
   *Moville Community Center, 815 Main Street, Moville, IA 51039*
3. **Salix Town Hall** — Monday, November 9, 2026 at 7:00 PM
   *Salix Community Center, 317 Tipton Street, Salix, IA 51052*

All interested residents, property owners, and stakeholders are strongly encouraged to attend these meetings and share their perspectives. Whether or not you are able to attend in person, your written comments and concerns are welcome and will assist the Zoning Commission in its work.

**Please submit written comments on or before August 28 by email to:**

Dan Priestley, Zoning Coordinator
Email: dpriestley@woodburycountyiowa.gov
Woodbury County Planning and Zoning
620 Douglas Street, Sixth Floor, Sioux City, IA 51101

For further information, please contact Dan Priestley, Zoning Coordinator, at (712) 279-6609, or visit the county website at www.woodburycountyiowa.gov.

Thank you for your engagement and for helping shape the future of land use in Woodbury County's unincorporated areas.

Sincerely,

Daniel J. Priestley
Woodbury County Zoning Coordinator
620 Douglas Street #609
Sioux City, IA 51101

Phone: 712-279-6609
Fax: 712-279-6530
Website: WoodburyCountyIowa.gov

In summary I recommend that Woodbury County establish a dedicated land use category for data centers, permitting them only through a conditional process with strict standards to balance economic growth and community protection.

**Key Recommendations**

**Create** a new "Data Center" use, allowed only in industrial districts or overlay zones. Use a Conditional Use Permit (CUP) process with public hearings, site-specific conditions, and objective standards.

Establish siting criteria: minimum parcel size, highway access, proximity to transmission lines, setbacks, and buffers.

Address visual impacts, noise, lighting, water and power infrastructure, and environmental concerns.

Require disclosure of power and water demands, impact analyses, and long-term management plans.

Protect infrastructure through traffic studies, road repairs, bonding, and development agreements.

Implement ongoing monitoring of water, energy, noise, and site operations with annual reporting.

Discourage allowing data centers in residential, prime agricultural, or environmentally sensitive areas.

Balance flexibility with safeguards to prevent adverse impacts while supporting technological and economic development.

Consider decommissioning if a data center closes for any reason. Ensure that they will return the site in suitable condition for further use in the county.

Because traditional zoning categories do not adequately address the unique impacts associated with large-scale data centers, I think Woodbury County should approach data centers as a distinct land use category, rather than trying to fit them into existing industrial, commercial, or utility classifications.

Woodbury County's goal should be to create a permitting framework that is:

Predictable for developers

Protective of neighboring landowners

Protective of agricultural land and rural character

Protective of public infrastructure and natural resources

Transparent to the public

A good ordinance should neither encourage nor discourage data centers outright; it should clearly define where and under what conditions they may be developed.

If one were to create a specific Data Center Use Classification, data centers need to be defined separately within the zoning ordinance and distinguish between:

Small data centers

Large/hyperscale data centers

Adopt specialized regulations because data centers more closely resemble infrastructure-intensive industrial facilities than office buildings.

I think Permitting should be done through a Conditional Use Permit Process (CUP) with the following recommendations:

Allow data centers only in designated industrial districts or specified agricultural districts through a Conditional Use Permit (CUP).

Require public hearings before approval.

Allow site-specific conditions.

This provides flexibility while still giving developers a predictable path, but it allows our communities to evaluate impacts such as noise, lighting, water use, and infrastructure demands.

When establishing a clear siting criteria, Woodbury County should consider:

Minimum parcel size

Access to major highways

Proximity to high-voltage electric transmission

Distance from residential concentrations

Avoidance of flood-prone areas

Compatibility with the County Comprehensive Plan

Require Significant Setbacks and Buffers

Also of concern should be the visual impacts, backup generator noise, lighting, and industrialization of agricultural landscapes

The National Association of Counties notes that jurisdictions are adopting setbacks considerably larger than typical building setbacks, ranging from hundreds of feet from residential uses.

Therefore Woodbury County could require:

500-1,000 feet from residences or residential-zoned land

Landscape screening

Berms where appropriate

Another major consideration should address power infrastructure

A critical issue is electrical demand.

The ordinance should require disclosure of:

Expected power consumption

Substation requirements

Transmission line needs

Utility agreements

Data centers often drive significant upgrades to electrical infrastructure. Are the power companies onboard and prepared to meet the energy demands and be able to provide the power without diminishing community residents power needs.

Another very important consideration should address water consumption. This may become one of the most important issues.

Applicants should provide:

Water demand estimates

Source of water

Impact analysis on neighboring wells

Long-term water-management plans

Recent Iowa ordinances have required formal water studies and water-use agreements before development approval as Linn County did.

My sister is an environmental engineer and I asked her input on permitting of data centers. She said another factor to consider is to find out a data center's effluent (what comes out after water has been run through the cooling coils. She said many times companies add water softening chemicals to prevent scaling on the cooling coils. Also, where will the water go after the data center is done with it? Does the sewer have the capacity and the ability to handle the water or can it be land-applied? What impact would this have on local resources. Does the data center plan to build their own water treatment plant or will they build water treatment ponds

The county should require noise and lighting standards

Backup generators can create substantial noise during testing and emergencies.

The ordinance should establish:

Daytime and nighttime noise limits at property lines

Shielded lighting requirements

Dark-sky standards

Emergency generator testing schedules

The county infrastructure must also be protected by requiring developers to:

Conduct traffic impact studies

Identify road improvements needed

Repair road damage caused during construction

Post bonding if necessary

Several recent ordinances require compensation for road and infrastructure impacts.

The county should consider development agreements

For hyperscale facilities, the County should reserve the option to negotiate:

Infrastructure commitments

Emergency services support

Community benefit contributions

Water-use monitoring

Reporting requirements

The county should also require ongoing monitoring

Annual reporting could include:

Water usage

Energy consumption

Generator testing

Noise complaints

Site operations

This allows the County to understand long-term impacts rather than focusing solely on initial approval.

In summary Woodbury County should amend its Zoning Ordinance to establish data centers as a separate land-use category permitted only through a Conditional Use Permit process within designated districts. The ordinance should include standards addressing setbacks, buffering, noise, lighting, water use, electrical infrastructure, road impacts, emergency services, and long-term monitoring. This approach provides certainty to applicants while protecting neighboring landowners, agricultural resources, and county infrastructure.

Given Woodbury County's agricultural character and proximity to major electric transmission corridors, I would favor a "conditional approval with robust standards" model rather than either unrestricted approval or outright prohibition. That balance is most likely to withstand public scrutiny and legal challenge while preserving the County's flexibility for future technology and economic development projects.

Option A (Recommended)

Create a new defined use called "Data Center."

Allow it only in:

Heavy Industrial

General Industrial or

A specially designated Data Center Overlay District

Option B

Allow in Agricultural Preservation districts only through a special approval process when specific criteria are met, such as proximity to transmission infrastructure and major transportation routes.

I would discourage allowing them in:

Residential districts

Commercial districts

Areas planned for future residential growth

Prime agricultural areas without additional scrutiny

2. Appropriate Locations

A policy recommendation could identify preferred characteristics:

Preferred Sites

Adjacent to existing high-voltage transmission lines or substations

Near interstate or major highway access

Outside floodplains

Away from concentrated residential development

Areas already planned for industrial growth

Areas where utility providers confirm service capacity

Less Suitable Sites

Highly productive farmland unless infrastructure advantages are compelling

Areas with known groundwater limitations

Scenic corridors or environmentally sensitive areas

Areas where substantial new transmission corridors would cross developed farmland

3. Approval Process

Conditional Use Permit (CUP) is my preferred recommendation.

Advantages:

Public hearing

Site-specific conditions

Ability to address water, roads, noise, and buffering

Existing process already familiar to county government

Disadvantages:

Less certainty for developers

Potential political pressure during hearings

However, these disadvantages can be minimized through clear approval criteria.

Recommended Structure

Data centers should be:

"Conditional Uses within designated industrial districts subject to compliance with adopted performance standards."

This allows the County to avoid arbitrary decision-making while retaining oversight.

Alternative: Special Use Permit / Special Exception

Depending on how the Woodbury County ordinance is structured, a Special Use Permit could be nearly identical to a CUP.

If the County wants a higher level of review, this may be preferable.

The key issue is not the title of the process but ensuring:

Public notice

Public hearing

Findings of fact

Ability to impose conditions

Ability to deny proposals that do not meet standards

Performance Standards Worth Recommending

The ordinance should establish objective standards for:

Setbacks and Buffers

Enhanced setbacks from residences

Landscaping requirements

Berms where appropriate

Noise

Property-line noise standards

Limits on generator testing

Lighting

Full cut-off fixtures

Dark-sky compliance

Water

Water source identification

Water use study

Groundwater impact analysis if wells are used

Several recent Iowa and national ordinances have focused heavily on water-use evaluation and agreements.

Transportation

Construction traffic management

Road-use agreements

Infrastructure reimbursement if warranted

Emergency Services

Fire protection plans

Coordination with county emergency management

Decommissioning

Removal requirements

Financial security if appropriate

5. My Recommendation to the Supervisors

If I were drafting a concise formal recommendation, I would write:

The County should create a separate land-use classification for Data Centers and permit them only within designated industrial districts or specifically identified locations. Approval should occur through a Conditional Use Permit or similar discretionary review process that includes public hearings and findings of fact. The ordinance should include objective standards addressing setbacks, noise, lighting, water use, electrical infrastructure, road impacts, emergency services, and site decommissioning. This approach balances economic development opportunities with protection of surrounding landowners and county infrastructure.

From a land-use perspective, the strongest argument is that data centers are too impactful to be approved by right, yet too valuable to prohibit outright. A well-defined CUP process provides the most balanced approach for Woodbury County.

# WINNEBAGO TRIBE OF NEBRASKA

P.O. Box 687 • 205 Bluff St. • Winnebago, Nebraska 68071 • PH: 402-878-2272
Visit us at: www.winnebagotribe.com

Dan Priestley, Zoning Coordinator
Woodbury County Planning and Zoning
620 Douglas Street, Sixth Floor
Sioux City, IA 51101

August 28, 2026

Dear Woodbury County Zoning Commissioners:

The Winnebago Tribe of Nebraska requests that there be an absolute ban on future hyperscale data centers in the unincorporated land in Woodbury County. It took a 40-year fight to get our land returned in Iowa from the Army Corps of Engineers. Linn County in Iowa has adopted some of the nation's strictest data center zoning rules. We urge Woodbury County leaders to look to Linn County for lessons. Despite strict zoning rules, Linn County just like Woodbury, does not have a municipal water utility, which limits its ability to protect local water resources. Citizens of Linn County say the protections are not enough and say that their wells will dry up, as rivers can be tapped and wells drilled as long as they comply with the Iowa DNR. This could allow tapping into the Missouri River Aquifer that our tribal nation depends on for our drinking water. This is unacceptable.

In the event that a ban is not approved, the Winnebago Tribe requests that only closed loop systems be eligible for permits under conditional-use permits for hyperscale data centers. There are currently four federally recognized tribes with lands in Iowa. They are the Omaha Tribe, Sac and Fox Tribe of the Mississippi, Ponca Tribe, and now, the Winnebago Tribe. Under the Winter's Doctrine, tribal nations have a sovereign right to all water required for our population now and into the future. The two Iowa Tribes must have a seat at the table for the permitting process.

Sincerely,

Coly Brown, Chairman
WinnebagoTribal Council

WINNEBAGO TRIBE OF NEBRASKA
GOVERNMENT SEAL

**Daniel Priestley**

**From:** Tambrey Groves [redacted]
**Sent:** Monday, August 31, 2026 10:00 PM
**To:** Daniel Priestley
**Subject:** Data Center

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

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Hello, i did not speak this evening as my ragweed allergies are horrible!

I want to add that the Loess Hills start in Westfield, IA, winds doqn through Woodbury County, and through the state and i feel that this unique land structure must be protected at all costs...
Loess soil is uniquely formed as soil blew across the plains and settled in layers...the soil is loose, prone to "avalanche" as often seen along highway 12 near Stone Park...

The Loess Hills are home to rare flowers such as the ten petal blazing star, cut leaf iron plant, and sand lilies...and animals such as the prairie rattlesnake, plains spadefoot toad, and regal fritillary butterfly...and birds such as the Ferruginous Hawk, barn owl, and black billed magpie...

The only other place on Earth with Loess soil is China....we are already competing with them for these monstrosity data centers....please don't let us lose our Loess Hills and their unique flora and fauna because of some make believe contest with China over data centers...

My degree is in horticulture with an emphasis on the edible and medicinal plants of the Loess Hills. I also was an adjust instructior at WITCC in the horticulture department. I also managed 4 multi million dollar USDA grants for the tribe of Winnebago, all related to orchard restoration, sustainable agriculture and wildcrafting, and community education.

Thank you,
Tambrey Groves
Sloan, IA

**Daniel Priestley**

**From:** Chad Small [redacted]
**Sent:** Wednesday, September 2, 2026 2:33 PM
**To:** Daniel Priestley
**Subject:** Data Center zoning commission

**Follow Up Flag:** Follow up
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Please forward to all Supervisors and Zoning Members.

**To the Woodbury County Board of Supervisors and Zoning Commission:**

My name is Chad Small, and I am with Local 234 of the International Union of Operating Engineers. I am writing to share my firsthand experience working on data center projects and why I believe Woodbury County should take a serious look at the opportunity being presented in the Salix area.

I have personally worked at three different data center projects, including the Google campus in Papillion, Nebraska. That project broke ground in 2019 and is still under construction today.

But here is what I want the Board to consider: **the biggest impact of a data center isn't necessarily what happens inside the fence — it is what can happen around it.**

If you look at the area surrounding the Papillion Google campus, you will see substantial commercial and industrial development that has taken place around the project. There are warehouses, suppliers, businesses, services, restaurants, housing and other developments in the surrounding area. Most of this development is newer construction that came after Google arrived.

These projects create demand for contractors, equipment operators, electricians, laborers, suppliers, maintenance workers, restaurants, housing and countless other businesses. They can become an economic anchor that attracts additional investment.

That is why I believe the conversation in Woodbury County needs to be bigger than simply asking, **"Do we want a data center?"**

We should be asking:

**"What could responsible data center development do for Woodbury County?"**

Think about the landowners and farmers in the Salix area. They deserve the opportunity to decide what is best for their own property and their families. If a landowner wants to continue farming, that should be their choice. If another landowner sees an opportunity to sell or develop their property, they should have that choice as well.

We can have reasonable zoning, standards and safeguards without shutting the door before we even know what the opportunity could bring.

I have also seen housing and other development built near Google facilities in the Omaha area. These facilities can be good neighbors. They aren't the dirty, heavily polluting industrial facilities that some people may imagine when they hear the word "data center."

Woodbury County has watched opportunities come and go. If we have an opportunity to bring new investment, jobs and development to the area, I believe we owe it to the people of Woodbury County to take a serious look.

As a Union Operating Engineer who has worked directly on these projects, I am willing to share my firsthand experience and answer questions from the Board or the public.

**Woodbury County should be looking for opportunities to grow — not finding reasons to turn them away.**

Thank you for your time and consideration.

Chad Small
Local 234 District 3 Business Agent
[redacted]

1

# Water Quality Bureau Comments – Iowa DNR

**Daniel Priestley**

**From:** Day, Erik <erik.day@dnr.iowa.gov>
**Sent:** Wednesday, September 16, 2026 8:54 AM
**To:** Daniel Priestley
**Cc:** daniel.watterson@dnr.iowa.gov
**Subject:** Re: Data Center Resources Inquiry

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Hi Daniel,

Regarding wells and water use, the DNR only requires permits if the data center will use a water source for cooling and/or other water needs (e.g. water wells or a surface water source). In this scenario, the data center would need the following permits:

1. Private Well Construction Permit (County)
2. Water Use Permit (DNR - for any water use of 25,000 gallons per day or greater for a minimum of one day per year)
3. Public Water Supply Construction Permit (DNR - if the water use also includes potable water (bathrooms, showers, drinking fountains, etc. that serve 25 or more people or has 15 or more service connections)
4. General Permit #6 (for discharge water associated with well construction if it will reach a water of the US)

So far, most data centers in Iowa connect to existing public water supplies, and therefore do not require separate well construction and water use permits. We don't get into zoning with the above permits, except that the water use permit requires the user to own, lease, or have an easement to use the land or water on the property.

During the construction phase, contractors may also be bringing utilities to rural areas where they currently don't exist. Buried utilities generally require some form of dewatering, which then requires a water registration from the DNR in order to pump 25,000 gallons or more any single day. Subsequently, they have to follow NPDES General Permit #9 for dewatering discharge.

It is worth noting that the general public seems most concerned about data center electrical and water needs, which are related to operating and cooling the facility. Current technology generally has an inverse relationship with these needs: energy-efficient cooling systems use more water, and energy-intensive systems use less water. Hopefully, newer technologies emerge that can reduce both needs.

Other permits, such as air quality permits and NPDES permits, would be required for other aspects of a commercial facility, but that is outside my area.

Let me know if you have any other questions.

Best regards,

**Erik Day**
**Geologist III**
Water Quality Bureau
Department of Natural Resources
6200 Park Ave. Ste 200
Des Moines, IA 50321
515-975-1644
erik.day@dnr.iowa.gov
www.iowadnr.gov



On Tue, Sep 15, 2026 at 11:42 AM Daniel Priestley <dpriestley@woodburycountyiowa.gov> wrote:

> Eric and Daniel,
>
> I was given your contact information by Ivy Bremer of Siouxland District Health. I am reaching out regarding Woodbury County's ongoing work related to the potential permitting of data center facilities in the unincorporated areas of the county. Woodbury County is currently under a data center moratorium and is in the midst of holding public town halls to gather facts, stakeholder input, and community concerns as the county considers infrastructure-related issues such as wells, water usage, wastewater, septic systems, and other utility impacts.
>
> If you have any resources, guidance, technical materials, or recommended contacts that the county should consider while preparing a draft ordinance for permitting data centers in unincorporated Woodbury County, I would greatly appreciate your input.
>
> The county is especially interested in:
>
> - potential infrastructure and environmental considerations,
> - appropriate zoning districts and locations,
> - permitting requirements and regulatory approaches,
> - and whether a conditional use permit or another mechanism would be most appropriate.
>
> Any written comments, references, or recommendations you can share would be very helpful as the county works to develop a thoughtful and workable process.
>
> Thank you for your time and assistance.
>
> Sincerely,

Daniel J. Priestley

Woodbury County Zoning Coordinator

620 Douglas Street #609

Sioux City, IA 51101

Phone: 712-279-6609

Fax: 712-279-6530

Website: WoodburyCountylowa.gov

**Daniel Priestley**

**From:** Susan Wagner [redacted]
**Sent:** Wednesday, September 16, 2026 9:19 PM
**To:** Daniel Priestley
**Subject:** Salix Iowa Data Center Roads and Concerns

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Hi Dan,
I was able to attend the Data Center Town Hall meeting in Sloan recently and just wanted to share some concerns. We've also attended all the Salix meetings since June.

We live about 3 miles from Salix....one mile to the east of where the proposed Google data center would go on 270th Street. This means....we are more than two miles outside the Salix city limits....but not if it is legally annexed to the town....then we would only be about one mile away. That all seems crazy when the size of the area of this thing is potentially 4-5 times the size of the actual town if you compared the houses that could fit into it.

Obviously, we do not want it here for a multitude of reasons....peace, sunsets, the loss of wildlife, etc. as well as family health issues for sounds and vibration. We built our house new a little over 20 years ago...planning to retire here. We just very recently retired. We took all the right steps in building as it was in a flood zone and built it up as required to live in a peaceful area. We do not own farmland and so our home is our primary wealth. The loss to our property value if this comes in, would be substantial to us.

When we found out initially, we sent messages and to the senators, representatives, governor, etc. We then were referred from the governor's office to the Woodbury County Supervisors...to which I attended some meetings and spoke of concerns at a couple...and also talked to Dave Deitrich, and sent emails to Mark Nelson and Matthew Ung.

The Salix Comprehensive 2035 growth plan is as far away from a data center as it gets....stating that Salix should maintain it's rural character and industry is to the west of I-29.

I have been talking with multiple people who live near the Southlands Council Bluffs Google and others...Ft. Wayne, Indiana etc....and all have nothing positive to say including noise, vibration, traffic, lights, etc. In some cases...their water has been effected too...discolored, low pressure, etc. In Indiana, one has about 179 6,000 gallon diesel tanks buried for generators. The bigger one in Council Bluffs, about 150 of them. That sounds like it should be in a major industrial area....not farm ground. One person had to move away recently because they could no longer sleep. Another is in the process of moving as Google is forcing them out. Others have remained, but all say the lights are like a football stadium 24/7 and that Google is not the "good neighbor" that they claim to be. They all claim the traffic is horrible....rude people, many accidents, and even deaths due to accidents.

As I'm sure you have heard about, the Salix town council and mayor knew that there was a data center being considered since January...but have misled and even lied to the people of Salix. I even wrote a short email to them in May and can see through open records that they received it....but not a one of them responded...even leaving my phone number. I gather from the open records that they had no intension of answering anyone who lives outside of Salix....even if you have a Salix mailing address, although it does seem like they have met with a number of union people who do not have Salix addresses. 80-90 percent of the town has No Data Center Signs...even Luton has many signs and doesn't want it there.
The disrespect shown from the mayor, Kevin Nelson to Mark Nelson, Woodbury County Supervisor, at the last meeting was appalling.

The proposed Google data center would be 1 1/2 miles long (from Highway 75 east to about a 1/2 mile before Charles Avenue.....and 1 mile wide from 260th Street to 270th Street. Again...we live on 270th (2872)...so would be approximately 1 mile east of this. **We have many concerns...but we have one major one that if nothing else....we hope you will be able to help us with through Woodbury County....and that is the roads.** Since this land is in a flood plain, they will obviously be needing a mass amount of dirt. The most likely location to get that dirt from would be from the Loess hills to the east about 4-5 miles. They did this in Council Bluffs and descimated a huge area. We were told by a resident that Google took 6 feet of dirt off the top of the Loess Hills and promised to put it back (with what...who knows)...but after 8 plus years...it has not been put back. There's a topography map that shows it.

Anyway....those semis run one after another, from early morning to late at night 7 days a week hauling dirt in to build up the land and for massive berms. **If they decide to use the gravel road we live on....what can be done????** It would ruin the road...but more than that....it would totally ruin our lives to have semis driving by one after another. When Sioux Dairy does sileage picking each year it lasts 7-10 days of them driving by. The dust, noise, vibration, etc. is almost unbearable...it leaves a mess on the house, cars, trees, and roads, and it is hard and dangerous to get out of the yard. This year in the area of just a couple miles, I know they were involved in big accident at 260th and Carroll Ave., there was another near accident near 250th that a woman almost got hit had she not taken the ditch, and one dumped over on it's side about a block from our house. Would Woodbury County be able to keep them off the road in front of our house??? We have one neighbor next door to the west of us too.

The main farmer who annexed his land also owns a house about 2 blocks west of us. The house sits empty as the the guy who lived in it before passed away a couple years ago and the farmer who annexed to Salix, Greg Jochum, now owns it. It has sat empty for that period of time. We are guessing that he plans on renting it out to some workers for the Data Center or even worse...a man camp. One mile to the north of us on 260th 20 acres and a house was sold to a concrete guy from South Sioux. I only know his first name is Juan...but my husband was a house framer so he knows him and says he is HUGE in concrete. It is our guess that he was given a heads up on this property as we never saw it go for sale and that he may have plans to do some of the concrete work on the data center and use it as an area to mix or hold some equipment for the project.

Also...since my husband was in construction.....back in late May when we heard from the news about a data center by Salix.....my husband asked Dave Reis about it. Dave owns Midwest Construction Rentals in Sioux City (Norfolk too). He asked Dave if he was going to be doing any concrete work out here and Dave said yes...they were going to be paving some streets for a data center near 260th and Carroll Ave. Dave does concrete work as well as rents out all the major equipment to construction builds and industrial construction. Dave Reis also told my husband at the time that a 10,000 acre solar farm is planned for this area too. The Jochums own land from Plymouth to Monona county.....certainly most of the area around Salix.

We definitely have water concerns, drainage concerns, etc. too. Who will protect us??? Will the county protect us???

Would you be able to address the road situation with the Woodbury County Supervisors? Even though I brought it to their attention under citizen concerns, we don't know how to get answers and help.

We will be at the Salix Town Hall for the Zoning Commission in November. I'm not sure if it needs to be addressed there or what we can do since we should be under the County....but then again....**are we,** now that the land is annexed??

I'm sorry this is long.

We appreciate the moratorium Woodbury County put in place on the unincorporated areas and hope and pray you are able to help us. We think if it was at least put in the industrial area west of I-29....this wouldn't be an issue for many people.

Thank you for reading and any direction you can give us would be so helpful and appreciated!

Russ and Sue Wagner

[redacted]

**Daniel Priestley**

**From:** Chad Small [redacted]
**Sent:** Friday, October 16, 2026 1:38 PM
**To:** Daniel Priestley
**Subject:** Woodbury county data center zoning

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I would like to share this with the zoning and board of supervisors councils. Thank you




Chad Small
Local 234 District 3 Business Agent
[redacted]

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**Hyperlink to the submission by Chad Small:**

Google's approach to investing in data center communities

https://datacenters.google/our-approach/

https://datacenters.google/our-approach/

## Daniel Priestley

**From:** Neil P. Osnato <neil@persistenceanalyticsgroup.com>
**Sent:** Wednesday, October 28, 2026 1:24 PM
**To:** Daniel Priestley
**Subject:** Woodbury County's data center regulations — verifying the promises before reliance

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Mr. Priestley,

I saw Woodbury County's request for input on proposed data center regulations and the upcoming November 9 public discussion in Salix.

There's an important question emerging in communities across the country: how does a county distinguish an impressive development representation from a sufficiently verified infrastructure commitment?

I'm Neil Osnato, founder of Persistence Analytics Group LLC (PAG), an independent Decision Assurance™ firm specializing in Infrastructure Assumption Verification™.

Our written analysis has been included in an official congressional hearing record and federal and state regulatory proceedings, and I've appeared on CBS News discussing infrastructure accountability.

PAG examines whether material representations concerning electricity demand, service availability, water requirements, construction milestones, infrastructure dependencies, and downside responsibility are supported by documented evidence.

We also identify changes that should require revalidation before officials continue relying on earlier assumptions.

The distinction matters because a data center application may contain dozens of numbers, but numbers and verified commitments aren't necessarily the same thing.

Or, as I like to put it, megawatts are very well-behaved in spreadsheets. It's when they have to show up in the real world that the questions become interesting.

Would Woodbury County consider a separate, fixed-fee written assessment of the evidentiary requirements supporting its future data center review process?

I can provide a defined scope, deliverables, timeline, and fee for county consideration without requesting that staff undertake an open-ended consulting exercise.

Best regards,

Neil P. Osnato

Neil P. Osnato
Founder | Persistence Analytics Group LLC Decision Assurance™ | Infrastructure Assumption Verification™ Evidence before reliance. Revalidation after material change.
neil@persistenceanalyticsgroup.com
609-464-9055
persistenceanalyticsgroup.com
InfraGard Member
SAM.gov Registered Vendor | UEI: D3VYU39H6DX9 | CAGE: 19T34

**Daniel Priestley**

**From:** jack coates <jackspurewater@gmail.com>
**Sent:** Sunday, November 1, 2026 11:31 PM
**To:** Daniel Priestley
**Subject:** Data center permitting town hall — community-first emergency reserve proposal

**Follow Up Flag:** Follow up
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To Woodbury County Zoning Commission:

I am contacting you on behalf of Trinity Continuum regarding the November 9 town hall on data center permitting. We would like to offer a constructive, nonproprietary infrastructure concept for consideration, not request an exemption from environmental or public-health protections.

COMMUNITY-FIRST EMERGENCY UTILITY RESERVE: Instead of sizing all water and electrical infrastructure solely for a data center's normal demand, a developer could evaluate financing additional modular utility capacity (for example, a 1.5x or 2x installed-capacity planning scenario, subject to rigorous engineering). A pre-agreed, independently qualified portion could be reserved for critical community use during a declared emergency. Under an approved dispatch agreement, the data center could voluntarily curtail nonessential computing operations while preserving essential safety and communications, allowing utility and emergency officials to direct eligible electrical and water capacity to priority community needs.

Trinity Continuum is developing modular, mobile water/power/thermal utility systems based on process-water recirculation, water treatment and reuse, on-site generation and thermal recovery. Appropriate reclaimed, saline or industrial water supplies and suitable natural-gas or LPG fuel sources could be evaluated case by case. A mobile platform might support temporary utility restoration if pre-engineered interfaces and safe fuel, electrical and water connections are available.

We suggest evaluating this as an optional, enforceable community-benefit arrangement: independently measured reserve capacity; separate reporting of circulating, makeup and freshwater volumes; verified water quality; utility-approved switching and backfeed protection; emissions and fuel permitting; clear dispatch priorities; funding, maintenance, liability and emergency drills; and public reporting. Capacity percentages are illustrative, not verified Trinity output or guaranteed export capability. Trinity has not represented this as an already deployed or certified emergency-response service.

Our goal is a solution that can support industry while protecting residents and giving local officials practical options during emergencies. We welcome questions, technical dialogue or an invitation to present this concept at an appropriate public meeting.

Trinity Continuum
https://trinitycontinuum.com/
https://trinitycontinuum.com/grid-water-resilience.html
Contact details are on the official website.

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## Daniel Priestley

**From:** Jana [redacted]
**Sent:** Wednesday, November 4, 2026 12:08 PM
**To:** Daniel Priestley
**Subject:** Data center

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

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Dan I am unable to attend to attend the meeting but would like to weigh in. I urge the zoning committee to reject zoning changes that would allow large data centers near homes or farmland. My concerns include continuous noise, increased demands on electricity and water, loss of productive agricultural land and potential costs to local taxpayers. Our communities rural character and residents quality of life should be the first consideration of the zoning committee. The impact once done could be life changing to many people Thanks for considering all sides, I must say I personally do not want to live anywhere near one of these. How about you?
Sincerely Jana Martens
[redacted]
M[redacted]

## Townhall Meeting Sloan, IA – August 31, 2026

The video from the first Zoning Commission Townhall meeting on data centers in Sloan is now available online at the following link: https://www.youtube.com/watch?v=zE2JVJAYyOQ.

The video is also accessible via the Zoning Commission Committee page on the county website. Also below are the list of speakers and their comments summarized/bullet pointed. There were about 59+ in attendance.

**Public Comments – Speakers in Order of Appearance**

**1. Denise Jensen**

- Identified herself as president of a local Sloan-area group.
- Expressed confusion regarding the respective roles of the County Zoning Commission (unincorporated areas) versus the City of Salix Zoning Commission.
- Stated she had reviewed county zoning ordinances (agriculture, limited industrial, residential, general industrial).
- Recommended that large data-center / factory / storage facilities be placed only in a heavy-industrial district rather than general industrial, citing proximity to major highways (old Highway 75), moderate impact standards, and the need to keep such uses away from homes and retail.
- Called for a dedicated ordinance specific to data centers rather than vague amendments.
- Stressed the need for transparency; stated the process to date had not been transparent.
- Raised concerns about water usage, noise, light, vibration, and endangered species; insisted these issues must not be omitted from any ordinance.
- Urged that data-center developers be slowed down and held accountable; stated rural areas should not be pushed around.
- Indicated she would clean up her notes and submit them for the public record.

**2. Eleanor Fetterman**

- Called for a thorough investigation by the Sheriff's Department into the "weaponization" of data centers against constitutional rights.
- Requested Freedom of Information Act (FOIA) requests on multi-level NDAs and all communications between data-center interests, electric companies, mayors, and board members in Woodbury County and beyond.
- Described data centers as support systems for AI, cameras, facial-recognition technology, and surveillance; characterized the situation as exploitation rather than capitalism.

- Cited reported harm to cattle (claim of no live births near data centers) and quadrupled electric bills in other areas.
- Opposed changes from residential to business zoning that trap property owners and the use or threat of eminent domain.
- Personally recommended that data centers be banned.

**3. Chad Small**

- Spoke in support of responsible zoning that protects the rights of landowners and farmers.
- Stated that farmers and landowners should retain options for how they use their property (farming, wind, solar, data centers) as income opportunities.
- Advocated clear zoning rules addressing legitimate concerns such as noise, traffic, water, and setbacks.
- Described the Salix area as a suitable rural location with available land, infrastructure access, and distance from densely populated areas.
- Opposed creating rules that make development impossible simply because some people dislike the appearance or sound of a project.
- Called for responsible zoning that both protects the community and preserves landowner freedom of choice.

**4. Janet Yanack**

- Thanked supervisors, commissioners, and the public.
- Distinguished traditional smaller co-location data centers (CPU / fan-cooled) from mega/hyperscale data centers that power AI and ChatGPT and increasingly support surveillance.
- Noted hyperscale facilities use GPUs requiring liquid cooling; the least-expensive cooling method uses up to 5 million gallons of fresh water daily.
- Observed that closed-loop systems shift water demand to power plants and increase energy use.
- Cited impacts: massive land footprint, heat islands, audible and inaudible noise (health issues), 24-hour light pollution, air and water pollution, wildlife disturbance, and home devaluation.
- Stated hyperscale centers are typically built in clusters.
- Referenced union publications claiming higher wages at data centers; noted 75 % of Americans do not want hyperscale AI data centers nearby and only 19 % use AI regularly.
- Cited financial risks (Oracle bond downgrade; large off-balance-sheet lease/purchase commitments by major tech firms).
- Submitted an audible-sound / decibel chart, toxic-impact report, and air-quality document for the record (received by motion and unanimous vote 5-0; Motion; Meister – Second; Corey).

**5. Ashley Wolfe**

- Reported personal observations from residents living near the Council Bluffs Google data center: no positive comments.
- Cited construction and ongoing traffic problems, including unsafe tailgating that required a parent to escort a young driver to school.
- Described intense nighttime lighting ("like daylight") that interferes with sleep.
- Noted wildlife displacement (some properties lost wildlife; others experienced influxes of displaced animals).
- Expressed personal concern about air quality / dust and sensitivity that can trigger asthma; stated many local residents share this concern.
- Preferred dark nights for sleep and outdoor air quality.

**6. Keely Purscell (Member, Winnebago Tribal Council, Winnebago, Nebraska; landowner in Iowa)**

- Spoke in support of those opposing the data center.
- Referenced the recent derecho in Gary, Indiana: residents remained without power while a data center retained power; opposed prioritizing a data center over residents (including elderly on oxygen or farmers relying on electricity for livestock).
- Requested that the Commission examine the Gary, Indiana situation.
- Noted the Winnebago Tribe had submitted formal comments; invoked the Winters Doctrine and federal law requiring a seat at the table for decisions affecting downstream tribal interests.
- Urged the Commission to say "no"; emphasized protection of farmland, cattle, and poultry.
- Cited a Stanton resident who reported cattle becoming aggressive and continuous noise after a data center was built nearby.
- Drew a historical parallel to the allotment era, in which outsiders claimed superior knowledge of land use; stated that money does not equal superior wisdom.
- Called for collaboration: "You're not one of them, you're one of us."

**7. Britney Wilson**

- Background in business and social entrepreneurship.
- Stated that any business deal should include clear benefits for the local community; representatives should advocate for those benefits.
- Acknowledged AI growth but insisted projects must not pollute water (cited Cheyenne, Wyoming Meta data-center bacteria issue affecting elderly and immunocompromised).
- Called for enforceable noise limits, no tax cuts (companies can afford to pay), and protection of wildlife and recreational waters.
- Opposed increased utility costs for residents; argued local people must be the primary beneficiaries of any development.

**8. Mitchell Peterson (Salix)**

- Thanked the Commission for the public process (contrasted with the Salix process).
- Agreed the Salix site is problematic because of proximity to town and residences.
- If a project proceeds elsewhere in the county, strong setbacks and ordinances against massive expansions are essential (cited Council Bluffs Google expansion from ~1,000 acres to an additional 860 acres).
- Recommended home-value impact studies and transparent, front-loaded communication with the community.

**9. Margaret Scott (Member, Winnebago Tribal Council)**

- Invited the public and Commission to a hyperscale-data-center teach-in on September 9 at Winne Vegas (Sale-specific session 3–4 PM; public presentation 6 PM).
- Noted a hydrologist and ecologists would present scientific information on land and water impacts.

**10. Sandy Silbernagel**

- Emphasized multi-generational responsibility to ancestors and future generations; family has century-farm and heritage-farm status.
- Opposed data centers that could force people from homes, cause ill health, or deplete water resources left by ancestors.
- Questioned the true ownership and motives of outside developers.
- Cited CF Industries' earlier $1.3 billion investment promise that yielded only a handful of permanent jobs after construction.
- Stated she does not want her name associated with a decision that harms the land or community.

**11. Claudia Stensland**

- Raised the concept of water-quality standards and neighboring-jurisdiction impacts.
- Argued that the same principle applied to water-quality standards should also apply to data-center siting decisions that affect neighboring jurisdictions and downstream communities.

**12. Lexa McKey**

- Spoke regarding environmental and community impacts of large-scale data-center development.
- Emphasized the need for careful consideration of long-term effects on land, water, and local residents.

**13. Denise Jensen (second time speaking)**

- Reiterated the need for transparency and a clear, dedicated ordinance.
- Restated concerns about water, noise, light, vibration, and accountability of developers.
- Again urged that the process be slowed and that rural communities not be pushed aside.

**14. Jody House**

- Spoke on the need for strong protective measures if any data-center development is considered.
- Raised concerns about community impacts and the importance of local control.

**15. Don Lord**

- Questioned energy availability: noted that companies had previously been turned away or withdrawn because the county lacked sufficient power.
- Observed that the county is now being told sufficient energy exists for data centers and asked for transparency on that change.
- Requested clear, quantitative information on water use, power demand, and noise levels before any decision.

**16. Keely Purscell (second time speaking)**

- Re-emphasized the Winters Doctrine and the requirement for tribal consultation when decisions affect downstream interests.
- Restated opposition to prioritizing data-center power reliability over residential and agricultural needs.

**17. Jean Mack**

- Spoke regarding community impacts and the need for careful evaluation of data-center proposals.
- Expressed support for protecting local residents and resources.

**18. Chad Small (second time speaking)**

- Reiterated support for landowner property rights and the ability of farmers to choose how to use their land.
- Again called for clear, responsible zoning rules that address legitimate concerns while not prohibiting development outright.

**19. Lynette Ross**

- Spoke on environmental and quality-of-life concerns related to large-scale industrial data centers.
- Urged the Commission to prioritize the long-term well-being of residents and the agricultural character of the county.

**20. Manape LaMere**

- Drew historical parallels to colonization and the cotton gin's unintended expansion of slavery.
- Stated that every person present is party to treaties and that treaties are the supreme law of the land under the U.S. Constitution.
- Criticized social impacts of technology (phones at funerals and wakes) and warned of unknown long-term social effects of AI and data centers.
- Cited local water testing showing PFAS levels approximately 20,000 times the acceptable rate and linked closed-loop systems to PFAS contribution.
- Urged the Commission to complete thorough environmental homework on water, air, and noise and to stand firm rather than allow delay that favors corporations.

**21. Nick Kerr (Bryan Kerr / related identification)**

- Spoke regarding energy capacity, infrastructure, and the trajectory of industrial development in the county.
- Raised questions about prior industrial-to-nuclear discussions near the airport and how they relate to data-center energy needs.

**22. Don Lord (second time speaking)**

- Repeated the request for transparent, quantitative data on water consumption, power demand, and noise before any decision is made.
- Expressed that the public needs full information to make informed judgments.

**23. Duane Herbst**

- Spoke as a local resident concerned about impacts on farming operations, water resources, and community character.
- Supported careful, protective zoning standards.

**24. Roger Brink**

- Recalled that a solar project on approximately 25 acres near the current area of interest was denied two years earlier after public opposition (roughly 12–15 opponents).
- Observed the much larger turnout opposing data centers and expressed hope that the Commission would respond similarly.

**25. Britney Wilson (second time speaking)**

- Reiterated that any approved project must deliver clear, enforceable benefits to the local community.
- Restated opposition to tax incentives and to projects that externalize costs onto residents (utilities, environment, health).

**26. Janet Yanack (second time speaking)**

- Re-emphasized the distinction between traditional and hyperscale data centers and the scale of water, energy, and environmental impacts.
- Again referenced the submitted technical documents (decibel chart, toxic-impact, air-quality).

**27. Denise Jensen (third time speaking)**

- Sought clarification on county versus city jurisdiction after annexation.
- Re-stated the recommendation for heavy-industrial classification and a dedicated ordinance.
- Again called for full transparency and accountability.

**28. Ashley Wolfe (second time speaking)**

- Reiterated negative experiences reported by residents near existing data centers (traffic, light, wildlife, air quality).
- Encouraged the Commission and public to research and speak directly with people living near operating facilities.

**29. Randy Bartels**

- Spoke regarding local impacts and the need for protective standards.
- Expressed concern about long-term effects on the community and agricultural land.

**30. Karen Stultz**

- Spoke on quality-of-life, environmental, and community concerns related to data-center development.
- Supported careful evaluation and protective zoning measures.

**31. Duane Herbst (second time speaking)**

- Restated concerns about farming operations, water resources, and the agricultural character of the area.
- Supported strong protective standards in any ordinance.

**32. Keely Purscell (third time speaking)**

- Reiterated the neighboring-jurisdiction principle for water-quality standards and argued it should apply equally to data-center decisions.
- Again called for tribal consultation and protection of downstream interests.

**33. Daniel Bittinger (Supervisor, speaking from the floor)**

- Responded to questions about prior business interest in the county over the last three to five years.
- Noted that some major companies had expressed interest but withdrew because energy providers indicated insufficient capacity.
- Acknowledged the public's desire for transparent information on water, power, and noise and indicated the need for better public data.
- Mandatory agreements to cover all costs should be considered.

**34. Manape LaMere (second time speaking)**

- Expanded on treaty obligations and the presence of multiple tribal nations with historic ties to the area (Winnebago, Ponca, Ioway, Omaha, Dakota).
- Re-emphasized environmental impacts (water, air, sound) and the social consequences of technology.
- Urged decisive action rather than prolonged debate that allows corporate interests to advance.

**35. Denise Jensen (fourth time speaking)**

- Returned to the jurisdiction question after annexation and the limits of county authority inside city limits.
- Reaffirmed the call for heavy-industrial zoning, a dedicated ordinance, transparency, and accountability.

**36. Roger Brink (second time speaking)**

- Reiterated the prior solar denial and the significance of the large public turnout against data centers.
- Expressed hope that the volume of opposition would influence the Commission's recommendation.

**37. Veronica Stewart (Sloan resident since 2023)**

- Moved to the area because she missed seeing the stars after living in a city for ten years; has not seen the stars in the last three years.

- Stated a long-held personal belief that the human race faces severe risk by approximately 2050.
- Said that approving a data center would expedite that trajectory and that whoever remains will be those who actually care for the land.
- Urged the public and Commission to start listening to those who have been quietly caring for the land for millennia.

**38. Rick Brenden**

- Asked the Board of Supervisors whether significant business interest seeking to add jobs had approached the county in the last three to five years.
- Sought clarification on energy capacity history and why power is now said to be available for data centers when earlier projects were constrained.
- Requested that the Board send clear public information on water use, power demand, and noise levels so residents can make informed decisions.

**39. Manape LaMere (third time speaking)**

- Returned to the themes of treaty obligations, environmental homework (water, air, sound), and the social impacts of technology.
- Warned that prolonged debate allows corporations to advance; urged the current generation to take a clear stand.
- Referenced the cotton-gin historical parallel again as a caution against unintended consequences of technological expansion.

## Townhall Meeting Moville, IA – August 21, 2026

The video from the second Zoning Commission Townhall meeting on data centers in Moville is now available online at the following link:
https://www.youtube.com/watch?v=VuiS7elOeTM

The video is also accessible via the Zoning Commission Committee page on the county website. Also below are the list of speakers and their comments summarized/bullet pointed. There were about 59+ in attendance.

**Public Comments – Speakers in Order of Appearance**

**1. Mark Nelson (Chair, Woodbury County Board of Supervisors)**

- Thanked the five volunteer Zoning Commission members for their service.
- Posed three questions to the public for response either at the meeting or later by email/phone:
- Question 1 – Does the developer or end-user matter? Is there a preference for local developers serving local institutions (hospital, financial institution, school,

government) versus large outside companies such as Google or Meta with no local roots?
- Question 2 – Does the size of the data center matter? Facilities can range from 1–2 acres (size of a small home) to thousands of acres and multi-story campuses. Is there appetite for small facilities, large facilities, or none at all?
- Question 3 – Does location matter, and does location depend on size? Traditionally industrial uses have been directed to the industrial corridor (CF, Port Neal, etc.). Hyperscale facilities may fit only there; smaller facilities might be considered near rural communities or existing substations.
- Stated he would now sit back and listen; thanked the large crowd for attending.

**2. Christian Gonzalez**
- Stated there is no way to compartmentalize, rationalize, or use "word witchcraft" to separate what is truly at stake.
- Expressed concern that many in the audience may not fully understand the internal as well as external factors of large corporations introducing data centers.
- Cited ecological and environmental damage caused by data centers and questioned the real purpose behind the industry.
- Raised speculation about a mass-surveillance grid and AI building databases on every citizen down to likes, dislikes, and mannerisms.
- Argued that if Facebook, Meta, and YouTube are already problematic, bringing that technology here is a huge danger.
- Concluded there is no condition or regulation that would allow him to accept data centers into the community; urged that they be stopped.

**3. Justin Smith**
- Agreed with the previous speaker.
- Stated that bringing in data centers of any size or purpose is a taint on the community.
- Emphasized that Woodbury County is an agricultural community at heart and that even its industrial sector has always retained an industrial-agricultural nature.
- Noted he works at an industrial agricultural plant (pea processing) across the river in Nebraska and values the long partnership between Iowa and Nebraska rural agricultural communities.
- Supported additional industry only if it remains focused on the county's agricultural soul and heart.
- Referenced a lengthy (>100-page) document posted by a counselor; while the beginning spoke strongly of agricultural roots, the reference materials were largely about how to build data centers and how to massage zoning laws "without costly delays."

- Stated the community should care about the cost to its way of living, not the costs of giant corporations.
- Declared he is vehemently against any type of data center in the county, city, or surrounding towns.
- Noted Iowa's spiking cancer rates and stated he could see only harm, not help, from data centers.

**4. Delton Knight**

- Stated he currently rents but plans to purchase rural property soon; therefore the issue concerns him directly.
- Asked what data centers actually bring: they do not bring many permanent jobs and, from what he has heard, do not help the local community.
- Expressed concern that projects are sometimes approved not because the people want them but because some part of government can make money from them.
- Stated he does not care about government making more money; governments already take plenty.
- Believed that if a data center ends up in the county, that will be the reason.

**5. Janet Yanack**

- Thanked the County Supervisors and Planning and Zoning Commission for offering the opportunity for citizens to voice opinions.
- Stated there has been a rush to build massive centers and that normal safeguards have been abandoned; that should not happen in local backyards.
- Insisted that environmental-impact studies, market-value studies for surrounding properties, water-usage and source disclosures, energy and backup-energy sources, and noise and air-pollution levels must be included in county zoning ordinances.
- Highlighted the often-ignored risk to emergency services: data centers and their construction carry risks that rural emergency services are neither trained nor equipped to handle.
- Raised e-waste as a critical issue; cited Jim Puckett (Basel Action Network) that society cannot ethically manage current e-waste, and hyperscale centers replace servers, graphics cards, and racks every 3–5 years, generating still more.
- Stated pollution does not stop at city, county, or state borders; the obligation is to protect water, soil, and rural lifestyle for future generations.
- Noted Iowa ranks second in cancer rates in the United States; hyperscale data centers and other industries must be held to a higher standard if the goal is to reduce cancer rates.
- Concluded that allowing unchecked access to land and resources is not in the best interest of county citizens or Iowa.

**6. Ben Sanford**

- Wanted to put the scale of AI data centers into perspective with concrete numbers.
- A typical mid-size AI data center consumes roughly 110 million gallons of water per year (over 300,000 gallons daily / over 12,000 gallons per hour).
- Average Iowa home (low end) consumes about 832 kWh per month; a standard AI data center consumes around 72 GWh per month—enough to power roughly 81,000 Iowa homes.
- Explained that a gigawatt is 1 billion watts (1,000 megawatts).
- After construction, even the largest data centers employ fewer than 150 constant on-site workers; a typical center employs around 27.
- Compared noise to wind turbines (with which many rural residents are familiar); an AI data center is roughly half as loud as a turbine but still loud enough to cause damage to people and animals living or passing nearby.
- Strongly urged anyone with a say in implementing or allowing data centers to reconsider.

**7. Keely Purscell (Member, Winnebago Tribal Council)**

- Spoke on behalf of the Winnebago Tribal Council in opposition to a data center anywhere in Woodbury County.
- Stated the Tribe are landowners and good neighbors.
- Compared data centers to large retail buildings that are abandoned and left as dead structures, and to wind turbines whose 20–30-year lifespan leaves waste for the landowner.
- Asserted that the planned data center for Salix is already obsolete; better technology exists that uses far less water and energy.
- Emphasized protection of farmland, water, and future generations.
- Urged the Commission to say “no.”

**8. Doug Leckband**

- Asked to see a show of hands of anyone with a positive view.

**9. Tom Morgan**

- Lives in rural/unincorporated Mobile area and has farm ground in the county.
- Is not firmly for or against the proposal and feels not knowledgeable enough to decide.
- Worries that the public meetings may be creating an overly negative “against everything” atmosphere.
- Questions whether Woodbury County is turning away business opportunities by not exploring alternatives.
- Wants the county to reach out and see if there’s another way to work with companies like Google.
- Thinks the county needs help with property taxes.

- Says rural Woodbury County is being hit hard by property taxes.

**10. Pam Clark**

- Lives in rural Woodbury County on a small acreage.
- Not fully informed enough to strongly support or oppose the issue.
- Notes that AI is already widely used in hospitals, businesses, and schools, and sees it as a growing technology.
- Believes data centers can provide benefits and efficiency.
- Suggests there is plenty of unused or unproductive land in other parts of the U.S. where data centers could be built.
- Strongly values Woodbury County's productive farmland and soil.
- Opposes using prime farmland for large data centers because it would remove land from farming and food production.
- Main concern is protecting farmland from being taken over and covered by data centers.

**11. Keely Purscell (Member, Winnebago Tribal Council)**

- Mentioned attending a Winnebago Tribe-sponsored teach-in about the effects of data centers.
- Cited ecologist Elijah Small saying hyperscale data centers can affect an area within a six-mile radius.
- Claimed data centers dry out the air enough to cause wood in homes to crack.
- Said the dry air makes it very hard to grow anything.
- Warned that these effects could harm homeowners and property values.
- Said research showed the Missouri River is at 14% health from headwaters to ocean.
- Compared the river's condition to a loved one whose heart or organs were only working at 14%.
- Argued the river should be protected because it sustains everyone.
- Opposed Woodbury County approving data centers if they would contribute to the Missouri River's decline.
- Emphasized that the concern comes from a scientist's findings, not just personal opinion.

**12. Mitchell Peterson**

- Said he is against the proposal.
- Lives close to the 900-acre area and did not expect to live next to something like this.
- Said location matters.
- Acknowledged industrial land may seem like a good place for data centers, but raised concerns about impacts on the Winnebago Tribe of Nebraska.

- Referenced the tribe's presentation about temperature changes from data centers and effects on walleye spawning.
- Warned that placing many data centers along the river could affect more than just Woodbury County.
- Said decisions should consider the bigger picture and who else will be affected.
- Invited people to an event in the city park on Friday at 5 p.m.

**13. Justin Smith**

- Said they had an additional comment after speaking earlier.
- Referred to comments from a Winnebago Nebraska representative and a young man about water use.
- Pointed to the Colorado River as an example of heavy activity leading to major environmental harm.
- Said the Colorado River no longer reaches the ocean because of development and water use.
- Asked people to imagine a similar outcome for the Missouri River.
- Noted they work near the Missouri River in the industrial area.
- Warned that if the Missouri River were similarly harmed, Iowa's economy could be affected.

**14. Delton Knight**

- Said there are other places companies could use that are not farmable land.
- Questioned why the project should be built here specifically.
- Believes the reason is that it costs less to build here than elsewhere.
- Said local resources are being targeted because they are available.
- Argued that wealthy companies should spend money to build somewhere that won't harm others or local resources.
- Said the issue is "all about the money," especially for big companies and governments.
- Stated that's just their opinion.

**15. Ben Havlicek**

- Identified as Ben Hich and said he still lives in town.
- Noted that AI is being used in schools, but said some students use AI search tools to cheat on assignments.
- Questioned whether AI is being used for its intended purpose.
- Said AI data sets store a huge amount of data.
- Believes the human mind and human intuition will always be better than AI.

**16. Karen Havlicek**

- Reiterated concerns about emergency-services impact on both incorporated and unincorporated areas.

- Noted that rural communities always look for the common good while city and county budgets are stretched thin by the status of the Iowa legislature.
- Emphasized reliance on volunteer emergency services who put their lives on the line daily.
- Stated tax dollars are already stretched at the county and local level.
- Reiterated that rural areas have always been the domain of the farmer and the duty is to leave the land better for the next generation; AI data centers will impact that next generation.

**17. Jody Nelson**

- Pointed out that a hyperscale AI data center is never "just a data center."
- Neighbors have already received letters requesting land options for battery-storage facilities (BESS).
- Large substations will also be required; eminent domain can be used to site them.
- Warned that the project could create another huge industrial area in a place that is currently agricultural—a major consideration.

**18. Dawn Thomas**

- Described herself as probably the most pro-data-center speaker of the evening, but with important caveats.
- Has no inherent objection to data centers per se, but regulatory guardrails must be in place.
- Called for mandatory use of closed-loop cooling systems, required infrastructure development, and renewable-energy sources.
- Expressed concern about financial trade-offs: companies seek tax breaks so that the public pays for streets, lines, and water infrastructure.
- Opposed granting tax exemptions; if companies come, they must pay their full share, including property taxes.

**19. Sherry Zenor Kiple**

- Although residing in an incorporated area, stated she is heavily impacted by unincorporated decisions.
- Reminded the Commission of the ripple effect: even a facility placed in an industrial zone affects far beyond that zone.
- Spoke against property-tax incentives; the same argument was made for wind turbines and the money never offset the true costs and risks.
- Stated there is no amount of money that counters the environmental, EMS-strain, noise, and other costs already articulated by previous speakers.
- Noted that companies come because of local resources and may view the community as "pushovers" for the almighty dollar; the community has the heart not to be bought out.

- Strongly discouraged data centers across the board for all the reasons already stated.

**20. Mark Nelson (Board of Supervisors Chair)**

- Noted that the Board of Supervisors received significant flak for imposing the moratorium and scheduling the town-hall series, but it was the right decision.
- Pointed to the huge crowds in Sloan and Moville (and expected in Salix) as evidence the process is valued.
- Compared turnout favorably to the earlier solar hearings (which were roughly one-quarter the size).
- Expressed pride in the speakers, many of whom claimed not to be good public speakers yet delivered excellent remarks.
- Stated the Board tries hard to listen to the people of the county; the Zoning Commission is a channel for that input.
- Confirmed the Board has no regrets about the process.

**21. Daniel Priestley (Zoning Coordinator – process and technical remarks)**

- Explained the nuts-and-bolts of conditional-use permits and the criteria the Commission and Board of Adjustment already apply: necessity and desirability for the public good, impacts on neighborhoods and the county, and public health, safety, and welfare.
- Noted that the solar debate produced decommissioning standards and a partnership among the Zoning Commission, Board of Adjustment, and Board of Supervisors.
- Emphasized the need for precise definitions: data centers can range from small accessory server rooms serving a single business to hyperscale campuses; a blanket ban risks unintended consequences.
- Distinguished hyperscale (high-energy GPU/AI computation) from traditional server farms or co-location facilities.
- Stated he has compiled an annotated bibliography of best practices from other jurisdictions while remaining careful not to simply “copy-paste” ordinances that do not fit Iowa or Woodbury County conditions.
- Reiterated the Future Land Use Map’s designation of the industrial corridor south of Sergeant Bluff / between the river and I-29 as the primary industrial area.
- Noted contact with Iowa DNR indicating most large data centers prefer connection to public/city water systems—raising annexation and inter-jurisdictional issues.
- Urged cities and the county to watch one another carefully; annexation pressure is already visible.
- Stressed that water, energy, noise, lighting, closed-loop vs. open-loop cooling, and development-plan detail will be key questions any permitting apparatus

must enable the county and public to ask.

**22. Keely Purscell (Member, Winnebago Tribal Council)**

- Distinguished traditional data centers (5–10 kW, air-cooled, single-building, serving a single company or local government—already present in county, city, church, and tribal facilities) from hyperscale AI data centers.
- Hyperscale facilities are used for AI training, surveillance, and machine learning; they draw 500–250+ kW per rack, are liquid-cooled (hence water demand), and occupy 500-plus-acre campuses (the Salix proposal is approximately 900 acres).
- Hyperscale centers serve global, not local, needs.
- Urged the Commission to leave room for the small, locally owned data centers that already exist while saying "no" to hyperscale facilities that use local data for "nefarious reasons" (targeted advertising, seed recommendations, etc.).
- Stated hyperscale operators are not good neighbors.

**23. Tom Bride**

- Reiterated the three questions posed at the beginning of the meeting (developer/end-user, size, and location relative to size) as a useful pathway for distinguishing small traditional facilities from hyperscale projects.
- Encouraged the public to communicate answers to Supervisor Nelson and to staff.

## Received Materials at Zoning Commission Meetings

The following materials were received by a motion and second from the Zoning Commission.

# WINNEBAGO TRIBE OF NEBRASKA

P.O. Box 687 • 205 Bluff St. • Winnebago, Nebraska 68071 • PH: 402-878-2272
Visit us at: www.winnebagotribe.com

Dan Priestley, Zoning Coordinator
Woodbury County Planning and Zoning
620 Douglas Street, Sixth Floor
Sioux City, IA 51101

August 28, 2026

Dear Woodbury County Zoning Commissioners:

The Winnebago Tribe of Nebraska requests that there be an absolute ban on future hyperscale data centers in the unincorporated land in Woodbury County. It took a 40-year fight to get our land returned in Iowa from the Army Corps of Engineers. Linn County in Iowa has adopted some of the nation's strictest data center zoning rules. We urge Woodbury County leaders to look to Linn County for lessons. Despite strict zoning rules, Linn County just like Woodbury, does not have a municipal water utility, which limits its ability to protect local water resources. Citizens of Linn County say the protections are not enough and say that their wells will dry up, as rivers can be tapped and wells drilled as long as they comply with the Iowa DNR. This could allow tapping into the Missouri River Aquifer that our tribal nation depends on for our drinking water. This is unacceptable.

In the event that a ban is not approved, the Winnebago Tribe requests that only closed loop systems be eligible for permits under conditional-use permits for hyperscale data centers. There are currently four federally recognized tribes with lands in Iowa. They are the Omaha Tribe, Sac and Fox Tribe of the Mississippi, Ponca Tribe, and now, the Winnebago Tribe. Under the Winter's Doctrine, tribal nations have a sovereign right to all water required for our population now and into the future. The two Iowa Tribes must have a seat at the table for the permitting process.

Sincerely,

Coly Brown, Chairman
WinnebagoTribal Council

WINNEBAGO TRIBE OF NEBRASKA
GOVERNMENT SEAL

Received at the Sloan Townhall. August 31, 2026

**The following documents were received from Janet Yanak at the Sloan Townhall on August 31, 2026.**

Janet Yanak

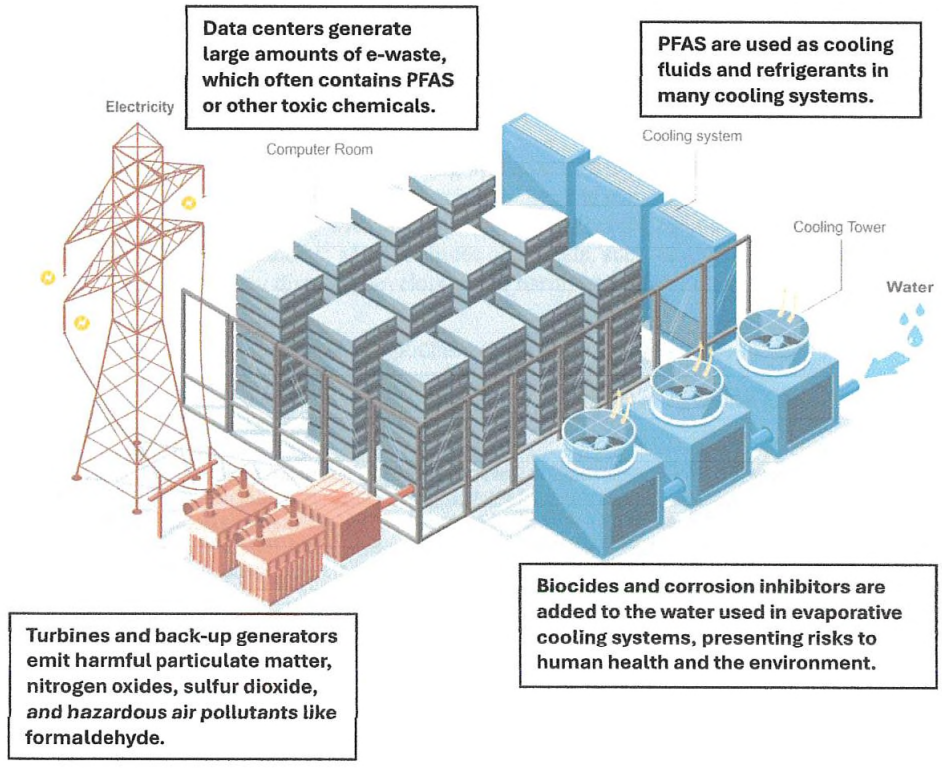


Janet Yanock

# Data Centers' Hidden Toxic Impacts

## *Despite use of PFAS and other toxic chemicals, data centers disclose little about their releases and discharges*

From the fuels that power their generators and turbines to the fluids and refrigerants that keep their servers from overheating, data centers are significant source of toxic chemicals and pollutants, including per- and polyfluoroalkyl substances ("PFAS"). Yet data centers rarely disclose the chemicals they use, and they are not required to publicly report their toxic releases, leaving surrounding communities unable to assess the risks to their health and environment. Many data centers also hide their operational details behind non-disclosure agreements, further impeding public access to information. This fact sheet summarizes several ways that data centers can use and release toxic chemicals and the harm that those substances pose to human health and the environment. The impacts of specific data centers depend on site-specific operations and conditions, however, and without greater transparency and reporting the communities surrounding data centers will remain exposed to unknown and unaddressed risks.




*Underlying graphic courtesy of Hoosier Environmental Counsel, https://www.hecweb.org/data-centers/. Text boxes added by Earthjustice.*

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can like copper and zinc can also leach from the pipes used in evaporative cooling systems.[12] Even so-called "closed loop" systems still require periodic flushes and blowdowns to clear the system, releasing large volumes of contaminated wastewater to local waterways or treatment plants.[13]

Still other data centers rely on conventional air conditioning, with chilled air blown over severs to regulate their temperature. In addition to being energy intensive, air cooling systems often rely on PFAS as refrigerants.[14] In the environment, these fluorinated gasses ("f-gasses") can also degrade into TFA, worsening existing contamination.[15] In addition to known leaks of f-gasses,[16] these refrigerants can be also be emitted, without reporting, during data centers' everyday operations.

**Semiconductors and E-Waste**

PFAS are widely used to manufacture the semiconductors used in data center servers, threatening the health of communities surrounding semiconductor production facilities.[17] PFAS manufacturers like Chemours have announced plans to expand their existing facilities to meet rising demand related to semiconductor production and artificial intelligence.[18]

PFAS are also used in busbars that conduct electricity;[19] communications cables;[20] and other equipment and infrastructure that is used in and disposed of by data centers. Because of the strains posed by round-the-clock data center operations and the pace at which electrical components are rendered obsolete, that equipment is frequently replaced and disposed of. One study found that the use of generative AI will generate an additional 1.2 to 5 million tons of e-waste between 2020 and 2030.[21] Many data centers do not have any e-waste recycling systems,[22] and federal regulations do not impose any requirements related to the disposal of PFAS,[23] increasing the likelihood of PFAS releases from data centers' e-waste disposal.

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[12] Ganesh Hegde, Ketos, *Closed Loop Cooling: Water Saver or Chemical Timebomb* (June 11, 2025), https://ketos.co/closed-loop-cooling-water-saver-or-chemical-time-bomb.
[13] *Id.*
[14] Matthew Gooding, Data Center Dynamics, *Altered Carbon: Could CO2 Cooling Replace F-gas-based Systems?* (Nov. 26, 2024), https://www.datacenterdynamics.com/en/analysis/altered-carbon-could-co2-cooling-replace-f-gas-based-systems/.
[15] Ahmet Elbir, *Environmental Impacts of F-gases and Trifluoroacetic Acid: Potential Threats to Aquatic Ecosystems and Management Strategies*, 44 Env't Progress & Sustainable Energy e70040 (2025), https://aiche.onlinelibrary.wiley.com/doi/10.1002/ep.70040; ATMOsphere, *The Rising Threat of HFOs and TFA to Health and the Environment*, at 11 (Oct. 2022), https://issuu.com/shecco/docs/2022_atmo_hfo_tfa_report; *see also* Eur. Chems. Agency, *Annex B to the Annex XV Restriction Report: Proposal for a Restriction on Per- and Polyfluoroalkyl Substances (PFASs),* at 15 (Mar. 22, 2023), https://echa.europa.eu/documents/10162/6f4a2076-7221-67a3-64f7-c67cc307f59c; .
[16] Manuel G. Pascual, *Data Centers are Drying Up the Port of Marseille: 'They Consume Enormous Amounts of Electricity,"* El Pais, Aug. 24, 2025, https://english.elpais.com/technology/2025-08-24/data-centers-are-drying-up-the-port-of-marseille-they-consume-enormous-amounts-of-electricity.html.
[17] Tom Perkins, *Industry Acts to Head Off Regulation on PFAS Pollution from Semiconductors,* The Guardian (Aug. 2024), https://www.theguardian.com/environment/article/2024/aug/24/pfas-toxic-waste-pollution-regulation-lobbying
[18] Sara Samora, *Chemours Expands Teflon PFA Production in West Virginia*, Manufacturing Dive (Aug. 22, 2024), https://www.manufacturingdive.com/news/chemours-plans-teflon-pfa-forever-chemicals-plant-expansion-west-virginia/724609/; Miranda Willson, *'Forever Chemicals' Industry Aims to Capitalize on AI Boom*, E&E News (June 11, 2025), https://www.eenews.net/articles/forever-chemicals-industry-aims-to-capitalize-on-ai-boom/.
[19] Daikin, *Materials for Data Center* (Sept. 2025), https://www.daikinchemicals.com/magazine/materials-for-data-center.html.
[20] *Id.*
[21] Peng Wang et al., *E-Waste Challenges of Generative Artificial Intelligence*, 4 Nature Computational Sci. 818 (2024), https://www.nature.com/articles/s43588-024-00712-6.
[22] Supermicro, *Data Centers & the Environment* (Dec. 2018), https://www.supermicro.com/wekeepitgreen/Data_Centers_and_the_Environment_Dec2018_Final.pdf.
[23] *See,* EPA, Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances— 2026 Version at 8 (2026).

**Power Generation**

Data centers already consumer nearly 5 percent of our nation's total electricity demand, a share that could more than triple by the end of the decade.[24] In addition to driving climate change and increasing electricity prices for consumers, this power generation often releases chemicals and pollutions that are associated with serious harms to public health and the environment.

Many data centers construct their own behind-the-meter power plants, located on site or in the vicinity of their operations. These power plants can contain dozens of gas-fired turbines, often constructed without necessary environmental permits.[25] Those turbines release fine particulate matter and nitrogen oxides, which can cause heart attacks, asthma, and premature deaths. One study found that authorized particulate matter emissions associated with a single data center could result in $53–99 million in annual health costs.[26] Nationwide, more than 70 new gas-fired power plants are planned to support the build out of data centers, emitting up to 44,000 tons of nitrogen oxides and 32,000 tons of fine particulate matter each year.[27]

Data centers also rely on on-site backup generators, often powered by diesel fuel or natural gas, which power the facility in the event of planned or unplanned power outages.[28] Between 2018 and 2024, generator capacity at data centers in the U.S. nearly tripled.[29] The International Agency for Research on Cancer classifies diesel exhaust as carcinogenic to humans, and diesel generators also release high levels of pollutants that are tied to reduced lung function, cardiovascular disease, and other serious harms.[30] A recent study estimated that emissions from back-up generators at Virginia data centers could trigger 14,000 asthma episodes and up to 19 deaths each year.[31]

*For more information, contact Jonathan Kalmuss-Katz, Earthjustice (jkalmusskatz@earthjustice.org)*

**This document is intended for informational purposes only and does not constitute legal advice. The information contained herein is not a substitute for professional legal counsel. Please consult an attorney to discuss your legal needs. Additionally, this is a rapidly evolving legal and factual landscape, so the information here may not reflect the most updated version of the law or facts. This version was last updated on July 23, 2026.**

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[24] Christa Marsha, *Data Centers' Share of US Electricity seen Doubling by 2030*, Energy Wire (Feb. 26, 2026), https://www.eenews.net/articles/data-centers-share-of-us-electricity-seen-doubling-by-2030/.
[25] Press Release, *NAACP Sues xAI for Illegal Pollution from Data Center Power Plant* (Apr. 14, 2026), https://earthjustice.org/press/2026/xai-sued-for-illegal-power-plant.
[26] Michael Cork et al., EmPower Analytics Group LLC, *Air Quality, Health, and Economic Impacts of the Vantage Data Center Facility* 2 (Feb. 27, 2026), https://www.pecva.org/wp-content/uploads/Health-Impacts-Vantage-Data-Center-Report-2.pdf.
[27] Env't Integrity Project, *The Power Behind AI: Wave of Dirty Gas Power Plants Planned for Data Centers* 3, 15 (July 1, 2026), https://environmentalintegrity.org/wp-content/uploads/2026/06/EIP_Report_ThePowerBehindAI_7.1.26.pdf.
[28] Damien Pitt, et al., VCU Institute for Sustainable Energy and Environment, *Localized Air Pollution Impacts from Data Centers in Northern Virginia* (2026), https://scholarscompass.vcu.edu/cgi/viewcontent.cgi?article=1003&context=isee_pubs/
[29] Better Data Center Project, *Diesel Generators at Data Centers Status, Impacts, and Protective Practices* 3 (Mar. 2026), https://betterdatacenterproject.com/wp-content/uploads/2026/03/Diesel-Generators-at-Data-Centers-Status-Impacts-and-Protective-Practices.pdf.
[30] *Id.*
[31] Yuelin Han et al., *Health-Informed Computing: Estimating and Addressing the Public Health Impact of Data Centers* (June 8, 2026), https://arxiv.org/pdf/2412.06288.

Jamt Yans

Date: July 16, 2026

From: Steven Klafka, P.E., BCEE, Environmental Engineer

Subject: Evaluating Air Quality Impacts of Diesel Generators at Data Centers

**INTRODUCTION**

The purpose of this document is to help you understand and estimate air quality impacts due to back-up emergency diesel generators at AI data centers. This document can be used to prepare *public comments on proposed air pollution control permits for AI data centers. It can also be* included in your comments to state or local agencies.

AI data centers require large amounts of electrical energy. This energy is either generated on-site or obtained from the local electrical utility. In both cases, the AI data centers install backup power systems to assure the data center continues to operate during electrical or equipment outages or interruptions. Most often, back-up electrical power is obtained from on-site diesel emergency generators and fuel storage tanks in large arrays.

Diesel generators are significant sources of air pollution. It is assumed they will only operate for testing and in case of an emergency. For this reason, they are frequently approved by local and *state regulatory agencies with little-to-no emission controls and little-to-no assessment of their* air quality impacts, especially beyond the fenceline of the property.

Regulatory agencies may place limits on generator usage for non-emergency readiness testing. However, there are rarely limits on emergency usage, leaving an open door for unlimited use of equipment that was intended for infrequent operation. Typically, we think of "emergency" usage as a natural disaster caused by adverse weather. However, the term "emergency" can vary by state, and thus expand the hours when a backup generator will operate.

The enclosed evaluation describes diesel generator air pollutants, emission rates, control methods, factors influencing air pollutant dispersion, and potential air quality impacts. It *reviews regulatory approval requirements and offers recommendations for reducing impacts.*

**This document is intended for informational purposes only and does not constitute legal advice. The information contained herein is not a substitute for professional legal counsel. Please consult an attorney to discuss your specific legal needs. Additionally, this is a rapidly evolving legal and factual landscape, so the information here may not reflect the most updated version of the law or facts. This version was last updated on 7/16/2026.**

**PROJECT DESIGN**

**Emission Sources**

An AI data center receiving its electrical power from the local utility and transmission lines must guarantee its reliability with on-site backup power sources. Even those with on-site power may use back-up power sources for equipment outages and related issues. Keeping the AI data center running during an outage protects profits, maintains compliance with contractual agreements, and avoids disruption of services that rely on the AI data center.

More often than not, backup electricity is provided by diesel fueled backup generators. Diesel generators are common since they can start quickly when needed, have low initial and operating costs, and have been in use for many years. Since AI data centers require large amounts of electricity, they need large numbers of diesel generators and on-site fuel storage.

While factories typically might have several generators to provide perhaps 5 megawatts (MW) of backup, AI data centers require 50 to 200 generators providing as much as 500 MW. One typical 2 MW generator provides the electricity needs of 1,700 typical homes in the U.S.[1]

The diesel generators are intended to be used as backup when there is an emergency loss of power. Planned usage for testing and maintenance may require 50 hours per year to assure the equipment is available when needed. In addition, in 2025, USEPA added that emergency diesel generators may be operated for up to 50 hours a year to participate in demand response in non-emergency situations.[2] This has increased the hours of planned, non-emergency general usage. During a period of extreme heat in 2026, the US energy secretary instructed grid operators to require data centers to use their backup power supplies if they need to ease the strain on the electrical system.[3] PJM Interconnection received approval to rely on the back-up diesel generators located at data centers in more than a dozen states to supplement electricity demand.[4]

Usage for emergencies will vary with the reliability of the electrical supply and local server weather. An Uptime Institute survey of data centers found that "most operators had no or

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[1] U.S. Energy Information Administration, Electricity consumption in U.S. homes varies by region and type of home, https://www.eia.gov/energyexplained/use-of-energy/electricity-use-in-homes.php, April 20, 2026.
[2] USEPA, Fact Sheet and Frequently Asked Questions, Use of Backup Generators to Maintain the Reliability of the Electric Grid, May 1, 2025.
[3] New York Times, Energy Dept. Orders Data Centers to Tap Backup Power, As triple-digit temperatures engulf much of the United States, the Trump administration wants grid managers to require the use of backup power that often goes unused.
https://www.nytimes.com/2026/07/02/business/energy-environment/electric-grid-data-centers-pjm.html?
[4] Maryland Matters, PJM gets green light to push data centers onto back-up power during heat wave, Order from Trump administration allows power plants to bypass pollution allowances, June 30, 2026

negligible outages in the past three years."[5] Before the widespread construction and operation of AI data centers, the U.S. Energy Information Administration reports that in 2022 the average electrical outage in the US was 5.6 hours per customer, while the maximum was approximately 19 hours in Florida.[6]

The frequency and length of power outages due to emergencies may change in the future. The frequency and length of diesel generator use due to demand response or to manage voltage/frequency disturbance events may increase at AI data centers in the future. The large increase in AI data centers in the U.S. has placed greater demands on electrical generator and distribution. Global warming is changing the climate so more frequent and severe storms may disrupt the reliable delivery of electricity.

To assist local and regulatory programs with estimating the potential or worst-case emissions from backup generators, USEPA recommends 500 hours of operation.[7] This assumption is typically used by local and state regulatory agencies when approving new back-up diesel generators for AI data centers.

Emissions and air quality impacts occur whenever generators operate during non-emergency readiness testing or emergency use resulting from a utility power outage. It is more common for air permits to place fuel usage or operating hour limits on generator usage for non-emergency use. Limits on emergency usage are less common which can be problematic. Some states, such as Virginia, have established operating hour limitations (i.e. 500 hours) for any generator operation, including both non-emergency and emergency operation.[8]

**Criteria Air Pollutants**

Diesel fueled generators release the following air pollutant emissions:

- Nitrogen Oxide (NOx);
- Particulate Matter, primarily smaller than 10 microns (PM10);
- Particulate Matter, primarily smaller than 2.5 microns (PM2.5);
- Sulfur Dioxide (SO2) formed from the sulfur in diesel fuel;
- Carbon Monoxide (CO) created by incomplete combustion;

[5] Uptime Institute, Annual Outage Analysis 2025, https://uptimeinstitute.com/resources/research-and-reports/annual-outage-analysis-2025
[6] U.S. Energy Information Administration, annual average total of electrical power interruptions, https://www.eia.gov/todayinenergy/detail.php?id=61303
[7] U.S. EPA, Calculating Potential to Emit (PTE) for Emergency Generators, September 6, 1995. https://www.epa.gov/title-v-operating-permits/calculating-potential-emit-pte-emergency-generators
[8] Virginia Department of Environmental Quality, Clarification#2025-01, Emergency Generator Air Permit Guidelines, January 17, 2025. https://www.deq.virginia.gov/news-info/shortcuts/permits/air/issued-air-permits-for-data-centers

- Lead (Pb) released from the Pb in the fuel; and,
- Volatile Organic Compounds (VOC) created by incomplete combustion.

The Washington Department of Ecology (WDOE) has evaluated the air quality impacts of numerous AI data centers equipped with backup emergency diesel generators. WDOE explains the potential air quality impacts of diesel generators as follows:[9]

> *Diesel exhaust is a toxic air pollutant, containing fine particles that can cause health problems for people who are exposed frequently and at high enough levels. These tiny particles are too small to be filtered out of the air by the nose and upper respiratory system. The particles go deep into the lungs, where they can cause damage and chemical changes.*
>
> *Nitrogen dioxide ($NO_2$) is another toxic air pollutant that can cause breathing problems even when you're exposed for a short time, from 30 minutes to 24 hours. Nitrogen dioxide can make breathing harder for people who already have lung problems, such as asthma. It also adds to acid rain and smog.*

When it adopted its Clean Air Nonroad Diesel Rule in 2004, prior to the recent growth in data centers, USEPA described the health benefits of controlling NOx and PM emissions as follows:[10]

> *"Reducing NOx and PM emissions from nonroad diesel engines by more than 90 percent will provide a wide range of public health benefits. Controlling these emissions will, by 2030, prevent every year about:12,000 premature deaths, 8,900 hospitalizations, one million work days lost, 15,000 heart attacks, 6,000 children's asthma-related emergency room visits, 280,000 cases of respiratory problems in children, 200,000 cases of asthma symptoms in children, and 5.8 million days of restricted adult activity due to respiratory symptoms."*

The criteria pollutants have National Ambient Air Quality Standards or NAAQS.[11] These include NO2, PM10, PM2.5, SO2, CO and Pb. There is a NAAQS for ozone (O3) which is formed in the atmosphere from NOx and VOC.

The USEPA and state agencies operate air quality monitors to measure concentrations of criteria air pollutants to verify compliance with the NAAQS.[12] These monitors typically obtain

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[9] WDOE, Diesel pollution from data centers, https://ecology.wa.gov/air-climate/air-quality/data-centers
[10] USEPA, Regulatory Announcement, Clean Air Nonroad Diesel Rule, May 2004. https://nepis.epa.gov/Exe/ZyPDF.cgi/P10001RN.PDF?Dockey=P10001RN.pdf
[11] USEPA, NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table, April 20, 2026.
[12] USEPA, Managing Air Quality - Ambient Air Monitoring, https://www.epa.gov/air-quality-management-process/managing-air-quality-ambient-air-monitoring

representative regional background concentrations rather than impacts of any specific industrial facility.

During the issuance of an air pollution permit for utility and industrial emission sources, USEPA, state agencies or permit applicants may conduct dispersion modeling to estimated downwind concentrations of criteria air pollutants to verify compliance with the NAAQS. However, a modeling analysis for diesel generators at data centers is rarely conducted, even when the installations at AI data centers are in the tens to hundreds of MWs in size.

Even if a regulatory agency uses dispersion modeling to keep air pollutant concentrations below the NAAQS, they are still approving an increase in emissions and exposure. With regard with fine particles or PM2.5, the American Lung Association does not consider any new exposure to be safe:[13]

*"There is no safe threshold to breathe in fine particles. A recent review of all available scientific evidence to date clearly shows that particle pollution is associated with increased mortality from all causes, cardiovascular disease, respiratory disease and lung cancer."*

The residents of disproportionally impacted neighborhoods may already be exposed to high levels of air pollution from industries and roadways. New AI data centers and their diesel generators will only exacerbate existing poor air quality conditions.

**Hazardous Air Pollutants**

Particulate matter and VOC emissions will be composed of numerous inorganic and organic chemicals. These are considered hazardous air pollutants or HAP, sometimes called toxic air pollutants or TAP. Similar to any fuel combustion, the HAP emissions from diesel generators include inorganic trace metals which are contained in the diesel fuel, and organic products of incomplete combustion like benzene, formaldehyde and polyaromatic hydrocarbons.

Many local or state agencies have adopted regulations to control HAP or TAP emissions. These include air quality standards for specific chemicals or emission control requirements.

USEPA has adopted national emission standards to reduce HAP emissions from diesel generators.[14] These standards include National Emission Standard for Hazardous Air Pollutants (NESHAP) and New Source Performance Standards (NSPS). Those generators used for emergency backup are subject to the NSPS Tier 2 emission standards. These do not require the

[13] American Lung Association, Particle Pollution, April 19, 2026, https://www.lung.org/clean-air/outdoors/what-makes-air-unhealthy/particle-pollution#risk

[14] USEPA, Regulations for Emissions from Heavy Equipment with Compression-Ignition (Diesel) Engines, https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-heavy-equipment-compression, April 20, 2026.

use of add-on control equipment, so the generators are uncontrolled. Diesel generators used full-time are subject to the NSPS Tier 4 emission standards which do require add-on control equipment. Diesel generators that run in conditions besides true emergency conditions, such as demand response, or voltage/frequency disturbance events, would presumably be required to meet the less stringent Tier 2 emission standards which do not require the use of add-on control equipment.

**DATA CENTER DESIGN AND AIR QUALITY IMPACTS**

**Energy Generation Method**

For back-up power, AI data centers are likely to use diesel generators as they are readily available and allow on-site fuel storage.

**Diesel Generator Emission Tier**

Diesel generators are considered stationary engines by USEPA. For new engines or generators built after 1996, USEPA established emission limitations and control requirements under the national NSPS regulations. There are currently four tiers depending on the date of construction:

- Tier 1 – 1996-2002
- Tier 2 – 2003-2005
- Tier 3 – 2006-2010
- Tier 4 – 2011- Present

For larger generators, > 560 kW, built today, Tier 2 limits apply to emergency generators and Tier 4 limits apply to continuously operated generators. Table 1 compares the Tier 2 and Tier 4 emission limits.[15]

Tier 2 limitations rely on generator engine design to meet the federal emission limits. These generators have uncontrolled emissions. If the manufacturer certifies the generator to comply with USEPA Tier 2 requirements, then typically no post construction testing of emissions is required. While not common, the permit agency may require a data center to conduct compliance stack tests on their diesel generators to verify compliance with the federal NSPS emission limitations. These tests require less than one hour of combined sampling at various operating loads.[16]

[15] USEPA, EPA Emission Standards for Nonroad Engines and Vehicles, https://www.epa.gov/emission-standards-reference-guide/epa-emission-standards-nonroad-engines-and-vehicles
[16] USEPA, Engine Testing Regulations, https://www.epa.gov/vehicle-and-fuel-emissions-testing/engine-testing-regulations

Tier 4 limitations rely on the use of add-on control equipment which reduce emissions by 90% or more. These add-on emission controls include:

- Selective Catalytic Reduction (SCR) control systems to reduce NOx emissions;
- Oxidation catalyst control systems to reduce CO and VOC emissions; and,
- Diesel particulate filters (DPF) to reduce PM emissions.

Similar SCR and oxidation catalyst control systems are also used to control emissions from larger coal, oil and natural gas-fired power plants.

***Table 1 – Current Tier 2 and Tier 4 Diesel Generator Limitations***

| Air Pollutant | Size & Type | NMHC | NMHC+NOx | NOx | PM | CO |
|---|---|---|---|---|---|---|
| | (kW) | (g/kW-hr) | (g/kW-hr) | (g/kW-hr) | (g/kW-hr) | (g/kW-hr) |
| Tier 2 | > 560 - All | - | 6.4 | - | 0.2 | 3.5 |
| Tier 4 | > 560 Generators | 0.19 | - | 0.67 | 0.03 | |
| | > 560 All Others | 0.19 | - | 3.5 | 0.04 | 3.5 |

*Note: NMHC = Nonmethane Hydrocarbons*

**Generator Emissions**

Table 2 summarizes the hourly and annual emissions from a typical diesel generator with a generating capacity of 2,750 kW. It complies with USEPA Tier 2 emission limitations so has no add-on emission control equipment. Annual emissions are shown based on varying operating schedules from 50 to 8,760 hours per year. While 50 hours per year may be sufficient for testing and maintenance, more operation is needed to accommodate demand response, manage voltage/frequency events, or during the loss of electricity from the utility. The highest annual emissions in Table 2 reflect generator usage for 8,760 hours per year, or continuous operation. This scenario could occur if off-site utility electricity were no longer available.

The emission estimates in Table 2 are based on operation at 100% capacity. For long-term operation, a generator could reduce generator output to 70% of capacity, with similar reductions in fuel usage and emissions.

***Table 2 - Emissions from a Typical Diesel Generator with 2,750 kW Capacity***

| Air Pollutant | Hourly (lbs per hour) | 50 hrs/yr (tons per year) | 100 hrs/yr (tons per year) | 500 hrs/yr (tons per year) | 8,760 hrs/yr (tons per year) |
|---|---|---|---|---|---|
| NOx | 53.5 | 1.34 | 2.68 | 13.38 | 234.33 |
| CO | 10.3 | 0.26 | 0.52 | 2.58 | 45.11 |
| VOC | 0.9 | 0.02 | 0.04 | 0.22 | 3.90 |

| | | | | | |
|---|---|---|---|---|---|
| PM | 0.8 | 0.02 | 0.04 | 0.21 | 3.64 |
| SO2 | 0.08 | 0.002 | 0.004 | 0.02 | 0.4 |

**Data Center Total Project Emissions**

The total emissions from two example AI data centers equipped with multiple backup diesel generators are summarized in Tables 3 and 4. Table 3 shows an AI data center with combined capacity of 87 MW of diesel generators. Table 4 shows an AI data center with combined capacity of 500 MW of diesel generators.

It is assumed that the diesel generators at both AI data centers comply with USEPA Tier 2 emission limitations so have no add-on emission control equipment. Annual emissions are shown based on varying operating schedules from 50 to 8,760 hours per year. As previously noted, 50 hours per year may be sufficient for testing and maintenance, but more operation is needed to accommodate demand response, manage voltage/frequency events, or use during the loss of electricity from the utility. The highest annual emissions reflect generator usage for 8,760 hours per year, or continuous operation. This scenario could occur if off-site utility electricity were no longer available.

On an hourly basis, approved emissions are very large so an AI data center can have significant short-term air quality impacts.

On an annual basis, approved emissions are typically kept low and below thresholds at which more stringent permit requirements would apply.

Annual usage of the generators and their emissions can be kept low by a fuel consumption and/or operating hours limit in the air pollution permit issued by the state or local agency. While annual usage may be limited to simplify permit approval requirements, the AI data center will still have high short-term emissions.

***Table 3 – Total Emissions from a Data Center with 87 MW Capacity Diesel Generators***

| Air Pollutant | Hourly (lbs per hour) | 50 hrs/yr (tons per year) | 100 hrs/yr (tons per year) | 500 hrs/yr (tons per year) | 8,760 hrs/yr (tons per year) |
|---|---|---|---|---|---|
| NOx | 1,692.5 | 42.3 | 84.6 | 423.1 | 7,413.3 |
| CO | 325.9 | 8.1 | 16.3 | 81.5 | 1,427.2 |
| VOC | 28.2 | 0.7 | 1.4 | 7.0 | 123.3 |
| PM | 26.3 | 0.7 | 1.3 | 6.6 | 115.0 |
| SO2 | 2.5 | 0.1 | 0.1 | 0.6 | 11.1 |

***Table 4 - Total Emissions from an AI Data Center with 500 MW Capacity Diesel Generators***

| Air Pollutant | Hourly (lbs per hour) | 50 hrs/yr (tons per year) | 100 hrs/yr (tons per year) | 500 hrs/yr (tons per year) | 8,760 hrs/yr (tons per year) |
|---|---|---|---|---|---|
| NOx | 9,727.3 | 243.2 | 486.4 | 2,431.8 | 42,605.5 |
| CO | 1,872.7 | 46.8 | 93.6 | 468.2 | 8,202.5 |
| VOC | 161.8 | 4.0 | 8.1 | 40.5 | 708.8 |
| PM | 150.9 | 3.8 | 7.5 | 37.7 | 661.0 |
| SO2 | 14.5 | 0.4 | 0.7 | 3.6 | 63.7 |

**Stack Heights**

Historically, diesel generators typically do not have tall stacks to disperse their emissions since they are used infrequently and their impacts during use are rarely evaluated.

With the advent of AI data centers simultaneously using many diesel generators, the potential for significant overlapping air quality impacts has increased. Like any large source, tall stacks help disperse the emissions and maintain impacts below air quality standards.

Short stacks are likely to be used if issuance of an air permit by the local or state agency requires no air quality modeling analysis to assess the downwind impact. In this case, a short stack might be 35 feet, while tall stack may be 100 feet.

Later in this report, examples of air permit issuance projects are provided. These show the height of stacks which have been used for diesel generators. The Lavender Fields Holdings project in Michigan City IN consists of 132 diesel generators. Each of these generators was equipped with a stack that was 20 feet tall. The Vantage Data Centers Management project in Port Washington, WI consists of 45 diesel generators. Each of these generators was equipped with a stack that was 35 feet tall. The Washington Department of Ecology has issued air permits to numerous data centers. In 2022, it approved the MWH Data Center in Quincy, WA. It was equipped with 96 diesel generators with stack heights ranging from 30 to 72 feet in height.[17]

A more extreme example is the Texas Commission on Environmental Quality proposed approval of the Fermi America Project Matador project in Carson County, Texas in 2026. Rather than use back-up diesel generators, this facility would provide its own on-site power generation using gas turbines. To assure compliance with air quality standards, 80 of the facility gas turbines would each be equipped with stacks that were 198 feet tall. [18]

[17] Washington Department of Ecology, Data centers regulated or reviewed by Ecology (listed by city), https://ecology.wa.gov/air-climate/air-quality/data-centers

[18] Perales, Allmon & Ice, P.C., Request for Contested Case Hearing regarding Application by Fermi Equipment

When wind blows over a building or structure it causes aerodynamic downwash which pulls the stack emission plume towards the ground causing higher concentrations. A generator located *next to a building and equipped with no stack or a short stack is more likely to experience* downwash. A rule of thumb is that stacks need to be 2.5 times the nearest building or structure height to avoid influence from winds blowing over the building. This stack height is referred by USEPA to as "Good Engineering Practice" or GEP stack height. [19]

If no dispersion modeling analysis is conducted for proposed data center diesel generators it would be reasonable to ask that all stacks meet the GEP criteria to assure adequate dispersion of the emissions.

**Buildings and Structures**

When a dispersion modeling analysis is conducted, it will consider the dimensions of data center buildings and structures and thus identify high impacts associated with aerodynamic downwash. If no analysis is conducted, the high impacts associated with downwash will not be identified.

**Property boundary and fences**

When shorter or no stacks are used for diesel generators, air pollutant concentrations are typically highest close to the AI data center and decrease further away. Under prior USEPA policy, the facility property was considered "ambient air" which must comply with the NAAQS. The facility could only be excluded if there is a fence installed along the entire perimeter to preclude public access. In 2019, USEPA updated its interpretation and allowed other measures like regular patrols, cameras, and perhaps signage.[20] In any case, it's important the data center has a fence or suitable measure to keep the public off their property.

This USEPA policy on a fenced property boundary applies to the major source PSD air permits. At a minor source, local or state agency policy determines where ambient air begins and air *quality standards will apply.*

**LOCAL CONDITIONS**

When evaluating the air quality impacts of an AI data center, unique local conditions should be considered. These include the following:

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Holdco, LLC for Proposed Air Quality Permit Nos. 181009, PSDTX1670, and GHGPSDTX254, Submitted to Texas Commission on Environmental Quality, January 20, 2026.

[19] USEPA, Guideline on Air Quality Models; Enhancements to the AERMOD Dispersion Modeling System, 95056 Federal Register / Vol. 89, No. 230 / Friday, November 29, 2024 / Rules and Regulations, 7.2.2.1 Good Engineering Practice Stack Height.

[20] USEPA, Revised Policy on Exclusions from "Ambient Air", December 2, 2019. https://www.epa.gov/sites/default/files/2019-12/documents/ambient_air2019.pdf

**Urban vs Rural**

- Urban areas have more people who are likely to be exposed than a rural site with fewer neighbors.
- Urban areas have more existing air pollution sources including industries and mobile vehicle traffic which increase existing emissions. These existing industrial sources should be identified and included in modeling analysis with the diesel generators at an AI data center.
- Urban areas have higher background air pollutant concentrations.
- A dispersion modeling analysis should account for the location being either urban or rural, existing off-site emission sources, and appropriate background concentrations.

**Topography**

The highest pollutant concentrations are located in the center of a stack plume so:

- Diesel generators at an AI data center located in a relatively flat area will allow stack pollutants to disperse before they reach the ground.
- Diesel generators at an AI data center located in a valley or surrounding by hills will result in higher concentrations since the plume will impact land closer to the plume center. This is the situation where dispersion modeling is especially useful to understand how topography increases the anticipated air quality impacts.
- Any dispersion modeling analysis should account for local terrain.

**Meteorology**

- Any dispersion modeling analysis should use meteorology that is representative of the project location.
- Weather measurements are typically obtained from a local airport.
- A wind rose created from the hourly measurements will show predominant wind speeds and directions where data center emissions will blow.

**Non-attainment Areas or Other High Background Air Quality Areas**

- The procedures used for a dispersion modeling analysis and its purpose to demonstrate compliance with air quality standards are typically the same no matter the location. However, a data center which will impact neighborhoods that have been identified as already having significant air quality issues or significant existing health impacts should raise caution.
- The complexity of a normal dispersion modeling analysis can be increased to provide more information about the project impacts in specific neighborhoods.

- Inhalation exposure provided by the modeling analysis can be combined with other routes of exposure like food and water to provide a more complete understanding of the *combined pollution burden on nearby residents.*
- The estimated exposure can be used to support the need for add-on emission controls and post-construction monitoring of emissions and impacts.

**AIR QUALITY PERMIT REQUIREMENTS**

As the number of diesel generators installed and emissions increase, emission thresholds are likely to be exceeded so that a permit is required prior to construction.

**Major Sources**

The type of air pollution construction permit and its requirements vary depending on the total allowable or potential emissions from a proposed data center. The potential emissions include *any legally enforceable restriction on emissions, operating hours or fuel usage.*

If total potential emissions from any single criteria air pollutant exceeds 250 tons per year (tpy), then the project is classified as "major" and requires a Prevention of Significant Deterioration or PSD construction permit. While the local or state agency may have authority to issue a PSD permit, it must follow USEPA and state policies and regulations.[21] One would expect major source data center requirements to be the same no matter the location within the U.S. However, it is not unusual to find slightly different interpretations by each local or state program. These differences may include the cost threshold at which add-on control options are no longer considered feasible, procedures to determine background air quality, or the number of off-site sources to be considered in the dispersion modeling analysis.

Significant PSD requirements include:

- Use of Best Available Control Technology to control emissions.
- An air quality impact modeling analysis to verify compliance with the NAAQS.
- An analysis of impacts on nearby Class I areas such as national parks.
- *An opportunity for public comments on the draft permit.*

The example data center shown in Table 4 limited to 500 hours per year of operation has maximum emissions of NOx and CO which are well above 250 tpy. Without any enforceable restrictions, the diesel generators at this AI data center would be subject to the PSD permit requirements.

[21] USEPA, Prevention of Significant Deterioration Basic Information, https://www.epa.gov/nsr/prevention-significant-deterioration-basic-information

The diesel generators at an AI data center required to obtain a major source PSD construction air permit would have a more stringent and protective level of analysis and emissions control *such as:*

- The BACT requirement would most likely demand the use of Tier 4 emission controls for the diesel generators. This add-on air pollution control equipment would reduce emissions by more than 90%. It includes Selective Catalytic Reduction (SCR) control systems to reduce NOx emissions, oxidation catalyst control systems to reduce CO and VOC emissions, and diesel particulate filters (DPF) to reduce PM emissions. Any technically feasible emission control method must be evaluated. For example, a data center in New Jersey also equipped its natural gas-fired reciprocating engine generators with wet scrubbers and biofilters.[22]
- The air quality impact analysis would evaluate the high hourly emissions from the diesel generators, and include off-site existing sources of emissions in the surrounding area. The USEPA approved dispersion model AERMOD provides accurate estimates of air quality impacts within 50 km of project site, so could evaluate impacts of all off-site industrial sources within this radius.

**Synthetic Minor Sources**

To avoid the delay and additional regulatory requirements of a PSD permit, most AI data centers using diesel generators would accept limitations on emissions, fuel consumption and operating hours to reduce potential annual emissions below 250 tpy. The example data center presented in Table 3 did accept an annual operating restriction of 50 hours per year for testing and maintenance. The actual emissions based on this 50-hour permit condition reduced NOx emissions to less than 250 tpy. In this case, a minor source construction permit, not a PSD permit, would be required.

Instead of limiting operating hours, a data center could also voluntarily install Tier 4 add-on emission control equipment. This approach would reduce annual emissions by approximately 90%. A data center which used this approach in 2025 was the Microsoft Mount Pleasant Data Center in Mount Pleasant, Wisconsin.[23]

Minor source construction permit requirements for a new or modified AI data center vary by *local or state agency. It would not be uncommon for a local or state agency to require no* emission controls and no air quality impact analysis for data center diesel generators. By

[22] Air Permit Application, DataOne USA, LLC, Vineland, NJ, December 16, 2025.
[23] WDNR, Air Pollution Control Construction Permit #24-MIN-238, Microsoft Mount Pleasant Data Centers, January 10, 2025.

avoiding the need for the major source PSD permit, a data center would be allowed to have very high uncontrolled hourly emissions with no analysis of its air quality impacts.

Diesel generators classified as either a major source or a minor source can both have high hourly emissions and high short-term impacts. By limiting its annual emissions, the minor source has avoided an evaluation of those impacts. Even if a project is a minor source, the applicant for a minor source permit or the agency issuing the permit should still conduct a modeling analysis to determine the air quality impacts.

**Staged Projects**

Often an AI data center will be built in stages in response to greater demand for its services. Additional diesel generators may be added to the facility after initial construction has been completed.

A data center which has already been issued a major source permit has emissions of any pollutant above 250 tpy. Subsequent expansions by adding new diesel generators are subject to major source permit requirements if expansion emissions exceed the PSD significant emission rates (SER). These SER are much lower that 250 tpy. For PM2.5 and NOx, the thresholds are 10 tpy and 40 tpy, respectively. Limits on operating hours and fuel usage may be established for the new diesel generators to keep their emissions below the SER.

A data center issued a minor source permit as a synthetic minor source would have emissions of any pollutant below 250 tpy. At a later date, it could expand by adding diesel generators with emissions up to, but not exceeding, another 250 tpy, and avoid major source permit *requirements for modifications*.

Air permit requirements are less stringent for minor versus major sources. There is incentive to stage a project to keep total emissions below the major source emission thresholds. For this reason, expansion of an existing data center should be evaluated for potential circumvention of the major source PSD rules by purposely staging a larger project into small projects with lower emissions. The smaller projects may each have emissions below the thresholds at which major source permit would be required, while the larger project when smaller projects are combined would exceed the threshold.

In 2009, USEPA published rules describing *"the principles of project aggregation that we would apply when determining whether a source had unreasonably segregated a single project into multiple projects, thereby circumventing the NSR permitting requirements."*[24] Later in 2018,

[24] Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR): Aggregation and Project Netting (74 FR 2376; January 15, 2009).

USEPA confirmed these rules.[25] Any expansion of an existing data center should be evaluated to determine if emissions from the new project should be combined with prior projects at the *same facility.*

**Permit Thresholds for Non-attainment Areas**

The PSD construction air permit requirements apply to air pollutants for the which the project location complies with the NAAQS. This is a considered an attainment area. Areas which do not *comply with the NAAQS, typically urban areas, are considered non-attainment areas for that air* pollutant. For these non-attainment area pollutants there are lower annual emission thresholds such as 25 or 50 tpy at which unique non-attainment areas requirements. These requirements may include emission offsets or use of add-on control equipment. To avoid these non-attainment area requirements, an AI data center may limit fuel usage or operating hours to keep *annual emissions of that specific air pollutant below the non-attainment area threshold.*

**Title V Operation Permit Thresholds**

Once a new AI data center has been constructed, it will receive an operation permit under federal Title V or 40 CFR Part 70 regulations. The major source operation permit threshold is 100 tpy. *To avoid unique major source requirements such as compliance inspections, semi-*annual monitoring reports, and more frequent agency inspections, a new AI data center may limit fuel usage or operating hours to keep annual emissions of any air pollutant below the Title V major source threshold.

**LOCAL AND STATE REQUIREMENTS FOR DIESEL GENERATORS AT DATA CENTERS**

The federal PSD regulations provide a consistent set of air pollution permit requirements when the emissions from multiple diesel generators at an AI data center are large enough to be considered a major source. However, for diesel generators at AI data centers which limit annual emissions to be classified as a minor source, there are a wide range of policies and rules that have been adopted by local and state regulatory agencies for issuance of air pollution permits to owners or operators of data centers.

The minimum requirements for diesel generators are those established by USEPA. These include the Tier 2 and Tier 4 emission limits, and associated recordkeeping for generator maintenance and operating hours.

[25] Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR): Aggregation; Reconsideration, Last updated on February 20, 2026, https://www.epa.gov/nsr/prevention-significant-deterioration-psd-and-nonattainment-new-source-review-nnsr-aggregation

Here is a short overview of additional diesel generator requirements enforced by local and state regulatory agencies:

**Wisconsin Department of Natural Resources (WDNR)**

The WDNR has not adopted any new air pollution policies and regulations to reflect the surge in the construction of data centers in Wisconsin. The agency uses its existing policies and rules when evaluating diesel generators at data centers. This approach is the same as for an industrial facility installing one or two backup generators, so has not been updated to reflect the numerous generators installed at data centers.

Emergency diesel generators must comply with the USEPA Tier 2 emission standards, so no add-on control equipment is necessary. There is nothing in the WDNR guidance to cover potentially increased frequency and length of diesel generator use in such large quantities to manage voltage/frequency disturbance events.

There is little or no dispersion modeling to verify compliance with the NAAQS or HAP standards. Emergency generators are considered intermittent sources following USEPA modeling policy, so there is no modeling of compliance for the 1-hour NAAQS for NO2. A state-only policy concludes that direct PM2.5 emissions cannot cause an exceedance of the NAAQS so no modeling is conducted to verify compliance with the 24-hour and annual average NAAQS for PM2.5. Under the state HAP rules, HAP emissions from the combustion of diesel fuel are exempt from HAP air quality standards.[26]

**Virginia Department of Environmental Quality (VDEQ)**

VDEQ has a dedicated data center web site explaining air permit approval procedures.[27] It recently proposed to update its air permit requirements for data centers equipped with diesel generators.[28] While these generators are typically designed to meet USEPA Tier 2 requirements with no add-on emission controls, VDEQ has proposed to require that all generators for applications received after July 1, 2026 be equipped with the USEPA Tier 4 controls including selective catalytic reduction (SCR) systems or equivalent for NOx emission control, a diesel oxidation catalyst system or equivalent for carbon monoxide control, and a diesel particulate filter (DPF) or equivalent for PM emission control.

**Oregon Department of Environmental Quality (ODEQ)**

[26] These state-only policies are likely inadequate to protect public health and may not be legally defensible.
[27] VDEQ, Issued Air Permits for Data Centers, https://www.deq.virginia.gov/news-info/shortcuts/permits/air/issued-air-permits-for-data-centers
[28] VDEQ, Memorandum - APG-576* - Diesel Engine-Generator Set Procedure for Writing New and Modified Permits, December 29, 2025.
https://www.deq.virginia.gov/home/showpublisheddocument/33241/639059863912930000

ODEQ has a dedicated data center web site explaining air permit approval procedures.[29] ODEQ expects data centers using diesel generators that are proposed to meet the federal Tier 2 *emission standards to conduct facility-specific dispersion modeling for short-term* NAAQS compliance and the Clean Air Oregon Level 3 risk assessment process for HAP.

More recently, ODEQ has created a Tier 4 Streamlined Data Center Permit. When Tier 2 generators are equipped with technology that controls DPM, NOx and VOC and thus meet Tier 4 emission standards, they are not required to conduct facility-specific dispersion modeling.

**Washington Department of Ecology (WDOE)**

WDOE has a dedicated data center web site explaining air permit approval procedures and provides copies of prior air permits and air quality impact analyses.[30] When required, a data center must conduct a dispersion modeling analysis and prepare a health impact assessment of *their toxic air pollution for diesel exhaust and nitrogen dioxide. WDOE has published air* permit and health impact assessments prepared for 22 data center projects. State only requirements for a new AI data center limit the combined cancer risk from toxic air pollutants to less than 10 in one million.[31]

**EXAMPLE DATA CENTER PROJECTS**

**Lavender Fields Holdings LLC, Michigan City IN[32], [33]**

This data center was issued IDEM Permit No. T091-49561-00195 and applied for a modification to double the number of generators. It will equipped with one hundred and thirty-two diesel-fired critical emergency generators with combined generating capacity exceeding 400 MW. *Generators are designed to comply with USEPA Tier 2 emission limitations so their emissions* will be uncontrolled. NOx and CO emissions were synthetically limited in the application to 245 tpy to keep them below major source threshold of 250 tpy, and thus avoid the major source PSD requirements including BACT and ambient air modeling. Potential emissions from other air pollutants assume 500 hours per year of operation. An increased frequency and length of diesel *generator use to manage voltage/frequency disturbance events was not modeled. IDEM*

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[29] ODEQ, Tier 4 Streamlined Data Center Permit, https://www.oregon.gov/deq/aq/aqpermits/pages/data-center-permit.aspx

[30] WDOE, Diesel pollution from data centers, https://ecology.wa.gov/air-climate/air-quality/data-centers

[31] WDOE, Health Impact Assessment Recommendation Document for CyrusOne Data Center Quincy, Washington, April 2019. https://ecology.wa.gov/getattachment/6abc4aa7-6b4b-434b-a76b-a35f5089f8aa/20190425CyrusOneTier2HIARec.pdf

[32] Indiana Department of Environmental Management, Lavender Fields Holdings LLC, Permit No. T091-49561-00195, New Source Construction and Part 70 Operating Permit, Addendum to the Technical Support Document (ATSD) for a New Source Construction and Part 70 Operating Permit, Technical Support Document (TSD) for a New Source Construction and Part 70 Operating Permit.

[33] Olsson, Air Construction Permit Application for Lavender Fields Holdings LLC, June 15, 2026.

estimated emissions of organic HAP but not inorganic HAP. Since the PSD requirements did not apply, no dispersion modeling analysis was conducted to verify compliance with the NAAQS or HAP air quality standards. In response to public comments, IDEM notes it has no authority to require specific technology (such as Tier 4 add-on control equipment), or down-wind fenceline ambient monitoring. A public meeting held December 9, 2025. The draft permit was submitted to USEPA for review on March 4, 2026. A final permit has not been issued.

**Vantage Data Centers Management Company, LLC, Port Washington, WI[34]**

This Vantage WI-1 Data Center project will be issued WDNR Construction Permit No. 25-MIN-094. It is equipped with forty-five (45) diesel-fired emergency generators with combined generating capacity of 87 MW. The generators were designed to comply with USEPA Tier 2 emission limitations so the emissions are uncontrolled. An annual fuel usage limitation was established to limit potential annual emissions. Potential NOx emissions were 49 tpy and less than the major source threshold of 250 tpy. The hourly total emission rate of NOx is 200 times the annual average emission rate. The WDNR did conduct dispersion modeling for the annual average NAAQS for NO2 using the annual average emission rate and determined compliance. This approach is typical for intermittent sources approved in Wisconsin. No further dispersion modeling was conducted due to WDNR policies which: 1) eliminate modeling for compliance with the 1-hour NAAQS for NO2 for intermittent sources, 2) assume no direct PM2.5 emissions can cause an exceedance of the NAAQS, and 3) combustion of diesel fuel is exempt from state HAP air quality standards. Public meeting was held on April 14, 2026.

It's worth noting that the Vantage project in Wisconsin was required to conduct no dispersion modeling analysis and use no add-on emission control equipment. However, for its smaller project in Washington State, Vantage was required to evaluate its impacts and use add-on controls. The Vantage Data Center – WA-13 Expansion Project in Quincy, WA was required to conduct a health assessment in 2022. The health assessment evaluated air quality impacts due to emissions of NOx and HAP. Cancer risks were assessed for carcinogenic TAP and compliance with state acceptable source impact levels were determined for other non-carcinogenic HAP. WDOE eventually required the diesel generators at this site to comply with the federal Tier 4 emission control requirements including the installation of add-on particulate and nitrogen oxide controls consisting of catalyzed diesel particulate filters and selective catalytic reduction to further reduce emissions.

[34] WDNR, Preliminary Determination for the Construction Permit for the Proposed Construction of a Data Center and Analysis and Preliminary Determination for the Operation Permit for a Data Center for Vantage WI-1 to be Located at N43430735 W 87861494, Port Washington, Ozaukee County, Wisconsin, Construction Permit No.: 25-MIN-094, Operation Permit No.: 24618528A-F01, Facility ID No.: 24618528, February 26, 2026.

Sierra Club and Midwest Environmental Advocates arranged for a dispersion modeling analysis to be conducted for the Vantage project in Wisconsin. The modeling results were submitted to the WDNR during the public comment period on the draft permit. This analysis shows that if the generators operated continuously for the entire year the following impacts would occur: 1) the 1-hour average NAAQS for NO2 would be exceeded, 2) the annual average NAAQS for PM2.5 would be exceeded, and 3) the combined off-site inhalation cancer risk would exceed one in one million.[35]

Figure 1 presents the NO2 modeling results for the Vantage WI-1 Data Center submitted to the WDNR for consideration. These are based on all proposed diesel generators operating continuously throughout the year. The maximum 1-hour average NO2 concentration was predicted to be 2,542 $\mu g/m^3$, well above the NAAQS of 188 $\mu g/m^3$. Violations of the NAAQS are predicted to be exceeded out to a distance of 16 km or 10 miles.

This is an example of a data center located in flat terrain. Had it been located in a valley, the impacts would have increased significantly.

Since there is no limitation on the operating hours of the generators during emergencies, these results are technically possible. An example of emergency use would be the management of voltage/frequency disturbances.

[35] Evaluation of Air Quality Impacts of Vantage WI-1 Data Center, Memorandum from S. Klafka, P.E., BCEE, Wingra Engineering to E. Ward, Director, Sierra Club, Wisconsin Chapter and M. Gelf, Legal Fellow, Midwest Environmental Advocates, April 13, 2006.

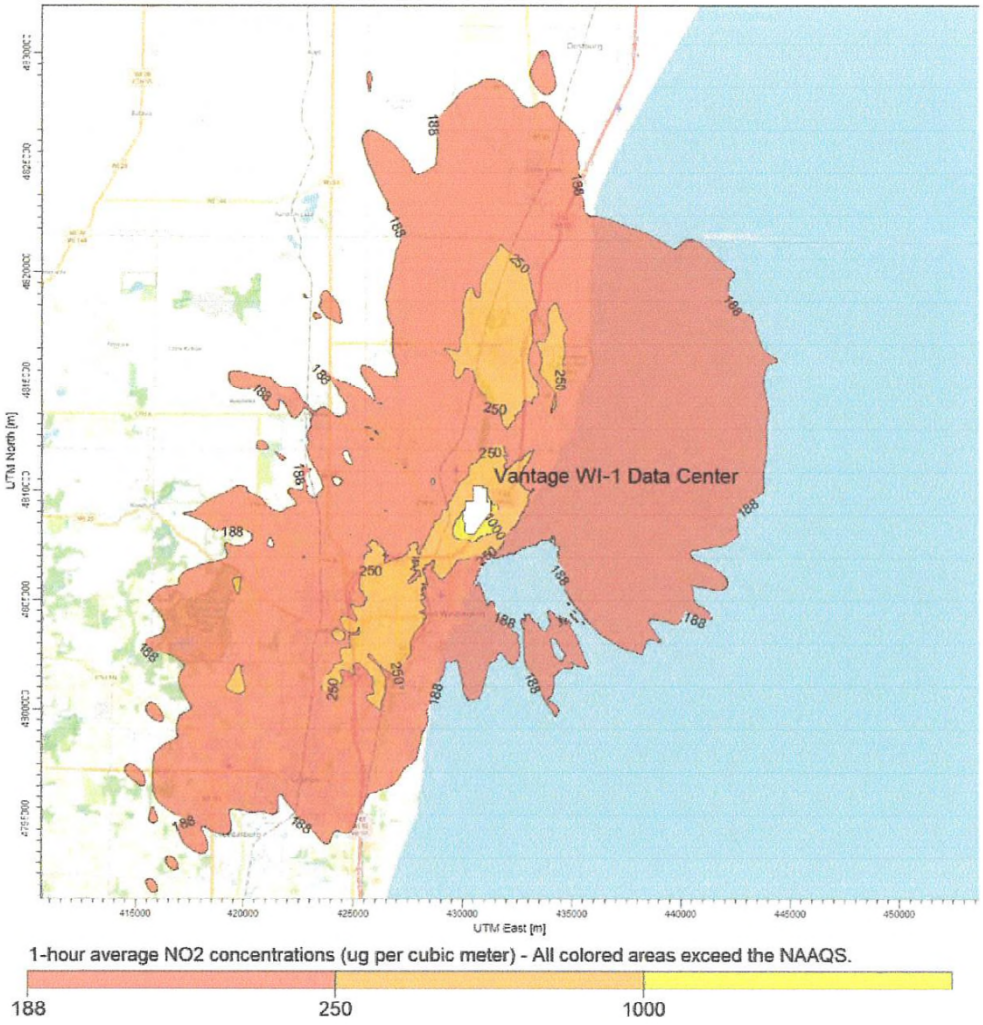



***Figure 1 – Vantage WI-1 Data Center Predicted 1-hour Average $NO_2$ Concentrations***

**DATA CENTER AIR PERMIT EVALUATION PROCEDURES**

When evaluating a new or existing data center equipped with a large number of diesel generators for backup power, here is a list of issues to consider and design alternatives for reducing the project air quality impacts:

**Emission Estimates**

- If not already provided in the permit application, the reviewing agency should provide emission estimates of all criteria air pollutants and HAP.
- USEPA emission factors for large stationary diesel and all stationary dual-fuel engines are typically used to estimate emissions of criteria air pollutants and organic HAP.[36] This section does not provide factors for inorganic HAP but these are available from USEPA for the combustion of distillate fuel oil.[37]
- Estimates should include peak hourly emissions, approved annual emissions based on any proposed limitations on fuel consumption or operating hours, and maximum annual emissions assuming full-time operation for the entire year.

**Dispersion Modeling**

- If not already provided in the permit application, a dispersion modeling analysis should be conducted by the reviewing agency to verify compliance and identify possible exceedances of the NAAQS and air quality standards for HAP emissions.
- The modeling analysis should use local meteorology, topography, fenced property boundaries, and consider the downwash effects of data center buildings and structures.
- While maximum concentrations are typically provided for comparison with air quality standards, the concentrations which occur in overburdened neighborhoods should be provided with the results. Figures displaying concentration contours or isopleths should be provided to show the extent of likely air quality impacts.
- For a modeling analysis, the maximum predicted air pollutant concentrations due to emissions from the data center are typically added to background concentrations representative of the location, and the total is then compared with the NAAQS. If there are existing air pollution sources in the area, the background concentration will be high and closer to the NAAQS. It is important that a representative and high background concentration be selected.

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[36] USEPA, AP-42: Compilation of Air Emissions Factors from Stationary Sources, 3.4 Large Stationary Diesel And All Stationary Dual-fuel Engines, April 2025. https://www.epa.gov/system/files/documents/2025-04/c03s04_april2025.pdf, April 20, 2026.
[37] USEPA, AP-42: Compilation of Air Emissions Factors from Stationary Sources, 1.3 Fuel Oil Combustion, May 2010, https://www.epa.gov/sites/default/files/2020-09/documents/1.3_fuel_oil_combustion.pdf, April 20, 2026.

- The modeling analysis may include only the diesel generators at an AI data center if it is located in a rural area and there are no other industrial sources. However, the AERMOD dispersion model approved by USEPA can provide reliable concentration estimates for an area within 50 km or 31 miles from the data center. If there are other industrial sources within this distance, they should be included with the data center to determine the combined impact and compliance with the NAAQS.
- If no dispersion modeling analysis will be conducted for a project, request that the stack heights be no lower than GEP to assure adequate dispersion of air pollutant emissions.
- If no dispersion modeling analysis will be conducted for a project, request that diesel generators be equipped with add-on emission control equipment which comply with USEPA Tier 4 emission limitations.

**Compliance Demonstration and Testing**

- Any limitations on total operating hours or fuel usage should be verified with permit recordkeeping requirements that are publicly available. These limits on hours and fuel usage are typically established so the project is classified as a synthetic minor source for air permit requirements.
- Records of the actual operation of each diesel generator should be included in the permit recordkeeping to help investigate future complaints or air quality problems.
- A limitation on operating hours for emergencies including voltage/frequency disturbances should be established. Otherwise, the emission estimates and modeling analysis should be based on full-time operation, 8,760 hours per year.
- Request that stack testing be conducted after construction to verify compliance with air permit and USEPA emission limitations.

**Ambient Monitoring**

- A dispersion modeling analysis should identify the locations of maximum off-site impact on a figure of the project area.
- Ambient monitors should be located at the point of maximum off-site air quality impacts to verify compliance with the NAAQS.
- While USEPA and state agencies operate monitoring networks, these are primarily designed to measure regional background concentrations not the impacts of specific industrial air pollution sources like data centers.
- The types of monitors already in use by the USEPA and state agencies are ideal since they have established design, maintenance and certification procedures. However, their large costs limit adoption.
- Typically, each air pollutant requires its own type of monitor or sampling method.

- The air pollutants anticipated to have the greatest impacts relative to their NAAQS would be NO2 and PM2.5. These would be the first choice for ambient monitoring.
- *Low-cost air quality monitors and sensors are supported by USEPA and are now in* widespread use by individuals and government agencies. [38]
- Thousands of low-cost sensors sold by PurpleAir are in wide use, and continuous report PM2.5 measurements to the internet for public access.[39]
- The NAACP policy recommendations for data centers in Maryland include ambient *monitoring: "Implement community-led monitoring (low-cost air sensors for GHGs and* co-pollutants)".[40]
- To supplement USEPA and state agency regional monitors, communities have installed low-cost monitoring networks. Denver has established a low-cost monitoring network for 17 air pollutants which continuous measurements uploaded to the internet.[41] *Madison, Wisconsin operates 45 sensors for PM2.5.*[42]
- Request that the air permit for a data center require development of a monitoring plan for the installation of low-cost monitors and sensors to provide continuous measurements at the point of maximum impact, and at numerous sensitive locations around diesel generators at the AI data center to accommodate changes in wind *directions and include more impacted neighborhoods.*

**Distance and Vegetation Buffers**

- Air quality impacts decrease with distance so the larger the buffer area between the diesel generators at an AI data center and sensitive receptors (i.e. residential areas, *schools, daycare centers, etc.), the better.*
- Vegetation and landscaping berms may reduce large fugitive dust emissions from roadways and construction, and also reduce noise levels.
- The NAACP recommendations for data centers suggests that:[43] "Best practice recommends minimum setbacks for sensitive receptors (schools, daycares, churches, *senior facilities) of ≥1,000 meters (≈0.6 miles) without vegetative buffers, or ≥750* meters with dense, engineered vegetative buffers designed for particulate interception."

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[38] USEPA, Air Sensor Toolbox, https://www.epa.gov/air-sensor-toolbox
[39] https://www2.purpleair.com/
[40] NAACP, The Peoples Report, p.28, A Gap Analysis of Data Center Infrastructure in Prince George's County, Maryland.
[41] City of Denver, Love My Air, https://denver.lovemyair.com/
[42] City of Madison, Air Quality Monitoring for Our City, https://www.cityofmadison.com/sustainability/climate/air-quality
[43] NAACP, The Peoples Report, p.30, A Gap Analysis of Data Center Infrastructure in Prince George's County, Maryland.

**Alternative Project Design**[44]

- Reduce or eliminate diesel generators usage by installing battery energy storage.
- Reduce diesel generator usage by eliminating operation for momentary grid disturbances, bridging power, demand response, planned outages, or primary power.
- Reduce diesel generator usage by improving electrical grid reliability with electrical storage, or upgrades to the aging distribution network.
- Reduce diesel generator usage by designing power controls to ride through momentary grid disturbances rather than immediately switching to backup power.
- Reduce diesel generator usage and required capacity by using more efficient data center design with load shifting or delaying workloads.
- Tier 4 add-on control equipment is readily available as a voluntary measure to reduce air quality impacts.

**BIBLIOGRAPHY**

**NAACP, The People's Report: A Gap Analysis of Data Center Infrastructure in Prince George's County, Maryland (March 2026).**

Task Force assessment of impacts of AI-driven data centers in Prince George's County, Maryland identifying information gaps related to environmental justice and civil rights, air quality, energy justice, and water infrastructure. Provides recommendations that are equity, justice, and health focused.

**Center for Study of Science, Technology and Policy, The Diesel Generator Dilemma: Reliable *Power, Unwanted Emissions*.**

Reviews diesel generator usage in India noting they contribute 7%–18% of the total air pollution in non-attainment cities. Provides a history of improvements including new emission standards, installation of add-on controls, and use of dual-fuel generators, emission and testing standards, and recommendations for future improvements including maintenance requirements and changing to other energy alternatives like solar panels, batteries and hydrogen fuel cells.

**Tong, Z. and Zhang, K.M., The near-source impacts of diesel backup generators in urban environments, Atmospheric Environment 109 (2015) 262-271.**

A dispersion modeling analysis was conducted to evaluate particulate matter concentrations downwind of a diesel generator in urban street canyons. Tall buildings cause recirculation of

[44] Better Data Center Project: Diesel Generators at Data Centers: Status, Impacts, and Protective Practices, March 2026. https://betterdatacenterproject.com/resources/diesel-generator-report, April 20, 2026.

emissions and high PM concentrations. Suggests the location of generators considers air flow around buildings and away from fresh air building intakes.

**Better Data Center Project: Diesel Generators at Data Centers: Status, Impacts, and Protective Practices, March 2026.**

Reviews the ubiquitous presence of diesel generators at data centers, the air, noise, spill and climate impacts, and best practices to reduce harm.

**Northern Virginia data center air pollution rivals power plant emissions, VCU research finds https://news.vcu.edu/article/northern-virginia-data-center-air-pollution-rivals-power-plant-emissions; https://scholarscompass.vcu.edu/isee_pubs/3/**

Examines the actual and future emissions backup generators at data centers in Northern Virginia, compares them to other sources, correlates them with demographic characteristics *such as race, income, and education.*

**Inside Climate News, Virginia Regulators Weigh Expanded Use of Data Center's Polluting Generators**
**https://insideclimatenews.org/news/15122025/virginia-regulators-weigh-expanded-use-of-data-centers-polluting-generators/, December 15, 2025**

The state's Department of Environmental Quality would expand permissible uses during emergencies to include "planned outages" by grid operators, presumably for power line *upgrades. Environmentalists say that with expanded use of diesel generators comes more* harmful air pollutants and more greenhouse gases.

**Data Centers' Use of Diesel Generators for Backup Power Is Commonplace—and Problematic**
https://insideclimatenews.org/news/12112025/data-center-diesel-generators-noise-pollution/

"Energy analysts and environmentalists say diesel generators are expensive, noisy, highly polluting and exempt from Clean Air Act regulations in times of energy "emergencies."

**AI's deadly air pollution toll**
https://news.ucr.edu/articles/2024/12/09/ais-deadly-air-pollution-toll

This article summarizes a recent UC Riverside paper, *The Unpaid Toll: Quantifying and Addressing the Public Health Impact of Data Centers*, UC Riverside, R1T, Caltech, October 2025. *This paper introduces a principled methodology to model lifecycle pollutant emissions for data* centers and computing tasks, quantifying the public health impacts. Researchers found that:

"Computer processing demands for artificial intelligence, or AI, are spurring increasing levels of deadly air pollution from power plants and backup diesel generators that continuously supply *electricity to the fast-growing number of computer processing centers.*"

and,

"For example, pollution from backup generators at data centers in Northern Virginia drifts into Maryland, West Virginia, Pennsylvania, New York, New Jersey, Delaware, and the District of *Columbia, creating regional public health costs of some $190 million to $260 million a year. If* these backup generators emit at their maximum permitted level, the annual cost will become 10-fold and reach $1.9 billion to $2.6 billion."

# Moville Townhall Questionnaire Results

## September 21, 2026

**Public Town Hall Questionnaire Analysis**

This report summarizes responses collected at the September 21, 2026 Woodbury County Zoning Commission town hall meeting in Moville, Iowa. The questionnaire was not designed as a scientific survey and should not be interpreted as statistically representative of the county population. Results are descriptive only and reflect opinions voluntarily provided by some attendees and respondents.

## Executive Summary

A total of 36 completed or partially completed questionnaires contained identifiable response data. The overwhelming trend among respondents was opposition to data centers in unincorporated Woodbury County. Key recurring concerns included water consumption, electrical demand, impacts on farmland, environmental protection, noise, wildlife effects, long-term land use compatibility, emergency service impacts, and concerns that costs could be shifted to local residents.

## Response Distribution by Location

| Location | Responses |
|---|---|
| Moville, Lawton, Highway 20 corridor | 24 |
| Sloan, Salix, Sergeant Bluff, I29 Corridor | 7 |
| Eastern Woodbury County (Correctionville, Anthon, Pierson, Danbury, Oto, and nearby) | 3 |
| Countywide, no single area | 1 |
| Blank | 1 |

## Overall Feeling Toward Data Centers

| Feeling | Count |
|---|---|
| Strongly Oppose | 25 |
| Oppose | 6 |
| Neutral, Unsure | 4 |
| Support | 1 |

**Question Asked: "Overall, how do you feel about allowing data centers in unincorporated Woodbury County?"**

Most respondents indicated either opposition or strong opposition. Only a small number expressed support, neutrality, or uncertainty. This indicates that attendees choosing to complete questionnaires generally held negative views toward data center development in unincorporated areas.

## Preferred Policy Viewpoint

| Viewpoint | Count |
|---|---|
| Prohibit data centers in unincorporated Woodbury County | 28 |
| I need more information before choosing | 4 |
| Allow them only in limited industrial locations, with a public hearing and strict standards | 3 |
| Encourage them as economic development, including incentives, if standards are met | 1 |

**Question Asked: "Which statement is closest to your view?"**

Most respondents indicated prohibition while a handful reported that they would need more information or to allow them only in limited industrial locations with public oversight and standards.

## Zoning Eligibility Preferences

| Location Type | Never | Only by CUP | Allowed | Preferred | Unsure |
|---|---|---|---|---|---|
| General Industrial | 22 | 4 | 2 | 6 | 1 |
| Other Industrial Districts | 22 | 3 | 1 | 3 | 6 |
| Special Data Center Overlay | 23 | 2 | 2 | 0 | 6 |
| Agricultural Preservation (AP) | 29 | 0 | 1 | 0 | 4 |
| Commercial Districts | 24 | 0 | 2 | 2 | 3 |
| Rural Residential Areas | 32 | 0 | 0 | 0 | 2 |
| Prime Farmland / High CSR | 34 | 0 | 0 | 0 | 1 |
| Floodplain or Mapped Sensitive Areas | 33 | 0 | 0 | 0 | 2 |
| Loess Hills / Scenic or Conservation Areas | 35 | 0 | 0 | 0 | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Next to Existing High-Voltage Lines or Substations | 28 | 0 | 2 | 2 | 4 |
| Next to I29 or Other Major Highways | 29 | 1 | 2 | 1 | 2 |

**Question Asked: "In which zoning settings should data centers be eligible to apply? – one mark per row"**

Across nearly all location categories, the most frequent response was "Never." The strongest opposition occurred for prime farmland/high CSR land, floodplains, scenic conservation areas, and rural residential locations. Responses generally suggest participants preferred avoiding data center development in agricultural and environmentally sensitive locations. Where support existed, it tended to be associated with industrial areas, highway corridors, or locations near existing electrical infrastructure.

## Qualitative Analysis of Open-Ended Responses

Open-ended comments were heavily focused on perceived impacts rather than potential benefits. Several major themes emerged repeatedly.

### *Water Resources*

Water use was one of the most frequently cited concerns. Respondents referenced water consumption, water pollution, evaporation, protection of local water supplies, and preference for closed-loop cooling systems.

### *Energy and Utility Infrastructure*

Many respondents expressed concern regarding electrical demand, power grid capacity, substations, utility infrastructure costs, and the possibility of increased electricity costs for residents.

### *Farmland and Rural Character*

Preservation of productive agricultural land was a dominant theme. Numerous comments argued that prime farmland should remain available for agricultural production rather than industrial development.

### *Environmental and Wildlife Impacts*

Respondents raised concerns about pollution, wildlife impacts, soil protection, air quality, noise, lighting, waste streams, and broader environmental consequences.

### *Economic and Governance Concerns*

Several comments questioned tax incentives, public subsidies, infrastructure costs, developer accountability, and whether decisions reflected community preferences.

### *Decommissioning and Long-Term Viability*

Some participants questioned the useful life of facilities and requested bonding, decommissioning plans, and protections against abandoned facilities.

## Key Terms Mentioned in Narrative Responses

| Theme | Approximate Mentions |
|---|---|
| Water | 26 |
| Ag | 13 |
| Environment | 12 |
| Noise | 10 |
| Electric | 7 |
| Energy | 5 |
| Ordinance | 5 |
| Tax | 4 |
| Community | 4 |
| Permit | 4 |
| Wildlife | 3 |
| Farmland | 2 |

## Relationship to Public Meeting Discussion

The questionnaire responses were generally consistent with themes discussed during the public town hall meeting. Meeting participants frequently discussed water usage, energy demand, agricultural land preservation, environmental impacts, emergency services, taxation, infrastructure, and the distinction between local-scale data centers and hyperscale facilities. Survey responses closely mirrored these topics and reinforced concerns voiced during public comment.

## Conclusions

The questionnaire results indicate that the 36 responding participants who completed questionnaires were predominantly opposed to permitting data centers in unincorporated Woodbury County. While a small number of respondents expressed support for limited development within industrial settings or requested additional information, the dominant perspective favored prohibition or highly restrictive regulation. The most significant issues identified by respondents were protection of water resources, preservation of farmland, environmental stewardship, electrical infrastructure impacts, community input, and long-term accountability of developers. Because the questionnaire was voluntary and non-scientific, these results should be interpreted as descriptive public input rather than a statistically representative survey of county residents.

## Open-ended Responses

| *What is your overall view on whether the county should create a specific ordinance for data centers?* |
|---|
| Don't Do it They will be Something new within 10-15 years |
| We don't want a mega/or any Data Center It will be obsolete in a few years |
| I am opposed to all data centers—anywhere in the county. |
| Blank |
| There should be a bar on hyperscale data centers in the unincorporated areas. |
| Yes we need a specific ordinance. Data Centers are unnecessary to Woodbury Co success + growth. |
| Very Restrictive Ordinances— |
| Blank |
| Blank |
| Blank |
| They shouldn't be allowed in Woodbury County |
| Blank |
| Negative development / preserve ag land / rural America |
| If happens regulation is needed. Concern for power grid, natural resources, etc. |
| They should never be permitted. |
| Blank |
| Do not want data centers in Woodbury County |
| Do not want data centers in Woodbury County |
| Needs guidelines on placement, size, and overall impact on Woodbury County. |
| The city, county, state, and federal government should copletely outlaw AI data centers. |
| Blank |
| No, the people of Woodbury County oppose data centers. Ultimately, that is all that matters. |
| No data centers! |
| I think there should be a commercial area for these not where farms are affected or homes. |
| Blank |
| Not sure |
| They shouldn’t be allowed |
| No data center in Woodbury County |
| Blank |
| There should not be any. |
| An ordinance prohibiting them. |
| Absolutely, a specific ordinance needs to be developed. |
| Blank |
| Yes they should |
| I believe ordinances should be put in place to ban any future data center development in all of Woodbury County unincorporated areas |
| Blank |
| Blank |
| Blank |
| Blank |

| |
|---|
| Blank |

| *What issues do you think a data center ordinance should address?* |
|---|
| Water Pollution / Noisy / Ruining good Farm Ground |
| Water Pollution / Wildlife / Noise/Light / Farmland / Infrastructure / who pays for that? |
| They should not be allowed—Why? Environmental concerns / higher energy prices / water usage/costs |
| Blank |
| 1) Little to no water use. Monthly reports. [remainder struck/illegible] |
| 1. Water use should not be given up for A.I 2. Electricity use, lost to the people at all 3. Noise 4. Land use 5. Danger to humans & animals |
| Pollution - Water Use - E. Waste Preservation of Farmland |
| Blank |
| Blank |
| Blank |
| The effects on wild life and all farm animals, companion and uncompanion; environment effects; water usage, position, noise, soil, what long term effects will there be |
| Blank |
| water usage / power it |
| Cost, environment protection and safety. Responsibility on data center ownership |
| How it affects the land, welfare, and surrounding areas. |
| Blank |
| The opinion of people around it. |
| The opinion of people around it. |
| See above. Comments from audience. |
| Banning them outright |
| Why put one in Salix along with Moville? What is the reasoning? |
| Blank |
| Blank |
| Blank |
| Blank |
| Not sure |
| Pollution - noise, water, soil, consuming to much water. Not good for the environment, negative impact to wildlife for animals |
| The size |
| Blank |
| See above. |
| Blank |
| Environmental / water, grid electrical, rising costs to local communities, crime, roadways, management of facilities, etc. |
| Water table, power grid |
| Water, Electricity, Noise |
| Permanent and unalterable BAN on any and all future construction of data centers and/or any support facilities they may require. |
| Blank |
| Blank |
| Blank |

| |
|---|
| Blank |
| Blank |

| *What concerns should the ordinance require decision-makers to evaluate before approving a permit?* |
|---|
| Water Pollution / They use a lot of water a lot of EVAPORATION / And pollution |
| See #2 |
| Environmental concerns / water usage / energy costs for everyone in their area |
| Blank |
| Blank |
| all of these above, the will of the people. |
| Blank |
| Blank |
| Blank |
| Blank |
| See question # 2 ! |
| Blank |
| environmental / Ag land is limited |
| Environments natural resources protection. Whose police, fire, etc. will be affected. Tax applications. |
| What it will do to the land and our water. |
| Blank |
| What happens if they leave in 5 years. Your dealing with the lawyers. Company in the world |
| Blank |
| Water usage, electrical needs, environmental impact, no data center out dated before building completed. |
| all of these above, the will of the people. |
| Blank |
| Blank |
| Blank |
| Blank |
| Blank |
| not on Ag ground |
| Everything I put in #2 |
| The beautiful farm land surrounding our Woodbury County and Moville area |
| Blank |
| Do not approve. |
| The citizens opinion, health, safety and cost. |
| Amount of resources such as electricity and water to be used. Their existence should not cause more costs and concerns to the community and surrounding areas. |
| Blank |
| Vote from the citizens |
| The actual opinions of the communities in and adjacent to any area where a data center is placed. |
| Blank |
| Blank |
| Blank |

| |
|---|
| Blank |
| Blank |

| *Are there any specific community concerns you believe the ordinance should not overlook?* |
|---|
| Raise Electric Bills for the community |
| Ask the people Vote |
| Please take into consideration that NO one wants these. Don't let any prospective tax incentives motivate you for the wrong reasons. |
| [no written responses] |
| Blank |
| 1 the noise the building + waste once the data center is obsolete |
| Risks to Emergency Services; Pollution; Water Use |
| Blank |
| Blank |
| Blank |
| does the community even want it; We don't want what is going on in Salix here! |
| Blank |
| Defiantly & on Ag or grazing land too |
| Environments, natural resources, strict regulations. Resources for taxpayers if errors, issues occur |
| How this will effect the area, and the permitting data centers will slowly reise our county. |
| Blank |
| Water, energy, noise, way for employed after built |
| Water, energy usage, noise, very few employed after it is up and running. Waste, air quality |
| Can it be compromised by other individuals of countries? |
| Mass surveillance, environmental havoc, utility and services costs. |
| Blank |
| Blank |
| Blank |
| Blank |
| Blank |
| don’t know |
| Des the community even want it. We don’t want that and going on in Salix here. |
| Water usage concerns. Electricity cost concerns for citizens. Noise concerns |
| Blank |
| Do not make an ordinance. |
| Resource depletion |
| Everything that would effect our way of life as we know it. |
| Economic development includes all business - a new development should be doing business with existing, plumbing, HVAC, etc., welding, tires, fuel, lumber, hdwe, etc. etc |
| See question #2 |
| All environmental concerns, including but not limited to soil, water, air, noise pollution, wildlife, and the vasly negative opposition the various communities have towards the type of development. |
| Blank |
| Blank |
| Blank |

| |
|---|
| Blank |
| Blank |

| *What else should be considered when drafting rules for data center permitting?* |
|---|
| Blank |
| Peoples choice |
| Please do not allow these. |
| [no written responses] |
| Blank |
| 1 NDAs for officials should be against the rules for local officials. City, County, State included |
| Decommissioning - Fully Paid Bond or escrow |
| Blank |
| Blank |
| Blank |
| No permits !!!; Keep Woodbury county great. No data center! |
| only closed loop water cooling; have the company pay for energy infrastructure; no tax incentives |
| Visit already constructed sites & hear their experience / long range impact + and — |
| Strict regulation. Environmental protection. |
| How much land will be used, how much water will be effected and the feet the destroy more than create. |
| Blank |
| Blank |
| Keep politics oft of the discussion. |
| None. Eliminate them. |
| Blank |
| Blank |
| Blank |
| Blank |
| Blank |
| Not sure |
| No permits, no data center |
| Blank |
| Blank |
| No data centers. |
| Blank |
| Everything and everything you as a board know to be a concern or potential concern. Its obvious our concerns are yours! |
| Blank |
| Just say no! We do not want one!! |
| Simply, just don't allow them. The vast majority of your constituents are heavily opposed to them in any respect as you should respect their wishes over any desires of any corporation. |
| Blank |
| Blank |
| Blank |
| Blank |
| Blank |

# Ordinance Development

The following are conceptual categories that can be used as a general guide for beginning the process to shape a potential ordinance. This includes core policy, regulatory, and practical issues. Each category is framed in a way to promote discussion. This is a draft and is subjected to changes and adjustments as necessary.

## 1. Overall, Purpose and Policy Goals

- Defining the primary objectives of regulation (protecting public health, safety, and welfare; minimizing impacts on surrounding properties, infrastructure, natural resources, and rural character).
- Balancing economic development opportunities against continuous operational effects such as noise, water demand, energy load, and long-term site management.
- Establishing whether data centers should be treated as a distinct land-use category requiring specialized standards rather than falling under general industrial rules.

## 2. Zoning District Placement and Use Classification

- Determining in which zoning districts data centers may be allowed (for example, only as a conditional or special-use permit in general industrial districts).
- Identifying districts where they should be prohibited outright (agricultural, residential, commercial, limited industrial, planned development, conservation, etc.).
- Clarifying whether different scales or types of facilities (colocation, enterprise, hyperscale) warrant different district treatment or review processes.

## 3. Public Notification and Community Engagement

- Setting the geographic radius for mailed notice to property owners for conditional-use hearings (standard distances versus expanded zones such as one mile).
- Specifying the method of compiling the notification list (certified abstractor listing or other verified source).
- Considering whether additional outreach (public meetings, postings, or online materials) is warranted given the scale and continuous nature of operations.

## 4. Application Requirements and Supporting Studies

- Requiring professional studies prepared by licensed experts as part of the permit application, including:
    - Predictive noise modeling of primary sources (cooling systems, generators, etc.).

  - Water-demand projections, cooling-method descriptions, sustainability assessments, and drought contingency plans.
  - Energy-load and grid-compatibility analyses (capacity requested, interconnection status, potential reliability effects).
  - Emergency management and fire-protection plans coordinated with local responders.
  - Detailed decommissioning and site-reclamation plans with cost estimates.
- Deciding whether additional materials (traffic studies, visual simulations, environmental assessments) should be mandatory or discretionary.

## 5. Separation Distances (Setbacks)

- Establishing minimum distances from occupied residences or residentially zoned land, public rights-of-way, adjacent industrial parcels, and parks or conservation areas.
- Determining whether any setbacks may be reduced through recorded waivers or covenants from affected owners.
- Evaluating whether larger buffers are needed for hyperscale facilities or for specific sensitive receptors.

## 6. Operational and Environmental Performance Standards

- **Noise**: Setting continuous sound-pressure limits (daytime and nighttime) measured at property lines or nearest residences, along with requirements for attenuation measures (enclosures, baffling, etc.). Clarifying exceptions for temporary emergency generator use.
- **Water resources**: Prohibiting or restricting private groundwater extraction for cooling; requiring use of public supplies; mandating high-efficiency cooling technologies (closed-loop, zero-liquid-discharge, or air-cooled systems); and establishing thresholds that trigger formal water-use agreements with the county.
- **Emergency power and fuel storage**: Specifying preferred fuel types or emission standards; requiring double-walled tanks and secondary containment sized to a percentage of tank capacity.
- **Screening and aesthetics**: Mandating security fencing or walls of a minimum height and continuous landscape buffers (width, plant types, density) along public roads and non-industrial boundaries.

## 7. Decommissioning, Abandonment, and Financial Assurance

- Defining the trigger for required decommissioning (for example, continuous non-operation for a set number of months).
- Specifying the scope of removal work (above-ground structures, foundations to a minimum depth, utilities, hazardous materials, site restoration to agricultural or pre-development condition).

- Establishing financial security instruments (letter of credit, cash escrow, or equivalent) sized to a percentage of estimated decommissioning costs, with periodic updates and no credit for salvage value.
- Clarifying responsibility if the operator defaults and the role of the county in enforcing or completing the work.

## 8. Definitions and Scope

- Crafting clear definitions that distinguish commercial data centers from ordinary offices, retail computer services, or accessory network rooms.
- Differentiating subtypes (colocation facilities serving multiple tenants, single-enterprise facilities, and hyperscale facilities defined by floor area or continuous power demand).
- Ensuring definitions capture the characteristic features (dense computing equipment, specialized cooling, backup power, fire-suppression systems) while remaining adaptable to technological change.

## 9. Administrative and Procedural Integration

- Integrating new standards into existing conditional-use review procedures, including any specialized findings the board of adjustment must make.
- Addressing cross-references to public-notice rules, land-use tables, and definition sections.
- Providing for periodic review or updates of standards as technology, water availability, grid conditions, or industry practices evolve.
- Confirming severability, conflict resolution with prior regulations, and the effective-date process.

## 10. Broader Implementation Considerations

- Coordination with regional utilities, water authorities, emergency management agencies, and volunteer fire departments.
- Monitoring and enforcement mechanisms (complaint procedures, periodic compliance reporting, or independent verification).
- Potential economic tools or incentives that could be paired with regulatory standards, if desired.
- Flexibility mechanisms (variances, planned-unit-development alternatives, or adaptive management plans) versus fixed numeric thresholds.

# Notes on the 2026 NACo Annual Conference Educational Summit: Data Centers, the Grid and County Development

(National Association of Counties / NACo; ~57 minutes) – July 30, 2026

**Video link:** https://www.youtube.com/watch?v=PZKhdEBXPSE

**Video description / core theme**

Data centers are reshaping local economies, land use, and electricity infrastructure. They bring jobs and tax revenue to some counties while straining grids and raising electricity costs in others. The session examines the roughly $3 trillion national investment driving data center growth, the county role in siting and grid stability, fiscal and community impacts, and a practical framework for evaluating proposals.

**Speakers**

- **John Farner** (Moderator), Executive Director of Land and Water, Lincoln Institute of Land Policy
- **Hon. Jessica Fitzwater**, County Executive, Frederick County, Maryland
- **Hon. Rick Handley**, Commissioner, Mason County, West Virginia
- **Heather Coil (Coyle)**, Senior Manager, State Policy & Partnerships, Data Center Coalition (DCC)

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**1. Framing the Issue as Historic Infrastructure Build-Out (John Farner)**

Farner frames data centers as a massive private infrastructure build-out comparable to earlier U.S. expansions:

- **Railroads (1870–1890)**: Rapid private investment; localities had almost no say ("railroaded").
- **Interstate Highway System (to ~1976)**: Publicly financed; counties generally had little or no control over routing.

**AI / data-center "five-layer cake"** (drawing on NVIDIA CEO Jensen Huang's Davos remarks):

- Top two layers: AI models and applications (ChatGPT-style tools, enterprise uses).
- Bottom three layers (on-the-ground infrastructure counties must manage):
    1. Energy / power generation
    2. Chips and compute (e.g., TSMC facilities in Phoenix described as "Death Star"-scale)
    3. Cloud infrastructure = data centers

**Current and future geography** Maps show active hubs (Northern Virginia, Arizona, Texas, Georgia) plus planned, under-construction, non-operational, and land-banked sites spreading into new areas. The picture changes daily. Lincoln Institute is preparing a full online toolkit (fall release) in coordination with NACo.

**Six key areas relevant to counties**

1. **Siting** — location, surrounding uses, water source, energy source.
2. **Local authority & capacity** — Do you have decision-making power, information, and *data-center-specific* ordinances (not just generic industrial rules)?
3. **Community benefits** — Housing, jobs, economic development; emerging Community Benefit Agreements (CBAs).
4. **Risk mitigation** — What happens if facilities become obsolete (e.g., future space-based computing)? Avoid stranded assets; build tools up front.
5. **Watershed / regional approach** — Energy or water impacts often spill into neighboring counties.
6. **Community engagement** (most important) — Continuous involvement from siting through benefits.

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**2. County Perspectives**

**Frederick County, Maryland (Jessica Fitzwater)**

- Seventh-largest and fastest-growing county in Maryland; part of the Baltimore–D.C.–Frederick triangle.
- **Story began with redevelopment**: Quantum Frederick hyperscale campus on the former Eastalco aluminum smelter (already industrially zoned, long vacant). Approvals predated Fitzwater's term. No additional new data-center projects approved since.
- **Regulatory response**:
    - Data-center work group (early 2023) with environmental, agricultural, business, labor, and community leaders.
    - Nation's toughest standards on noise, vibration, expanded setbacks, clear zoning.
    - Zoning overlay limits data centers to <1 % of county land.
    - Agricultural-preservation requirement: 5 acres preserved for every 1 acre used by data centers.
    - Executive orders pausing applications while rules were refined.
- **Fiscal results**: Quantum Frederick has generated >$3.5 billion in recorded transactions and >$50 million in one-time recordation-tax revenue supporting agriculture, open space, housing, and transit. **No local incentives or tax breaks** were given ("they don't need them").
- **Community-benefit negotiations** underway so residents share in the value.

- Public engagement has intensified dramatically, producing frustration, legal challenges to zoning, and more misinformation than any other issue in her experience.
- Stance: Neither pro- nor anti-data center. Priority is regulation that protects quality of life while maximizing benefits.
- **State–local coordination is essential**: Many critical issues (energy use, air pollution, well-water impacts, utility rates) are outside county authority. Frederick has advocated for expanded local taxing authority, stronger statewide energy rules, transparency/public-reporting requirements, and better air-pollution monitoring. Recent state creation of a large-load customer registry for data centers was incorporated via executive order requiring proof of registration before county applications advance.
- Constituents do not care which level of government is responsible; they want protection and responsiveness.

**Key advice**: Be extremely careful with tax incentives—they can create legal hurdles (quid-pro-quo problems) for later Community Benefit Agreements.

**Mason County, West Virginia (Rick Handley)**

- Rural agricultural/industrial county (~25,000 people). Hosts a major Nucor steel mill with a favorable 30-year PILOT that delivers $1 million/year (significant relative to a $12 million county budget).
- **Data-center project**: First phase of a multi-phase facility under construction; second project already acquiring land (prices up to ~$42,000/acre). Uses natural gas (not the grid) and Ohio River water (treated, used for cooling, returned—similar to nearby power plants). These design choices address common electric-bill and aquifer concerns.
- **Major constraint — House Bill 2014**: State legislation that *preempts* local control. It exempts data centers from county/municipal zoning, noise, lighting, land-use rules, building permits, inspections, code enforcement, and licensing. The legislature expressly occupies the entire regulatory field.
    - Tax-revenue split: 50 % to the state (to help cut personal income tax), 30 % to the host county (hard-fought), 10 % shared among all counties, 10 % to state agencies.
    - Host counties therefore receive substantial new revenue (estimates $15–25 million) but lose siting and regulatory authority. Commissioners still face political blame and election pressure.
- **On-the-ground problems**:
    - First facility sited adjacent to a residential area. Complete vegetation stripping + heavy rain caused silt/mud flooding of homes (Memorial Day weekend and a later event). Company cleaned up and is now buying many of the 53 homes, but some long-time elderly residents do not want to leave.

    - No public meetings before construction; only private talks with individual landowners. Lack of transparency damaged trust.
- **Positive contributions**: Company donated $250,000 to the sheriff's department for vehicles and $300,000 to EMS.
- Core message: Local input is essential; transparency, communication, and trust are non-negotiable. Misinformation (often based on outdated data-center practices) is rampant.

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**3. Industry Perspective (Heather Coil, Data Center Coalition)**

- DCC represents large data-center owners/operators and major data users. Focuses on policy, advocacy, workforce, and stakeholder outreach.
- Personal background includes early work in a brownfield data center (former St. Louis Post-Dispatch printing plant).
- **Economic scale** (2023–2024 figures cited):
    - $1.7 trillion contribution to U.S. GDP (direct + indirect).
    - Direct employment >1 million; supported ~5.5 million jobs total.
    - Each data-center job supports ~4.5 other jobs.
    - $369 billion in federal/state/local tax contributions.
- Data growth is explosive: U.S. customers/businesses will generate twice as much data in the next 5 years as in the previous 10; one-third of the global population is still offline. Average U.S. household has ~21 connected devices. 95 % of Fortune 500 companies rely on the cloud.
- Industry commitment: Be good neighbors, use energy and water efficiently/sustainably, and tailor community benefits to local priorities.
- DCC works at the state level on authority/home-rule clarity and engages in rate cases (30 states last year) to ensure data centers pay full cost of service.
- Emerging work: Creating regular forums for industry–local-official dialogue and increasing staff capacity so companies can better communicate benefits and answer questions.

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**4. Interactive Table Exercise & Audience Themes**

Participants discussed a NACo data-center checklist. Key gaps identified and reported back:

- **Trusted data validation** — Independent, credible verification of energy, water, and resource-use claims to build public confidence.
- **Community engagement & transparency** — Better guidance on early public education, in-person engagement (not just social media), and transparent information sharing.

- **Model policies & best practices** — Proven development models and ordinances that can be adapted (acknowledging that authority structures differ widely across states).

**Panel reactions**

- Fitzwater: These three themes capture the core challenges. Model policies are hard because home-rule vs. preemption varies dramatically; Maryland's strong environmental rules and new large-load registry help. Early, multi-forum, in-person engagement is the hardest and most important task amid national noise and misinformation. Companies must become better storytellers about construction jobs (high-quality, union-supported), permanent jobs, downstream business benefits, and long-term revenue that funds schools, public safety, and amenities. Revenue is game-changing but often invisible at the start; local officials cannot be left to "defend big tech."
- Coil: DCC will carry these themes back to members. Industry is already active on rate cases and is adding community-engagement capacity. Regular industry–local forums are in development.
- Handley: Emphasized transparency + communication + **trust**. Absence of public meetings was a major missed opportunity. Local control (or at least meaningful input) is essential for fairness to counties and citizens.

---

**5. Resources, Next Steps & Closing**

**NACo resources** (QR codes shown):

- Energy resources and events
- Rural-county-specific programming
- Energy symposium
- Data-center resource hub

**Lincoln Institute**: Forthcoming toolkit of model ordinances drawn from across the United States (counties can adapt what fits local needs). Strong focus on building staff capacity (in partnership with Claremont Lincoln University).

**Overall takeaway for county leaders** Data-center development is a high-stakes, fast-moving infrastructure wave. Success requires:

- Clear local authority and data-center-specific rules where possible
- Close coordination with state and regional energy regulators
- Early, continuous, transparent community engagement
- Realistic risk mitigation and community-benefit structures
- Independent data validation

- Willingness by both local governments and industry to share information and build trust

Counties that prepare frameworks now will be better positioned to capture benefits while protecting quality of life and fiscal health. The conversation is ongoing; NACo and partners such as the Lincoln Institute are developing practical tools to support that work.

# Meeting Notices

Sioux City Journal

AFFIDAVIT OF PUBLICATION

Sioux City Journal
2802 Castles Gate Drive
Sioux City 51106
(712) 293-4250

State of Florida, County of Broward, ss:

Anjana Bhadoriya, being first duly sworn, deposes and says: That (s)he is a duly authorized signatory of Column Software, PBC, duly authorized agent of Sioux City Journal, printed and published by Journal Communications, in Sioux City in Woodbury County and issued daily and Sunday and that this affidavit is Page 1 of 1 with the full text of the sworn-to notice set forth on the pages that follow, and the hereto attached:

**PUBLICATION DATES:**
Aug. 15, 2026

**NOTICE ID:** h6ZilPWkNv5tp3QXS7Zr
**PUBLISHER ID:** COL-IA-503547
**NOTICE NAME:** Townhall - Sloan
**Publication Fee:** $43.03

Anjana Bhadoriya
(Signed)

VERIFICATION

State of Florida
County of Broward

SHERI SMITH
Notary Public - State of Florida
Commission # HH804448
Expires on May 31, 2030

Subscribed in my presence and sworn to before me on this: 08/17/2026

S Smith
Notary Public
Notarized remotely online using communication technology via Proof.

**NOTICE OF PUBLIC TOWN HALL MEETING BEFORE THE WOODBURY COUNTY ZONING COMMISSION TO SEEK INPUT FROM THE PUBLIC ABOUT THE PERMITTING PROCESS OF DATA CENTERS IN UNINCORPORATED WOODBURY COUNTY, IOWA – TO BE HELD IN SLOAN, IA, AUG. 31, 2026 AT 7:00 PM**

The Woodbury County Zoning Commission will hold a public town hall meeting (hearing/listening session) to gather citizen input on potential amendments to the Woodbury County Zoning Ordinance regarding data center facilities in the unincorporated areas of Woodbury County, Iowa, on **Monday, August 31, 2026 at 7:00 PM.** Said public town hall meeting will be held at the **Sloan Community Hall, 423 Evans Street, Sloan, IA 51055.**

The Zoning Commission is studying data centers with the mission to prepare a recommendation to the Board of Supervisors on how to facilitate the permitting application process in the Woodbury County Zoning Ordinance as a zoning ordinance text amendment or another ordinance. The Commission will be seeking input on potential requirements and regulations, as well as zoning districts (locations) such as the General Industrial (GI) Zoning District, and the permitting application process itself, such as a conditional use permit or a comparable mechanism.

**IMPORTANT JURISDICTIONAL NOTICE:** These town hall meetings and proposed zoning regulations apply ONLY to unincorporated areas under Woodbury County zoning jurisdiction. Incorporated cities and towns within Woodbury County regulate their own zoning ordinances and corporate boundaries independently.

All interested residents, property owners, and stakeholders are strongly encouraged to attend and share their perspectives. You may also forward your written comments and concerns by mail or email to: Woodbury County Planning and Zoning, 620 Douglas Street, Sixth Floor, Sioux City, IA 51101; Emails should be sent to Dan Priestley at: dpriestley@woodburycountyiowa.gov.

For further information, please contact Dan Priestley, Zoning Coordinator, Woodbury County Planning and Zoning at (712) 279-6609 or visit the county website at www.woodburycountyiowa.gov.

Additional town hall meetings are scheduled for Monday, September 21, 2026 at 7:00 PM at the Moville Community Center, 815 Main Street, Moville, IA 51039, and Monday, November 9, 2026 at 7:00 PM at the Salix Community Center, 317 Tipton Street, Salix, IA 51052. Additional meetings will be scheduled in other Woodbury County communities as needed.

COL-IA-503547

IOWA INFORMATION MEDIA GROUP

Dawn Norton
Woodbury County Planning & Zoning
620 Douglas Street, 6th Floor
Sioux City, IA 51101
dnorton@woodburycountyiowa.gov

**THIS IS NOT AN INVOICE**

## AFFIDAVIT OF PUBLICATION

#427033 Town Hall Mtg re: Data Centers Aug. 31, 2026

The undersigned, being first duly sworn on oath, states that Iowa Information Media Group, a corporation duly organized and existing under the laws of the State of Iowa, with its principal place of business in Sheldon, Iowa, the publisher of newspapers of general circulation as identified below, and printed and published in the city of Moville, Woodbury county, Iowa, and that a legal notice, a printed copy of which is attached as Exhibit "A" and made part of this affidavit, was printed and published in the publication(s) and editions dated as follows:

| | | | |
|---|---|---|---|
| 427033 | The Record | 8/20/26 | $49.04 |

Myrna Wagner
Management, The Record

Subscribed and sworn to before me by said Myrna Wagner this 20th day of August, 2026

Lori Wiersma
Notary Public in and for State of Iowa

NOTARIAL SEAL IOWA
LORI WIERSMA
Commission Number 812609
My Commission Expires
09/12/2027

WOODBURY COUNTY PLANNING & ZONING

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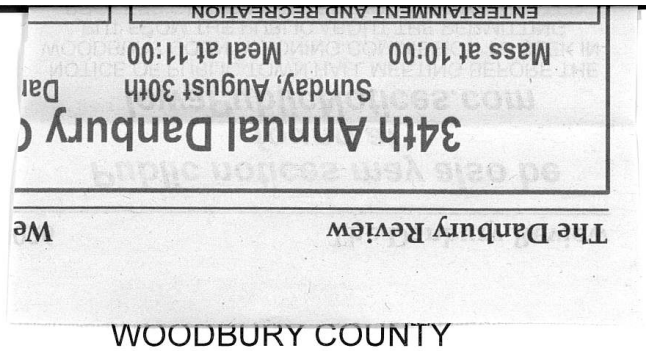
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(#427033)


ENTERTAINMENT AND RECREATION
Mass at 10:00 Meal at 11:00
Sunday, August 30th Dan
34th Annual Danbury C
The Danbury Review We

WOODBURY COUNTY

I, LYNN BUTH, being duly sworn, say that I am the editor of THE DANBURY REVIEW, a weekly newspaper of general circulation printed and published in Danbury, Woodbury County, Iowa, and that the Notice of town hall meeting for data centers of which the annexed is a printed copy, was published in said paper for 1 week, the first publication being on the 19th day of August, 2026, and the last publication on the 19th day of August, 2026.

Lynn Buth

Sworn to before me and subscribed in my presence by the said Lynn Buth this 20th day of August A.D., 2026.

NOTARIAL SEAL IOWA
COLE BOGER
Commission Number 804154
My Commission Expires
May 2, 2025

Cole Boger

Notary Public in and for said County and State

PROOF OF PUBLICATION

STATE OF IOWA
WOODBURY COUNTY

duly sworn, say that I am the editor
URY REVIEW, a weekly newspaper
ulation printed and published
oodbury County, Iowa, and that
wn hall meeting for data centers
annexed is a printed copy, was
aid paper for 1 week, the first
ing on the 19th day of August, 2026,
ublication on the 19th day of August,

re me and subscribed in my
ne said Lynn Buth this
day of August A.D., 2026.

Public in and for said County and State



## Public notices may also be found at IowaPublicNotices.com

NOTICE OF PUBLIC TOWN HALL MEETING BEFORE THE WOODBURY COUNTY ZONING COMMISSION TO SEEK INPUT FROM THE PUBLIC ABOUT THE PERMITTING PROCESS OF DATA CENTERS IN UNINCORPORATED WOODBURY COUNTY – TO BE HELD IN SLOAN, IA, AUG. 31, 2026 AT 7:00 PM

The Woodbury County Zoning Commission will hold a public town hall meeting (hearing/listening session) to gather citizen input on potential amendments to the Woodbury County Zoning Ordinance regarding data center facilities in the unincorporated areas of Woodbury County, Iowa, on Monday, August 31, 2026 at 7:00 PM. Said public town hall meeting will be held at the Sloan Community Hall, 423 Evans Street, Sloan, IA 51055.

The Zoning Commission is studying data centers with the mission to prepare a recommendation to the Board of Supervisors on how to facilitate the permitting application process in the Woodbury County Zoning Ordinance as a zoning ordinance text amendment or another ordinance. The Commission will be seeking input on potential requirements and regulations, as well as zoning districts (locations) such as the General Industrial (GI) Zoning District, and the permitting application process itself, such as a conditional use permit or a comparable mechanism.

IMPORTANT JURISDICTIONAL NOTICE: These town hall meetings and proposed zoning regulations apply ONLY to unincorporated areas under Woodbury County zoning jurisdiction. Incorporated cities and towns within Woodbury County regulate their own zoning ordinances and corporate boundaries independently.

All interested residents, property owners, and stakeholders are strongly encouraged to attend and share their perspectives. You may also forward your written comments and concerns by mail or email to: Woodbury County Planning and Zoning, 620 Douglas Street, Sixth Floor, Sioux City, IA 51101; Emails should be sent to Dan Priestley at: dpriestley@woodburycountyiowa.gov.

For further information, please contact Dan Priestley, Zoning Coordinator, Woodbury County Planning and Zoning at (712) 279-6609 or visit the county website at www.woodburycountyiowa.gov.

Additional town hall meetings are scheduled for Monday, September 21, 2026 at 7:00 PM at the Moville Community Center, 815 Main Street, Moville, IA 51039, and Monday, November 9, 2026 at 7:00 PM at the Salix Community Center, 317 Tipton Street, Salix, IA 51052. Additional meetings will be scheduled in other Woodbury County communities as needed.

Danbury Review
PO Box 207
Danbury, IA 51019
712-893-2001
<review@danbury-ia.com>

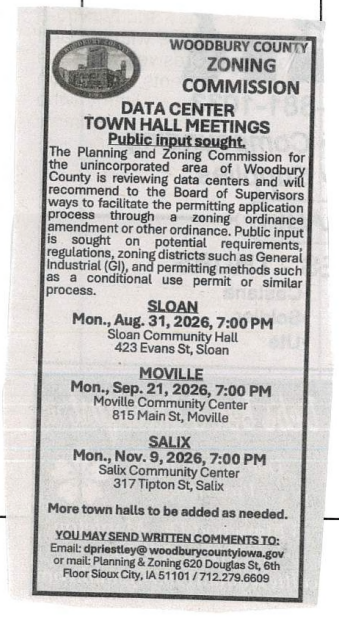
# Statement

| Date |
|---|
| 08/19/26 |

| Bill To |
|---|
| WOODBURY COUNTY PLANNING & ZONING<br>620 DOUGLAS ST FL 6<br>SIOUX CITY, IA 51101-1247 |

| Amount Due | Amount Enc. |
|---|---|
| $62.55 | |

| Date | Item | Description | Amount | Balance |
|---|---|---|---|---|
| 07/31/26 | | Balance forward | | 0.00 |
| 08/19/26 | Legals | Notice Town Hall Meetings for Data Centers | 48.55 | 48.55 |
| 08/19/26 | 1x4 | Town Hall ad | 14.00 | 62.55 |



WOODBURY COUNTY
ZONING COMMISSION

DATA CENTER
TOWN HALL MEETINGS
Public input sought.

The Planning and Zoning Commission for the unincorporated area of Woodbury County is reviewing data centers and will recommend to the Board of Supervisors ways to facilitate the permitting application process through a zoning ordinance amendment or other ordinance. Public input is sought on potential requirements, regulations, zoning districts such as General Industrial (GI), and permitting methods such as a conditional use permit or similar process.

SLOAN
Mon., Aug. 31, 2026, 7:00 PM
Sloan Community Hall
423 Evans St, Sloan

MOVILLE
Mon., Sep. 21, 2026, 7:00 PM
Moville Community Center
815 Main St, Moville

SALIX
Mon., Nov. 9, 2026, 7:00 PM
Salix Community Center
317 Tipton St, Salix

More town halls to be added as needed.

YOU MAY SEND WRITTEN COMMENTS TO:
Email: dpriestley@woodburycountyiowa.gov
or mail: Planning & Zoning 620 Douglas St, 6th Floor Sioux City, IA 51101 / 712.279.6609

| Amount Due |
|---|
| $62.55 |

Sioux City Journal

## AFFIDAVIT OF PUBLICATION

Sioux City Journal
2802 Castles Gate Drive
Sioux City 51106
(712) 293-4250

State of Florida, County of Broward, ss:

Anjana Bhadoriya, being first duly sworn, deposes and says: That (s)he is a duly authorized signatory of Column Software, PBC, duly authorized agent of Sioux City Journal, printed and published by Journal Communications, in Sioux City in Woodbury County and issued daily and Sunday and that this affidavit is Page 1 of 1 with the full text of the sworn-to notice set forth on the pages that follow, and the hereto attached:

**PUBLICATION DATES:**
Sep. 10, 2026

**NOTICE ID:** mYMVFsfFrHJjqLbBx2WL
**PUBLISHER ID:** COL-IA-503624
**NOTICE NAME:** Townhall - Moville
**Publication Fee:** $42.37

Anjana Bhadoriya

(Signed)_____

**VERIFICATION**

State of Florida
County of Broward

SHERI SMITH
Notary Public - State of Florida
Commission # HH804448
Expires on May 31, 2030

Subscribed in my presence and sworn to before me on this: 09/15/2026

S Smith

Notary Public
Notarized remotely online using communication technology via Proof.

**NOTICE OF PUBLIC TOWN HALL MEETING BEFORE THE WOODBURY COUNTY ZONING COMMISSION TO SEEK INPUT FROM THE PUBLIC ABOUT THE PERMITTING PROCESS OF DATA CENTERS IN UNINCORPORATED WOODBURY COUNTY – TO BE HELD IN MOVILLE, IA, SEPTEMBER 21, 2026 AT 7:00 PM**

The Woodbury County Zoning Commission will hold a public town hall meeting (hearing/listening session) to gather citizen input on potential amendments to the Woodbury County Zoning Ordinance regarding data center facilities in the unincorporated areas of Woodbury County, Iowa, on **Monday, September 21, 2026 at 7:00 PM.** Said public town hall meeting will be held at the **Moville Area Community Center, 815 Main Street, Moville, IA 51039.**

The Zoning Commission is studying data centers with the mission to prepare a recommendation to the Board of Supervisors on how to facilitate the permitting application process in the Woodbury County Zoning Ordinance as a zoning ordinance text amendment or another ordinance. The Commission will be seeking input on potential requirements and regulations, as well as zoning districts (locations) such as the General Industrial (GI) Zoning District, and the permitting application process itself, such as a conditional use permit or a comparable mechanism.

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Another town hall meeting is scheduled for Monday, November 9, 2026 at 7:00 PM at the Salix Community Center, 317 Tipton Street, Salix, IA 51052. Additional meetings will be scheduled in other Woodbury County communities as needed.

COL-IA-503624

WWW.SERGEANTBLUFFADVOCATES.COM
SERGEANT BLUFF ADVOCATE/SERGEANT BLUFF, IOWA
14 | THURS. SEPTEMBER 10, 2026

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*Published in the Sergeant Bluff Advocate weekly newspaper, Thursday, Sept. 10, 2026. The SB-Advocate is an Official Woodbury County newspaper. (PN#091026-00493)*

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Thursday, September 10, 2026 THE Record Page 10

## WOODBURY COUNTY COMMUNITY & ECONOMIC DEVELOPMENT

**NOTICE OF PUBLIC TOWN HALL MEETING BEFORE THE WOODBURY COUNTY ZONING COMMISSION TO SEEK INPUT FROM THE PUBLIC ABOUT THE PERMITTING PROCESS OF DATA CENTERS IN UNINCORPORATED WOODBURY COUNTY – TO BE HELD IN MOVILLE, IA, SEPTEMBER. 21, 2026 AT 7:00 PM**

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(#428946)

Sioux City Journal

## AFFIDAVIT OF PUBLICATION

Sioux City Journal
2802 Castles Gate Drive
Sioux City 51106
(712) 293-4250

State of New Jersey, County of Camden, ss:

Anjana Bhadoriya, being first duly sworn, deposes and says: That (s)he is a duly authorized signatory of Column Software, PBC, duly authorized agent of Sioux City Journal, printed and published by Journal Communications, in Sioux City in Woodbury County and issued daily and Sunday and that this affidavit is Page 1 of 1 with the full text of the sworn-to notice set forth on the pages that follow, and the hereto attached:

**PUBLICATION DATES:**
Oct. 27, 2026

**NOTICE ID:** RJg0OhnPhAxFuxmpW1ZZ
**PUBLISHER ID:** COL-IA-503822
**NOTICE NAME:** ZC_11-9-26_Data_Center_Townhall_Salix
**Publication Fee:** $41.04

Anjana Bhadoriya

(Signed)_____

**VERIFICATION**

State of New Jersey
County of Camden

**SHARONN E THOMAS-POPE**
NOTARY PUBLIC
STATE OF NEW JERSEY
My Commission Expires January 23, 2027

Subscribed in my presence and sworn to before me on this: **10/27/2026**

_____
Notary Public
**Notarized remotely online using communication technology via Proof.**

**NOTICE OF PUBLIC TOWN HALL MEETING BEFORE THE WOODBURY COUNTY ZONING COMMISSION TO SEEK INPUT FROM THE PUBLIC ABOUT THE PERMITTING PROCESS OF DATA CENTERS IN UNINCORPORATED WOODBURY COUNTY – TO BE HELD IN SALIX, IA, NOVEMBER 9, 2026 AT 7:00 PM AT THE SALIX COMMUNITY CENTER, 317 TIPTON ST., SALIX, IA 51052**

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A subsequent town hall meeting is scheduled for Monday, January 18, 2027 at 7:00 PM in Correctionville, IA at the Correctionville Community Center, 312 Driftwood St., Correctionville, IA 51016.
COL-IA-503822

**Woodbury County**
**State of Iowa** } **SS.**

I, Timothy Loftus, of said County, being first duty sworn on oath, state that I am the Publisher of the Sergeant Bluff Advocate. A newspaper printed and published in the City of Sergeant Bluff, County of Woodbury, State of Iowa, and issued weekly, and the legal notice titled:

**Woodbury County Zoning Commission**
**NOTICE OF PUBLIC TOWN HALL MEETING**
BEFORE THE WOODBURY COUNTY ZONING COMMISSION TO SEEK INPUT FROM THE PUBLIC ABOUT THE PERMITTING PROCESS OF DATA CENTERS IN UNINCORPORATED WOODBURY COUNTY – TO BE HELD IN SALIX, IA, NOVEMBER 9, 2026 AT 7:00 PM AT THE SALIX COMMUNITY CENTER, 317 TIPTON ST., SALIX, IA 51052

*PN#102926-00528*

a copy of which is hereto annexed, was published in said newspaper on the **29th** day of **October**, 2026.

Fees for publication $**50.93**

Timothy J Loftus, Publisher

Subscribed and sworn by Steven L. Bourk, 204 1st St., Suite 101, Sergeant Bluff, County of Woodbury, and State of Iowa on this **29th** day of **October**, 2026.

NOTARIAL SEAL IOWA
STEVEN L. BOURK
Commission No. 865573
My Commission Expires
June 19, 2028

(SEAL)

of the County of Woodbury, State of Iowa
Notary Public in and for said County.

**NOTICE OF PUBLIC TOWN HALL MEETING**
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*Published in the Sergeant Bluff Advocate weekly newspaper, Thursday, October 29, 2026. The SB-Advocate is an Official Woodbury County newspaper. (PN#102926-00558)*

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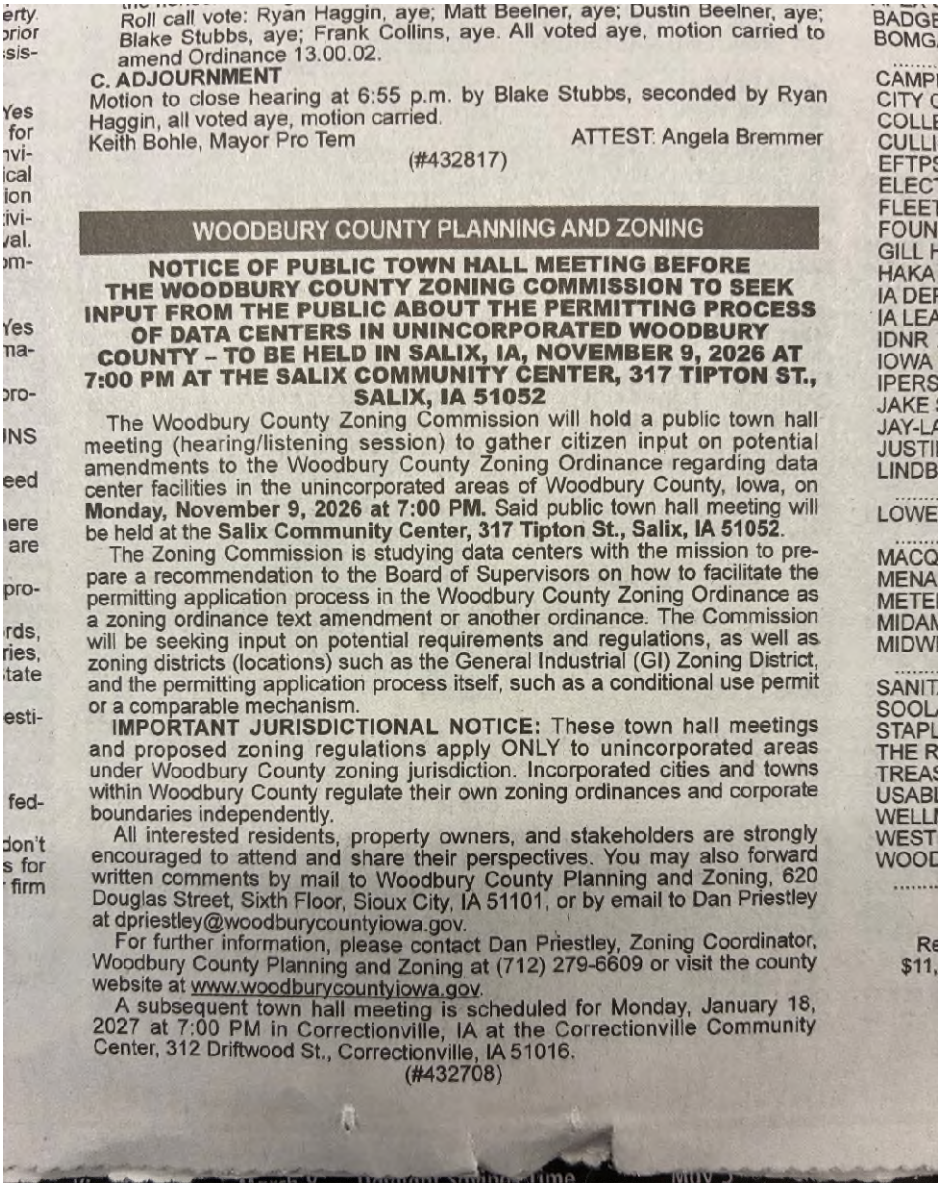
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Danbury Review, 10/21/26



Roll call vote: Ryan Haggin, aye; Matt Beelner, aye; Dustin Beelner, aye; Blake Stubbs, aye; Frank Collins, aye. All voted aye, motion carried to amend Ordinance 13.00.02.

**C. ADJOURNMENT**

Motion to close hearing at 6:55 p.m. by Blake Stubbs, seconded by Ryan Haggin, all voted aye, motion carried.

Keith Bohle, Mayor Pro Tem ATTEST: Angela Bremmer

(#432817)

## WOODBURY COUNTY PLANNING AND ZONING

### NOTICE OF PUBLIC TOWN HALL MEETING BEFORE THE WOODBURY COUNTY ZONING COMMISSION TO SEEK INPUT FROM THE PUBLIC ABOUT THE PERMITTING PROCESS OF DATA CENTERS IN UNINCORPORATED WOODBURY COUNTY – TO BE HELD IN SALIX, IA, NOVEMBER 9, 2026 AT 7:00 PM AT THE SALIX COMMUNITY CENTER, 317 TIPTON ST., SALIX, IA 51052

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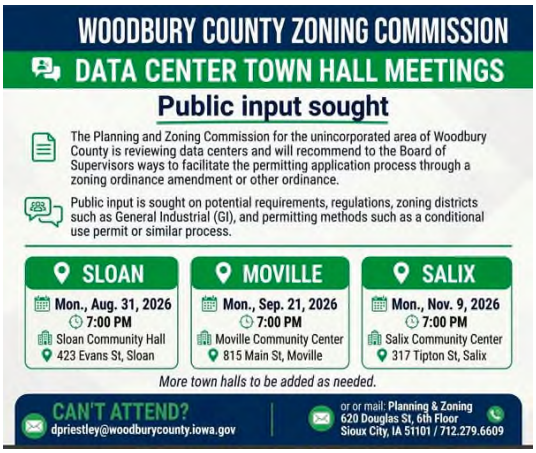
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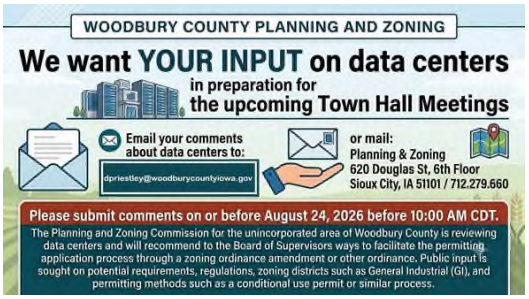
(#432708)

Moville Record, 10/29/26

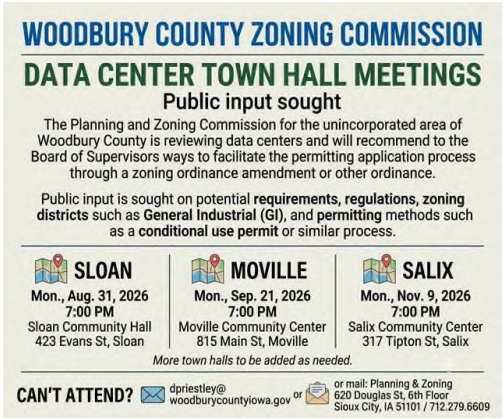
## Social Media Advertisements




Posted to Facebook on August 21, 2026
Posted to X on August 21, 2026

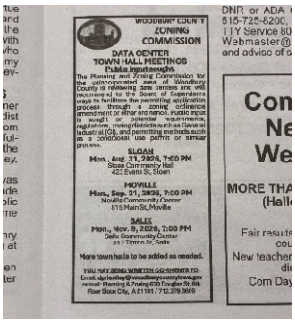



Posted to Facebook on August 14, August 4, 2026
Posted to X on August 21, August 4, 2026

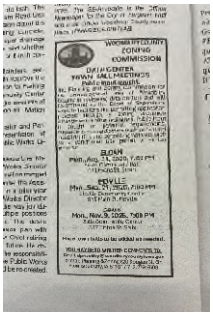



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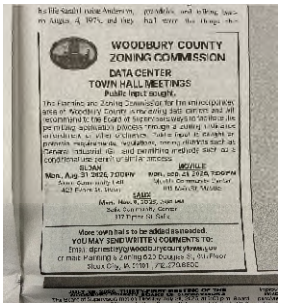
## Newspaper Advertisements



Published in Danbury Review on August 19, 2026



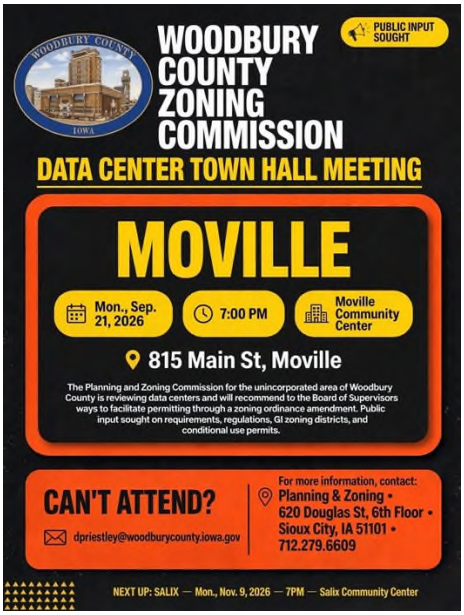
Published in Sergeant Bluff Advocate on August 20, 2026



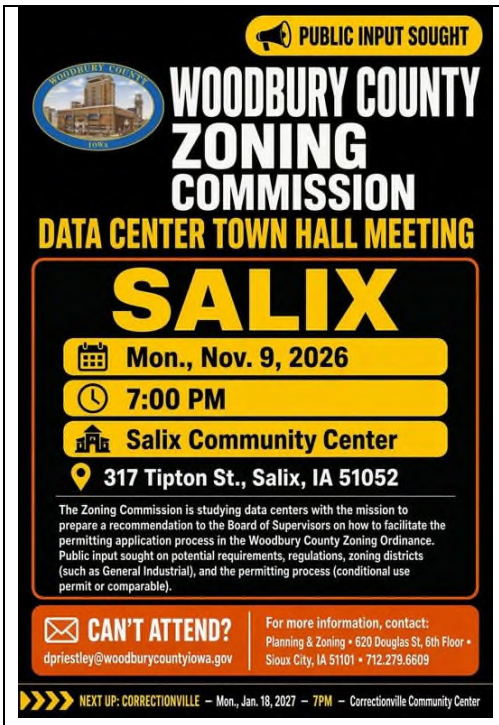

Published in Moville Record on August 13, 2026




Posted to Facebook on September 14, 2026
Posted to X on September 14, 2026




Posted to Facebook on September 5, 2026
Posted to X on September 15, 2026




Posted to Facebook on November 2, 2026, October 16, 2026
Posted to X on November 2, 2026, October 16, 2026

## Press Release on July 31, 2026

**FOR IMMEDIATE RELEASE** July 31, 2026

**WOODBURY COUNTY ZONING COMMISSION TO HOLD PUBLIC TOWN HALL MEETINGS ON DATA CENTER ZONING ORDINANCE REGULATIONS FOR THE UNINCORPORATED AREA**

WOODBURY COUNTY, IOWA — The Woodbury County Zoning Commission will host three initial public listening sessions to gather citizen input on potential amendments to the Woodbury County Zoning Ordinance regarding data center facilities in unincorporated areas. Additional meetings will be scheduled in other Woodbury County communities as needed.

The Zoning Commission is studying data centers with the mission to prepare a recommendation to the Board of Supervisors on how to facilitate the permitting application process in the Woodbury County Zoning Ordinance as a zoning ordinance text amendment or another ordinance. The Commission will be seeking input on potential requirements and regulations, as well as zoning districts (locations) such as the General Industrial (GI) Zoning District, and the permitting application process itself, such as a conditional use permit or a comparable mechanism.

**IMPORTANT JURISDICTIONAL NOTICE:** These town hall meetings and proposed zoning regulations apply ONLY to unincorporated areas under Woodbury County zoning jurisdiction. Incorporated cities and towns within Woodbury County regulate their own zoning ordinances and corporate boundaries independently.

**INITIAL TOWN HALL SCHEDULE & LOCATIONS:**

1. **SLOAN TOWN HALL** Date & Time: Monday, August 31, 2026 at 7:00 PM Location: Sloan Community Hall Address: 423 Evans Street, Sloan, IA 51055
2. **MOVILLE TOWN HALL** Date & Time: Monday, September 21, 2026 at 7:00 PM Location: Moville Community Center Address: 815 Main Street, Moville, IA 51039
3. **SALIX TOWN HALL** Date & Time: Monday, November 9, 2026 at 7:00 PM Location: Salix Community Center Address: 317 Tipton Street, Salix, IA 51052

All interested residents, property owners, and stakeholders are strongly encouraged to attend and share their perspectives. You are also welcome to share your written comments and concerns by sending them to **Dan Priestley** at **dpriestley@woodburycountyiowa.gov** or to **Woodbury County Planning and Zoning, 620 Douglas Street, Sixth Floor, Sioux City, IA 51101.**

For further information, please contact **Dan Priestley, Zoning Coordinator, Woodbury County Planning and Zoning at (712) 279-6609** or visit the county website at **www.woodburycountyiowa.gov.**

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Posted to Woodbury County Website – News on July 31, 2026
Posted to Facebook on July 31, 2026
Posted to X on July 31, 2026

## Types of Data Centers

There are numerous sources not limited to advocacy publications and ordinances that offer common types or recognized data centers. The Urban Land Institute discusses corporate or enterprise data centers, colocation data centers, which include retail data centers, wholesale data centers, telecom data centers, and hyperscale data centers.

According to the Urban Lan Institute's publication*, Local Guidelines for Data Center Development* (2004), corporate or enterprise data centers are facilities that store and process the data of a single organization and are often owned and operated by that organization, such as major financial institutions, rather than leased from a third-party provider. Colocation data centers, including retail data centers, are multi-tenant facilities where a third-party operator leases server space, cabinets, or power capacity to multiple customers. Wholesale data centers represent a subtype of colocation facility in which a developer leases large portions, or sometimes all, of a facility's space and power capacity to a single customer (Urban Land Institute, 2004).

The Urban Land Institute further explains that telecom data centers are generally smaller facilities owned by telecommunications providers and serve as critical network exchange points where traffic from cellular networks connects to the broader internet. Hyperscale data centers are large-scale facilities designed for a single major technology company, such as Amazon Web Services (AWS), Microsoft, Google, or Meta, and are built to accommodate substantial and rapidly changing demands for computing power and data storage. The term "hyperscale" reflects the ability of these facilities to efficiently scale resources up or down to support massive user bases and the significant processing and storage requirements associated with cloud computing, artificial intelligence, and other data-intensive services (Urban Land Institute, 2004).

The *Data Center Ordinance Guide* (2026), prepared by the Chester County and Montgomery County Planning Commissions, identifies corporate or enterprise data centers, retail data centers, wholesale data centers, and hyperscale data centers as common categories of data center development. According to the guide, corporate or enterprise data centers were commonly developed in the 1990s and 2000s to store and process the data of a single entity and were sometimes located on the same site as a company's office building. As data centers increasingly developed as stand-alone principal uses, classifications evolved to reflect differing business models and operational functions (Chester County and Montgomery County Planning Commissions, 2026).

The guide explains that retail data centers lease space and equipment to multiple companies, or to a single company through turnkey service arrangements, with the data center operator providing day-to-day operational support. Wholesale data centers similarly lease space, often to a single large customer, but generally provide only the physical space and power infrastructure, leaving the tenant responsible for operating and maintaining its own computing equipment. Hyperscale data centers are large facilities constructed and operated by a single company to meet its specific computing needs, including cloud storage, artificial intelligence, subscription-based software services, and other applications requiring significant processing capacity. These facilities are designed to scale efficiently as operational demands change. The guide notes that the size and power requirements of these data center types can vary substantially, with the largest

facilities commonly exceeding 100,000 square feet and consuming significant amounts of electrical power (Chester County and Montgomery County Planning Commissions, 2026).

## City of Sioux City's Presentation to the Planning & Zoning Commission

The City of Sioux City, like Woodbury County is also in the process of considering an ordinance to address a framework for the permitting of data centers. On October 13, 2026, the Sioux City Zoning Commission conducted their first meeting where a presentation was offered for the purpose of acquainting residents with a process by overview their zoning ordinance, summarizing data centers, highlighting issues, preparing their schedule, and facilitating public comment. The presentation specifically discusses the categorization of land uses including allowed, limited, conditional, and prohibited. They also defined selected zoning districts, and offered an over view of data centers as well as specified that the benefits of data centers are increased tax revenues, digital connectivity, and new jobs while the challenges are energy and water demand and land use considerations. The also clarified the components of data centers using data provided from Data Center University (City of Sioux City, 2026).

Key characteristics of a modern data center include servers, storage systems, networking equipment, power infrastructure, cooling systems, and security controls. According to the article, "What's Inside a Data Center?", a data center is a highly secure facility designed to provide continuous digital services through redundant systems that prevent downtime if a component fails. Connectivity is delivered through multiple fiber-optic routes that converge in a Meet-Me Room (MMR), while servers operate in climate-controlled environments to ensure reliability. Reliable power is maintained through transformers, uninterruptible power supplies (UPS), backup generators, and fuel reserves. Advanced cooling systems prevent overheating and improve energy efficiency, and specialized fire suppression systems use inert gases to protect equipment. Physical security measures, including surveillance, biometric access controls, and 24/7 monitoring, are complemented by a Network Operations Center (NOC) that continuously monitors facility operations to maximize uptime and service reliability (Data Center University, n.d.).

Using source material from the Hubbell Environmental Law Initiative, University of Iowa College of Law, the City presented data center as including: edge data centers; enterprise data centers; colocation data centers; and hyperscale data centers (Hubbell Environmental Law Initiative, n.d.).



## Edge Data Centers

Small facilities located close to end users.

Edge data centers are smaller facilities placed near where data is generated and used, such as in cities, industrial sites, or rural areas.
They reduce the distance data must travel, improving speed and reliability for time-sensitive applications.
Examples: Telecommunications infrastructure, smart cities, industrial sites, and IoT (Internet of Things) applications.



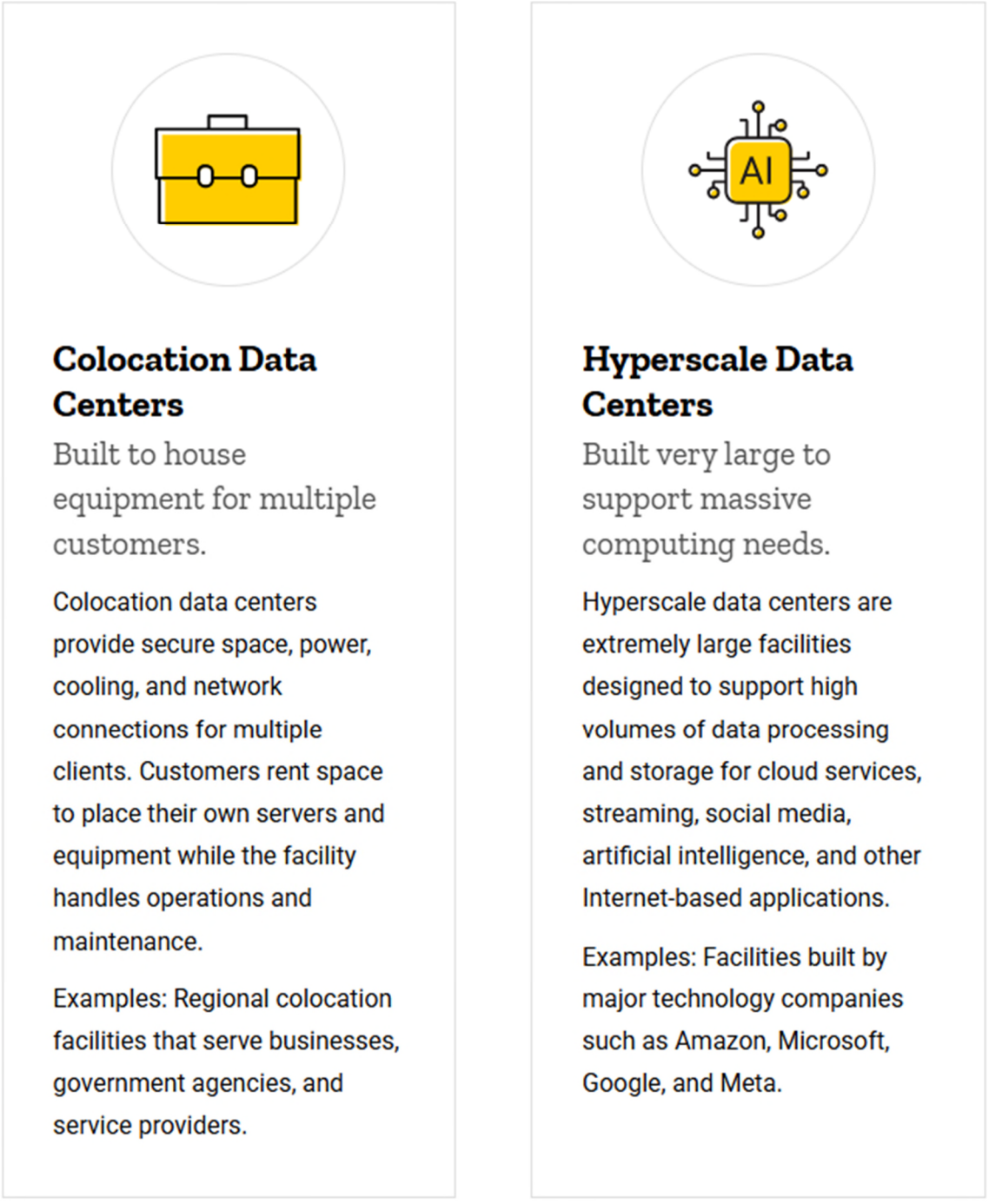
## Enterprise Data Centers

Built and used by a single organization.

Enterprise data centers are owned and operated by a company or institution to support its own business needs. They are typically located on or near the organization's main facilities and are not designed to serve outside customers.

Examples: University systems, hospitals, banks, relaters, manufacturing companies.

**Source**: Hubbell Environmental Law Initiative, University of Iowa College of Law. https://heli.law.uiowa.edu/projects/iowa-data-center-decision-tool-landing-page/iowa-data-center-decision-tool-resources-and

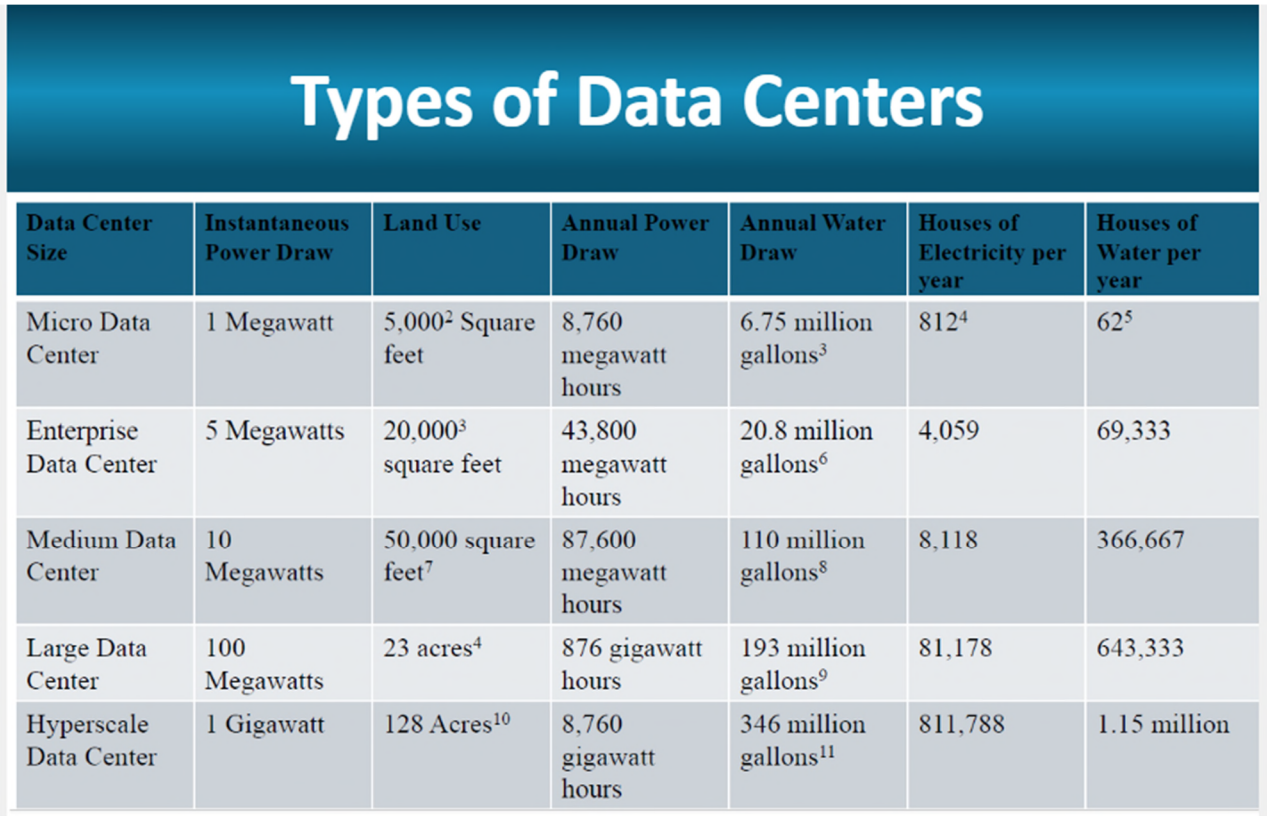



**Source**: Hubbell Environmental Law Initiative, University of Iowa College of Law. https://heli.law.uiowa.edu/projects/iowa-data-center-decision-tool-landing-page/iowa-data-center-decision-tool-resources-and

Additionally, the city offered data from the National Association of Development Organizations Research Foundation's The Future is Now: Data Centers from a presentation by Joe D'Antonio, who emphasizes that not all data centers are alike and that the scale of a proposed facility has significant implications for land use, utility infrastructure, and community planning. Data center classifications range from micro facilities serving localized computing needs to hyperscale campuses supporting cloud computing and artificial intelligence operations. As facility size increases, so do the demands for electricity, water, and land, making an understanding of data center types essential for zoning and development review processes (D'Antonio, 2026).

A Micro Data Center typically requires approximately 1 megawatt (MW) of power, occupies about 5,000 square feet, consumes 8,760 megawatt-hours (MWh) of electricity annually, and uses approximately 6.75 million gallons of water per year. An Enterprise Data Center generally requires 5 MW of power, occupies approximately 20,000 square feet, consumes 43,800 MWh annually, and uses 20.8 million gallons of water per year. A Medium Data Center increases these demands substantially, requiring 10 MW of power, approximately 50,000 square feet of land area, 87,600 MWh of annual electricity consumption, and about 110 million gallons of water annually (D'Antonio, 2026).

The largest facilities create dramatically greater infrastructure demands. A Large Data Center typically draws 100 MW of power, occupies roughly 23 acres, consumes 876 gigawatt-hours (GWh) annually, and uses approximately 193 million gallons of water each year. At the highest end of the spectrum, a Hyperscale Data Center may require 1 gigawatt (GW) of power, occupy approximately 128 acres, consume 8,760 GWh of electricity annually, and use approximately 346 million gallons of water per year. The presentation notes that a hyperscale facility uses enough electricity annually to power approximately 811,788 homes, illustrating the extraordinary scale of modern data center development (D'Antonio, 2026).




| Data Center Size | Instantaneous Power Draw | Land Use | Annual Power Draw | Annual Water Draw | Houses of Electricity per year | Houses of Water per year |
|---|---|---|---|---|---|---|
| Micro Data Center | 1 Megawatt | 5,000[2] Square feet | 8,760 megawatt hours | 6.75 million gallons[3] | 812[4] | 62[5] |
| Enterprise Data Center | 5 Megawatts | 20,000[3] square feet | 43,800 megawatt hours | 20.8 million gallons[6] | 4,059 | 69,333 |
| Medium Data Center | 10 Megawatts | 50,000 square feet[7] | 87,600 megawatt hours | 110 million gallons[8] | 8,118 | 366,667 |
| Large Data Center | 100 Megawatts | 23 acres[4] | 876 gigawatt hours | 193 million gallons[9] | 81,178 | 643,333 |
| Hyperscale Data Center | 1 Gigawatt | 128 Acres[10] | 8,760 gigawatt hours | 346 million gallons[11] | 811,788 | 1.15 million |

D'Antonio, J. (2026). *The future is now: Data centers* [Presentation]. National Association of Development Organizations.

From a planning perspective, the presentation concludes that data center proposals should not be viewed as a single land-use category. The differences in power demand, water consumption, and land requirements between a micro facility and a hyperscale campus are several orders of magnitude apart. From this presentation's perspective, local governments should tailor zoning regulations and development review standards to the specific type and size of data center being proposed rather than applying a uniform approach to all facilities (D'Antonio, 2026).

The City of Sioux City also provided several examples of existing data center developments in Iowa to illustrate the range of facility scales and operational characteristics across the state (City of Sioux City, 2026). In Altoona, the Meta data center campus represents a hyperscale operation, encompassing approximately 500 acres and more than 5 million square feet of building area, with an estimated power demand of 1,400 megawatts. The facility represents an investment of approximately $2.5 billion and supports roughly 1,000 construction jobs and 400 permanent positions. By comparison, the CyrusOne data center in Council Bluffs occupies approximately 20 acres and 216,000 square feet, with an estimated power demand of 9 megawatts. The presentation also highlighted existing data centers in Sioux City, including Fibercomm, which occupies approximately 0.26 acres and 11,250 square feet and represents an investment of approximately $6 million, and The

Security Institute, which occupies approximately 3,972 square feet. These examples demonstrate the substantial variation in data center development, ranging from small local facilities serving regional needs to large hyperscale campuses requiring significant land area, utility infrastructure, and capital investment (City of Sioux City, 2026).

The City of Sioux City also covered the importance of applicable definitions, use and scale. In particular, they provided the following graphic that compares the following data centers: edge, enterprise, colocation, hyperscale, and specialized AI-Ready (City of Sioux City, 2026).




As noted, Edge Data Centers are the smallest facilities, typically ranging from 10 kW to 500 kW. These facilities are distributed close to end users in order to reduce latency and improve response times. They are designed for applications that require real-time data processing and rapid access to services. Key characteristics include low latency, close proximity to users, compact and modular construction, and the ability to be deployed quickly (City of Sioux City, 2026).

Enterprise Data Centers are larger facilities, generally ranging from 500 kW to 5 MW. These are built and operated by individual organizations to support internal IT operations and mission-critical business workloads. Enterprise data centers emphasize high reliability and security while allowing organizations to maintain control over their data and infrastructure. The graphic highlights high reliability, data sovereignty, customization, and alignment with business and IT objectives as their primary advantages (City of Sioux City, 2026).

Colocation Data Centers occupy the middle of the scale spectrum, typically between 5 MW and 50 MW. Unlike enterprise facilities owned by a single organization, colocation

centers are shared environments where multiple organizations lease space and infrastructure. These facilities provide strong network connectivity, flexible expansion opportunities, and cost efficiencies gained through shared resources. The graphic identifies strong connectivity, scalable capacity, carrier neutrality, and cost efficiency as defining features (City of Sioux City, 2026).

Hyperscale Data Centers are significantly larger, ranging from 50 MW to more than 500 MW. These massive facilities are constructed by large cloud service providers and major digital platform companies to support enormous computing and storage demands. They are characterized by extensive scale, worldwide service reach, and advanced operational technologies. According to the graphic, their key traits include massive scale, global reach, sustainability initiatives, and advanced automation (City of Sioux City, 2026).

Specialized AI-Ready Data Centers represent the newest and most technologically advanced category. These facilities are designed specifically for artificial intelligence (AI) and high-performance computing (HPC) workloads and typically begin at 20 MW and can exceed 1 GW. Because AI processing requires exceptional computing density and generates substantial heat, these facilities incorporate advanced cooling systems and specialized networking architectures. The graphic highlights AI/HPC optimization, advanced cooling, high-performance fabric interconnects, and future-ready design as their distinguishing characteristics (City of Sioux City, 2026).

Overall, the comparison shows a progression from small, localized edge facilities focused on speed and proximity, through enterprise and colocation centers that support organizational workloads, to extremely large hyperscale campuses serving global cloud platforms. At the far end of the spectrum are AI-ready data centers, which are purpose-built to handle the intensive computational and cooling requirements of next-generation artificial intelligence and high-performance computing applications (City of Sioux City, 2026). The City of Sioux City also rightfully pointed out that there are numerous issues that must be addressed, including definitions, zoning districts, setbacks, building placement and design, environmental impacts, infrastructure and utilities, and power. As such, bulk requirements such as setbacks and separation distances should be established with the unique characteristics of surrounding neighborhoods in mind, including appropriate buffers from residential areas, schools, parks, and other sensitive land uses (City of Sioux City, 2026).

Clear definitions are needed to distinguish between the varying scales and types of data centers, as facility size, power consumption, and operational impacts can differ significantly. Appropriate zoning districts must be identified to ensure compatibility with surrounding land uses and to establish a predictable review process. Building placement and design standards should address site size, building height, exterior materials, outdoor equipment, traffic circulation, parking, and landscaping to minimize visual impacts and maintain community character. Environmental considerations should include noise generated by cooling systems and backup generators, heat discharge, lighting impacts, and

the proper disposal and recycling of equipment. Infrastructure and utility requirements should evaluate the availability and capacity of water, wastewater, stormwater, streets, and cooling systems to ensure public facilities are not adversely affected (City of Sioux City, 2026). Finally, power demands must be carefully reviewed through capacity studies and consideration of backup generation, battery storage, and alternative energy sources to verify that electrical infrastructure can reliably support new development without negatively impacting existing users (City of Sioux City, 2026).

## Data Center Related Definitions

| County | Population (2020) | Definitions |
|---|---|---|
| **Adair** | 7,496 | **Data Center.** A facility which (1) engages in storage (including cloud based storage), management, maintenance, processing, analysis, computing, hosting (including any form of high-compute applications) and/or transmission of digital data and/or (2) houses and/or provides space to house computing and/or networking equipment, hardware, systems, servers, appliances, associated components and/or digital infrastructure related to and/or utilized in the storage (including cloud based storage), management, maintenance, processing, analysis, computing, hosting (including any form of high-compute applications) and/or transmission of digital data.<br>**Property Line.** The legal boundary between separately owned real estate parcels, and between privately owned parcels and publicly owned land or public right of way.<br>**Occupied** Residence. A house, apartment or other structure designed for residential use that is the abode of a person, family or household and is regularly occupied.<br>**Occupied Building.** A school, hospital, church, public library, pool, shelter house, tent, wedding venue or any other structure that is regularly occupied for private or public gatherings. **Occupied** Farm Building. A barn, shed, lot, pasture or any other structure or area that is regularly occupied by livestock.<br>**Occupied Area.** A cemetery, park, campsite, trail, public recreation area or any other structure or area that is regularly occupied for private or public gatherings.<br>**Minimum Separation Requirements.** The minimum required distance that must exist between a certain line, structure and/or area and a Data Center, or any part, component or appurtenance of a Data Center. |
| **Allamakee** | 14,061 | **Cryptocurrency:** Digital or virtual currency not issued by any central authority that is designed to function as a medium of exchange and that uses encryption technology to regulate the generation of units of currency, to verify fund transfers, and to prevent counterfeiting.<br>**Cryptocurrency mining:** The commercial process by which cryptocurrency transactions are verified and added to the public ledger, known as the blockchain, and the means through which new units of cryptocurrency are released.<br>**Cryptocurrency Mining Center:** A data center engaged in cryptocurrency mining.<br>**Data Center (also known as a High-Density Computing Facility):** A permanent or temporary structure, such as a building, a cargo container or similar storage container, that houses or provides space to house a group of networked server computers in one physical location to centralize the storage, management, and dissemination of data and information about a particular topic, taxonomy, or body of knowledge.<br>**Large** Scale Data Center (LDC): A data center with a maximum power capacity greater than 3MWs (Megawatts). An LDC typically houses 2000 or more servers.<br>**Micro Data Center (MDC):** Also referred to as Edge Data Centers, a Micro Data Center is a small-scale or localized facility, often serving as an edge computing site or corporate enterprise data center, typically housing 500 to 2,000 servers, having a maximum power capacity equal to or less than 3 MWs (Megawatts). MDCs are designed as modular, highly-secure, or powered-shell units to support localized data needs. MDCs or buildings containing MDCs shall no be larger than 865 square feet.<br>**Sensitive Area:** A geographic area defined by natural features where there is a significant risk of groundwater degradation due to human activities conducted at, under, or near the land surface. Sensitive areas include, but are not limited to, sinkholes, rivers, streams, creeks, natural springs, lakes, farm ponds, wetlands, karst topography, and fault zones. |
| **Jackson** | 19,485 | **Accessory** Use. A use or structure incidental and subordinate to the principal facility on the same parcel and serving a function customarily associated with the principal use.<br>**Board of Adjustment (BOA).** The Jackson County Board of Adjustment as established under Chapter 4 of the Jackson County Zoning Ordinance.<br>**Closed-Loop** Cooling System. A cooling system that recirculates coolant within a sealed system and does not rely on continuous withdrawal or discharge of groundwater or surface water during normal operation.<br>**Conditional Use Permit (CUP).** The Board of Adjustment approval authorizing a High-Density Computing Facility as a conditional use under the Jackson County Zoning Ordinance. If the relevant zoning ordinance uses a different term (e.g., "Special Exception") for Board of Adjustment land-use approval, the term CUP in this ordinance shall be construed to mean the applicable Board of Adjustment approval. **Corn** Suitability Rating (CSR2). A soil-productivity index for low farmland used to compare the relative suitability of soils for row-crop production. CSR2 application, when required by this ordinance, shall be provided in a map and summary format acceptable to the Zoning Administrator. |

| County | Population (2020) | Definitions |
|---|---|---|
| | | **Expansion or Modification.** Any structural, mechanical, or electrical alteration that increases total electrical service load, physical footprint, or operational capacity beyond that authorized under the most recent zoning permit or Board of Adjustment approval.<br>**Fully Enclosed Building**. A permanent structure with a roof and four (4) fully enclosed walls. Doors and openings shall remain closed except for normal ingress/egress and maintenance. Roofed canopies, partially enclosed buildings, or screened enclosures do not qualify.<br>**High-Density Computing Facility (HDCF).** A large-scale or cluster of structures housing servers, computer processors, or similar computing equipment that is designed, proposed, or operated at a total electrical service load of six hundred (600) amps or greater or any use-intensive site of two hundred fifty (250) kW or greater, as identified in an application materials, utility-service documentation, or other information acceptable to the Zoning Administrator. Examples include cryptocurrency mining, artificial-intelligence training, data-processing, cloud-computing, or similar computational operations. Thresholds are based on regional utility data showing step-change impacts to local grid reliability above this service level. The term includes facilities commonly referred to as data centers, cryptocurrency mining operations, or similar computing-intensive uses whether primary or accessory in nature.<br>**Hydro-Cooling System.** A closed-loop or water-based heat-exchange system used for temperature control of computing equipment.<br>**Known Map Sensitive Area.** A sensitive environmental, cultural, hydrologic, scenic, or geologic resource identified in County, state, or federal mapping, records, or adports, including but not limited to wetlands, floodplains, sinkholes, karst features, protected water resources, conservation areas, mapped burial or archaeological sensitivity areas, bluffs, scenic byway viewsheds, or other mapped natural-resource areas.<br>**Noise Level (dBA).** Sound-pressure level measured with an A-weighted filter and slow-response time constant in accordance with ANSI S12.9 (Parts 1 & 3) and IEC 61672-1. Type 1 sound-level meter standards.<br>**Nonparticipating Parcel.** A parcel that is not owned, leased, controlled, or otherwise subject to a written agreement with the High-Density Computing Facility applicant, owner, or operator to permit occupancy, site use, construction, setup, access, or related project approval. [Revised from 5/18/2026 draft]<br>**Occupied Structure.** Any building or structure designed for or regularly used by humans for habitation, employment, assembly, education, worship, or shelter, whether permanent or seasonal.<br>**Operator.** The individual, company, partnership, corporation, or other legal entity that owns, leases, controls or operates the project, maintenance, and/or operation of a High-Density Computing Facility.<br>**Owner.** The person, partnership, corporation, trust, or other legal entity having title to the real property on which a High-Density Computing Facility is located, as recorded with the County Recorder.<br>**Peak Particle Velocity (PPV).** The maximum instantaneous velocity of ground vibration, expressed in millimeters per second (mm/s), as measured by a tri-axial accelerometer per DIN 4150-3 or BS 7385-2 standards.<br>**Road Use Agreement (RUA).** A written agreement between the facility operator/applicant and the Jackson County Engineer (or other road authority having jurisdiction), establishing designated haul routes, access points, traffic measures, and the operator's obligations for maintenance, repair, and restoration of public road infrastructure impacted by facility-related traffic.<br>**Surface Water.** Any water body located on the surface of the land, including rivers, streams, creeks, ponds, lakes, drainageways, wetlands and other waters regulated by the Iowa Department of Natural Resources (IDNR). **Utility Provider**. The electric utility (including an investor-owned public utility, municipal utility, or electric cooperative) that is lawfully authorized to provide retail electric service to the subject property, or its designated agent, and that will supply primary electric power to the High-Density Computing Facility.<br>**Utility Service Coordination Letter.** Written documentation from the applicable Utility Provider, or its documentation acceptable to the Zoning Administrator, confirming that the applicant has contacted the Utility Provider regarding the proposed facility's anticipated electrical service needs and identifying any known service extensions, upgrades, easements, substations, transmission or distribution improvements, or related utility infrastructure improvements necessary to serve the proposed use. The letter is for land-use and site-feasibility review only and shall not be construed as County regulation of utility capacity, rates, service territory, interconnection requirements, or system operations. |
| **Jones** | 20,646 | **Clean agent fire suppression system:** A system that uses electrically nonconductive gaseous agents that do not leave residue upon evaporation to extinguish fires.<br>**Closed-loop cooling system:** A sealed system where a coolant circulates continuously, absorbing heat from a source, and then transferring that heat to a heat exchanger for removal, without the coolant ever being exposed to the environment.<br>**Commercial cryptocurrency mining:** The commercial process by which cryptocurrency transactions are verified and added into the blockchain, and the means through which new units of cryptocurrencies are released through the use of server farms. Any equipment requiring a high-density load service, for the purposes of operating a cryptocurrency mining server farm, will constitute a commercial cryptocurrency mining operation. **Cryptocurrency:** A digital currency in which cryptography techniques are used to regulate the generation of units of currency and to verify the transfer of funds while operating independently of a central bank.<br>**Cryptocurrency data center:** Leased or owned boundaries of floor space devoted to the operating data processing equipment for commercial cryptocurrency mining; excludes spaces for data centers not otherwise engaged in commercial cryptocurrency mining, commercial offices, storage, shipping and receiving, warehousing, or any other space that is not electronic processing.<br>**Cryptocurrency server farm:** Three or more interconnected computers housed together in a single facility (either air-cooled or water-cooled), whose primary function is to perform cryptocurrency mining or associated data processing.<br>**Data mining:** The commercial process by which volumes of data are analyzed to find patterns, discover trends, and gain insights into how light may interact in a way that is used and will constitute a commercial data mining operation.<br>**High-density** load service: Any individual service at or above 660 amps in which the energy use intensity (EUI) is calculated as greater than 250 kBtu/ft2/year the total for all operating square footage. **Liquid** cooling |

| County | Population (2020) | Definitions |
|---|---|---|
| | | system: A method of cooling electronic components or other devices by circulating liquid coolant through them to cool and absorb heat produced during operations and then discharge that heat through a heat exchanger. |
| **Linn** | 230,299 | **Data** center means a facility consisting of one or more buildings (whether constructed simultaneously or in separate phases) used primarily for the storage, management, processing, and transmission of digital data, which houses computer or network equipment, systems, servers, appliances, and other associated components related to digital data storage and operations. Data center includes commercial cryptocurrency mining operations and processing.<br>**Small-scale** data center means a data center that has an electrical design capacity of 20 MW or less, and that uses less than 50 gallons per minute of water or less on an annualized basis. For the purposes of determining compliance with power and water usage thresholds in this ordinance, all data center buildings that are part of a phased or multi-building campus shall be evaluated in the aggregate, regardless of whether such buildings are constructed simultaneously or in separate phases.<br>**Large-scale** data center means a data center that has an electrical design capacity greater than 20 MW or that uses more than 50 gallons per minute of water on an annualized basis. For the purposes of determining compliance with power and water usage thresholds in this ordinance, all data center buildings that are part of a phased or multi-building campus shall be evaluated in the aggregate, regardless of whether such buildings are constructed simultaneously or in separate phases.<br>**Places** of Public Assembly means buildings or facilities where people gather for civic, educational, religious, cultural purposes, including, but not limited to retirement and nursing homes, schools, child care homes and centers, group homes, hospitals, detention facilities, or human service facilities, not including facilities allowed as an accessory use to the principal use in question. |
| **Muscatine** | 43,235 | **Cryptocurrency** mining or production installations and Data Center: A physical facility that uses computing and networking equipment to collect, store and process data, as well as distribute and access resources. It may also include supporting equipment such as batteries, back-up generators and cooling equipment. |
| **Osceola** | 6,192 | **DATA CENTER,** A building or other structure rehabilitated or constructed to house a group of networked server computers in one physical location in order to centralize the storage, management, and dissemination of data and information pertaining to a particular business, taxonomy, or body of knowledge. A data center provides computer processing for uses including but not limited to cloud storage, cryptocurrency mining, and artificial intelligence. "Data Center" also includes the lease of a business facility leased by an entity that operates a data center. |
| **Story** | 98,537 | **Accessory BESS (Co-located)** means a battery energy storage system that is ancillary to another primary use of the property. Examples include a BESS co-located with a renewable energy generation facility (solar or wind farm) to store generated electricity for on-site use (peak shaving, backup power), or batteries providing electric grid services at an existing substation. An accessory BESS is subordinate in size and purpose to the main use on the site. These are also often referred to as Hybrid BESS.<br>**Agrivoltaics or Agrivoltaic Projects** means solar sites that combine agricultural uses with generating electricity within the project area to maximize land use and offering mutual production benefits.<br>**ANSI** means the American National Standards Institute.<br>**Augmentation** means the process of supplementing or replacing some or all of the system components to maintain the nameplate capacity (measured in megawatts).<br>**Battery Energy Storage Management System** means an electronic system that protects energy storage systems from operating outside their safe operating parameters and disconnects electrical power to the energy storage system or places it in a safe condition if potentially hazardous temperatures or other conditions are detected.<br>**Battery Energy Storage System (BESS**) means one or more devices, assembled together, capable of storing and discharging electricity primarily intended to supply electricity to a building or to the electrical grid. This includes, but is not limited to, the following: battery cells; enclosed and dedicated-use buildings; thermal, battery, and energy management system components; inverters; access roads; distribution, collection, and feeder lines; wires and cables; conduit; footings; foundations; towers; poles; crossarms; guy lines and anchors; substations; interconnection or switching facilities; circuit breakers and transformers; overhead and underground control, communications and radio relay systems, and telecommunications equipment; utility lines and installations; and accessory equipment and structures. A BESS does not include a stand-alone 12-volt car battery or an electric motor vehicle. A BESS is classified as a Tier 1 or Tier 2 (Utility Scale) BESS as follows: a. Tier 1 BESS have an aggregate energy capacity less than or equal to 600kWh and, if in a room or enclosed area, consist only of a single energy storage system technology. b. Tier 2 (Utility Scale) BESS have an aggregate energy capacity greater than 600kWh or are comprised of more than one storage battery technology in a room or enclosed area.<br>**BESS Dedicated-Use Building** means a building or structure that is only used for BESS components and equipment, is classified as Group F-1 occupancy, as defined in the International Building Code, and complies with the following: a. The building's only use is battery energy storage, energy generation, and other electrical grid-related operations. b. No other occupancy types are permitted in the building. c. Occupants in the rooms and areas containing BESS are limited to personnel that operate, maintain, test, or repair the BESS and other energy systems. d. Administrative and support personnel are permitted in areas within the buildings that do not contain BESS, provided that these areas do not occupy more than ten (10) percent of the building area of the story in which they are located, and a means of egress is provided from the administrative and support use areas to the public way that does not require occupants to traverse any other containing BESS or other energy systems footprint.<br>**BESS Participating Property** means a BESS host property or any real property that is the subject of an agreement that provides for the payment of monetary compensation to the landowner from the BESS owner (or affiliate) regardless of whether any part of a BESS is constructed on the property.<br>**Clean Agent Fire Suppression System** means a system that uses electrically nonconductive gaseous agents that do not leave residue upon evaporation to extinguish fires. |

| County | Population (2020) | Definitions |
|---|---|---|
| | | **Closed-Loop Cooling System** means a sealed system where a coolant circulates continuously, absorbing heat from a source, and then transferring that heat to a heat exchanger for removal, without the coolant ever being exposed to the environment. A closed-loop system shall not use evaporative cooling. It may consist of methods including, but not limited to, air-cooled (dry) cooling, rear-door heat exchanger cooling, hybrid dry economizer cooling, direct-to-chip cooling, or immersion cooling.<br>**Commercial Cryptocurrency Mining** means the commercial process by which cryptocurrency transactions are verified and added to the public ledger, known as the block chain, and the means through which new units of cryptocurrencies are released through the use of server farms. Any equipment requiring a high-density load service, for the purposes of operating a cryptocurrency mining server farm, will constitute a commercial cryptocurrency mining operation. |

# Sample Data Center Ordinances in Iowa (Draft and Effective)



SIOUX COUNTY, IOWA

## An Amendment to the Sioux County Zoning Ordinance

### Data Center Design Standards

*An amendment to the Sioux County Zoning Ordinance establishing design, siting, and operating standards for data center facilities in unincorporated Sioux County. This draft is written for County review. It is not an adopted ordinance and not legal advice. The County Attorney reviews and finalizes all language before adoption, and the County sets every value marked as a County decision in the companion outline.*

## Article I. Purpose and Intent

Conventional commercial, warehouse, and general industrial zoning was not written for the impacts a data center brings. The purpose of this amendment is to allow well-designed data center development in Sioux County in a manner that protects residents, groundwater and surface water, agricultural land, rural quiet and dark skies, County roads and drainage, and the County's long-term fiscal interests.

These standards are adopted as an amendment to the Sioux County Zoning Ordinance and are read together with the County Comprehensive Plan. Where a standard in this amendment is more specific or more protective than an existing provision, the more protective standard governs for data center uses.

## Article II. Applicability, Definitions, and Project Scale

### 2.1 Applicability

This amendment applies to every new data center facility, and to every material expansion of an existing facility, in unincorporated Sioux County. Phased or multi-building campuses are evaluated in the aggregate across all buildings and all commonly controlled parcels, so a project may not avoid a threshold, or the per-parcel cap, by dividing into phases or across adjacent parcels under common control.

### 2.2 Project scale and per-parcel maximum

Facilities are sized by electrical design capacity, up to an aggregate maximum of 25MW across all buildings on any project site. There is no minimum size; regulation is proportionate to actual capacity, and no single parcel hosts an unbounded campus. Any necessary improvement to infrastructure will be the financial responsibility of the applicant.

**(a)** Maximum: design capacity greater than 25MW is not permitted.

**(b)** No minimum: no floor on project size applies; requirements scale with the project's actual capacity.

**(c)** Every facility is subject to conditional use and site-plan review, building-design review, the full agreement suite, and independent peer review.

**(d)** Every facility is also subject to Board findings on cumulative capacity and to community benefit under relevant ordinances, scaled to its actual capacity.

Baseline obligations apply to every facility regardless of size: metering, scheduled reporting, and a community-benefit agreement, so that a small facility does not escape oversight.

### 2.3 Definitions

**(a)** Data center: a facility of one or more buildings used primarily for the storage, management, processing, and transmission of digital data. Cryptocurrency-mining and blockchain-validation facilities are regulated separately by purpose and are not permitted under these data center provisions.

**(b)** Design capacity: the maximum planned electrical load at full build-out, verified in writing by the serving utility. Design capacity governs 25 MW per project site maximum.

**(c)** Place of public assembly: a building where people gather for civic, educational, religious, or cultural purposes, including schools, childcare, churches, hospitals, nursing and retirement homes, and group homes.

**(d)** Receptor: the nearest occupied dwelling or place of public assembly, and the point at which the noise and light limits of this amendment are measured.

## Article III. Siting and Farmland Protection

These standards steer data centers onto already-disturbed, non-agricultural or industrial ground and prohibits any use of productive cropland, using an objective soil test rather than case-by-case judgment.

**(a)** Brownfield fast lane. Previously disturbed land, or land designated Heavy Industrial in the Comprehensive Plan, qualifies regardless of soil rating.

**(b)** Marginal-land gate. Absent brownfield status, a site qualifies only where at least 75 percent of the site is non-irrigated Capability Class 3 or poorer, or carries a Corn Suitability Rating (CSR2) of 40 or below, together with existing non-farm-use, irregular-lot, and slope provisions.

**(c)** Rebuttable presumption against prime farmland. Where 25 percent or more of a site's soils carry a CSR2 of 75 or higher and neither gate is met, the use is presumed inappropriate, and the burden shifts to the applicant to prove that no reasonable alternative site exists.

**(d)** Grading cap. Where prime farmland is nonetheless approved, no more than 10 percent of the site's prime-farmland area may be graded or disturbed absent a specific Board modification.

**(e)** Sites shall avoid mapped floodplain, and drainage tile, field access, and adjoining farm operations shall be protected.

**(f) In all cases, parcels not currently classified as Heavy Industrial shall be reclassified accordingly.**

## Article IV. Setbacks and Lot Standards

Setbacks buffer neighbors from noise, light, and visual mass. The setback that applies depends on how a project is entitled. One rule sits above the entire article: **the noise limits established in this ordinance shall be satisfied in every case**, and no setback, however derived, excuses a facility from meeting them.

### 4.1 Path A: project on existing industrial-zoned land (no rezone)

Where the project sits on a parcel already zoned for industrial use, the underlying industrial-zoning setback prevails as the dimensional standard. The facility is treated as a use within the existing industrial designation and earns no larger buffer simply for being a data center, but it shall satisfy the noise limits and shall modify site and building design as needed to do so.

**(a)** Industrial abutting a residential district. Where an industrial parcel line abuts residentially zoned property, the setback along that shared boundary shall increase from the industrial standard to a negotiated distance, agreed with the County and informed by the affected residential owners, sufficient to meet the noise limits established in this ordinance at the residential receptor and to provide a meaningful visual buffer. The negotiated distance is recorded in the site-plan approval.

### 4.2 Path B: project requiring a rezone

Where the project requires a rezone, setbacks are as follows:

**(a)** Setback to any property line: 100 feet.

**(b)** Setback to a residential property or place of public assembly: 500 feet, wall to receptor.

Halving the above setbacks on rezoned land is a deliberate policy choice. Oversized buffers force the large land assemblages that drive mega-site development; the smaller setback, paired with the 25 MW per-project cap and the always-controlling noise rule, constrains rather than enlarges a project's footprint.

### 4.3 Height and frontage (both paths)

Maximum building height is the same as the Heavy Industrial standard, which is 35 feet, excluding limited screened rooftop equipment. A landscaped yard of at least 20 feet is provided along public street frontage, except at driveways.

## Article V. Noise Performance and Acoustic Design

Continuous cooling and power equipment, and periodic generator testing, are the impacts residents raise most. Low-frequency sound (dBC) matters as much as overall level (dBA) and can affect livestock. This article sets the numeric limits and requires that they be met **through building construction and equipment design rather than through distance**, so that reasonable setbacks, not oversized buffers, control sound.

### 5.1 Noise limits at the receptor

Measured at the outer wall of the affected occupied structure, above a baseline ambient established by an acoustic study:

**(a)** Residential, daytime (7:00 AM to 10:00 PM): 55 dBA and 65 dBC.

**(b)** Residential, nighttime (10:00 PM to 7:00 AM): 50 dBA and 65 dBC.

**(c)** Non-residential adjacent: 65 dBA and 75 dBC.

### 5.2 Compliance by design (the controlling rule)

The decibel limits delineated in this section govern in every case. Whichever setback path applies under this ordinance, the facility shall meet these limits at the receptor and shall modify site layout and building construction until it does. A setback never waives the noise standard. Where the applicable setback alone will not achieve compliance, the applicant shall employ the acoustic measures in Section 5.3 and shall not rely on enlarged separation distance as a substitute.

### 5.3 Accepted acoustic construction measures

Compliance is demonstrated by engineered design. Accepted measures include, without limitation:

- Full enclosure of cooling and power equipment, including generators, within the building envelope, or within purpose-built acoustic enclosures rated for the required insertion loss.
- High-mass exterior wall assemblies, such as insulated tilt-up concrete or equivalent assemblies of a specified sound-transmission-class rating, on elevations facing a receptor.
- Acoustic louvers, duct silencers, and attenuators on all air intake and discharge paths.
- Selection of low-noise equipment, and interior placement of mechanical equipment oriented away from the nearest receptor.
- Berms and dense landscape buffers as supplementary measures, which count toward achieving the limits.

Where the measures in this section achieve the Section 5.1 limits at the receptor, **the dimensional setback need not be enlarged beyond the base standard established under this ordinance.** This is the express basis on which the County controls noise without requiring outsized setbacks.

### 5.4 Testing and verification

**(a)** Generator testing and other elevated-noise maintenance is limited to 8:00 a.m. to 6:00 p.m., Monday through Friday, unless the County approves otherwise, and may be barred on declared poor-air-quality days.

**(b)** The applicant shall provide a pre-construction acoustic baseline and a post-construction noise study at full load by an INCE-certified professional or licensed engineer, with re-testing every five years for the life of the facility, at the operator's expense.

**(c)** Adjacent owners may waive higher limits by recorded written agreement; short-term exceedances are allowed during severe weather.

## Article VI. Water Supply, Closed-Loop Cooling, and Sustainability

Water is the central concern in Iowa's data-center debate, and the water question is a cooling question. The County cannot issue water-use permits, which sit with the Iowa DNR, but it will require information and enter into agreements that add local protection.

### 6.1 Closed-loop cooling performance standard

Cooling shall meet a performance standard, not a technology mandate. A closed-loop or non-evaporative cooling system is required unless the applicant demonstrates that an alternative uses **both less water and less energy**. The required water performance is benchmarked to the Shumate HD/AC hybrid loop, the dual-temperature closed-loop system developed by Darren Shumate (Shumate Engineering) (that system draws approximately 8 gallons per MW per hour, about 192 gallons per MW per day, or roughly 70,000 gallons per MW per year, against approximately 80 gallons per MW per hour for conventional water-cooled chillers with cooling towers: a reduction on the order of 90 percent. Because that benchmark is met with off-the-shelf components, the standard is a result the market can meet, not a de facto prohibition).

Wells and groundwater may serve domestic use only (employee uses, facility and office incidental uses, bathrooms, kitchens, drinking water, and similar uses). In no circumstance may a facility draw primary cooling make-up water from private potable wells.

### 6.2 Water use in context

On a per-megawatt basis, each megawatt of cooling capacity uses about 192 gallons per day on the Shumate hybrid dual-temperature loop (roughly 70,000 gallons per MW per year, against about 1,920 gallons per MW per day on conventional water-cooled chillers with cooling towers, roughly ten times as much. At about 192 gallons per MW per day, a megawatt of Shumate cooling uses less water than a neighborhood coffee shop). That difference is driven by the cooling choice alone and is the evidentiary basis for the standard in Section 6.1. Facility figures follow the Shumate Engineering cooling-system matrix; everyday comparators use published nonresidential water-use benchmarks. All are order-of-magnitude planning benchmarks, not site-specific guarantees.

Upon formal declaration of a Class D4 Exceptional Drought condition from the US Drought Monitor, the facility shall initiate emergency bulk water hauling and shall cease withdrawal from rural water systems. Any bulk water used during such condition shall be obtained from a source located outside the service territory of any rural water system serving the facility and outside the area subject to the D4 Exceptional Drought designation.

### 6.3 Water Study (at application)

The applicant shall submit a planning-level Water Study by a qualified professional demonstrating that sufficient water is available without undue adverse impact on existing users, wells, aquifers, or watersheds, describing the proposed sources and demand ranges, the cooling technology and efficiency and reuse measures, and contingency approaches for supply interruption or drought.

### 6.4 Water Use Agreement (before building permit)

Before a building permit issues, the applicant shall enter a binding Water Use Agreement addressing, at minimum: tamper-evident telemetered metering; scheduled public reporting; drought and constraint response; documented DNR coordination on permits and well-interference mitigation; a well-monitoring fund and make-whole obligation for impaired private wells within one to two miles; and liquidated damages per 1,000 gallons of unauthorized withdrawal, as a contract remedy not capped by the ordinance-fine limit.

### 6.5 Construction water

Separately from operations, the applicant shall submit a construction-water plan addressing dewatering limits, neighboring-well monitoring, and make-good obligations (because construction-phase dewatering, not cooling, has drawn down water tables at comparable projects).

## Article VII. Site Design, Access, and Accessory Uses

- Sites shall connect by a continuous cement-surfaced connection of sufficient capacity to a County arterial or a state or federal highway, and projects requiring road improvements to meet this standard shall deliver them at the applicant's expense.
- Vehicular access points shall minimize conflict with through traffic and accommodate emergency and heavy-equipment vehicles.

- Truck loading, service areas, and utility yards shall be located away from residential frontages and screened from public view.
- On-site equipment, including, but not limited to, transformers, chillers, coolers, generators, fuel and water storage, and battery energy storage, shall be sited and screened to reduce noise and visual impact and positioned to help achieve the established noise limits.
- Permitted accessory uses: on-site renewable generation and battery storage, standby generation, substations and switchyards, microgrid infrastructure, water treatment and recycling, and incidental office and maintenance facilities, each subject to this amendment.

## Article VIII. Architectural and Building Design

Data center buildings are large and utilitarian by default. The following standards are required in order to soften their mass and help them read as compatible with a rural setting.

- Break up long, blank walls with articulation, material changes, or recesses at regular intervals.
- Use muted, non-reflective earth-tone colors and materials that recede into the landscape, rather than high-contrast corporate branding.
- Screen all rooftop and wall-mounted mechanical equipment from view at the property line.
- Provide consistent architectural treatment across phased or multi-building campuses, and minimize reflective surfaces and glare toward roads and neighbors.

## Article IX. Landscaping, Screening, and Buffers

- Install perimeter buffers meeting the County's buffer standards, plus a landscaped yard of at least 20 feet along public street frontage except at driveways.
- Use a mix of evergreen and deciduous plantings, sized to provide meaningful screening within a defined establishment period, emphasizing native and hardy species to northwest Iowa.
- Provide a landscape maintenance and replacement obligation so screening is sustained over the life of the facility.
- Where berms are used, integrate them with plantings for combined visual and acoustic benefit, and credit them toward the established noise limits.

## Article X. Lighting (Dark-Sky Standards)

Rural Sioux County has genuinely dark skies. Lighting follows current DarkSky International guidance.

**(a)** Fixtures: full-cutoff, fully shielded, and downward-facing only.

**(b)** Light trespass at the property line: no more than 0.5 foot-candles.

**(c)** Uplight: none, with no light emitted above horizontal.

**(d)** Color temperature: 3000K or warmer.

**(e)** Controls: motion-activation, dimming, or curfews for non-security lighting; a lighting plan is required at submittal and field-verified after construction.

## Article XI. Power, Generation, and Battery Storage

Electric rates and interconnection are regulated by the Iowa Utilities Commission and the serving utility, not the County. The County's authority is over the land-use aspects of on-site energy infrastructure. However, the following information is required at application:

**(a)** Utility verification. Written verification from the serving power provider that the maximum planned load has been calculated and that supply and infrastructure are adequate and developer-funded, before a building permit, with disclosure of planned line, interconnection, and substation locations.

**(b)** Backup generation. A backup-power plan covering fuel source, number and size of generators, testing frequency and duration, emission and noise controls, and fuel storage and delivery, demonstrating compliance with all applicable permits. Testing is subject to the windows established in this ordinance and may be barred on declared poor-air-quality days.

**(c)** Battery energy storage. Compliance with national fire standards; a separate 150 percent removal and disposal bond posted before operation; developer-funded training and equipment for the Sioux County volunteer fire services, with a certificate of occupancy withheld until the Fire Marshal certifies readiness, and annual re-certification.

## Article XII. Stormwater and Environmental Protection

- Submit a stormwater management plan, a stormwater pollution prevention plan (SWPPP), and an erosion and sediment control plan at site-plan submittal.
- Manage the large impervious footprint so that post-development runoff rates and quality do not degrade downstream drainage, tile systems, or surface waters.
- Submit a construction and operational waste-management plan addressing volumes, recycling and salvage, disposal, on-site separation, and documentation of diversion.
- Protect existing agricultural drainage tile and County drainage infrastructure and coordinate with the applicable drainage district.

## Article XIII. Roads and Public Infrastructure Protection

Construction traffic can quickly damage rural County roads and bridges. These provisions place that wear on the developer, not the County.

- Identify all haul routes and applicable weight and size permits before construction.
- Conduct a pre-construction roadway conditions survey with the County Secondary Roads Department to establish a baseline.
- Enter a Road Use Agreement assigning responsibility for maintenance, dust control, and repair, backed by financial assurance.
- Conduct a post-construction survey and restore roads to pre-construction condition, and repair damage to public drainage systems within 72 hours of discovery.

## Article XIV. Emergency Response and Safety

The applicant shall submit an Emergency Response Plan developed with all local first responders and County Emergency Management and Public Health, before any ground disturbance, covering:

- Response procedures and responsible facility representatives for severe weather, fire, security incidents, capacity and transmission events, environmental and chemical releases, and medical emergencies.
- Site evacuation, designated egress routes, and emergency staging areas.
- A stand-alone battery-energy-storage safety section addressing thermal runaway, suppression, and isolation where battery storage is present.
- Fuel and hazardous-material storage and spill response. Security-sensitive details may be redacted consistent with Iowa Code, subject to County Attorney review.

## Article XV. Decommissioning and Financial Assurance

A data center building can reach the end of its useful life in as little as 15 to 20 years. Without an up-front plan and secured funding, an obsolete facility becomes the County's problem. Being mindful of this, the following is required:

**(a)** Decommissioning plan. Before construction, a decommissioning plan by a licensed professional engineer describing how the facility will be removed and the site restored if operations cease, with estimated removal and restoration costs, a timeline, disposal and recycling of equipment including batteries, and the intended end state of the land.

**(b)** Trigger. Cessation of operations for a continuous 365-day period initiates a cure period, then removal.

**(c)** Financial assurance. Security sufficient to cover estimated net decommissioning cost, recommended at net cost plus 10 percent, staged 25 percent before building permit, 50 percent by year 5, and 100 percent by year 10, with an annual construction-cost (ENR) escalator, re-estimated every five years, with a change-of-control trigger, excluding speculative salvage value, and favoring adaptive reuse over automatic demolition.

## Article XVI. Community and Economic Benefit

Because a facility of this scale falls below Iowa's data-center exemption threshold, it pays full local property tax on land, building, and equipment. The County's leverage is therefore not a tax break to give away, but a benefit package to require and secure. With that in mind, the following must be agreed upon and initiated prior to application approval:

- Require an Economic Development Agreement with the County at or before rezoning, approved by the Board: an upfront contribution plus a modest escalating annual payment, scaled to the actual project.
- Provide a Community Betterment Fund supporting public infrastructure, services, environmental protection, or workforce development.
- At the Board's discretion, consider a Property Value Protection Plan addressing impacts to nearby residential property values.
- Secure every dollar commitment by letter of credit, bond, or corporate guarantee, with a defined cure period and liquidated damages on shortfalls.
- Decline local tax abatement for data centers: the full tax base is an element of the community benefit.
- State local hiring and local-vendor commitments honestly for a small permanent headcount and provide a named resident seat and a public benefits dashboard.

## Article XVII. Application and Review Process

### 17.1 Trust provisions

- No non-disclosure agreements with public officials. Undisclosed or unknown power or water demand automatically routes a project to the most rigorous review track.
- Independent, County-selected peer review of every technical study (water, noise, power), chosen by the County and paid from an applicant-funded escrow.
- Annexation disclosure. Applicants disclose any annexation discussions, and the County exercises its statutory city-consultation right.
- A live public project dashboard at least two weeks before the first hearing.

### 17.2 Submittal sequence

All proposed Data Center applicants must submit a Conditional Use application. Subsequent to that submission the following applies: a pre-application concept meeting; mailed neighbor notice within 1,000 feet within 14 days of filing; an applicant-hosted public information meeting before the Planning and Zoning hearing; a full disclosure packet (peak MW, gallons per day and cooling method, water source, backup generation and emissions, jobs, timeline, and tax posture) with the Water Study, draft agreements, and site plan; the Planning and Zoning recommendation and Board decision; and the pre-building-permit plan set (lighting, noise, road-use, water-use, emergency, stormwater, waste, and decommissioning).

## Article XVIII. Cumulative Limits and Automatic Review

The 25 MW per-project cap bounds any single site; the following bounds the County as a whole:

**(a)** Land ceiling: total acreage in data-center use, capped at a set share of county acreage, as determined by the Board.

**(b)** Water ceiling: cumulative permitted groundwater withdrawal, capped against the aquifer's modeled sustainable yield.

**(c)** Power ceiling: cumulative interconnected MW, capped at utility-certified available capacity.

The County will maintain a running remaining-capacity ledger, and the ordinance reopens automatically at the earliest of: any single ceiling reaching 75 percent; three years elapsing; completion of the State of Iowa's Dakota-aquifer study; or a utility revision to its capacity certification. The ceilings are adopted as Comprehensive-Plan findings first, then, with Board approval, written into the zoning ordinance.

## Article XIX. Enforcement, Severability, and Adoption

### 19.1 Enforcement

- Water: liquidated damages per 1,000 gallons of unauthorized withdrawal; three violations in five years suspends the certificate of occupancy.
- Noise and light: violation notice, then an operator-funded remediation plan, then an escalating daily fine at a level determined by the Board, with the operator bearing all testing costs.
- Backstops: 48-hour inspection access, full indemnification of County legal costs, and injunctive relief, so that a court may order a non-compliant facility to cease operating.
- In cases of unremedied violations, the County reserves the right to suspend the certificate of occupancy, which effectively curtails operations.

### 19.2 Severability

If any provision of this amendment is held invalid, the remaining provisions remain in effect.

### 19.3 Adoption mechanics (Iowa)

As per relevant sections of Iowa Code, a Planning and Zoning Commission recommendation is a statutory prerequisite; the Board considers the amended ordinance at three separate meetings; and a protest by owners within 500 feet forces a 60 percent supermajority.

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**Status of this draft**

*A working draft for County review, not a finished ordinance and not an adopted standard. All numeric values are proposed benchmarks drawn from adopted ordinances (Linn County EU-3, Susquehanna County PA Section 713, Loudoun County VA, St. Louis Armory conditions, and others), from clearly labeled model ordinances, from the County's own wind and solar rules, and from published water-use data and the Shumate Engineering cooling-system matrix. Several provisions touch matters Iowa law reserves to the State: water-use permitting sits with the Iowa DNR and electric rates with the Iowa Utilities Commission. The County Attorney reviews and finalizes all language before adoption.*

Updated: 11-5-26



Adair County Ordinance # _____

**AN ORDINANCE REGULATING TIIE PLACEMENT OF DATA CENTERS ON PROPERTY LOCATED IN ADAIR COUNTY, IOWA**

BE IT ENACTED BY THE ADAIR COUNTY BOARD OF SUPERVISORS:

**Purpose and Intent**

The purpose of this Ordinance is to establish appropriate conditions and safeguards of any use of land for the purpose of a Data Center in Adair County, Iowa.

The intent of this Ordinance is to facilitate the location, construction, installation, operation and decommissioning of any Data Center in Adair County, Iowa in a manner that: protects and preserves the rights, privileges and property of the County and its residents, preserves and improves peace, safety, health, welfare, comfort and convenience of its residents and provides an opportunity for economic growth and development.

All Data Centers must follow this Ordinance.

**Section 1. Definitions.**

Data Center. A facility which (1) engages in storage (including cloud based storage), management, maintenance, processing, analysis, computing, hosting (including any form of high-compute applications) and/or transmission of digital data and/or (2) houses and/or provides space to house computing and/or networking equipment, hardware, systems, servers, appliances, associated components and/or digital infrastructure related to and/or utilized in the storage (including cloud based storage), management, maintenance, processing, analysis, computing, hosting (including any form of high-compute applications) and/or transmission of digital data.

Property Line. The legal boundary between separately owned real estate parcels, and between privately owned parcels and publicly owned land or public right of way.

Occupied Residence. A house, apartment or other structure designed for residential use that is the abode of a person, family or household and is regularly occupied.

Occupied Building. A school, hospital, church, public library, pool, shelter house, shed, wedding venue or any other structure that is regularly occupied for private or public gatherings.

Occupied Farm Building. A barn, shed, lot, pasture or any other structure or area that is regularly occupied by livestock.

Occupied Area. A cemetery, park, campsite, trail, public recreation area or any other structure or area that is regularly occupied for private or public gatherings.

Minimum Separation Requirements. The minimum required distance that must exist between a certain line, structure and/or area and a Data Center, or any part, component or appurtenance of a Data Center.

**Section 2. Separation Requirements.** A Data Center, or any part, component or appurtenance thereof, shall not be sited, located, constructed, installed, used and/or operated in violation of the Separation Requirements listed below.

| Line, Structure and/or Area | Separation Requirements |
|---|---|
| Property Line | **660 feet** |
| Occupied Area | **1,320 feet** |
| Occupied Farm Building | **1,320 feet** |
| Occupied Building | **1,600 feet** |
| Occupied Residence | **1,600 feet** |

**Section 3. Severability.** If, for any reason, any part, section, subsection, sentence, clause or phrase of this ordinance, or the application thereof to any person or circumstances is declared to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of this ordinance.

**Section 4. Penalty**. Any person, persons, firms, partnerships or corporations, whether acting alone or in concert with any other, who violates this Ordinance, shall be guilty of a simple misdemeanor as authorized by Iowa Code section 331.302.

**Section 5. Effective Date.** This Ordinance shall be in force and effect from and after its passage, approval and publication as provided by law.

Woodbury County Planning and Zoning





11/5/26

Updated: 11-5-26



Amendment #20 to Zoning Ordinance L

AN AMENDMENT TO THE ALLAMAKEE COUNTY ZONING ORDINANCE L TO ADD REQUIREMENTS FOR DATA CENTERS

**SECTION 1. PURPOSE**

The purpose of this Amendment is to establish the minimum requirements for and regulation of any applicant/developer/owner engaged in the construction, erection, placement, location, maintenance, modification, operation, and/or decommissioning of Data Centers in Allamakee County in a manner that preserves and protects the rights, privileges, and property of the county and its residents, that ensures the protection of the health, safety, and welfare of the county's residents, and that provides an opportunity for economic growth and development.

**SECTION 2. DEFINITIONS**

**Cryptocurrency:** Digital or virtual currency not issued by any central authority that is designed to function as a medium of exchange and that uses encryption technology to regulate the generation of units of currency, to verify fund transfers, and to prevent counterfeiting.

**Cryptocurrency mining:** The commercial process by which cryptocurrency transactions are verified and added to the public ledger, known as the blockchain, and the means through which new units of cryptocurrency are released.

**Cryptocurrency Mining Center:** A data center engaged in cryptocurrency mining.

**Data Center (also known as a High-Density Computing Facility):** A permanent or temporary structure, such as a building, a cargo container or similar storage container, that houses or provides space to house a group of networked server computers in one physical location to centralize the storage, management, and dissemination of data and information about a particular business, taxonomy, or body of knowledge.

**Large Scale Data Center (LDC):** A data center with a maximum power capacity greater than 3MWs (Megawatts). An LDC typically houses 2000 or more servers.

**Micro Data Centers (MDC):** Also referred to as Edge Data Centers, a Micro Data Center is a small-scale or localized facility, often serving as an edge computing site or corporate enterprise data center, typically housing 500 to 2,000 servers, having a maximum power capacity equal to or less than 3 MWs (Megawatts), and designed as modular, high-security, or powered-shell units to support localized data needs. MDCs or buildings containing MDCs shall be no larger than 865 square feet.

**Sensitive Area:** A geographic area defined by natural features where there is a significant risk of groundwater degradation from action activities conducted at, under, or near the land surface. Sensitive areas include, but are not limited to, sinkholes, rivers, streams, creeks, natural springs, lakes, farm ponds, wetlands, karst topography, and public water supplies.

**SECTION 3. CLASSIFICATIONS**

Micro Data Centers (MDCs) are prohibited in Allamakee County outside of the following districts: A-1 Agricultural District, C-1 Commercial District, I-1 Limited Industrial District, and I-2 General Industrial District, and shall require issuance of a building permit prior to creation.

Large Data Centers (LDCs) are prohibited in Allamakee County, except as permitted by Conditional Use in the I-2 General Industrial District and shall require issuance of a building permit prior to creation.



MDCs and LDCs are strictly prohibited from using groundwater or surface water for cooling purposes. Air-cooled or closed-loop, non-evaporative systems shall be the only cooling methods allowed for MDCs or LDCs in Allamakee County.

No MDC in Allamakee County shall be located less than five (5) miles from another MDC within the county.

No LDC in Allamakee County shall be located less than twenty (20) miles from another LDC within the county.

**SECTION 4. GENERAL APPLICATION REQUIREMENTS**

**MDC and LDC Application**. Applications for an MDC and LDC must identify all owners and leaseholders of the property and the operator of the proposed MDC and LDC site. The application shall be submitted to the Allamakee County Zoning Administrator. Each application shall contain, at minimum, all of the following:

1. **Identity**. The full identity and contact information for all owners/leaseholders/operators of the proposed data center.
2. **Project Description**. A description of the project, including development timeline, location of proposed buildings and parking areas, and the approximate number of anticipated employees.
3. **Height**. MDCs and LDCs shall comply with the building height limitations set forth for principal structures in the underlying zoning district.
4. **Setbacks**. MDCs shall maintain a minimum five hundred (500) feet setback from dwellings, mobile homes, cabins, and occupied community buildings and comply with NFPA 75, *Standards for the Fire Protection of Information Technology Equipment* requirements related to setbacks and buffers, with the more restrictive setback/buffer applied. Property line setbacks shall be the same as required for principal structures in the underlying zoning district. in which the MDC is located.
5. **Fencing Requirements**. All fencing shall be constructed and maintained in accordance with the requirements set forth in Section 110 of the National Electric Code. Fencing shall be constructed and maintained in good condition, as determined by the Allamakee County Zoning Administrator, throughout the life of the project. Fences, gates and warning signs must be maintained in good condition until the MDC or LDC is dismantled and removed from site.
6. **Landscaping**. All areas within fifty (50) feet of the MDC or LDC site shall be cleared of combustible vegetation and other combustible growth and remain cleared as long as the MDC or LDC remains.
7. **Signage**. Signage shall follow ANSI Z535 and shall include the following information:
   a. The type of technology associated with the MDC or LDC, and any special hazards associated with the MDC or LDC;
   b. The type of fire suppression system installed in and around the MDC or LDC; and
   c. 24-hour emergency contact information as required by the National Electric Code (NEC), disconnect and other emergency shutoff information shall be clearly and prominently displayed on a light reflective surface. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.



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8. **Noise**. The 1-hour average noise generated from the MDC or LDC, or any of its components, or associated ancillary equipment shall not exceed a noise level of fifty- five (55) dBA or sixty (60) dBC as measured outside of any non-participating dwelling, cabin, mobile home, or occupied community building or the property line, whichever is closer. Applicants shall submit equipment and component manufacturer noise ratings at the time of application to demonstrate compliance.
   a. At the discretion of the Zoning Administrator, the applicant may be required to provide Operating Sound Pressure Level measurements before and after construction from a few sampled locations, to be determined by the Zoning Administrator, at the perimeter of a comparable MDC or LDC to demonstrate compliance with this standard.
   b. The applicant may be required to document the decibel level if there is a complaint on an operational system. At the discretion of the Zoning Administrator, the owner shall commission a report providing Operating Sound Pressure Level measurements from a reasonable number of sampled locations, to be determined by the Zoning Administrator, at the outside wall of any non-participating dwellings, cabins, mobile homes, occupied community building, or the property line to demonstrate compliance with this standard.
   c. The average hourly decibel level of both dBA and dBC may be exceeded during short-term events such as severe windstorms.
9. **Backup Power Plan**. A description of a backup power plan, describing the fuel source and expected usage of any standby, backup, or temporary power generation systems, shall be required. The plan shall identify the anticipated number and size of generators or other power units, anticipated testing frequency and duration, anticipated noise and emission control measures, and anticipated fuel storage or delivery methods. The plan shall certify that the data center will remain in strict compliance with all applicable local, state, and federal permitting requirements.
   a. Any diesel generators used shall be Tier IV backup generators.
   b. Natural Gas Turbines shall use attached Selective Catalytic Reduction (SCR) units and shall use ammonia, not urea, as the catalyst. All gas turbines must meet state and federal emission standards.
10. **Site Plan**. A site plan shall be submitted showing preliminary structure details and location, fencing details and location, landscaping plan, signage, location of underground and above ground transmission facilities, project development timeline, and any other pertinent information as required by the Zoning Administrator. Prior to issuance of any building permit(s), the Zoning Administrator may approve minor modifications to the preliminary site plan to account for reasonable engineering optimization and final selection of equipment. The site plan application shall additionally include and conform to the following:
    a. Power and Communications Lines.
       i. On-site power and communications lines between MDC or LDC units shall be placed underground to the extent feasible and as permitted by the serving utility. The main service connection at the utility company right-of-way, and any new interconnection equipment, may be located above ground.
       ii. New power and communications lines running from the on-site system(s) to interconnections with structures off-site shall be buried underground to the extent feasible and as permitted by the serving utility.
       iii. At the discretion of the approving authority, power and communications lines may be allowed to be unburied in the following circumstances:



1. When elements of the natural landscape, such as but not limited to shallow bedrock and water courses, and/or existing infrastructure, interfere with the ability to bury lines.
2. When distance makes placing the lines underground infeasible.

   b. An electrical diagram detailing the MDC or LDC layout, associated components, and electrical interconnection methods, in compliance with National Electrical Code disconnects and overcurrent devices.
   c. A preliminary equipment specification sheet that documents the proposed MDC or LDC components, inverters and associated electrical equipment that are to be installed. A final equipment specification sheet shall be submitted before the issuance of building permit(s).
   d. The name, address, and contact information of the proposed system installer and the owner and/or operator of the MDC or LDC. The identity of the final system installer shall be submitted before issuance of the building permit(s).
   g. MDCs or LDCs shall comply with the latest published version of The National Fire Protection Association (NFPA) 75 and 76, the *Standard for the Fire Protection of Information Technology Equipment and Standards for the Fire Protection of Telecommunications Facilities,* as of the date of the submission of the application.
11. **Operations and Maintenance Manual**. The applicant shall provide an ongoing maintenance schedule for the MDC or LDC, as well as for the general upkeep of the property.
12. **Fire Safety Compliance Plan**. The applicant shall document and describe how the fire safety system and its associated controls will function and be maintained in proper working conditions.
13. **Ice Mitigation Plan**. The applicant shall provide an ice mitigation plan concurrent with the applicant's describing the policies and procedures to be followed to prevent the buildup of ice on neighboring properties and roadways.
14. **Insurance**. Evidence of general liability insurance coverage shall be submitted to the Zoning Administrator, prior to commencement of any construction in Allamakee County. The evidence of general liability insurance shall be in the form of a certificate of insurance satisfactory to the Zoning Administrator, and shall show general liability insurance coverage for the installation and operation of the MDC, LDC, or coverage of such specifically provided under a homeowner's or business owner's insurance policy.
15. **Proposed Electric Consumption Verification.** Written verification from the MDC's or LDC's proposed power provider, stating the applicant, has calculated the maximum planned electrical consumption of the proposed use and has verified the utility supply and related electrical infrastructure is sufficient to accommodate the applicant's proposed use.

**SECTION 5 ADDITIONAL LARGE DATA CENTER (LDC) REQUIREMENTS**

All LDCs are subject to the requirements outlined above in Section 4. General Application Requirements, in addition to the following:

1. **Setbacks**. LDC setbacks shall comply with NFPA 75 and 76 requirements related to setbacks and buffers, or said setbacks below, whichever is greater. All other setbacks and buffer requirements dictated by NFPA 75 and 76 shall be followed/adhered to.
   a. 200 feet to property lines.
   b. 1000-foot setback from dwellings, mobile homes, cabins, and the outermost wall of a place of public assembly.
2. **Site and structure requirements**, including:
   a. Stormwater management plan.
   b. Stormwater pollution prevention plan.
   c. Erosion and sediment control plan.
   d. All LDC production equipment (computers, servers, etc.) shall comply with currently recognized Iowa State Building Code requirements. Said structure(s) shall be placed on a permanent foundation.
3. **Lighting Plan.** A lighting plan shall be submitted providing details of the light spread and intensity diagrams, fixture specifications, and mounting height details. Any lighting used for outdoor illumination on the property shall be full cut-off fixtures so that light does not shine upward nor adversely impact adjoining property. Outdoor lighting for LDCs shall adhere to a lighting schedule agreed upon by the applicant and board members during the Conditional Use Permit procedure.
4. **Water Quality Protections:** LDCs shall not be built within 1000 feet of a known mapped sensitive area and shall not be built within 1500 feet of a sinkhole. LDCs built within ½ mile of a known sensitive area must adhere to a water protection plan, which shall include the installation and maintenance of a buffer strip of perennial grasses and/or native trees with a minimum 30-foot width around the sensitive area. The installation of the buffer around the sensitive area shall be performed by the Natural Resources Conservation Service (NRCS) or an approved 3rd party qualified to install and maintain buffers that control runoff. Reports of compliance shall be provided to the Zoning Administrator at the time of completion and every three years thereafter. The cost of installation and maintenance of the buffer around the sensitive area shall be incurred by the LDC owner. Any State of Iowa or a Federal Regulatory Agency water quality restriction which is more restrictive than that provided in this ordinance shall supersede this portion of the ordinance.
5. **State and National Byway Visual Resource Protections and Intrinsic Area Resource Protections:** No LDC shall be allowed within the viewshed or 1 miles, whichever is greater, of the center line from each side of a Scenic Byway. It is recognized that Allamakee County, Iowa has a Driftless Scenic Byway that traverses east and west across the county, and The National Great River Road, which runs north and south through the county.
6. **Development Buffers around Incorporated City Limits:** No LDC shall be built within 2 miles of an incorporated city limit. The purpose of this buffer is to prevent locking up prime land for potential city expansion.
7. **Economic Development Agreement:** Before or contemporaneously with the rezoning to the I-2 zoning district, the applicant for a large-scale data center (LDC) shall enter into an Economic Development Agreement ("EDA") with the County, approved by the Allamakee County Board of Supervisors. The purpose of the EDA is to establish ongoing cooperation between the County and the project operator, a description of any incentives that the project operator will receive (subject to the terms of the EDA), and to provide ongoing contributions that advance the County's fiscal, infrastructure, and community goals related to hosting LDC facilities. The County shall retain full reasonable discretion to determine the form, structure, and use of funds or benefits provided under any EDA. At a minimum, the agreement shall provide for the creation of a Community Betterment Fund or similar mechanism to support public infrastructure, services, environmental protection, workforce development, or other community benefits, as determined by the Board of Supervisors. Additionally, as part of the EDA, the applicant shall consider implementing a Property Value Protection Plan. The purpose of the Property Value Protection Plan is to address potential impacts to nearby residential property values associated with the development and operation of the LDC. Nothing in this section shall limit the County's authority to negotiate terms appropriate to the scale, location, and nature of a specific project, or to enter into separate agreements addressing road use, infrastructure improvements, or other matters related to the development of the LDC.
8. **Fire Safety Compliance Plan**
   a. Applicant shall be responsible for ensuring that firefighters of the designated area are site-specifically trained and equipped in accordance with current NFPA standards.
   b. An applicant shall have a minimum of one meeting annually with local fire department(s), the Allamakee County Sheriff Department, and Allamakee County Emergency Management to go over updates related to emergencies, preparedness, and procedures, and any changes to the Operations and Maintenance Manual and Emergency Operations Procedures.
9. **Emergency Operations Plan.** A copy of the approved Emergency Operations Plan shall be provided to the system owner, the local fire department(s), the Allamakee County Sheriff's Office, and Allamakee County Emergency Management. A copy shall also be placed in an approved location on-site to be accessible to facility personnel, fire code officials, and emergency responders. The Emergency Operations Plan shall include at a minimum the following information:
   a. Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for a safe start-up following cessation of emergency conditions.
   b. Procedures for inspection and testing of associated alarms, interlocks, and controls.
   c. Procedures to be followed in response to specifically identified alerts from the LDC.
   d. Identification of management systems that could signify potentially dangerous conditions, including shutting down equipment, summoning service and repair personnel, and providing agreed-upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure.

10. **Roads**. Applicants shall take measures to avoid damaging public roads and shall be responsible for the mitigation of damage to public roads. At the discretion of the Allamakee County Engineer, a "Public Roads Damage Avoidance and Mitigation Plan" shall be required and be in accordance with the following standards:
    a. **Identification of Potential Roads Usage**. The applicant shall identify, in consultation with the Allamakee County Engineer, all state and local roads to be used within Allamakee County to transport equipment, parts, and materials for the construction, operation or maintenance of the LDC and related components.
    b. **Documentation of Road Conditions**. Before construction, the Allamakee County Engineer shall document the current road conditions of the roads identified for use, with all associated costs of such being to the applicant. The County Engineer shall document the road conditions again within thirty (30) days after construction is complete, weather permits.
    c. **Road Preparation and Damage**. Any road preparation or maintenance necessitated by the proposed LDC or damage caused by the applicant or its contractors during construction or decommissioning shall be completed or repaired within 9 months of completion of construction or decommissioning, at the applicant's expense. Emergency repairs will be initiated by the Allamakee County Engineer, which may be necessary to restore traffic daily, and the costs thereof assessed to applicant.
        i The applicant shall demonstrate that it has appropriate financial resources to ensure repair of damaged roads.
12. **Decommissioning and Site Reclamation Plan**. A Decommissioning and Site Reclamation Plan shall address and/or ensure the following standards:
    a. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
    b. The anticipated life of the LDC.
    c. The estimated decommissioning costs and method of ensuring funds will be available.
    d. The manner in which the site will be restored, including a description of how any changes to the surrounding areas and other systems adjacent to the LDC, such as, but not limited to, structural elements, building penetrations, means of egress, and required fire detection suppression systems, will be protected during decommissioning and confirmed as being acceptable after the system is removed.
    e. A listing of any contingencies for removing an intact operational LDC from service, and for removing an LDC from service that has been damaged by a fire or other damaging event.
    f. That following a continuous one-year period in which there is no activity at the LDC, the permit holder will have one year to complete the decommissioning of the LDC. At the discretion of the Zoning Administrator, the continuous one-year period that triggers decommissioning may be extended if the applicant demonstrates an ongoing commitment to the project through activities such as making lease payments or documentation of ongoing maintenance or repairs.
        i. Decommissioning shall be completed in accordance with the approved decommissioning plan.
        ii. The landowner or tenant shall notify the Zoning Administrator both when the project is discontinued and when decommissioning is complete.



iii. At the discretion of the Board of Adjustments, financial surety may also be required.

SECTION 6. TIMELINE

Within 45 days following the Zoning Administrator's receipt of a completed application for an LDC, the Zoning Administrator shall hold a Public Informational Meeting at a regularly scheduled Board of Adjustments meeting. All property owners within two thousand (2000) feet of the property for which the Conditional Use is being requested shall be contacted, prior to the Public Information Meeting, to inquire as to their approval or disapproval of said permit, and notify them of the time and place of the meeting. The applicant has the option to be in attendance at said meeting to address any questions the public/notified property owners may have. A Public Notice of Informational Meeting for an LDC site will be published in the newspapers of record 4-20 days before the Board of Adjustments meeting.

If any section, provision, sentence, clause, phrase, or part of this Amendment shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the Amendment as a whole or any section, provision, sentence, clause, phrase, or part not adjudged invalid or unconstitutional.

This Amendment shall be in full force and effect from and after its final passage, approval, and publication as provided by law.

First Reading: March 30, 2026

Second Reading: April 6, 2026

Third Reading: April 13, 2026

Amendment #20 to County Ordinance L (the Allamakee County Zoning Ordinance) is hereby approved and adopted on this 13 day of April 2026

Thomas Clark, Chairman, Allamakee County Board of Supervisors

Daniel Byrnes, Member, Allamakee County Board of Supervisors

Dennis Keatley, Member, Allamakee County Board of Supervisors

Updated: 11-5-26



**JACKSON COUNTY ORDINANCE # ____**
**HIGH-DENSITY COMPUTING FACILITIES (HDCF) ORDINANCE**

Be it enacted by the Board of Supervisors of Jackson County, Iowa:
This ordinance is adopted pursuant to the powers granted to counties under Iowa Code Chapters 331 and 335, and in accordance with Iowa Code § 331.302, which authorizes counties to enact ordinances and to incorporate by reference applicable state and federal regulations or technical standards.
It is the intent of the Jackson County Board of Supervisors that this ordinance operate in harmony with all applicable state and federal laws, rules, regulations, codes, permits, and technical standards, including but not limited to the Iowa Administrative Code, the Iowa Code, and nationally recognized standards such as NFPA, ANSI, and IEC.
All referenced codes and standards shall be deemed to include their most current versions, as amended from time to time, as provided in Section 17(E) of this ordinance.
Compliance with these standards does not supersede, duplicate, or limit the authority of the State Fire Marshal, IDNR, or any other agency having jurisdiction under applicable law.

**Section 1. Purpose and Intent**

This ordinance is adopted under the authority of Iowa Code Chapters 331 and 335 for the purpose of protecting the public health, safety, and welfare of Jackson County residents. This ordinance is adopted in accordance with and in furtherance of the Jackson County Land Use Policy and the Jackson County Comprehensive Plan.
The purpose of this ordinance is to regulate the siting and land use impacts of High-Density Computing Facilities (HDCFs) in order to promote compatibility with surrounding land uses, protect public infrastructure, preserve agricultural land and natural resources, and reduce the risk of adverse impacts associated with the siting, construction, and operation of such facilities.
Because HDCFs may involve substantial electrical demand, continuous equipment operation, cooling systems, and large-scale site improvements, these regulations are intended to ensure that such uses are considered only in appropriate locations and under standards addressing location, setbacks, site design, infrastructure coordination, resource protection, and decommissioning.
These regulations are further intended to support orderly development patterns and discourage scattered or incompatible rural industrial development consistent with the Jackson County Land Use Policy and Comprehensive Plan.

**Section 2. Definitions**

**Abatement.** Any corrective action taken to reduce, mitigate, or eliminate an identified violation of this ordinance, including but not limited to operational adjustments, physical modifications, removal of violating materials or equipment, site restoration, or other corrective action authorized by law.
**Abandoned Facility.** A facility that ceases active operations for more than one (1) year without written notice to the County and without an approved plan to return the facility to active operation, unless cessation is due to force majeure, utility outage, court order, or an approved temporary suspension.



**Accessory Use.** A use or structure incidental and subordinate to the principal facility on the same parcel and serving a function customarily associated with the principal use.
**Board of Adjustment (BOA).** The Jackson County Board of Adjustment as established under Chapter 4 of the Jackson County Zoning Ordinance.
**Closed-Loop Cooling System.** A cooling system that recirculates coolant within a sealed system and does not rely on continuous withdrawal or discharge of groundwater or surface water during normal operation.
**Conditional Use Permit (CUP).** The Board of Adjustment approval authorizing a High-Density Computing Facility as a conditional use under the Jackson County Zoning Ordinance. If the then-current zoning ordinance uses a different term (e.g., "Special Exception") for Board of Adjustment land-use approval, the term CUP in this ordinance shall be construed to mean the applicable Board of Adjustment approval.
**Corn Suitability Rating (CSR2).** A soil-productivity index for Iowa farmland used to compare the relative suitability of soils for row-crop production. CSR2 information, when required by this ordinance, shall be provided in a map and summary format acceptable to the Zoning Administrator.
**Expansion or Modification.** Any structural, mechanical, or electrical addition or alteration that increases total electrical service load, physical footprint, or operating noise beyond that authorized under the most recent zoning permit or Board of Adjustment approval.
**Fully Enclosed Building.** A permanent structure with a roof and four (4) fully enclosed walls. Doors and openings shall remain closed except for normal ingress/egress and maintenance. Roofed canopies, partially enclosed buildings, or screened enclosures do not qualify.
**High-Density Computing Facility (HDCF).** A facility or group of structures housing servers, computer clusters, processors, or similar computing equipment that is designed, proposed, or operated at a total electrical service load of six hundred (600) amps or greater and/or an energy-use intensity of two hundred fifty (250) kWh per square foot per year or greater, as identified in application materials, utility-service documentation, or other information acceptable to the Zoning Administrator.
Examples include cryptocurrency mining, artificial-intelligence training, data-processing, cloud-computing, or similar computational operations. Thresholds are based on regional utility data showing step-change impacts to local grid reliability above this service level.
The term includes facilities commonly referred to as data centers, cryptocurrency mining operations, or similar computing-intensive uses, whether primary or accessory in nature.
**Hydro-Cooling System.** A closed-loop or water-based heat-exchange system used for temperature control of computing equipment.
**Known Mapped Sensitive Area.** A sensitive environmental, cultural, hydrologic, scenic, or geologic resource identified in County, state, or federal mapping, records, or adopted plans, including but not limited to wetlands, floodplains, sinkholes, karst features, protected water resources, conservation areas, mapped burial mound or archaeological sensitivity areas, bluffs, scenic byway viewsheds, or other mapped natural-resource areas.
**Noise Level (dBA).** Sound-pressure level measured with an A-weighted filter and slow-response time constant in accordance with ANSI S12.9 (Parts 1 & 3) and IEC 61672-1 (Type 1 sound-level meter) standards.



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**Nonparticipating Parcel.** A parcel that is not owned, leased, controlled, or otherwise subject to a written agreement with the High-Density Computing Facility applicant, owner, or operator for purposes of siting, construction, operation, setback, access, or related project approval. *[Revised from 5/18/2026 draft]*

**Occupied Structure.** Any building or structure designed for or regularly used by humans or livestock for habitation, employment, assembly, education, worship, or shelter, whether permanent or seasonal.

**Operator.** The individual, company, partnership, corporation, or other legal entity that owns, leases, or controls the operation, maintenance, and regulatory compliance of a High-Density Computing Facility.

**Owner.** The person, partnership, corporation, trust, or other legal entity holding title to the real property on which a High-Density Computing Facility is located, as recorded with the County Recorder.

**Peak Particle Velocity (PPV).** The maximum instantaneous velocity of ground vibration, expressed in millimeters per second (mm/s), as measured by a tri-axial accelerometer per DIN 4150-3 or BS 7385-2 standards.

**Road Use Agreement (RUA).** A written agreement between the facility operator/applicant and the Jackson County Engineer (or other road authority having jurisdiction), establishing designated haul routes, access points, traffic control measures, and the operator's obligations for maintenance, repair, and restoration of public road infrastructure impacted by facility-related traffic.

**Surface Water.** Any water body located on the surface of the land, including rivers, streams, creeks, ponds, lakes, drainageways, wetlands and other waters regulated by the Iowa Department of Natural Resources (IDNR).

**Utility Provider.** The electric utility (including an investor-owned public utility, municipal utility, or electric cooperative) that is lawfully authorized to provide retail electric service to the subject property, or its designated agent, and that will supply primary electrical power to the High-Density Computing Facility.

**Utility Service Coordination Letter.** Written documentation from the applicable Utility Provider, or other documentation acceptable to the Zoning Administrator, confirming that the applicant has contacted the Utility Provider regarding the proposed facility's anticipated electrical service needs and identifying any known service extensions, upgrades, easements, substations, transmission or distribution improvements, or related utility infrastructure improvements necessary to serve the proposed use. The letter is for land-use and site-feasibility review only and shall not be construed as County regulation of utility capacity, rates, service territory, interconnection requirements, or system operations.

## Section 3. Applicability and Zoning Districts

High-Density Computing Facilities (HDCFs) require substantial electrical infrastructure, may generate continuous operational noise, and may utilize cooling systems that affect surrounding environmental conditions. To ensure compatibility with neighboring land uses, protection of natural resources, and public safety, this section establishes where such facilities may be considered within Jackson County.

### A. Prohibited Locations

High-Density Computing Facilities are prohibited in all zoning districts except those specifically listed in Section 3(B).



High-Density Computing Facilities are also prohibited within the Floodplain Overlay District and within any area where industrial or commercial development is prohibited by applicable County, state, or federal law, regulation, easement, deed restriction, conservation restriction, or other legally binding land-use limitation.

Sites containing or affecting wetlands, conservation areas, protected natural-resource areas, drainageways, flood-prone areas, karst features, bluffs, or other environmentally sensitive resources shall be subject to all applicable County, state, and federal review and permitting requirements. The County may require the applicant to identify such resources on the site plan and may require additional information or conditions where necessary to determine site suitability and prevent adverse land-use impacts.

Sites located within areas mapped in the County's Historical Burial Mound Overlay or other known or potential archaeological or cultural resource areas shall be subject to the County's existing cultural resource review requirements. Where applicable, the County may require a cultural resource assessment prepared by a qualified professional to confirm that development will not disturb protected resources.

Sites located within the viewshed of a designated national or state scenic byway shall be reviewed in accordance with the scenic byway and visual resource provisions of Section 12.

### B. Allowable Locations (Board of Adjustment Approval Required)

High-Density Computing Facilities may be considered only upon approval by the Board of Adjustment, following a public hearing, within the following zoning districts:

- M-1 Limited Industrial District
- M-2 General Industrial District
- C-1 Commercial District

All High-Density Computing Facilities, regardless of zoning district, shall comply with the enclosure and permanent construction requirements of Section 13.

### C. Conditional Use Permit Required

High-Density Computing Facilities shall not be permitted by right in any zoning district.

Approval by the Board of Adjustment is required for all HDCFs and shall be processed as Conditional Use Permits (CUPs) under the Jackson County Zoning Ordinance.

### D. General Siting Requirements

**1**. Sites shall have feasible access to electrical and broadband infrastructure without requiring new service extensions through existing residential neighborhoods or environmentally sensitive areas. As part of siting feasibility, the applicant shall submit the Utility Service Coordination Letter or other acceptable documentation required by Section 9(A), identifying the applicable utility provider and any known utility service extensions, upgrades, easements, substations, transformers, access routes, or related infrastructure improvements that may be necessary to serve the proposed use.

**2**. Sites shall provide safe, all-weather access for emergency-response, utility, and service vehicles.

**3**. Facilities that cannot comply with the cooling and water-use standards of Section 7 without reliance on consumptive groundwater or surface-water use shall be ineligible for approval. Any request for consideration of alternative cooling technology shall be reviewed only through the Board of Adjustment approval process and the limited exception provisions of Section 7(B), and shall require written Findings of Fact.



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**4**. Where a proposal involves conversion of existing cropland or pasture to industrial use, the applicant shall provide CSR2 information as required by Section 4. CSR2 is a consideration for compatibility and land-use impacts; it is not, by itself, an approval or denial criterion.

**Section 4. Application and Review Process**

**A. Pre-Application Conference.**

Before filing an application, the applicant shall meet with the Zoning Administrator, County Engineer, and Environmental Health. The purpose is to identify site constraints, coordinate utility and infrastructure needs, and confirm required submittals.

**B. Application Submittal Requirements.**

Applications for a High-Density Computing Facility (HDCF) shall include, at minimum:

**1.** A site plan showing property boundaries, topography, drainageways, proposed structures, setbacks, utilities, emergency access, stormwater facilities, parking, and landscaping.

**2**. If the proposal converts existing cropland or pasture, a CSR2 map and brief summary of (a) the average CSR2 for the disturbed area and (b) acres proposed for disturbance. The applicant may include a short narrative on how the layout minimizes conversion where feasible.

**3**. Required studies, as applicable, including noise analysis, hydrogeologic/water evaluation, utility service coordination, stormwater and drainage information, traffic information, and backup power/fuel storage information, prepared in accordance with Sections 6 through 14 of this ordinance.

**4**. The Utility Service Coordination Letter or other acceptable documentation required by Section 9(A).

**5**. A written operations plan describing anticipated hours of operation, staffing levels, maintenance activities, delivery schedules, site security, emergency shutdown procedures, generator use, backup power systems, expected truck traffic during operation, and the name and contact information for the responsible facility operator.

**6.** If the project is proposed to be constructed in phases, the applicant shall submit a phasing plan identifying the timing, location, electrical load, structures, equipment, impervious surface, utility improvements, and operational capacity of each phase. Any future phase, expansion, or increase in electrical load beyond that approved shall require review as an Expansion or Modification under this ordinance.

**7.** The applicant shall identify the location and general type of major utility infrastructure proposed to serve the facility, including transformers, substations, switchgear, utility yards, poles, underground routes, easements, service access routes, and related equipment areas, to the extent known at the time of application.

**8**. The applicant shall identify the proposed method of sanitary sewage disposal and potable water supply for the facility, including whether the facility will use an existing system, proposed private well, public or municipal water service, hauled water, or another lawful source. Any required County Health Department or state agency review shall be coordinated under Section 8.



**9**. The applicant shall submit a preliminary stormwater, grading, drainage, and erosion-control plan prepared by a qualified professional, identifying existing and proposed drainage patterns, impervious surface, stormwater facilities, erosion-control measures, sediment-control measures, and any required state or federal stormwater permits.

**10**. The applicant shall provide an estimate of construction and operational traffic, including employee trips, delivery trips, maintenance vehicles, fuel deliveries, waste or e-waste removal, oversized loads, and anticipated haul routes. The County Engineer may require a more detailed traffic impact study where site conditions, road limitations, traffic volume, or public safety concerns warrant additional review.

**11.** The applicant shall identify any proposed backup generators, fuel tanks, battery energy storage systems, diesel storage, propane storage, coolant storage, or other backup power systems, including general location, capacity, containment measures, noise impacts, air-emissions permitting status if applicable, and emergency-response considerations. Nothing in this subsection authorizes a battery energy storage system except as otherwise allowed by County ordinance.

**12.** As part of the Emergency Access and Safety Coordination Plan, the applicant shall provide basic site-safety information reasonably necessary for emergency-response coordination, including access routes, gate or access-control information, emergency contact information, general location of electrical disconnects or isolation points, backup generators, fuel storage areas, battery systems if proposed, coolant or chemical storage areas, and any other site features that may affect emergency access or responder awareness. The plan shall *(Revised 5/18/2026)* be provided to the emergency-response agency having jurisdiction for informational review and coordination purposes only. Nothing in this section shall be interpreted to require the County or any emergency-response agency to approve building design, fire-code compliance, utility-owned equipment, electrical systems, or any matter under the authority of the State Fire Marshal or other agency having jurisdiction.

**13.** The applicant shall submit a list of known or anticipated local, state, and federal permits, licenses, registrations, approvals, or agency reviews required for the project, including but not limited to stormwater, water use, wastewater or discharge, air emissions, fuel storage, electrical, driveway or access, road-use, or environmental permits. County approval under this ordinance does not relieve the applicant of responsibility to obtain all other required approvals.

**14.** Public Notification

a. Notice of the public hearing shall be prepared and published by Jackson County in accordance with Iowa Code sections 335.6 and 331.305 and Chapter 4 of the Jackson County Zoning Ordinance.

b. In addition to published notice, mailed courtesy notice shall be provided to all property owners within one (1) mile of the subject property lines.

c. Failure of mailed courtesy notice shall not invalidate the hearing or any action taken, provided published notice was properly given.

**15.** The required fee and any escrow for third-party review, as determined by the Zoning Administrator.

**C. Completeness and Review Timeline.**

**1.** Within fifteen (15) business days of submittal, the Zoning Administrator shall determine whether the application is complete and notify the applicant of any deficiencies or confirm completeness.

**2.** Upon acceptance as complete, applications eligible for Board of Adjustment review shall be scheduled for a public hearing no sooner than forty-five (45) days from acceptance to allow interdepartmental review, technical evaluation, public notice, and utility coordination.

**3.** Decision Period.

a. No Rezoning Required. If the property is already zoned to allow High-Density Computing Facilities, the Board of Adjustment shall act on the Conditional Use Permit within ninety (90) days after acceptance of a complete application, unless extended by mutual written agreement.

b. Rezoning Required. If rezoning is required, the rezoning request shall proceed in accordance with the applicable procedures and timelines of the Jackson County Zoning Ordinance, including any required referrals, reviews, and actions by other jurisdictions or agencies where applicable. Following final action by the Board of Supervisors on the rezoning request, the Board of Adjustment shall schedule and consider the Conditional Use Permit application in accordance with this section.

**4.** The ninety-day decision period is paused while (a) third-party review is underway or (b) required documents from the applicant or Utility Provider are outstanding.

**D. Third-Party Technical Review.**

**1.**The County may retain one or more qualified independent professionals to review technical materials where specialized expertise beyond normal staff capacity is reasonably necessary.

All costs of third-party review, including professional fees and reasonable County administrative costs associated with such review, shall be paid by the applicant to Jackson County, reimbursed to Jackson County upon invoice, or paid through an escrow or advance-payment process established by Jackson County. Such costs shall not be borne by Jackson County. *(Revised from 5/18/2026 draft)*

**2.** The County may require an escrow deposit or advance payment in an amount reasonably estimated to cover third-party review costs. Review or processing of the application may be suspended if the escrow is depleted and not timely replenished by the applicant.

**3.** The County may require an escrow deposit or advance payment to Jackson County in an amount reasonably estimated to cover third-party review costs. Review or processing of the application may be suspended if the escrow is depleted and not timely replenished by the applicant. *(Revised from 5/18/2026 draft)*

**E. Public Hearing.**

All High-Density Computing Facility Conditional Use Permit applications shall be heard by the Board of Adjustment following completion of any required rezoning process.

**F. Permit Conditions and Findings.**



**1.** The Board of Adjustment shall impose such reasonable and necessary conditions as are needed to ensure compliance with this ordinance and to protect the public health, safety, and welfare.

**2.** All decisions shall include written Findings of Fact summarizing the evidence, conditions, and basis for approval or denial, with reference to the standards of Iowa Code section 335.15 where applicable.

**3.** In addition to the technical standards set forth in Sections 5 through 15, the Findings of Fact shall address, as applicable, compatibility with surrounding land uses, transportation and road impacts, utility service considerations, CSR2 information, and consistency with the Jackson County Land Use Policy and Comprehensive Plan.

**G. Minimum Standards; No Guarantee of Approval.**

Compliance with the minimum submittal, technical, dimensional, and operational standards of this ordinance does not, by itself, guarantee approval of a High-Density Computing Facility. Each application shall remain subject to the applicable public hearing process, required Findings of Fact, site-specific review, consistency with the Jackson County Zoning Ordinance, Jackson County Land Use Policy and Comprehensive Plan, and consideration of public health, safety, welfare, infrastructure, compatibility, and natural resource impacts. The reviewing body may approve, approve with conditions, or deny an application based on the standards of this ordinance and the evidence in the record.

**H. As-Built Documentation and Pre-Operation Certification.**

Prior to commencement of full facility operations, the facility owner and operator shall submit as-built plans or certification from a licensed professional confirming that the facility was constructed in substantial compliance with the approved site plan, approved conditions, utility infrastructure plan, stormwater plan, emergency access plan, and other approved application materials.

**I. Annual Compliance Certification.**

By March 1 of each year, the facility owner and operator shall submit a brief annual certification confirming that the facility remains in compliance with the approved Conditional Use Permit, approved site plan, approved operations plan, noise and vibration standards, cooling and water-use standards, emergency contact information, decommissioning financial assurance, and all applicable conditions of approval. The certification shall identify any material changes in ownership, operation, electrical load, cooling technology, backup power systems, or site layout during the prior calendar year.

**Section 5. Setbacks and Separation Requirements**

The following setbacks and separation requirements shall apply to all principal structures, equipment enclosures, cooling systems, generators, and associated infrastructure of a High-Density Computing Facility.

**A. Occupied Structures and Cemeteries.**

No High-Density Computing Facility shall be located less than one thousand feet (1,000') from any occupied structure or cemetery.

**B. Property Lines.**
No High-Density Computing Facility shall be located less than five hundred feet (500') from any property line.

**C. Wells.**
No High-Density Computing Facility structure, equipment enclosure, cooling system, generator, or associated infrastructure shall be located less than five hundred feet (500') from any existing public well or any private well located on a nonparticipating parcel, unless a different separation distance is approved or required by the County Health Department, IDNR, or other agency having jurisdiction. *[Revised from 5/18/2026 draft]*

**D. Known Mapped Sensitive Areas.**
No High-Density Computing Facility shall be located less than one thousand feet (1,000') from any known mapped sensitive area.

**E. Sensitive Area Protection.**
Any High-Density Computing Facility that is otherwise permitted under this ordinance and is proposed more than one thousand feet (1,000') but within one thousand three hundred twenty feet (1,320') of a known mapped sensitive area may, as a condition of approval, be required to implement additional site protections reasonably necessary to prevent runoff, erosion, sedimentation, thermal impacts, or other adverse effects on the sensitive area. Such protections may include buffer strips, stormwater measures, grading controls, vegetation requirements, or other comparable measures appropriate to the site.

**F. Greater Setback May Be Required.**
The Board of Adjustment may require greater setbacks where site conditions, topography, facility design, cooling technology, water-use characteristics, or other site-specific factors indicate that additional distance is necessary to protect public health, safety, and welfare, to achieve compliance with Section 6 of this ordinance, or to prevent adverse impacts to groundwater, surface water, or hydrologically sensitive features.

**G. Findings of Fact Required.**
Any increase in the setbacks required by this section, or any additional site protection required under this section, shall be supported by written Findings of Fact referencing applicable studies, modeling, site conditions, agency guidance, or other information contained in the public record.

**H. Greater Standard Governs.**
Where multiple setback or separation standards apply, the greater distance shall govern. Nothing in this section shall be interpreted to authorize a reduction of any required setback except through the applicable variance process under the Jackson County Zoning Ordinance.

**I. Measurement.**
Setbacks shall be measured from the nearest High-Density Computing Facility structure, equipment enclosure, cooling system, generator, or associated infrastructure to the respective property line, occupied structure, cemetery, or environmental feature.
If more restrictive setback, buffer, or water-quality requirements are imposed by state or federal law, those requirements shall govern.



**Section 6. Noise and Vibration Standards**
The purpose of this section is to protect the health, comfort, and welfare of Jackson County residents from excessive noise and vibration associated with High-Density Computing Facilities.

**A. Noise Limits**

**1.** Noise from any High-Density Computing Facility shall not exceed fifty decibels (50 dBA), measured at the property line of a nonparticipating parcel.

**2.** If testing identifies a distinct hum, tone, or other prominent low-frequency characteristic, the measured sound level shall be adjusted by plus five decibels (+5 dBA) for compliance evaluation purposes.

**B. Noise Measurement Standards.**

**1.** Noise measurements shall be conducted in accordance with the most current versions of ANSI S12.9 (Parts 1 and 3) and IEC 61672-1, or approved successor or equivalent standards providing equal or greater rigor, accuracy, and public protection.
Instrumentation and Method. Testing shall be performed using a Class 1 / Type 1 sound level meter capable of one-third-octave band analysis, or equivalent instrumentation under an approved successor or equivalent standard.

**2.** Measurements shall be taken over a representative operating period sufficient to capture typical facility conditions, including cyclical equipment operation, as determined by the qualified professional conducting the test.

**3.** If a successor or equivalent standard is used, the testing professional shall provide a brief written statement explaining why the alternative standard is equivalent to or more conservative than the standards listed above.

**C. Noise Testing, Reporting, and Corrective Action.**

**1.** The facility owner and operator shall, at their sole expense, provide:
**a.** a baseline ambient noise study completed prior to commencement of construction, documenting existing background sound conditions at representative locations; and
**b.** a post-startup noise compliance test completed within sixty (60) days after commencement of full facility operations, or within such additional time approved by the Zoning Administrator for good cause, demonstrating compliance with this ordinance under representative operating conditions.

**2.** Additional noise testing may be required by Jackson County in response to a complaint, following any Expansion or Modification, following a documented violation, or when the Zoning Administrator reasonably determines that additional testing is necessary to investigate potential noncompliance.

**3.** Beginning on the third anniversary of commencement of full facility operations, and every three (3) years thereafter for so long as the facility operates, the facility owner and operator shall provide an updated noise compliance test at their sole expense.

**4.** All noise testing shall be conducted by an independent qualified professional experienced in environmental noise measurement.

**5.** All noise testing and reporting required under this section shall be at the sole expense of the facility owner and operator and shall not be borne by Jackson County.

**6.** Any noise study or sound test required under this ordinance shall be submitted to the Zoning Administrator within ten (10) business days after testing. The report shall include, at a minimum, testing locations, dates and times, equipment and calibration information, standards used, facility operating conditions, and results sufficient to demonstrate compliance.

**7.** If noise exceeds the allowable limits, the facility owner and operator shall promptly implement corrective measures and, if necessary, suspend the offending equipment or operations until compliance is demonstrated by follow-up testing. Any follow-up report shall also be submitted to the Zoning Administrator.

**D. Vibration Limits.**

Maximum Vibration Level. Ground vibration from any High-Density Computing Facility shall not exceed the following Peak Particle Velocity (PPV), measured at any property line:
0.30 mm/s PPV during daytime hours (7:00 a.m. to 10:00 p.m.);
0.14 mm/s PPV during nighttime hours (10:00 p.m. to 7:00 a.m.).

**E. Vibration Measurement Standards**

**1.** Vibration measurements shall be conducted in accordance with the most current versions of DIN 4150-3 and BS 7385-2, or approved successor or equivalent standards providing equal or greater rigor, accuracy, and public protection.
Instrumentation and Method. Testing shall be performed using a tri-axial vibration monitor or accelerometer capable of recording Peak Particle Velocity in three directions.

**2.** Measurements shall be taken over a representative operating period sufficient to capture typical facility conditions, including cyclical equipment operation, as determined by the qualified professional conducting the test.

**3.** If a successor or equivalent standard is used, the testing professional shall provide a brief written statement explaining why the alternative standard is equivalent to or more conservative than the standards listed above.

**F. Vibration Testing, Reporting, and Corrective Action.**

**1.** The facility owner and operator shall, at their sole expense, provide:
**a.** a baseline ambient vibration study completed prior to commencement of construction, documenting existing background vibration conditions at representative locations; and
**b.** a post-startup vibration compliance test completed within sixty (60) days after commencement of full facility operations, or within such additional time approved by the Zoning Administrator for good cause, demonstrating compliance with this ordinance under representative operating conditions.

**2.** Additional vibration testing may be required by Jackson County in response to a complaint, following any Expansion or Modification, following a documented violation, or when the Zoning Administrator reasonably determines that additional testing is necessary to investigate potential noncompliance.



**3.** Beginning on the third anniversary of commencement of full facility operations, and every three (3) years thereafter for so long as the facility operates, the facility owner and operator shall provide an updated vibration compliance test at their sole expense.

**4.** All vibration testing shall be conducted by an independent qualified professional experienced in environmental or structural vibration measurement.

**5.** All vibration testing and reporting required under this section shall be at the sole expense of the facility owner and operator and shall not be borne by Jackson County.

**6.** Any vibration study or test required under this ordinance shall be submitted to the Zoning Administrator within ten (10) business days after testing. The report shall include, at a minimum, test locations and measurement points, dates and times, measurement duration, equipment and calibration information, standards used, facility operating conditions during testing, and results sufficient to demonstrate compliance.

**7.** If vibration exceeds the allowable limits, the facility owner and operator shall promptly implement corrective measures and, if necessary, suspend the offending equipment or operations until compliance is demonstrated by follow-up testing. Any follow-up report shall also be submitted to the Zoning Administrator.

**Section 7. Cooling Systems & Water Use**

The purpose of this section is to address land use impacts associated with cooling systems and water use, including compatibility with surrounding properties, protection of groundwater and surface water resources, and site suitability for High-Density Computing Facilities. This section is intended to establish land use standards and coordination requirements only. Nothing in this section shall be construed to supersede, duplicate, or replace the authority of the Iowa Department of Natural Resources or any other agency having jurisdiction over water withdrawal, discharge, wastewater, or related permitting requirements.

**A. Required Cooling Technology**

All High-Density Computing Facilities (HDCFs) shall utilize air-cooled or closed-loop cooling systems. Open-loop, once-through, or water-consumptive cooling systems are prohibited. This requirement applies to all primary and auxiliary cooling equipment serving computing, electrical, or energy storage components of the facility.

**B. Limited Exception (Board of Adjustment Discretion)**

The Board of Adjustment may consider an alternative cooling technology only if the applicant submits a certified engineering report demonstrating that the proposed system:
**1.**Does not withdraw groundwater or surface water.
**2.**Results in no net consumptive water loss.
**3.**Does not increase risk to aquifers, private wells, or hydrologically sensitive features.
**4.**Complies with all applicable Iowa Department of Natural Resources (IDNR) water-use and discharge requirements.
Any approval of an alternative cooling system shall require written Findings of Fact and may include conditions of approval.



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**C. Spill Prevention and Containment**

All coolants, lubricants, and water-treatment chemicals shall be stored in approved containers with secondary containment sufficient to prevent release to soil, groundwater, or surface water. Containment practices shall comply with all applicable local, state, and federal requirements, including applicable IDNR or EPA requirements, manufacturer specifications, permit conditions, and applicable fire, electrical, or industry standards. *[Revised from 5/18/2026 draft]*

**D. Cooling Water Discharge and Disposal**

Any discharge or disposal of cooling water, including water containing additives or treatment chemicals, shall comply with all applicable IDNR, federal, and other legal requirements. Where cooling-water discharge or disposal is proposed as part of facility operations, the applicant may be required to provide sufficient information to demonstrate that such discharge or disposal will be lawfully handled through the appropriate permitting or disposal pathway. Nothing in this subsection shall be interpreted to authorize discharge otherwise regulated by IDNR or other agencies having jurisdiction.

**E. Closed-Loop System Verification at Start-Up (Under Review)**

Prior to commencement of full facility operations, the facility owner and operator shall provide written verification from a licensed professional engineer or qualified cooling-system installer that:

**1.** All closed-loop cooling systems have been pressure-tested or otherwise inspected for leaks and system integrity;

**2.** Testing and inspection were conducted in accordance with manufacturer specifications and applicable industry standards; and

**3.** Any deficiencies identified during testing have been corrected and re-verified.

The Zoning Administrator may require follow-up verification or inspection if there is credible evidence of leakage, system malfunction, or resulting impacts to neighboring land uses or environmental resources.

**F. Annual Water Use Reporting**

Unless the facility is connected to a municipal water-supply system, the facility owner and operator shall submit a simple annual water-use summary to the Zoning Administrator by March 1 of each year covering the prior calendar year of operations. The summary shall include, at a minimum:

**1.** Total water used during the reporting period, by source, including municipal supply, private well, or hauled water;

**2.** A brief description of any changes to cooling equipment, cooling-system type, or water-use practices during the reporting period; and

**3.** A certification that the facility remains in compliance with the cooling-system and water-use requirements of this section.

Routine submission of this summary to state agencies is not required by this ordinance. Additional reporting may be requested by the Zoning Administrator only if required by IDNR or if credible evidence of water-use conflicts with neighboring properties or environmental resources arises.

**G. Compliance With Other Laws**

Nothing in this section supersedes, duplicates, or limits the authority of the Iowa Department of Natural



Resources or any other agency having jurisdiction. All facilities shall comply with Iowa Code chapter 455B and all other applicable state and federal laws, permits, and regulatory requirements.

**Section 8. Sanitary Facilities and Water Supply**

This section serves as a coordination provision. Sanitary sewage disposal systems and potable water supply systems are governed by the County Health Department and applicable state agencies rather than independent County zoning standards.

All sanitary sewage disposal systems and potable water supplies serving a High-Density Computing Facility shall comply with applicable County Health Department regulations and all applicable state requirements administered by the Iowa Department of Health and Human Services, Iowa Department of Natural Resources, or any other agency having jurisdiction.

Where review or permitting by the County Health Department or a state agency is required, the Zoning Administrator shall coordinate referral as part of the application review process. Approval under this ordinance does not relieve the facility owner, operator, applicant, or property owner of responsibility to obtain all required sanitary, wastewater, potable-water, well, water-system, or related permits and approvals.

**Section 9. Utility Coordination**

**A. Utility Service Coordination and Applicant Verification.**

The applicant shall provide written documentation identifying the applicable electric Utility Provider for the subject property and confirming that the applicant has consulted with the Utility Provider regarding the proposed High-Density Computing Facility, including the proposed maximum electrical service load and any known utility service extensions, upgrades, easements, substations, transmission/distribution improvements, or related site improvements that may be necessary to serve the proposed use.

The documentation may be provided in the form of a utility service availability letter, utility feasibility letter, service coordination letter, or other written confirmation acceptable to the Zoning Administrator. Proprietary, confidential, rate-related, or contract terms may be redacted.

The purpose of this requirement is limited to land-use review, site-feasibility review, infrastructure coordination, emergency access and safety planning, and evaluation of potential site impacts. Nothing in this subsection shall be interpreted to require the County to determine electric utility capacity, approve or deny electric service, regulate utility rates, regulate service territories, regulate interconnection requirements, require a Utility Provider to serve the facility, or interfere with matters governed by state or federal law. Failure to provide the required documentation may result in the application being deemed incomplete.

**B. Utility Connections, Infrastructure and Site Design**

**1.** Reasonable efforts shall be made to place utility connections serving the HDCF underground where feasible based on soil conditions, topography, distance, and other site constraints.

**2.** Major utility equipment areas, transformers, switchgear, substations, easements, and service-access routes shall be shown on the approved site plan to the extent known and shall be located, screened, and accessed in a manner compatible with surrounding land uses and emergency-response needs.

**Section 10. Emergency Access, Safety Coordination and Hazard Containment**

**A. Emergency Access and Safety Coordination Plan**

Prior to issuance of any zoning permit, the applicant shall submit an Emergency Access and Safety Coordination Plan consistent with the information required under Section 4(B)(12). The plan shall demonstrate that the facility site layout provides safe, reliable, all-weather access for emergency-response, utility, and service vehicles and includes basic site-safety information reasonably necessary for emergency-response coordination.

The plan may be provided to the emergency-response agency having jurisdiction for informational review and coordination purposes only. Nothing in this section shall be interpreted to require the County or any emergency-response agency to approve building design, fire-code compliance, utility-owned equipment, electrical systems, or any matter under the authority of the State Fire Marshal, Utility Provider, or other agency having jurisdiction.

The plan shall be maintained on file with the County and updated as necessary to reflect material changes to site layout, access, gate or access-control information, emergency contact information, emergency electrical disconnects or isolation points, backup power systems, fuel storage areas, coolant or chemical storage areas, or other site features that may affect emergency access or responder awareness.

**B. Emergency Contact and Access Updates**

The facility owner and operator shall maintain current twenty-four-hour emergency contact information with the Zoning Administrator. Any change in facility ownership, operation, emergency contact information, access-control information, or designated responsible representative shall be provided to the Zoning Administrator within ten (10) days.

**C. Hazard Awareness and Containment**

To reduce risks to surrounding land uses, public infrastructure, responders, and natural resources, on-site storage of coolants, fuels, lubricants, batteries, or other regulated liquids or chemicals shall be located and maintained so as to prevent spills, leaks, discharges, or uncontrolled releases to soil, groundwater, surface water, stormwater systems, or the atmosphere, as applicable under local, state, or federal law.

Secondary containment and release-prevention measures shall be provided where required by applicable law, permit, code, manufacturer specifications, or industry standards. *[Revised from 5/18/2026 draft]*

**D. Emergency Signage**

A sign visible at the primary access entrance shall identify the facility owner and/or operator and display a twenty-four-hour emergency contact phone number. Required signage shall be maintained in good condition for the life of the facility. Any change in facility ownership, operation, or emergency contact information shall be updated on the required signage and in the Emergency Access and Safety Coordination Plan within ten (10) days.

**Section 11. Waste Management, E-Waste, and Regulated Materials**

**A. Purpose and Land Use Basis**

This section is intended to address land-use impacts associated with the on-site accumulation, storage, removal, recycling, and disposal of electronic waste, obsolete equipment, regulated materials, and similar



materials associated with High-Density Computing Facilities. Such impacts may include site-safety concerns, contamination risk, visual blight, interference with site maintenance, and interference with decommissioning or site restoration. Nothing in this section is intended to supersede, duplicate, or replace the authority of the Iowa Department of Natural Resources, the U.S. Environmental Protection Agency, the State Fire Marshal, or any other agency having jurisdiction over environmental, waste-disposal, hazardous-material, or code-compliance matters.

**B. Waste Handling and Disposal**

All solid waste, e-waste, hazardous materials, and regulated substances associated with a High-Density Computing Facility shall be handled, stored, transported, and disposed of in compliance with all applicable local, state, and federal laws. Such materials shall not be accumulated on-site beyond reasonable operational needs.

**C. Timely Removal**

To prevent site-safety concerns, visual blight, and interference with decommissioning or site restoration, e-waste and hazardous materials shall be stored and removed in compliance with all applicable local, state, and federal laws and shall not be accumulated on-site beyond reasonable operational needs. Temporary storage pending removal shall occur within approved structures or enclosures, or within approved containers designed for the material being stored, and shall use appropriate containment measures where required by applicable law or standards.

**D. Documentation**

The facility owner and operator shall maintain disposal, recycling, transfer, manifest, or other records required by applicable local, state, or federal law, including IDNR or EPA requirements where applicable. To the extent such records exist or are legally required, they shall be retained for at least five (5) years or the period required by the applicable agency, whichever is longer, and shall be provided to the Zoning Administrator upon request for purposes of verifying compliance with this ordinance or decommissioning obligations. Routine submission is not required unless a compliance concern arises.

**E. Compliance and Referral**

Failure to comply with this section constitutes a zoning violation subject to enforcement under the Jackson County Zoning Ordinance. Jackson County may refer suspected environmental violations to the Iowa Department of Natural Resources, the U.S. Environmental Protection Agency, or other agencies having jurisdiction.

**Section 12. Screening, Fencing, and Lighting**

**A. Security Fencing**

An eight-foot (8 ft.) security fence shall be installed and maintained around the perimeter of the High-Density Computing Facility. Fencing shall be constructed of durable, non-reflective materials commonly used for substations, utility facilities, or similar secured infrastructure. All access points shall be secured with lockable gates designed to prevent unauthorized entry. Fencing shall be maintained in good condition for the life of the facility.









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**B. Visual Screening**

Visual screening may be required by the Board of Adjustment where necessary to reduce visual impacts on nearby occupied structures or public roadways and to maintain compatibility with surrounding land uses. In determining whether screening is required, the Board of Adjustment may consider facility visibility, site conditions, topography, existing vegetation, and the relationship of the facility to nearby occupied structures and public roads.

**1.** Required screening may include architectural walls or panels, berming, landscaping with native or adaptive species, existing vegetation, or other comparable methods approved by the Board of Adjustment.

**2.** Loading bays, refuse and trash collection areas, service entrances, and similar service areas shall be located or screened to minimize visibility from public roads and nearby occupied structures.

**3.** Ground-mounted mechanical and electrical equipment, including but not limited to generators, transformers, cooling equipment, switchgear, and similar components, shall also be located or screened to minimize visibility from public roads and nearby occupied structures. Ground-mounted mechanical or electrical equipment and service-yard areas shall not be located within any required building setback for the zoning district.

**4.** Screening requirements shall be site-specific and shall not interfere with sight-distance requirements, road safety, snow removal, or utility infrastructure.

**C. Screening Maintenance**

Any required screening shall be maintained for the life of the facility. Dead, damaged, or missing plant materials shall be replaced within the next appropriate growing season.

**D. Exterior Lighting**

All exterior lighting shall be designed to minimize glare, light trespass, and visual impacts on surrounding properties. Exterior lighting shall be fully shielded and downcast and shall be directed away from adjacent properties and public roadways. Lighting levels shall not exceed 0.2 foot-candles, measured at the property line. Motion sensors, timers, or other control technologies shall be used where feasible to minimize continuous illumination. Exterior lighting fixtures shall not exceed 3,000 Kelvin.

**E. Reflective Materials**

Reflective, mirrored, or high-gloss exterior finishes are prohibited on buildings, fencing, and equipment enclosures. Exterior materials shall utilize matte or low-reflectivity finishes compatible with surrounding rural or industrial character.

**F. Scenic Byway and Visual Resource Considerations.**

Jackson County recognizes the importance of protecting the visual character and scenic resources associated with designated state and national scenic byways. Where a proposed High-Density Computing Facility is located within the viewshed of such a corridor, the Board of Adjustment may consider visual impacts and may require reasonable conditions, including additional screening, lighting controls, site-layout modifications, and compatible exterior materials or finishes, to reduce adverse visual effects.



**G. Site Maintenance**

The facility owner and operator shall maintain the site in a clean and orderly condition for the life of the facility, including fencing, screening elements, lighting fixtures, and the grounds immediately surrounding structures.

**H. Enforcement**

Failure to maintain the site in compliance with this section or with approved plans shall constitute a zoning violation subject to enforcement under this ordinance. All costs associated with installation, maintenance, replacement, and long-term upkeep required under this section shall be the responsibility of the facility owner and operator.

**Section 13. Structural Standards**

**A. Permanent Construction Required**

All principal buildings and equipment enclosures associated with a High-Density Computing Facility shall be permanently constructed and supported by a concrete foundation or equivalent engineered foundation designed by a licensed professional engineer.

**B. Enclosure Required for Computing Equipment**

All servers, computer clusters, processors, data-processing equipment, cryptocurrency mining equipment, artificial-intelligence computing equipment, and similar computing equipment shall be located entirely within a fully enclosed, permanent building. Outdoor or partially enclosed placement of computing equipment is prohibited.

This subsection does not prohibit exterior placement of permanently installed mechanical, electrical, cooling, generator, transformer, switchgear, fuel-storage, utility, or similar support equipment, provided such equipment is shown on the approved site plan and complies with all applicable setbacks, screening, noise, safety, containment, and other requirements of this ordinance.

**C. Exterior Mechanical and Electrical Support Equipment**

Exterior mechanical, electrical, cooling, generator, transformer, switchgear, fuel-storage, utility, or similar support equipment shall be permanently installed, shown on the approved site plan, and maintained in good repair. Such equipment shall not be placed on temporary skids, trailers, shipping containers, mobile storage units, or other non-permanent supports except during construction, repair, emergency replacement, or other temporary activity approved by the Zoning Administrator.

**D. Prohibited Structures**

The following portable or non-permanent structures shall not be used as buildings, enclosures, or permanent support structures for computing equipment or associated support equipment of a High-Density Computing Facility:

- Cargo or shipping containers;
- Railroad cars;
- Semi-truck trailers;



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- Mobile or temporary storage units; or
- Any other portable or non-permanent structure not designed for long-term building occupancy.

**E. Structural Maintenance**

All structures and equipment enclosures associated with a High-Density Computing Facility shall be maintained in good repair and free of deterioration, corrosion, or structural defects that could create safety hazards, fire risk, or operational impacts. Failure to maintain structures in compliance with this section constitutes a zoning violation subject to enforcement under this ordinance.

**F. Parking**

Off-street parking for High-Density Computing Facilities shall be provided at a minimum ratio of one (1) parking space per two (2) employees on the maximum shift, plus one (1) parking space per company vehicle. If the principal use of the facility changes following CUP approval, the new use shall comply with all applicable parking and loading requirements for that use under the Jackson County Zoning Ordinance.

**Section 14. Road Use and Infrastructure Agreements**

**A. Purpose**

To protect Jackson County roads, bridges, culverts, and drainage systems from damage due to construction, operation, or maintenance traffic associated with High-Density Computing Facilities (HDCFs); to ensure safe and reliable access during construction; and to assign responsibility for repair and restoration to the facility operator.

**B. Road Identification and Access**

**1.** Before issuance of any zoning permit and prior to construction-related hauling or site mobilization, the applicant shall identify all public roads, bridges, and access points intended for use in transporting equipment, materials, or supplies to and from the site.

**2.** The County Engineer may require additional traffic information or a traffic impact study when the proposed facility, construction schedule, haul route, access point, road classification, bridge or culvert condition, sight-distance limitation, or nearby land use indicates that additional review is reasonably necessary to protect public safety and public infrastructure.

**3.** The applicant shall obtain all required oversize-load, weight, and access permits from the County Engineer or other road authority at least sixty (60) days prior to mobilization.

**C. Existing Road Conditions (Pre-Construction Survey)**

**1.** Prior to commencement of construction-related hauling or site mobilization, the applicant shall conduct a pre-construction road condition survey in coordination with the County Engineer to establish baseline conditions for all proposed haul routes.

**2.** The survey shall include, at a minimum, photographs or video, pavement and shoulder condition documentation, and identification/condition of ditches, culverts, and drainage structures.



**3.** The survey shall be prepared or verified by a licensed professional engineer and shall be approved by the County Engineer before construction begins.

**D. Road Use Agreement**

**1.** Prior to the start of construction, the facility owner and operator shall enter into a written Road Use Agreement with Jackson County, in a form approved by the County Engineer and County Attorney, if applicable.

**2.** The RUA shall describe designated haul routes, traffic control measures, seasonal load restrictions, dust-control measures, and the operator's responsibilities for maintenance and repair.

**3.** The RUA shall remain in effect until all construction activities are complete and final inspections are accepted by the County Engineer.

**E. Financial Assurance**

**1.** Prior to the start of construction-related hauling, the operator shall provide financial security—such as a performance bond, irrevocable letter of credit, or cash escrow, in an amount equal to one hundred thirty percent (130%) of the estimated cost of any required road repairs, improvements, or maintenance.

**2.** The amount shall be determined by the County Engineer based on expected use and anticipated repair or improvement costs and may be adjusted as needed to reflect updated engineering estimates or changed site conditions.

**3.** Financial assurance shall be in a form acceptable to the County and shall be issued by a surety or financial institution authorized to do business in the State of Iowa.

**4.** Financial assurance shall remain in force until written release by the County Engineer, not less than twelve (12) months after completion of construction or hauling activities.

**F. Maintenance and Repair**

**1.** During construction and any other period of extraordinary hauling or heavy equipment transport associated with the facility, the facility owner and operator shall maintain all approved haul routes in a condition equal to or better than their documented pre-construction condition.

**2.** Any damage, deterioration, or safety hazard caused by facility-related traffic shall be repaired or mitigated within seventy-two (72) hours of discovery or written notice from the County Engineer, or within such other reasonable timeframe as may be specified by the County Engineer based on the nature of the damage and public safety considerations.

**3.** If repairs are not made within the required timeframe, the County may take enforcement action and may draw upon the financial assurance to complete the work.

**G. Post-Construction Inspection and Release**



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**1.** After construction is complete, a joint inspection shall be performed by the County Engineer and operator to compare post-construction conditions with the baseline survey.

**2.** When all deficiencies have been corrected, the County Engineer shall issue written confirmation and release the financial security.

**3.** If deficiencies remain, the County may use the bond, escrow, or other instrument to complete remaining work and recover administrative/engineering costs where authorized.

**H. Drainage and Infrastructure Protection**

The operator shall repair any damage to public drainage systems, culverts, or associated infrastructure caused by construction or operation within seventy-two (72) hours of discovery or as directed by the County Engineer.

**Section 15. Discontinuation, Decommissioning, and Abandonment**

**A. Purpose**

To ensure High-Density Computing Facilities (HDCFs) are dismantled, removed, and the site restored to a safe, stable, and environmentally sound condition when use is discontinued, abandoned, or a permit is revoked, and to ensure that decommissioning costs are borne by the operator and property owner rather than the public.

**B. Discontinuation / Abandonment**

**1.** A HDCF is considered discontinued after one (1) year without active operations or other documented productive use authorized by the Conditional Use Permit, unless the operator submits a written plan to return the facility to service on a reasonable schedule. The operator shall provide written notice to the Zoning Administrator when the facility is permanently shut down or when operations will be suspended for an extended period.

**2.** The Zoning Administrator may determine discontinuation or abandonment based on inspection, operator information, or other reliable documentation.

**C. Decommissioning Deadline and Extension**

**1.** Following discontinuation or abandonment, the facility owner and operator shall complete decommissioning and site restoration within two hundred seventy (270) days in accordance with the approved Decommissioning Plan.

**2.** The facility owner and operator may request one extension of up to ninety (90) days, in writing, for good cause shown.

**D. Decommissioning Plan (Submitted with CUP)**

**1.** At the time of Conditional Use Permit (CUP) application, the applicant shall submit a Decommissioning Plan outlining how the facility will be removed and the site restored at the end of its service life or upon discontinuation/abandonment.

**2.** The plan shall be prepared and sealed by a professional engineer licensed in the State of Iowa.



**3.** At a minimum, the plan shall include:

a. A step-by-step sequence for dismantling, removal, recycling, and disposal of buildings, equipment, foundations, wiring, conduits, fencing, lighting, impervious surfaces, and accessory facilities.

b. Site-restoration actions, including repair of disturbed areas, regrading as needed, and revegetation/ground cover.

c. An itemized cost estimate in current dollars for decommissioning and site restoration, excluding salvage value.

d. Identification of responsible parties and contractors.

e. A description of how decommissioning will be carried out safely and in compliance with applicable laws.

**E. Cost Estimate Review and Update**

**1.** The decommissioning cost estimate is subject to County review for completeness and reasonableness. At the applicant's sole expense, the County may retain an independent qualified professional to evaluate the estimate.

**2.** At the sole expense of the facility owner and operator, jointly and severally, decommissioning cost estimates shall be reviewed and updated at least every three (3) years, or more often if required by the County due to material changes in facility size or configuration.

**F. Financial Assurance Required**

**1.** Prior to issuance of any zoning permit or commencement of construction, the facility owner and operator shall be jointly and severally responsible for providing and maintaining financial assurance in a form acceptable to Jackson County to guarantee decommissioning, site restoration, and compliance with this section. The amount of financial assurance shall be based on the approved decommissioning cost estimate, as reviewed and accepted by the County, and shall be kept current and in effect for the life of the facility until released in writing by Jackson County following satisfactory completion of decommissioning and restoration.

**2.** Financial assurance shall be issued by a surety or financial institution authorized to do business in Iowa and shall name Jackson County as beneficiary/obligee as appropriate.

**3.** Financial assurance shall remain in effect until the County confirms in writing that decommissioning and site restoration are complete. Failure to maintain required financial assurance is a zoning violation and a breach of CUP conditions.

**G. Responsibility; Property Owner Acknowledgement**

Prior to final CUP approval and prior to issuance of any zoning permit or commencement of construction, the property owner of record shall either be a co-applicant or, together with the facility operator, shall execute and provide to Jackson County a written acknowledgment, in a form approved by the County, confirming their understanding of and agreement to comply with the decommissioning, restoration, financial assurance, maintenance, and enforcement requirements of this ordinance.

The acknowledgment shall include, at a minimum:

**1**. The legal description of the subject property and parcel identification number;



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**2**. The name and address of the record property owner;
**3**. The name and address of the facility operator, if different from the owner;
**4**. Reference to the approved Conditional Use Permit by case number and date of approval, if applicable;
**5**. A statement that the facility owner and operator are jointly and severally responsible for compliance with the requirements of this ordinance, including decommissioning, restoration, financial assurance, and cost reimbursement obligations;
**6**. A statement that such obligations shall be binding upon the owner, operator, and their respective heirs, successors, assigns, lessees, transferees, and any other party acquiring an ownership or operational interest in the facility or subject property;
**7**. A statement that any subsequent transfer, sale, assignment, or conveyance of the subject property or facility shall not extinguish or diminish the obligations imposed by this ordinance; and
**8**. A statement that zoning approval does not relieve the owner or operator from compliance with any other applicable local, state, or federal requirements.
The County may require that this acknowledgment, or a memorandum of it in recordable form, be recorded against the subject property with the Jackson County Recorder so as to provide notice to successors and assigns. A recorded copy, including Recorder filing information, shall be provided to the Zoning Administrator before any zoning or building permit is issued. Failure to record and provide proof of recording as required by this section constitutes a zoning violation and shall be grounds for withholding or revoking permits issued under this ordinance.
Private lease terms or contractual arrangements between the owner and operator do not limit the County's authority to enforce this ordinance.

**H. County Remedy on Default; Cost Recovery**

**1.** If the operator fails to complete decommissioning and restoration on time, the County may issue a written Notice of Default stating the basis for noncompliance and providing a reasonable cure period, not to exceed thirty (30) days, unless a shorter period is needed to address an imminent threat to health, safety, or the environment.

**2.** After the cure period (or sooner, if necessary to address an imminent threat), the County may take enforcement action and may cause decommissioning and site restoration to be completed by contractors selected by the County.

**3.** The County may draw on the financial assurance in an amount sufficient to pay all reasonable costs incurred to complete decommissioning and restoration, including contractor costs, administrative costs, engineering and inspection services, and legal expenses. The County's determination of default and documentation of costs shall be sufficient basis for a claim against the financial assurance.

**4.** If County costs exceed the available financial assurance, the operator and property owner of record may be held responsible for the unpaid balance to the extent permitted by law.



**5.** Where authorized by Iowa law, the County may pursue recovery of eligible costs through liens, special assessments, or tax-recovery procedures, including Iowa Code § 331.384 if determined applicable by legal counsel.

**I. Documentation of Completion**

Upon completion of decommissioning and site restoration, the facility owner and operator shall submit a final report prepared by a qualified professional certifying that work was completed in accordance with the approved plan. The County shall inspect the site before releasing financial assurance.

**J. Site Restoration**

Unless otherwise approved as part of a reuse plan, decommissioning shall include:
**1.** Removal of exterior HDCF-specific equipment and appurtenances, including exterior equipment yards, standalone cooling equipment, generators, transformers not needed for a subsequent permitted use, above-ground tanks, and security fencing that is no longer needed.
**2.** Restoration of disturbed areas not needed for a subsequent permitted use, including removal of unused gravel laydown areas, stabilization of soil, and reseeding or other vegetative cover consistent with surrounding land uses.
**3.** Removal or mitigation of foundations, pads, or below-grade structures that create safety hazards, impede agricultural use, or are inconsistent with the approved post-decommissioning land use.

**K. Interior Equipment and Materials**

Interior computing equipment and associated materials shall be de-energized and managed in compliance with all applicable e-waste, solid-waste, and hazardous-waste laws and regulations, including Iowa Code Chapter 455B and any applicable state or federal requirements.
Nothing in this ordinance shall be construed to prohibit reuse of a structurally sound, code-compliant building shell and foundation for other permitted industrial, commercial, or agricultural uses, provided all hazardous materials and regulated equipment are removed or managed in compliance with applicable law and any approved reuse plan.

**L. Reuse of Buildings**

The Board of Adjustment may approve a decommissioning plan that retains a building shell and associated foundations when a subsequent permitted use has been identified or is reasonably foreseeable, and when retention is consistent with public safety, building and fire codes, and surrounding land use compatibility.

**Section 16. Enforcement and Penalties**

**A. General Authority**

The Zoning Administrator is authorized to administer and enforce this ordinance pursuant to Chapter 11 of the Jackson County Zoning Ordinance and Iowa Code § 335.

**B. Responsibility**

The facility owner and operator shall be jointly and severally responsible for compliance with this ordinance, all conditions of approval, all approved plans and submissions, and all obligations relating to construction, operation, maintenance, decommissioning, restoration, and enforcement of the facility.
No transfer of ownership, operational control, leasehold interest, or other interest in the facility or subject property shall relieve the owner or operator of any responsibility under this ordinance unless and until such transfer is approved in writing by Jackson County as required by this ordinance.
Private agreements between the owner, operator, lessee, contractor, or any other party shall not limit or impair the County's authority to enforce this ordinance against any responsible party.

**C. Violations and Procedures**

1. When the Zoning Administrator determines that a violation of this ordinance, an approved permit, a condition of approval, or an approved plan or submission has occurred, the Zoning Administrator shall issue a written Notice of Violation to the facility owner and operator and shall copy the property owner of record. The notice shall identify the nature of the violation, the corrective action required, and the deadline for compliance.

**2.** If the violation is not corrected within the time specified in the Notice of Violation, Jackson County may pursue one or more of the following remedies, as authorized by law and the Jackson County Zoning Ordinance:

a. Civil citations and fines as provided by County code;

b. Initiation of suspension or revocation proceedings for the Board of Adjustment approval or zoning permit, as applicable and as authorized by law;

c. Initiation of civil abatement or nuisance proceedings under Iowa Code section 657, Chapter 11 of the Jackson County Zoning Ordinance, or other applicable law; and

d. Recovery of County costs as provided in this ordinance.

**3.** [PENDING ATTORNEY REVIEW] Where a High-Density Computing Facility is operating in a manner that poses an imminent and documented threat to public health or safety, neighboring property, public infrastructure, or natural resources — including but not limited to uncontrolled hazardous-material release, fire or explosion risk, or repeated operation in violation of enforceable noise or vibration limits after notice and opportunity to cure — the County may seek immediate temporary injunctive relief or other lawful relief in a court of competent jurisdiction, or may pursue any temporary suspension mechanism otherwise authorized by Iowa law. This subsection shall be interpreted and applied only to the extent consistent with Iowa Code chapter 335 and other applicable law.

**D. Abatement and Cost Recovery**

If the facility owner and operator fail to timely remedy a violation or to complete required decommissioning or site restoration, Jackson County may, after notice and opportunity to cure as provided by this ordinance, enter the property and take such actions as are reasonably necessary to perform abatement, decommissioning, or site restoration.
The facility owner and operator shall be jointly and severally responsible for all reasonable costs incurred by Jackson County in connection with such work, including but not limited to administrative costs, contractor



costs, engineering or consultant review, inspection costs, recording costs, legal expenses, and site restoration costs.
Jackson County may recover such costs through any financial assurance required by this ordinance and may pursue any other remedy authorized by law, including lien procedures under Iowa Code section 331.384 if applicable.

**E. Continuing Violations**

Each day that a violation continues after the deadline for correction stated in a Notice of Violation, or after any extended deadline approved by Jackson County, shall constitute a separate violation. Civil penalties may be assessed for each day of continuing violation as provided by County code and the County Schedule of Fines and Fees.

**F. Coordination with Other Authorities**

Nothing in this ordinance limits the authority of Jackson County to refer matters to the Iowa Department of Natural Resources, the State Fire Marshal, the County Engineer, the County Health Department, law enforcement, or any other local, state, or federal agency having jurisdiction over the matter. Referral to another agency does not preclude Jackson County from also pursuing enforcement under this ordinance.

**Section 17. Miscellaneous Provisions**

**A. Non-Transferability**

Any Conditional Use Permit or zoning permit issued under this ordinance is specific to the approved applicant, owner, operator, and project site, and shall not be transferred or assigned without prior written approval by the Zoning Administrator, or by the Board of Adjustment where required under the Jackson County Zoning Ordinance.

**B. Conflict of Regulations**

This ordinance shall be applied in coordination with other applicable federal, state, and local requirements. Where a conflict exists, the controlling authority shall govern.

**C. Severability**

If any section, clause, or provision of this ordinance is declared invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of the ordinance.

**D. Periodic Review**

The County shall review this ordinance at least every three (3) years, and may update it sooner as needed, to ensure continued alignment with evolving technologies, public infrastructure considerations, and applicable state and federal requirements.

**E. Referenced Standards**

Any reference in this ordinance to a statute, administrative rule, or technical standard—including but not limited to the Iowa Code, Iowa Administrative Code, NFPA, ANSI, IEC, or IDNR rules—shall mean the version in effect at the time of application, unless a specific edition or date is expressly stated. Where a successor or



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equivalent standard exists, the County may accept compliance with the successor/equivalent standard upon a determination that it provides equal or greater protection and enforceability.

**F. Owner and Operator Responsibility for Costs**
Unless otherwise expressly provided in this ordinance, all costs associated with application preparation, technical studies, design, installation, utility extensions or upgrades, testing, monitoring, reporting, maintenance, remediation, decommissioning, restoration, and compliance with this ordinance shall be the responsibility of the facility owner and operator, jointly and severally, and shall not be borne by Jackson County.

**G. Conditions of Approval; More Restrictive Standard Controls.**
Where a condition of approval, approved site plan, approved study, recorded agreement, agency requirement, or other applicable law imposes a more restrictive requirement than this ordinance, the more restrictive requirement shall govern.

**H. Other Permits, Approvals, and Private Obligations.**
Approval under this ordinance does not relieve the facility owner, operator, applicant, or property owner from obtaining any other required local, state, or federal permits, licenses, registrations, approvals, inspections, or authorizations. Approval under this ordinance also does not relieve the owner or operator from compliance with private covenants, easements, lease terms, deed restrictions, utility agreements, or other private obligations applicable to the property.

**I. Public Records and Confidential Information.**
Application materials, studies, reports, plans, correspondence, and approvals submitted under this ordinance may be subject to Iowa public records laws. If an applicant believes any submitted material is confidential or protected from disclosure, the applicant shall clearly identify the specific material and the legal basis for the claimed protection at the time of submittal. Jackson County does not guarantee confidential treatment of submitted materials except as required or allowed by law.

**J. No County Warranty or Assumption of Liability.**
Approval under this ordinance shall not be construed as a warranty or representation by Jackson County that the facility is safe, suitable, profitable, properly engineered, compliant with private agreements, or compliant with all non-zoning laws. The facility owner and operator remain solely responsible for design, construction, operation, maintenance, compliance, decommissioning, restoration, and all costs and liabilities associated with the facility.





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*JONES COUNTY IOWA ORDINANCE 2025-*
*An ordinance amending the code of ordinances of the County of Jones, State of Iowa.*

*Be it enacted by the Board of Supervisors of Jones County; Iowa as follows:*

*Section 1: The purpose of this ordinance is to amend CHAPTER 3, JONES COUNTY ZONING ORDINANCE OF TITLE VI- PROPERTY & LAND USE by adding additional definitions and replacing ARTICLE XVIII RESERVED FOR FUTURE USE WITH ARTICLE XVIII CRYPTOCURRENCY AND DATA MINING.*

*Section 2: The Chapter will be amended as follows:*

**********

**ARTICLE XVIII CRYPTOCURRENCY AND DATA CENTERS**

SECTION 1. INTENT
The intent of this Article is to promote and regulate the design, siting, construction, operation, maintenance and decommissioning of cryptocurrency facilities and data centers and to protect the health, safety and welfare of neighbors and the public, and to avoid unintended impacts on resources and adjacent uses.

SECTION 2. PURPOSE
The purpose of this Article is to provide the requirements necessary to obtain a permit to install and operate an active cryptocurrency facility or data center in Jones County.

SECTION 3. DEFINITIONS
As used in this Article, the following terms are hereby defined, in addition to those found in Article III Definitions:

*Clean Agent Fire Suppression system: A system that uses electrically non-conductive gaseous agents that do not leave residue upon evaporation to extinguish fires.*

*Closed-loop cooling system:* A sealed system where a coolant circulates continuously, absorbing heat from a source, and then transferring that heat to a heat exchanger for removal, without the coolant ever being exposed to the environment.

*Commercial cryptocurrency mining:* The commercial process by which cryptocurrency transactions are verified and added to the public ledger, known as the block chain, and the means through which new units of cryptocurrencies are released through the use of server farms. Any equipment requiring a high-density load service, for the purposes of operating a cryptocurrency mining server farm, will constitute a commercial cryptocurrency mining operation.

*Cryptocurrency: A digital currency in which encryption techniques are used to regulate the generation of units of currency and to verify the transfer of funds while operating independently of a central bank.*

*Cryptocurrency data center: leased or owned boundaries of floor space devoted to the operating data processing equipment for commercial cryptocurrency mining; excludes spaces for data centers not otherwise engaged in commercial*

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*cryptocurrency mining, commercial offices, storage, shipping and receiving, warehousing, or any other space that is not electronic processing.*

*Cryptocurrency server farm: Three or more interconnected computers housed together in a single facility either air-cooled or water cooled, whose primary function is to perform cryptocurrency mining or associated data processing.*

*Data mining: The commercial process by which volumes of data are analyzed to find patterns, discover trends, and gain insight into how the data can be used will constitute a commercial data mining operation.*

*High-density load service: Any individual service at or above 660 amps in which the energy use intensity (EUI) is calculated as greater than 250 kWh/feet2/year in total for all operating square footage.*

*Liquid Cooling System: A method of cooling electronic components or other devices by circulating liquid coolant through them, to cool and absorb heat from components and then dissipate heat through a radiator.*

SECTION 4: DATA CENTER AND CRYPTOCURRENCY OPERATIONS

Data Centers and cryptocurrency operations are allowed in the A2-Agricultural, C1-Commercial, C2-Highway Commercial, I-Industry and the I2-Heavy Industry districts.

A. A site plan shall be submitted and reviewed prior to the approval of the data center or cryptocurrency facility installation and shall require a special use permit.

B. Applicants wishing to site a new data center or cryptocurrency mining facility within Jones County must provide an application and site plan. Each project shall require a separate application. Data Centers or cryptocurrency mining facilities will use the Special Permitted Use application under the appropriate district. The application for a data center or cryptocurrency facility installation shall include the following information on the site plan or in narrative form, supplied by the data center or cryptocurrency installation owner.

1. The name, address, EIN of Applicant, as well as the proposed property owners, including contact information (name, address, telephone and email) of the authorized representative.
2. Project development timeline which indicates how the applicant will inform adjacent property owners and interested stakeholders in the community.
3. Project development plan for the project, which plan shall contain aerial photographs of the entire proposed project area, showing the proposed location for the facility. The plan shall show property lines and setback distances.
4. Documentation of Applicant's legal control over the private property necessary for the project, signed by the property owner.
5. The applicable fee.
6. A report prepared by a qualified third-party analyzing the noise profile of the project area and the ability of the project to demonstrate compliance. The expense for testing and reporting the results, in written format to the County will be the responsibility of the applicant.
7. Ice mitigation report for public right of ways and neighboring properties approved by the Jones County Engineer and adjacent landowners.
8. Emergency Operations Procedures. A copy of the approved Emergency Operations Procedures shall be given to the system owner, the local fire department, the Sheriff, and Jones County Emergency Management. A hardcopy shall also be placed in an approved location to be accessible to facility personnel and emergency responders.
9. Decommissioning plan.

SECTION 5: PUBLIC NOTICE

Upon receipt of all applications and filing fees, the Land Use Administrator shall place on the appropriate Board or Commission's agenda for the next regular meeting and see that proper notice is provided. Proper notice shall consist of publication of the request along with the time and place for the hearing at least five (5) days prior to the hearing, but no longer than twenty (20) days prior to the hearing in all the officially designated newspapers of the County. In addition, certified mailings shall be sent to all property owners within a one (1) mile radius with the time and place for the hearing.

SECTION 6: SITING AND DESIGN REQUIREMENTS

A. Lot Size: Minimum lot size shall adhere to the minimum standards for the zoning district where the project is located. See Appendix A

B. Setbacks: Structures must adhere to the minimum accessory structure setback standards for the zoning district where the project is located; greater setbacks may be recommended. See Appendix A

C. Utility Connections: Reasonable efforts shall be made to place all utility connections from data or cryptocurrencies facilities underground, depending on appropriate soil conditions, shape and topography of the site, distance to the connection, or other conditions or requirements.

D. Regulations: All structures shall be subject to bulk and height regulations in the underlying zoning district.

E. Screening: A landscape buffer may be required to be installed and maintained during the life of the operation. Determination of the screening requirements will be made by the Board of Adjustment as part of the review and approval process and will be based on adjacent or nearby surrounding land uses and topography.

ii. If the applicant wishes the waiver to apply to succeeding owners of the property, a permanent noise impact easement shall be recorded in the Office of the Jones County Recorder which describes the burdened properties and which advises all subsequent owners of the burdened property that the noise levels in excess of those permitted by this ordinance may exist on or at the burdened property.

F. Signage: Each cryptocurrency mining and data mining operation shall Provide 24- hour emergency contact signage visible at the access entrance. Signs shall include company name, owner/representative name, telephone number, and corresponding local power company and telephone number. All additional signage must adhere to the Jones County Sign ordinance, see Article XX.

G. Lighting: See Article XIX in the Jones County Zoning Ordinance.

E. Noise: Audible noise caused by data centers and cryptocurrency mining operations, not including existing ambient noise, shall not exceed sixty (60) dB continuously during daytime hours or a nighttime continuous sound level of fifty (50) dB.

1. In the event audible noise due to data centers and cryptocurrency mining operations contains a steady pure tone, such as a whine, screech, or hum, the standards for audible noise set forth shall be reduced by five (5) dB.

2. Audible noise caused by data centers or cryptocurrency mining facilities shall not exceed sixty (60) dB for more than 5 minutes within an hour, when measured at the exterior of any residence, school, hospital, church, or public library existing on the date of approval of the permit.

3. In the event the ambient noise level (exclusive of the development in question) exceeds the applicable standard given above, the applicable standard shall be adjusted so as to equal the ambient noise level. The ambient noise level shall be expressed in terms of the highest whole number sound pressure level in dB, which is exceeded for more than five (5) minutes per hour. Ambient noise levels shall be measured at the exterior of potentially affected existing residences, schools, hospitals, churches, and public libraries. Ambient noise level measurement techniques shall employ all practical means of reducing the effect of generated noise at the microphone.

a. In the event the noise levels resulting from data centers and cryptocurrency facilities exceed the criteria listed above, a waiver to said levels may be granted by the Board of Adjustment provided that the following has been accomplished.

i. Written waiver from the affected property owners has been obtained stating that they are aware of the data center or cryptocurrency facility and the noise limitations imposed by this Ordinance, and that consent is granted to allow noise levels to exceed the maximum limits otherwise allowed; and,

I. STRUCTURE: All structures shall have concrete foundations

1. Shall not be defective, decayed, or corroded.

2. The use of cargo containers, railroad cars, semi-truck trailers, and other similar storage containers for any component of the operation are prohibited.

3. A clean agent fire protection system must be provided and maintained in good working order within any structure which contains a server farm. High sensitivity smoke detectors shall be installed and operational in order to activate the clean agent fire suppression system.

J. ZONING: Data centers and cryptocurrency mining facilities will only be located in the A2-Agricultural, C1-Commercial, C2-Highway Commercial, I-Industry, I2-Heavy Industrial zoning districts.

K. COOLING SYSTEM: Data centers and cryptocurrency mining facilities shall be required to have a liquid cooling system.

1. A closed loop cooling system will be required.

2. The application shall include an estimate of annual water consumption for the site.

3. The intended source of water for the development, and documentation from the Iowa Department of Natural Resources along with Jones County Environmental Health affirming sufficient water resource exist to serve the site.

4. All necessary permits must be obtained from Jones County Environmental Health and the Iowa Department of Natural Resources.

L. EQUIPMENT: All servers, computers, processers, materials, and equipment must be enclosed within buildings.

M. ELECTRICAL POWER: Prior to issuance of a permit, the applicant shall provide written verification from the power provider that the applicant has calculated the maximum potential electrical consumption of the proposed use and has verified the utility's supply equipment and related electrical infrastructure is sufficiently sized and can safely accommodate the proposed use during the power provider's peak consumption hours.

N. Ice Mitigation Report: Any data center or cryptocurrency facility shall ensure that the amount of heat that is dissipated by the mining activity shall be monitored when the average daily temperature is 40 degrees Fahrenheit or less to ensure that there is no buildup of ice on neighboring properties and roadways.

1. In the instance that concensation and ice occur, there shall be an agreement between the facility's operational contact, owners of neighboring properties, and the County Engineer to mitigate ice on public right of way.

SECTION 7: DISCONTINUANCE, DECOMMISSIONING AND ABANDONMENT

The application must include a decommissioning plan that describes the anticipated life of the facility and the manner in which the project will be decommissioned; the site restoration actions; removal of equipment, the estimated costs in current dollars; and the method for ensuring that funds will be available for decommissioning and restoration.

Following a continuous one-year period in which no mining is generated, or if substantial action on the project is discontinued for a period of one year, the permittee holder or successor and interest, will have one year to complete decommissioning of the data or cryptocurrency facility. Decommissioning shall be completed in accordance with the approved decommissioning plan. The landowner or tenant must notify the County when the project is discontinued.

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LINN COUNTY, IOWA

Prepared by Linn County Planning & Development
935 2nd Street S.W., Cedar Rapids, Iowa 52404-2100
(319) 892-5130
Return to Amanda Brown, Auditor's Office

**LINN COUNTY ORDINANCE # _____**

**AN ORDINANCE AMENDING THE CODE OF ORDINANCES, LINN COUNTY, IOWA BY MODIFYING PROVISIONS IN CHAPTER 107: ARTICLE VII SECTION 107-131 REGARDING DISTRICTS AND DISTRICT BOUNDARIES, ARTICLE VII SECTION 107-151 REGARDING EU-3 EXCLUSIVE USE THREE LARGE-SCALE DATA CENTERS DISTRICT, ARTICLE VIII SECTION 107-147-1 USE TABLE, AND ARTICLE IX SECTION 107-180 REGARDING DEFINTIONS RELATED TO DATA CENTERS**

**BE IT ORDAINED** by the Board of Supervisors, Linn County, Iowa as follows:

**SECTION 1. SUBSECTION ADDED.** Chapter 107, Article VI, Section 107-116 Standards for Industrial Uses § **(e)** is hereby added to read as follows:

(e) *Small-Scale Data Center and other similar uses.* Small-scale data centers and other similar uses shall meet the requirements found in Section 107-151 § (c) through (m) of this chapter.

**SECTION 2. SUBSECTION MODIFIED.** Chapter 107, Article VII, Section 107-131 Districts and District Boundaries § (b) is hereby amended to include the EU-3 Exclusive Use District as follows:

(19) EU-3 Exclusive Use Three, Large-Scale Data Center District

**SECTION 3. SECTION ADDED.** Chapter 107, Article VII, Section 107-151 **EU-3 Exclusive Use Three, Large-Scale Data Center District** is hereby added to read as follows:

(a) *Purpose.* The purpose of the EU-3 Exclusive Use Three, Large-Scale Data Center District is to provide a clear, comprehensive and predictable regulatory framework for the siting and operation of large-scale data centers within unincorporated Linn County. Large-scale data

centers are characterized by substantial long-term demands on public infrastructure, including electrical power, water supply, transportation systems, and emergency services, as well as potential impacts on surrounding land uses and environmental resources. This district is intended to ensure that such facilities are evaluated, located, and developed in a manner consistent with the Comprehensive Plan; that their infrastructure and operational impacts are appropriately reviewed and mitigated; and that the County can fulfill its long-term fiscal, infrastructure, and community responsibilities associated with hosting generational infrastructure facilities.

(b) Principal permitted use.

(1) Large scale Data Centers.

(c) Accessory Uses.

(1) Battery energy storage systems (BESS).

(2) Solar arrays and other similar on-site renewable power generation systems.

(3) On-site standby or backup power generation.

(4) Electrical substations, switchyards, or power distribution equipment.

(5) District energy or microgrid infrastructure.

(6) Water treatment and recycling facilities.

(7) Office, maintenance, and employee support facilities incidental to the data center.

(d) *Major site plan required.* A major site plan shall be submitted and reviewed prior to the approval of a large-scale data center. A large-scale data center shall require rezoning to the EU-3 zoning district, unless already located within such EU-3 zoning district.

(e) *Additional information.*

(1) The following information shall be submitted on the major site plan, or in narrative form; supplied by the applicant with any application for rezoning to the EU-3 zoning district:

a. *Legal description.* A legal description of all properties leased and/or owned, that are identified to be part of the project area;

b. *Site plan.* A description of the project including development timeline, location of buildings, parking, approximate number of employees;

c. *Water Study.* A water study shall be submitted demonstrating that sufficient water resources are available to support the proposed use as described in Section 107-151 § (n)(1) below.

d. *Economic Development Agreement.* The applicant shall enter into an Economic Development Agreement ("EDA") with the County, approved by the Board of Supervisors as described in Section 107-151 § (o) below.

(2) The following information shall be submitted prior to issuance of the first building permit for the data center:

a. Planned location of underground or overhead electric lines, grid interconnection points, project entrances, staging areas, and access roads required during construction and post construction;

b. *Waste Management Plan.* A Waste Management Plan detailing how construction waste will be handled during the construction period. The plan shall include:

i. Estimated volumes and types of materials to be generated.

ii. Identification of materials proposed for recycling, salvage, or reuse.

iii. Designated recycling and disposals facilities.

iv. Procedures for on-site material separation and storage.

v. Documentation requirements demonstrating final disposal or diversion;

c. Written verification from their proposed power provider that the applicant has calculated the maximum planned electrical consumption of the proposed use and has verified the utility supply and related electrical infrastructure is sufficient to accommodate the applicant's proposed use.

d. *Lighting Plan.* A lighting plan shall be submitted providing details of the light spread and intensity diagrams, fixture specifications and mounting height details. Any lighting used for outdoor illumination on the property shall be full-cutoff fixtures so that light does not shine upward nor adversely impact adjoining property.

e. A description of a backup power plan describing the fuel source and expected usage of any standby, backup, or temporary power generation systems. The plan shall identify the anticipated number and size of generators or other power units, anticipated testing frequency and duration, anticipated noise and emission control measures, and anticipated fuel storage or delivery methods. The plan shall demonstrate the data center will comply with all applicable local, state and federal permitting requirements.

f. *Road use agreement.* An approved Road Use Agreement containing the information and conditions specified in section 107-151§ (k) below is required before the start of construction.

g. *Pre-construction noise analysis.* Completed analysis shall be submitted in accordance with 107-151§ (i) below.

h. *Water Use Agreement.* The applicant shall submit a water use agreement to govern ongoing coordination between the applicant and the County regarding water use during operation of the facility as described in Section 107-151 § (n)(2) below.

i. *Emergency Response Plan.* The applicant shall submit an emergency response plan as described in Section 107-151 § (p) below.

j. Site and structure requirements, including:

i. Stormwater management plan;

ii. Stormwater pollution prevention plan;

iii. Erosion and sediment control plan;

iv. All Data Center production equipment (computers, servers, etc.) shall comply with Building Code requirements. Said structure(s) shall be placed on a permanent foundation.

(3) For any data center facility consisting of one or more buildings (whether constructed simultaneously or in separate phases), the applicant shall not be required to submit or resubmit the items referenced in sections 107-151 §(e)(2)(a)-(i) as to any building

or phase of buildings constructed after the initial building permit is issued, if such building or phase of buildings were contemplated on the relevant submission delivered under said sections 107-151 §(c)(2)(a)-(i) in connection with the first building permit issued for the data center and the scope and footprint of the project has not substantially changed from the time of intial submission.

(f) *Required setbacks.*

(1) 200 feet to property lines.

(2) 1,000 feet (measured from the closest outer wall of the closest building on the data center property) to the closest outer wall of a place of public assembly and to the property line of any residentially zoned property, including residentially zoned properties within city limits. The Board of Supervisors, in consultation with any impacted city, may reduce this setback with a majority vote. Impacted city means any city with residentially zoned property within 1,000 feet of the closest outer wall of the closest building on the data center property. "Residentially owned property" does not include properties in the agricultural, critical natural resources, commercial, or industrial zoning districts.

(g) *Street access.* The site shall have access to a hard surfaced road of sufficient capacity to accommodate the traffic that the use will generate, with continuous hard surfaced connection to a county arterial, or state or federal highway.

(h) Access. Vehicular access points shall create a minimum of conflict with through traffic movement

(i) *Parking.* Parking and loading shall meet the standards in section 107-93 §(e).

(j) *Buffers.* Buffers shall be installed meeting the standards in section 107-93 § (d). In addition, lot frontage on a public street shall be separated from the edge of sidewalk or pavement by a landscaped yard of at least 20 feet in width, except where driveway accesses occur.

(k) *Avoidance and mitigation of damages to public infrastructure.*

(1) *Roads.* Applicants shall identify all roads planned to be used for the purpose of transporting equipment for construction, operation or maintenance of the data center and obtain applicable weight and size permits from the impacted road authority prior to construction.

(2) *Existing road conditions.* Applicant shall conduct and provide evidence of a pre-construction roadway conditions survey, in coordination with the Linn County Secondary Road Department, to determine baseline road conditions and authority. The survey shall adequately document all road, road right of way, and public drainage infrastructure conditions requested for use during all phases of construction. Applicants shall enter into a Road Use Agreement with Linn County Secondary Road Department that clearly details responsibilities for on-going road maintenance and dust control measures for all identified Linn County jurisdictional roads during all phases of construction. The Road Use Agreement may require certain applicant and county undertakings, including but not limited to providing financial assurance in the form of an irrevocable letter of credit, bond, cash, escrow, parent guarantee or other form of security or guaranty acceptable to Linn County. At construction completion, Applicant shall, unless otherwise provided in the applicable Road Use Agreement, conduct and provide evidence of a post construction roadway conditions survey, in accordance with the Road Use Agreement and in coordination with the Linn County Secondary Road Department, to verify that road conditions, to the extent impacted by applicant's use in the construction of its data center, have been restored, as far as reasonably practical, to pre-construction conditions or as otherwise required by the Road Use Agreement.

(3) *Drainage system.* The applicant shall be responsible for repair of damage to public drainage systems stemming from construction, operation or maintenance of the data center. Applicant shall acknowledge any damage to public drainage systems and the responsibility for repair in a timely manner within 72 hours of damage discovery.

(4) *Road Use Agreement.* An approved Road Use Agreement containing the information and conditions specified in this section is required before the start of construction.

(l) *Noise Analysis.* No operating data center equipment shall produce decibel levels exceeding any of the following limitations, with the exception of initial construction and routine maintenance. Adequate setbacks and effective sound mitigating equipment shall be used to comply with these limitations:

(1) The average hourly noise level shall not exceed fifty-five (55) dBA or sixty-five (65) dBC as measured from the outer wall of any occupied structure within residentially zoned property adjacent to the proposed development. For property adjacent to the proposed development that is not residentially zoned, the average hourly noise level shall not exceed sixty-five (65) dBA or seventy-five (75) dBC as measured from the outer wall of any occupied structure. The average decibel limit is specific to source of the sound and does not count against cumulative ambient decibel levels as established in a baseline acoustic evaluation.

(2) Equipment testing, maintenance activities, and construction activities that generate elevated noise, including generator testing, shall be limited to the hours of 8:00 a.m. to 6:00 p.m., Monday through Friday, unless otherwise approved by the Zoning Administrator. County approval for excessive noise generation shall not be unreasonably withheld.

(3) The average hourly decibel level may be exceeded during short-term events such as severe windstorms.

(4) A pre- and post-construction noise evaluation shall be completed by a certified Professional Engineer (PE) to verify compliance with the County's standards. The post-construction noise evaluation shall be completed after completion of all planned data center buildings at the end of construction (as defined in section 107-151(l)(5).

(5) Commencing on the fifth anniversary of the end of construction, as defined hereafter, and continuing every five years thereafter, for so long as the data center operates, a noise evaluation shall be completed at the operators expense by a certified professional by the Institute of Noise Control Engineering (INCE), or a licensed professional engineer (PE) to verify compliance with the county's standards in section 107-151(l)(1). Completion of all data center buildings, or end of construction, means the date on which all of the following have occurred: completion of construction of the data center or, in the case of a phased or multi-building campus, all buildings of the multi-building data center campus, and issuance of a certificate of occupancy for all related buildings; and the data center operator has communicated, in writing, to the Zoning Administrator that it has completed the data center campus; provided, that, if all construction has stopped on the property for more than six (6) consecutive calendar months, other than due to delays by the

County in processing related permits or approvals, then "end of construction" as used herein shall be deemed to have occurred as of the last day of such calendar month. This six-month time frame may be extended by the Zoning Administrator.

(6) The owner(s) of adjacent property may voluntarily agree, by written and recorded waiver, to a higher average hourly decibel level than those allowed within this subsection.

(m) *Confidentiality and Open Records Compliance.* If an applicant submits information it believes to be a trade secret or otherwise confidential under Iowa Code Section 22.7 the applicant shall clearly identify such information at the time of submittal and provide the County with a written basis under Iowa Code Section 22.7 of why any and all information provided to the County is marked confidential. The County will treat such information in accordance with the Iowa Open Records Act, including the exemptions provided under Iowa Code Section 22.7, as amended. The County may disclose such information to staff or contracted reviewers solely for the purpose of evaluating compliance with this ordinance, subject to applicable confidentiality obligations. Notwithstanding this subsection, applicant acknowledges and understands that the County may only legally keep information confidential pursuant to Iowa Code Section 22.7.

(n) *Water Supply and Sustainability Review.* Approval for large-scale data center projects shall be conditioned on the applicant demonstrating there is sufficient reliable water supply to meet all projected water demands without undue adverse impacts on existing users, aquifers, or watersheds. To demonstrate this, the applicant must comply with the following requirements:

(1) As part of any application for rezoning, special use permit, or other discretionary land use approval for a data center, the applicant shall submit a Water Study. The purpose of this plan is to demonstrate, at a planning-level, that sufficient water resources are available to support the proposed use without causing undue adverse impacts to existing water users, groundwater resources, or surface water systems. The plan shall describe the proposed water source(s), anticipated ranges of water demand, assumptions regarding cooling technologies, efficiency measures, system reliability considerations, and general contingency approaches for water supply interruptions or emergencies. The plan shall be prepared by a qualified professional and shall contain sufficient information to allow the County, reviewing bodies, and the public to understand and evaluate the potential water impacts of the proposed use.

(2) Prior to issuance of any building permit for a data center, the applicant shall enter into a Water Use Agreement with Linn County. The purpose of the Water Use Agreement is to govern ongoing coordination between the applicant and the County regarding water use during operation of the facility. The agreement shall address, at a minimum, water use monitoring, reporting frequency, data sharing protocols, and verification of compliance with applicable permits and approvals. The agreement may also include provisions addressing response procedures during periods of water supply constraint, drought, emergency conditions, or other circumstances in which water use reductions or operational adjustments may be necessary to protect public health, safety, or existing water users. The Water Use Agreement may include additional terms related to adaptive management, mitigation measures, and enforcement as determined appropriate by the County and Applicant. The Water Use Agreement shall also require the Applicant to demonstrate coordination with the Iowa Department of Natural Resources (IDNR) regarding applicable water use permits, interference mitigation procedures, monitoring obligations, and compliance procedures.

(o) *Economic Development Agreement.* Prior to or contemporaneously with the rezoning to the EU-3 zoning district, the applicant of a large scale data center shall enter into an Economic Development Agreement ("EDA") with the County, approved by the Board of Supervisors. The purpose of the EDA is to establish ongoing cooperation between the County and the project operator, a description of any incentives that the project operator will receive (subject to the terms of the EDA), and to provide ongoing contributions that advance the County's fiscal, infrastructure, and community goals related to hosting large-scale data center facilities. The County shall retain full reasonable discretion to determine the form, structure, and use of funds or benefits provided under any EDA. At a minimum, the agreement shall provide for the creation of a Community Betterment Fund or similar mechanism to support public infrastructure, services, environmental protection, workforce development, or other community benefits, as determined by the Board of Supervisors. Additionally, as part of the EDA, the applicant shall consider implementing a Property Value Protection Plan. The purpose of the Property Value Protection Plan is to address potential impacts to nearby residential property values associated with the development and operation of the data center. Nothing in this section shall limit the County's authority to negotiate terms appropriate to the scale, location, and nature of a specific project, or to enter into separate agreements addressing road use, infrastructure improvements, or other matters related to the development of the large-scale data center.

(p) *Emergency Response Plan.* The applicant shall submit an emergency response plan prior to any ground disturbance at the project site detailing the planned response actions that will be taken by facility representatives in the event of an emergency. These actions are intended to minimize health risks to personnel and people in the surrounding community, as well as minimize adverse impacts to the environment.

1. The plan shall include, but is not limited to, a detailed narrative of response procedures and the facility representatives responsible for management of the following plausible contingencies that could occur at the facility: natural disaster/severe weather, fire, security incident, capacity/transmission, environmental, chemical, pipeline (if applicable), and medical. It shall include procedures for a site evacuation, designated egress routes and emergency staging areas.

2. The plan shall include a stand-alone section detailing the emergency response protocols specific to battery energy storage areas (if applicable).

3. The plan shall be developed in coordination with local first responders, Linn County Emergency Management & Linn County Public Health personnel.

4. Notwithstanding anything in this section to the contrary, the applicant may redact confidential or proprietary information from any submission hereunder.

(q) *Notification Requirements.* To assist in providing adequate notice to interested parties, the applicant for a rezoning to the EU-3 District shall:

(1) Within 14 days of filing the rezoning application with the planning and development department, mail a notice via first class mail to property owners and tenants within 1,000 feet of the subject site explaining the request and identifying the subject property.

(2) Prior to the application being heard at the planning and zoning commission meeting, the applicant shall host a public informational meeting held at a location reasonably accessible to all identified property owners. Applicants must mail a notice of the public informational meeting via first class mail to property owners and tenants within 1,000 feet of the subject site.

a. Applicants must submit a list of the property owners and tenants contacted, a copy of the notice sent, and a notarized affidavit stipulating to the mailing to the planning and development department.

**SECTION 4. SECTION MODIFIED** Chapter 107, Article VII, Section 107-147-1 Use Table is hereby amended to read as follows:

| Transportation and Utility Uses | STD | AG | RR 1/2/3 | VR | VM | USR | USR-MF | HC | GC | CNR | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Utility generating plants and facilities (except wind farms, utility scale solar, gas-fired electric generating facilities, and nuclear energy generating facilities) | | C | | | | | | C | C | C | |
| **Utilities** | | | | | | | | | | | |
| Gas-fired electric generating facilities, nuclear energy generating facilities and nuclear waste storage | See article VII, E-U 2, Gas-Fired Electric Generating Facilities, Nuclear Energy Generating Facilities and Nuclear Waste Storage District | | | | | | | | | | |
| **Industrial** | | | | | | | | | | | |
| Small-scale data center | 107-116 (x) | C | | | | | | | C | C | |
| **Data Centers** | | | | | | | | | | | |
| Large scale data center | See article VII, E-U 3, Large Scale Data Center District | | | | | | | | | | |

**SECTION 5. SECTION MODIFIED**, Chapter 107, Article IX, Section 107-180 Definitions is hereby amended to add the following definitions:

*Data center* means a facility consisting of one or more buildings (whether constructed simultaneously or in separate phases) used primarily for the storage, management, processing, and transmission of digital data, which houses computer or network equipment, systems, servers, appliances, and other associated components related to digital data storage and operations. Data center includes commercial cryptocurrency mining operations and processing.

*Small-scale data center* means a data center that has an electrical design capacity of 20 MW or less, and that uses less than 50 gallons per minute of water or less on an annualized basis. For the purposes of determining compliance with power and water usage thresholds in this ordinance, all data center buildings that are part of a phased or multi-building campus shall be evaluated in the aggregate, regardless of whether such buildings are constructed simultaneously or in separate phases.

*Large-scale data center* means a data center that has an electrical design capacity greater than 20 MW or that uses more than 50 gallons per minute of water on an annualized basis. For the purposes of determining compliance with power and water usage thresholds in this ordinance, all data center buildings that are part of a phased or multi-building campus shall be evaluated in the aggregate, regardless of whether such buildings are constructed simultaneously or in separate phases.

*Places of Public Assembly* means buildings or facilities where people gather for civic, educational, religious, or cultural purposes, including, but not limited to retirement and nursing homes; schools, childcare homes and centers; group homes, hospitals, detention facilities, or human service facilities, not including facilities allowed as an accessory use to the principal use in question.

**SECTION 6. REPEALER.** All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed.

**SECTION 7. SEVERABILITY.** If any section, provision or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.

**SECTION 8. SAVING.** The Code of Ordinances, Linn County, Iowa, shall remain in full force and effect, save and except as amended by this ordinance.

**SECTION 9. EFFECTIVE DATE.** This ordinance shall be in effect after its final passage, approval and publication as provided by law.

**LINN COUNTY BOARD OF SUPERVISORS**

Kirsten Running-Marquardt, Chair

Sami Scheetz, Vice Chair

Brandy Z. Meisheid, Supervisor

Updated: 11-5-26

Woodbury County Planning and Zoning

I, Linn County Auditor, hereby certify that the above and foregoing is a true copy of an ordinance passed by the Linn County Board of Supervisors.

_____
Todd Taylor, Linn County Auditor

STATE OF IOWA
COUNTY OF LINN

This instrument was acknowledged before me on the _____ day of _____, 2026, by Todd Taylor as Linn County Auditor.

_____
Notary Public, State of Iowa

Planning & Zoning Commission on the 20TH day of JANUARY, 2026.

Public hearing and First consideration on the 4TH day of FEBRUARY, 2026.

Second consideration on the 16TH day of FEBRUARY, 2026.

Third consideration and final passage on the 18TH day of FEBRUARY, 2026.

Published in the Gazette on the _____ day of _____, 2026.



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**100.37 DIGITAL CURRENCY MINING AND/OR DATA CENTER FACILITY.** The intent of the regulations of this Section is to balance the need for digital currency needs with the need to protect the public health, safety, and welfare of the residents of Monona County, and to avoid unintended impacts on resources and adjacent uses. No operation may be developed without site plan review and verification by the planning and zoning department that all requirements within this ordinance have been met.

A. All structures used for the facilities shall meet the following standards:

1. The use of cargo containers is permissible; the container needs to be in good condition. The use of railroad cars and semi-truck trailers is prohibited.
2. Facilities will be allowed with a Special Use permit with restrictions in the Agricultural District (A-1), Rural Residential District (R-1), Light Industrial District (M-1) and Heavy Industrial District (M-2).
3. The required setbacks are listed in Section 100.17 Bulk Regulations and will be followed for each district.

B. The noise generated from the facility, components and equipment shall not exceed a daytime continuous sound level of sixty decibels (60 dBA) or a nighttime continuous sound level of fifty decibels (50 dBA) at any occupied residential or commercial building.

C. All plans for these facilities will include, but are not limited to:

1. Monona County Special Use Permit with Restrictions Application.
2. A letter from the local power provider that the applicant has verified the utility supply, and they can safely accommodate the proposed use during the power provider's peak consumption hours.
3. A report from a county approved professional engineer with the noise results will be provided to the county zoning administrator. This report is due within thirty (30) days after the start-up of the facility. The costs associated with this report will be the responsibility of the applicant. All servers, computers, processers, materials, and equipment must be enclosed within the structure.
4. Each facility structure shall have 24-hour emergency contact signage that contains the Company name, phone number and Power Company name that are visible at the access entrance. Monona County 911 addresses will be required for all sites.
5. An emergency response plan will be submitted with the permit application. There shall be an emergency termination switch install outside of any containment structure and appropriately signed so that responding public safety officials can quickly identify it. Structures shall have some type of fire detection/suppression system.
6. A decommission plan for the facility will be submitted with the permit application.

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Updated: 11-5-26

Woodbury County Planning and Zoning

MUSCATINE COUNTY, IOWA

Instrument #: 2025-02054
05/13/2025 09:44:03 AM Total Pages: 1
MIS MISCELLANEOUS
Recording Fee: $0.00 Transfer Tax: $0
Sarah M Hearst - Recorder, Muscatine County Iowa

Prepared By and Return to: Muscatine County Administration Office. 414 E. Third St, Ste 101, Muscatine, IA 52761 563(263-5317)

**ORDINANCE #05-12-25-01**
**AMENDING THE MUSCATINE COUNTY ZONING ORDINANCE RELATING TO DATA CENTERS & CRYPTOCURRENCY MINING**

BE IT HEREBY ORDAINED by the Muscatine County Board of Supervisors:

Section 1. Amendment. The Muscatine County Code of Ordinances, Title III, Chapter II, is amend by the adoption of the following:

Article I, Section 3, Definitions:
**Cryptocurrency mining or production installations and Data Center:** A physical facility that uses computing and networking equipment to collect, store and process data, as well as distribute and access resources. It may also include supporting equipment such as batteries, back-up generators and cooling equipment.

Article X, Section 3: 3.9 Cryptocurrency mining or production

facilities and Data Centers

Article XI, Section 3: 3.28 Cryptocurrency mining or production

facilities and Data Centers

A Cryptocurrency mining or production installation or Data Center is a Special Permitted Use in the in the I-1 and I-2 Industrial Districts.

Section 2. Severability. If any section, provision, or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the regulations as a whole or any section, provision, or part thereof not adjudged invalid or unconstitutional.

Section 3. Effective Date. This ordinance shall take effect upon its publication as required by law.

Section 4. Conflict with Provisions. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

PASSED, APPROVED AND ORDAINED this 12th day of May, 2025.

ATTEST:

Shannon Steele
Administrative/Elections Clerk

Nathan Mather, Chairperson
Muscatine County Board of Supervisors

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OSCEOLA COUNTY, IOWA

**ORDINANCE NO. 66**

AN ORDINANCE AMENDING THE 2013 ZONING ORDINANCE FOR OSCEOLA COUNTY, IOWA ZONING ORDINANCE BY AMENDING ARTICLE III, DEFINITIONS AND ARTICLE XI, (GI) GENERAL INDUSTRUSTRIAL DISTRICT TO INCLUDE REGULATIONS FOR DATA CENTERS

**WHEREAS**, the zoning ordinance on file in the office of the County Auditor designates certain standards as provided by Chapter 335, Iowa Code; and

**WHEREAS,** it is deemed advisable and recommended by the Osceola County Planning and Zoning Commission to amend Article III definitions and Article XI (GI) General Industrial District to add regulations for data centers.

**NOW, THEREFORE, BE IT ORDAINED**, by the Osceola County Board of Supervisors;

SECTION 1. ADD NEW ZONING DEFINITION. The Osceola County Zoning Ordinance is hereby amended by adding the following new zoning definition to section 3.2.5. Industrial Zoning Definitions:

DATA CENTER. A building or other structure rehabilitated or constructed to house a group of networked server computers in one physical location in order to centralize the storage, management, and dissemination of data and information pertaining to a particular business, taxonomy, or body of knowledge. A data center provides computer processing for uses including but not limited to cloud storage, cryptocurrency mining, and artificial intelligence. "Data Center" also includes the lease of a business facility leased by an entity operating a data center business at that location.

SECTION 2. PRINCIPAL PERMITTED USE. The Osceola County Zoning Ordinance is hereby amended by adding the following new principal permitted use to section 11.2.

Data Center is allowed as an industrial use

SECTION 6. SEVERABILITY. Should any provision or portion of this Ordinance be declared unconstitutional, or be otherwise voided, such a finding shall not invalidate other provisions of this Ordinance.

SECTION 7. REPEALER. All ordinances or parts of previous ordinances in conflict with the provisions of this right of way ordinance are hereby repealed.

SECTION 8. EFFECTIVE DATE. This ordinance shall be in full force and effect from and after its adoption and publication as required by law and as provided for in Chapter 380.6 and 380.7 of the Code of Iowa. *(Code of Iowa, Sec. 380.6[1]; Sec. 380.7[3]; and Sec. 362.3)*

ADOPTION

Passed and approved of the first consideration on June 9, 2026.

Passed and approved of the second consideration on waived on June 9, 2026.

Passed and approved of the third consideration on waived on June 9, 2026.

Adopted on June 9th, 2026

Published on June 3, 2026

Jerry Helmers, Chairperson, Board of Supervisors

Attest:
Rochelle Van Tilburg
Osceola County Auditor

I certify that the foregoing was published as Ordinance No. 46 on the 3rd of June, 2024.

Rochelle Van Tilburg

Adoption:

Passed and approved by motion of the first ordinance reading on June 9, 2026

Passed and approved by motion of the second ordinance reading on waived on June 9, 2026

Passed and approved by motion of the third ordinance reading on waived on June 9 2026

Updated: 11-5-26



DO NOT WRITE IN THE SPACE ABOVE, RESERVED FOR RECORDER
Prepared By: Leanne Harter, Story County Planning and Development, 900 6th Street, Nevada, IA 50201 (515) 382-7245

Please return to:
Planning & Development

**STORY COUNTY IOWA**
**ORDINANCE NO. 330**
**AN ORDINANCE AMENDING CHAPTER 85, GENERAL PROVISIONS AND DEFINITIONS; CHAPTER 86, DISTRICT REQUIREMENTS; CHAPTER 88, GENERAL SITE PLANNING STANDARDS; AND CHAPTER 90, CONDITIONAL USES OF THE STORY COUNTY CODE OF ORDINANCES – LAND DEVELOPMENT REGULATIONS FOR A TEXT AMENDMENT TO ADDRESS USES FOR DIGITAL ASSET MINING, CRYPTCURRENCY OPERATIONS, DATA PROCESSING CENTERS AND/OR BATTERY/ENERGY STORAGE SOLUTIONS ON PROPERTIES LOCATED IN UNINCORPORATED STORY COUNTY**

BE IT ENACTED by the Board of Supervisors of Story County, Iowa:

Section 1. Purpose. An Ordinance Amending Chapter 85, General Provisions and Definitions; Chapter 86, District Requirements; Chapter 88, General Site Planning Standards; and Chapter 90, Conditional Uses Of The Story County Code of Ordinances—Land Development Regulations For A Text Amendment To Address Uses for Digital Asset Mining, Cryptocurrency Operations, Data Processing Centers and/or Battery/Energy Storage Solutions on properties located in unincorporated Story County.

Section 2. Proposed Amendments. The amendments are as shown in Attachment A of this ordinance.

Section 3. Repealer. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 4. Saving Clause. If any section, provision, or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.

Section 5. Effective Date. This ordinance shall be effective after its final passage, approval and publication of the ordinance or a summary thereof, as provided by law.

**Action upon FIRST Consideration:** _____
**DATE: March 3, 2026**

Moved by: _____
Seconded by: _____
Voting Aye: _____
Voting Nay: _____
Not Voting: _____
Absent: _____

**Action upon SECOND Consideration:** _____
**DATE: March 10, 2026**

Moved by: _____
Seconded by: _____
Voting Aye: _____
Voting Nay: _____
Not Voting: _____
Absent: _____

**Action upon THIRD Consideration:** _____
**DATE: March 17, 2026**
Moved by: _____
Seconded by: _____
Voting Aye: _____
Voting Nay: _____
Not Voting: _____
Absent: _____



Woodbury County Planning and Zoning

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11/5/26

ADOPTED THIS ____ day of _____, _____.

Attest:

Chairperson, Board of Supervisors

County Auditor

ROLL CALL FOR ALLOWANCE

| | | | |
|---|---|---|---|
| Latifah Faisal | Yea___ | Nay___ | Absent___ |
| Lisa Hedden | Yea___ | Nay___ | Absent___ |
| Linda Murken | Yea___ | Nay___ | Absent___ |

ALLOWED BY VOTE OF BOARD

Yea___Nay___Absent___

CHAIRPERSON

Above tabulation made by ___



**ATTACHMENT A**

**CHAPTER 85**
**LAND DEVELOPMENT REGULATIONS: GENERAL PROVISIONS AND DEFINITIONS**

**85.07 EXEMPTIONS.**

3. Public Utilities Exempt. No requirement, restriction, or regulation contained in the Ordinance shall be construed to control the type or location of any poles, towers, wires, water or sewer lines, gas mains, cables, or any other similar distributing equipment of a public utility. County, state, and federal road projects for the maintenance and/or construction of public roads and public road right-of-way shall also be considered exempt. Battery Energy Storage Systems are not considered routine utility distribution equipment or essential services for zoning purposes.

**85.08 DEFINITIONS.**

"Accessory BESS (Co-Located)" means a battery energy storage system that is ancillary to another primary use of the property. Examples include a BESS co-located with a renewable energy generation facility (solar farm or wind farm) to store generated power, batteries that store electricity for on-site use (peak shaving, backup power), or batteries providing electric grid services at an existing substation. An accessory BESS is subordinate in size and purpose to the main use on the site. These are also often referred to as Hybrid BESS.

"Agrivoltaics or Agrivoltaic Projects" means solar sites that combine agricultural uses with generating electricity within the project area to maximize land use and offering mutual production benefits.

"ANSI" means the American National Standards Institute.

"Augmentation" means the process of supplementing or replacing some or all of the system components to maintain the nameplate capacity (measured in megawatts).

"Battery Energy Storage Management System" means an electronic system that protects energy storage systems from operating outside their safe operating parameters and disconnects electrical power to the energy storage system or places it in a safe condition if potentially hazardous temperatures or other conditions are detected.

"Battery Energy Storage System (BESS)" means one or more devices, assembled together, capable of storing and discharging electricity primarily intended to supply electricity to a building or to the electrical grid. This includes, but is not limited to, the following: battery cells; enclosures and dedicated-use buildings; thermal, battery, and energy management system components; inverters; access roads; distribution, collection, and feeder lines; wires and cables; conduit; footings; foundations; towers; poles; crossarms; guy lines and anchors; substations; interconnection or switching facilities; circuit breakers and transformers; overhead and underground control, communications and radio relay systems, and telecommunications equipment; utility lines and installations; and accessory equipment and structures. A BESS does not include a stand-alone 12-volt car battery or an electric motor vehicle. A BESS is classified as a Tier 1 or Tier 2 (Utility Scale) BESS as follows:

a. Tier 1 BESS have an aggregate energy capacity less than or equal to 600kWh and, if in a room or enclosed area, consist only of a single energy store system technology.

b. Tier 2 (Utility Scale) BESS have an aggregate energy capacity greater than 600kWh or are comprised of more than one storage battery technology in a room or enclosed area.

"BESS Dedicated-Use Building" means a building or structure that is only used for BESS components and equipment, is classified as Group F-1 occupancy, as defined in the International Building Code, and complies with the following:

a. The building's only use is battery energy storage, energy generation, and other electrical grid-related operations.
b. No other occupancy types are permitted in the building.
c. Occupants in the rooms and areas containing BESS are limited to personnel that operate, maintain, service, test, and repair the BESS and other energy systems.
d. Administrative and support personnel are permitted in areas within the buildings that do not contain BESS, provided that these areas do not occupy more than ten (10) percent of the building area of the story in which they are located, and a means of egress is provided from the administrative and support use areas to the public way that does not require occupants to traverse through areas containing BESS or other energy systems equipment.

"BESS Participating Property" means a BESS host property or any real property that is the subject of an agreement that provides for the payment of monetary compensation to the landowner from the BESS owner (or affiliate) regardless of whether any part of a BESS is constructed on the property.

"Clean Agent Fire Suppression System" means a system that uses electrically nonconductive gaseous agents that do not leave residue upon evaporation to extinguish fires.

"Closed-loop Cooling System" means a sealed system where a coolant circulates continuously, absorbing heat from a source, and then transferring that heat to a heat exchanger for removal, without the coolant ever being exposed to the environment. A closed-loop system shall not use evaporative cooling. It may consist of methods including, but not limited to, air-cooled (dry) cooling, rear-door heat exchanger cooling, hybrid dry economizer cooling, direct-to-chip cooling, or immersion cooling.

"Commercial Cryptocurrency Mining" means the commercial process by which cryptocurrency transactions are verified and added to the public ledger, known as the block chain, and the means through which new units of cryptocurrencies are released through the use of server farms. Any equipment requiring a high-density load service, for the purposes of operating a cryptocurrency mining server farm, will constitute a commercial cryptocurrency mining operation.

"Commercial Solar Energy System" (C-SES) means a solar energy generation facility, solar collection system, or area of land comprised of a solar energy device, array of devices, or structural design feature, principally used to provide for the generation of energy distributed into

the electrical grid and not intended to primarily reduce on-site consumption of utility power with the following scales: Community/Commercial at 15 kW–1 MW and Utility-Scale at >1 MW.

"Commissioning" means a systematic process that provides documented confirmation that installed systems function according to the intended design criteria and comply with applicable code requirements.

"Community Noise Equivalent Level (CNEL)" means the 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dB to sound levels occurring in the evening from 7 PM to 10 PM and after the addition of 10 dB to sound levels occurring in the night between 10 PM and 7 AM.

"Cryptocurrency" means a digital currency in which encryption techniques are used to regulate the generation of units of currency and to verify the transfer of funds while operating independently of a central bank.

"Cryptocurrency Data Center (CDC)" means the leased or owned boundaries of floor space devoted to the operating data processing equipment for commercial cryptocurrency mining, excluding spaces for data centers not otherwise engaged in commercial cryptocurrency mining, commercial offices, storage, shipping and receiving, warehousing, or any other space that is not electronic processing.

"Cryptocurrency Mining or Production Installations associated with a Data Center" means a physical facility that uses computing and networking equipment to collect, store and process data, as well as distribute and access resources. It may also include supporting equipment such as batteries, back-up generators and cooling equipment.

"Cryptocurrency Server Farm" means three or more interconnected computers housed together in a single facility either air-cooled or water cooled, whose primary function is to perform cryptocurrency mining or associated data processing.

"Data Center (DC)" means a facility used primarily for the storage, management, processing, and transmission of digital data, which houses computer or network equipment, systems, servers, appliances and other associated components related to digital data operations. The facility may also include air handlers, power generators, water cooling and storage facilities, utility substations, and other associated utility infrastructure to support sustained operations at the Data Center.

"Data Center Accessory Use" means the ancillary uses or structures secondary and incidental to a Data Center use, including but not limited to: administrative, logistical, fiber optic, storage, and security buildings or structures; sources of electrical power such as generators used to provide temporary power when the main source of power is interrupted; electrical substations; utility lines; domestic and non-contact cooling water and wastewater treatment facilities; water holding facilities; pump stations; water towers; environmental controls (air conditioning or cooling towers; fire suppression, and related equipment), and security features, provided such Data Center Accessory Uses/structures are located on the same tract or assemblage of adjacent parcels developed as a unified development with a Data Center. The use shall not include energy generation systems used or intended to be used to supply power to the Data Center during normal operations.

"Data Center Electrical Substation" means a facility used for the transformation or transmission and/or switching of voltages to distribution voltages which switches circuits and distributes usable/consumable electric power, specifically for Data Center users on the same or adjacent site, or on a site immediately across a road right-of-way.

"Data Center Principal Building" means a building that contains the office and/or data storage functions of a Data Center.

"Data Mining" means the commercial process by which volumes of data are analyzed to find patterns, discover trends, and gain insight into how the data can be used as a commercial data mining operation.

"Dedicated-Use Building (BESS)" means a building that is only used for BESS components and equipment, as defined in the NFPA 855 Standards for the Installation of Stationary Energy Storage Systems.

"Energy Storage" means any technology that can absorb electricity, storing the electricity for a period of time, and redelivering that electricity.

"Footcandle" means the amount of light to saturate a one-foot square with one lumen of light.

"High-density Load Service" means any individual service at or above 660 amps in which the energy use intensity (EUI) is calculated as greater than 250 kWh/Feet$^2$/year in total for all operating square footage.

"Liquid Cooling System" means a method of cooling electronic components or other devices by circulating liquid coolant through them, to cool and absorb heat from components and then dissipate heat through a radiator.

"NEC" means the National Electric Code.

"NESC" means the National Electrical Safety Code.

"Non-commercial solar energy system (SES)" means a solar collection system consisting of one or more roof- and/or ground-mounted solar collector devices and solar related equipment, and is intended to primarily reduce on-site consumption of utility power. A system is considered a noncommercial solar energy system only if it supplies electrical or thermal power solely for on-site use at a scale of ≤15 kW, except that when a property upon which the facility is installed also receives electrical power supplied by a utility company, excess electrical power generated and not presently needed for on-site use may be used by the utility company.

"Non-participating Property" means any property that is not a participating property.

"Non-participating Residence" means any residence that is located on a non-participating property.

"On-site BESS" means a BESS that is intended primarily to serve the electricity needs of the applicant property but may, at times, discharge into the electric grid.

"Off-site BESS" means a BESS for the primary purpose of off-site use through the electric grid.

"Participating Property" means real property that is either owned by an applicant or that is the subject of an agreement that provides for the payment of monetary compensation to the landowner from the BESS owner (or affiliate) regardless of whether any part of the BESS system is constructed on the property.

"Public Utility" means a public utility as defined in the Iowa Code Chapter 476.1 and municipally owned waterworks or wastewater facilities, waterworks having less than two thousand customers, joint water utilities established pursuant to Iowa Code Chapter 389, rural water districts incorporated and organized pursuant to Iowa Code Chapters 357A and 504, cooperative water associations incorporated and organized pursuant to Iowa Code Chapter 499, districts organized pursuant to Iowa Code Chapter 468, or a person furnishing electricity to five or fewer customers either by secondary line or from an alternate energy production facility or small hydro facility, from electricity that is produced primarily for the person's own use. Public utility does not include BESS facilities.

"Repowering" means the process of configuring, supplementing, or replacing some or all of the system components to increase the nameplate capacity (measured in megawatts).

"Sensitive Receptors" means schools; preschools; day care centers; in-home daycares; health facilities including, but not limited to hospitals, clinics, long term care facilities, retirement and nursing homes; community centers; places of worship; playgrounds; parks (excluding trails); campgrounds; prisons; dormitories; or any permitted residence.

"Thermal Runaway" means the rapid, uncontrollable increase in temperature often leading to catastrophic failure in electronic components or, specifically, batteries. It is a self-sustaining cycle where heat generation exceeds heat dissipation, resulting in an escalating temperature rise, potentially leading to fires, explosions, and the release of hazardous materials.

"Utility-Scale Tier 2 BESS (U-BESS)" means facilities that are typically standalone installations that store and dispatch energy to the electric grid (often at substation or transmission voltage level).







**CHAPTER 88**
**LAND DEVELOPMENT REGULATIONS: GENERAL SITE PLANNING STANDARDS**

9. Off-Street Loading Areas. In any district in connection with every building or part thereof hereafter erected having a gross floor area of 6,000 square feet or more, which is to be occupied by manufacturing, storage, warehouse, goods display, retail store, wholesale store, market, hotel, hospital, or other uses similarly requiring the receipt or distribution by vehicles of material or merchandise, there shall be provided and maintained on the same lot with such building at least one off-street loading space, plus one additional such loading space for each 20,000 square feet or major fraction thereof of gross floor area so used in excess of 10,000 square feet.

A. Each loading stall shall not be less than 12 feet in width and 40 feet in length.
B. Such space may not occupy all or any part of a required yard or open space. When adjacent to a residential district or residential use, it shall be set back 10 feet and screened from adjacent property by a planting screen not less than 10 feet in width and six feet in height or by a fence, wall, berm, or other comparable means. For CDC and DC uses, applicable setback requirements found in Chapter 90 must be satisfied.
C. For CDC and DC uses, loading spaces/bays are only permitted to be located on one façade of the Data Center Principal Building.

**Amend Table 88-5 Parking Ratios by Type to include the following**

| Land Use | Number of Maximum Spaces |
|---|---|
| U-BESS | One space for each employee on the largest shift. If there are no shift employees, three spaces are permitted. |
| CDC or DC | One space per employee on the largest shift, plus an additional three visitor spaces. |

**CHAPTER 86**
**LAND DEVELOPMENT REGULATIONS: DISTRICT REQUIREMENTS**

Add the following as a Permitted Accessory Use in all zoning districts, except the GB/C district.

Tier 1 Battery Energy Storage Systems

**CHAPTER 90**
**LAND DEVELOPMENT REGULATIONS: CONDITIONAL USES**

**6. Commercial WECS (C-WECS).**

L. Noise. Audible noise due to C-WECS sites operations shall not exceed ~~60~~ 55 dBA for any period of time, when measured at any dwelling, school, hospital, church, or public library existing on the date of approval of any conditional use permit from the property line.

N. Discontinuation and Decommissioning. A C-WECS shall be considered a discontinued use after one year without energy production, unless a plan is developed and submitted to the Director outlining the steps and schedule for returning the C-WECS to service. All C-WECS and accessory facilities shall be removed to four feet below ground level within 180 days of the discontinuation of use. Each C-WECS shall have a decommissioning plan outlining the anticipated means and cost of removing C-WECS at the end of their serviceable life or upon becoming a discontinued use. The cost estimates shall be made by a professional engineer licensed in the State of Iowa. The plan shall also identify the financial resources that will be available to pay for the decommissioning and removal of the C-WECS and accessory facilities. The County reserves the right to verify that adequate decommissioning terms are contained in the landowner easement.

(1) The applicant shall submit a copy of the decommissioning plan to all property owners within the Conditional Use Permit area. The property owners shall provide the County a signed affidavit stating their awareness and responsibility of decommissioning costs.
(2) Decommissioning ~~Fund~~ Financial Security. The applicant ~~shall~~ must continuously maintain a financial assurance mechanism in the form of a performance bond and/or other security approved by the County Attorney, for the period of the life of the facility. The required amount of the security shall be 130 percent of the total decommissioning cost identified in the decommissioning plan, excluding any salvage value ~~as amended by the Board of Adjustment~~. The financial assurance mechanism must ensure that funds will be available upon discontinuation and shall not include the future value, if any, of scrap. If a bond is posted to meet this requirement, the bond-issuing company must be agreed upon by both the applicant and County. All decommissioning, removal and remediation fund requirements shall be fully funded before a zoning permit is issued. The County shall have sole discretion with regard to the determination of the mode of financial assurance.
(3) Every three (3) years from the first date of operations, or on the written request of the County, the Owner shall review and update the Decommissioning Plan and all appendices and provide the updated plan and appendices to the County on or before the date of each three-year anniversary of the first date of operations. As part of this review process, the Owner shall recalculate the total decommissioning cost and the decommissioning guaranty amount; and the financial assurance required shall be modified accordingly.

Q. Submittal Requirements. In addition to the submittal requirements defined for conditional use permit applications, all applications for C-WECS must submit the following information (as applicable).

(18) Pre-construction interconnection agreements.

**8. Commercial – Solar Energy Systems (C-SES).**

D. Ground Cover and Buffer Areas. Perennial vegetative ground cover shall be planted on the ground around and under solar arrays and in project site buffer areas, and the ground shall meet the following standards:

(1) Top soils shall not be removed from the site during development unless the removal is part of a remediation effort pre-defined and approved through the Conditional Use Permit.
(2) Soils shall be planted and maintained in perennial vegetation in accordance with sub-paragraph 3 below to prevent erosion, manage run-off, and build soil.
(3) Seed mixes and maintenance practices must be approved by Story County Conservation prior to action by the Board of Adjustment.
(4) Solar collectors and racking are not considered impervious cover if underlying ground is pervious vegetation, and the soil is not compacted.
(5) The applicant shall submit a vegetative management plan prepared by a qualified professional or reviewed and approved by Story County Conservation. The plan shall identify:
    a. The natural resource professionals consulted or responsible for the plan
    b. The conservation, habitat, eco-system, or agricultural goals, which may include: providing habitat for pollinators such as bees and monarch butterflies, providing habitat for wildlife such as upland nesting birds and other wildlife, establishing vegetation for livestock grazing, reducing on-site soil erosion, and improving or protecting surface or ground water quality.
    c. The intended mix of vegetation upon establishment.
    d. The management methods and schedules for how the vegetation will be managed on an annual basis, with particular attention given to the establishment period of approximately three years.

E. Fencing. Ground-mounted solar energy device or combination of devices comprising a C-SES shall be enclosed by perimeter fencing at a height of eight feet to restrict unauthorized access. Security fences and gates must be maintained in good condition until the site is decommissioned.
(1) Native/pollinator-friendly vegetation buffers or fencing to screen solar farms from adjacent homes/public roads is required.

L. Discontinuation and Decommissioning. C-SES shall be considered discontinued after one year without energy production, unless a plan is developed and submitted to the Director outlining the steps and schedule for returning the C-SES to service.

(1) Removal Requirements. Any C-SES which has reached the end of its useful life or has been determined to be discontinued pursuant to this section shall be decommissioned and removed within 180 days of the discontinuation of use.

(2) Decommissioning shall consist of:

a. Physical removal of all large-scale ground-mounted solar photovoltaic installations, structures, equipment, security barriers and transmission lines from the site to four feet below ground level within 180 days of the discontinuation of use.
b. Disposal of all solid and hazardous waste in accordance with local, State, and federal waste disposal regulations.
c. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Director may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

(3) Decommissioning Plan and Financial Surety.

a. C-SES shall have a decommissioning plan outlining the anticipated means and costs of removing the C-SES at the end of its serviceable life or upon becoming discontinued.
b. The decommissioning plan shall identify financial resources that will be available to pay for decommissioning and removal of C-SES.
c. The applicant ~~shall~~ must continuously maintain a financial assurance mechanism in the form of a performance bond and/or other security approved by the County Attorney, for the period of the life of the facility. The amount of the security shall be 130 percent of the total decommissioning cost identified in the decommissioning plan, without the salvage value. The financial assurance mechanism must ensure that funds will be available upon discontinuation and shall not include the future value, if any, of scrap. If a bond is posted to meet this requirement, the bond issuing company must be agreed upon by both the applicant and County. All decommissioning, removal and remediation fund requirements shall be fully funded before a zoning permit is issued. The County shall have sole discretion with regard to the determination of the mechanism of financial assurance.
d. Property Owner Affidavit. The applicant shall submit a copy of the decommissioning plan to all property owners within the boundaries of the Conditional Use Permit area. The property owners shall provide the County a signed affidavit acknowledging receipt of the plan and their responsibility for decommissioning costs.
e. Every three (3) years from the first date of operations, or on the written request of the County, the Owner shall review and update the Decommissioning Plan and all appendices and provide the updated plan and appendices to the County on or before the date of each three-year anniversary of the first date of operations. As part of this review process, the Owner shall recalculate the total

decommissioning cost and the decommissioning guaranty amount; and the financial assurance required shall be modified accordingly.

M. Monitoring and Maintenance. The owner or operator of C-SES shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Internal circulation drives shall be maintained by the owner or operator to a level acceptable to the applicable fire chief and Story County Emergency Management Agency. The owner or operator shall be solely responsible for the cost of maintaining the C-SES and any internal access roads.

(1) Agrivoltaics or Agrivoltaic Projects such as pollinator-friendly cover crops/livestock grazing on solar farm sites are permitted and encouraged to continue, to achieve co-benefits of solar energy and agriculture.

O. Submittal Requirements. In addition to the submittal requirements defined for conditional use permit applications, all applications for C-SES must submit the following information (as applicable).

(22) Vegetative Management Plan.

This page through the end of the packet contains proposed new regulation.

**CHAPTER 90**
**LAND DEVELOPMENT REGULATIONS: CONDITIONAL USES**

**Amendment to Table 90-1 – Table of Conditional Uses**
All subject to supplemental standards, and in the C-LI and HI

- Utility-Scale Battery Energy Storage System (U-BESS) (When such use is proposed conjunction with an application or major modification for a "Commercial Wind Energy Conversion Systems (C-WECS)", "Commercial Solar Energy Systems (C-SES)", or "Any land or building used by a utility service for the purpose of generating or converting power", the U-BESS may be site on property zoned A-1, Agricultural and all supplemental standards for a U-BESS shall apply in addition to supplemental standards for "Commercial Wind Energy Conversion Systems (C-WECS)", "Commercial Solar Energy Systems (C-SES)", or "Any land or building used by a utility service for the purpose of generating or converting power".)
- Cryptocurrency Data Center or Cryptocurrency Mining or Production Installations associated with a Data Center (CDC)
- Data Center (DC)

**11. Utility-Scale (Tier 2) Battery Energy Storage Systems (U-BESS)**

A. The requirements of the Ordinance shall apply to all U-BESS proposed after the effective date of the Ordinance.

B. Co-Located with Solar or Wind: When a U-BESS is proposed as part of a new solar farm or wind farm, the U-BESS is processed as a component of the new solar farm or wind farm's conditional use permit rather than requiring a separate conditional use permit. For an existing wind farm or solar farm that was permitted prior to the adoption of the standards for U-BESS wanting to add battery storage, such applications will be processed as a Major Modification to the existing conditional use permit.

C. Setbacks and Separation Requirements. The following setbacks and separation requirements shall apply to all components of a U-BESS.

1) U-BESS facilities shall comply with all applicable setbacks and separation distances as required by NFPA 855.

2) Sensitive Receptors. Setbacks from the nearest Receptor use shall be 100 feet or greater, as measured from structure to structure. Setbacks shall be established allowing for no greater than 55dB(A) from the U-BESS occurring at an adjacent dwelling.

3) Public Right-of-Way. Setbacks from public right-of-way shall comply with the applicable setbacks as defined by the base zone district.

D. Screening and Landscaping

1) U-BESS must be visually screened from the public right-of-way and from any Sensitive Receptors located within 100' of the U-BESS.

E. Parking shall comply with the requirements defined in Section 88.08 Parking and Circulation Standards.

F. Hazardous Materials and Environmental Protection

1) The U-BESS shall comply with all applicable hazardous materials handling and reporting laws.

2) Batteries shall be recycled or disposed of in accordance with environmental regulations upon decommissioning. The Decommissioning Plan must identify where the batteries will go.

3) U-BESS installations must comply with the County's stormwater and erosion control ordinance.

4) On parcels containing more than 50 percent of the gross acreage as lands identified with areas designated Natural Resource Areas on the Cornerstone to Capstone (C2C) Comprehensive Plan, the conditional use permit shall not be approved unless conditions protecting the identified areas are attached to the request, either split zoned with conservation or conservation easements.

5) U-BESS shall not be located in the Special Flood Hazard Area.

G. Fencing and Security Measures.

1) A perimeter security fence up to eight (8) feet tall must be installed around the entire U-BESS, including the battery containers and electrical equipment.

2) Fencing may not be placed in front of landscaping adjacent to roads. There must be landscaping in front of any fence adjacent to public roads.

3) Security fencing near electrical installations must be grounded and bonded to protect against electrical hazards as per the National Electric Code.

4) For installations over 1,000 volts, a warning sign reading "DANGER – HIGH VOLTAGE – KEEP OUT" is required on locked or monitored enclosures.

5) Warning signage such as high voltage, energy storage facility identification, emergency contact info, must be posted on the fence per the National Electric Code requirements.

6) Security fences and gates must be maintained in good condition until the site is decommissioned.

7) Battery energy storage systems shall also comply with specifications established in NFPA 855 relating to barriers and buffering.

H. Signage. No signs other than appropriate warning signs, or standard manufacturers', operators', or installers' identification signage, shall be displayed unless permitted in accordance with Chapter 89.

I. Access and Fire Safety. Battery energy storage systems shall comply with the latest published version of the National Fire Protection Association (NFPA) 855, Standard for Installation of Stationary Energy Storage Systems, at the date of the submission of the application.

J. Lighting. Exterior lighting, including any security lighting, shall be the minimum necessary for safety and security, downward directed, shielded from adjacent properties, and comply with the requirements of Section 88.09, Site Lighting.

K. Emergency Response Plan (ERP):

1) An ERP is to be prepared and submitted for review prior to the issuance of a zoning permit. At the time a conditional use permit application is submitted, a draft ERP per NFPA 855 Section 4.3.2.1.4(4) shall be included with the application materials. This shall include but not be limited to an evacuation plan, firefighting techniques, and responsibility assignments for each scenario in the ERP.

2) Prior to commencing commercial operations, the applicant shall submit a plan as an appendix to the project permit application for offering site-specific training to the fire service and emergency personnel of all applicable jurisdictions.

3) The ERP shall be reviewed annually by local emergency responders throughout the project's lifespan and modified for best safety practices if necessary.

4) Routine maintenance shall be performed on the U-BESS equipment to ensure proper performance of the technology. The County and local emergency responders are to be contacted if there are concerns of failure to meet any ERP standards in the U-BESS performance.

5) The applicant must conduct and submit documentation of hazard mitigation analyses as required by NFPA 855. An ERP and necessary fire precautions must be in place prior to issuance of any zoning permits.

6) Local first responders are to be trained and equipped to the extent current equipment is insufficient to respond appropriately to the selected battery technology for the U-BESS project, at the Owner's commercially reasonable expense, prior to the commencement of the operation. Refresher training to local first responders shall be required, at the Owner's commercially reasonable expense, at reasonable intervals, at least annually or as requested by the jurisdictional fire chief and Story County Emergency Management throughout the life of the project.

7) Owner shall be responsible for the commercially reasonable costs of local first responders for any emergency event at the facility.

8) Owner shall provide confirmation that there will be remote monitoring of the U-BESS 24 hours daily, seven (7) days a week.
9) U-BESS operators are required to certify that the system is being maintained per safety standards and coordinate refresher training or drill with the applicable fire department. Annual proof to be provided to Story County Planning and Development no later than February 28 each year. Failure to comply annually with this may result in revocation of the conditional use permit.

L. Noise Standards: Sound generated from the battery energy storage systems, components, and associated ancillary equipment, measured at the nearest sensitive receptor or a non-participating property shall not exceed 55 dB(A) (1-hour Leq) at the property line.
1) These standards shall not apply to uses established after the U-BESS is permitted/started.

M. Compliance with Applicable Codes and Certifications.
1) State Building Code. All U-BESS shall meet all requirements of the current State Building Code.
2) National Electric Code (NEC). All U-BESS shall comply with the National Electrical Code, current edition.
3) Certification that all battery units meet national safety standards (e.g. UL 1973 for battery modules, and UL 9540 for the entire storage system). All U-BESS applications shall provide such certification.

~~N. Lighting. Exterior lighting at a U-BESS site shall be the minimum necessary for safety and security, downward directed, and shielded from adjacent properties and comply with the requirements of Section 88.09.~~

N. Underground Installation of Utilities. Reasonable efforts shall be made to place all utility connections from ~~CDC or DC~~ U-BESS facilities underground, depending on appropriate soil conditions, shape and topography of the site, distance to the connection, or other conditions or requirements. Any above ground utility lines require an engineer's signed statement and explanation as to why buried utilities are not feasible.

O. All U-BESS shall comply with Iowa Utilities Board rules and any state law requirements. Any required state or federal permits or approvals (such as IUB generator certificates for very large facilities) must be obtained, and copies provided to the County, prior to construction.

P. Review of Augmentation Plans
1) If augmentation was not considered in the approved permit application, then such augmentation shall be processed as an amendment to the approved conditional use permit.

Q. Commissioning Plan and Report
2) Prior to issuance of a zoning permit, U-BESS Applicants shall submit a commissioning plan in accordance with NFPA 855 that contains:
a. An electrical diagram detailing the battery energy storage system configuration, associated components, and electrical interconnection methods, compliant with applicable state or local electrical codes, including NEC and NESC.
b. A preliminary equipment specification sheet that documents the proposed battery energy storage system components, inverters and associated electrical equipment that are to be installed. A final equipment specification datasheet shall be submitted prior to the issuance of the zoning permit.
c. Name, address, and contact information of proposed or potential system installer and the owner and/or operator of the U-BESS. Such information of the final system installer shall be submitted prior to the issuance of final zoning permit.

R. Discontinuation and Decommissioning. U-BESS shall be considered discontinued after it has not stored electrical energy for twelve (12) consecutive months, unless a plan is developed and submitted to the Director outlining the steps and schedule for returning the U-BESS to service.
3) Removal Requirements. Any U-BESS which has reached the end of its useful life or has been determined to be discontinued pursuant to this section shall be decommissioned and removed within one-hundred eighty (180) days of the discontinuation of use.
4) Decommissioning shall consist of:
a. Physical removal of all above-surface facilities and infrastructure that have no ongoing purpose, from the site. All U-BESS and accessory facilities shall be removed to four (4) feet below ground level within one-hundred eighty (180) days of the discontinuation of use.
b. Disposal of all solid and hazardous waste in accordance with local, State, and federal waste disposal regulations.
c. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Director may allow the owner or operator to leave landscaping to minimize erosion and disruption to vegetation.
5) Decommissioning Plan and Financial Surety.
a. U-BESS shall have a decommissioning plan outlining the anticipated means and costs of removing the U-BESS at the end of its serviceable life or upon becoming discontinued.
b. The decommissioning plan shall identify financial resources that will be available to pay for decommissioning and removal of U-BESS.
c. The applicant must continuously maintain a financial assurance mechanism in the form of a performance bond and/or other security approved by the County Attorney, for the period of the life of the facility. The required amount of the security shall be 130 percent of the total decommissioning cost identified in the decommissioning plan, excluding any salvage value. The financial assurance mechanism must ensure that funds will be available upon discontinuation and shall not include the future value, if any, of scrap. If a bond is posted to meet this requirement, the bond issuing company must be agreed upon by both the applicant and County. All decommissioning, removal and remediation fund requirements shall be fully funded before a zoning permit is issued. The County shall have sole discretion with regard to the determination of the mechanism of financial assurance.
d. Property Owner Affidavit. The applicant shall submit a copy of the decommissioning plan to all property owners within the boundaries of the Conditional Use Permit area. The property owners shall provide the County with a signed affidavit acknowledging receipt of the plan and their responsibility for decommissioning costs.
e. Every three (3) years from the first date of operations, or on the written request of the County, the Owner shall review and update the Decommissioning Plan and all appendices and provide the updated plan and appendices to the County on or before the date of each three-year anniversary of the first date of operations. As part of this review process, the Owner shall recalculate the total decommissioning cost and the decommissioning guaranty amount; and the financial assurance required shall be modified accordingly.

S. Monitoring and Maintenance. The owner or operator of a U-BESS shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Internal circulation drives shall be maintained by

the owner or operator to a level acceptable to the applicable fire chief and Story County Emergency Management Agency. The owner or operator shall be solely responsible for the cost of maintaining the U-BESS and any internal access roads.

6) Following the initial completion of the project and the project commissioning, Owner shall notify the County, in writing, of any battery enclosures before being removed or installed at the project. Such notification shall be at least thirty (30) days in advance of the removal or installation, except in cases of emergency, when Owner shall notify the County as soon as practicable. No batteries shall be stored on the premises outside of battery enclosures, with the exception of batteries stored for future use, and any such used for future use shall be stored to NFPA 855 standards.

T. Ownership Changes. If the owner of the U-BESS changes or the owner of the property changes, the conditional use permit shall remain in effect, provided that the successor owner or operator assumes in writing all of the obligations of the conditional use permit, site plan approval, and decommissioning plan. A new owner or operator of the U-BESS shall notify the Story County Planning and Development Department in writing of such changes in ownership or operations within sixty (60) days of the change.

7) The conditional use permit and all other local approvals for the U-BESS may be considered void if a new owner or operator fails to provide written notification to the Story County Planning and Development Department within the required timeframe. Reinstatement of a void conditional use permit will be subject to the same review and approval processes for new conditional use permits.

U. Third-Party Reviewer

8) The County may seek the services of a third-party reviewer with expertise in the U-BESS technology field to assist with the following services (if the conditional use permit is approved by the County).

a. Review of the site and architectural plan, battery technology, compliance with NFPA 855, and with other applicable regulatory standards and codes not specifically identified in these regulations.

b. Assist with the review of the ERP, completed noise study, decommissioning plan and review of decommissioning financial security agreement.

9) The County shall make their best effort so that the Third-Party Review does not unreasonably delay the project's zoning permitting or construction process. The Owner shall be responsible for reimbursing the County for the commercially reasonable costs incurred for the services of said Third-Party Reviewer. Said costs shall be mutually agreed upon by the County and Owner prior to the County's commencement of plan review for the zoning permit.

V. Avoidance and Mitigation of Damages to Public Infrastructure.

10) Roads. Applicant shall identify all roads to be used for the purpose of transporting components and/or equipment for construction, operation or maintenance of the U-BESS and obtain applicable weight and size permits from the impacted road authority prior to construction.

11) Existing Road Conditions. Applicant shall conduct a pre-construction survey, in coordination with the impacted local road authority to determine existing road conditions. The pre-construction survey shall include photographs and a written agreement to document the condition of the roads and applicable public facilities. The applicant is responsible for on-going road maintenance and dust control measures identified by the Story County Engineer during all phases of construction.

12) Drainage System. The applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation, or maintenance of the U-BESS.

13) Required Financial Security. The applicant shall be responsible for restoring or paying damages as agreed to by the applicable road authority sufficient to restore the roads and bridges to preconstruction conditions. Financial assurance mechanisms in the form of a performance bond and/or other security approved by the Story County Attorney's Office shall be submitted to the Planning and Development Department covering 130 percent of the costs of all required improvements prior to final issuance of the conditional use permit by the Board of Adjustment. This requirement may be waived by the Board of Adjustment upon recommendation from the Story County Engineer.

W. Submittal Requirements. All U-BESS applications must submit the following information in addition to submittal requirements defined for conditional use permit applications.

1) The names of the project applicants.
2) The names of the project owners.
3) The legal description and address of the project.
4) The names of the landowners.
5) Pre-construction survey and proposed routes.
6) Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, and screening vegetation or structures.
7) A detailed site plan drawing showing the layout of the U-BESS facility on the property including the battery enclosures/containers, inverters and electrical equipment, transformers, access roads, parking or turnaround areas for maintenance vehicles, proposed fencing and gates, landscape buffers (if any), and setback distances from property lines and existing structures, and identifying any adjacent uses (homes, public roads, etc.), floodplain, rights-of-way and zoning district designations. For co-located U-BESS at a solar/wind farm, the U-BESS components should be clearly identified on the overall project site plan as defined in Section 90.08.6 Commercial WECS (C-WECS) and 90.08.8 Commercial Solar Energy Systems (C-SES).
8) Project Narrative and Specification Sheets describing the U-BESS project, including the type of battery technology (e.g. lithium-ion, flow battery, etc.), the nameplate energy capacity (in MW and MWh), the intended charge/discharge regime (e.g. daily cycling, emergency backup), and whether the system is stand-alone or tied to a generation facility. The applicant should provide manufacturer's spec sheets for the battery units and associated equipment, to verify dimensions and compliance with safety standards (such as UL listings).
9) Statements of Compliance with Applicable Codes and Certifications.
10) Emergency Response Plan.
11) Site Safety and Security Plan: A detailed plan outlining on-site safety features such as thermal monitoring systems, ventilation and explosion-proof construction features and describing how the site will be secured against unauthorized access like fencing, locking cabinets, lighting, alarms, etc.
12) Project development timeline.
13) Existing Resources Inventory as defined in Chapter 85.
14) Documentation of actual or prospective access and traffic control of the project site.
15) Operation and maintenance plan of the U-BESS, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operation and maintenance of the installation.
16) Proof of liability insurance.
17) Applicable Fee

18) Decommissioning plan without salvage value calculated into the security bond amount.
19) Acknowledgement of Third-Party Reviewer process and potential costs.

**12 Cryptocurrency Mining or Production Installations Associated with a Data Center (CDC); Data Centers (DC)**

A. The requirements of the Ordinance shall apply to all CDC or DC proposed after the effective date of the Ordinance.
B. Maximum Height. Building height shall not exceed forty (40) feet and shall not include any additional rooftop equipment, which may not exceed a maximum height of thirty (30) feet.
   1) Any mechanical rooftop equipment, including but not limited to heating, air conditioning, ventilation, generators, and other similar equipment, shall be screened with a parapet wall, false roof, or other building elements that shall provide one hundred (100) percent screening of mechanical equipment from the adjacent roadways, properties, and waterways.
      a. The parapet wall, false roof, or building element shall be constructed of the same materials used in the construction of the principal building or structure and shall be designed to be architecturally integrated with the building's overall design.
      b. No screening shall be required for renewable energy infrastructure equipment, including but not limited to solar energy systems, wind energy systems, and other power generation equipment.
      c. No screening shall be required for any green infrastructure, including but not limited to green roofs, rooftop cisterns, and other bioretention equipment.
C. Setbacks
   1) All principal buildings, accessory structures, and Data Center Electric Utility Substations shall be set back at least two hundred (200) feet from all property lines or not exceeding 60dB(A).
   2) If located on the ground, any equipment for cooling, ventilating, or otherwise operating the facility, including any power generator or other power supply equipment, must either be:
      a. Located at least one hundred (100) feet or not exceed 60 dB(A) from the lot line of a property with a residential zoning classification or an existing dwelling; or
      b. Separated from the lot line of a property with a residential zoning classification or an existing dwelling by the principal data center building.
D. Site Layout. Buildings shall be sited and oriented to:
   1) Minimize visual impacts of the bulk of the building when examined on a line-of-sight basis from adjacent public streets and Sensitive Receptor areas.
   2) Provide safe and convenient vehicular access to the site, including sufficient on-site queuing areas at security gates.
   3) Accommodate parking area.
   4) Minimize impacts to natural resources.
   5) Incorporate appropriate stormwater management practices.
E. Utility Connections: Reasonable efforts shall be made to place all utility connections from CDC or DC facilities underground, depending on appropriate soil conditions, shape and topography of the site, distance to the connection, or other conditions or requirements. Any above ground utility lines require an engineer's signed statement and explanation as to why buried utilities are not feasible.
F. Screening
   1) Substations, electrical yards, mechanical yards, and any other exposed equipment shall not be located between the building and a publicly accessible road or right-of-way and shall be screened from any adjacent publicly available accessible street, private street, trail, or park.

2) All cooling, ventilation, and other electrical equipment used to operate the facility shall not be located between the building and publicly accessible rights-of-way.

3) CDC or DC must be visually screened from the public right-of-way and from any Sensitive Receptors located within 100' of the CDC or DC. A landscape buffer is required to be installed and maintained during the life of the operation. The following plant unit percentages apply to each property line where the buffer is required:

a. A maximum of twenty (20) percent of the required plant units may be a combination of shrubs, ornamental grasses, and perennials.

b. A minimum of forty (40) percent and a maximum of seventy (70) percent of the required plant units must be evergreen trees that are a minimum of eight (8) feet in height at the time of planting.

c. A maximum of thirty (30) percent of the required plant units may be small deciduous trees.

d. A maximum of thirty (30) percent of the required plant units may be large deciduous trees.

e. Buffer Substitution Using Topography and Vegetation. Use of the natural topography and preservation of non-invasive existing vegetation, supplemented by new vegetation, if needed, may be substituted for the above requirements if determined by the Story County Board of Adjustment to provide screening at the density, depth, and height equivalent to that outlined above.

G. Signage: Each CDC or DC operation shall provide 24-hour emergency contact signage visible at the access entrance. Signs shall include company name, owner/representative name, telephone number, and corresponding local power company and telephone number. All additional signage must adhere to the requirements in Chapter 89.

H. Lighting: Exterior lighting, including any security lighting, shall be the minimum necessary for safety and security, downward directed, and shielded from adjacent properties and comply with the requirements of Section 88.09, Site Lighting.

I. Noise/Vibration

1) The CNEL at the boundary of the property containing a Sensitive Receptor shall not exceed 55 dB(A) within three hundred (300) feet.

2) The CNEL at the boundary of any developed property not containing a Sensitive Receptor shall not exceed 70 dB(A).

3) Sound that is produced for not more than a cumulative period of one (1) minute in any hour may exceed the standards above by up to 10 dB(A).

4) In the event audible noise operations contains a steady pure tone, such as a whine, screech, or hum, the standards for audible noise set forth shall be reduced by 5 dB(A).

5) The maximum sound levels listed above do not apply to emergency alerts, emergency work to provide electricity, water, or other public utilities when public health or safety is involved, snow removal, or road repair.

6) A noise reduction barrier or device may be required at the discretion of the Board of Adjustment when it is inconclusive that noise level tests do not conform to acceptable noise levels.

7) The limitations of this section shall not apply to any Sensitive Receptor that is established adjacent to the CDC or DC after the date of issuance of a final zoning permit for the applicant's operation.

8) In the event the noise levels resulting from CDC or DC operations exceed the criteria listed above, a waiver to said levels may be granted by the Board of Adjustment provided that the following has been accomplished.

a. Written waiver from the affected property owners has been obtained stating that they are aware of the CDC or DC and the noise limitations imposed by these Regulations, and that consent is granted to allow noise levels to exceed the maximum limits otherwise allowed; and.

b. If the applicant wishes the waiver to apply to succeeding owners of the property, a permanent noise impact easement shall be recorded in the Office of the Story County Recorder which describes the burdened properties and which advises all subsequent owners of the burdened property that the noise levels in excess of those permitted by these Regulations may exist on or at the burdened property.

c. Any generators on the property shall comply with the U.S. Environmental Protection Agency (EPA) New Source Performance Standards (NSPS) of at least Tier 4 emissions. Testing for these generators shall not exceed ten (10) hours per month unless a power outage occurs. Generators shall be enclosed by a sound attenuation for noise reduction and to reduce pollution.

d. Except for generator testing or commissioning activities, generator use is limited to backup/emergency use only.

J. Foundation. All structures shall have concrete foundations.

1) Foundations shall not be defective, decayed, or corroded.

2) The use of cargo containers, railroad cars, semi-truck trailers, and other similar storage containers for any component of the operation are prohibited.

K. Cooling Systems. CDC or DC shall be required to have a liquid cooling system.

1) A closed loop cooling system is required.

2) The application shall include an estimate of annual water consumption for the site to include an assessment for annual replacement or replenishment of water in the closed loop.

3) The application shall include a description of the intended source of water for the development, and documentation from the Iowa Department of Natural Resources along with Story County Environmental Health affirming sufficient water resources exist to serve the site.

4) All necessary permits must be obtained from Story County Environmental Health and the Iowa Department of Natural Resources.

L. Equipment. All servers, computers, processers, materials, and equipment must be enclosed within buildings.

M. Electrical Power. The applicant shall provide written verification from the power provider that the applicant has calculated the maximum potential electrical consumption of the proposed use and has verified the utility supply equipment and related electrical infrastructure is sufficiently sized and can safely accommodate the proposed use during the power provider's peak consumption hours.

N. Hazardous Materials and Environmental Protection.

1) The CDC or DC shall comply with all applicable hazardous materials handling and reporting laws.

2) All CDC or DC must comply with the County's stormwater and erosion control ordinance.

3) On parcels containing more than 50 percent of the gross acreage as lands identified with areas designated Natural Resource Areas on the Cornerstone to Capstone (C2C) Comprehensive Plan, the conditional use permit shall not be approved unless conditions protecting the identified areas are attached to the request, either split zoned with conservation or conservation easements.

4) CDC or DC shall not be located in the Special Flood Hazard Area.

O. Ice Mitigation Report: All CDC or DC shall ensure that the amount of heat that is dissipated by the mining activity shall be monitored when the average daily temperature is 40 degrees Fahrenheit or less to ensure that there is no buildup of ice on neighboring properties and roadways.
   1) In the instance that condensation and ice occur, there shall be an agreement between the facility's operational contact, owners of neighboring properties (to mitigate ice buildup on dwellings), and the County Engineer to mitigate ice on public right of way.

P. Safety.
   1) The equipment used in any CDC or DC operation shall be housed in a metered, electrically grounded, and pre-engineered metal-encased structure with a fire rating designed to resist an internal electrical fire for at least 30 minutes. The containment space shall contain baffles that automatically close in the event of fire, independent of a possible electric system failure.
   2) Any CDC or DC using ~~proposing~~ proposed battery storage or any other device or group of devices capable of storing energy in order to supply electrical energy at a later time, whether the energy is stored for use on-site or off-site, shall demonstrate compliance with NFPA Standard 855, Installation of Stationary Energy Storage Systems, or similar standards and must include fire suppression systems designed specifically for battery storage.
   3) A clean agent fire protection system must be provided and maintained in good working order within any structure which contains a server farm. High sensitivity smoke detectors shall be installed and operational in order to activate the clean agent fire suppression system.

Q. Power Lines and Electric Utility Substations.
   1) CDC or DC Electric Utility Substations must include year-round opaque landscaping or a screen wall a minimum of eight (8) feet in height to minimize visual impact.
   2) Electric Utility Substations on the same property as the CDC or DC they serve must be located on the side or rear of a principal building so they are screened from public view and must not be in a required front yard. On-site substations do not require a buffer or screening between the Data Center Principal Building and the substation.
   3) Burying power lines serving the property is required. On-site power lines of 34.5 kV and below must be buried. Any above ground utility lines require an engineer's signed statement and explanation as to why buried utilities are not feasible.
   4) The CDC or DC Electric Utility Substation shall be subject to applicable zoning district setback requirements. Setbacks shall be measured from the edge of the compound containing the substation to the property boundary of the lot it occupies.

R. Emergency Contact Information.
   1) Each CDC or DC operation shall provide 24-hour emergency contact signage visible at the access entrance. Signs shall include the company name (if applicable), the owner/representative's name, the telephone number, and the corresponding local power company's name and telephone number.

S. Compliance with Applicable Codes and Certifications. Statements of Compliance with Applicable Codes and Certifications below ~~is~~ are required at the time of submittal for a conditional use permit.
   1) State Building Code. All CDC or DC shall comply with all requirements of the current State Building Code.
   2) National Electrical Code (NEC). All CDC or DC shall comply with the National Electrical Code, current edition.
   3) Certification that all battery units meet national safety standards (e.g. UL 1973 for battery modules, and UL 9540 for the entire storage system).

T. Commissioning Plan and Report. Prior to issuance of a zoning permit, CDC or DC Applicants shall submit a commissioning plan that demonstrates:
   1) An electrical diagram detailing the configuration, associated components, and electrical interconnection methods, compliant with applicable state or local electrical codes, including NEC and NESC.
   2) Name, address, and contact information of proposed or potential system installer and the owner and/or operator of the CDC or DC. Such information of the final system installer shall be submitted prior to the issuance of final zoning permit.

U. Discontinuation and Decommissioning. CDC or DC shall be considered discontinued after twelve (12) months without active and continuous use unless a plan is developed and submitted to the Director outlining the steps and schedule for returning the CDC or DC to service.
   1) Removal Requirements. Any CDC or DC which has reached the end of its useful life or has been determined to be discontinued pursuant to this section shall be decommissioned and removed within one-hundred eighty (180) days of the discontinuation of use.
   2) Decommissioning shall consist of:
      a. Physical removal of all above-surface facilities and infrastructure that have no ongoing purpose from the site. All CDC and DC and accessory facilities shall be removed to four (4) feet below ground level within one-hundred eighty (180) days of the discontinuation of use.
      b. Disposal of all solid and hazardous waste in accordance with local, State, and federal waste disposal regulations.
      c. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Director may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.
   3) Decommissioning Plan and Financial Surety.
      a. The CDC or DC shall have a decommissioning plan outlining the anticipated means and costs of removing the CDC or DC at the end of its serviceable life or upon becoming discontinued.
      b. The decommissioning plan shall identify financial resources that will be available to pay for decommissioning and removal of a CDC or DC.
      c. The applicant must continuously maintain a financial assurance mechanism in the form of a performance bond and/or other security approved by the County Attorney, for the period of the life of the facility. The required amount of the security shall be 130 percent of the total decommissioning cost identified in the decommissioning plan, excluding any salvage value. The financial assurance mechanism must ensure that funds will be available upon discontinuation and shall not include the future value, if any, of scrap. If a bond is posted to meet this requirement, the bond issuing company must be agreed upon by both the applicant and County. All decommissioning, removal and remediation fund requirements shall be fully funded before a zoning permit is issued. The County shall have sole discretion with regard to the determination of the mechanism of financial assurance.
      d. Property Owner Affidavit. The applicant shall submit a copy of the decommissioning plan to all property owners within the boundaries of the Conditional Use Permit area. The property owners shall provide the County with a signed affidavit acknowledging receipt of the plan and their responsibility for decommissioning costs.

e. Every three (3) years from the first date of operations, or on the written request of the County, the Owner shall review and update the Decommissioning Plan and all appendices and provide the updated plan and appendices to the County on or before the date of each three-year anniversary of the first date of operations. As part of this review process, the Owner shall recalculate the total decommissioning cost and the decommissioning guaranty amount; and the financial assurance required shall be modified accordingly.

V. Monitoring and Maintenance. The owner or operator of a CDC or DC shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Internal circulation drives shall be maintained by the owner or operator to a level acceptable to the applicable fire chief and Story County Emergency Management Agency. The owner or operator shall be solely responsible for the cost of maintaining the CDC or DC and any internal access roads.

W. Ownership Changes. If the owner of the CDC or DC changes or the owner of the property changes, the conditional use permit shall remain in effect, provided that the successor owner or operator assumes in writing all of the obligations of the conditional use permit, site plan approval, and decommissioning plan. A new owner or operator of the CDC or DC shall notify the Story County Planning and Development Department in writing of such changes in ownership or operations within sixty (60) days of the change.

1) The conditional use permit and all other local approvals for the CDC or DC may be considered void if a new owner or operator fails to provide written notification to the Story County Planning and Development Department within the required timeframe. Reinstatement of a void conditional use permit will be subject to the same review and approval processes for new conditional use permits.

X. Third-Party Reviewer.

1) The County may seek the services of a third-party reviewer with expertise in the CDC or DC field to assist with the following services (if the conditional use permit is approved by the County).

a. Review of the site and architectural plan, battery technology, compliance with state and federal regulations, and with other applicable regulatory standards and codes not specifically identified in these regulations.

b. Assist with the review of the ERP, completed noise study, decommissioning plan and review of decommissioning financial security agreement.

2) The County shall make their best effort that the Third-Party Review does not unreasonably delay the project's zoning permitting or construction process. The Owner shall be responsible for reimbursing the County for the commercially reasonable costs incurred for the services of said Third-Party Reviewer. Said costs shall be mutually agreed upon by the County and Owner prior to the County's commencement of plan review for the zoning permit.

Y. Avoidance and Mitigation of Damages to Public Infrastructure.

1) Roads. Applicants shall identify all roads to be used for the purpose of transporting components and/or equipment for construction, operation or maintenance of the CDC or DC and obtain applicable weight and size permits from the impacted road authority prior to construction.

2) Existing Road Conditions. Applicant shall conduct a pre-construction survey, in coordination with the impacted local road authority to determine existing road conditions. The pre-construction survey shall include photographs and a written agreement to document the condition of the roads and applicable public facilities. The applicant is responsible for on-going road maintenance and dust control measures identified by the Story County Engineer during all phases of construction.

3) Drainage System. The applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation, or maintenance of the CDC or DC.

4) Required Financial Security. The applicant shall be responsible for restoring or paying damages as agreed to by the applicable road authority sufficient to restore the roads and bridges to preconstruction conditions. Financial assurance mechanisms in the form of a performance bond and/or other security approved by the Story County Attorney's Office shall be submitted to the Planning and Development Department covering 130 percent of the costs of all required improvements prior to final issuance of the conditional use permit by the Board of Adjustment. This requirement may be waived by the Board of Adjustment upon recommendation from the Story County Engineer.

Z. Submittal Requirements. All CDC or DC applications must submit the following information in addition to submittal requirements defined for conditional use permit applications.

1) The names of the project applicants.
2) The names of the project owners.
3) The legal description and address of the project.
4) The names of the landowners.
5) Pre-construction survey and proposed routes.
6) Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, and screening vegetation or structures.
7) A detailed site plan drawing showing the layout of the CDC or DC on the property including structures, access roads, parking or turnaround areas for maintenance vehicles, proposed fencing and gates, landscape buffers (if any), and setback distances from property lines and existing structures, also identification of any adjacent uses (homes, public roads, etc.).
8) Project Narrative and Specification Sheets describing the CDC or DC project.
9) Statements of Compliance with Applicable Codes and Certifications.
10) Emergency Response Plan.
11) Site Safety and Security Plan: A detailed plan outlining on-site safety features such as thermal monitoring systems, ventilation and explosion-proof construction features and describing how the site will be secured against unauthorized access like fencing, locking cabinets, lighting, alarms, etc.
12) Project development timeline.
13) Existing Resources Inventory as defined in Chapter 85.
14) Documentation of actual or prospective access and traffic control of the project site.
15) Operation and maintenance plan of the CDC or DC, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operation and maintenance of the installation.
16) Proof of liability insurance.
17) Application Fee.
18) Decommissioning plan without salvage value calculated into the security bond amount.
19) Acknowledgement of Third-Party Reviewer process and potential costs.
20) Landscaping plan to be approved by Story County Conservation.

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# Town Hall Management Plan

## Event Goal:

Gather orderly, inclusive public input on potential amendments to the Woodbury County Zoning Ordinance regarding data center facilities. Input will inform the Zoning Commission's recommendation to the Board of Supervisors on requirements, regulations, zoning districts (e.g., General Industrial), and the permitting process (e.g., conditional use permit or comparable mechanism).

## Recommended Agenda Structure

1. Purpose Statement & Ground Rules (3–4 minutes) – Chairperson
2. Zoning Staff Comments & Evening Plan (5–7 minutes) – Zoning Staff
3. Public Comment Period – All who wish to speak (main portion of meeting)
4. Closing Remarks & Next Steps (3–5 minutes) – Zoning Staff
5. Adjournment

## 1. PURPOSE STATEMENT (CHAIR):

Good evening. Thank you for joining us. The purpose of this town hall is to listen to citizen input on potential amendments to the Woodbury County Zoning Ordinance concerning data center facilities in unincorporated areas.

The Zoning Commission is studying how best to facilitate the permitting process—whether through a zoning ordinance text amendment or another ordinance—and is seeking your perspectives on potential requirements and regulations, suitable zoning districts such as General Industrial (GI), and the application process itself, such as a conditional use permit or comparable mechanism.

**These meetings and any proposed regulations apply only to unincorporated areas under Woodbury County zoning jurisdiction. Incorporated cities and towns regulate their own zoning independently.**

## 2. TIME LIMIT AND GROUND RULES (CHAIR):

To ensure everyone who wishes to speak has the opportunity, we will enforce a time limit of three (3) minutes per speaker.

- When you approach or are recognized, please state your name and, if you wish, your affiliation or location (e.g., property owner in unincorporated Woodbury County).
- At the three-minute mark, if you are still speaking, I will respectfully interrupt you and offer 30 seconds to conclude your remarks.
- Please address comments to the Commission and staff, remain civil, and focus on the topic of data center zoning and permitting for the unincorporated areas only. Personal attacks or off-topic remarks will not be permitted.
- One speaker at a time. All comments are directed at the Chairperson and the Commission. There will be no group dialogue and the mission will stay on point with the contents of what each individual speaker wishes to offer. Interruptions will be ruled out of order.
- ***The Zoning Commission reserves the right to allow speakers additional time and additional turns to speak*.**
- Written comments may also be submitted tonight or later to Dan Priestley at **dpriestley@woodburycountyiowa.gov** or to **Woodbury County Planning and Zoning, 620 Douglas Street, Sixth Floor, Sioux City, IA 51101.**
- I will now turn it over to the zoning staff for remarks.

## 3. ZONING STAFF COMMENTS & PLAN FOR THE EVENING (ZONING STAFF)

- Brief overview of the Commission's mission and the study process.
- Confirmation that the evening's plan is for everyone who wishes to speak to have the opportunity to do so.
- Any logistical notes (sign-in sheet location, speaking procedure, how comments will be recorded).
- Reminder of additional town halls (Moville, Salix, and others as needed) and the written comment option.
    - **ZONING COMMISION REGULAR MEETING**
        - Date & Time: Monday, September 28, 2026 at 5:00 PM
        - Location: Woodbury County Courthouse (Basement)
        - Address: 620 Douglas Street, Sioux City, IA 51106
    - **SALIX TOWN HALL**
        - Date & Time: Monday, November 9, 2026 at 7:00 PM
        - Location: Salix Community Center
        - Address: 317 Tipton Street, Salix, IA 51052

## 4. PUBLIC COMMENT PERIOD

- Chair or staff announces 3-minute mark with 30 seconds to conclude.
- After the formal queue is exhausted, offer a final call for additional speakers.
- If attendance is very large, consider brief grouping of similar points only if speakers voluntarily agree; otherwise maintain individual three-minute turns.
- ***The Zoning Commission reserves the right to allow speakers additional time and additional turns to speak.***

**Handling interruptions or disruptions**: Chair calls for a pause, restates the ground rules, and, if necessary, calls for a short recess.

**Documentation:** Staff records speaker name, key points, and any specific recommendations. Written comments will be accepted.

## 5. CLOSING (CHAIR)

- Thank all participants.
- Summarize that input will be compiled and considered by the Commission as it prepares its recommendation.
- Remind attendees of remaining town hall dates, written comment channels, and the county website (www.woodburycountyiowa.gov) (www.woodburycountyiowa.gov).
- Provide contact information for Dan Priestley, Zoning Coordinator: (712) 279-6609.
- Adjourn the meeting.