JACKSON TOWNSHIP

COLUMBIA COUNTY

DATA CENTER OVERLAY ORDINANCE

SECTION 1. TITLE AND AUTHORITY

This Ordinance shall be known as the "Data Center Overlay Ordinance," adopted as an amendment to the Township Zoning Ordinance pursuant to the Pennsylvania Municipalities Planning Code ("MPC"), 53 P.S. §10101 et seq.

SECTION 2. LEGISLATIVE FINDINGS

The Board of Supervisors hereby finds and determines as follows:

A. Nature of Data Centers

1. Data Centers are high-intensity land uses requiring substantial electrical power, cooling infrastructure, and uninterrupted utility service.
2. These facilities generate continuous noise from cooling equipment, transformers, switchgear, and backup generators, including low-frequency noise that can travel long distances and penetrate structures.
3. Data Centers may require significant water resources for cooling, depending on system design, and may generate wastewater requiring specialized disposal.
4. Data Centers produce heat plumes, vibration, and electromagnetic fields that may affect nearby properties and natural resources.
5. Construction of Data Centers typically involves extended periods of heavy truck traffic, blasting, grading, and large-scale earth disturbance.

B. Infrastructure Limitations

1. The Township relies predominantly on private groundwater wells, which are vulnerable to drawdown, interference, and aquifer depletion.
2. The Township is served primarily by on-lot septic systems, with limited or no public sewer infrastructure capable of supporting high-intensity industrial uses.
3. The Township's electric distribution system is a rural distribution network not designed to support industrial-scale electrical loads typical of Data Centers.

4. Large electrical demands may cause voltage drops, service degradation, or reliability issues for existing residents and businesses.

5. Substation capacity in the region is limited, and expansion may require significant infrastructure upgrades.

6. Rural road networks are not designed for heavy construction traffic associated with Data Center development.

C. Environmental Sensitivity

1. The Township contains prime agricultural soils throughout its boundaries, which are a valuable and finite resource requiring protection.

2. The Township includes floodplains associated with its stream corridors, which must be preserved to protect life, property, and water quality.

3. Steep slopes are present in many areas of the Township and are susceptible to erosion, instability, and stormwater impacts if disturbed.

4. The Township contains a limited number of streams, which require protection from thermal pollution, sedimentation, and stormwater impacts.

5. The Township contains forested areas, though the amount varies by location; these areas provide wildlife habitat, stormwater infiltration, and rural character.

6. Data Centers, due to their impervious surfaces, heat discharge, and infrastructure demands, may adversely affect these sensitive environmental resources if not properly regulated.

D. Community Character

1. The Township is characterized by agricultural lands, open fields, and working farms that contribute to the Township's rural identity and economic base.

2. Residential development within the Township is low-density, consisting primarily of single-family homes on large lots served by private wells and septic systems.

3. The Township contains limited Highway Commercial and Manufacturing district and has historically not supported large-scale industrial development.

4. The scale, mass, and infrastructure demands of Data Centers are incompatible with the Township's existing rural character unless carefully sited and regulated.

E. Planning and Legal Basis

1. The MPC authorizes municipalities to regulate land uses to protect public health, safety, and welfare.

2. The Township Comprehensive Plan emphasizes protection of rural character, natural resources, and infrastructure capacity.

3. The Township is not required to permit Data Centers in all zoning districts and may confine them to a designated Overlay District.

4. The purpose of this Ordinance is not to prohibit Data Centers, but to ensure they are located only in areas suitable for such uses and subject to strict performance standards.

SECTION 3. PURPOSE AND INTENT

The purpose of this Ordinance is to:

1. Establish a Data Center Overlay District (DCOD) where Data Centers may be considered by Conditional Use.
2. Protect residential areas and Sensitive Receptors from noise, vibration, heat, and visual impacts.
3. Ensure adequate electric, water, sewer, and broadband capacity.
4. Protect natural resources, including groundwater, streams, wetlands, forests, and wildlife habitat.
5. Require responsible energy use, including on-site renewable generation.
6. Ensure that Data Centers do not degrade the Township's rural character or infrastructure.
7. Provide clear, enforceable standards for the siting, design, construction, operation, and decommissioning of Data Centers.

SECTION 4. ESTABLISHMENT OF THE DATA CENTER OVERLAY DISTRICT (DCOD)

1. The DCOD is hereby established as shown on the Official Zoning Map.
2. The DCOD shall consist of approximately 442 acres, selected based on:
    a. proximity to high-voltage transmission lines (115 kV or greater);
    b. access to fiber infrastructure;
    c. distance from Sensitive Receptors;
    d. avoidance of prime agricultural soils where feasible;
    e. areas with adequate water availability.
3. The DCOD does not alter underlying zoning district regulations except as expressly provided herein.

4. No Data Center shall be permitted outside the DCOD.

5. The boundaries of the Data Center Overlay District are shown on the map labeled "Exhibit A – Data Center Overlay Map," which is hereby adopted as part of this Ordinance and incorporated by reference.

SECTION 5. COMMUNITY BENEFIT AGREEMENT

The Township shall require a Community Benefit Agreement (CBA) for any data center or high-impact Industrial use in the overlay district that meets one or more of the following thresholds: gross floor area exceeding 5,000 square feet; peak electrical demand exceeding 1 MW; projected water demand exceeding 10,000 gallons per day; location within 500 feet of a residential, agricultural or conservation zone. The CBA shall be executed prior to issuance of any building permit and shall address, at minimum: direct contributions to offset impacts on broadband capacity, police and fire services, water and stormwater infrastructure, roadway maintenance, and noise and vibration mitigation. The Township may also consider benefits for the community which addresses infrastructure improvements, environmental mitigation or community benefits. Nothing in this Ordinance shall be construed to require a payment in lieu of taxes or community benefit contribution as a condition of approval, except where authorized by law.

SECTION 6. DEFINITIONS

A. General Definitions

1. Data Center A facility used for centralized computing, data storage, cloud computing, artificial-intelligence compute, machine-learning operations, or similar digital-processing functions. A Data Center includes associated mechanical yards, electrical infrastructure, battery energy storage systems (BESS), cooling systems, and backup power systems. A Data Center does **not** include a Cryptocurrency Mining Facility unless expressly stated in this Ordinance. The term includes hyperscale data centers, enterprise data centers, and colocation facilities.

2. Cryptocurrency Mining Facility A "Cryptocurrency Mining Facility" is a facility, building, structure, or use in which specialized computer equipment performs blockchain processing, cryptocurrency mining, proof-of-work validation, hashing operations, or similar high-intensity computational tasks, whether as a principal use or accessory use. A Cryptocurrency Mining Facility includes any operation where the primary purpose is the generation of cryptocurrency or digital tokens.

3. Data Center Campus A development containing more than one Data Center building on a unified tract or assemblage of parcels under common ownership or control, whether constructed simultaneously or in phases.

4. Data Center Accessory Use Ancillary structures or systems secondary and incidental to a Data Center, including administrative buildings, fiber infrastructure, substations, switchgear, cooling systems, water storage tanks, pump stations, battery energy storage systems (BESS), fire suppression systems, security buildings, guardhouses, perimeter fencing, and stormwater facilities.

5. Sensitive Receptor Schools, preschools, daycare centers, in-home daycares, hospitals, long-term care facilities, nursing homes, places of worship, community centers, playgrounds, parks, campgrounds, prisons, dormitories, and any residence not located on a parcel with an existing industrial or commercial use.

6. Heat Plume The upward discharge of heated air from cooling systems, exhaust vents, or mechanical equipment that may affect surrounding properties, vegetation, wildlife, or air quality.

7. Low-Frequency Noise (LFN) Noise in the frequency range below 200 Hz, which can travel long distances, penetrate structures, and cause perceptible vibration or disturbance.

8. Renewable Energy System Solar, wind, geothermal, or other renewable energy generation systems installed on-site to offset electrical consumption of the Data Center or Data Center Campus.

9. Impervious Surface Any surface that prevents or significantly impedes the infiltration of stormwater into the ground.

10. Emergency Response Plan (ERP) A written plan describing procedures for fire, medical, hazardous materials, electrical failure, generator failure, and other emergency events.

11. Vibration Oscillatory motion of the ground or structures caused by mechanical equipment, generators, or construction activities.

12. Nuclear Energy System A facility, device, reactor, or energy-generation system that produces power through nuclear fission, nuclear fusion, radioactive decay, or any other nuclear reaction. The term includes, but is not limited to, Small Modular Reactors (SMRs), micro-reactors, advanced nuclear reactors, experimental nuclear systems, and any associated fuel handling, storage, cooling, containment, shielding, or waste-management infrastructure. "Nuclear Energy System" shall not be considered an accessory use, essential service, or utility infrastructure for purposes of this Ordinance.

B. Definitions of Required Submission Items

1. Environmental Impact Statement (EIS) A comprehensive written analysis evaluating impacts to groundwater, surface water, wetlands, floodplains, steep slopes, soils, wildlife, habitat, stormwater, heat plume, air quality, cumulative impacts, and proposed mitigation.

2. Noise Study A technical report including baseline ambient noise measurements, modeled operational noise levels, octave-band and LFN analysis, generator testing noise, cumulative noise modeling, identification of Sensitive Receptors, and mitigation measures.

3. Water Feasibility Study A hydrogeologic analysis including safe yield, aquifer drawdown, well interference, seasonal variability, recharge capacity, and mitigation.

4. Utility Capacity Letter Written confirmation from electric, water, sewer, and broadband utilities regarding available capacity, required upgrades, system impacts, timelines, and ability to safely accommodate the proposed load.

5. Heat Plume Mitigation Plan A report including dispersion modeling, impacts on adjacent properties, vegetation, wildlife, air quality, and mitigation measures.

6. Vibration Study A report including baseline vibration measurements, modeled vibration levels, thresholds for perceptibility and structural impact, and mitigation.

7. Renewable Energy Compliance Plan A plan demonstrating compliance with the 30% renewable energy requirement, including methodology, proposed systems, expected generation, REC strategy, and reporting.

8. Construction Management Plan A plan describing hours of operation, truck routing, blasting, erosion controls, dust control, protection of wells and septic systems, temporary lighting, and contact information.

9. Decommissioning Plan A plan describing removal of buildings and equipment, soil and groundwater testing, site restoration, disposal or recycling, timeline, and financial security

SECTION 7. USE REGULATIONS

A. Permitted Uses. Within the Data Center Overlay District (DCOD), the following uses shall be permitted only by Conditional Use:

1. Data Centers.

2. Data Center Campuses.

3. Data Center Accessory Uses.

B. Prohibited Uses. The following uses are expressly prohibited within the DCOD:

1. Cryptocurrency mining facilities.
2. Any use involving hazardous materials beyond quantities customarily associated with Data Center operations.
3. Any use that generates perceptible vibration, odor, glare, or heat beyond the property line.

C. Compliance Required. All Data Centers shall comply with:

1. the Township Zoning Ordinance;
2. the County Subdivision and Land Development Ordinance (SALDO);
3. this Ordinance;
4. all applicable local, state, and federal regulations.

D. Conditions. The Township may impose reasonable conditions on any Conditional Use approval to protect public health, safety, and welfare, including but not limited to:

1. noise mitigation;
2. water use limitations;
3. traffic restrictions;
4. emergency response requirements;
5. environmental protection measures.

E. Phased Approvals. No phase of a Data Center Campus shall proceed until the Township determines that all prior phases have been constructed and are operating in compliance with all applicable approvals.

SECTION 8. DIMENSIONAL STANDARDS

A. Minimum Lot Area: 50 acres.

B. Minimum Lot Width: 500 feet.

C. Setbacks:

1. Front Yard: 300 feet
2. Side Yard: 300 feet
3. Rear Yard: 300 feet
4. Sensitive Receptor Setback: No Data Center building, generator, cooling tower, or mechanical equipment shall be located within 600 feet of any Sensitive Receptor

D. Maximum Building Height: 50 feet, unless otherwise approved through the Master Plan.

E. Maximum Impervious Coverage: 55%.

F. Building Separation: 150 feet minimum.

G. Separation Between Data Centers: 1 mile minimum between Data Centers on separate properties.

H. Maximum Building Footprint: 250,000 sq ft unless otherwise approved.

I. Height of Mechanical Equipment: 65 feet maximum unless required for heat plume mitigation.

SECTION 9. MASTER PLAN REQUIREMENTS

A Master Plan is required for any Data Center Campus or phased development. It shall include:

A. Overall Site Layout

The Master Plan shall include a scaled plan showing all proposed buildings, mechanical yards, substations, cooling infrastructure, stormwater facilities, internal roads, fencing, landscaping, and buffers, together with a description of the intended use of each building and structure. The layout shall demonstrate compliance with all Township land use requirements and shall be coordinated with all other required plans without duplicating technical standards regulated by state or federal agencies.

B. Phasing Plan

The Master Plan shall include a phasing plan describing each phase of development, the anticipated timeline for each phase, required infrastructure improvements, and a cumulative impact analysis. The cumulative impact analysis shall address land-use impacts only and shall rely on the **then-current** standards of applicable state and federal agencies for technical matters such as stormwater, air quality, and utility capacity.

C. Noise Analysis

The applicant shall submit a Noise Analysis prepared by a qualified acoustical professional demonstrating compliance with the Township's noise performance standards. Noise levels generated by the Data Center and all Data Center Accessory Uses shall not exceed **55 dBA during daytime hours** (7:00 a.m. to 8:00 p.m. Monday–Friday) and **50 dBA during nighttime and weekend hours** (8:00 p.m. to 7:00 a.m. Monday–Friday and all day Saturday and Sunday), as measured at the property line of the Use. Noise levels shall not exceed **45 dBA at nighttime** at the property line of any Sensitive Receptor not included within the project site.

All measurements shall be conducted using ANSI S1.4-2014 or the **then-current** industry standard for sound level meters. Because low-frequency noise standards are not fully established by state or federal agencies, the applicant shall incorporate the latest available technology into equipment design and operating procedures to limit low-frequency noise beyond the property line.

A preliminary noise study shall be submitted with the Conditional Use application, an interim noise study shall be submitted during building permit review, and an as-built noise study shall be submitted six months after issuance of the certificate of occupancy. If the as-built study identifies a violation of the Township's noise limits, such violation shall constitute a violation of this Ordinance and shall require corrective action. Noise limits apply during normal operations and during emergency generator operation. Emergency generator testing is permitted in accordance with manufacturer and industry standards.

D. Water Demand Analysis

The applicant shall submit a Water Demand Analysis demonstrating full compliance with the Township's cooling system requirements. The Analysis shall confirm that all cooling systems are limited to air-cooled or sealed, non-evaporative closed-loop systems and that no groundwater or surface water withdrawal is proposed. The Analysis shall rely on then current DEP standards for any technical matters related to water quality, hydrogeology, or public water supply, without duplicating DEP permitting requirements.

Nothing in this Ordinance shall prohibit normal domestic water use for sanitary fixtures, drinking water, handwashing, cleaning, or other routine human occupancy needs, provided such uses comply with all then current applicable state and federal standards

E. Energy Demand Analysis

The Applicant shall submit an Energy Demand Analysis demonstrating compliance with the energy system performance standards of this Ordinance. The Analysis shall describe projected electrical demand for each phase of development, cumulative load at full build-out, and required utility upgrades. All technical matters related to electrical safety, emissions, interconnection, and equipment design shall comply with all then current applicable state and federal standards, including the Pennsylvania Uniform Construction Code (UCC), National Fire Protection Association (NFPA) standards, Pennsylvania Public Utility Commission (PUC) requirements, and DEP and EPA air-quality regulations. The Township's review shall be limited to land use impacts, protection of Township infrastructure, and compliance with the performance standards of this Ordinance.

The Analysis shall include documentation from the serving electric utility demonstrating available capacity, required transmission or distribution upgrades, anticipated impacts on voltage

stability and reliability for existing Township customers, and the timeline and responsibility for all required improvements. All utility documentation shall reflect then current PUC and utility interconnection standards.

The Analysis shall include a certification that the facility will not utilize Small Modular Reactors, micro-reactors, advanced nuclear reactors, fission-based or fusion-based energy systems, or any nuclear-powered generation facility of any size or classification. This prohibition is a land-use condition and does not supersede or conflict with any federal nuclear regulatory authority.

The Analysis shall describe all proposed on-site energy generation systems, including solar, wind, geothermal, battery energy storage systems (BESS), or other renewable systems, and shall demonstrate compliance with the Township's renewable energy requirements or approved alternative compliance mechanisms. All technical standards for renewable energy systems, electrical interconnection, and battery storage shall comply with then current UCC, NFPA, and PUC requirements.

The Analysis shall describe all backup and emergency power systems, including generator type, Tier rating, fuel type, storage capacity, expected runtime, testing schedule, and noise, emissions, and vibration controls. Backup power systems shall comply with all then current DEP and EPA air-quality standards, NFPA fire protection standards, and UCC electrical safety requirements. The Analysis shall demonstrate that backup systems will not cause adverse land use impacts to Sensitive Receptors or Township infrastructure.

If the Applicant proposes any energy generation or storage technology not expressly identified in this Ordinance, the Energy Demand Analysis shall demonstrate that the technology is not a Nuclear Energy System, complies with all performance standards applicable to permitted energy systems, and provides equal or greater protection of public health, safety, and welfare. All technical evaluations shall rely on then current applicable state and federal standards.

F. Emergency Access Plan

The applicant shall submit an Emergency Response Plan (ERP) coordinated with Township emergency services. The ERP shall address facility hazards, emergency cooling and energy procedures, firefighting water supply, hazardous materials management, shutdown procedures, emergency access, and incident reporting. All technical standards related to hazardous materials, fire protection, electrical safety, and emergency response shall comply with then current NFPA, DEP, EPA, and UCC requirements. The ERP shall not duplicate technical standards regulated by state or federal agencies.

G. Stormwater Management Plan

The Applicant shall submit a comprehensive Stormwater Management Plan prepared by a Pennsylvania-licensed Professional Engineer. The Plan shall demonstrate compliance with all then current Pennsylvania Department of Environmental Protection (DEP) stormwater requirements, including Chapter 102 and Chapter 105 regulations, and all applicable County Conservation District standards. The plan shall meet the standards as set forth in the Columbia County Subdivision and Land Development Ordinance Where the Township has adopted a Stormwater Management Ordinance, the Plan shall also demonstrate compliance with that ordinance; however, in the event of any conflict, the then current DEP standards shall control. The Township's review shall be limited to land-use impacts, protection of Township infrastructure, and consistency with the performance standards of this Ordinance, and shall not duplicate technical standards regulated by DEP.

The Stormwater Management Plan shall include an analysis of existing and post-development hydrology, stormwater management facilities, water quality protection, construction-phase erosion and sediment controls, long-term operation and maintenance, and emergency overflow and resiliency. The Plan shall certify that no cooling system produces wastewater, blowdown, thermal discharge, or any water-based effluent, and that no cooling system withdraws groundwater or surface water. Cooling system discharges are prohibited from entering any stormwater facility, watercourse, or groundwater recharge area.

H. Utility Infrastructure Plan Requirements

The applicant shall submit a Utility Infrastructure Plan describing all electrical, water, wastewater, cooling, telecommunications, and fuel systems. All utility infrastructure shall comply with then current UCC, NFPA, DEP, EPA, and PUC standards. The Township's review shall be limited to land-use impacts, siting, screening, and protection of Township infrastructure. The Plan shall demonstrate compliance with the Township's non-consumptive cooling requirements and shall not duplicate technical standards regulated by state or federal agencies.

I. Environmental Impact Analysis (EIS)

The applicant shall submit an Environmental Impact Study evaluating environmental and community impacts not otherwise addressed in the Stormwater Management Plan, Cooling Systems section, or Utility Infrastructure Plan. The EIS shall summarize compliance with those sections and shall rely on then current DEP, EPA, and federal wildlife standards for technical matters. The EIS shall not duplicate technical analyses required under other sections of this Ordinance.

J. Vibration Impact Analysis Requirements

The Applicant shall submit a Vibration Impact Study prepared by a qualified professional engineer licensed in Pennsylvania. The Study shall evaluate vibration impacts from construction, long-term operation, and post-construction conditions using Peak Particle Velocity (PPV) or the then current industry standard. The Township's review shall be limited to land-use impacts and protection of neighboring properties, wells, and public infrastructure.

The Study shall assess potential vibration effects on adjacent structures, Sensitive Receptors, wells and groundwater systems, underground utilities, public roads, and environmentally sensitive areas. Baseline site conditions shall be documented, including soil and geotechnical characteristics and proximity to receptors.

Vibration levels shall not exceed **0.1 in/sec PPV** at the property line during normal operations and **0.3 in/sec PPV** during construction, or more stringent limits where necessary to protect wells, historic structures, or Sensitive Receptors. These limits are land use performance standards and do not supersede or conflict with any UCC structural requirements.

Where predicted vibration exceeds allowable limits, the Study shall identify appropriate mitigation measures. The Township may require pre-construction condition surveys, construction phase monitoring, and post construction or operational monitoring if warranted. If vibration complaints occur, the Township may require additional testing or mitigation. If an independent expert retained by the Township confirms a violation, the Applicant or Occupant shall reimburse the Township for the cost of the evaluation.

K. Landscaping and Buffering Plan.

The Applicant shall submit a Landscaping and Screening Plan demonstrating compliance with the Township's buffering and visual mitigation requirements and shall be in compliance with, and not conflict with the Columbia County Subdivision and Land Development Ordinance. Screening shall be designed to minimize visibility of buildings, mechanical equipment, cooling infrastructure, substations, and loading areas from public roads and adjoining properties. Landscaping shall be installed and maintained in accordance with then current best management practices for plant selection, soil preparation, and maintenance, and shall not conflict with any then current DEP, County Conservation District, or PennDOT requirements related to vegetation, erosion control, or sight distance. The Township may require evergreen screening, berms, fencing, or a combination thereof to achieve effective year-round visual mitigation.

L. Lighting Plan

The Applicant shall submit a Lighting Plan demonstrating compliance with the Township's lighting performance standards and meet the standards as set forth in the Columbia County Subdivision and Land Development Ordinance. All exterior lighting shall be full cut-off,

downward-directed, and designed to prevent glare, light trespass, and skyglow. Lighting shall be installed and operated in accordance with then current Illuminating Engineering Society (IES) recommended practices for outdoor lighting and with then current electrical safety requirements of the Uniform Construction Code (UCC) and National Electrical Code (NEC). The Lighting Plan shall include fixture locations, mounting heights, shielding, and photometric information sufficient to demonstrate compliance. Lighting shall be designed to minimize visibility of equipment and to protect adjacent properties and Sensitive Receptors.

M. Decommissioning Plan

The Applicant shall submit a Decommissioning Plan for each Data Center, Major Data Center, and Data Center Campus. The Plan shall describe the process and timeline for cessation of operations, removal of buildings, equipment, foundations, substations, cooling infrastructure, mechanical yards, and utility connections, and restoration of the site to a condition compatible with surrounding land uses. The Plan shall identify responsible parties, estimated decommissioning costs, and proposed financial security. All decommissioning activities shall comply with all then current applicable state and federal standards, including DEP, EPA, UCC, and NFPA requirements for waste handling, hazardous materials, and site restoration. The Township's review shall be limited to land-use impacts, site restoration, and adequacy of financial security.

The Decommissioning Plan shall include procedures for the removal and proper management of all hazardous materials, batteries, transformers, fuel systems, and any other regulated substances in accordance with then current DEP and EPA requirements. The Plan shall certify that all cooling systems, electrical systems, and mechanical systems will be removed or rendered permanently inoperable and that no groundwater withdrawal, wastewater discharge, or thermal discharge will occur during decommissioning.

The Plan shall include a post-closure inspection and monitoring schedule demonstrating that the site will remain stable, free of environmental hazards, and restored to a vegetated condition. The Plan shall identify the responsible party for post-closure monitoring and shall require notification to the Township upon completion of all decommissioning activities.

The Decommissioning Plan and associated financial security shall run with the land and shall be binding on all successors and assigns. Financial security shall remain in place until the Township verifies that all decommissioning activities have been completed in accordance with this Ordinance.

The amount of financial security shall be reviewed and adjusted every three (3) years, or more frequently if required by the Township, based on an updated decommissioning cost estimate prepared by a qualified professional selected by the Township. The Applicant or Occupant shall reimburse the Township for the full cost of the review and any associated professional services

N. Battery Energy Storage System (BESS) Analysis

N. Battery Energy Storage System (BESS) Analysis If a Battery Energy Storage System (BESS) is proposed, the Applicant shall submit a BESS Analysis prepared by qualified professionals. The Analysis shall describe the proposed BESS location, capacity, technology type, fire protection measures, ventilation, containment, cooling systems, and emergency shutdown procedures. All BESS design, installation, and operation shall comply with all then current applicable state and federal standards, including the Uniform Construction Code (UCC), National Fire Protection Association (NFPA) standards (including NFPA 855 or its successor), and any applicable DEP or EPA requirements for hazardous materials and waste. The Township's review shall be limited to land use impacts, siting, screening, and consistency with the Emergency Response Plan and Utility Infrastructure Plan.

The BESS Analysis shall evaluate potential fire, explosion, and thermal runaway hazards, including off gas release, heat plume impacts, and separation distances from buildings, property lines, and Sensitive Receptors. The Analysis shall identify all hazardous materials associated with the BESS and shall describe spill containment, hazardous materials management, and end of life disposal or recycling procedures in accordance with then current DEP and EPA requirements.

The Analysis shall describe electrical integration with the facility and the serving utility, including interconnection requirements, grid stability considerations, and coordination with utility protection systems. All technical interconnection standards shall comply with then current PUC and utility requirements.

The Analysis shall describe BESS specific emergency procedures, including fire suppression, thermal runaway response, gas detection and ventilation, isolation and shutdown, and coordination with the Emergency Response Plan. The Analysis shall demonstrate that BESS cooling systems operate within a sealed, non evaporative loop and comply with all cooling system prohibitions in this Ordinance.

The Analysis shall include a description of decommissioning and end of life management for all BESS components, including hazardous materials handling, removal, and disposal or recycling. Financial security for BESS decommissioning shall be included in the facility's Decommissioning Plan and shall be reviewed and adjusted every three years based on an updated cost estimate prepared by a qualified professional selected by the Township, at the Applicant's expense.

If the Applicant proposes any BESS technology not expressly identified in this Ordinance, the BESS Analysis shall demonstrate that the technology provides equal or greater protection of public health, safety, and welfare compared to the systems expressly permitted herein, based on then current applicable state and federal standards.

SECTION 10. CONDITIONAL USE APPLICATION REQUIREMENTS

A Conditional Use application shall not be deemed complete unless it includes:

A. Master Plan.- Because certain Master Plan components must demonstrate compliance with the Columbia County Subdivision and Land Development ordinance, applicants may need to prepare conditional use materials and Land Development materials concurrently, even though conditional use approval must be obtained prior to final County approval of the Land Development Plan.

B. Environmental Impact Statement.

C. Noise Study.

D. Water Feasibility Study.

E. Utility Capacity Letters.

F. Heat Plume Mitigation Plan.

G. Vibration Study.

H. Traffic Impact Study.

I. Lighting Plan.

J. Landscaping and Buffering Plan.

K. Stormwater Management Plan.

L. Construction Management Plan.

M. Renewable Energy Compliance Plan.

N. Emergency Response Plan.

O. Decommissioning Plan.

P. Any additional information required by the Township.

SECTION 11. PERFORMANCE STANDARDS

A. Cooling System Requirements

1. Prohibited Cooling Systems. The following cooling systems are prohibited for all Data Centers, Data Center Campuses, and Data Center Accessory Uses:

a. **Open-loop cooling systems**, including any system that withdraws groundwater or surface water and discharges it after a single pass.
b. **Evaporative cooling systems**, including cooling towers, hybrid evaporative systems, adiabatic cooling, misting systems, spray-assisted cooling, or any system that consumes water through evaporation.
c. **Closed-loop systems with evaporative assist**, wet-side economizers, or any system that requires make-up water.
d. **Any cooling system** that withdraws, pumps, extracts, or utilizes groundwater or surface water from any source within the Township
e. **Any cooling system** that generates wastewater, blowdown, or thermal discharge, or any water-based effluent.
f. **These Prohibitions** regulate land-use impacts and do not supersede or conflict with any DEP or EPA permitting authority. All permitted cooling systems shall comply with all then current state and federal standards applicable at the time of application.

B. Permitted Cooling Systems

Only air-cooled systems and sealed, non-evaporative closed-loop liquid cooling systems are permitted. Air-cooled systems include direct air cooling, indirect air cooling, dry coolers, air-cooled chillers, and rear-door or in-row air-based systems. Closed-loop liquid cooling systems must operate within a sealed loop, must not withdraw groundwater or surface water, must not consume water through evaporation, and must reject heat to the air through dry cooling or equivalent non-evaporative methods. Direct-to-chip and immersion cooling systems are permitted only if they operate within a sealed, non-evaporative loop and reject heat to the air.

C. Groundwater and Surface Water Protection

Cooling systems shall not withdraw, pump, extract, or utilize groundwater or surface water from any source within the Township for cooling, process water, or make-up water.

Nothing in this Ordinance shall prohibit normal domestic water use for sanitary fixtures, drinking water, handwashing, cleaning, or other routine human occupancy needs, provided such uses comply with all then current applicable state and federal standards

D. Purpose and Intent

These standards are necessary to protect the Township's limited groundwater resources, which serve as the sole potable water supply for Township residents and businesses, and to ensure that Data Center cooling systems do not generate wastewater, thermal discharge, or consumptive water use incompatible with the Township's rural infrastructure.

E. Stormwater

All stormwater or process water associated with cooling operations shall be managed in accordance with the Stormwater Management Plan requirements of this ordinance. Nothing in the Stormwater section shall be interpreted to permit consumptive water use, groundwater withdrawal, or evaporative cooling prohibited under this section.

F. Future Cooling Technologies

Cooling technologies not expressly listed in this Ordinance may be permitted only if the Applicant demonstrates, to the satisfaction of the Township, that the proposed system:

1. operates within a sealed, non-evaporative loop;
2. does not withdraw or consume groundwater or surface water;
3. does not require make-up water;
4. does not generate wastewater, blowdown, or thermal discharge; and
5. provides equal or greater protection of groundwater resources compared to the systems expressly permitted herein.

G. Energy Infrastructure

Energy Infrastructure shall comply with all applicable UCC, NFPA, DEP, EPA, and PUC requirements. Tier IV generators may be required where necessary to ensure reliability and prevent voltage degradation; BESS may be required.

H. Environmental Protection

No perceptible vibration, smoke, odor, dust, glare, or heat beyond property lines. Wildlife and natural resource protection measures shall be incorporated consistent with the Township ordinances and all then-current state and federal standards.

I. Emergency Management

All Emergency Response Plann shall be submitted for Township approval. The plan shall address firefighting water supply, 24-hour emergency contact information, hazardous materials compliance, and coordination with local emergency services.

SECTION 12. RENEWABLE ENERGY REQUIREMENT

A. Minimum on-site renewable generation: 30% of average monthly electrical consumption.

B. Alternative compliance: maximum feasible on-site + REC retirement or certified green power.

C. Annual reporting required.

D. BESS may be required.

SECTION 12.1. PROHIBITION ON NUCLEAR ENERGY SYSTEMS

A. Prohibited Energy Systems.

No Data Center, Data Center Campus, or Data Center Accessory Use shall include, rely upon, construct, install, operate, or be powered by any nuclear-based energy system, whether as a primary, backup, supplemental, experimental, or future-expansion power source. Prohibited systems include, but are not limited to:

1. Small Modular Reactors (SMRs)
2. Micro-reactors
3. Advanced nuclear reactors
4. Fission-based energy systems
5. Fusion-based energy systems
6. Any nuclear-powered generation facility, regardless of size, classification, or regulatory status

B. Accessory Use Limitation.

Nuclear energy systems shall not be considered an accessory use, essential service, utility infrastructure, or permitted power generation method for purposes of this Ordinance.

C. Purpose and Intent.

This prohibition is necessary to protect public health, safety, and welfare due to:

1. the Township's rural character and low-density development pattern;
2. the Township's reliance on private groundwater wells and on-lot septic systems;
3. the Township's limited emergency response capacity and lack of nuclear-trained personnel;
4. the absence of infrastructure capable of supporting nuclear-related safety, monitoring, containment, or evacuation requirements; and
5. the incompatibility of nuclear energy systems with the Township's Comprehensive Plan and the intent of the Data Center Overlay District.

D. No Waivers or Modifications.

The prohibition in this Section shall not be waived, modified, or reduced through Conditional Use approval, variance, special exception, or any other zoning relief.

SECTION 13. CONSTRUCTION-PHASE REQUIREMENTS

A. Hours Mon–Fri 7 AM–6 PM; Sat 8 AM–4 PM; no Sundays/holidays.

B. Construction Noise Max 75 dBA; blasting/pile driving limited to 9 AM–3 PM.

C. Dust Control No visible dust beyond property lines.

D. Blasting Pre-blast surveys; notice; vibration monitoring.

E. Traffic Designated truck routes; avoid residential streets; staging areas; road cleaning.

F. Wells/Septic No adverse impacts; monitoring may be required; Applicant responsible for repairs.

G. Erosion Control Approved E&S plan; inspections after 0.5" rainfall.

H. Temporary Lighting Shielded, downward, no glare.

I. Compliance All construction must follow the Construction Management Plan.

SECTION 14. OPERATIONAL-PHASE REQUIREMENTS

A. Continuous noise monitoring.

B. Heat plume monitoring.

C. Monthly water use reporting.

D. Annual energy reporting.

E. Emergency services coordination.

F. Security fencing and lighting.

G. Landscaping maintenance.

H. Lighting controls.

SECTION 15. DECOMMISSIONING REQUIREMENTS

A. Required after 12 months of inactivity.

B. Decommissioning Plan required.

C. Financial security required and updated every 3 years.

D. Township may draw security and complete decommissioning if Applicant fails.

SECTION 16. CONDITIONAL USE CRITERIA

Applicant must demonstrate:

A. Protection of Sensitive Receptors.

B. Protection of water resources.

C. Noise compliance.

D. Infrastructure adequacy.

E. Environmental protection.

F. Consistency with Township plans.

G. Adequate emergency services.

H. Renewable energy compliance.

I. Financial security.

SECTION 17. ENFORCEMENT AND PENALTIES

Violations constitute zoning violations; enforcement by Zoning Officer; penalties per Zoning Ordinance and MPC; approvals may be revoked.

SECTION 18. SEVERABILITY

If any sentence, clause, section, or part of this Ordinance is for any reason found to be unconstitutional, illegal, or invalid, such unconstitutionality, illegality, or invalidity, shall not effect or impair any of the remaining provisions, sentences, clauses, sections, or parts thereof. It is expressly declared as the intent of the Township that this Ordinance would have been adopted had such unconstitutional, illegal, or invalid sentence, clause, section, or part thereof not been included herein.

SECTION 19. EFFECTIVE DATE

This Ordinance shall be in full force and effect from and after its passage or the first day allowed by law thereafter.

Enacted and approved this _____ day of _____, _____

ATTEST:

Secretary, Mary Smith

Jackson Township:

Supervisor Chairman, Ryan Fritz

Supervisor, Clayton Emery

Supervisor, Carl Spiece

(SEAL)