

Data Center Model Ordinance Review

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Background

- The North Dakota League of Cities established a work group in August of 2025 to discuss and draft a model ordinance that sets standard guidelines for how communities permit data centers
- Drafting a model ordinance encourages cities and counties to adopt more uniform regulations, eliminating confusion over varying regulations in different municipalities.
- Significant discussion focused on the potential noise study requirement, as well as how to define different sizes and kinds of data centers.

Definition Proposal:

Data Center. A facility used primarily for the storage, management, processing, and transmission of digital data, which houses computer or network equipment, servers, and other equipment, appliances, and components related to digital data storage and operations.

This definition would be included in Section 62-135 – Industrial use types.

Clarification between Major, Minor, & Micro data centers is still being debated. Current proposed definitions:

- *Major* – A data center that utilizes greater than 1 megawatt (MW) of power.
- *Minor* – A data center that utilizes between 100 kilowatts (kW) and 1 MW of power.
- *Micro* – A data center that utilizes less than 100 kW of power.

Permitted Zoning Districts:

Data centers can have different levels of impact on adjacent properties depending on size and intensity. The different sizes of data centers would be permitted in different areas:

- Major – Permitted by right in the General Industrial (GI) zoning district, and allowed in the Agricultural (AG) zoning district with a Special Use Permit.
- Minor – Permitted by right in the Limited Industrial (LI) and GI zoning districts, and allowed in the General Commercial (GC) and AG zoning districts with a Special Use Permit.
- Micro – Either permitted by right or allowed with a Special Use Permit as an accessory use in all zoning districts.

All proposed Major or Minor data centers would require a development agreement with the City prior to construction, regardless of the zoning district.

Additional Requirements:

In addition to standard Development Permit requirements, the following materials or entitlements that shall be required to effectuate a Data Center:

1. Identification of the owner/operator of the Data Center.
2. A narrative describing the proposed project, including cooling method, anticipated design life, estimated daily trips during construction and operation, including heavy trucks and passenger vehicles, general construction phasing plan, description of wastewater the facility will create and approach to managing discharges

Additional Requirements (Continued):

3. Prior to approval, the applicant shall submit an Acoustic Impact Report prepared and signed by a licensed professional engineer with demonstrated acoustical engineering expertise. The report shall:
 - a. Identify all major sound-emitting source points (e.g., chillers, generators, cooling units, substations) and list the predicted sound pressure level produced by each major sound-emitting source type;
 - b. quantify the cumulative predicted sound pressure levels from the project (of the specific project phase under review), accounting for concurrent operation of sources not including operation of backup sources;
 - c. report the existing measured ambient cumulative sound pressure levels at the lease or owned project land boundaries; and
 - d. model and report the existing and predicted cumulative sound pressure levels for each Lot within one-half mile of the source point(s) as measured to the nearest point on a Lot Line ("Receptor Site").

Results shall be expressed in A-weighted decibels (dBA) as sound pressure levels with notation of any prominent tonality or impulsive events, and be supported by a description of operating scenarios, Receptor Sites, terrain/ground absorption, shielding, and meteorological assumptions. The report shall also include a map referencing all project structures, a summary table comparing predicted levels to applicable requirements, and recommended mitigation, if any, needed to achieve compliance. Penalties to the requirements shall be applied per ANSI S12.9 for identified tonal or impulsive sound sources or events.

Additional Requirements (Continued):

4. A site plan conforming with _____.
5. A map of the project area showing all of the following Uses and Receptor Sites within one-half of a mile of the exterior boundaries of the property where the Data Center will be located:
 - a. All existing Buildings currently occupied;
 - b. Campgrounds;
 - c. Manufactured Home or RV Parks; and
 - d. Parks or recreational areas.
6. Applicant to develop, in coordination with local jurisdiction, a list of agencies necessary for project compliance with all applicable State and Federal laws, statutes, rules, and regulatory standards, and an anticipated schedule for necessary approvals.
7. Written verification from the electrical provider that sufficient capacity will be available to meet anticipated needs for electrical power.
8. Written verification from the water utility that sufficient capacity will be available to meet anticipated needs for water.
9. Prior to the issuance of Development Permits, the applicant shall enter into a Development Agreement if required by the local permitting jurisdiction.
10. Any other relevant studies, reports, certifications, or approvals as may be required by local permitting jurisdiction to ensure compliance with this Section and this Ordinance.

Suggested Use Standards

1. Noise perceived from Receptor Site(s), as measured from any source point(s), shall not exceed the sound pressure levels provided in _____ for normal operation. If necessary, noise mitigation shall be required to achieve compliance. Noise mitigation may include, but is not limited to, the use of low-noise fans, earthen berms, sound walls, or enclosures.
2. The sound pressure levels stated above may be temporarily exceeded during emergency operations due to power grid interruptions.
3. Testing and maintenance operations for emergency generators shall only occur between the hours of 7 AM and 9 PM. Only one generator may be tested at a time at the site.
4. A landscaped buffer yard shall be installed in accordance with _____ of this Ordinance.
5. All-weather access will be maintained by the owner/operator unless the access is dedicated and accepted by the local permitting jurisdiction.
6. All data processing and storage is contained within a permanent structure or structures constructed in compliance with the locally-adopted version of the International Building Code and the International Fire Code.

Findings

- Since data centers function as manufacturers, they would be considered an industrial use. Some minor data centers may be compatible with commercial uses, but major data centers would only be allowed in General Industrial
- Due to the potential for excessive noise generation and strain on City sewer-water services, development agreements
- Definitions for Major, Minor, and Micro data centers have not been finalized by the League of Cities' proposed ordinance. City staff recommends delaying proposing a text amendment until those definitions have been finalized.

Comments? Questions?