



Bulloch County Departmental Review

Agenda Item:	11	Meeting Date:	May 3, 2022 (BOC)
Application #:		Application Type:	County Initiated Text Amendment
Request:	The Bulloch County Planning and Development department proposes to amend the Zoning Ordinance of Bulloch County to include definitions and regulations related to commercial cryptocurrency mining operations.		

Applicant:	Bulloch County	Current Zoning:	AG-5, LI, HI
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Staff proposes the following amendment to the Zoning Ordinance Bulloch County:

STATE OF GEORGIA
COUNTY OF BULLOCH

AMENDMENT TO THE CODE OF ORDINANCES OF BULLOCH COUNTY, GEORGIA

BE IT ORDAINED by the Bulloch County Board of Commissioners that Section 202 of Article 2 of Appendix C – Zoning of the Code of Ordinances of Bulloch County, Georgia is hereby amended to add definitions for Cryptocurrency, Cryptocurrency Data Center, Commercial Cryptocurrency Mining, Cryptocurrency Server Farm, High Density Load Service, and Two-Phase Immersion Cooling to read as follows:

Cryptocurrency: A digital currency in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank.

Cryptocurrency Data Center: Leased or owned boundaries of floor space devoted to the operating data processing equipment for Commercial Cryptocurrency Mining; excludes spaces for commercial offices, storage, shipping and receiving, warehousing, or any other space that is not electronic processing.

Commercial Cryptocurrency Mining: The commercial process by which cryptocurrency transactions are verified and added to the public ledger, known as the block chain, and also the means through which new units of cryptocurrencies are released, through the use of server farms or data centers employing data processing equipment. Any equipment requiring a High-Density Load Service, for a server farm or data center, will constitute a commercial cryptocurrency mining operation. The following standards apply:

a. Prior to approval of the certificate of completion or occupancy, the applicant shall provide written verification from the electrical service provider stating the following:

1. Adequate capacity is available on the applicable supply lines and substation to ensure that the capacity available to serve the other needs of the service area is consistent with the normal projected load growth envisioned by the provider;
2. Utility supply equipment and related electrical infrastructure are sufficiently sized and can safely accommodate the proposed use;



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3. The use will not cause electrical interference or fluctuations in line voltage on and off the operating premises; and
 4. The utility supplier will limit the energy usage at the peak times subject to typical load management policies
- b. Prior to approval of the certificate of completion or occupancy, the applicant shall provide the County with written verification that the electrical work has passed a third-party final inspection.
- c. All cryptocurrency mining operations, server farms, and/or data centers, including all ancillary equipment/operations for purposes such as cooling, shall be designed, constructed, operated, and maintained so as to be harmonious and appropriate in appearance with the existing or intended character of the surrounding properties. The use of cargo containers, railroad cars, semi-truck trailers and other similar storage containers for any component of the operation is strictly prohibited.
- d. Cryptocurrency server farms shall employ two-phase immersion cooling as the primary means of cooling or heat transfer for the data center and mining components.
- e. The operations shall not cause the dissemination of vibration or noise in excess of the maximum environmental noise level established by Bulloch County Code of Ordinances Chapter 10, Article VI, or a noise level exceeding ninety decibels (90 dB) from a distance of twenty-five feet from the exterior of the containment structure or sixty decibels (60 dB) beyond the property line. Prior to the issuance of a certificate of completion or occupancy, a report with noise level test results shall be submitted by the applicant from a qualified acoustical engineer for compliance and approval. A noise reduction barrier or device may be required at the discretion of the Zoning Administrator.
- f. No facade of any Commercial Cryptocurrency Mining operation shall have more than twenty percent (20%) of the area exposed with apparatus (e.g., vents, fans, HVAC systems, etc.).
- g. The equipment used in any Commercial Cryptocurrency Mining operation shall be housed in an individually metered, electrically grounded and pre-engineered metal-encased structure with a fire rating designed to resist an internal electrical fire for at least 30 minutes. The containment space shall contain baffles that will automatically close in the event of fire independent of a possible electric system failure.
- h. Any use or activity producing air, dust, smoke, glare, exhaust, heat, or humidity in any form shall be carried on in such a manner that it is not perceptible at or beyond the property line.
- i. The ambient temperature inside of the containment space which houses a Commercial Cryptocurrency Mining operation shall not exceed 120 degrees Fahrenheit at any time.
- j. Each Commercial Cryptocurrency Mining operation shall provide a 24-hour emergency contact signage visible at the access entrance. Signs shall include company name if applicable, owner/representative name, telephone number, and corresponding local power company and telephone number.



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k. All Commercial Cryptocurrency Mining operations shall meet the requirements of Sections 405, 406, and 407 of Article IV of this appendix with regard to buffers and screening.

l. All perimeters of the building or construction footprint(s) must have security fencing of woven chain-link material including appropriate material for screening. Fencing shall be located behind the vegetative buffer.

m. Any Commercial Cryptocurrency Mining operation that is not operated for a continuous period of 12 months and for which there are no applications pending for permitted use of the structure at the end of such 12-month period, shall be considered abandoned, whether or not the owner or operator intends to make use of the device(s). The owner of an abandoned server farm or data center, and the owner of the property where the abandoned server farm and data center are located shall be under a duty to remove such facilities. If such facilities are not removed within a reasonable time, not to exceed three months, after receipt of notice from the governing authority notifying the owner(s) of such abandonment, the governing authority may remove such facilities and place a lien upon the property for the costs of removal. The governing authority may pursue all legal remedies available to it to insure that abandoned device(s) are removed. Delay by the governing authority in taking action shall not in any way waive the governing authority's right to take action.

Cryptocurrency Server Farm: Three or more interconnected computers housed together in a single facility whose primary function is to perform cryptocurrency mining or associated data processing.

High Density Load Service: The provision of electrical service where the requested load density has, for any monthly billing period, either an average power demand in excess of 300 kilowatts, OR an average power density in excess of 250 kilowatt-hours per year per data center square foot, equivalent to 35.064 square feet per kilowatt, at 100% load factor.

Two-Phase Immersion Cooling: The provision of heat reduction by the direct submersion of server components in a thermally conductive dielectric liquid or coolant whereby heat is removed from the system with the circulation of liquid into direct contact with hot components, causing the liquid to undergo a low-temperature evaporation process to cool the hot components and transfer the heat out of the liquid. The gas is cooled again by a heat exchanging method such as a condenser coil to allow return flow into the larger liquid volume.

BE IT FURTHER ORDAINED by the Bulloch County Board of Commissioners that Section 503(b)(18) of Article 5 of Appendix C – Zoning of the Code of Ordinances of Bulloch County, Georgia is hereby created to read as follows:

(18) Commercial Cryptocurrency Mining

BE IT FURTHER ORDAINED by the Bulloch County Board of Commissioners that Section 802 of Article 8 of Appendix C – Zoning of the Code of Ordinances of Bulloch County, Georgia is hereby revised to read as follows:



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Section 802: Commercial and Industrial – Principal Uses.

	HC	GC	NC	LI	HI
Adult Entertainment	C	C			
Agriculture				P	P
Airport or Airstrip (public, private, commercial)				C	C
Appliance Repair and Maintenance	P	P		P	P
Automotive Oil Change and Lubrication Shop	P	P		P	
Automotive Repair	C			P	P
Automotive Sales, Parts and Accessories Store	P	P		P	
Automotive Towing	P	P		P	P
Banking	P	P	C		
Bed and Breakfast Inn	P	P	C		
Building Material Dealer ¹				P	P
Bus Station / Taxi Service	P	P			
Cemetery	C	C	C		
Church	C	C	P	C	C
Civic and Social Organization	C	C	C		
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Sales, Repair and Maintenance					P
Commercial Cryptocurrency Mining				C	C
Community Center	C	C	C		
Contractor	C	C		P	P
Day Care Facility	P	P	C		
Display Advertising	P	P		P	P
Drycleaning and Laundry Service	P	P	C	P	P
Dwellings, Multiple-family	C	C	C		
Dwellings, Single-family Detached	C	C	C		
Dwellings, Two-family	C	C	C		
Education or Training Facility	P	P	C	P	P
Facilities to Host Private and Public Functions	C	C	C		
Flea Market	C	C			
Food Processing Facility	C			C	P
Freight Trucking	P			C	C
Funeral Homes and Funeral Service	C	C			
Gasoline Station with Convenience Store	P	P	C		
General Business	P	P	C		
Government: Local, State, Federal	P	P	P	P	P
Grocery Store	P	P	C		
Heavy Manufacturing					C

¹ If in LI zoning district, must be entirely enclosed by a fence that is at least six (6) feet high and screens the yard from view.

P – Permitted Use.

C – Conditional Use.



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Section 802: Commercial and Industrial – Principal Uses (continued).

	HC	GC	NC	LI	HI
Home and Garden Equipment Sale, Repair, and Maintenance	C	C		P	P
Hospice Care Facility	P	P			
Hospital	P	C			
Hotel and Motel	P	P			
Inert Landfill	C			C	C
Intermediate Care Home	P	P			
Junk Yard, Salvage Yard, and Auto Wrecking Yard	C				C
Natural Resource Development				C	C
Nursery, Garden Center, and Farm Supply Store	P	P	C		
Nursing Home	P	P			
Outdoor Advertising Sign	P	P		P	P
Outdoor Storage	P	P			
Parking Lot and Garage	P	P		P	P
Personal Care Home: Group or Congregate	P	P	C		
Printing/Publishing	P	P		P	P
Radio Station	P	P			
Railroad Transportation					P
Recreation Facility (Private)	C	C			
Recreational Vehicle Park and Campground	C	C			
Restaurant	P	P	C		
Sawmill				P	P
School	P	P			
Service Establishments Catering to Industry				P	
Shopping Center	C	C			
Technical and Trade School	P			P	
Tower	C	C	C	C	C
Transfer Station					C
Truck Stop	P			P	
Used Merchandise (e.g., Antique Stores)	P	P	C		
Utility Substations	P	P	P	P	P
Veterinary Service	P			P	
Warehousing and Storage	P	P		P	P
Wastewater Pre-Treatment Facility				C	C
Wholesale Operation	P	P		P	P
Wholesale Trade Agent and Broker (Auctions)	P	P			P
Wood Kitchen Cabinet and Countertop Manufacturing	C			P	P

¹ Except for planned developments. Ownership of individual units on a single lot may be transferred, provided that ground areas remain under common ownership.

P – Permitted Use.
C – Conditional Use.