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Planning Commission Hearing Date: September 9, 2025
Board of Commissioners Hearing Date: September 30, 2025

STAFF ANALYSIS

CASE NO.: TA-25-1247647		**File ID #:** 2025-0972
Address:	County-Wide	**Commission Districts:** All Districts
Request:	Application of the Director of Planning and Sustainability to Amend Chapter 27 To Establish a Definition, Regulatory Guidelines, and Development Standards for Data Centers in M (Industrial), M-2 (Heavy Industrial) and O-I (Office Institutional) zoning districts. This text amendment is County-wide.	
Applicant/Agent:	DeKalb County Planning & Sustainability Department	
Sections of the Zoning Ordinance Affected by the Amendment:	Chapter 27 of the Zoning Ordinance, to amend Section 4.1.3 (Use Table) to allow data centers in O-I, M, and M-2 zoning districts subject to certain supplemental regulations; and by adding to Article 9.1.3 – Defined Terms *of the Code of DeKalb County, as revised 1988*.	

STAFF RECOMMENDATION: Approval

The DeKalb County Planning & Sustainability Department is seeking to adopt an ordinance for regulations on data center developments, consisting of a physical room, building, or facility that houses infrastructure for building, running, delivering, or transmitting applications and services, or for storing and managing the data associated with those applications or service. The proposed ordinance defines 'data centers' in three capacities of **minor**, **major**, and **campus** - which is dependent on square footage, load capacity, and/or whether a substation is required for operation.

Major and campus data centers shall only be permitted in **Light Industrial** (M) and **Industrial** (M-2) zoning districts due to their scale, limited employment generation, and lack of public accessibility. These facilities are not compatible with Activity Centers or residential neighborhoods.

Minor data centers will be permitted as accessory uses in **Office Institutional** (OI) zoning districts and permitted outright in **Office-Development** (OD) zoning districts to accommodate small-scale operations in higher intensity areas.

The proposed ordinance includes separation and buffer requirements, architectural standards, operational requirements, and supplemental assessments on water consumption, energy consumption, and tree preservation.

The purpose for these regulations ensures that any new and/or existing developments do not impose upon the health, wellbeing, and welfare of DeKalb County Residents. The proposed ordinance considers the impacts of data center development on the economic, social, and environmental aspects of DeKalb County.

Over the last 10 years, the United States has seen a dramatic increase in data center development. Atlanta has seen major changes in the real estate market to prepare for the incoming demand. A study done with CBRE Research for North America Data Center Trends H1 2024 showed that Atlanta led all the primary markets for data centers with a 26% year-over-year increase in pricing, based on strong demand from AI providers, such as Google, Amazon, Microsoft, and X (CBRE Report).

Due to the High-Tech Data Center Equipment Tax Exemption (O.C.G.A. § 48-8-3(68.1)) allowed under House Bill 696 in 2018, many companies have been incentivized to build new data centers in Georgia. Early into 2024, the social media company X acquired a $10.1 million tax-break to install new AI hardware in their data center environment in Atlanta. Additionally, more investments have been made by large corporations to transform Georgia into a high-tech hub. On January 6th, 2025, Amazon's cloud computing division, Amazon Web Services (AWS), released a statement on their plans to invest $11 billion towards expanding their AI infrastructure and improve the efficiency of their cloud computing technology. Amazon has selected development sites in Butts and Douglas Counties, stating their expectations of creating 550 new high-skilled jobs (Reuters). There are currently two data centers located within DeKalb County. The first is a data centered owned by DC Blox Atlanta located at 6 West Druid Hills Dr. NE, Atlanta, GA 30329. The facility is 3,350 sq ft and has been occupied since 2010. The second is INAP Data Center owned by Lincoln Rackhouse located at 40 Perimeter Center East, Atlanta, GA 30338. The facility is 88,000 sq ft and has been occupied since 2019.

The primary community concerns regarding data centers are the energy and water consumption, environmental impacts, land-use impacts, and noise pollution, particularly for hyperscale facilities (>500,000 sq ft). In 2023, data centers consumed about 4.4% of total US electricity and are expected to consume 6.7 to 12% of total US electricity by 2028 (US Department of Energy). In understanding the basic capacity necessary to support data centers in populated areas, it is important to evaluate their impact on the surrounding community. Municipalities worldwide will have to learn how to adapt to the significant intelligent investments and the pressure from cloud and AI providers for space.

Resource and Environmental Impact

Energy Consumption

According to the Atlanta Regional Commission, Atlanta has the most data center capacity under construction in the US at 1,289.1 Megawatts (MW), which contributes to four times as many data centers under construction in comparison to the total existing inventory (ARC Data Centers). For context, 1 MW is equivalent to one million watts of power, which is enough to power 650 homes. A small data center, which is about 20,000 sq ft uses the same amount of energy as 3,250 homes (ARC). On average, data centers exhaust 10 to 40 times more electricity per square foot than a typical office space (US Department of Energy). To compensate for this massive growth, Georgia Power has anticipated a 12,000-megawatt load that will triple by mid-2030 that will require a significant expansion in the state's energy capacity. Since 2022, Georgia Power has had to accommodate for new larger load customers, particularly data centers, with demand surging from 336 MW in 2021 to 2,197 MW in 2022 (Georgia Power, 2023 IRP Update).

Water Consumption

An important site selection criterion for data center locations is access to water, primarily through municipal or regional water utilities. For ideal high-density and high-performance computing, data centers can request 100,000 gallons to 3 million gallons of water per day, depending on the type of cooling system in place. Water cooling, consisting of an evaporative and closed-loop cooling, is a preferred method among hyperscale facilities

because it more efficient in absorbing and expelling heat from high-density centers. Hyperscale data centers can consume 550,000 gallons per day, while wholesale and retail data centers consume an average of 180,000 gallons per day (Water Usage in DCs). Although data centers can use a large amount of water daily many facilities have opted to find alternatives that consume less water, such as immersion cooling (Yañez-Barnuevo, 2025). Despite these efforts, data centers still require a lot of energy and water to function effectively - even more so at larger scales.

Land use

The average size for a data center is 100,000 sq ft, the equivalent of a city block. However, they are not limited to square footage and can be found in various layouts relative to site and space limitations (see Appendix A). Medium sized facilities can be between 2,700 and 6,900 sq ft, which can represent Internal and Communication Service Providers, respectively. Larger establishments, such as the Colocation spaces and Hyperscale facilities, can have a minimum size of 11,000 to 30,000 sq ft. It is important to note that these are sizes for the average square footage per module and not the total square footage of the entire facility/campus. (Berkeley Lab Energy Analysis & Environmental Impacts Division Report 2024). Due to their relatively low employee-to-square foot ratio, parking requirements are minimal.

Noise levels

The primary sources of noise pollution that come from data centers is noise from server operation, cooling systems, grouping of the equipment, and building design that can emphasize the acoustics of the facilities. A typical data center can have noise levels that reach up to 90 decibels (dBA) near server areas when testing generators, however, a typical data center will operate at a noise level between 45 dB and 80 dB when no testing is occurring. The cooling systems emit low-frequency sounds that can be a nuisance to the surrounding environment over longer periods of time. To regulate noise levels when development abuts residential and conservation areas, a noise impact assessment will be required from the applicant/property owner to measure pre-operation ambient noise and provide acoustic mitigation strategies if noise level exceeds 60 dB during any hours of the day or night once equipment for data center development is in operation.

Planning Staff is collaborating with DeKalb County's Watershed Department to address water consumption concerns. Staff has also relied on key information from Georgia Power, Atlanta Regional Commission, and Data Center developers to ensure that regulations are conducive to the development goals of the County and the community. Therefore, it is the recommendation of the Planning & Sustainability Department that the text amendment application, which includes separation and buffer requirements, architectural standards, operational requirements, and supplemental assessments on water consumption, energy consumption, and tree preservation, be *"Approved"*.