



MEMO

TO: Mayor and Council

CC: Jeff Leatherman, Deputy City Administrator
David Davidson and Joseph Cusack, City Attorneys

FR: Michelle M. Alexander, Director Community Development

RE: Data Centers Findings and Example Ordinance Overview

DA: July 7, 2026

Background.

As directed by Mayor and Council at the January 12th 2026 meeting, Staff has conducted research and prepared documentation of findings related to data centers. Upon the completion of a white paper and an example ordinance (version 1), Staff conducted 3:3 meetings with the Planning Commission, which subsequently held two public hearings on the subject. Through the public hearing process additional findings emerged (see Memo dated June 9).

Staff offers an overview of findings and recommendations as follows.

Findings

The key noise impact generated by data centers stems from the systems required for cooling and energy redundancy. The literature indicates the sound disturbance for data centers requiring 1 MW is the equivalent of that of a typical grocery store. An average hospital uses between 2 MW and 5 MW. At approximately 15 MW and above, facilities transition to industrialized grade cooling systems, generating more intense noise nuisance.

Further, best practice suggests that the required noise studies include both dBA and dBC¹ measurement (45 for dBA and 65 for a weighted dBC), because of the low-frequency hum that dBA monitoring does not register (typically under 250Hz). Accordingly, operations standards should also include the requirement of specialized lower noise fans or acoustic

¹ Hessler,G (2004) "Proposed Criteria in Residential Communities for Low-Frequency Noise Emissions from Industrialized Sources.". Noise Control Engineering Journal 52(4).



louvers and back-up generators should feature hospital-quality acoustic architectural elements. A densely planted 100 foot buffer can also reduce sound by up to ten decibels (dB).² However trees do not mitigate against low-frequency noise so an acoustic wall should also be required.

The original example ordinance prepared by staff categorized data centers by size, following examples around the region. Based on all findings about noise impacts, Staff recommends regulating data centers based on categories of power usage (quantity of megawatts or MW's). Anything that requires less than 1 MW should be excluded from the definition of data centers; data centers specifically are regulated for the purpose of mitigating negative externalities. Smaller operations using 1 MW or less in power load will not necessitate the large cooling systems and loud back-up generators.

Recommended Regulatory Framework – Example Ordinance v. 2

Data Center Definition.

A facility containing one or more large-scale computer systems dedicated to operating data or for storing and managing data for off-site users. For purposes of these regulations, “large scale” refers to facilities with heavy loads of 1 MW or more of electrical demand, Data center equipment includes back-up batteries and/or power generators, cooling units, fire suppression systems and enhanced security features. For purposes of this code, data server rooms for internal users without a substation and consuming less than 1MW of energy use are **explicitly exempt** from this definition of data centers.

Classification	MegaWatts	Distance from Residential
Exempt	<1 MW and hospitals	N/A
Tier 1	1-4 MW	200
Tier 2	5 – 20 MW	1,000

Example zoning district locations. Staff recommends limiting locations to the “Industrial Light” and the “Office Park” districts, assuming that certain technology firms depend on small sized data centers that occupy only a portion of their total building space. Staff recommends the use only as a “Conditional Use”, which requires a substantial amount of

²Stell, A (2026). “Using Trees and Shrubs to Reduce Noise...”. Iowa State University Extension and Outreach.



detailed information related to impacts (see list below) and public hearing to fully vet the impact of a proposed project.

The example ordinance also **prohibits** a data center development adjacent to any residential use or zoning.

Planted Buffers. The recommended example draft (version 2) proposes additional buffers as follows:

MegaWatts	Total Planted Tree Buffer
Tier 1	100 feet
Tier 2	200 feet Plus an 8 ft acoustic wall at the property limit (may be waived if post construction noise less than 50 dB)

Use Standards. The recommended example draft (version 2) proposes requiring the following information as part of a submittal package:

- Noise survey and post construction study
- Water consumption
- Energy consumption (confirmation of power availability by utility)
- Photometric survey
- Tree protection survey and plan
- Community Impact:
 - o Net square footage of facility
 - o Total cost of construction
 - o Value at build-out
 - o Number of permanent full-time employees
 - o Daily traffic trips
 - o Sewage and solid waste
- Prohibits evaporative water-based cooling systems (closed-loop or equivalent type)



Fire Safety Measures. City of Roswell Fire added to the example ordinance several provisions for emergency access, fuel and cooling fluid disclosures and protocols for post-incident scene control.

Decommission Plan. Staff recommend that provisions shall be made at the time of permitting for a decommissioning plan to regulate closure and repurposing of the abandoned structure.