3.2 Land Use Matrix

P = Permitted Use S = Special Use	AG	CR	R1	R2	R3	MR	MH	PR	IS	LC	GC	HC	LI	GI	HI
INDUSTRIAL USES															
Data Center, Commercial												S	S	S	S

A blank table cell indicates the use is **not permitted in the zone district.**
Hyperscale Data Centers are prohibited in all zoning districts.

3.3(VI) Industrial Use Descriptions and Standards

Data Center: A facility used primarily for the storage, management, processing, or transmission of digital data, and that houses computer or network equipment, systems, servers, appliances, and associated components, including but not limited to data storage facilities, server farms, colocation facilities, cloud computing facilities, and artificial intelligence training or processing facilities. The term Data Center does not include information technology equipment that is incidental and subordinate to a primary use otherwise permitted in the district, such as a business's internal server room. See ***3.10 Data Center*** for additional standards.

3.10 Data Center

A. **Purpose.** This article is adopted for the following purposes:

1. To provide for the safe and appropriate location of data centers that support economic development opportunities for Madison County and its residents while avoiding undue burden on public infrastructure;
2. To establish clear standards and procedures for the siting, development, operation, and decommissioning of data centers within Madison County;
3. To protect the public health, safety, and general welfare of Madison County residents, including protection of water resources, electric grid reliability, and ambient noise levels;
4. To ensure data center development is compatible with surrounding land uses, including residential and agricultural districts, and preserves the rural character of the unincorporated areas;
5. To provide for orderly economic development while avoiding undue burden on public infrastructure, the electric grid, and groundwater resources; and
6. To ensure the eventual decommissioning of data center facilities does not leave unused structures or environmental hazards on agricultural or industrial land.

B. **Intent.** It is the intent of this article to provide guidance for the development, construction, operation, and decommissioning of data centers in Madison County, Indiana through reasonable guidelines and restrictions, and to preserve the health, safety, and general welfare of Madison County residents and the public.

C. **Applicability**

1. This article governs the siting, development, construction, operation, and decommissioning of data centers in all unincorporated areas of the County.

2. This article applies to: (i) construction of any new data center; (ii) expansion of an existing data center that increases Critical IT Load, building footprint, or site acreage by more than ten percent (10%); and (iii) any change of use of an existing structure to a data center.

3. This article does not apply to information technology equipment that is incidental and subordinate to a primary use otherwise permitted in the district, such as a business's internal server room.

4. Except as expressly modified herein, all other provisions of this Ordinance remain in full force and effect.

D. **Classification, Use Permissions, and Approval Process**

1. Data Center Types. For purposes of this article, data centers are categorized by Critical IT Load and site area as follows:

   a. Accessory Data Center: a Critical IT Load of less than 1 megawatt (MW) and a total building area of less than 10,000 square feet that is typically accessory to a primary use. Accessory Data Centers are permitted by right as an accessory use.

   b. Commercial Data Center: a Critical IT Load between 1 MW and 20 MW or a site area of at least 5 acres and no more than 40 acres. Commercial Data Centers require a special use approval through the BZA as shown on ***3.2 Land Use Matrix***. A Commercial Data Center requires a pre-application meeting with the Administrator. Specific filing requirements will be provided at that time.

   c. Hyperscale Data Center: a Critical IT Load of 20 MW or greater, or a total site area over 40 acres. Hyperscale Data Centers are prohibited in all zoning districts.

2. Critical IT Load is defined as the portion of electric power capacity, expressed in megawatts, reserved solely for owners or tenants of a data center to operate their computer servers and required supporting equipment.

E. **Siting Requirements [Applies to Accessory and Commercial Data Centers]**

1. Prime Farmland. No more than 10% of a Data Center site may be located on Prime Farmland as designated on the Soil Data Access (SDA) Prime and Other Important Farmlands report for Madison County in the "Farm Class" column as "All areas are prime farmland" or "Farmland of statewide importance." A letter from the Madison County Natural Resources Conservation Service (NRCS), or another qualified source, stating that no more than 10% of the proposed project is on Prime Farmland shall be included with the application. Madison County reserves the right to use its own Geographic Information System mapping to verify the stated percentage.

2. No data center structure may be placed within a Special Flood Hazard Area as determined by the Federal Emergency Management Agency (***FEMA***) or the ***Indiana Department of Natural Resources*** (IDNR), whichever is more stringent.

3. No data center structure, electrical equipment, or backup generator may be placed within any legal easement or right-of-way without written permission of the easement holder or County Commissioners respectively. Placement within a regulated drain easement or stormwater conveyance system is prohibited except by written permission of the Madison County Drainage Board.

F. **Setback Requirements [Applies to Accessory and Commercial Data Centers]**

1. An Accessory Data Center shall meet the primary building setbacks of the underlying zoning district. A minimum separation of 100 feet is required between a data center component and a residential use or district.

2. A Commercial Data Center must be set back at least 200 feet from any adjoining road or property line and 300 feet from any residential use or district.

3. These setbacks may be reduced if the Plan Commission approves a noise and visual mitigation plan demonstrating that a lesser setback will not adversely affect the adjacent use. Adjacent homeowners may waive the setback requirements by execution of a Waiver Agreement. To be valid, a Waiver Agreement must: (1) be in writing; (2) specifically state that the document is a waiver agreement; (3) briefly describe the standard or requirement being modified; (4) briefly describe the standard agreed upon by the parties; (5) be executed in a manner free from coercion or duress; (6) be executed by both parties; (7) be subject to the approval of the Administrator; and (8) be filed with the Planning Department.

4. Any above-grade transmission line serving the facility must be set back at least 100 feet from the boundary of the site.

G. **Design and Safety Standards [Applies to Commercial Data Centers]**

1. Utility and Power Supply Assurance. The application must include a letter from the applicable electric utility confirming that adequate capacity exists, or will exist upon completion of identified upgrades, to serve the proposed facility without degrading service to existing customers.

2. Backup Power Generation. Backup power generation is any generator, fuel cell, battery system, or other equipment used to provide emergency or standby electrical power to a data center independent of the primary utility connection.

   a. All backup power generation equipment must be disclosed in the application and installed on a permanent foundation.

   b. Fuel storage must comply with all applicable fire code and ***IDEM*** requirements and must be located no closer than 100 feet to any residentially zoned or used property.

   c. Emissions must comply with all applicable state and federal air quality permits, copies of which must be provided to the Administrator upon issuance.

   d. Testing of backup generators, other than during an actual power outage, may only occur between 8:00 a.m. and 6:00 p.m., Monday through Friday.

3. Energy Efficiency Plan. An applicant for a Commercial Data Center must submit an Energy Efficiency Plan identifying the facility's design Power Usage Effectiveness (PUE) target and describing the measures used to achieve and maintain that target. The design PUE cannot exceed 1.4.

4. Fencing and Buffering. A landscape buffer at least 30 feet in width, meeting or exceeding the buffer yard standards of this Ordinance, must be provided along any property line abutting a residential or agricultural

district. All ground-mounted equipment shall be enclosed by a minimum six (6) foot high security fence with a locking gate.

5. Color, Finish, and Lighting. To the extent reasonably possible, data center buildings and ground-mounted equipment shall be designed using colors, materials, textures, screening, and landscaping to blend into their settings and avoid visual blight. Lighting shall be shielded and downcast so as not to affect adjacent properties.

H. **Water Resources — Supply and Monitoring [Applies to Commercial Data Centers]**

1. Water Supply. The applicant must demonstrate adequate water supply for cooling and operational needs, including documentation of water rights or supply agreements, and comply with IDEM requirements and ***IC 13-18*** for any surface water intake or discharge. The applicant must submit a Water Management Plan identifying the sources of water supply, projected average daily and peak water demand, cooling technology, and measures to minimize potable water consumption. A data center may not be approved if, based on substantial evidence, it will impair the water supply available to existing agricultural, residential, or municipal users.

2. Water Quality Monitoring. The applicant must provide a site-specific hydrologic report and monitoring plan, prepared by a qualified professional geologist, identifying the location of monitoring wells to be installed within the fence line of the facility. Monitoring wells must be tested by an independent Drinking Water Laboratory certified by the State of Indiana, with results reported to the Administrator and the Madison County Health Department at the owner/operator's expense. At a minimum, samples must be tested for pH, turbidity, total dissolved solids, heavy metals, nitrates, coliform bacteria, zinc, aluminum, PFAS (Forever Chemicals), and RCRA 8 Metals, at the following intervals:

   a. Pre-Construction: monthly for 6 months before application, to establish a baseline.

   b. Post-Construction: once, after construction is complete and prior to issuance of the Certificate of Compliance.

   c. Operational: once every 6 months during operation.

   d. Post-Decommissioning: once, within 30 days of completed decommissioning.

3. Contamination Response. If a test exceeds acceptable regulatory limits, the owner/operator must promptly notify the Administrator and the Madison County Health Department, submit an action plan within 10 days addressing removal of existing contamination and prevention of further contamination, and provide commercial water tanks and potable water to affected properties until the issue is resolved, at the owner/operator's sole cost.

4. No PFAS (Forever Chemicals) can be discharged from the site.

I. **Wildlife and Environmental Impact Mitigation [Applies to Commercial Data Centers]**

A Commercial Data Center must minimize impact on wildlife and keep habitat connections unobstructed through the project site. The petitioner shall provide, with the application, an analysis conducted by a qualified third-party professional to identify and assess potential impacts on wildlife and the natural environment within

the site and the area within one mile, addressing wooded areas, riparian buffers, wetlands, avian and bat impacts, other sensitive ecosystems, and historical or cultural sites, together with a corresponding Impact Mitigation Plan. The level of detail in the analysis shall be determined prior to the application during a pre-application meeting between the applicant and the Administrator.

J. **Property Value Guarantee Agreements [Applies to Commercial Data Centers]**

A Commercial Data Center is a Covered Facility under ***3.15 Property Value Guarantees***, and its developer must offer a Property Value Guarantee to all Guarantee Holders within the Guarantee Distance set in ***3.15(C) Applicability and Guarantee Distance***.

K. **Construction Requirements [Applies to Commercial Data Centers]**

1. Road Use and Road Agreement. The owner/operator must identify all county roads to be used for construction, operation, or maintenance traffic prior to construction, subject to Madison County Engineering/Highway Department approval of the proposed route and a pre-construction baseline survey of road, bridge, and culvert conditions. Any road or culvert damage caused by construction, installation, or removal must be repaired to the satisfaction of the Engineering Department, which may require remediation, collection of oversized-load permit fees, or a corporate surety bond (amount fixed by the Engineering Department, at the owner/operator's expense) to guarantee future repairs.

2. Dust Control. Reasonable dust and debris control measures are required on the site during construction, including a stormwater run-off fence on all construction sites during construction and installation.

3. Construction Lighting. Temporary construction lighting must be arranged to prevent glare and light trespass onto adjoining properties. Fixtures must be shielded and direct light downward.

4. Construction Work Hours. Construction activities are limited to Monday through Friday, 7:00 a.m. to 7:00 p.m., except as necessary to complete a discrete crane-lift or oversized-load delivery already in progress, with advance notice to the Administrator.

L. **Operation and Maintenance**

1. Operation and Maintenance Plan. The applicant shall submit a plan for the operation and maintenance of the data center addressing safe access, stormwater controls, and general procedures for operation and maintenance of the facility.

2. Physical Modifications. Any modification materially altering the mechanical load, load path, or major electrical components of the facility requires the owner/operator to confer with the Administrator as to whether the modification requires re-certification. Like-kind replacements do not require re-certification.

3. Inspections. The Administrator may inspect the facility and accessory structures up to twice annually to certify safety and maintenance.

4. Emergency Response Plan. Prior to issuance of a building permit, the owner/operator shall provide a plan including the project summary, electrical schematic, and site plan to the appropriate local safety officials, including Madison County Emergency Management, the Sheriff's Department, the responding Fire Department, and the Madison County Building Official. The plan must address hazardous materials

storage, fire suppression, emergency vehicle access, safe shutdown and de-energization, and notification protocols. Knox boxes and keys shall be provided at locked entrances for emergency personnel access. Any specialized training necessary will be provided at the owner/operator's expense.

5. Materials Handling and Disposal. Hazardous materials must be stored in a containment area capable of holding 110% of the largest volume stored within it. Solid waste must be promptly removed and disposed of in accordance with all applicable laws.

6. Annual Compliance Reports. By January 31 of each year, the data center operator of a Commercial Data Center must submit to the Administrator an annual report covering total energy consumption and measured PUE, total water consumption, results of any noise compliance monitoring, and the frequency and duration of backup generator testing and use.

7. Liability Insurance. Prior to the initiation of construction and/or any operation, the owner and operator of a data center shall maintain a commercial general liability policy covering death, bodily injury, and property damage, naming Madison County, Indiana as an additional insured, with dollar amounts satisfactory to the County Commissioners.

8. Ownership Change. Approval remains in effect through a change of ownership. Written notice must be provided to the Administrator within 30 days of the change. Approval is void if the new owner fails to notify the Administrator within that period.

9. Ownership Disclosure. Before issuance of an Improvement Location Permit for a Commercial Data Center, the applicant must disclose, in writing, the full legal name, state of formation, and principal business address of every entity holding an ownership interest in the project, including the ultimate parent company and any intermediate holding companies, and must update this disclosure within 30 days of any change. The applicant may not use a confidentiality agreement or a shell entity to withhold this information. Noncompliance with this subsection is grounds for the County to pursue revocation of the associated approvals.

M. **Nuisance Prevention [Applies to Commercial Data Centers].** No operating data center shall produce noise that exceeds any of the following limitations, except during construction or maintenance. Adequate setbacks, barriers, enclosures, use of quieter equipment, or other effective means of reducing noise shall be used to comply with these limitations:

1. At no point within 200 feet of a primary residence may the sound pressure levels from the data center's continuous mechanical and HVAC equipment exceed the following sound levels, measured with an octave band analyzer or sound level meter and associated filter manufactured in compliance with standards prescribed by the American National Standards Institute (ANSI). This standard shall supersede any noise standard(s) set forth in any other Madison County Ordinance.

Octave Bands In Hertz (Hz) per ANSI	Maximum Permitted Sound Level (in decibels)*
63	75
125	70

Octave Bands In Hertz (Hz) per ANSI	Maximum Permitted Sound Level (in decibels)*
250	65
500	59
1000	53
2000	48
4000	44
8000	41

** Measured 200 feet from the edge of any primary structure.*

2. The applicant or data center operator must submit a noise study and mitigation plan, prepared by a qualified acoustical engineer, addressing continuous and intermittent noise sources, including cooling equipment and backup generators.

3. The Administrator may hire an appropriate company, at the owner's or operator's expense, to determine if noise levels have been exceeded.

N. **Discontinuation and Abandonment [Applies to Commercial Data Centers]**

1. A data center that has reached the end of its useful life, or been abandoned, must be restored for reuse or physically removed per the Decommissioning-Restoration Plan by the owner/operator within 12 months of documented discontinuation of operations. The owner/operator must provide written notice of the discontinuation date to the Administrator within 30 days of the discontinuation.

2. A data center is considered abandoned if it does not operate for 12 consecutive months, unless a Rehabilitation Plan developed by the owner/operator is submitted to, and approved by, the County Commissioners outlining the necessary procedures and time schedule for commencing or returning the facility to operation.

3. All data center components must be restored for reuse or removed by the owner within 1 year of the date of abandonment. If the owner fails to do so, the County may engage qualified contractors to enter the project site, remove the components, sell any components removed, and restore or remediate the site, and may initiate proceedings to recover any costs incurred.

O. **Nuisance Declaration and Enforcement [Applies to Commercial Data Centers]**

1. Declaration of Public Nuisance. Any data center declared unsafe by the County Commissioners by reason of inadequate maintenance, failed water test, dilapidation, obsolescence, fire hazard, damage, abandonment, or noncompliance with its permits, is declared a public nuisance and shall be abated by repair, rehabilitation, demolition, or removal in accordance with the procedures of this article.

2. Rehabilitation Plan. A Rehabilitation Plan shall be submitted to the County Commissioners within 60 days, providing procedures to rehabilitate the facility within 12 months, extendable to 18 months total for force majeure. Absent an approved and met Rehabilitation Plan, the facility shall be demolished and removed in accordance with the Decommissioning-Restoration Plan and Agreement.

3. Public Nuisance Waiver. If an extraordinary event as defined in ***IC 36-7-4-1109.1(a)*** damages or destroys part or all of the data center, the 12-month removal timeline is waived so long as the owner/operator provides a Rehabilitation Plan, approved by the County Commissioners, within 60 days of the damage.

4. Adverse Effects. If the Plan Commission receives a complaint about the data center's operation, the Administrator shall investigate and determine if the complaint is meritorious and, if so, follow the County's enforcement process in ***Chapter 9: Enforcement***.

P. **Decommissioning Plan and Financial Surety [Applies to Commercial Data Centers]**

1. Prior to receiving an Improvement Location Permit, the applicant, owner, and operator of a Commercial Data Center shall submit and enter into a Decommissioning-Restoration Plan and Agreement with the County Commissioners outlining the anticipated means, costs, and method of payment of all costs of decommissioning and restoration at the end of the facility's life, upon becoming an abandoned use, or upon being declared a public nuisance.

2. The decommissioning plan must include: physical removal of all structures, foundations, and equipment; recycling or disposal of all solid and hazardous waste in accordance with applicable law; site stabilization and revegetation as necessary (the Administrator may allow landscaping to remain to minimize erosion and disruption); and, for sites with structures that can be repurposed, restoration to a condition suitable for alternative development.

3. Performance Guarantee. Prior to issuance of an Improvement Location Permit, the applicant must provide the County with a performance guarantee in the form of a bond, irrevocable letter of credit, or other financial security acceptable to the County Commissioners, in the amount of 150% of the estimated decommissioning and restoration cost, as determined by a licensed engineer, to allow for anticipated increases in future decommissioning costs. Unless otherwise agreed, every 5 years, or upon request of the Madison County Plan Commission, a new engineer's estimate shall be submitted and the financial security adjusted upward or downward as necessary.

4. If the owner/operator defaults or decommissions, the County retains the right, after appropriate court order, to enter the property and remove any parts of the facility using funds from the surety on file.

Q. **Application Requirements.** In addition to the standard application requirements, an application for a Commercial Data Center shall include:

1. A pre-application meeting record with the Administrator, including a summary of at least one public informational meeting held within the affected community prior to filing, along with a record of attendees and copies of all written comments received;

2. Contact information for the applicant, owner, and operator;

3. A preliminary site plan showing all buildings, access points, setbacks, buffers, fencing, and backup generator locations;

4. A utility capacity letter;

5. A Water Management Plan;

6. An Energy Efficiency Plan;
7. A noise study;
8. The wildlife and environmental impact analysis;
9. A Decommissioning-Restoration Plan and Agreement, including a cost estimate prepared by a licensed engineer;
10. For a Commercial Data Center, proof that Property Value Guarantee agreements have been filed with the Planning Department; and
11. Any other information reasonably required by the Administrator to evaluate compliance with this article.

3.2 Land Use Matrix

P = Permitted Use S = Special Use	AG	CR	R1	R2	R3	MR	MH	PR	IS	LC	GC	HC	LI	GI	HI
COMMUNICATION/UTILITIES															
Energy Storage Systems, Tier 2													S	S	S
Energy Storage Systems, Tier 3															S

A blank table cell indicates the use is **not permitted in the zone district.**

3.3(IV) Communication/Utilities Use Descriptions and Standards

Energy Storage System (ESS): One or more devices, assembled together, capable of storing energy in any form, including electrochemical, mechanical, thermal, chemical, or gravitational potential energy, for the purpose of supplying electrical energy at a later time, including all batteries, flywheels, pressure vessels, thermal storage media, hydrogen production, storage, and conversion equipment, gravity masses, reservoirs, and other storage media and devices; energy management and monitoring equipment; inverters and other power conversion or generating equipment; and foundations, enclosures, fencing, and other equipment necessary for the system's safe and proper function. An ESS does not include a stand-alone 12-volt vehicle battery, an electric motor vehicle, or battery storage integral to a consumer product. See 4.2(Q) Energy Storage Systems as Accessory Use for a Tier 1 ESS. See *3.11 Energy Storage Systems* for additional standards.

3.11 Energy Storage Systems (ESS)

A. **Purpose.** This article is adopted for the following purposes:

1. To provide for the safe and appropriate location of energy storage systems that support economic development and grid resiliency while avoiding undue burden on public infrastructure;
2. To establish development standards that protect the public health, safety, and general welfare of Madison County residents given the fire, thermal-runaway, explosion, pressure, mechanical, structural, and chemical hazards that may be associated with energy storage technologies;
3. To ensure ESS development is compatible with surrounding land uses and community character;
4. To provide clear and predictable review procedures for ESS applications;
5. To accommodate existing and emerging energy storage technologies through technology-neutral standards supplemented by technology-specific safeguards;
6. To coordinate local land use authority with state and federal regulatory oversight; and
7. To ensure the eventual decommissioning of an ESS does not leave unused structures or environmental hazards on agricultural or industrial land.

B. **Intent**. It is the intent of this article to provide guidance for the development, construction, operation, and decommissioning of Energy Storage Systems in Madison County, Indiana through reasonable guidelines and restrictions, recognizing that an ESS is frequently, but not always, co-located with an approved solar or wind energy facility, and recognizing that energy storage technology continues to evolve beyond battery-based systems.

C. **Applicability**

1. This article governs the siting, development, construction, operation, and decommissioning of primary-use ESS in all unincorporated areas of the County.

2. This article applies to: (i) construction of any new primary-use ESS; (ii) expansion of an existing ESS that increases aggregate energy capacity, building footprint, or site acreage by more than ten percent (10%); (iii) any change of use of an existing structure to an ESS; and (iv) a change in the storage technology classification of an existing ESS under ***3.11(D)***.

3. This article applies to an ESS of any storage technology, including a pumped hydroelectric storage facility and a chemical ESS using hydrogen, except to the extent its regulation by the County is preempted by state or federal law, such as a facility subject to licensing by the Federal Energy Regulatory Commission.

4. Except as expressly modified herein, all other provisions of this Ordinance remain in full force and effect.

D. **Classification, Use Permissions, and Approval Process**

1. ESS Tiers. For purposes of this article, an ESS is classified by aggregate energy capacity, meaning the total rated electrical energy the ESS is designed to deliver from a fully charged state regardless of storage technology, as follows:

   a. Tier 1 ESS: aggregate energy capacity of 600 kilowatt-hours (kWh) or less. A Tier 1 ESS is regulated exclusively as an accessory use under ***Chapter 4: Accessory Uses and Structures*** and is not a primary use under this article.

   b. Tier 2 ESS: aggregate energy capacity greater than 600 kWh and less than 10 megawatt-hours (MWh).

   c. Tier 3 ESS: aggregate energy capacity of 10 MWh or greater.

   d. Unlisted Technology: an ESS using a storage technology that is not certified to UL 9540, or an approved equivalent or subsequent standard, by a Nationally Recognized Testing Laboratory is classified as a Tier 3 ESS regardless of its aggregate energy capacity and may not be approved as an accessory use under ***Chapter 4: Accessory Uses and Structures***.

2. ESS Technology Classification. For purposes of this article, an ESS is further classified by storage technology as follows. An ESS that combines more than one storage technology must meet the standards of this article applicable to each.

   a. Electrochemical ESS: an ESS that stores energy in batteries or other electrochemical cells, including lithium-ion, lead-acid, nickel-based, sodium-based, and flow batteries.

b. Mechanical ESS: an ESS that stores energy as kinetic or potential energy, including flywheels, compressed-air energy storage, gravity-based systems using elevated masses, and pumped hydroelectric storage.

c. Thermal ESS: an ESS that stores energy as heat or cold in a storage medium, including molten salt, heated solids, phase-change materials, and liquid-air or other cryogenic systems, for later conversion to electrical energy.

d. Chemical ESS: an ESS that converts electrical energy into a chemical energy carrier, including hydrogen, ammonia, or synthetic fuel, and stores that carrier for later conversion to electrical energy.

e. Other ESS: an ESS using a storage technology not described above, which the Administrator shall classify according to the technology it most closely resembles in hazard and land use impact, subject to ***3.11(D)(1)(d)***.

3. A Tier 2 or Tier 3 ESS must comply with all applicable local, state, and federal codes, including the Indiana Building Code, the Indiana Electrical Code, the Indiana Fire Code, and this article.

4. Approval Process

a. A Tier 2 ESS requires special use approval by the BZA in the LI, GI, and HI Districts and site development plan approval by the Plan Commission.

b. A Tier 3 ESS requires, in sequence: (i) rezoning of the subject property to the High Impact (HI) District, if not already so zoned; (ii) special use approval by the Board of Zoning Appeals; and (iii) site development plan approval by the Plan Commission.

c. A co-located ESS, interconnected with and sited on the same project area as an approved solar or wind energy facility, shall be reviewed together with, and as part of, the underlying SES or WECS approval to the extent the Administrator determines the applications can be efficiently combined, but remains subject to the technical standards of this article.

E. **Siting Requirements**

1. Prime Farmland. No more than 10% of a Tier 2 or Tier 3 ESS site may be located on Prime Farmland, as designated on the Soil Data Access (SDA) Prime and Other Important Farmlands report for Madison County. A letter from the Madison County Natural Resources Conservation Service (NRCS), or another qualified source, stating that no more than 10% of the proposed project is on Prime Farmland shall be included with the application.

2. No ESS structure may be placed within a Special Flood Hazard Area as determined by ***FEMA*** or ***IDNR***, whichever is more stringent. An ESS cannot be placed within any legal easement, right-of-way, regulated drain easement, or stormwater conveyance system except by written permission of the easement holder, Madison County Commissioners, or the Madison County Drainage Board, as applicable.

F. **Setback Requirements**

1. A Tier 2 or Tier 3 ESS must meet the setback requirements of the zoning district in which it is located, and in no case less than 50 feet from any property line, measured from the edge of the outermost ESS enclosure, vessel, or structure. Setbacks must be increased where necessary to satisfy the separation requirements of ***NFPA 855*** or any other code applicable to the storage technology between the ESS and exposures such as buildings, other ESS enclosures, or combustible storage.

2. Separation from a Non-Participating Dwelling. If the separation between an ESS enclosure and the outer wall of a dwelling on a non-participating property is 250 feet or less, a landscape buffer meeting or exceeding the standards of 5.17(D)(3) Buffer Yard Type 3 is required. If the separation is greater than 250 feet, no buffer is required. This requirement may be waived or modified upon written consent of the owner of each affected non-participating property.

3. Fall Zone. Any ESS structure exceeding 20 feet in height, including a gravity-based ESS tower or elevated mass, shall be set back from all property lines, public rights-of-way, overhead utility lines, and dwellings a distance of not less than 1.1 times its height, measured from finished grade.

4. Technology-Specific Separation. The Board of Zoning Appeals may require setbacks or separation distances greater than those established in this section for a mechanical, thermal, or chemical ESS, or for an ESS classified as Tier 3 under ***3.11(D)(1)(d)***, where the hazard mitigation analysis required by ***3.11(H)*** demonstrates that greater separation is necessary to protect adjoining property, structures, or the public.

G. **Height.** ESS enclosures, containers, vessels, and appurtenant structures may not exceed 40 feet in height, measured from finished grade, unless a greater height is specifically engineered and documented as necessary for the system's safe operation or inherent to the storage technology (such as a gravity-based ESS) and approved as part of the special use. An ESS structure exceeding 40 feet in height must also meet the fall zone requirement of ***3.11(F)(3)*** and comply with any applicable airport overlay district regulations and Federal Aviation Administration notice requirements.

H. **Design and Safety Standards**

1. Safety Standards and Certifications. An ESS and its associated equipment must be certified by a Nationally Recognized Testing Laboratory to UL 9540, or an approved equivalent or subsequent standard. An ESS for which no such certification is available is classified under ***3.11(D)(1)(d)*** and is subject to the hazard mitigation analysis required by this section. For an electrochemical ESS, batteries must be listed to UL 1973 or the applicable UL standard for the battery chemistry used. For a Tier 2 or Tier 3 electrochemical ESS, the UL 9540A test report for the installed equipment must be provided to the Madison County Building Official and the Fire Chief with primary jurisdiction prior to commissioning. Components of a mechanical, thermal, or chemical ESS, including pressure vessels, fuel cells, electrolyzers, turbines, and generators, must be listed, certified, or stamped to the recognized standard applicable to that component.

2. Compliance with NFPA 855 and Other Applicable Codes. An ESS must be designed, installed, and operated in accordance with the most recent published edition of NFPA 855, Standard for the Installation of Stationary Energy Storage Systems, the National Electrical Code (***NFPA 70***), NFPA 2, Hydrogen Technologies Code (for a chemical ESS using hydrogen), the ASME Boiler and Pressure Vessel Code and Indiana boiler

and pressure vessel laws and rules (for an ESS incorporating pressure vessels), and the Indiana Fire Code, as applicable. Where this article's numeric standards (e.g., setbacks, separation distances) are less restrictive than NFPA 855 or another applicable code, the more restrictive standard governs.

3. Fencing. A Tier 2 or Tier 3 ESS must be completely enclosed by a security fence at least 7 feet in height, consistent with NFPA 70, with a locking gate accessed by a keypad or Knox box with key. Barbed wire is not permitted as perimeter fencing except where required by NFPA 855, the National Electrical Code, the Indiana Building Code, or where needed for security at an associated substation or switchyard.

4. Electrical Components and Utility Interconnection. All cables between the ESS and an associated project substation must be buried underground at a depth of at least 36 inches, except where the serving utility's interconnection standards require otherwise, or where above-grade routing is necessary for equipment access and maintenance. For a grid-connected ESS, the interconnection application must be submitted to the serving utility prior to applying for required permits.

5. Signage. The ESS must be posted with signage identifying the type of energy storage technology (and, for an electrochemical ESS, the battery chemistry), associated hazards, the type of fire suppression system installed (if any), and 24-hour emergency contact information, consistent with ANSI Z535 and NFPA 855. Signage must be updated within 90 days of any change to the emergency contact information. No portion of the ESS shall contain or be used to display advertising.

6. Hazard Mitigation Analysis. An application for a Tier 2 or Tier 3 ESS shall include a hazard mitigation analysis consistent with NFPA 855, prepared at the applicant's expense by a qualified, independent third-party professional engineer acceptable to the Fire Chief with primary jurisdiction and the Madison County Building Official. The analysis shall identify the hazards associated with the proposed storage technology and the design features, separation distances, and operational measures used to mitigate them, and shall address, at a minimum and as applicable:

    a. Electrochemical ESS: thermal runaway and propagation, off-gassing, deflagration and explosion control, and electrolyte leakage;

    b. Mechanical ESS: rotor or containment failure, pressure-vessel rupture, structural collapse, falling or suspended masses, and failure of any dam, reservoir, or penstock;

    c. Thermal ESS: high- or low-temperature surfaces and storage media, heat-transfer fluid leaks, and fire or burn hazards;

    d. Chemical ESS: flammable or toxic gas release, leak detection, ventilation, ignition-source control, and explosion; and

    e. Unlisted Technology: for an ESS classified as Tier 3 under ***3.11(D)(1)(d)***, such additional testing or analysis as the Fire Chief or Building Official determines is necessary to establish safe separation distances and emergency response procedures in the absence of a recognized listing standard.

I. **Water Resources and Soil Protection**

1. Stormwater and Firefighting-Runoff Containment. A hazardous-materials secondary containment area, sized to 110% of the largest volume stored, is required for any liquid electrolyte, heat-transfer fluid, chemical energy carrier, or other hazardous material stored as part of an ESS, and any associated fire-suppression agents. To the extent commercially available and consistent with applicable fire codes, non-PFAS fire suppression agents must be used.

2. Groundwater Monitoring. A Tier 3 electrochemical, thermal, or chemical ESS, and any other Tier 3 ESS that stores hazardous materials, must provide a site-specific hydrologic report and monitoring plan, prepared by a qualified professional geologist, identifying the location of monitoring wells to be installed within the fence line of the facility. Monitoring wells must be tested by an independent Drinking Water Laboratory certified by the State of Indiana, with results reported to the Administrator and the Madison County Health Department at the owner/operator's expense. At a minimum, samples must be tested for pH, turbidity, total dissolved solids, heavy metals, nitrates, coliform bacteria, zinc, aluminum, PFAS (Forever Chemicals), and RCRA 8 Metals, together with any other constituents identified in the hazard mitigation analysis as associated with the storage media, at the following intervals:

   a. Pre-Construction: monthly for 6 months before application, to establish a baseline.

   b. Post-Construction: once, after construction is complete and prior to issuance of the Certificate of Compliance.

   c. Operational: once every 6 months during operation.

   d. Post-Decommissioning: once, within 30 days of completed decommissioning.

3. Contamination Response. If a test exceeds acceptable regulatory limits, the owner/operator must notify the Administrator and the Madison County Health Department within 24 hours, submit an action plan within 10 days addressing removal of existing contamination and prevention of further contamination, and provide commercial water tanks and potable water to affected properties until the issue is resolved, at the owner/operator's sole cost.

4. An ESS is subject to stormwater management, erosion and sediment control provisions, and NPDES permit requirements, and all applicable local, state, and federal codes.

J. **Property Value Guarantee Agreements**

A Tier 3 ESS is a Covered Facility under ***3.15 Property Value Guarantees***, and its developer must offer a Property Value Guarantee to all Guarantee Holders within the Guarantee Distance set in ***3.15(C) Applicability and Guarantee Distance***.

K. **Construction Requirements**

1. Road Use and Road Agreement. The owner/operator must identify all county roads to be used for construction, operation, or maintenance traffic prior to construction, subject to Madison County Engineering/Highway Department approval and a pre-construction baseline survey of road conditions. Any

road damage caused by the project must be repaired to the satisfaction of the Engineering Department, which may require a corporate surety bond to guarantee future repairs.

2. Dust Control. Reasonable dust and debris control measures are required on the site during construction.

3. Construction Lighting. Temporary construction lighting must be shielded and directed downward to prevent glare and light trespass onto adjoining properties.

4. Construction Work Hours. Construction activities are limited to Monday through Friday, 7:00 a.m. to 7:00 p.m., except as necessary to complete a discrete crane-lift or oversized-load delivery already in progress, with advance notice to the Administrator.

L. **Operation and Maintenance**

1. Operation and Maintenance Plan. The applicant shall submit a plan for the operation and maintenance of the ESS, including measures for maintaining safe access, stormwater controls, and general procedures for operation and maintenance of the facility.

2. Physical Modifications. Any increase in aggregate energy capacity, expansion of the site footprint, or other modification that would change the ESS from one Tier to another or change its storage technology classification requires approval of an amended special use prior to construction. Like-kind replacements are considered maintenance and do not require a new approval. Replacement with equipment of a different storage technology or, for an electrochemical ESS, a different battery chemistry is not a like-kind replacement.

3. Inspections. The Administrator may inspect the facility up to twice annually to certify safety and maintenance.

4. Emergency Response Plan. Prior to commissioning, the owner/operator shall provide an Emergency Response Plan to Madison County Emergency Management, the Madison County Building Official, and the Fire Chief with primary jurisdiction, addressing the hazards identified in the hazard mitigation analysis required by ***3.11(H)***, hazardous materials storage, fire suppression systems, emergency vehicle access, safe shutdown and de-energization, evacuation and notification protocols, and site-specific training for local first responders, consistent with NFPA 855 and any other code applicable to the storage technology. The owner/operator shall conduct, at its expense, annual training drills with local emergency responders.

5. Annual Compliance Reports. By January 31 of each year, the operator of a Tier 2 or Tier 3 ESS must submit to the Administrator an annual report documenting adherence to approved plans and conditions, including any incident reports for the preceding year.

6. Incident Reporting. The owner/operator shall report any thermal event, fire, explosion, pressure-vessel or containment failure, structural failure, or release of hazardous materials to the Administrator and the Fire Chief with primary jurisdiction within 24 hours of discovery.

7. Liability Insurance. Prior to the initiation of construction and/or any operation, the owner and operator of an ESS shall maintain a commercial general liability policy covering death, bodily injury, and property

damage, naming Madison County, Indiana as an additional insured, with dollar amounts satisfactory to the County Commissioners.

8. Ownership Change. Approval remains in effect through a change of ownership. Written notice must be provided to the Administrator within 30 days of the change. Approval is void if the new owner fails to notify the Administrator within that period.

M. **Nuisance Prevention.** No operating ESS shall produce noise that exceeds any of the following limitations, except during construction or maintenance. Adequate setbacks, barriers, enclosures, use of quieter equipment, or other effective means of reducing noise shall be used to comply with these limitations:

1. At no point within 200 feet of a primary residence may the sound pressure levels from the ESS exceed the following sound levels, measured with an octave band analyzer or sound level meter and associated filter manufactured in compliance with standards prescribed by the American National Standards Institute (ANSI). This standard shall supersede any noise standard(s) set forth in any other Madison County Ordinance.

Octave Bands In Hertz (Hz) per ANSI	Maximum Permitted Sound Level (in decibels)*
63	75
125	70
250	65
500	59
1000	53
2000	48
4000	44
8000	41

** Measured 200 feet from the edge of any primary structure.*

2. The Administrator may hire an appropriate company, at the owner's or operator's expense, to determine if noise levels have been exceeded.

N. **Discontinuation and Abandonment**

1. An ESS that has reached the end of its useful life, or been abandoned, must be physically removed by the owner/operator within 12 months of documented discontinuation of operations. The owner/operator must provide written notice of the discontinuation date to the Administrator within 30 days of the discontinuation.

2. An ESS is considered abandoned if it does not charge or discharge energy for 12 consecutive months, unless a Rehabilitation Plan developed by the owner/operator is submitted to, and approved by, the County Commissioners.

3. All ESS components must be removed by the owner within 1 year of the date of abandonment, and all batteries and other storage media or components that are broken or at the end of life must be recycled where feasible or otherwise disposed of in accordance with applicable state and federal law. All hazardous materials, chemical energy carriers, and heat-transfer fluids must be removed from the site and properly disposed of. If the owner fails to do so, the County may engage qualified contractors to enter the project site, remove the components, sell any components removed, remediate the site, and may initiate proceedings to recover any costs incurred.

O. **Nuisance Declaration and Enforcement**

1. Declaration of Public Nuisance. Any ESS declared unsafe by the County Commissioners by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, damage, abandonment, or noncompliance with its permits is hereby declared a public nuisance and shall be abated by repair, rehabilitation, demolition, or removal.

2. Rehabilitation Plan. A Rehabilitation Plan shall be submitted to the County Commissioners within 60 days, providing procedures to rehabilitate the facility within 12 months, extendable to 18 months total for force majeure.

3. Public Nuisance Waiver. If an extraordinary event as defined in ***IC 36-7-4-1109.1(a)*** damages or destroys part or all of the ESS, the 12-month removal timeline is waived so long as a Rehabilitation Plan, approved by the County Commissioners, is submitted within 60 days of the damage.

4. Adverse Effects. If the Plan Commission receives a complaint about the ESS's operation, the Administrator shall investigate and determine if the complaint is meritorious and, if so, follow the County's enforcement process in ***Chapter 9: Enforcement***.

P. **Decommissioning Plan and Financial Surety**

1. Prior to receiving an Improvement Location Permit, the applicant, owner, and operator of a Tier 2 or Tier 3 ESS shall submit and enter into a Decommissioning-Restoration Plan and Agreement with the County Commissioners outlining the anticipated means, costs, and method of payment of all decommissioning and restoration costs.

2. Performance Guarantee. Prior to issuance of an Improvement Location Permit, the applicant must provide the County with a performance guarantee in the amount of 150% of the estimated decommissioning, restoration, and storage-media recycling and disposal cost, as determined by a licensed engineer, sized to reflect equipment degradation and salvage value over time. Unless otherwise agreed, every 5 years the estimate shall be updated and the financial security adjusted accordingly.

3. If the owner/operator defaults or decommissions, the County retains the right, after appropriate court order, to enter the property and remove any parts of the ESS using funds from the surety on file.

Q. **Application Requirements.** In addition to the standard application requirements, an application for a Tier 2 or Tier 3 ESS shall include:

1. Contact information for the applicant, owner, and operator;

2. Identification of the storage technology classification under ***3.11(D)***, the manufacturer and model of the storage equipment, and the listing or certification status of the ESS;
3. A site plan showing unit, container, vessel, and structure layout and height, spacing, access roads, fencing, and, for a co-located system, cross-reference to the underlying SES or WECS approval;
4. NFPA 855 (and, as applicable, NFPA 2 and pressure-vessel code) compliance documentation and a fire protection plan approved by the Fire Chief with primary jurisdiction;
5. A hazard mitigation analysis;
6. An emergency response and spill/containment plan;
7. Engineering certification of foundation and structural design;
8. An interconnection agreement, if grid-tied;
9. The groundwater monitoring plan, if required;
10. A Decommissioning-Restoration Plan and Agreement, including a cost estimate prepared by a licensed engineer;
11. For a Tier 3 ESS, proof that Property Value Guarantee agreements have been filed with the Planning Department; and
12. Any other information reasonably required by the Administrator to evaluate compliance with this article.

3.2 Land Use Matrix

P = Permitted Use S = Special Use	AG	CR	R1	R2	R3	MR	MH	PR	IS	LC	GC	HC	LI	GI	HI
INDUSTRIAL USES															
Carbon Capture and Sequestration (CCS)															S

A blank table cell indicates the use is **not permitted in the zone district.**

3.3(VI) Industrial Use Descriptions and Standards

Carbon Capture and Sequestration (CCS): The capture of carbon dioxide from an emission source and its transport to, and injection into, a geologic storage formation for long-term storage. See ***3.12 Carbon Capture and Sequestration (CCS)*** for additional standards.

3.12 Carbon Capture and Sequestration (CCS)

A. **Purpose.** This article is adopted for the following purposes:

1. To provide a local land-use framework for the siting of surface facilities associated with the transport and geologic storage of carbon dioxide that complements, rather than duplicates or conflicts with, federal and state permitting;

2. To protect agricultural land, drainage, private water supplies, and adjacent property owners from the surface land-use impacts of CCS development, such as noise, traffic, lighting, and emergency access;

3. To provide clear and predictable review procedures for CCS applications; and

4. To coordinate local land use authority with state and federal regulatory oversight, recognizing that CCS is primarily regulated at the federal level by the ***U.S. Environmental Protection Agency*** (EPA) and the ***Pipeline and Hazardous Materials Safety Administration*** (PHMSA), and at the state level by the ***Indiana Department of Natural Resources*** (IDNR) under ***IC 14-39***.

B. **Intent and Preemption Acknowledgment**

1. It is the intent of this article to provide a local land-use siting framework for the surface facilities associated with carbon capture and sequestration — injection and monitoring well sites, compressor stations, and on-site pipelines not subject to a state certificate of authority — while expressly acknowledging that the permitting of ***Class VI*** injection wells, subsurface storage, and long-term stewardship of the storage reservoir are regulated by the EPA under the ***Safe Drinking Water Act***'s Underground Injection Control program and by IDNR under ***IC 14-39-2***, and that carbon dioxide transmission pipelines are regulated by IDNR under ***IC 14-39-1*** and by PHMSA under ***49 CFR Part 195***.

2. Nothing in this article shall be construed to supersede or conflict with regulations of the EPA, IDNR, the ***Indiana Department of Environmental Management*** (IDEM), PHMSA, or other federal or state agencies with jurisdiction over CCS facilities.

3. This article is adopted under the County's zoning authority in ***IC 36-7-4*** and regulates the location, design, and surface land-use impacts of CCS Surface Facilities. It does not regulate the subsurface injection, storage, or monitoring of carbon dioxide, which is reserved to state and federal agencies (***IC 36-1-3-8(a)(7)***). As provided in ***IC 14-39-2-12.8(e)***, a UIC Class VI permit does not authorize any infringement of local law, and an applicant for a state carbon sequestration project permit must address compliance with applicable local law under ***IC 14-39-2-5(c)(7)*** and (27).

4. If any provision of this article is determined to be preempted by state or federal law, that provision shall be severed and the remaining provisions shall remain in full force and effect.

C. **Definitions**

Area of Review (AoR) has the meaning set forth in ***40 CFR 146.81***, as adopted by ***IC 14-39-0.6-3.5***.

Carbon Dioxide Injection Well has the meaning set forth in ***IC 14-39-0.6-5***.

Investigatory Well means a nonproduction well permitted by IDNR under ***IC 14-39-2-11.5*** to obtain geologic data on the suitability of formations for carbon sequestration.

Monitoring Well means a well used to monitor a carbon sequestration project as required by a UIC Class VI permit.

Plume means the three-dimensional subsurface extent and dispersing volume of injecting carbon dioxide within a target geologic storage reservoir. The plume represents the physical footprint of the injected gas as it occupies and moves through the pose spaces of deep, permeable rock formations.

Pore Space has the meaning set forth in ***IC 14-39-0.6-20***.

Storage Facility, Storage Operator, Carbon Dioxide Transmission Pipeline, and Post-Injection Site Care have the meanings set forth in ***IC 14-39-0.6***.

UIC Class VI Permit has the meaning set forth in ***IC 14-39-0.6-30*** and includes a permit issued by the EPA or by IDNR upon a grant of primacy.

D. **Applicability**

1. This article governs the siting, development, construction, and decommissioning of CCS surface facilities, including injection well sites, monitoring well sites, compressor or processing stations, and on-site pipelines exempt under ***IC 14-39-1-4.5*** within Madison County. For purposes of this Ordinance, CCS includes only the following surface components located in unincorporated Madison County (each a "CCS Surface Facility"): injection well sites, monitoring well sites, compressor or processing stations serving a storage facility, and on-site carbon dioxide pipelines exempt from a state certificate of authority under ***IC 14-39-1-4.5***. Carbon dioxide capture equipment is regulated as part of, and accessory to, the host industrial use.

2. This article applies to: (i) construction of any new CCS Surface Facility; (ii) expansion of an existing CCS facility that increases building footprint or site acreage by more than ten percent (10%); and (iii) any change of use of an existing structure to a CCS facility.

3. Except as expressly modified herein, all other provisions of this Ordinance remain in full force and effect.

4. Exclusions. This article does not regulate: (i) the route, construction, or operation of a carbon dioxide transmission pipeline that holds a certificate of authority issued under ***IC 14-39-1-6***, provided that an above-ground compressor station serving such a pipeline is subject to ***3.12(G)***, ***3.12(H)***, and ***3.12(L)*** to the extent not inconsistent with siting or setback requirements established by IDNR under ***IC 14-39-1-19*** or with federal pipeline safety standards; or (ii) the carbon dioxide plume, storage facility, or surface area above the plume, except where a CCS Surface Facility is located.

5. Investigatory Wells. An investigatory well permitted by IDNR under ***IC 14-39-2-11.5*** is a temporary use permitted in the HI District upon issuance of an Improvement Location Permit. It is subject only to ***3.12(L)*** and to removal of surface equipment and restoration of the site within 12 months after the well is plugged.

E. **Use Permissions and Approval Process**

1. Approval Process. A CCS requires, in sequence: (i) rezoning of the subject property to the High Impact (HI) District, if not already so zoned; (ii) special use approval by the Board of Zoning Appeals, based on the findings in ***3.12(E)(3)***; and (iii) site development plan approval by the Plan Commission, with the Plan Commission retaining site plan review authority.

2. BZA special use approval for the surface facility may proceed prior to, or concurrent with, state and federal permitting, but no Improvement Location Permit may be issued until the applicant has provided the Administrator with a copy of the final UIC Class VI permit and the carbon sequestration project permit and certificate issued by IDNR under ***IC 14-39-2-7***. A draft or proposed permit does not satisfy this requirement.

3. Special Use Findings. In addition to the general special use criteria of this Ordinance, the BZA shall find that: (i) the CCS meets the siting, setback, and design standards of this article; (ii) haul routes, access drives, and emergency access are adequate; (iii) the facility is compatible with the character of the surrounding area in scale and appearance, considering screening and site layout; and (iv) the applicant has coordinated its Emergency Response Plan with Madison County Emergency Management. The BZA shall not deny or condition approval based on the subsurface design, injection operations, or subsurface monitoring of a carbon sequestration project, which are regulated by IDNR and EPA.

F. **Siting Requirements**

1. Prime Farmland. No more than 10% of a CCS Surface Facility site may be located on Prime Farmland, as designated on the Soil Data Access (SDA) Prime and Other Important Farmlands report for Madison County. A letter from the Madison County Natural Resources Conservation Service (NRCS), or another qualified source, confirming compliance shall be included with the application.

2. No CCS surface structure may be placed within a Special Flood Hazard Area as determined by ***FEMA*** or IDNR, whichever is more stringent.

3. Site Control. The application must include evidence that the applicant owns, leases, or holds an easement for each parcel on which a CCS will be located. Pore space ownership, consents, and the integration of pore space interests are governed by ***IC 14-39-2-3*** and ***14-39-2-4*** and are determined by IDNR. The

applicant shall provide the Administrator a copy of any IDNR integration order affecting property in Madison County, for information only.

G. **Setbacks**

1. Surface facilities (wellheads, compressor stations, and above-ground pipeline appurtenances) must be set back a minimum of 500 feet from any school, hospital, or place of public assembly, or dwelling on a non-participating property; a minimum of 200 feet from any non-participating property line or residential zoning district boundary; and a minimum of 300 feet from any public right-of-way. Setbacks are measured from the nearest above-ground component of the surface facility, including the wellhead and any compressor building or equipment pad, to the nearest exterior wall of the building or to the property line or right-of-way line, as applicable. The owner of a non-participating property may waive, in writing, the dwelling and property line setback requirements. This waiver must be recorded in the Office of the County Recorder

2. Siting and setback requirements for carbon dioxide transmission pipelines are reserved to IDNR under ***IC 14-39-1-19***, and pipeline safety is governed by PHMSA under ***49 CFR Part 195***. The setbacks in this section apply to above-ground surface facilities only and do not regulate the route or alignment of a buried pipeline.

3. Development Near Existing Pipelines. An application for a primary plat, development plan, or Improvement Location Permit for a new dwelling or place of public assembly within 500 feet of the centerline of an existing carbon dioxide transmission pipeline shall show the pipeline on the site plan. The Administrator shall send notice of the application to the pipeline operator and Madison County Emergency Management.

H. **Design and Safety Standards**

1. Fencing, Signage, and Leak Detection. Surface facilities must be enclosed by security fencing at least 7 feet in height with a locking gate. Signage identifying the facility, associated hazards, and 24-hour emergency contact information must be posted consistent with ANSI Z535. The owner/operator shall provide the Administrator with documentation of the leak detection and carbon dioxide monitoring systems required for the facility by IDNR, EPA, or PHMSA, and shall describe in the Emergency Response Plan under ***3.12(M)(2)*** how alarms from those systems will be communicated to Madison County 911.

2. Noise Limits for Compressor Stations. A CCS compressor station may not produce noise exceeding the following sound levels, measured at any point within 200 feet of a non-participating dwelling with an octave band analyzer or sound level meter and associated filter manufactured in compliance with standards prescribed by the American National Standards Institute (ANSI). This standard shall supersede any noise standard(s) set forth in any other Madison County Ordinance.

Octave Bands In Hertz (Hz) per ANSI	Maximum Permitted Sound Level (in decibels)*
63	75

Octave Bands In Hertz (Hz) per ANSI	Maximum Permitted Sound Level (in decibels)*
125	70
250	65
500	59
1000	53
2000	48
4000	44
8000	41

** Measured at any point within 200 feet of a non-participating dwelling.*

3. Pipeline Information. The application must include a map of all carbon dioxide pipelines serving the facility within Madison County and either (i) a copy of the IDNR certificate of authority issued under ***IC 14-39-1-6***, or (ii) a statement of the basis on which the pipeline is exempt under ***IC 14-39-1-4.5***. On-site pipelines exempt under ***IC 14-39-1-4.5*** are subject to development plan review for location, surface restoration, and drainage tile repair. As-built route maps filed with IDNR under ***IC 14-39-1-10*** shall also be filed with the Administrator and Madison County Emergency Management.

I. **Water Resources and Monitoring Information**

1. State and Federal Monitoring Plans. The applicant shall provide the Administrator and the Madison County Health Department with copies of the area of review and corrective action plan, the testing and monitoring plan, and the emergency and remedial response plan submitted under ***IC 14-39-2-5(c)(21)***, (23), and (25). The applicant shall also provide copies of monitoring reports submitted to IDNR or EPA within 30 days after submission. These documents are provided for information and emergency planning; the County does not approve or condition subsurface monitoring.

2. Private Water Well Testing. The owner/operator shall offer, at its expense and with the well owner's consent, testing of each private water well within one-half mile of a CCS Surface Facility by an independent laboratory certified by the State of Indiana for drinking water. Results shall be provided to the well owner, the Administrator, and the Madison County Health Department. At a minimum, samples must be tested for pH, turbidity, total dissolved solids, heavy metals, nitrates, coliform bacteria, zinc, aluminum, and RCRA 8 Metals, at the following intervals:

   a. Pre-Construction: once before construction begins, to establish a baseline.

   b. Post-Construction: once, after construction is complete and prior to issuance of the Certificate of Compliance.

   c. Operational: upon written request of the well owner, not more than once per year during operation.

   d. Post-Decommissioning: once, within 30 days of completed decommissioning.

3. Contamination Response. If a private water well test under this section shows an exceedance of a primary drinking water standard that was not present in the baseline test, the owner/operator must promptly notify the Administrator, the Madison County Health Department, and IDNR, and provide commercial water tanks and potable water to affected properties until IDNR or the Health Department determines that the exceedance was not caused by the CCS facility or the issue is resolved, at the owner/operator's sole cost.

4. Seismic Monitoring Plan. The applicant shall provide a copy of any seismic monitoring plan required by IDNR or EPA as part of the UIC Class VI permit. Response to a seismic event or suspected leak shall be addressed in the Emergency Response Plan under ***3.12(M)(2)***.

5. A CCS Facility, and any vibration resulting from the facility, is subject to all standards in ***5.6 Performance Standards***.

6. If a CCS Surface Facility will withdraw groundwater or surface water for its operations, the application shall identify the source and volume of the withdrawal and include any registration required under ***IC 14-25-7***. The BZA may consider the effect of the withdrawal on existing agricultural, residential, and municipal water users in its special use findings.

J. **Wildlife and Environmental Impact Mitigation.** The applicant shall provide, with the application, an analysis conducted by a qualified third-party professional to identify and assess potential impacts on wildlife and the natural environment within the site and the area within one mile.

K. **Property Value Guarantee Agreements**

A CCS is a Covered Facility under ***3.15 Property Value Guarantees***, and its developer must offer a Property Value Guarantee to all Guarantee Holders within the Guarantee Distance set in ***3.15(C) Applicability and Guarantee Distance***.

L. **Construction Requirements**

1. Road Use and Road Agreement. The owner/operator must identify all county roads to be used for construction, operation, or maintenance traffic prior to construction, subject to Madison County Engineering/Highway Department approval of the proposed route and a pre-construction baseline survey of road, bridge, and culvert conditions. Any road or culvert damage caused by construction, installation, or removal must be repaired to the satisfaction of the Engineering Department, which may require remediation, collection of oversized-load permit fees, or a corporate surety bond (amount fixed by the Engineering Department, at the owner/operator's expense) to guarantee future repairs.

2. Dust Control. Reasonable dust and debris control measures are required on the site during construction, including watering of haul roads as needed. Erosion and sediment control shall comply with the IDEM Construction Stormwater General Permit and any applicable Madison County stormwater requirements.

3. Construction Lighting. Temporary construction lighting must be arranged to prevent glare and light trespass onto adjoining properties. Fixtures must be shielded and direct light downward.

4. Construction Work Hours. Construction activities are limited to Monday through Friday, 7:00 a.m. to 7:00 p.m., except as necessary to complete a discrete crane-lift or oversized-load delivery already in progress, with advance notice to the Administrator.

5. Drainage Tile. The owner/operator shall locate and, where practicable, avoid agricultural drainage tile, and shall repair or reroute any tile damaged during construction, operation, or removal of a CCS or on-site pipeline, to the satisfaction of the Madison County Surveyor.

M. **Operation and Maintenance**

1. Annual Compliance Reports. By January 31 of each year, the facility operator must submit to the Administrator an annual report documenting adherence to approved plans and conditions, including the private water well test results under ***3.12(I)***, a list of all monitoring reports submitted to IDNR or EPA, and copies of any notices of violation issued by IDNR, EPA, or PHMSA for the preceding year.

2. Emergency Response Plan. Prior to commissioning, the owner/operator shall provide an Emergency Response Plan to Madison County Emergency Management, Madison County 911, the Madison County Building Official, and the Fire Chief with primary jurisdiction, addressing leak response, evacuation, and notification protocols. The plan shall incorporate the emergency and remedial response plan submitted to IDNR under ***IC 14-39-2-5(c)(25)***, identify the area of potential carbon dioxide exposure around each CCS Surface Facility and pipeline, and be updated annually. Before commissioning and annually after that, the owner/operator shall offer training to the fire departments and emergency medical services with jurisdiction and coordinate with them on carbon dioxide detection equipment needs.

3. Liability Insurance. Prior to the initiation of construction and/or any operation, the owner and operator shall maintain a commercial general liability policy naming Madison County, Indiana as an additional insured, in an amount not less than $5,000,000 per occurrence, or another amount set by the County Commissioners, and shall provide a certificate of insurance annually.

4. Ownership Change. Approval remains in effect through a change of ownership. Written notice must be provided to the Administrator within 30 days of the change. The new owner/operator shall assume all obligations of the approval, performance guarantees, and agreements, and shall provide a copy of the IDNR approval or notice of the permit transfer under ***IC 14-39-2-1.5(d)*** and ***14-39-2-12.8(c)***.

N. **Discontinuation and Abandonment**

1. A CCS that has reached the end of its useful life, or been abandoned, must be removed, and the site restored, by the owner/operator within 12 months after the later of documented discontinuation of operations or IDNR approval of well plugging, consistent with the post-injection site care and site closure plan approved under ***IC 14-39-2-5(c)(26)***. Monitoring wells, monitoring equipment, and fixed structures that IDNR or EPA requires to remain in place during the post-injection site care period are exempt from removal until released by IDNR, and shall then be removed within 12 months.

2. A CCS is considered abandoned if it is not in active use for 12 consecutive months, unless a Rehabilitation Plan is submitted to, and approved by, the County Commissioners. Cessation of injection does not

constitute abandonment while the owner/operator is conducting post-injection site care required by IDNR or EPA.

O. **Nuisance Declaration and Enforcement**

1. Declaration of Public Nuisance. Any CCS declared unsafe by the County Commissioners, after notice and an opportunity to be heard, by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, leak, damage, abandonment, or noncompliance with the conditions of its local approvals is hereby declared a public nuisance and shall be abated by repair, rehabilitation, demolition, or removal.

2. Rehabilitation Plan. A Rehabilitation Plan shall be submitted to the County Commissioners within 60 days, providing procedures to rehabilitate the facility within 12 months, extendable to 18 months total for force majeure.

3. Public Nuisance Waiver. If an extraordinary event as defined in ***IC 36-7-4-1109.1(a)*** damages or destroys part or all of the CCS, the 12-month removal timeline is waived so long as a Rehabilitation Plan, approved by the County Commissioners, is submitted within 60 days of the damage.

4. Adverse Effects. If the Administrator receives a complaint about the facility's operation, the Administrator shall investigate and determine if the complaint is meritorious and, if so, follow the County's enforcement process in ***Chapter 9: Enforcement***. Complaints concerning subsurface operations shall be referred to IDNR.

P. **Post-Closure and Financial Assurance**

1. Well plugging and abandonment of the injection well is governed by IDNR and EPA Class VI requirements. Surface reclamation and removal of above-ground equipment at the Madison County surface facility must occur consistent with ***3.12(N)*** and the post-injection site care and site closure plan approved by IDNR. The owner/operator shall provide the Administrator a copy of the certificate of project completion issued under ***IC 14-39-2-13*** and evidence that the deed notation required by ***IC 14-39-2-13(o)*** has been recorded.

2. Performance Guarantee. Prior to issuance of an Improvement Location Permit, the applicant must provide the County with a performance guarantee for surface reclamation and restoration, including removal of above-ground equipment, foundations to a depth of four feet, and access drives, and repair of drainage tile, in the amount of 150% of the estimated cost as determined by a licensed engineer, reassessed every 5 years. This local financial assurance addresses only the surface facility and does not substitute for any financial assurance required by EPA or IDNR for well plugging, post-injection site care, or long-term stewardship of the storage reservoir.

Q. **Application Requirements.** In addition to the standard application requirements, an application for a CCS facility shall include:

1. A copy of the Area of Review (AoR) map submitted to IDNR under ***IC 14-39-2-5(c)(9)***, and a site plan showing each CCS Surface Facility, access drive, haul route, and on-site pipeline;

2. Evidence of surface site control;

3. The pipeline information;

4. The state and federal monitoring plans and the private water well testing program;
5. The wildlife and environmental impact analysis;
6. The surface reclamation cost estimate and performance guarantee;
7. A copy of the IDNR carbon sequestration project permit application and, when issued, the UIC Class VI permit and the IDNR permit and certificate;
8. The Emergency Response Plan;
9. Proof that Property Value Guarantee agreements have been filed with the Planning Department; and
10. The approved haul route and any road use agreement.

3.2 Land Use Matrix

P = Permitted Use S = Special Use	AG	CR	R1	R2	R3	MR	MH	PR	IS	LC	GC	HC	LI	GI	HI
COMMUNICATION/UTILITIES															
Small Modular Reactor (SMR)															S

A blank table cell indicates the use is **not permitted in the zone district.**

3.3(IV) Communication/Utilities Use Descriptions and Standards

Small Modular Reactor (SMR): A nuclear reactor licensed by the *U.S. Nuclear Regulatory Commission* that generates electricity, heat, or hydrogen and is smaller in size and output than a conventional nuclear power plant. An SMR may be built alone or with additional reactors on a single site. An SMR facility includes the reactor or reactors and the associated structures, equipment, and site infrastructure within the facility boundary. See *3.13 Small Modular Reactors (SMR)* for additional standards.

3.13 Small Modular Reactors (SMR)

A. **Purpose.** This article is adopted for the following purposes:

1. To provide for the safe and appropriate location of advanced nuclear energy facilities that support energy security and economic development for Madison County and its residents;
2. To establish development standards that protect public health, safety, and welfare from the non-radiological impacts of SMR facilities while accommodating innovative clean energy technology;
3. To ensure compatibility with surrounding land uses and community character;
4. To provide clear and predictable review procedures for SMR facility applications; and
5. To coordinate local land use authority with federal nuclear regulatory oversight by the *U.S. Nuclear Regulatory Commission* (NRC) and state utility oversight by the *Indiana Utility Regulatory Commission* (IURC) under *IC 8-1-8.5*.

B. **Intent and Federal Preemption Acknowledgment**

1. The intent of this article is to provide a local land-use siting framework for Small Modular Reactor facilities, while expressly acknowledging that reactor design, construction, operation, security, radiological safety, and the storage of spent nuclear fuel and high-level radioactive waste are regulated exclusively by the NRC, and that the IURC regulates a public utility SMR per *IC 8-1-8.5*.
2. Nothing in this article shall be construed to supersede or conflict with regulations of the NRC, IURC, the *Indiana Department of Environmental Management* (IDEM), the *Indiana Department of Homeland Security*, or other federal or state agencies with jurisdiction over nuclear facilities.

3. In applying this article, no decision-making body of the County shall base a decision or condition on (i) radiological hazards or the adequacy of NRC safety, security, or emergency planning requirements, or (ii) the need for the facility or its cost to utility ratepayers, which are determined by the IURC under ***IC 8-1-8.5-2*** and ***IC 8-1-8.5-12.1***.

4. Spent Fuel Storage. On-site storage of spent nuclear fuel or high-level radioactive waste, including an independent spent fuel storage installation, is an accessory use to an approved SMR facility. Under ***IC 8-1-8.5-12.1(d)(5)***, such storage may not occur without first meeting all applicable NRC requirements, and the County does not impose design or safety standards on it. Storage structures shall be shown on the site plan and are subject to the setbacks and height limits of ***3.13(G)***.

5. If any provision of this article is determined to be preempted by state or federal law, that provision shall be severed and the remaining provisions shall remain in full force and effect.

C. **Definitions**

Small Modular Nuclear Reactor: As defined in ***IC 8-1-8.8-10.2***: a nuclear reactor that (1) has a rated electric generating capacity of not more than 470 megawatts; (2) is capable of being constructed and operated, alone or in combination with one or more similar reactors, at a single site; and (3) is required to be licensed by the NRC. The term includes such a reactor that uses a process to produce hydrogen for energy storage, as a fuel, or for other uses. SMR facility means the complete installation including one or more small modular reactors, associated equipment, structures, and infrastructure necessary for power generation, on-site switchyard and interconnection, hydrogen production (if any), and site operations, located within the facility boundary. Transmission lines outside the facility boundary are not part of the SMR facility.

Microreactor: A Small Modular Reactor with a rated electric generating capacity of not more than 20 megawatts electric (MWe) per reactor, or, for a reactor that does not generate electricity, a thermal output of not more than 60 megawatts thermal (MWt), that is required to be licensed by the NRC. A Microreactor Facility consists of one or more microreactors with a combined capacity of not more than 100 MWe, together with associated equipment and structures within the facility boundary. A facility exceeding that combined capacity is regulated as an SMR facility.

D. **Applicability**

1. This article governs the siting, development, construction, operation, and decommissioning of SMR facilities in all unincorporated areas of the County. The standards in this article supersede the standards of the zoning district in which the SMR facility is located.

2. This article applies to: (i) construction of any new SMR facility; (ii) expansion of an existing SMR facility that increases building footprint or site acreage by more than ten percent (10%); and (iii) any change of use of an existing structure to an SMR facility.

3. Except as expressly modified herein, all other provisions of this Ordinance remain in full force and effect.

4. IURC and Non-Utility Facilities. This article applies to an SMR facility whether it is constructed by a public utility under an IURC certificate issued under ***IC 8-1-8.5***, or by a person exempt from certification under ***IC***

8-1-8.5-7, such as a facility constructed primarily for the owner's own use. For a public utility facility, this article shall be applied consistent with ***3.3(IV)(E)***.

E. **Use Permissions and Approval Process**

1. Approval Process. An SMR facility requires, in sequence: (i) rezoning of the subject property to the High Impact (HI) District, if not already so zoned; (ii) special use approval by the Board of Zoning Appeals; and (iii) site development plan approval by the Plan Commission, with the Plan Commission retaining site plan review authority.

2. Minimum Site Size. The minimum site size is:

   a. SMR – 20 acres for a single-unit facility, plus 10 acres for each additional reactor unit, or the area needed to contain the NRC-approved site boundary, whichever is greater.

   b. Microreactor – 5 acres for a single-unit facility, plus 2 acres for each additional unit, or the area needed to contain the NRC-approved site boundary, whichever is greater.

3. Federal Licensing. No Improvement Location Permit may be issued for an SMR facility until the applicant provides the Administrator with (i) an NRC construction permit, combined license, or limited work authorization covering the work, and (ii) for a public utility, the IURC certificate issued under ***IC 8-1-8.5***, or for a person exempt under ***IC 8-1-8.5-7***, a copy of its report to the IURC. No facility may commence operations without NRC authorization to operate.

F. **Siting Requirements**

1. Prime Farmland. No more than 10% of an SMR site may be located on Prime Farmland, as designated on the Soil Data Access (SDA) Prime and Other Important Farmlands report for Madison County. A letter from the Madison County Natural Resources Conservation Service (NRCS), or another qualified source, confirming compliance shall be included with the application.

2. Floodplain Restrictions. No reactor structure or critical safety system may be located within a 100-year floodplain as mapped by ***FEMA*** or ***IDNR***, whichever is more stringent, or as determined by detailed engineering study.

3. Separation from Residential Districts and Schools. The minimum required separation between the SMR facility property line and any residential zoning district boundary, or any dwelling on a non-participating property, school, hospital, or place of public assembly, is 2,000 feet for a standard SMR and 1,000 feet for a microreactor. This separation is established to address noise, traffic, lighting, visual impact, and cooling tower plume, and not radiological hazards.

4. Separation Between SMR Projects. No SMR facility may be placed within 3 miles of another SMR facility, measured from the project property lines.

G. **Setbacks and Height**

1. Minimum setbacks for reactor structures and primary containment buildings are 500 feet from any property line or public right-of-way. Other structures within the facility shall meet the setbacks of the HI District.

2. Maximum building height is 200 feet for reactor containment structures and cooling towers, and 75 feet for accessory buildings.

H. **Design and Safety Standards**

1. Ingress/Egress and Access. The site must have direct access to a state or federal highway capable of accommodating heavy equipment transport. Site access roads must be designed to always accommodate emergency vehicle access.

2. Fencing and Security. The owner/operator shall provide the security fencing and perimeter required by the NRC. The security perimeter must be set back from public areas and screened with landscaping where visible from adjacent properties or public rights-of-way. Local review addresses the buffer and setback for the security perimeter; it does not address the security design itself, which remains within NRC jurisdiction.

3. Color, Finish, and Aesthetics. To the extent reasonably possible, support structures shall be designed using colors, materials, and landscaping to blend into their settings.

I. **Water Resources**

1. The applicant must demonstrate adequate water supply for cooling and operational needs, including documentation of water rights or supply agreements, and comply with IDEM requirements and ***IC 13-18*** for any surface water intake or discharge and with any registration required for a significant water withdrawal facility under ***IC 14-25-7***. A Water Management Plan identifying the cooling system design and water demand must be submitted with the application.

2. Radiological environmental monitoring, including any groundwater monitoring associated with the facility, is governed by the NRC's license conditions. The County requires local groundwater testing for non-radiological water quality monitoring including: a site-specific hydrologic report and monitoring plan, prepared by a qualified professional geologist, identifying monitoring locations selected by the owner/operator outside any NRC-controlled security area, tested by an independent Drinking Water Laboratory certified by the State of Indiana for, at a minimum, pH, turbidity, total dissolved solids, heavy metals, nitrates, coliform bacteria, zinc, aluminum, PFAS (Forever Chemicals), and RCRA 8 Metals, with results reported to the Administrator and the Madison County Health Department at the owner/operator's expense, with sampling at the following intervals:

   a. Pre-Construction: once before construction begins, to establish a baseline.

   b. Post-Construction: once, after construction is complete and prior to issuance of the Certificate of Compliance.

   c. Operational: once every 6 months during operation.

d. Post-Decommissioning: once, within 30 days after completion of non-radiological site restoration under ***3.13(Q)***.

J. **Wildlife and Environmental Impact Mitigation**

1. The applicant shall provide, with the application, an analysis conducted by a qualified third-party professional to identify and assess potential impacts on wildlife and the natural environment within the site and the area within one mile.

2. The applicant shall provide, for information, a copy of the site characterization (including seismic and geologic hazards) submitted to the NRC. A geotechnical investigation prepared by an Indiana-licensed professional engineer is required for non-safety-related structures, roads, and stormwater facilities.

K. **Property Value Guarantee Agreements**

An SMR is a Covered Facility under ***3.15 Property Value Guarantees***, and its developer must offer a Property Value Guarantee to all Guarantee Holders within the Guarantee Distance set in ***3.15(C) Applicability and Guarantee Distance***.

L. **Construction Requirements**

1. Road Use and Road Agreement. The applicant must identify all county roads to be used for construction, operation, or maintenance traffic, subject to Madison County Engineering/Highway Department approval and a pre-construction baseline survey of road conditions. Construction access roads may not be located closer than 2,000 feet from any residence, measured from the centerline of the access road to the nearest corner of the residence.

2. Transportation Plan. A plan showing how vehicles would access the site, including oversized-component delivery routes, and describing impacts on the local and regional road system during construction and operation, is required with the application.

3. Dust Control. Reasonable dust and debris control measures are required on the site during construction, including watering of haul roads as needed. Erosion and sediment control shall comply with the IDEM Construction Stormwater General Permit and any applicable Madison County stormwater requirements.

4. Construction Lighting. Temporary construction lighting must be arranged to prevent glare and light trespass onto adjoining properties. Fixtures must be shielded and direct light downward.

5. Construction Work Hours. Construction activities are limited to Monday through Friday, 7:00 a.m. to 7:00 p.m., except as necessary to complete a discrete crane-lift or oversized-load delivery already in progress, with advance notice to the Administrator.

M. **Operation and Maintenance**

1. Physical Modifications. Any physical modification that increases the building footprint, height, or site acreage of the SMR facility, or adds a reactor unit, requires amendment of the approved development plan under ***3.13(E)(1)***. Modifications to the reactor, its safety systems, or other NRC-licensed components are governed by the NRC and are not subject to local review.

2. Inspections. The Administrator may inspect the non-radiological portions of the facility up to twice annually to certify compliance with the land use conditions of approval. Nothing in this subsection authorizes inspection of matters within the exclusive jurisdiction of the NRC.

3. Emergency Planning Zone Coordination. Prior to commissioning, the owner/operator must submit the Emergency Planning Zone map approved by the NRC and a coordination record with Madison County Emergency Management and the Indiana Department of Homeland Security, documenting the facility's role in local emergency response planning, including offsite response plans developed under FEMA's Radiological Emergency Preparedness program (***44 CFR Part 350***). The owner/operator shall offer annual training to the fire departments, emergency medical services, and law enforcement agencies with jurisdiction for non-radiological emergencies at the facility, such as fire, hazardous materials, and hydrogen.

4. Annual Compliance Reports. By January 31 of each year, the facility operator must submit to the Administrator an annual report documenting adherence to the non-radiological conditions of approval.

5. Liability Insurance and Price-Anderson Coverage. Prior to the initiation of construction and/or any operation, the owner and operator shall maintain a commercial general liability policy naming Madison County, Indiana as an additional insured, in an amount not less than $10,000,000 per occurrence, or another amount set by the County Commissioners, for non-nuclear liability. The federal Price-Anderson Act governs nuclear liability and insurance; the owner/operator must also provide proof of the financial protection required by the NRC under the Price-Anderson Act in addition to standard general liability insurance.

6. Ownership Change. Approval remains in effect through a change of ownership. Written notice must be provided to the Administrator within 30 days of the change. A transfer of an NRC license requires NRC approval, and a transfer of a public utility facility may require IURC approval. The owner/operator shall provide copies of those approvals with the notice. The new owner/operator shall assume all obligations of the approval, performance guarantees, and agreements.

N. **Nuisance Prevention.** No SMR facility shall produce noise that exceeds the following sound levels, measured at any point along the property lines of the site with an octave band analyzer or sound level meter and associated filter manufactured in compliance with standards prescribed by the American National Standards Institute (ANSI), except during construction or an actual emergency response. This standard shall supersede any noise standard(s) set forth in any other Madison County Ordinance.

Octave Bands In Hertz (Hz) per ANSI	Maximum Permitted Sound Level (in decibels)*
63	75
125	70
250	65
500	59
1000	53

Octave Bands In Hertz (Hz) per ANSI	Maximum Permitted Sound Level (in decibels)*
2000	48
4000	44
8000	41

** Measured at any point along the property lines of the site.*

O. **Discontinuation and Abandonment**

1. An SMR facility that has reached the end of its useful life, or been abandoned, must, after the NRC terminates the facility license under ***10 CFR 50.82*** or ***52.110***, have all remaining non-radiological structures restored for reuse or physically removed per the Decommissioning-Restoration Plan by the owner/operator within 12 months of license termination. The owner/operator must provide written notice of the discontinuation date to the Administrator within 30 days of the discontinuation.

2. An SMR facility is considered abandoned if it has not generated electricity for 12 consecutive months and the owner/operator has not certified permanent cessation of operations to the NRC or is not maintaining the facility in accordance with its NRC license, unless a Rehabilitation Plan is submitted to, and approved by, the County Commissioners.

3. The owner/operator must attest, under penalties of perjury, that all easements/leases for the SMR facility provide financial assurance for proper decommissioning within 1 year of end-of-life, discontinuance, or abandonment. Upon abandonment, and after NRC license termination, the County Commissioners may use the surety and right of entry to remove non-radiological structures and restore the site; the owner/operator is responsible for the County's attorney costs and fees in enforcing this Ordinance.

P. **Nuisance Declaration and Enforcement**

1. Declaration of Public Nuisance. Any SMR facility declared unsafe by the County Commissioners, after notice and an opportunity to be heard, by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, damage, abandonment, or a determination of unsafe non-radiological condition is hereby declared a public nuisance and shall be abated by repair, rehabilitation, demolition, or removal, in accordance with the procedures of this article and without impairing any matter within the NRC's exclusive jurisdiction.

2. Rehabilitation Plan. A Rehabilitation Plan shall be submitted to the County Commissioners within 60 days, providing procedures to rehabilitate the facility within 12 months, extendable to 18 months total for force majeure.

3. Public Nuisance Waiver. If an extraordinary event as defined in ***IC 36-7-4-1109.1(a)*** damages or destroys part or all of the SMR facility, the 12-month removal timeline may be waived if a Rehabilitation Plan is submitted and approved within 60 days of the damage.

4. Adverse Effects. The owner/operator must minimize and mitigate adverse non-radiological effects of the facility. If a known adverse effect is not resolved within 180 days of a written complaint, the complainant may file with the Administrator, who investigates and, if meritorious, pursues enforcement under the

County's enforcement provisions, including fines and injunctive relief. Complaints concerning radiological matters shall be referred to the NRC.

Q. **Decommissioning Plan and Financial Surety**

1. As part of the application to rezone the property, the applicant, owner, and operator shall submit and enter into a Decommissioning-Restoration Plan and Agreement with the County Commissioners. The Decommissioning-Restoration Plan and Agreement addresses only non-radiological site restoration. The owner/operator shall provide the Administrator copies of the decommissioning documents filed with the NRC, including the post-shutdown decommissioning activities report and license termination plan, when filed.

2. The local decommissioning plan and financial assurance obligations in this section address only the non-radiological site restoration (roads, landscaping, surface structures) not addressed by the NRC's radiological cleanup requirements. The owner/operator shall provide proof of its NRC-required decommissioning funding assurance in addition to the local financial assurance.

3. Performance Guarantee. Prior to issuance of an Improvement Location Permit, the applicant must provide the County with a performance guarantee in the amount of 150% of the estimated non-radiological decommissioning and restoration cost, as determined by a licensed engineer. Unless otherwise agreed, every 5 years the estimate shall be updated and the financial security adjusted accordingly.

R. **Application Requirements.** In addition to the standard application requirements, an application for an SMR facility shall include:

1. A pre-application conference with the Administrator and relevant County departments to discuss project scope, regulatory requirements, and community engagement;

2. A site plan showing all proposed structures, setbacks, access points, utilities, and security features;

3. A detailed project description including reactor technology, electrical generation capacity, and number of units;

4. Documentation of NRC licensing status, and the IURC certificate or petition under ***IC 8-1-8.5*** or the report required by ***IC 8-1-8.5-7***, as applicable;

5. A copy of the applicant's Environmental Report submitted to the NRC, a non-radiological assessment of local water, stormwater, traffic, noise, and ecological impacts, and the geotechnical and site characterization materials per ***3.13(J)*** above;

6. An Emergency Planning Zone map and coordination record;

7. A transportation plan;

8. A construction management plan addressing traffic routing, dust control, noise mitigation, and work hours;

9. Proof that Property Value Guarantee agreements have been filed with the Planning Department;

10. The Decommissioning-Restoration Plan and Agreement, and financial assurance documentation;

11. Proof of an active NRC licensing docket, as a condition of scheduling the local hearing (an accepted application for an early site permit, construction permit, combined license, or other NRC license under ***10 CFR Part 50***, 52, or 53), to avoid tying up a special use approval on a speculative project; and

12. Copies of all permits required by IDEM for water intake, wastewater discharge, stormwater, and air emissions from non-nuclear equipment, or a schedule for obtaining them.

3.14 Emerging Technologies

A. **Purpose.** This article establishes a consistent, case-by-case review procedure for land uses involving novel technology or infrastructure that do not fit any listed use category in this Ordinance, ensuring appropriate scrutiny of impacts on land, water, energy, and public safety until a permanent, use-specific ordinance provision can be adopted.

B. **Threshold Trigger.** When the Administrator determines, pursuant to ***3.1(D) Unlisted or Questionable Land Uses***, that a proposed use involving significant new technology or infrastructure: (1) is not reasonably similar to any listed use; and (2) involves characteristics warranting enhanced review, such as significant land, water, or energy consumption; novel environmental or safety considerations; or potential regional infrastructure impacts, the approval process of this article is triggered.

C. **Approval Process**

An Emerging Technology use requires, in sequence: (i) rezoning of the subject property to the High Impact (HI) District, if not already so zoned; (ii) special use approval by the Board of Zoning Appeals; and (iii) site development plan approval by the Plan Commission.

D. **Siting Requirements**

1. Prime Farmland. No more than 10% of an Emerging Technology site may be located on Prime Farmland, as designated on the Soil Data Access (SDA) Prime and Other Important Farmlands report for Madison County. A letter from the Madison County Natural Resources Conservation Service (NRCS), or another qualified source, stating that no more than 10% of the proposed project is on Prime Farmland shall be included with the application.

2. No Emerging Technology structure may be placed within a Special Flood Hazard Area as determined by ***FEMA*** or ***IDNR***, whichever is more stringent. An Emerging Technology cannot be placed within any legal easement, right-of-way, regulated drain easement, or stormwater conveyance system except by written permission of the easement holder, Madison County Commissioners, or the Madison County Drainage Board, as applicable.

E. **Setback Requirements**

1. An Emerging Technology use must meet the setback requirements of the zoning district in which it is located, and in no case less than 100 feet from any property line, measured from the edge of the outermost enclosure, vessel, or structure. Setbacks must be increased where necessary to satisfy the separation requirements of ***NFPA 855*** or any other code applicable to the Emerging Technology use.

2. Separation from a Non-Participating Dwelling. If the separation between an Emerging Technology structure and the outer wall of a dwelling on a non-participating property is 250 feet or less, a landscape buffer meeting or exceeding the standards of 5.17(D)(3) Buffer Yard Type 3 is required. If the separation is greater than 250 feet, no buffer is required. This requirement may be waived or modified upon written consent of the owner of each affected non-participating property.

3. Fall Zone. Any Emerging Technology structure exceeding 100 feet in height shall be set back from all property lines, public rights-of-way, overhead utility lines, and dwellings a distance of not less than 1.1 times its height, measured from finished grade.

4. Technology-Specific Separation. The Board of Zoning Appeals may require setbacks or separation distances greater than those established in this section where the hazard mitigation analysis demonstrates that greater separation is necessary to protect adjoining property, structures, or the public.

F. **Design and Safety Standards**

1. Fencing. An Emerging Technology use must be completely enclosed by a security fence at least 7 feet in height with a locking gate accessed by a keypad or Knox box with key. Barbed wire is not permitted as perimeter fencing except where required by NFPA 855, the National Electrical Code, the Indiana Building Code, or where needed for security at an associated substation or switchyard.

2. Hazard Mitigation Analysis. An application for an Emerging Technology use shall include a hazard mitigation analysis consistent with NFPA 855, prepared at the applicant's expense by a qualified, independent third-party professional engineer acceptable to the Fire Chief with primary jurisdiction and the Madison County Building Official. The analysis shall identify the hazards associated with the proposed technology and the design features, separation distances, and operational measures used to mitigate them.

G. **Property Value Guarantee Agreements**

An Emerging Technology use is a Covered Facility under ***3.15 Property Value Guarantees***, and its developer must offer a Property Value Guarantee to all Guarantee Holders within the Guarantee Distance set in ***3.15(C) Applicability and Guarantee Distance***.

H. **Construction Requirements**

1. Road Use and Road Agreement. The owner/operator must identify all county roads to be used for construction, operation, or maintenance traffic prior to construction, subject to Madison County Engineering/Highway Department approval and a pre-construction baseline survey of road conditions. Any road damage caused by the project must be repaired to the satisfaction of the Engineering Department, which may require a corporate surety bond to guarantee future repairs.

2. Dust Control. Reasonable dust and debris control measures are required on the site during construction.

3. Construction Lighting. Temporary construction lighting must be shielded and directed downward to prevent glare and light trespass onto adjoining properties.

4. Construction Work Hours. Construction activities are limited to Monday through Friday, 7:00 a.m. to 7:00 p.m., except as necessary to complete a discrete crane-lift or oversized-load delivery already in progress, with advance notice to the Administrator.

I. **Operation and Maintenance**

1. Operation and Maintenance Plan. The applicant shall submit a plan for the operation and maintenance of the Emerging Technology use, including measures for maintaining safe access, stormwater controls, and general procedures for operation and maintenance of the facility.

2. Physical Modifications. Any increase or expansion of the site footprint by 10% or more requires approval of an amended special use prior to construction. Like-kind replacements are considered maintenance and do not require a new approval.

3. Inspections. The Administrator may inspect the facility up to twice annually to certify safety and maintenance.

4. Emergency Response Plan. Prior to commissioning, the owner/operator shall provide an Emergency Response Plan to Madison County Emergency Management, the Madison County Building Official, and the Fire Chief with primary jurisdiction, addressing the hazards identified in the hazard mitigation analysis required by ***3.14(F)(2)***, hazardous materials storage, fire suppression systems, emergency vehicle access, evacuation and notification protocols, and site-specific training for local first responders, consistent with codes applicable to the Emerging Technology use. The owner/operator shall conduct, at its expense, annual training drills with local emergency responders.

5. Annual Compliance Reports. By January 31 of each year, the operator of the Emerging Technology use must submit to the Administrator an annual report documenting adherence to approved plans and conditions, including any incident reports for the preceding year.

6. Incident Reporting. The owner/operator shall report any thermal event, fire, explosion, pressure-vessel or containment failure, structural failure, or release of hazardous materials to the Administrator and the Fire Chief with primary jurisdiction within 24 hours of discovery.

7. Liability Insurance. Prior to the initiation of construction and/or any operation, the owner and operator of an Emerging Technology use shall maintain a commercial general liability policy covering death, bodily injury, and property damage, naming Madison County, Indiana as an additional insured, with dollar amounts satisfactory to the County Commissioners.

8. Ownership Change. Approval remains in effect through a change of ownership. Written notice must be provided to the Administrator within 30 days of the change. Approval is void if the new owner fails to notify the Administrator within that period.

J. **Nuisance Prevention**. No operating Emerging Technology use shall produce noise that exceeds any of the following limitations, except during construction or maintenance. Adequate setbacks, barriers, enclosures, use of quieter equipment, or other effective means of reducing noise shall be used to comply with these limitations:

1. At no point within 200 feet of a primary residence may the sound pressure levels from the Emerging Technology use exceed the following sound levels, measured with an octave band analyzer or sound level meter and associated filter manufactured in compliance with standards prescribed by the American

National Standards Institute (ANSI). This standard shall supersede any noise standard(s) set forth in any other Madison County Ordinance.

Octave Bands In Hertz (Hz) per ANSI	Maximum Permitted Sound Level (in decibels)*
63	75
125	70
250	65
500	59
1000	53
2000	48
4000	44
8000	41

** Measured 200 feet from the edge of any primary structure.*

2. The Administrator may hire an appropriate company, at the owner's or operator's expense, to determine if noise levels have been exceeded.

K. **Discontinuation and Abandonment**

1. An Emerging Technology use that has reached the end of its useful life, or been abandoned, must be physically removed by the owner/operator within 12 months of documented discontinuation of operations. The owner/operator must provide written notice of the discontinuation date to the Administrator within 30 days of the discontinuation.

2. An Emerging Technology use is considered abandoned if it does not operate for 12 consecutive months, unless a Rehabilitation Plan developed by the owner/operator is submitted to, and approved by, the County Commissioners.

3. All Emerging Technology use components must be removed by the owner within 1 year of the date of abandonment, and all components that are broken or at the end of life must be recycled where feasible or otherwise disposed of in accordance with applicable state and federal law. All hazardous materials must be removed from the site and properly disposed of. If the owner fails to do so, the County may engage qualified contractors to enter the project site, remove the components, sell any components removed, and remediate the site, and may initiate proceedings to recover any costs incurred.

L. **Nuisance Declaration and Enforcement**

1. Declaration of Public Nuisance. Any Emerging Technology use declared unsafe by the County Commissioners by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, damage, abandonment, or noncompliance with its permits is hereby declared a public nuisance and shall be abated by repair, rehabilitation, demolition, or removal.

2. Rehabilitation Plan. A Rehabilitation Plan shall be submitted to the County Commissioners within 60 days, providing procedures to rehabilitate the facility within 12 months, extendable to 18 months total for force majeure.

3. Public Nuisance Waiver. If an extraordinary event as defined in ***IC 36-7-4-1109.1(a)*** damages or destroys part or all of the Emerging Technology use, the 12-month removal timeline is waived so long as a Rehabilitation Plan, approved by the County Commissioners, is submitted within 60 days of the damage.

4. Adverse Effects. If the Plan Commission receives a complaint about the Emerging Technology use's operation, the Administrator shall investigate and determine if the complaint is meritorious and, if so, follow the County's enforcement process in ***Chapter 9: Enforcement***.

M. **Decommissioning Plan and Financial Surety**

1. Prior to receiving an Improvement Location Permit, the applicant, owner, and operator of an Emerging Technology use shall submit and enter into a Decommissioning-Restoration Plan and Agreement with the County Commissioners outlining the anticipated means, costs, and method of payment of all decommissioning and restoration costs.

2. Performance Guarantee. Prior to issuance of an Improvement Location Permit, the applicant must provide the County with a performance guarantee in the amount of 150% of the estimated decommissioning, and restoration cost, as determined by a licensed engineer. Unless otherwise agreed, every 5 years the estimate shall be updated and the financial security adjusted accordingly.

3. If the owner/operator defaults or decommissions, the County retains the right, after appropriate court order, to enter the property and remove any parts of the Emerging Technology use using funds from the surety on file.

N. **Application Requirements**. In addition to the standard application requirements, an application for an Emerging Technology use shall include:

1. Contact information for the applicant, owner, and operator;

2. A site plan showing facility layout and height, spacing, access roads, and fencing;

3. A fire protection plan approved by the Fire Chief with primary jurisdiction;

4. A hazard mitigation analysis;

5. An emergency response plan;

6. Engineering certification of foundation and structural design;

7. An interconnection agreement, if grid-tied;

8. The groundwater monitoring plan, if required;

9. A Decommissioning-Restoration Plan and Agreement, including a cost estimate prepared by a licensed engineer;

10. Proof that Property Value Guarantee agreements have been filed with the Planning Department; and

11. Any other information reasonably required by the Administrator to evaluate compliance with this article.

3.15 Property Value Guarantees

A. **Purpose**

This article is adopted for the following purposes:

1. To establish a single, uniform Property Value Guarantee procedure for the large-scale emerging technology uses regulated in articles ***3.10*** through ***3.14***;
2. To protect the owners of nearby non-participating property from a loss in property value that results from a Covered Facility; and
3. To give developers and property owners clear and predictable rules for offering, valuing, and honoring a guarantee.

B. **Definitions**

Property Value Guarantee: A written agreement, offered by the developer of a Covered Facility to each Guarantee Holder, under which the developer will compensate the Guarantee Holder, or purchase the Guarantee Holder's property, if the property loses value after the Covered Facility is built.

Covered Facility: Commercial Data Center (***3.10***), a Tier 2 or 3 ESS (***3.11***), a CCS Surface Facility (***3.12***), an SMR facility (***3.13***), or an Emerging Technology use (***3.14***).

Guarantee Holder: The owner of a Non-Participating Property located within the Guarantee Distance.

Non-Participating Property: Property that is not owned by, or leased or under easement to, the developer or the Covered Facility's owner.

Guarantee Distance: The distance established in ***3.15(C)***.

Baseline Fair Market Value: The fair market value of a property determined under ***3.15(E)*** below before construction of the Covered Facility begins.

C. **Applicability and Guarantee Distance**

1. A developer of a Covered Facility must offer a Property Value Guarantee to every Guarantee Holder. The Guarantee Distance for each Covered Facility is:
    a. Commercial Data Center: one (1) mile.
    b. Tier 3 ESS: one (1) mile.
    c. CCS Surface Facility: two (2) miles.
    d. SMR facility: four (4) miles.
    e. Emerging Technology: one (1) mile.
2. The Guarantee Distance is measured in a straight line from the nearest point of the Covered Facility's site boundary to the nearest point of the Non-Participating Property's boundary. For a CCS facility, the site

boundary is the boundary of the surface facility, including the wellhead, compressor station, and associated equipment.

3. Owners are identified from the most recent records of the Madison County Auditor and Assessor. The developer is responsible for the accuracy of the list and must update it before each mailing.

D. **Offer of Guarantee**

1. The developer must deliver a written offer of the Property Value Guarantee to each Guarantee Holder by certified mail, return receipt requested, no later than sixty (60) days before the Board of Zoning Appeals hearing on the Covered Facility. A copy of the offer, the mailing list, and the return receipts must be filed with the Administrator.

2. The offer must include the form of agreement, a plain-language summary of the guarantee, the name and contact information of the developer's representative, and a statement that the Guarantee Holder may have the property appraised at the developer's expense under ***3.15(E)*** below.

3. The offer remains open for the life of the Guarantee Period (***3.15(F)(5)***). A Guarantee Holder's failure to respond, or decision not to sign at the time of the offer, does not waive the Guarantee Holder's right to the guarantee.

4. A person who becomes a Guarantee Holder after the initial mailing, including a successor owner, is entitled to the guarantee on the same terms. The developer must provide the offer to that person within 30 days of written notice from the Administrator or the new owner.

E. **Baseline Fair Market Value**

1. Fair market value will be established by, at a minimum, two licensed appraisers acceptable to both the developer and the County. If the two appraisers differ in their valuation of the property by more than 10%, the two appraisers will jointly select a third independent appraiser within 14 days. If they cannot agree within that period, the Administrator will appoint one from a list of appraisers certified by the Indiana Real Estate Appraiser Licensure and Certification Board. The third appraiser's determination controls.

2. Each appraiser must be licensed in Indiana, have no financial interest in the Covered Facility, and have no other engagement with the developer in the preceding 5 years.

3. The Baseline Fair Market Value must be determined for each Non-Participating Property within the Guarantee Distance before construction begins. All appraisal costs are paid by the developer.

4. If a Guarantee Holder disagrees with the Baseline Fair Market Value, they may request an appraisal before construction begins. The appraisal must be provided within 90 days of the request. All appraisal costs are paid by the developer.

F. **Guarantee Terms and Claims**

1. Guarantee. If the value of a Guarantee Holder's property decreases after the Covered Facility is built, and the Guarantee Holder is unable to sell the property, the developer will, at the Guarantee Holder's election,

either pay the Guarantee Holder the difference between the Baseline Fair Market Value and the property's current value, or buy the property at the Baseline Fair Market Value.

2. Inability to Sell. A Guarantee Holder is unable to sell the property if the Guarantee Holder has listed the property for sale with a licensed real estate broker at a listing price that does not exceed the higher of (a) the Baseline Fair Market Value, or (b) the fair market value as determined by a comparative market analysis, and has actively and continuously marketed the property, including standard multiple listing service exposure, for a period of at least one hundred eighty (180) days without receiving a bona fide written offer at or above ninety percent (90%) of the listing price.

3. Claim Procedure. A Guarantee Holder makes a claim by written notice to the developer and the Administrator. Within sixty (60) days of the claim, current value will be determined by the appraisal process in ***3.15(E)(1)***. The developer must pay the claim or close the purchase within ninety (90) days of the final valuation. All appraisal and closing costs are paid by the developer.

4. General Market Changes. In determining a decrease in value, the appraisers must adjust for general market movement by comparing the property with comparable properties outside the Guarantee Distance.

5. Guarantee Period. The guarantee is available from the date the Covered Facility begins commercial operation until ten (10) years after that date. A claim made within the Guarantee Period remains valid until resolved.

6. Successors. The guarantee runs with the property and may be exercised by any owner during the Guarantee Period.

7. A Guarantee Holder is not required to release any other legal right or remedy as a condition of receiving a payment or purchase under this article.

G. **Security**

1. A surety bond in the amount of three percent (3%) of the assessed value of all properties within the Guarantee Distance must be provided to the County for the life of the project, usable to pay for appraisals, cover decreases in value, buyouts, and related costs. The bond must be in a form acceptable to the County Attorney and issued by a surety authorized to do business in Indiana.

2. The assessed value is determined from the most recent records of the Madison County Assessor at the time of the filing and updated every 5 years.

3. If the County draws on the bond, the developer must restore it to its full amount within thirty (30) days.

H. **Filing and Permit Conditions**

1. No building permit may be issued until all Property Value Guarantee agreements have been filed with the Madison County Planning Department.

2. For a Guarantee Holder who has not signed an agreement, the developer satisfies this section by filing the certified-mail offer, the return receipt, and a statement that the offer remains open under ***3.15(D)(3)***.

3. The surety bond required by ***3.15(G)*** must be in place before an Improvement Location Permit is issued.

I. **Reporting and Administration**

1. The developer must include in its annual compliance report to the Administrator the number of claims received, resolved, and pending under this article, the amounts paid, and the current bond amount.

2. The Administrator keeps the mailing list, agreements, and claim records as public records.

J. **Enforcement**

Failure to offer, honor, or secure a Property Value Guarantee is a violation of this Ordinance. In addition to any other remedy, the County Commissioners may suspend the Covered Facility's permits until the violation is cured and may draw on the surety bond to satisfy a valid claim that the developer has not paid when due.

K. **Severability**

If any provision of this article, or its application to any person or Covered Facility, is held invalid or unenforceable, the invalidity does not affect the remaining provisions of this article or any provision of Articles ***3.10***, ***3.11***, ***3.12***, ***3.13***, or ***3.14***, which remain in full force and effect.