CASCADE DATA CENTER ADVISORY COMMITTEE MEETING
PUBLIC NOTICE & AGENDA
NOVEMBER 18, 2026
7:00PM

NOTICE: Notice is hereby given that the Cascade Data Center Advisory Committee will hold a meeting on Wednesday, November 18, 2026 at **7:00 PM** in the Cascade City Hall Council Chambers, 320 1st Ave W, Cascade, IA 52033.

1. Call to Order
2. Introductory Statement
3. Roll Call
4. Approve the Agenda as Presented
5. Approve November 11 Meeting Minutes
6. Reapprove the Four Definitions Approved at November 11th Meeting
7. Continue to Review Definitions to Include in Ordinance
    a. Emissions
    b. Operational Noise
    c. Environmental Issues
    d. Others
8. Open Forum For Advisory Committee Members
9. Other Business – Next Meeting Date and Agenda
10. Adjournment

Data Center Advisory Committee Meeting Minutes
November 11, 2026

The November 11th Data Center Advisory Committee meeting was called to order at 7:00PM by Chairman McNally. Delaney, Weber, Mehrl, Saunders, Rogers, Walter, McNally and Frey answered roll.

Motion Weber, second Rogers to approve the agenda. All Ayes. Motion carried.

Motion Saunders, second Mehrl to approve the minutes from October 28, 2026. Seven Ayes, Walter abstained since she was not in attendance. Motion carried.

The committee reviewed definitions for updating the M-2 zoning district including Data Center, Data Center Business, Sustainable Design and Hyperscale Data Center.

Data Center: means a structure or building rehabilitated or constructed to house a group of networked server computers in one physical location in order to centralize the storage, management, and dissemination of data and information pertaining to a particular business, taxonomy, or body of knowledge. A data center business's facility typically includes the mechanical and electrical systems, redundant or backup power supplies, redundant data communications connections, environmental controls, and fire suppression systems.

Data Center Business: An entity whose business among other businesses, is to operate or lease a data center in the city of Cascade.

Sustainable Design: Construction design that reduces negative environmental effects and improves occupant health and comfort through resource conservation, waste minimization, and healthier environments.

Hyperscale Data Center: A data center meeting both of the following criteria:
A facility of 100,000 square feet or larger.
Electrical demand exceeding 60 megawatts.

Due to technical issues, the recording of the meeting stopped at 8:00pm. Anything that happened after that was not recorded. At the November 18th meeting, the above 4 definitions will be again voted on by the advisory committee.

Next meeting will be held Wednesday, November 18th at 7pm.

Motion Saunders, second Weber to adjourn at 9:30pm. All Ayes. Motion carried.

Definitions

Data Center: means a structure or building rehabilitated or constructed to house a group of networked server computers in one physical location in order to centralize the storage, management, and dissemination of data and information pertaining to a particular business, taxonomy, or body of knowledge. A data center business's facility typically includes the mechanical and electrical systems, redundant or backup power supplies, redundant data communications connections, environmental controls, and fire suppression systems.

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CASCADE DATA CENTER ADVISORY COMMITTEE

November 18, 2026 Meeting Research Packet

M-2 red/blue draft | 28 local definitions | diesel generators and air emissions | Iowa municipal zoning

Prepared November 16, 2026 • City of Cascade, Iowa • Independent research compilation

> **Status:** Neither the attached independent zoning proposal nor this research brief has been adopted by the City Council. Four definitions were reported approved for the committee's working draft November 11; the remaining 24 definitions and the proposed performance rules were not.

Included in order

1. **Cover and action questions** — assumptions, source caveats, legislative status
2. **November 11 red/blue full ordinance** — rebuilt from current source with November 16 independent draft corrections; existing zoning baseline preserved, not adopted law
3. **28 proposed Section 165.41 definitions** — complete wording and source footnotes; approved versus proposed clearly separated
4. **Definitions omitted from the 86-term research glossary** — terms already treated in Iowa law or Cascade code, with source references
5. **EPA / Iowa diesel-generator research** — federal operating rules, Tier classifications, 15/1,000 ppm fuel sulfur, ambient concentrations, permit questions
6. **Verbatim official federal/Iowa sources** — reproduced government PDF pages with transparent highlights; source edition noted
7. **Iowa municipal comparisons** — Central City working draft and relevant city-law links; Central City original pages where obtainable

Non-negotiable distinctions

Generator count is not engine tier. The reported 15 units and 40 MW electrical project load do not independently establish a diesel-generator equipment schedule, Tier 4 certification, use category, permit thresholds or the installed generating capacity.

PPM is not a single emissions standard. Fuel sulfur limits are in ppm; ambient NO2, SO2, CO and ozone may be in ppm/ppb. Engine NOx, CO and particulate certification is usually in g/kW-hr. A fuel-sulfur ppm number is not an exhaust NOx ppm limit.

Government originals versus editorial work. Reproduced PDF facsimiles preserve original statutory text; transparent yellow highlights are editorial. The dated print editions are cited separately from links to current official regulations.

Full source repository: https://github.com/ttbakiatwoam/cascade-data-center
Sources checked through November 16, 2026; obtain certified city minutes and final generator inventory before final legal conclusions.

Meeting decision/questions checklist

> **Do not assume Tier 4 from 15 generators or 40 MW.** Ask Simple Mining for exact engine inventory, model year, per-cylinder displacement, emergency/nonemergency status, EPA emissions certification, permitted run hours, air-pollutant mass emissions, sulfur specification and concurrent-operation scenario.

1. Confirm which of the **four committee definitions** were approved at November 11 and certified roll calls. No separate adoption of the Hyperscale ban has been shown.
2. Review the remaining **24 local proposals** individually, distinguishing definitional necessity from operational requirements.
3. Confirm Iowa DNR construction and operating permit applicability, NSPS Subpart IIII, RICE NESHAP Subpart ZZZZ, and cumulative emissions from all proposed engines.
4. Decide whether to request additional City zoning operating conditions after reviewing EPA/Iowa preemption and uniformity; avoid inventing unsupported ppm thresholds.
5. Compare **Central City (draft)**, **Palo (enacted EU-1)**, **Dubuque (temporary moratorium)** and other Iowa municipalities by actual legal status, not generic "Iowa data center law".

NOVEMBER 11, 2026 MEETING RECORD | WORKING DRAFT REVISED NOVEMBER 16

City of Cascade, Iowa
M-2 & Citywide Zoning
Draft Ordinance Redline

Existing text in black / proposed ordinance text in red / transcription and formatting corrections in blue

INDEPENDENT WORKING DRAFT — NOT CITY-ADOPTED LAW. The November 11 advisory-committee vote approved definitions for draft consideration only. The City Council has not enacted this document.

Four definitions approved for the committee draft

Definition	November 11 reported action
Data Center	Approved; exact 5–3 or 6–2 tally not independently confirmed.
Data Center Business	Approved; exact 5–3 or 6–2 tally not independently confirmed.
Sustainable Design	Approved unanimously; numerical tally not independently confirmed.
Hyperscale Data Center	Approved 5–3: 100,000 square feet or larger **AND** electrical demand **exceeding 60 megawatts**. No calendar-year or "annually" test was approved.

Scope: The full integrated comparison follows. The source redline lists 28 independently proposed §165.41 additions, of which only the four named above were reported approved at the November 11 meeting. The remaining definitions and all separate proposed performance standards — including a citywide hyperscale prohibition — are **not represented as committee-approved.**

Authority: Based on the repository's contemporaneous November 11 participant-reported record, not certified City minutes. The underlying existing-code baseline remains subject to City Clerk/Attorney confirmation of later enactments and numbering.

Reading guide: RED indicates text a future City ordinance would need to enact; BLUE indicates only spelling, layout, or transcription repair to existing text. Source links and legal notes are preserved in the redline. Historical original scans and the 86-term research glossary are intentionally excluded from this dated PDF.

M-2 AND CITYWIDE ZONING — ACTUAL REDLINE AGAINST CASCADE'S EXISTING ORDINANCE

City of Cascade, Iowa | Draft proposals for November 18, 2026

Independent legislative comparison — NOT ADOPTED CITY LAW

Baseline: The existing §165.11(A)–(G)(1) text preserved in Cascade's zoning scan, with enacted 2022 B(18), is reproduced below in **black**. Selected existing §165.12 and §165.41 provisions appear in black at their affected locations. The City Code publisher expressly states that the separate 1992 zoning ordinance and amendments remain saved from repeal; the online code does **not** consolidate the full zoning ordinance. Therefore this baseline is **source-grounded but not a certified current-law consolidation**. The City Clerk/Attorney must verify subsequent amendments and current numbering, **including Ordinance 265-93 (M-2), Ordinance 126-09 (zero-lot-line buildings in C-1/M-1/M-2), Ordinance 05-22 (fitness uses), and Ordinance 19-24 (fences)**, all identified in the City Code publisher's amendment index. A 2009 proposed text marked DRAFT in the scan is **not proof that Ordinance 126-09 was never enacted**; the index lists that enactment, but its precise operative text still requires reconciliation. **This redline must not be represented as a certified fully consolidated 2026 code.**[1516]

Notation (based on the ordinance in force, not changes between project drafts):

Marking	Actual meaning
BLACK — EXISTING	City ordinance text and enacted B(18). Existing words are not silently amended or repealed.
RED — NEW/AMENDED LAW PROPOSED	Text the City would add through an ordinance amendment: B(19), D(8), G(2)–G(19), §165.12(17) and selected §165.41 definitions. New provisions are **not in current zoning law**.
BLUE — CORRECTIONS TO EXISTING SOURCE	Only source transcription spelling/punctuation or layout corrections, with the original spelling separately disclosed. Blue is **not a proposed new substantive duty**.
BLACK/BLUE — EDITORIAL NOTE	Explanations outside enactable ordinance text. The November 11 vote approved **definitions**, not the separately proposed citywide Hyperscale ban or new noise/ generator hours.

Redlining rule: Entire newly added subsections are red, **including all their numerical standards**, because existing M-2 does not contain them. The fact that an early project draft had different noise limits or generator hours is **not** a blue correction to current City law. The separate 86-term research appendix is not part of this ordinance or the next packet. The current clean proposed amendment remains available separately.

EXISTING §165.11 M-2 CODE (BLACK) WITH PROPOSED ADDITIONS (RED)

A. Statement of Intent

The "M-2" Heavy Industrial District is intended to accommodate general manufacturing and related uses of a heavy industrial character while providing protection from harmful effects to existing and future land uses in other districts.

B. Permitted Principal Uses and Structures

> **BLUE - FORMAT ONLY:** The scan prints permitted uses and off-street parking in two columns over two pages. This consolidated table retains every original numbered use and parking/loading ratio, reorganized for readable comparison. The word "faction" is corrected to "fraction" in blue where the original clearly refers to a portion of floor area. The original scan is preserved unchanged.[15]

Existing use	Permitted principal use or structure	Minimum required off-street parking or loading
1.	Farm implement sales, service, repair, and assembly.	1 space/300 sq. ft. of sales service or office floor area.
2.	Automotive and truck sales, service and repair.	1 space/300 sq. ft. of sales service or office floor area.
3.	Automobile paint and body shop.	1 space/300 sq. ft. of sales service or office floor area.
4.	Building material sales and storage.	1 space/300 sq. ft. of sales service or office floor area.
5.	Manufacturing, assembly and processing uses, but not including the manufacture, processing or blending of fertilizers, pesticides, insecticides or other chemicals, fuels or petroleum products that are combustible, explosive or of toxic nature.	1 space/employee plus 1/vehicle used by the industry.
6.	Concrete products manufacture and central mixing and proportioning plant.	1 space/employee plus 1/vehicle used by the industry.
7.	Wholesaling, warehousing or storage but not including the bulk storage of liquid fertilizer, agricultural chemical or petroleum products.	1 off-street loading space for each 5,000 sq. ft. of floor area or fraction thereof.
8.	Contractor's office, shop and storage yard.	1 off-street loading space for each 5,000 sq. ft. of floor area or fraction thereof.
9.	Grain elevator and storage bins.	1 off-street loading space for each 5,000 sq. ft. of floor area or fraction thereof.
10.	Feed milling.	1 off-street loading space for each 5,000 sq. ft. of floor area or fraction thereof.

Existing use	Permitted principal use or structure	Minimum required off-street parking or loading
11.	Veterinarian's office and kennel.	1 off-street loading space for each 5,000 sq. ft. of floor area or fraction thereof.
12.	Truck and freight terminal.	1 off-street loading space for each 5,000 sq. ft. of floor area or fraction thereof.
13.	Welding and machine shop.	1 off-street loading space for each 5,000 sq. ft. of floor area or fraction thereof.
14.	Plumbing, heating, air conditioning and sheet metal shop.	1 off-street loading space for each 5,000 sq. ft. of floor area or fraction thereof.
15.	Railroads and public utilities including storage and maintenance yards and buildings.	1 off-street loading space for each 5,000 sq. ft. of floor area or fraction thereof.
16.	Drive-in eating or drinking establishments.	5 spaces plus 1 space/50 sq. ft. of floor area.
17.	Mini warehouse.	Adequate parking and driveway areas shall be provided around the building's perimeter, subject to approval.

18. Fitness Center or Exercise Type Business (already enacted October 10, 2022). Parking Requirement - 1 space/200 sq. ft. of floor area devoted to such purpose. **This entry was enacted under Ordinance 05-22 and is not a newly proposed red addition.**[16]

RED — NEW §165.11(B)(19) — AFTER ENACTED B(18)

19. Data Center.

A Data Center as defined in Section 165.41 of this Ordinance, expressly excluding a Hyperscale Data Center. Hyperscale Data Centers are prohibited in all City zoning districts as provided in proposed Section 165.12(17).

Minimum required off-street parking: one space per employee on the largest regularly scheduled shift, plus one space for each company vehicle regularly stationed at the premises.

C. Permitted Accessory Uses and Structures

1. Uses and structures clearly incidental and necessary to the permitted principal uses of this district.
2. Temporary buildings used in conjunction with construction provided such buildings are removed promptly upon completion of the construction work.
3. Dwelling units for watchmen or caretakers employed on the premises provided that an open yard of at least 2,400 sq. ft. is reserved and maintained for use by the occupants.
4. Satellite receivers.

D. Special Exception Uses and Structures

Subject to Section 165.34(2) and other requirements contained herein, the Board of Adjustment may permit the following:

1. Stockyards, loading pens, slaughter houses and handling or processing of animal by-products, poultry processing plants, buying stations and/or sale barns and yards, provided that it is not closer than one fourth (1/4) mile to any dwelling unit other than that of the owner or operator, or any park, school, church or place of public assembly; that the provisions for drainage, sanitation, waste disposal, and fly control are approved by the County Health Officer; that it is located so that prevailing winds will not cause dust or odors to create a nuisance for developed properties in the vicinity; and that one (1) parking space for each employee and 1 space for each vehicle used by the industry be provided. An additional 25 parking spaces shall be provided for sale barns.

2. Bulk storage of petroleum products, liquid fertilizers, and agricultural chemicals provided that such use is not closer than 300 feet to a dwelling or place of public assembly and that one parking space for each vehicle used by the industry be provided.

Source note for D(2): The printed words above are readable in the source scan, but that scanned page also has dark, handwritten lines over portions of D(2). **This reprint does not construe the ink marks as legally adopted deletions.** The City Clerk must determine whether a later adopted ordinance altered D(2).[15]

3. The following uses provided that they are not closer than 1000 feet to any dwelling unit other than that of the owner or operator, or any park, school, church or place of public assembly; that 1 off-street parking space for every 2 employees and 1 off-street space for each company vehicle shall be provided.

a. Chemical plants.

b. Explosive manufacture or storage.

c. Fertilizer blending and manufacture.

d. Garbage, offal, or dead animal reduction.

e. Refining of petroleum and natural gas and their products.

4. Auto wrecking and junkyards on sites of 5 acres or more provided that the front yard be maintained as an open space free of weeds and debris; that the site be enclosed with a 6-foot-high fence or a suitable landscape planting that must screen the operation from the view of adjacent public streets and places of public assembly, parks, recreation areas, and residential properties; and that a minimum of 1 off-street parking space for each employee and 1 off-street space for each vehicle used by the facility be provided.

5. Communications stations and towers provided that they are not closer to a dwelling or place of public assembly than a distance equal to one-half their height, that will not interfere with the operation of any airport or landing strip, and that 1 off-street space for each vehicle used by the facility be provided.

6. An on-site free-standing business identification sign up to 75-feet in height provided the sign is a distance equal to one-half its height from neighboring buildings, maintains 7.5-feet horizontal clearance and 12.5-feet vertical clearance from overhead power lines, and the sign is designed and built to withstand 100-mph winds. Applicant must demonstrate a clear and compelling need for the special exception.

7. An adult-oriented establishment provided the establishment is not in or within sixteen hundred (1,600) feet of the borders of a residential district; any church, synagogue, mosque, temple, or other place of religious worship; any public or private school offering general education for students between the years of Kindergarten and Twelfth grade; of any daycare home or daycare business; any public park or playground. For purposes of this section, bike paths, trails, waterways, and boat launches shall not be deemed a public park; any other adult entertainment business; or any existing establishment selling alcoholic beverages for

consumption on premises. The above cited distances shall be measured by following a straight line, without regard to intervening buildings, from the nearest point of the property parcel upon which the proposed adult entertainment business is to be located, to the nearest point of the parcel of property or zoning district boundary line from which the proposed adult entertainment business is to be separated. The definitions of adult-oriented establishments in Chapter 124.02 of the Cascade Code of Ordinances are hereby incorporated by reference.

RED — NEW §165.11(D)(8) — AFTER EXISTING D(7) ●

8. Major Industrial Facility.

Any otherwise permitted principal use within the M-2 District meeting one or more of the following thresholds shall require Special Exception approval pursuant to Section 165.34(2). This special-exception classification does not authorize a Hyperscale Data Center prohibited by Section 165.12(17):

1. Maximum anticipated coincident electrical demand of **five megawatts (5 MW) or greater**;
2. Anticipated industrial, process, cooling, or facility water demand of **25,000 gallons or more during any twenty-four-hour period**;
3. Aggregate stationary electrical generation capacity, excluding fire pumps, of **two megawatts (2 MW) or greater**;
4. Aggregate stationary battery or other electrical-energy-storage capacity of **five megawatt-hours (5 MWh) or greater**; or
5. A material expansion of an existing facility that causes the facility to exceed any threshold above.

The requirements of this subsection shall apply **without regard to the business type, technology, product, customer, tenant, ownership structure, or industrial process involved.** Similar physical impacts shall be treated consistently, and the City shall document the comprehensive-plan and public-welfare rationale for each objective threshold.[23]

E. Minimum Lot Area, Yard Requirements, and Maximum Height

BLUE - FORMAT ONLY: Reorganized the original three-column dimensions table as a labeled list; the numeric limits are unchanged.

- **Minimum lot area / width:** None.
- **Minimum front yard:** 25 feet.
- **Minimum rear yard:** 25 feet.
- **Minimum side yard:** 20 feet.
- **Minimum street-side yard, corner lot:** 20 feet.
- **Maximum height:** 60 feet.

F. Permitted Signs

1. Billboards and advertising signs provided:

a) That they are not within 75 feet of a highway intersection, highway structure, residence, park, school, cemetery, public or semi-public building.

b) That they are not within 150 feet of another billboard or advertising sign.

c) That they do not exceed 300 sq. ft. in area.

2. Trade, business or industry identification signs for the firm located on the site provided that:

a) Free standing signs shall not exceed 150 square feet in area or 25 feet in height.

b) Signs mounted flush on the wall of a building shall not exceed 10% of the area of the wall of the building on which they are located or 200 square feet, whichever is smaller.

c) Overhanging signs, attached to a building shall not project above the height of the building, or more than four (4) feet from the wall of the building and shall not have more than 100 square feet of area.

3. All signs shall be maintained in a neat and presentable condition and in the event that they shall become illegible or their use shall cease, they shall be removed promptly and the area occupied restored to a condition free from refuse and debris.

4. See Supplementary District Regulations (Section 165.12).

G. Special Requirements

1. Supplementary District Regulations (Section 165.12).

G(1) is original, current baseline language and is not deleted or replaced in this proposal.[15]

G(2). Uniform Applicability — proposed addition

RED — NEW §165.11(G)(2)

The requirements of this subsection apply uniformly to M-2 uses, structures, and operations unless a provision expressly establishes an objective physical or operational threshold. No requirement shall be imposed, waived, or varied solely because of the identity of the owner, operator, tenant, customer, industry, computing workload, product, or business model.

A lawful preexisting use, structure, or condition shall be treated in accordance with Sections 165.14 through 165.20 and other applicable law. To the maximum extent legally permissible, new construction, material expansion, replacement equipment, and materially modified operations after the effective date shall comply with the standards applicable to that work or modification.

G(3). Site Development Plan — proposed addition

RED — NEW §165.11(G)(3)

Before issuance of a building permit for a new principal M-2 use or Major Industrial Facility, the applicant shall submit an engineered site development plan identifying, as applicable:

- buildings and structures;
- parking and loading areas;
- access roads;
- exterior mechanical and cooling equipment;
- generators;
- electrical substations and transformers;
- energy-storage systems;
- fuel and chemical storage;
- water and sewer connections;
- stormwater facilities;
- exterior lighting;
- landscaping and screening;

- fences;
- property boundaries; and
- existing sensitive receptors located within 1,000 feet of the property.

For a Major Industrial Facility, the plan shall additionally identify maximum anticipated electrical load, water demand, stationary generation capacity, fuel storage, cooling technology, principal noise-generating equipment, and proposed phasing.

For any Major Industrial Facility using stationary backup or on-site generation, the applicant shall provide a generator schedule identifying each engine's proposed manufacturer/model, rated electrical and thermal capacity, fuel type, exhaust configuration, fuel tank and containment, anticipated emergency and non-emergency operating modes, reasonably foreseeable simultaneous-operation scenarios, planned testing frequency and duration, and applicable state or federal emissions permits or permit-exemption determinations. Information requiring legitimate security protection may be submitted in an appropriately redacted public version and a protected version, only as authorized by Iowa law. The City shall not purport to issue or replace air-quality permits.

For each engine, the generator schedule shall also disclose the rated brake horsepower, displacement per cylinder, engine model year and EPA certification/engine-family documentation for each stationary engine. Before equipment installation or other applicable permitting milestone, the applicant shall submit copies of required Iowa DNR air construction permits or documented exemptions; where available or requested by the responsible agency, the facility-wide potential-to-emit and Title V/PSD applicability determinations, operating restrictions, enforceable hourly or annual limits, and simultaneous-operation assumptions. The Zoning Administrator checks completeness of the filing for zoning purposes; emissions permitting remains with the relevant state or federal agency. Applicability must be determined for the actual engine inventory, not assumed from a preliminary 40 MW / approximately 15-engine scenario.

G(4). Operational Noise — proposed addition

RED — NEW §165.11(G)(4) ●

All M-2 uses shall be designed, constructed, operated, and maintained so that noise attributable to the use does not exceed the following standards, measured in accordance with generally accepted professional acoustic practice:

a. M-2 property-line standard: The facility-attributable one-hour sound level at any property boundary shall not exceed **65 dBA and 75 dBC from 7:00 a.m. to 10:00 p.m.; or 60 dBA and 70 dBC from 10:00 p.m. to 7:00 a.m.** Compliance with the sensitive-receptor measurement provisions below is assessed separately.

b. Residential or sensitive-receptor standard: At each existing dwelling, school, licensed child-care facility, hospital, nursing facility, place of worship, public library, or comparable occupied sensitive use, compliance shall be evaluated **inside the closest normally occupied room on the side of the structure nearest the M-2 noise source**. The initial assessment shall include the nearest existing qualifying occupied structure. Additional qualifying structures shall be evaluated where source orientation, terrain, or shielding could produce higher exposure.

The sound-level meter microphone shall be placed **within five (5) feet of the interior face of the nearest source-facing exterior wall**, but **at least 1.5 feet (0.5 meter) from that wall and other large reflecting surfaces**, where physically practicable, at approximately four (4) to five (5) feet above the finished floor. **All doors and windows shall be closed throughout the measurement. In a dwelling with a controllable forced-air HVAC blower, the fan control shall be set to ON for continuous operation during the entire indoor measurement, with the thermostat set within**

65°F–75°F where reasonably practicable; the detailed protocol in subsection G(5) applies. The qualified acoustical professional shall identify the room and measurement positions and document any necessary deviation from these placement requirements. The following **indoor, facility-attributable one-hour equivalent continuous sound levels (Leq,1h)** shall not be exceeded:

- **65 dBA and 75 dBC from 7:00 a.m. to 10:00 p.m.**; and
- **60 dBA and 70 dBC from 10:00 p.m. to 7:00 a.m.**.

c. Tonal noise: Where an industrial sound source produces a prominent recurring tone, whine, screech, or hum, the applicable A-weighted limit shall be reduced by five (5) decibels.

d. Measurement: The one-hour average is the energy-equivalent continuous sound level (Leq,1h), not an arithmetic mean of decibel readings. A qualified acoustical professional shall use a calibrated Type 1 or Type 2 sound-level meter appropriate for the purpose, identify A- or C-weighting, document meteorology for exterior measurements, receiving location, background sources, room conditions for interior measurements, and source operating conditions. Outdoor source assessment shall use a documented ANSI/ASA S12.9 or successor environmental-noise assessment method. Indoor sensitive-receptor assessment shall use a documented method appropriate for room sound and low-frequency industrial noise, including ANSI/ASA S12.72 and S12.9 Part 7 where applicable.[1718] The City shall evaluate only facility-attributable noise using a documented background-noise adjustment procedure, accounting for unrelated indoor sound sources. Entry into an occupied structure for testing requires occupant consent or other lawful authority. If access is unavailable, the professional may report modeled indoor exposure with explicit assumptions, but shall not represent an outdoor measurement as a direct indoor compliance test. These measurement protocols shall not be construed to set a new statewide noise standard.[910]

e. Voluntary indoor access and outdoor alternative: The owner or lawful occupant of a sensitive-receptor structure may decline voluntary indoor noise testing. Declining consent does not invalidate a complaint or waive other remedies authorized by law. Interior or exterior entry onto private property requires consent or an independent lawful basis.

If indoor testing is declined, the qualified acoustical professional shall measure the facility-attributable Leq,1h outdoors at the point on the sensitive-receptor parcel boundary closest to the industrial property, provided the location is lawfully accessible and acoustically representative. Otherwise, a nearby lawfully accessible representative location shall be selected and the departure documented. The report shall document background conditions, microphone position, source operating conditions and any distance, shielding or reflection adjustments needed to estimate sound incident on the protected structure.

To assess the proposed indoor thresholds, the professional shall use documented, source-spectrum-appropriate outdoor-to-indoor noise reduction (OINR) or equivalent acoustical transmission-loss data for the building assembly, including walls, windows, doors and openings. Separate A- and C-weighted estimates and low-frequency assessment shall be provided where applicable. A calculated indoor result shall be labeled an **estimate**, not a direct indoor measurement. The applicable M-2 property-line limit remains unchanged.

Exterior-wall insulation R-values in Iowa energy requirements measure thermal resistance, not acoustical isolation. R-values may inform assembly identification but shall not be converted directly into dBA/dBC corrections. If reliable facade sound-reduction evidence is unavailable, a zero-decibel reduction may be used for cautious preliminary screening only, not by itself as conclusive proof of an indoor violation. The source of any acoustic correction and its uncertainty shall be disclosed.[2123]

G(5). Acoustic Study and Verification — proposed addition

RED — NEW §165.11(G)(5)

Every Major Industrial Facility shall provide, at the applicant's expense:

1. A **preconstruction baseline acoustic evaluation**, completed before site construction or grading materially changes ambient sound, documenting representative exterior A- and C-weighted hourly equivalent levels (Leq,1h) at nearby sensitive-receptor parcels and M-2 property boundaries. The evaluation shall include **voluntary indoor baseline measurements** inside nearby existing sensitive-receptor structures wherever the property owner or lawful occupant consents, as specified below;
2. A predictive acoustic model demonstrating compliance at property boundaries and nearby sensitive receptors under maximum reasonably anticipated operating conditions, including hot-weather conditions where relevant;
3. A post-construction compliance evaluation within sixty (60) days after commencing normal operations at reasonably representative load and weather conditions, or within a documented alternative period approved for commissioning constraints; and
4. A recurring compliance evaluation at least once every three (3) years, or following a material modification reasonably expected to affect noise levels.

Preconstruction indoor-receptor baseline and consent. The applicant shall identify the closest existing dwelling or other sensitive-receptor structures and any additional receptors reasonably expected to receive greater facility-related noise because of equipment orientation, terrain, or shielding. Before construction, the applicant shall offer the owner or lawful occupant of each selected structure an opportunity, **at no cost to that owner or occupant**, to consent to baseline testing within the nearest normally occupied room facing the proposed industrial source. When consent is granted, a qualified acoustical professional shall record representative **daytime and nighttime indoor dBA and dBC Leq,1h levels** under the placement, closed-door, and closed-window conditions described in subsection G(4)(b), together with operating indoor HVAC or ventilation conditions, existing sound sources, weather where relevant, and measurement times. The study should obtain paired exterior measurements at the same structure when lawful access and conditions permit. This provides a documented **preconstruction ambient baseline**, not a presumption that existing sound is attributable to the proposed facility.

Declined or unavailable access. Neither a property owner nor a lawful occupant shall be required by this subsection to permit voluntary entry. The applicant shall document reasonable efforts to offer indoor baseline testing and record whether consent was granted or declined without disclosing unnecessary private household information. Where indoor consent is declined or lawful access is unavailable, the preconstruction study shall perform the exterior alternative in subsection G(4)(e), including a source-facing receptor-parcel boundary measurement **only where lawful access is available**, or the nearest suitable lawful exterior location. Any estimated interior baseline shall use independently substantiated acoustical transmission-loss assumptions; **Iowa exterior-wall thermal R-values shall not be converted into decibel adjustments**. Estimated indoor levels shall be identified as *modeled*, not as measured values. A refusal of voluntary interior testing shall not be treated as a waiver of the applicable noise protections.

Thermostat and HVAC fan setting during indoor testing. During every indoor preconstruction baseline, postconstruction verification, and complaint-response acoustic measurement, **the forced-air HVAC circulation fan shall be set to ON for continuous operation throughout the entire measurement interval**, wherever the building has an occupant-controllable fan ON setting. **AUTO is not the default for this test.** For dwellings, the heating/cooling thermostat setpoint shall be within **65°F to 75°F (inclusive)** where reasonably practicable and consistent with occupant health and safety.

Heating and cooling demand may still cycle normally in response to the thermostat; the blower must remain on between those calls. Do not deliberately force heating or cooling cycles. The qualified acoustic professional shall verify and record the actual continuous blower operation, fan speed or mode, system type, thermostat setpoint and mode, measured interior temperature, heating/cooling cycles, other ventilation, and any deviation. These identical test settings shall be used for the comparable preconstruction and postconstruction measurements, or differences must be explained and accounted for in the technical assessment. Continuous fan sound is part of the measured indoor background and may mask industrial noise; the report shall distinguish facility-attributable sound from HVAC sound using a technically appropriate method. Supplemental measurements under other fan settings may inform the assessment but do not replace the required fan-ON measurement. If no blower or continuous-ON control is present, or use would be unsafe or medically inappropriate, document the reason and measure under representative existing conditions; lack of such equipment does not invalidate a complaint. The **65–75°F setpoint and mandatory fan-ON protocol are proposed local measurement conditions**, not Iowa residential code requirements.[25]

Evidence for a claimed increase after construction. A finding that a Major Industrial Facility **increased noise inside a neighboring sensitive-receptor structure** shall be supported by reliable evidence of the **preconstruction indoor baseline** and a comparable **postconstruction indoor level**, measured in the same room when practicable, **with exterior doors and windows closed**, using the same A- and C-weighted Leq,1h metrics and comparable daytime/nighttime periods, ventilation settings, and sound-source conditions. The analysis must establish that the later level is higher than the earlier level beyond the stated measurement uncertainty and must separately substantiate the amount **attributable to the facility**, rather than assuming all ambient sound comes from that facility. A preconstruction home need not have been silent; the relevant question is whether its indoor noise demonstrably increased because of the facility.[24]

Where an owner declined the preconstruction indoor evaluation, the City may consider credible earlier sound surveys, contemporaneous records, and the documented exterior-to-interior acoustic model described in subsection G(4)(e). An unsupported assertion of an increase alone shall not establish a violation **based solely on a change from preconstruction conditions**. This evidentiary requirement **does not prevent anyone from submitting a complaint**, does not require a historical baseline to investigate or enforce an **absolute indoor or M-2 property-line limit**, and does not displace rights or remedies under Iowa nuisance law.[924]

The required acoustic model and post-startup testing shall examine ordinary peak operations, reasonably foreseeable simultaneous generator testing or emergency backup operation, identifiable low-frequency or tonal equipment sources, and nearby residential and other sensitive receptors. Where safety or operational requirements prevent actual simultaneous generator testing, a qualified professional may combine measured source data with documented predictive modeling, with assumptions stated in the report.

Any separate structure-borne or ground-vibration concern must be evaluated with measurements appropriate to vibration (such as peak particle velocity), not inferred from dBA/dBC sound measurements. A numeric vibration ceiling is **not adopted in this draft** pending independent engineering and legal review.

The City may require reasonable corrective measures where testing demonstrates noncompliance.

G(6). Generator and Elevated-Noise Testing — proposed addition

RED — NEW §165.11(G)(6) ●

Routine and pre-planned testing of stationary generators or other equipment producing substantially elevated noise shall occur only between **8:00 a.m. and 6:00 p.m., Monday through Friday**, except where operation outside those hours is:

1. Required during an actual emergency;
2. Necessary to protect life, property, or critical equipment;
3. Required by a governmental agency, applicable code, manufacturer, utility, insurer, or reliability authority; or
4. Specifically authorized by the Zoning Administrator because the testing cannot reasonably be completed during ordinary testing hours.

This restriction applies uniformly to M-2 businesses operating such equipment. "Emergency generator" as classified for Iowa air-quality permitting follows applicable state air regulations; local zoning testing-hour rules do not alter air-permit classifications or authorize impermissible emissions.[8]

This local testing window does not expand the permissions or limits applicable under 40 CFR 60.4211(f), 60.4209, 60.4214, 567 IAC chapter 22, or a project-specific air permit. An annual potential-to-emit assumption (including a conditional 500-hour method) is not permission to operate that many hours. Emergency, required testing, and otherwise permitted non-emergency operation must be classified under the controlling regulation.

G(7). Generator Operating Records — proposed addition

RED — NEW §165.11(G)(7) ●

Any M-2 facility having aggregate stationary generation capacity of two (2) MW or more shall maintain records identifying:

- date and duration of each operation;
- whether the operation was emergency or non-emergency;
- reason for operation; and
- equipment operated.

Records shall be retained for at least three (3) years, or longer if required by controlling federal or state regulation or an air permit, and made available to the City upon reasonable request for zoning-compliance purposes, subject to applicable public-record and confidentiality law.

G(8). Major Industrial Facility Setbacks — proposed addition

RED — NEW §165.11(G)(8) ●

Existing M-2 dimensional requirements shall remain applicable generally. In addition, for a new Major Industrial Facility:

1. A principal building shall be located at least **100 feet from a property boundary adjoining a residential zoning district**.
2. Stationary generators, exterior cooling equipment, large transformers, substations, compressors, industrial fans, and comparable exterior mechanical equipment shall be located at least **200 feet from a residential zoning district boundary**.
3. The Board of Adjustment may approve a reduced equipment setback, but never less than 100 feet, where an applicant-funded independent acoustic analysis demonstrates that all applicable noise standards will be met under maximum reasonably anticipated operating conditions.

Nothing in this subsection authorizes a setback reduction that conflicts with any other applicable code, easement, fire requirement, or utility clearance.

G(9). Exterior Lighting — proposed addition

RED — NEW §165.11(G)(9)

All new or replacement exterior lighting within the M-2 District shall:

1. Be fully shielded and directed downward;
2. Be designed to prevent direct glare onto residential property and public streets;
3. Not exceed **0.5 foot-candle at a residential zoning boundary**, excluding existing public street lighting; and
4. Use automatic controls or reduced lighting levels during periods when full illumination is unnecessary, except for safety, security, and emergency lighting.

G(10). Screening — proposed addition

RED — NEW §165.11(G)(10)

Exterior mechanical equipment, generators, fuel tanks, refuse areas, substations, and comparable industrial equipment visible from an adjoining residential district or public right-of-way shall be screened through landscaping, berms, walls, fencing, equipment enclosures, or a combination thereof.

Screening shall not interfere with required ventilation, fire access, utility clearance, security, or equipment safety.

G(11). Water Use and Cooling — proposed addition

RED — NEW §165.11(G)(11)

Any M-2 use reasonably expected to use **25,000 gallons or more of water in a twenty-four-hour period** shall provide:

1. Projected average and peak water demand;
2. Identification of the proposed water source;
3. Applicable Iowa Department of Natural Resources permits, approvals, or documentation, with any determination of a **regulated** or **nonregulated** water use made under Iowa Code §455B.261 and applicable implementing rules, not inferred from the City's impact-review threshold alone;[7]
4. An engineering analysis demonstrating adequate water supply without unreasonable interference with existing users;
5. Separate metering of material industrial or cooling-water use where practicable; and
6. Annual water-use reporting to the City.

Once-through cooling using potable municipal water is prohibited for new Major Industrial Facilities.

Closed-loop or non-evaporative cooling shall be preferred. An evaporative system may be approved where professional engineering demonstrates that the alternative will not create an unreasonable demand upon municipal water resources and adequately controls drift, plume, condensation, and icing.

G(12). Electrical Utility Verification — proposed addition

RED — NEW §165.11(G)(12) ●

Before issuance of a building permit for any M-2 use having maximum anticipated electrical demand of five (5) MW or more, the applicant shall provide written documentation from the serving electric utility confirming that:

1. The proposed maximum electrical demand has been disclosed;
2. Required utility infrastructure and service upgrades have been identified sufficiently for the utility to provide service;
3. Responsibility for project-specific utility improvements has been addressed between the utility and customer; and
4. The facility's electrical service may be constructed and operated in accordance with applicable utility, electrical, and safety requirements.

Nothing in this ordinance regulates electric rates, utility service territories, generation procurement, or matters preempted or otherwise committed by law to a public utility, electric cooperative, state agency, or federal authority.

G(13). Fuel, Batteries, Hazardous Materials, and Emergency Response — proposed addition

RED — NEW §165.11(G)(13) ●

A Major Industrial Facility shall provide an Emergency Response Plan to the City and appropriate emergency-response agencies before occupancy.

The plan shall identify, where applicable:

- emergency contacts;
- facility access;
- electrical disconnects;
- generator locations;
- fuel quantities and shutoffs;
- coolant and chemical inventories;
- battery-energy-storage systems;
- fire-suppression systems;
- evacuation procedures;
- spill response; and
- procedures for providing emergency responders access to the site.

The plan shall be reviewed following material facility modifications and at reasonable intervals requested by the City or responding agencies.

G(14). Heat Rejection, Drift, Condensation, and Icing — proposed addition

RED — NEW §165.11(G)(14) ●

No M-2 mechanical exhaust, cooling, or heat-rejection system shall be operated in a manner that causes ice, condensate, cooling-tower drift, mist, or similar discharge to accumulate upon an adjoining property or public right-of-way or create an unreasonable safety hazard.

G(15). Stormwater and Drainage — proposed addition

RED — NEW §165.11(G)(15)

All new M-2 development shall comply with applicable City, state, and federal stormwater requirements.

A Major Industrial Facility shall submit engineered stormwater calculations demonstrating that development will not cause an unlawful or unreasonable increase in off-site flooding, erosion, or drainage impacts, **subject to Iowa Code §364.3 limitations on municipal runoff and topsoil requirements**. An independently imposed more restrictive runoff standard may require the City to bear specified engineering, construction, or property costs, and shall not be presumed authorized by this zoning section.[12]

The property owner shall be responsible for repair of documented project-caused damage to City drainage infrastructure to the extent permitted by law.

G(16). Public Infrastructure — proposed addition

RED — NEW §165.11(G)(16)

Where an M-2 development creates a documented need for road, water, sewer, drainage, emergency-service, or other public improvements beyond existing system capacity, the City may require a development or infrastructure agreement allocating proportionate project-related costs to the applicant to the extent permitted by Iowa law.

This provision shall apply equally to every M-2 development creating the same type and degree of infrastructure burden.

Where substantial construction hauling is reasonably expected to affect City roads, the City may, pursuant to an independently authorized permit or written road-use agreement, require a preconstruction photographic/engineering condition survey, defined haul routes and axle/load limits, reasonable maintenance and restoration terms, postconstruction verification, and proportionate financial security supported by an engineering estimate. No fixed multiplier or new fee is prescribed here without legal review.

G(17). Decommissioning of Major Industrial Facilities — proposed addition

RED — NEW §165.11(G)(17)

An application for a Major Industrial Facility shall include a decommissioning plan describing:

1. Anticipated facility life;
2. Equipment and structures to be removed;
3. Environmental remediation and site restoration;
4. Estimated decommissioning cost;
5. Salvage assumptions; and
6. Proposed method of financial assurance.

A facility shall be considered abandoned when its principal industrial operation has ceased continuously for twelve (12) months, excluding temporary shutdowns caused by reconstruction, documented market

conditions accompanied by evidence of a bona fide intent to resume operations, casualty, litigation, government order, utility interruption, or similar circumstances approved by the Zoning Administrator.

Following abandonment, decommissioning shall be completed within twelve (12) months unless extended for good cause.

The form and amount of financial assurance shall be established in a manner approved by the City Attorney and shall be reasonably related to the documented cost of decommissioning and site restoration.

A qualified professional's decommissioning cost estimate shall be reviewed at least once every three (3) years and following a material expansion or ownership/operator change that materially alters restoration obligations. The City may require adjustment of assurance to the reasonable documented cost of performance, including contingencies, only through a legally authorized and objectively administered instrument.

To the extent enforceable under Iowa law, approval conditions and any separate recorded agreement shall identify responsible owners and operators, notice requirements upon transfer, acceptable successor security, and procedures for default and lawful recovery. Private contracts shall not transfer away obligations imposed by law or approval conditions.

G(18). Material Expansion — proposed addition

RED — NEW §165.11(G)(18) ●

An approved Major Industrial Facility shall require an updated Special Exception review where a proposed modification would increase any of the following by **twenty percent (20%) or more** above the previously approved maximum:

- electrical demand;
- water demand;
- stationary generation capacity;
- energy-storage capacity;
- exterior mechanical-equipment capacity; or
- developed building area.

Crossing a Major Industrial Facility threshold for the first time shall require Special Exception approval regardless of percentage increase.

G(19). Compliance, Inspection, and Corrective Action — proposed addition

RED — NEW §165.11(G)(19) ●

The Zoning Administrator may require documentation reasonably necessary to verify compliance with conditions of approval and the objective standards of this section. Where specialized testing or engineering is reasonably required because of a credible compliance question involving a Major Industrial Facility, the City may require the owner or operator to provide qualified professional testing, subject to applicable law and any fee or cost-recovery provisions adopted by the City.

Each Major Industrial Facility shall submit a brief annual compliance certification to the Zoning Administrator by March 1 for the prior calendar year, identifying the facility owner and operator; material changes in electricity demand, generation equipment, cooling and water use; whether prescribed acoustic tests and generator logs have been maintained; reported material incidents or

violations; and the status of financial assurance. The certification is a compliance statement, not automatic approval of unverified representations.

Where reasonably necessary and authorized by an adopted fee schedule or agreement, the City may retain or approve an independent qualified professional to review applicant studies and required remedial testing at reasonable, documented applicant cost. For complex matters, the City may require a deposit or escrow established through lawful procedures with an accounting and refund of unused amounts. The applicant must not control or direct the independent expert's findings.

Nothing in this section limits other remedies available under Chapter 165 or applicable law.

EXISTING §165.12 SUPPLEMENTARY DISTRICT REGULATIONS (BLACK) AND PROPOSED PROHIBITION (RED)

BLACK — existing §165.12(6), as printed in the preserved zoning scan; not changed by the proposal:

> **6. Proposed Use Not Covered In Ordinance.** Any proposed use not covered in this Ordinance as a Permitted Use or Special Exception shall be referred to the Planning and Zoning Commission for a recommendation as to the proper district in which such use should be permitted and the Ordinance amended as provided in Section 165.39 before a permit is issued for such proposed use.[15]

BLACK — existing §165.12(16), as printed in the preserved zoning scan; not changed by the proposal:

> **16. Subdivision Required.** Every owner of any lot or tract of land who shall subdivide the same into three (3) or more parts on or after the effective date of adoption of the original Subdivision Control Ordinance (June 9, 1975), shall have the plat of such subdivision approved by the City Council as provided in the Subdivision Control Ordinance (Title VI, Chapter 166, City Code of the City of Cascade, Iowa). All re-plats of existing lots in subdivisions shall comply with the procedures and standards of the Subdivision Control Ordinance.[15]

Source caution: The reproduced §165.12(6) and (16) paragraphs are the relevant bookends, **not a reprint of all existing §165.12(1)–(16)**. The separately enacted 2024 fencing amendment to §165.12(12) remains untouched. The City Clerk must verify §165.12's current numbering before adding (17).[16]

RED — NEW PROPOSED §165.12(17) — CITYWIDE HYPERSCALE PROHIBITION

17. Hyperscale Data Centers - Prohibited in All Zoning Districts.

A Hyperscale Data Center, as defined in Section 165.41, is a prohibited land use in every zoning district regulated by this Ordinance within the City of Cascade's lawful zoning jurisdiction. A Hyperscale Data Center shall not be approved as a permitted principal use, accessory use, special exception, conditional use, or as a component of an otherwise permitted use. No zoning, development, building, or other City land-use approval shall be issued for the initial establishment, construction, conversion, or expansion of a facility to a Hyperscale Data Center.

The Major Industrial Facility special-exception review in Section 165.11(D)(8) does not make a Hyperscale Data Center eligible for approval. Project phases and functionally integrated buildings or facilities under a unified development plan shall be reviewed together to determine whether the defined Hyperscale Data Center thresholds are met; separate bona fide facilities shall not be aggregated solely because they are neighbors. Any change to a lawful permitted Data Center that would meet both

Hyperscale Data Center thresholds after the change is prohibited unless and until the governing zoning ordinance is lawfully amended.

This subsection applies within the incorporated City and any territory in which Cascade has validly exercised municipal zoning jurisdiction under Iowa Code Section 414.23. It does not claim authority over unincorporated territory zoned by a county or other land beyond the City's legally established jurisdiction. It does not extinguish lawful existing nonconforming-use rights or displace appeal and variance authority independently granted by state law.[31]

BLUE — legislative-status note (not ordinance text): The Nov. 11 committee **approved the Hyperscale Data Center definition 5-3**, but did **not** separately approve the proposed citywide prohibited-use clause. The City Council must use lawful Chapter 414 procedures, and §414.23 does not confer jurisdiction over all surrounding county land automatically.[31]

EXISTING §165.41 DEFINITIONS (BLACK) AND ADDITIONS (RED)

BLACK — existing introductory language (§165.41), preserved from the source:

165.41 Definitions. For the purpose of this Ordinance, certain terms and words are hereby defined. Words used in the present tense shall include the future; the singular number shall include the plural and the plural the singular; and the word "shall" is mandatory and not directory.[15]

BLUE — Source-layout note only: The entire existing glossary remains in force except as lawfully amended. No new local Building, Structure, Lot, Dwelling Unit, Accessory Use or Construction definition is proposed.

Proposed additions to §165.41

The four committee-approved definitions are reproduced as reported on November 11, 2026, without alternate local rewording. Single canonical source and legal citations. The remaining definitions in this redline are additional **independent proposals**, not reported committee-approved definitions.

The 28 proposed terms below are RED additions to existing §165.41. The City already defines Building, Structure, Lot, Dwelling Unit, and Accessory Use; those definitions are **not added again**. The text below does not delete the other currently enacted definitions. The Nov. 11 committee vote approved the definitions of Data Center, Data Center Business, Sustainable Design, and Hyperscale Data Center; it did **not** adopt this project's other definitions or the separate citywide prohibition.[62730]

RED — NEW §165.41 DEFINITION (1 OF 28) ●

Data Center: A structure or building rehabilitated or constructed to house a group of networked server computers in one physical location in order to centralize the storage, management, and dissemination of data and information pertaining to a particular business, taxonomy, or body of knowledge. A data center business's facility typically includes the mechanical and electrical systems, redundant or backup power supplies, redundant data communications connections, environmental controls, and fire suppression systems.[5]

RED — NEW §165.41 DEFINITION (2 OF 28) ●

Hyperscale Data Center: A Data Center meeting both of the following conditions:

1. **100,000 square feet or larger.**

2. **Electrical demand exceeding 60 megawatts.**[30]

RED — NEW §165.41 DEFINITION (3 OF 28) ●

Data Center Business: An entity whose business among other businesses, is to operate or lease a data center in the city of cascade.[5]

RED — NEW §165.41 DEFINITION (4 OF 28) ●

Sustainable Design: Construction design that reduces negative environmental effects and improves occupant health and comfort through resource conservation, waste minimization, and healthier environments.[26]

RED — NEW §165.41 DEFINITION (5 OF 28) ●

Major Industrial Facility: An M-2 use meeting or exceeding any one threshold in proposed §165.11(D)(8): 5 MW coincident demand, 25,000 gallons in any 24 hours, 2 MW aggregate stationary generation, or 5 MWh storage. Also includes a modification that crosses a threshold.

RED — NEW §165.41 DEFINITION (6 OF 28) ●

Material Expansion: A modification increasing an approved maximum by 20 percent or more for electrical demand, water demand, stationary generation, energy storage, exterior mechanical capacity, or developed building area, or crossing a Major Industrial Facility threshold for the first time.

RED — NEW §165.41 DEFINITION (7 OF 28) ●

Sensitive Receptor: An occupied dwelling, school, licensed child-care facility, hospital, nursing facility, place of worship, public library, public park facility, or comparable occupied use requiring protection from continuous industrial noise.

RED — NEW §165.41 DEFINITION (8 OF 28) ●

Ambient Noise / Baseline Sound: The sound environment at a designated receiving location without the regulated facility's incremental contribution, determined under representative day, night, and meteorological conditions. Ambient noise is not the Iowa air-quality term "ambient air."[810]

RED — NEW §165.41 DEFINITION (9 OF 28) ●

Facility-Attributable Noise: The sound contribution attributable to a regulated M-2 use at the specified receiving point, including reasonably foreseeable simultaneous operation of equipment; exclude unrelated transportation, natural, and third-party background noise through an approved, documented acoustical procedure.[10]

RED — NEW §165.41 DEFINITION (10 OF 28) ●

dBA: A-weighted decibels of sound pressure, measured with calibrated equipment using the applicable professional noise measurement method.

RED — NEW §165.41 DEFINITION (11 OF 28) ●

dBC: C-weighted decibels of sound pressure, which place greater relative weight on low-frequency sound than A-weighting.

RED — NEW §165.41 DEFINITION (12 OF 28) ●

Hourly Average Sound Level (Leq,1h): The energy-equivalent continuous sound-pressure level over sixty (60) minutes, expressed using the specified A- or C-weighting; intermittent contributions are

averaged on an acoustic energy basis, not by taking an arithmetic mean of decibel values. The qualified professional shall identify source operation, background sound, measurement location, and calibration.[10]

RED — NEW §165.41 DEFINITION (13 OF 28) ●

Prominent Tone / Tonal Noise: An identifiable recurring or steady audible frequency component distinguishable from neighboring sound bands when evaluated under the ordinance's specified professional acoustical method.

RED — NEW §165.41 DEFINITION (14 OF 28) ●

Acoustic Study: A qualified professional's documented baseline survey, maximum-design-operation model, receptor analysis, assumptions, equipment schedule, and verification protocol.

RED — NEW §165.41 DEFINITION (15 OF 28) ●

Maximum Anticipated Coincident Electrical Demand: The greatest reasonably anticipated simultaneous electrical load, expressed in MW, for the complete site during normal or design-maximum operation. A sum of independent equipment nameplate ratings does not establish coincident site demand without a documented load calculation.

RED — NEW §165.41 DEFINITION (16 OF 28) ●

Aggregate Stationary Generation Capacity: The sum of rated electrical outputs of all stationary generators covered by the section, in megawatts, excluding fire pumps only where expressly provided.

RED — NEW §165.41 DEFINITION (17 OF 28) ●

Aggregate Electrical-Energy-Storage Capacity: The summed rated stored electrical energy of covered stationary storage systems, in megawatt-hours, using documented nameplate energy ratings.

RED — NEW §165.41 DEFINITION (18 OF 28) ●

Exterior Mechanical Equipment: Permanently located outdoor fans, compressors, cooling equipment, generators, transformers, heat-rejection systems, and comparable mechanical installations serving an M-2 principal use.

RED — NEW §165.41 DEFINITION (19 OF 28) ●

Residential Zoning District Boundary: The official delineation between an M-2 parcel or district and land designated residential by the City's controlling zoning map.

RED — NEW §165.41 DEFINITION (20 OF 28) ●

Sensitive-Receptor Measurement Location: The specified exterior wall, occupied outdoor-use area, or other objectively identified receiving point at a sensitive receptor, documented on an approved site/acoustic plan.

RED — NEW §165.41 DEFINITION (21 OF 28) ●

Once-Through Cooling: A process in which municipal potable water passes through a cooling system once and is discharged rather than being recirculated for heat rejection.

RED — NEW §165.41 DEFINITION (22 OF 28) ●

Closed-Loop Cooling: A recirculating coolant system intended to keep working fluid contained, subject to any limited makeup or process losses specifically disclosed.

RED — NEW §165.41 DEFINITION (23 OF 28) ●

Emergency Response Plan: A written, site-specific plan documenting access, contacts, utility isolation, fuel, chemicals, battery systems, suppression, evacuation, spills, and coordination with first responders.

RED — NEW §165.41 DEFINITION (24 OF 28) ●

Decommissioning: The safe disconnection, dismantling, lawful removal, cleanup, and site restoration work required at the end of a covered facility's life.

RED — NEW §165.41 DEFINITION (25 OF 28) ●

Abandonment: Continuous cessation of a facility's principal approved industrial operation for the period specified in §165.11(G)(17), subject to its listed reasonable exceptions.

RED — NEW §165.41 DEFINITION (26 OF 28) ●

Financial Assurance: A surety, letter of credit, escrow, performance bond, trust, or other legally authorized and enforceable arrangement in a reasonable amount covering documented decommissioning and site restoration duties. The statutory definition applicable to sanitary-disposal facilities under Iowa Code §455B.301(9) does not itself grant the City authority to impose that requirement on M-2 data centers; a separate legal basis must be confirmed by the City Attorney.[13]

RED — NEW §165.41 DEFINITION (27 OF 28) ●

Independent Qualified Professional: An appropriately licensed or credentialed expert with relevant technical competence and no financial or managerial interest that would compromise independent evaluation.

RED — NEW §165.41 DEFINITION (28 OF 28) ●

Material Modification (for monitoring): A change in equipment, site layout, generation operation, or other covered operation reasonably likely to change the regulated environmental or infrastructure impact.

BLUE COPYEDIT REGISTER — CHANGES TO SOURCE TRANSCRIPTION ONLY

Original scan or enacted text	Blue correction / presentation in this document	Classification
B(1)–B(17) were printed as a two-column use/parking table across PDF pages 45–46.	Consolidated into one three-column table with original numbers, use descriptions, and parking/loading ratios.	**FORMAT ONLY**
B(5): "Manufacturing, assemble and processing uses"	"Manufacturing, **assembly** and processing uses" (blue highlighted word)	**GRAMMAR ONLY**, preserves activity category
B(7)–B(15): "or faction thereof"	"or **fraction** thereof" (each occurrence blue)	**SPELLING ONLY**, preserves 5,000-square-foot loading-space ratio
D(4): "6 foot high fence"	"**6-foot-high** fence" (blue)	**PUNCTUATION ONLY**, preserves six-foot height

Original scan or enacted text	Blue correction / presentation in this document	Classification
B(18) adopted 2022: "1space/200 sq ft."	"**1 space/200 sq. ft.**" (blue)	**SPACING / ABBREVIATION ONLY**, preserves 1-per-200 parking ratio
E: lot area, yards and height originally in a small three-column table.	Labeled list preserving None, 25 ft / 25 ft / 20 ft / 20 ft / 60 ft.	**FORMAT ONLY**
Heading capitalization and line breaks from typewritten source.	Standardized bold section headings and readable paragraphs.	**FORMAT ONLY**

Not silently corrected: The scanned D(7) uses the phrase "of any daycare home or daycare business"; D(5) uses "that will not interfere" and B(1)–(4) use "sales service or office floor area." Those phrases may warrant cleanup, but they remain as printed because editing them could change the legal meaning. They require City Attorney review. Likewise, the handwritten strike marks in the scanned D(2) remain **unverified** and are not treated as enacted deletions.

LEGAL STATUS AND ADOPTION CHECKLIST

1. Obtain the **complete current certified M-2 ordinance**, including amendments after the original scan. This document is a comparative draft, not a certification.
2. Preserve already enacted B(18) and G(1); confirm that new B(19), D(8), G(2)–(19) are the next available numbers before publication.
3. Retain the existing F sign provisions and E dimensional rules; the proposed G(8) setbacks are additional **conditional** standards, not a rewriting of ordinary M-2 setbacks.
4. Check D(2) against the enacted ordinance history; handwritten strike marks are not legislation.
5. Review the proposed Chapter 165.41 additions alongside the existing definitions and the state uniformity rule, Iowa Code §414.2.
6. Verify that blue copyedits do not change legal meaning; if the City proposes to rewrite an operative requirement, mark it **red** and adopt it through the required legislative process.
7. This integrated comparison is **NOT a final ordinance**. The clean proposed amendatory language is available separately; counsel should verify enactment mechanics and legal standards.

CHICAGO-STYLE NUMBERED NOTES - DOCUMENTARY SOURCES

The numbered notes below cite the preserved zoning scan, known later municipal amendments, and sources for the November 11 definitions and additional November 18 working proposals. These citations and editing annotations are noncodified background.

Superscript note markers in this proposal point to these numbered sources. Notes are documentary authorities and **are not operative zoning terms**. Project-specific engineering assumptions and proposed numerical thresholds still require independent validation.

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1. Iowa General Assembly, *Iowa Code* §414.1 (2026), municipal regulation of building location and industrial land use, https://www.legis.iowa.gov/docs/code/2026/414.1.pdf. ↩
2. Iowa General Assembly, *Iowa Code* §414.2 (2026), uniformity for each class or kind of building throughout each zoning district, https://www.legis.iowa.gov/docs/code/2026/414.2.pdf. ↩
3. Iowa General Assembly, *Iowa Code* §414.3 (2026), comprehensive-plan and health, safety, conservation, and public-facility considerations, https://www.legis.iowa.gov/docs/code/2026/414.3.pdf. ↩

4. Iowa General Assembly, *Iowa Code* §414.12(2)-(4) (2026), Board of Adjustment special exceptions and variances, including 2025-added subsection (4), https://www.legis.iowa.gov/docs/code/2026/414.12.pdf. ↩

5. Iowa General Assembly, *Iowa Code* §423.3(95)(f) (2026), definitions applicable to data-center tax treatment, https://www.legis.iowa.gov/docs/code/2026/423.3.pdf. ↩↩

6. Iowa General Assembly, *Iowa Code* §103A.3 (2026), construction and building definitions, https://www.legis.iowa.gov/docs/code/2026/103A.3.pdf; City of Cascade, *Chapter 165 Zoning Ordinance*, §165.41, transcription in this repository: https://github.com/ttbakiatwoam/cascade-data-center/blob/master/dataset/cascade-zoning/CHAPTER-165-ZONING-ORDINANCE.md. ↩

7. Iowa General Assembly, *Iowa Code* §455B.261 (2026), water allocation, beneficial use, nonregulated use, and regulated use, https://www.legis.iowa.gov/docs/code/2026/455B.261.pdf. ↩

8. Iowa Department of Natural Resources, *Iowa Administrative Code* 567—22.1, air-quality definitions and emergency generators, https://www.legis.iowa.gov/docs/iac/rule/02-25-2026.567.22.1.pdf. ↩↩

9. Iowa General Assembly, *Iowa Code* §657.1 (2026), nuisance, https://www.legis.iowa.gov/docs/code/2026/657.1.pdf. ↩↩

10. Acoustical Society of America / American National Standards Institute, *ANSI/ASA S12.9*, environmental sound measurement and assessment standards, https://webstore.ansi.org/ (exact current edition and applicable part require acoustical expert verification). ↩↩↩↩

11. Iowa General Assembly, *Iowa Code* §§455B.131, 455B.381, and 455B.411 (2026), air contaminants, hazardous conditions, and waste-management terms, https://www.legis.iowa.gov/docs/code/2026/455B.pdf. ↩

12. Iowa General Assembly, *Iowa Code* §364.3 (2026), limitations on municipal topsoil and stormwater runoff requirements, https://www.legis.iowa.gov/docs/code/2026/364.3.pdf. ↩

13. Iowa General Assembly, *Iowa Code* §455B.301(9) (2026), definition of financial assurance instrument for sanitary disposal projects, https://www.legis.iowa.gov/docs/code/2026/455B.301.pdf. ↩

14. Iowa Department of Natural Resources, *Iowa Administrative Code* 567—60.1 (2026), wastewater and incorporated stormwater definitions, https://www.legis.iowa.gov/docs/iac/rule/567.60.1.pdf. ↩

15. City of Cascade, *Chapter 165 Zoning Ordinance*, original scanned M-2 Heavy Industrial District, "Entire zoning code-1.pdf," source PDF pp. 45–49 (printed code pp. 34–38), preserved at https://github.com/ttbakiatwoam/cascade-data-center/blob/master/sources/cascade-zoning/Entire%20zoning%20code-1.pdf; source transcription at https://github.com/ttbakiatwoam/cascade-data-center/blob/master/dataset/cascade-zoning/CHAPTER-165-ZONING-ORDINANCE.md. The same scan labels its 2009 zero-lot-line proposal a **draft** (PDF p. 6). ↩↩↩↩↩↩

16. City of Cascade, *Ordinance 05-22*, adopted October 10, 2022, adds fitness centers as M-2 B(18), https://github.com/ttbakiatwoam/cascade-data-center/blob/master/dataset/cascade-zoning/ordinances/ORDINANCE-05-22.md; *Ordinance 19-24*, adopted September 9, 2024, amends §165.12(12), including M-2 fencing, https://github.com/ttbakiatwoam/cascade-data-center/blob/master/dataset/cascade-zoning/ordinances/ORDINANCE-19-24.md. ↩↩↩

17. Acoustical Society of America / ANSI, *ASA/ANSI S12.72-2015 (R2025), Procedure for Measuring the Ambient Noise Level in a Room*, https://webstore.ansi.org/standards/asa/asaansis12722015r2025; *ASA/ANSI S12.9-2016/Part 7 (R2025), Measurement of Low-frequency Noise and Infrasound Outdoors in the Presence of Wind and Indoors in Occupied Spaces*, https://webstore.ansi.org/standards/asa/asaansis122016partr2025. Both are measurement frameworks; neither establishes the proposed numeric Cascade limits. ↩

18. International Organization for Standardization, *ISO 1996-2:2017, Acoustics—Description, Measurement and Assessment of Environmental Noise—Part 2*, https://www.iso.org/standard/59766.html. Contains guidance on indoor environmental-noise measurement; the draft's five-foot proximity criterion is a proposed local choice. ↩

19. World Health Organization, *Guidelines for Community Noise* (1999), indoor-bedroom night-noise guidance of 30 dBA Leq, https://www.who.int/publications-detail-redirect/a68672. This guideline is not binding Iowa law. ↩

20. U.S. Department of Energy, *Building Energy Codes Program, Iowa*, https://www.energycodes.gov/status/states/iowa; Iowa Administrative Code 481—301.24, *Residential Energy Code*, https://www.legis.iowa.gov/DOCS/ACO/IAC/LINC/Rule.481.301.24.pdf; Pacific Northwest National Laboratory, *Iowa Amendments to the 2012 IECC*, https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-24946Rev1.pdf. These cover energy, not building acoustics. ↩

21. Federal Highway Administration, *Noise Measurement Handbook*, §6.0, Table 6-1, FHWA-HEP-18-065 (2018), https://www.fhwa.dot.gov/Environment/noise/measurement/handbook.cfm. Typical building attenuation factors address highway traffic noise and are not site-specific industrial acoustic results. ↩

22. City of Cascade, *Code of Ordinances*, §6-12-8, "Building Code Adopted," Ordinance 02-22 (August 22, 2022), https://codelibrary.amlegal.com/codes/cascadeia/latest/cascade_ia/0-0-0-4159; U.S. Department of Energy, *Guide to Determining Climate Regions by County* (2015), https://www.energy.gov/eere/buildings/articles/building-america-best-practices-series-volume-73-guide-determining-climate. ↩

23. Federal Highway Administration, *Noise Measurement Handbook*, section 6 (building outdoor-to-indoor noise reduction), https://www.fhwa.dot.gov/Environment/noise/measurement/handbook.cfm; ASTM International, *ASTM E966*, facade field sound attenuation, https://store.astm.org/standards/e966; Iowa Supreme Court, *Singer v. City of Orange City*, No. 23-1600 (Dec. 20, 2024), https://www.iowacourts.gov/iowa-courts/supreme-court/supreme-court-opinions/case/23-1600. The City Attorney should review access and enforcement authority. ↩

24. Federal Highway Administration, *Construction Noise Handbook*, §5.3–5.4 (baseline measurement and comparable before/after locations and conditions), https://www.fhwa.dot.gov/Environment/noise/construction_noise/handbook/handbook05.cfm; *Noise Measurement Handbook*, discussion of measurement comparability and uncertainty, https://www.fhwa.dot.gov/Environment/noise/measurement/handbook.cfm; Iowa General Assembly, *Iowa Code* §657.1 (2026), nuisance and civil remedies, https://www.legis.iowa.gov/docs/code/2026/657.1.pdf. This draft evidence standard is a proposed local ordinance provision, not an established precondition to an Iowa-law nuisance claim. ↩↩

25. ASHRAE, *ANSI/ASHRAE Standard 55-2023, Thermal Environmental Conditions for Human Occupancy*, https://www.ashrae.org/technical-resources/bookstore/standard-55-thermal-environmental-conditions-for-human-occupancy; ASHRAE, *Technical FAQs*, "recommended indoor temperature and humidity levels for homes," https://www.ashrae.org/technical-resources/technical-faqs (comfort varies by humidity, clothing, activity, and season, so no universal 65–75°F required range); ASHRAE, *2023 Handbook—HVAC Applications*, ch. 49, "Noise and Vibration Control," https://handbook.ashrae.org/Handbooks/A23/SI/A23_Ch49/a23_ch49_si.aspx (document actual HVAC operating conditions and distinguish equipment from background sound). ↩

26. Iowa General Assembly, *Iowa Code* §103A.3(25) (2026), **official sustainable-design definition** (the November 11 committee wording is a paraphrase), https://www.legis.iowa.gov/docs/code/2026/103A.3.pdf; §103A.8B addresses the state sustainable-design standards program, https://www.legis.iowa.gov/docs/code/2026/103A.8B.pdf. ↩

27. City of Cascade, historical *Chapter 165 Zoning Ordinance*, §165.41(1), (8), (12), (30), and (51), repository transcription; verify current codification against the City Clerk's authoritative text. ↩

28. Iowa General Assembly, *Iowa Code* §455B.131(1)–(3), (6), (8), (11) (2026), state **air-quality** definitions, https://www.legis.iowa.gov/docs/code/2026/455B.131.pdf. ↩

29. Noncodified research reference: 86-term Iowa-law/dictionary comparison and the November 11, 2026 separate §165.41 companion draft. These references do not override adopted zoning or state law; the companion is an alternative drafting vehicle, not a second enactment. ↩

30. **Committee vote record, not codified.** Participant correction of November 11, 2026 vote: **Hyperscale Data Center** was approved **5–3**, with "100,000 square feet or larger" and "Electrical demand exceeding 60 megawatts." Earlier project transcriptions saying **"more than 100,000"** or **"annually"** were incorrect. Exactly 100,000 square feet satisfies the size threshold; exactly 60 MW does not satisfy "exceeding." The text does not specify a calendar year, a method of calculating electrical demand, or whether floor area means gross building area or footprint. Any substantive calendar-year measurement amendment needs a separate committee vote. See the reported November 11 record; official minutes pending. ↩↩

31. Iowa General Assembly, *Iowa Code* §§414.1–414.4 (municipal land-use zoning), §414.12 (board of adjustment and variances), and §414.23 (territory beyond city limits), https://www.legis.iowa.gov/docs/code/2026/414.1.pdf, https://www.legis.iowa.gov/docs/code/2026/414.2.pdf, https://www.legis.iowa.gov/docs/code/2026/414.12.pdf, https://www.legis.iowa.gov/docs/code/2026/414.23.pdf. Existing Cascade zoning §165.12(6) addresses uses not covered by the ordinance; the proposed express citywide prohibition is intended to prevent reclassification through that general procedure without a lawful zoning amendment. The City Attorney must review the legal basis and any existing nonconforming-use rights. ↩↩

28 proposed §165.41 terms — full text and sources

Omitted-definition notice (for the November 18 meeting): The earlier 86-term research glossary is **not** a proposal to enact 86 new local definitions. Terms already defined in Cascade §165.41 or in Iowa statutory/administrative programs were removed from the *local amendment proposal* to avoid inconsistent duplications. **They are enumerated after the 28 terms.** These existing rules are scattered across Iowa Code Chapters **103A, 414, 423, 455B, 657** and 567 IAC environmental rules — **not all in Chapter 414**. Three terms (Data Center, Data Center Business and Sustainable Design) were nonetheless expressly approved for draft local wording on November 11; this does not incorporate state tax/building-code eligibility automatically.

Vote status: 1-4 approved for advisory working draft only (participant-reported); numbers 5-28 are independently drafted options and require separate committee action. "Approved" does not mean City Council adopted law.

1. Data Center

PARTICIPANT-REPORTED COMMITTEE-APPROVED DRAFT TERM

Data Center: A structure or building rehabilitated or constructed to house a group of networked server computers in one physical location in order to centralize the storage, management, and dissemination of data and information pertaining to a particular business, taxonomy, or body of knowledge. A data center business's facility typically includes the mechanical and electrical systems, redundant or backup power supplies, redundant data communications connections, environmental controls, and fire suppression systems. [source 10]

Source 10:

Iowa General Assembly, *Iowa Code* §423.3(95)(f) (2026), definitions applicable to data-center tax treatment, https://www.legis.iowa.gov/docs/code/2026/423.3.pdf.

2. Hyperscale Data Center

PARTICIPANT-REPORTED COMMITTEE-APPROVED DRAFT TERM

Hyperscale Data Center: A Data Center meeting both of the following conditions:

1. **100,000 square feet or larger.**
2. **Electrical demand exceeding 60 megawatts.** [source 30]

Source 30:

Committee vote record, not codified. Participant correction of November 11, 2026 vote: **Hyperscale Data Center** was approved **5-3**, with "100,000 square feet or larger" and "Electrical demand exceeding 60 megawatts." Earlier project transcriptions saying **"more than 100,000"** or **"annually"** were incorrect. Exactly 100,000 square feet satisfies the size threshold; exactly 60 MW does not satisfy "exceeding." The text does not specify a calendar year, a method of calculating electrical demand, or whether floor area means gross building area or footprint. Any substantive calendar-year measurement amendment needs a separate committee vote. See the reported November 11 record; official minutes pending.

3. Data Center Business

PARTICIPANT-REPORTED COMMITTEE-APPROVED DRAFT TERM

Data Center Business: An entity whose business among other businesses, is to operate or lease a data center in the city of cascade. [source 10]

Source 10:

Iowa General Assembly, *Iowa Code* §423.3(95)(f) (2026), definitions applicable to data-center tax treatment, https://www.legis.iowa.gov/docs/code/2026/423.3.pdf.

4. Sustainable Design

PARTICIPANT-REPORTED COMMITTEE-APPROVED DRAFT TERM

Sustainable Design: Construction design that reduces negative environmental effects and improves occupant health and comfort through resource conservation, waste minimization, and healthier environments. [source 26]

Source 26:

Iowa General Assembly, *Iowa Code* §103A.3(25) (2026), **official sustainable-design definition** (the November 11 committee wording is a paraphrase), https://www.legis.iowa.gov/docs/code/2026/103A.3.pdf; §103A.8B addresses the state sustainable-design standards program, https://www.legis.iowa.gov/docs/code/2026/103A.8B.pdf.

5. Major Industrial Facility

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Major Industrial Facility: An M-2 use meeting or exceeding any one threshold in proposed §165.11(D)(8): 5 MW coincident demand, 25,000 gallons in any 24 hours, 2 MW aggregate stationary generation, or 5 MWh storage. Also includes a modification that crosses a threshold.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

6. Material Expansion

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Material Expansion: A modification increasing an approved maximum by 20 percent or more for electrical demand, water demand, stationary generation, energy storage, exterior mechanical capacity, or developed building area, or crossing a Major Industrial Facility threshold for the first time.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

7. Sensitive Receptor

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Sensitive Receptor: An occupied dwelling, school, licensed child-care facility, hospital, nursing facility, place of worship, public library, public park facility, or comparable occupied use requiring protection from continuous industrial noise.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

8. Ambient Noise / Baseline Sound

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Ambient Noise / Baseline Sound: The sound environment at a designated receiving location without the regulated facility's incremental contribution, determined under representative day, night, and meteorological conditions. Ambient noise is not the Iowa air-quality term "ambient air." [source 7] [source 6]

Source 7:

Iowa Department of Natural Resources, *Iowa Administrative Code* 567—22.1, air-quality definitions and emergency generators, https://www.legis.iowa.gov/docs/iac/rule/02-25-2026.567.22.1.pdf.

Source 6:

Acoustical Society of America / American National Standards Institute, *ANSI/ASA S12.9*, environmental sound measurement and assessment standards, https://webstore.ansi.org/ (exact current edition and applicable part require acoustical expert verification).

9. Facility-Attributable Noise

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Facility-Attributable Noise: The sound contribution attributable to a regulated M-2 use at the specified receiving point, including reasonably foreseeable simultaneous operation of equipment; exclude unrelated transportation, natural, and third-party background noise through an approved, documented acoustical procedure. [source 6]

Source 6:

Acoustical Society of America / American National Standards Institute, *ANSI/ASA S12.9*, environmental sound measurement and assessment standards, https://webstore.ansi.org/ (exact current edition and applicable part require acoustical expert verification).

10. dBA

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

dBA: A-weighted decibels of sound pressure, measured with calibrated equipment using the applicable professional noise measurement method.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

11. dBC

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

dBC: C-weighted decibels of sound pressure, which place greater relative weight on low-frequency sound than A-weighting.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

12. Hourly Average Sound Level (Leq,1h)

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Hourly Average Sound Level (Leq,1h): The energy-equivalent continuous sound-pressure level over sixty (60) minutes, expressed using the specified A- or C-weighting; intermittent contributions are averaged on an acoustic energy basis, not by taking an arithmetic mean of decibel values. The qualified professional shall identify source operation, background sound, measurement location, and calibration. [source 6]

Source 6:

Acoustical Society of America / American National Standards Institute, *ANSI/ASA S12.9*, environmental sound measurement and assessment standards, https://webstore.ansi.org/ (exact current edition and applicable part require acoustical expert verification).

13. Prominent Tone / Tonal Noise

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Prominent Tone / Tonal Noise: An identifiable recurring or steady audible frequency component distinguishable from neighboring sound bands when evaluated under the ordinance's specified professional acoustical method.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

14. Acoustic Study

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Acoustic Study: A qualified professional's documented baseline survey, maximum-design-operation model, receptor analysis, assumptions, equipment schedule, and verification protocol.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

15. Maximum Anticipated Coincident Electrical Demand

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Maximum Anticipated Coincident Electrical Demand: The greatest reasonably anticipated simultaneous electrical load, expressed in MW, for the complete site during normal or design-maximum operation. A sum of independent equipment nameplate ratings does not establish coincident site demand without a documented load calculation.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

16. Aggregate Stationary Generation Capacity

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Aggregate Stationary Generation Capacity: The sum of rated electrical outputs of all stationary generators covered by the section, in megawatts, excluding fire pumps only where expressly provided.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

17. Aggregate Electrical-Energy-Storage Capacity

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Aggregate Electrical-Energy-Storage Capacity: The summed rated stored electrical energy of covered stationary storage systems, in megawatt-hours, using documented nameplate energy ratings.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

18. Exterior Mechanical Equipment

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Exterior Mechanical Equipment: Permanently located outdoor fans, compressors, cooling equipment, generators, transformers, heat-rejection systems, and comparable mechanical installations serving an M-2 principal use.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

19. Residential Zoning District Boundary

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Residential Zoning District Boundary: The official delineation between an M-2 parcel or district and land designated residential by the City's controlling zoning map.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

20. Sensitive-Receptor Measurement Location

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Sensitive-Receptor Measurement Location: The specified exterior wall, occupied outdoor-use area, or other objectively identified receiving point at a sensitive receptor, documented on an approved site/acoustic plan.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

21. Once-Through Cooling

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Once-Through Cooling: A process in which municipal potable water passes through a cooling system once and is discharged rather than being recirculated for heat rejection.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

22. Closed-Loop Cooling

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Closed-Loop Cooling: A recirculating coolant system intended to keep working fluid contained, subject to any limited makeup or process losses specifically disclosed.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

23. Emergency Response Plan

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Emergency Response Plan: A written, site-specific plan documenting access, contacts, utility isolation, fuel, chemicals, battery systems, suppression, evacuation, spills, and coordination with first responders.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

24. Decommissioning

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Decommissioning: The safe disconnection, dismantling, lawful removal, cleanup, and site restoration work required at the end of a covered facility's life.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

25. Abandonment

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Abandonment: Continuous cessation of a facility's principal approved industrial operation for the period specified in §165.11(G)(17), subject to its listed reasonable exceptions.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

26. Financial Assurance

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Financial Assurance: A surety, letter of credit, escrow, performance bond, trust, or other legally authorized and enforceable arrangement in a reasonable amount covering documented decommissioning and site restoration duties. The statutory definition applicable to sanitary-disposal facilities under Iowa Code §455B.301(9) does not itself grant the City authority to impose that requirement on M-2 data centers; a separate legal basis must be confirmed by the City Attorney. [source 13]

Source 13:

Iowa General Assembly, *Iowa Code* §455B.301(9) (2026), definition of financial assurance instrument for sanitary disposal projects, https://www.legis.iowa.gov/docs/code/2026/455B.301.pdf.

27. Independent Qualified Professional

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Independent Qualified Professional: An appropriately licensed or credentialed expert with relevant technical competence and no financial or managerial interest that would compromise independent evaluation.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

28. Material Modification (for monitoring)

INDEPENDENT PROPOSED TERM — NOT COMMITTEE-APPROVED

Material Modification (for monitoring): A change in equipment, site layout, generation operation, or other covered operation reasonably likely to change the regulated environmental or infrastructure impact.

Source: independent Cascade M-2 technical/operational proposal, supported by draft §165.11 and technical research. No claim of an already codified Iowa zoning definition. Full source redline.

Omitted or nonproposed glossary terms

> **Important distinction:** "Removed" means *not proposed as a new local definition*; it does not repeal or delete state laws or existing Cascade definitions. The 52 items below are Iowa statutory/administrative reference terms remaining outside the 28 proposed local entries. Their legal scope ranges from **building regulation, state tax, air pollution, hazardous waste and water allocation** to general land use. They are **not all statewide zoning definitions**. The prior 86-term collection additionally contained five legal-principle explanations, not freestanding Iowa statutory definitions.

Already in Cascade zoning (do not redefine without an identified reason)

Existing local term	Already enacted location
Accessory Use	Cascade §165.41(1)
Building (Structure)	Cascade §165.41(8)
Dwelling Unit	Cascade §165.41(12)
Lot	Cascade §165.41(30)
Structure (Building)	Cascade §165.41(51)

52 state-law terms omitted from the proposed 28

Each term links to the source used in the 86-term research glossary. Verify each statute's limited legal context before applying it to land-use zoning.

Iowa term not reproposed	Primary Iowa-law or rule reference
Site preparation activities	423.3.pdf
Building	103A.3.pdf
Construction	103A.3.pdf
Equipment	103A.3.pdf
Owner	103A.3.pdf
Structure	103A.3.pdf
Development	18B.2.pdf
Land development regulations	18B.2.pdf
Air contaminant	455B.131.pdf
Air contaminant source	455B.131.pdf
Air pollution	455B.131.pdf
Emission	455B.131.pdf

Iowa term not reproposed	Primary Iowa-law or rule reference
Greenhouse gas	455B.131.pdf
Major stationary source	455B.131.pdf
Ambient air	02-25-2026.567.22.1.pdf
Emergency generator	02-25-2026.567.22.1.pdf
Emission limitation / emission standard	02-25-2026.567.22.1.pdf
Hazardous condition	455B.381.pdf
Hazardous substance — release response	455B.381.pdf
Hazardous substance — waste management	455B.411.pdf
Hazardous waste	455B.411.pdf
Disposal (hazardous material)	455B.411.pdf
Industrial waste	455B.171.pdf
Aquifer	455B.261.pdf
Beneficial use	455B.261.pdf
Depleting use	455B.261.pdf
Floodplains	455B.261.pdf
Floodway	455B.261.pdf
Groundwater	455B.261.pdf
Nonregulated use	455B.261.pdf
Permit (water allocation)	455B.261.pdf
Regulated use	455B.261.pdf
Surface water	455B.261.pdf
Waste (water allocation)	455B.261.pdf
Watercourse	455B.261.pdf
Stormwater	567.60.1.pdf
Stormwater discharge associated with industrial activity	567.60.1.pdf
Nuisance	657.1.pdf
Building regulations	103A.3.pdf
Performance objective	103A.3.pdf
Aquifer storage and recovery	455B.261.pdf

Iowa term not reproposed	Primary Iowa-law or rule reference
Basin (groundwater)	455B.261.pdf
Diffused waters	455B.261.pdf
Permittee (water allocation)	455B.261.pdf
Closure (sanitary disposal project)	455B.301.pdf
Closure plan (sanitary disposal project)	455B.301.pdf
Financial assurance instrument (sanitary disposal project)	455B.301.pdf
Solid waste	455B.301.pdf
Cleanup (hazardous substance)	455B.381.pdf
Best management practice (BMP)	567.60.1.pdf
Construction permit (wastewater)	567.60.1.pdf
Fugitive dust	02-25-2026.567.22.1.pdf

Five additional zoning-law concepts retained as research, not local definitions

Special exception; Variance; Public welfare / general welfare; Zoning uniformity; Stormwater controls. These are concepts whose meaning and legal authority derive from applicable state and local procedures, not five newly proposed §165.41 terms. [Source table](https://github.com/ttbakiatwoam/cascade-data-center/blob/master/dataset/policy/38_IOWA_STATE_AND_M2_DEFINITIONS_2026-11-03.md).

Master research sources: 86-term research register and November 11 complete redline. Reported draft votes: four canonical definitions.

Generator and Iowa zoning research

November 18, 2026 - Diesel Generation, Air Standards, and Iowa Municipal Zoning Comparisons

For the Cascade Data Center Advisory Committee, 7:00 p.m. November 18, 2026
Research cutoff: November 16, 2026. **Independent research briefing; not an approved committee position or legal/engineering opinion.**

Read this before discussing a Tier 4 mandate

A committee participant has reported **approximately 15 proposed diesel generator sets** associated with Simple Mining's **approximately 40 MW** preliminary data-center concept. The 15-unit count, electrical output, fuel, maker/model, manufacture date, engine displacement, certificate, air permit and intended operating use have **not** been corroborated by a final generator schedule or issued permit. An illustrative 40 MW / 15 calculation equals **2.67 MW per unit**, **not** proof of individual generator rating, Tier 4 status, 40 MW of installed generator capacity, or how redundancy is allocated. The 40 MW figure has been presented as **facility demand**, not necessarily diesel backup capacity. The project scope remains preliminary.

Decision-critical finding: Neither Iowa law nor federal law assigns a stationary diesel engine's emissions tier solely by generator count or by facility megawatts. Section **40 CFR 60.4202** provides **Tier 2 or Tier 3 pathways** for many newly manufactured **emergency** stationary compression-ignition engines; **40 CFR 60.4201** and **60.4204** cover **nonemergency** engines and can point to other standards. Correct selection requires **each engine's construction/manufacture/model year, horsepower or engine kW (not merely alternator output), liters per cylinder, EPA family/certificate and emergency-use classification**. Federal §60.4202 · §60.4205 · §60.4204.

Do not conflate: 1. **Exhaust certification limits** for NOx, hydrocarbons, CO and particulate matter, generally expressed in **grams per engine kilowatt-hour (g/kW-hr)**, with different model-year and displacement categories. 2. **Fuel sulfur content**, expressed as **parts per million by weight** in 40 CFR 1090.305 (generally **15 ppm** for stationary engines **under 30 liters/cylinder** following §60.4207(b)). The **§60.4207(d)** fuel rule for engines **30 or more liters/cylinder** separately specifies **1,000 ppm**; do **not** blanket-apply 15 ppm before determining displacement and other applicable law/permit conditions. 3. **Outdoor ambient-air standards**, such as **NO2 100 ppb = 0.100 ppm, one-hour; SO2 75 ppb = 0.075 ppm, one-hour; CO 35 ppm, one-hour / 9 ppm, eight-hour**. These are concentration standards **at ambient receptors**, with specific regulatory statistical forms, **not diesel stack outlet limits**. EPA NAAQS table. Iowa **567 IAC 22.11** incorporates national ambient standards; it does not generally set a universal generator NOx-in-exhaust ppm ceiling.

Federal law: EPA provisions to include verbatim as the official-text appendix

The packet's regulatory appendix must preserve the federal government's own published section PDFs **unaltered and identified by edition**, rather than a generated or paraphrased imitation. A **July 1, 2025 CFR edition** is appended for the following sections, with **current 2026 eCFR cross-check links** provided. Any 2026 intervening amendment controls over the older printed edition; City counsel should verify the effective text before legislating.

Official section	Topic and decision
40 CFR 60.4200	Applicability to stationary compression-ignition engines, including construction and modification
40 CFR 60.4201	Manufacturer certification - nonemergency engines
40 CFR 60.4202	Manufacturer certification - emergency engines; **not automatically Tier 4**
40 CFR 60.4204	Operator emissions - **nonemergency** engines
40 CFR 60.4205	Operator emissions - **emergency** engines
40 CFR 60.4207	**Diesel fuel ppm:** §60.4207(b) cross-references the ULSD 15-ppm standard; §60.4207(d) specifies a distinct **1,000 ppm** fuel sulfur rule for engines at least 30 L/cylinder
40 CFR 1090.305	**15 ppm** sulfur by weight in ULSD; cetane index at least 40 **or** aromatics at most 35% by volume
40 CFR 60.4209	Applicable **non-resettable hour meter** requirements
40 CFR 60.4211	Operate to manufacturer specifications; **§60.4211(f)** limits emergency classification, testing, and restricted nonemergency dispatch
40 CFR 60.4214	Notification and hour records/operating reason as applicable
40 CFR 63.6590	**RICE NESHAP Subpart ZZZZ**, including circumstances where meeting NSPS Subpart IIII satisfies applicable NESHAP duties

Emergency-use conditions: Under §60.4211(f), genuine emergency operation is not subject to a uniform annual hour ceiling, but routine maintenance/readiness operation is ordinarily covered by the **100 hours per calendar year** provisions; a limited **50 hours of nonemergency operation is part of, not added to, that 100 hours**, and cannot generally be used for peak shaving or ordinary economic dispatch, except the tightly specified §60.4211(f)(3)(i) grid-protection conditions. Engine classification can change if nonemergency-use restrictions are breached.

Regulatory hierarchy: Federal engine certification and NESHAP are not replaced by a municipal zoning definition; a local Tier 4-only requirement, if considered, would be an **additional proposed local policy** requiring an identified legal rationale, feasibility analysis, compatibility with Iowa Code Chapter 414, and separate committee/Council consideration.

Federal/Iowa ppm and ppb quick reference - highlight at the meeting

Substance / metric	Numerical value	Units and location	Source / important qualification
Diesel ULSD sulfur (<30 L/cyl category)	**15 ppm**	Fuel sulfur, **by weight; not stack NOx**	40 CFR 60.4207(b) -> 1090.305(b)
Diesel fuel >=30 L/cylinder - specific provision	**1,000 ppm**	Fuel sulfur max per gallon for §60.4207(d); review other controlling fuel/permit rules	40 CFR 60.4207(d)

Substance / metric	Numerical value	Units and location	Source / important qualification
Nitrogen dioxide (NO2), one hour	**100 ppb = 0.100 ppm**	Outdoor ambient **air concentration**; EPA regulatory 98th percentile, averaged 3 years	EPA NAAQS / Iowa 567-22.11
Nitrogen dioxide, annual	**53 ppb = 0.053 ppm**	Ambient annual mean	Same
Sulfur dioxide (SO2), one hour	**75 ppb = 0.075 ppm**	Ambient 99th percentile of daily one-hour maxima, averaged 3 years	Same
Carbon monoxide (CO), one hour	**35 ppm**	Ambient; not to be exceeded more than once per year	Same
Carbon monoxide, eight hours	**9 ppm**	Ambient; not to be exceeded more than once per year	Same
Ozone, eight hours	**0.070 ppm**	Ambient ozone standard, not generator certification	Same
Diesel engine NOx, CO, hydrocarbons, PM certification	**Not a single universal ppm number**	Usually **g/kW-hr** by model year, rating and displacement	40 CFR 60.4201-4205
PM2.5, annual / 24-hour	**9 / 35 ug/m3**	Ambient **mass concentration**, not ppm	EPA NAAQS; averaging rules apply

Scientific caution: A fuel sulfur value of 15 ppm does **not** mean NOx at the stack is 15 ppm. No valid direct conversion exists from a g/kWh engine limit to a stack ppm without engine fuel/exhaust composition, operating load, flow, basis, oxygen correction and testing conditions. Ambient ppm is evaluated at receptors by dispersion and background analysis. Applying ambient NAAQS as exhaust limits or converting Tier rating to stack ppm with an arbitrary factor would be technically indefensible.

Iowa law and the actual permitting question

The packet's verbatim Iowa-law appendix draws **relevant Chapter 22 pages** from the official Iowa Administrative Code Chapter 22, June 10, 2026 archive (IAC text dated January 7, 2026); paper reproduction will identify the actual edition and page ranges.

- **567 IAC 22.1 - definition of "emergency generator":** limited to providing emergency power in an unforeseen utility interruption; it excludes ordinary utility peaking and generators operated while utility power is available. **Iowa's definition can be materially narrower than an operator's casual label "backup".**
- **567 IAC 22.1(1)-(3):** stationary-source **air construction permits** generally apply before construction or modification unless a specified exemption applies. A 15-engine installation should not be presumed exempt or permit-free.
- **567 IAC 22.1 - potential-to-emit (PTE) calculation:** special **500 hours/year** for certain historical operation of emergency generators **is a PTE calculation assumption, not permission to run for 500 hours**; alternative 8,760 or federally enforceable hour caps may apply. For new generators, require DNR's project-specific PTE method and permit classification.
- **567 IAC 23.1(2) and 23.1(4):** Iowa adopts federal NSPS and hazardous-air-pollutant requirements by reference (with state-specific adoption dates/exceptions). Check the current Subpart IIII and ZZZZ

entries and Iowa permit applicability; do not assume "Tier 4" appears as an Iowa generic diesel-generator mandate.

- **567 IAC 22.11:** Iowa's ambient air standards refer to federal **40 CFR Part 50** standards; the pollutant ppm/ppb values in this memo are **ambient** values, not direct Iowa generator stack concentration thresholds.
- **Iowa DNR permit controls:** An individual issued permit can create narrower **unit-specific** limitations (lb/hr, tons/year, hours, fuel limits, stack parameters, monitoring) and may require modeling cumulative emissions from all installed engines. A general 15-generator source permit, permit-to-construct or Title V/PSD classification cannot be resolved without a complete specification, emissions inventory and enforceable operating hours. Iowa DNR air construction permit guidance.

Iowa's fuel/ambient standards are not a substitute for the applicable federal engine-certification emissions limits. Present federal and Iowa authorities **separately**; do not characterize Iowa as setting a universal "NOx 15 ppm diesel generator" standard.

Iowa CITY zoning comparisons - clauses for highlighted consideration

Status matters: "Adopted" means an enacted City ordinance; "draft" means proposed text with **no assumed legal effect**. County drafts are isolated in the next subsection. The following concise source-linked summaries identify **paragraphs to highlight**, not wholesale legislative endorsements.

Central City - November 2026 public draft, NOT enacted

Primary reference: The user-supplied 10-page *Zoning_Code_Amendment.pdf* (pages cited below), also linked in the project's city comparison. November 10 reporting on release/status. The document has blanks for ordinance number, readings, signatures and adoption date.

- **Pages 1-2, Sec. 2 & Secs. 3-4:** tiers: **Tier 1 <=30,000 sq ft; Tier 2 >30,000 and <100,000; Tier 3 >=100,000** cumulative gross floor area. Tier 1 proposed M-1/M-2; Tier 2 and Tier 3 M-2. **No >60 MW condition**. Related server rooms serving another principal use are excluded from the proposed definition.
- **Page 4, General Industrial Standards 6: 65 dBA** combined operational noise at **any industrial site property line**, with a site-specific acoustic-method measurement; other generally applicable stricter noise restrictions remain. The draft provides an emergency-operation exception.
- **Page 5, General Industrial Standards 8:** routine testing and required maintenance, commissioning and load-bank testing proposed **8:00 a.m. to 6:00 p.m., Monday-Friday**, excluding federal holidays, and subject to attenuation and 65 dBA limits; genuine emergencies may operate at any time. **A zoning time window is not a substitute for EPA operating-hour and emissions requirements.**
- **Page 3, General Industrial Standards 1-4:** proportional water/wastewater, electricity, infrastructure, and site review, with specific written findings and cost attribution.
- **Pages 6-7, Supplemental Standards 4, 6, 8:** acoustical studies for all three tiers, disclosure of cooling and water, and tier transition on cumulative expansion.
- **Pages 8-10:** separate **proposed** Chapter 90 emergency water-service restriction procedure, with written determination and an expedited hearing; not a generally enacted law shown by this blank draft.

Comparison: Central City's draft permits even Tier 3 data centers in M-2, whereas the separate **independent Cascade proposal** would prohibit facilities meeting the two-part Hyperscale definition citywide. The Central City tier system **cannot** be described as an Iowa legal default.

City of Palo - Ordinance 93-2026, adopted EU-1 data center district

Official source: City of Palo Ordinance 93-2026, §165.16A, particularly **Permitted Principal Use; Permitted Accessory Uses and Structures; Major Site Plan Required; Additional Information**. The ordinance establishes an **EU-1 exclusive-use district** for both large and small Data Centers. **On-site standby or backup power generation** is an accessory use; a facility generally requires EU-1 rezoning and a major site plan. This is a **dedicated zoning district**, not a 100,000-ft2-and-60-MW citywide ban. Do not assume EU-1 alone imposes a Tier 4 federal emissions classification.

City of Dubuque - 2026 enacted hyperscale MORATORIUM only

Official source: City data center information and Ordinance 37-26. The temporary moratorium applies when **any one** of the following is met: **>=100,000 sq ft OR >75 MW OR >=5,000 servers OR >50 gpm** process/cooling water. The **OR** design differs from Cascade's committee-approved **AND** definition. The moratorium is **temporary**, not an enacted permanent citywide ban, and does not supply standalone diesel-generator ppm limits.

City of Council Bluffs - separate existing use categories and 2026 proposal

Source: September 14, 2026 City Council presentation. Data centers were already described as permitted uses in **I-2/P-I**. A **<=30 MW / >30 MW** small/large split was discussed, **not verified enacted**. The City's discussion is useful for **load-based tiering**, but does not itself verify a new adopted generator-testing rule.

City of Decorah - M-3 proposal; final enactment unresolved

Sources: September 21 hearing notice and October 5 proceedings. The proposal treats Data Centers as an **M-3 industrial principal use** subject to additional standards. The final 2026 text and enactment have not been independently verified; do not cite it as operative code or an air-permit mandate without confirmation.

Separate county comparisons - NOT municipal City ordinances

- **Jones County enacted Ordinance 2025-02:** original comparison copy. Reported 60 dB daytime / 50 dB nighttime continuous noise controls, site/cooling review, emergency provisions, and closure plans; no **Tier IV diesel mandate identified in the enacted 2025 text**.
- **Jones County November 10, 2026 P&Z work-session draft:** official packet. Proposed **Section 6(Q)** would require **"Teir IV backup generators"** (spelling as submitted). It is **proposal**, not automatically adopted County law.
- **Dubuque County 2026 citizen-submitted draft** §16-705 contains a **proposed** Tier 4-only position, weekday 10 a.m.-3 p.m. testing, monitoring/modeling; **not enacted**. Do not merge it with the City of Dubuque's separate moratorium.

Public discussion checklist - specific documents to request

1. **Generator inventory:** each engine's manufacturer/model, nameplate **mechanical kW/HP and electrical output**, year/serial, EPA engine family and emissions certificate, displacement **liters per cylinder**, fuel sulfur specification, catalytic/DPF/SCR/urea hardware and exhaust-stack design.
2. **Intended purpose:** emergency-only backup, routine readiness tests/load-bank testing, nonemergency peak shaving, dispatch into the grid, or continuous/on-site generation? Provide **one-hour and annual operating scenarios** for each unit plus concurrent-operation assumptions.
3. **Air permits:** Iowa DNR pre-application consultation, each application number, PSD/Title V/major-source screening, and demonstration whether federal NSPS/RICE NESHAP applies, together with any federally enforceable limits.

4. **Emission calculations: NOx, CO, SO2, VOC, PM2.5, PM10, HAP** in **g/kW-hr, lb/hr and tons/year**, including startup and simultaneous testing. Show chemical-speciation and source test basis and avoid confusing ambient NO2 ppm with stack NOx.
5. **Dispersion and receptors:** AERMOD or accepted permitting analysis for simultaneous stacks, nearby homes/schools, meteorology, background concentrations and NAAQS compliance. Require documentary evidence rather than new arbitrary municipal ppm limits.
6. **Testing and noise:** expected maintenance frequency, duration, number of generators simultaneously operated, generator acoustics at sensitive homes, mufflers/barriers and EPA hourly operating categories.
7. **Fire and fuel:** inventory and tank containment, spill prevention, emergency-response access, and stormwater impacts.
8. **Legal scope:** identify where City zoning and general nuisance controls apply **in addition to** state/federal air permits, without assigning the City powers reserved for Iowa DNR or the EPA.

Documentary source and as-of notes

This brief is prepared for the **November 18, 2026** committee agenda using the federal regulations available as of **November 16, 2026**, the official **2025 federal CFR printed edition** for the verbatim Subpart IIII facsimiles, a dated federal Part 1090 facsimile, and the Iowa Administrative Code **June 10, 2026 Chapter 22 archive** for verbatim state pages, the supplied **10-page Central City working draft**, and the official/comparator sources linked above. The federal **2026 eCFR** and Iowa legislative website should be consulted for any subsequent amendments. City attorney, Iowa DNR permitting staff, and qualified air-modeling experts should review the applicable requirements before an ordinance is presented for enactment.

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and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011; 86 FR 34357, June 29, 2021]

EMISSION STANDARDS FOR MANUFACTURERS

§ 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 1039.102, 1039.104, 1039.105, 1039.107, and 1039.115 and 40 CFR part 1039, appendix I, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the appropriate Tier 2 emission standards for new marine CI engines as described in 40 CFR part 1042, appendix I, for all pollutants, for the same displacement and rated power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) of this section may be certified to the

provisions of 40 CFR part 1042 for commercial engines that are applicable for the engine's model year, displacement, power density, and maximum engine power if the engines will be used solely in either or both of the following locations:

(1) Remote areas of Alaska; and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

(h) Stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with auxiliary emission control devices (AECDs) as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR part 1039, appendix I, while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011; 81 FR 44219, July 7, 2016; 86 FR 34357, June 29, 2021]

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The Tier 2 emission standards for new nonroad CI engines for the appropriate rated power as described in 40 CFR part 1039, appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 for model year 2007 engines; and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a rated power greater than or equal to 37 KW (50 HP), the Tier 2 or Tier 3 emission standards for new nonroad CI engines for the same rated power as described in 40 CFR part 1039, appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the Tier 2 emission standards as described in 40 CFR part 1039, appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the appropriate Tier 2 emission standards for new marine CI engines as described in 40 CFR part 1042, appendix I, for all pollutants, for the same displacement and rated power:

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provisions of 40 CFR part 1042 for commercial engines that are applicable for the engine's model year, displacement, power density, and maximum engine power if the engines will be used solely in either or both of the following locations:

(1) Remote areas of Alaska; and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

(h) Stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with auxiliary emission control devices (AECDs) as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR part 1039, appendix I, while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011; 81 FR 44219, July 7, 2016; 86 FR 34357, June 29, 2021]

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The Tier 2 emission standards for new nonroad CI engines for the appropriate rated power as described in 40 CFR part 1039, appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 for model year 2007 engines; and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a rated power greater than or equal to 37 KW (50 HP), the Tier 2 or Tier 3 emission standards for new nonroad CI engines for the same rated power as described in 40 CFR part 1039, appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105 beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the Tier 2 emission standards as described in 40 CFR part 1039, appendix I, for all pollutants and the smoke standards as specified in 40 CFR 1039.105.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the appropriate Tier 2 emission standards for new marine CI engines as described in 40 CFR part 1042, appendix I, for all pollutants, for the same displacement and rated power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI ICE identified in paragraphs (a) and (c) of this section may be certified to the provisions of 40 CFR part 1042 for commercial engines that are applicable for the engine's model year, displacement, power density, and maximum engine power if the engines will be used solely in either or both of the locations identified in paragraphs (g)(1) and (2) of this section. Engines that would be subject to the Tier 4 standards in 40 CFR part 1042 that are used solely in either or both of the locations identified in paragraphs (g)(1) and (2) of this section may instead continue to be certified to the previous tier of standards in 40 CFR part 1042. The previous tier is Tier 3 in most cases; however, the previous tier is Tier 2 if there are no Tier 3 standards specified for engines of a certain size or power rating.

(1) Remote areas of Alaska; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016; 86 FR 34358, June 29, 2021; 88 FR 4471, Jan. 24, 2023]

§ 60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§ 60.4201 and 60.4202 during the certified emissions life of the engines.

[76 FR 37968, June 28, 2011]

EMISSION STANDARDS FOR OWNERS AND OPERATORS

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with

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(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI ICE identified in paragraphs (a) and (c) of this section may be certified to the provisions of 40 CFR part 1042 for commercial engines that are applicable for the engine's model year, displacement, power density, and maximum engine power if the engines will be used solely in either or both of the locations identified in paragraphs (g)(1) and (2) of this section. Engines that would be subject to the Tier 4 standards in 40 CFR part 1042 that are used solely in either or both of the locations identified in paragraphs (g)(1) and (2) of this section may instead continue to be certified to the previous tier of standards in 40 CFR part 1042. The previous tier is Tier 3 in most cases; however, the previous tier is Tier 2 if there are no Tier 3 standards specified for engines of a certain size or power rating.

(1) Remote areas of Alaska; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016; 86 FR 34358, June 29, 2021; 88 FR 4471, Jan. 24, 2023]

§ 60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§ 60.4201 and 60.4202 during the certified emissions life of the engines.

[76 FR 37968, June 28, 2011]

EMISSION STANDARDS FOR OWNERS AND OPERATORS

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with

the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the Tier 1 emission standards in 40 CFR part 1042, appendix I.

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

(f) Owners and operators of stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with AECDs as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR part 1039, appendix I, while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016; 86 FR 34358, June 29, 2021]

§60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI

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the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the Tier 1 emission standards in 40 CFR part 1042, appendix I.

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in § 60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in § 60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

(f) Owners and operators of stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with AECDs as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR part 1039, appendix I, while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016; 86 FR 34358, June 29, 2021]

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI

ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the Tier 1 emission standards in 40 CFR part 1042, appendix I.

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 86 FR 34358, June 29, 2021]

§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

FUEL REQUIREMENTS FOR OWNERS AND OPERATORS

§60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) [Reserved]

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

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ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the Tier 1 emission standards in 40 CFR part 1042, appendix I.

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 86 FR 34358, June 29, 2021]

§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

FUEL REQUIREMENTS FOR OWNERS AND OPERATORS

§60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) [Reserved]

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder must use diesel fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

(e) Stationary CI ICE that have a national security exemption under § 60.4200(d) are also exempt from the fuel requirements in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013; 85 FR 78463, Dec. 4, 2020]

OTHER REQUIREMENTS FOR OWNERS AND OPERATORS

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§ 60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in § 60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion

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(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder must use diesel fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

(e) Stationary CI ICE that have a national security exemption under § 60.4200(d) are also exempt from the fuel requirements in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013; 85 FR 78463, Dec. 4, 2020]

OTHER REQUIREMENTS FOR OWNERS AND OPERATORS

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§ 60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in § 60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion

engine equipped with a diesel particulate filter to comply with the emission standards in § 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

COMPLIANCE REQUIREMENTS

§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §§ 60.4201(a) through (c) and 60.4202(a), (b), and (d) using the certification procedures required in 40 CFR part 1039, subpart C, and must test their engines as specified in 40 CFR part 1039. For the purposes of this subpart, engines certified to the standards in Table 1 to this subpart shall be subject to the same certification procedures required for engines certified to the Tier 1 standards in 40 CFR part 1039, appendix I. For the purposes of this subpart, engines certified to the standards in Table 4 to this subpart shall be subject to the same certification procedures required for engines certified to the Tier 1 standards in 40 CFR part 1039, appendix I, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §§ 60.4201(d) and (e) and 60.4202(e) and (f) using the certification procedures required in 40 CFR part 1042, subpart C, and must test their engines as specified in 40 CFR part 1042.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135 and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not

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stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

(j) Stationary CI ICE manufacturers may equip their stationary CI internal combustion engines certified to the emission standards in 40 CFR part 1039 with AECDs for qualified emergency situations according to the requirements of 40 CFR 1039.665. Manufacturers of stationary CI ICE equipped with AECDs as allowed by 40 CFR 1039.665 must meet all the requirements in 40 CFR 1039.665 that apply to manufacturers. Manufacturers must document that the engine complies with the Tier 1 standard in 40 CFR part 1039, appendix I, when the AECD is activated. Manufacturers must provide any relevant testing, engineering analysis, or other information in sufficient detail to support such statement when applying for certification (including amending an existing certificate) of an engine equipped with an AECD as allowed by 40 CFR 1039.665.

(k) Manufacturers of any size may certify their emergency stationary CI internal combustion engines under this section using assigned deterioration factors established by EPA, consistent with 40 CFR 1039.240 and 1042.240.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 81 FR 44219, July 7, 2016; 86 FR 34358, June 29, 2021]

§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR part 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in § 60.4204(a) or § 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in § 60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified to emission standards for the same model year and maximum engine power as described in 40 CFR parts 1039 and 1042, as applicable. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in § 60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in § 60.4204(b) or § 60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in § 60.4205(c), you must comply by purchasing an engine certified to the emission standards in § 60.4204(b), or

§60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and NO_X and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_X and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3), is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for the purpose specified in paragraph (f)(2)(i) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal,

state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii)–(iii) [Reserved]

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after

you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

(h) The requirements for operators and prohibited acts specified in 40 CFR 1039.665 apply to owners or operators of stationary CI ICE equipped with AECDs for qualified emergency situations as allowed by 40 CFR 1039.665.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013; 81 FR 44219, July 7, 2016; 86 FR 34359, June 29, 2021; 87 FR 48605, Aug. 10, 2022]

Testing Requirements for Owners and Operators

§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder. Alternatively, stationary CI ICE that are complying with Tier 2 or Tier 3 emission standards as described in 40 CFR part 1039, appendix I, or with Tier 2 emission standards as described in 40 CFR part 1042, appendix I, may follow the testing procedures specified in § 60.4213, as appropriate.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE subject to Tier 2 or Tier 3 emission standards as described in 40 CFR part 1039, appendix I, or Tier 2 emission standards as described in 40 CFR part 1042, appendix I, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \quad \text{(Eq. 1)}$$

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$$F_o = \frac{0.209 F_d}{F_c} \quad \text{(Eq. 4)}$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \quad \text{(Eq. 5)}$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 − 15 percent O_2, the defined O_2 correction value, percent.

(iii) Calculate the NO_X and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad \text{(Eq. 6)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

$\%CO_2$ = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_X mass per unit output emission limitation, convert the concentration of NO_X in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \quad \text{(Eq. 7)}$$

Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_X concentration in ppm.

$1.912x10^{-3}$ = Conversion constant for ppm NO_X to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{\text{KW-hour}} \quad \text{(Eq. 8)}$$

Where:

ER = Emission rate in grams per KW-hour.

C_{adj} = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

Notification, Reports, and Records for Owners and Operators

§60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section. Beginning on February 26, 2025,

submit the notification electronically according to paragraph (g) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purpose specified in § 60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v)–(vi) [Reserved]

(vii) Hours spent for operation for the purposes specified in § 60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in § 60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 60.4. Beginning on February 26, 2025, submit annual report electronically according to paragraph (g) of this section.

(e) Owners or operators of stationary CI ICE equipped with AECDs pursuant to the requirements of 40 CFR 1039.665 must report the use of AECDs as required by 40 CFR 1039.665(e).

(f) Beginning on February 26, 2025, within 60 days after the date of completing each performance test required

by this subpart, you must submit the results of the performance test required under this section following the procedures specified in paragraphs (f)(1) and (2) of this section.

(1) *Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert) at the time of the test.* Submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), according to paragraph (g) of this section. The data must be submitted in a file format generated using the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) *Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test.* The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI according to paragraph (g) of this section.

(g) If you are required to submit notifications or reports following the procedure specified in this paragraph (g), you must submit notifications or reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report or notification, you must submit a complete file in the format specified in this subpart, including information claimed to be CBI, to the EPA following the procedures in paragraphs (g)(1) and (2) of this section. Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph (g).

(1) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address *oaqpscbi@epa.gov*, and as described in paragraph (g) of this section, should include clear CBI markings. ERT files should be flagged to the attention of the Group Leader, Measurement Policy Group; all other files should be flagged to the attention of the Stationary Compression Ignition Internal Combustion Engine Sector Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email *oaqpscbi@epa.gov* to request a file transfer link.

(2) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404–02), OAQPS, U.S. Environmental Protection Agency, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711. ERT files should be sent to the attention of the Group Leader, Measurement Policy Group, and all other files should be sent to the attention of the Stationary Compression Ignition Internal Combustion Engine Sector Lead. The mailed CBI material should be double wrapped and clearly

marked. Any CBI markings should not show through the outer envelope.

(h) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with that reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (h)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(i) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with that reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (i)(1) through (5) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

(j) Any records required to be maintained by this subpart that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain

electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013; 81 FR 44219, July 7, 2016; 87 FR 48606, Aug. 10, 2022; 89 FR 70512, Aug. 30, 2024]

SPECIAL REQUIREMENTS

§60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205.

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_X in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in remote areas of Alaska may meet the requirements of this subpart by manufacturing and installing engines meeting the Tier 2 or Tier 3 emission standards described in 40 CFR part 1042 for the same model year, displacement, and maximum engine power, as appropriate, rather than the otherwise applicable requirements of 40 CFR part 1039, as indicated in §§60.4201(f) and 60.4202(g).

(c) Manufacturers, owners, and operators of stationary CI ICE that are located in remote areas of Alaska may choose to meet the applicable emission standards for emergency engines in §§60.4202 and 60.4205, and not those for non-emergency engines in §§60.4201 and 60.4204, except that for 2014 model year and later nonemergency CI ICE, the owner or operator of any such engine must have that engine certified as meeting at least the Tier 3 PM standards identified in appendix I of 40 CFR part 1039 or in 40 CFR 1042.101.

(d) The provisions of §60.4207 do not apply to owners and operators of pre-

(*e.g.*, refining, importing, blending). An example is an officer of a corporation under the laws of incorporation of the state in which the company is incorporated. Examples of positions in non-corporate business structures that qualify are owner, chief executive officer, president, or operations manager.

Retail outlet means any establishment at which fuel is sold or offered for sale for use in motor vehicles, nonroad engines, nonroad vehicles, or nonroad equipment, including locomotive or marine engines.

Retailer means any person who owns, leases, operates, controls, or supervises a retail outlet.

RFG covered area means the geographic areas specified in §1090.285 in which only RFG may be sold or dispensed to ultimate consumers.

RFG opt-in area means an area that becomes a covered area under 42 U.S.C. 7545(k)(6) as listed in §1090.285.

Round (rounded, rounding) has the meaning given in §1090.50.

Sampling strata means the following types of areas sampled during a survey:

(1) Densely populated areas.

(2) Transportation corridors.

(3) Rural areas.

State Implementation Plan (SIP) means a plan approved or promulgated under 42 U.S.C. 7410 or 7502.

Summer gasoline means gasoline that is subject to the RVP standards in §1090.215.

Summer season or *high ozone season* means the period from June 1 through September 15 for retailers and WPCs, and May 1 through September 15 for all other persons, or an RVP control period specified in a SIP if it is longer.

Tank truck means a truck used for transporting fuel, fuel additive, or regulated blendstock.

Transmix means any of the following mixtures of fuels, which no longer meet the specifications for a fuel that can be used or sold as a fuel without further processing:

(1) Pipeline interface that is not cut into the adjacent products.

(2) Mixtures produced by unintentionally combining gasoline and distillate fuels.

(3) Mixtures of gasoline and distillate fuel produced from normal business operations at terminals or pipelines, such as gasoline or distillate fuel drained from a tank or drained from piping or hoses used to transfer gasoline or distillate fuel to tanks or trucks, or gasoline or distillate fuel discharged from a safety relief valve that are segregated for further processing.

Transmix blender means any person who owns, leases, operates, controls, or supervises a transmix blending facility.

Transmix blending facility means any facility that produces gasoline by blending transmix into PCG under §1090.500.

Transmix distillate product (TDP) means the diesel fuel blendstock that is produced when transmix is separated into blendstocks at a transmix processing facility.

Transmix gasoline product (TGP) means the gasoline blendstock that is produced when transmix is separated into blendstocks at a transmix processing facility.

Transmix processing facility means any facility that produces TGP or TDP from transmix by distillation or other refining processes, but does not produce gasoline or diesel fuel by processing crude oil or other products.

Transmix processor means any person who owns, leases, operates, controls, or supervises a transmix processing facility in the United States. A transmix processor is a fuel manufacturer.

Ultra-low-sulfur diesel (ULSD) means diesel fuel that is certified to meet the standards in §1090.305.

United States means the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

Volume additive reconciliation (VAR) period means the following:

(1) For an automated detergent blending facility, the VAR period is a time period lasting no more than 31 days or until an adjustment to a detergent concentration rate that increases the initial rate by more than 10 percent, whichever occurs first. The concentration setting for a detergent injector may be adjusted by more than 10 percent above the initial rate without terminating the VAR period, provided the purpose of the change is to correct a batch misadditization prior to the

to make up for those from the ethanol 1.0 psi waiver reinstatement.

(d) EPA will publish a document in the FEDERAL REGISTER announcing the approval of any ethanol 1.0 psi waiver reinstatement request and its effective date.

(e) Upon the effective date for the reinstatement of the ethanol 1.0 psi waiver in a subject area (or portion of a subject area) included in an approved request, the ethanol 1.0 psi waiver will apply in such subject area.

[89 FR 14774, Feb. 29, 2024]

Subpart D—Diesel Fuel and ECA Marine Fuel Standards

§ 1090.300 Overview and general requirements.

(a) Diesel fuel is subject to the ULSD standards in §1090.305, except as follows:

(1) Alternative sulfur standards apply for 500 ppm LM diesel fuel and ECA marine fuel as specified in §§1090.320 and 1090.325, respectively.

(2) Exemption provisions apply as specified in subpart G of this part.

(b) Diesel fuel additives must meet the requirements in §1090.310.

(c) A diesel fuel manufacturer or diesel fuel additive manufacturer must demonstrate compliance with the standards in this subpart by measuring fuel parameters in accordance with subpart N of this part.

(d) All the standards in this part apply to diesel fuel and diesel fuel additives on a per-gallon basis.

(e)(1) No person may produce, import, sell, offer for sale, distribute, offer to distribute, supply, offer for supply, dispense, store, transport, or introduce into commerce any diesel fuel, ECA marine fuel, or diesel fuel additive that does not meet any standard set forth in this subpart.

(2) Notwithstanding paragraph (e)(1) of this section, an importer may import diesel fuel that does not comply with the standards set forth in this subpart if all the following conditions are met:

(i) The importer offloads the imported diesel fuel into one or more tanks that are physically located at the same import facility at which the imported diesel fuel first arrives in the United States or at a facility to which the imported diesel fuel is directly transported from the import facility at which the imported diesel fuel first arrived in the United States.

(ii) The importer uses the imported diesel fuel to produce one or more new batches of diesel fuel.

(iii) The importer certifies each new batch of diesel fuel under §1090.1000(c) and demonstrates that it complies with the standards in this subpart by measuring fuel parameters in accordance with subpart N of this part before custody or title to each new batch of diesel fuel is transferred.

(f) No fuel or fuel additive manufacturer may introduce into commerce diesel fuel or diesel fuel additives that are not "substantially similar" under 42 U.S.C. 7545(f)(1) or permitted under a waiver granted under 42 U.S.C. 7545(f)(4).

(g) Distillate global marine fuel that does not qualify for an exemption under §1090.650 is subject to the standards, requirements, and prohibitions that apply for ULSD under this part.

(h) No person may introduce used motor oil, or used motor oil blended with diesel fuel, into the fuel system of model year 2007 or later diesel fuel motor vehicles or engines or model year 2011 or later nonroad diesel fuel vehicles or engines (not including locomotive or marine engines).

[85 FR 78469, Dec. 4, 2020, as amended at 90 FR 4346, Jan. 15, 2025]

§ 1090.305 ULSD standards.

(a) *Overview.* Except as specified in §1090.300(a), diesel fuel must meet the ULSD per-gallon standards of this section.

(b) *Sulfur standard.* Maximum sulfur content of 15 ppm.

(c) *Cetane index or aromatic content.* Diesel fuel must meet one of the following standards:

(1) Minimum cetane index of 40.

(2) Maximum aromatic content of 35 volume percent.

§ 1090.310 Diesel fuel additives standards.

(a) Except as specified in paragraph (b) and (c) of this section, diesel fuel additives blended into diesel fuel that is subject to the standards in §1090.305

must have a sulfur concentration less than or equal to 15 ppm on a per-gallon basis.

(b) Diesel fuel additives do not have to comply with paragraph (a) of this section if all the following conditions are met:

(1) The additive is added to diesel fuel in a quantity less than 1.0 volume percent of the resultant mixture of additive and diesel fuel.

(2) The PTD for the diesel fuel additive complies with the requirements in §1090.1120(b).

(3) The additive is not commercially available as a retail product for ultimate consumers.

(c) The provisions of this section do not apply to additives used in 500 ppm LM diesel fuel or ECA marine fuel.

[85 FR 78469, Dec. 4, 2020, as amended at 90 FR 4346, Jan. 15, 2025]

§1090.315 Heating oil, kerosene, ECA marine fuel, and jet fuel provisions.

Heating oil, kerosene, ECA marine fuel, or jet fuel must not be sold for use in motor vehicles or nonroad equipment and are not subject to the ULSD standards in §1090.305 unless it is also designated as ULSD under §1090.1015(a).

[85 FR 78469, Dec. 4, 2020, as amended at 90 FR 4346, Jan. 15, 2025]

§1090.320 500 ppm LM diesel fuel standards.

(a) *Overview.* 500 ppm LM diesel fuel produced or distributed by a transmix processor or pipeline operator under §1090.515 must meet the per-gallon standards of this section.

(b) *Sulfur standard.* Maximum sulfur content of 500 ppm.

(c) *Cetane index or aromatic content.* The standard for cetane index or aromatic content in §1090.305(c).

§1090.325 ECA marine fuel standards.

(a) *Overview.* Except as specified in paragraph (c) of this section, ECA marine fuel must meet the per-gallon standards of this section.

(b) *Sulfur standard.* Maximum sulfur content of 1,000 ppm.

(c) *Exceptions.* The standards in paragraph (b) of this section do not apply to the following:

(1) Residual fuel made available for use in a steamship or C3 marine vessel if the U.S. government exempts or excludes the vessel from MARPOL Annex VI fuel standards. Diesel fuel and other distillate fuel used in diesel fuel engines operated on such vessels is subject to the standards in this section instead of the standards in §1090.305 or §1090.320.

(2) Distillate global marine fuel that is exempt under §1090.650.

[85 FR 78469, Dec. 4, 2020, as amended at 90 FR 4347, Jan. 15, 2025]

Subpart E [Reserved]

Subpart F—Transmix and Pipeline Interface Provisions

§1090.500 Gasoline produced from blending transmix into PCG.

(a) *Applicability.* (1) Except as specified in paragraph (a)(2) of this section, a transmix blender that blends transmix into PCG must comply with the requirements of this section.

(2) Small volumes of fuel that are captured in pipeline sumps or trapped in pipeline pumps or valve manifolds and that are injected back into batches of gasoline or diesel fuel are exempt from the requirements in this section.

(b) *Requirements.* (1) The distillation end-point of the resultant transmix-blended gasoline must not exceed 437 degrees Fahrenheit.

(2) The resultant transmix-blended gasoline must meet the downstream sulfur per-gallon standard in §1090.205(c) and the applicable RVP standard in §1090.215.

(3) The transmix blender must comply with the recordkeeping requirements in §1090.1255.

(4) The transmix blender must maintain and follow a written quality assurance program that meets the requirements of paragraph (c) of this section.

(5) In the event that the test result for any sample collected under the quality assurance program specified in paragraph (c) of this section indicates that the gasoline does not comply with any of the applicable standards in this part, the transmix blender must do all the following:

(i) Immediately take steps to stop the sale of the gasoline that was sampled.

CHAPTER 22
CONTROLLING AIR POLLUTION

[Prior to 7/1/83, DEQ Ch 3]
[Prior to 12/3/86, Water, Air and Waste Management[900]]

Chapter rescission date pursuant to Iowa Code section 17A.7: 6/19/29

567—22.1(455B) Definitions and permit requirements for new or existing stationary sources. For the purpose of these rules and the rules in 567—Chapters 20 through 35, the following terms shall, unless otherwise noted, have the meaning indicated in this chapter. Additional definitions potentially applicable to this chapter are set forth in 567—Chapters 21 and 23. The definitions set out in Iowa Code sections 455B.101, 455B.131, and 455B.411 are incorporated verbatim in these rules.

"12-month rolling period" means a period of 12 consecutive months determined on a rolling basis with a new 12-month period beginning on the first day of each calendar month.

"Act" means the Clean Air Act (42 U.S.C. Sections 7401, et seq.), as amended through November 15, 1990.

"Air quality standard" means an allowable level of air contaminant or atmospheric air concentration established by the commission.

"Ambient air" means that portion of the atmosphere, external to buildings, to which the general public has access.

"Anaerobic lagoon," for purposes of air quality rules in 567—Chapters 20 through 35, means an impoundment, the primary function of which is to store and stabilize organic wastes. The impoundment is designed to receive wastes on a regular basis and the design waste loading rates are such that the predominant biological activity in the impoundment will be anaerobic. An anaerobic lagoon does not include:

1. A runoff control basin that collects and stores only precipitation-induced runoff from an open feedlot feeding operation; or
2. A waste slurry storage basin that receives waste discharges from confinement feeding operations and that is designed for complete removal of accumulated wastes from the basin at least semiannually; or
3. Any anaerobic treatment system that includes collection and treatment facilities for all off-gases.

"Biodiesel fuel" means a renewable, biodegradable, mono alkyl ester combustible liquid fuel derived from agricultural plant oils or animal fat, such as but not limited to soybean oil. For purposes of this definition, "biodiesel fuel" must also meet the specifications of American Society for Testing and Material Specifications (ASTM) D 6751-02, "Standard Specification for Biodiesel Fuel (B100) Blend Stock for Distillate Fuels," and be registered with the U.S. Environmental Protection Agency as a fuel and a fuel additive under Section 211(b) of the Act.

"Chimney" or *"stack"* means any flue, conduit or duct permitting the discharge or passage of air contaminants into the open air or constructed or arranged for this purpose.

"Combustion for indirect heating" means the combustion of fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to, the products of combustion.

"Control equipment" means any equipment that has the function to prevent the formation of or the emission to the atmosphere of air contaminants from any fuel burning, incinerator or process equipment.

"Country grain elevator" means the same as defined in 22.10(1).

"Diesel fuel" means a low sulfur fuel oil that complies with the specifications for grade 1-D or 2-D, as defined by the ASTM D 975-02, "Standard Specification for Diesel Fuel Oils," grade 1-GT or 2-GT, as defined by ASTM D 2880-00, "Standard Specification for Gas Turbine Fuel Oils," or grade 1 or 2, as defined by ASTM D 396-02, "Standard Specification for Fuel Oils."

1. For purposes of the air quality rules contained in Title II, and unless otherwise specified, diesel fuel may contain a blend of up to 2.0 percent biodiesel fuel, by volume, as "biodiesel fuel" is defined in this rule.

2. The department shall consider air pollutant emissions calculations for the biodiesel fuel blends specified in paragraph "1" to be equivalent to the air pollutant emissions calculations for unblended diesel fuel.

3. Construction permits or operating permits issued under 567—Chapter 22 that restrict equipment fuel use to diesel fuel shall be considered by the department to include the biodiesel fuel blends specified in paragraph "1," unless otherwise specified or in a permit issued under this chapter.

"Electric furnace" means a furnace in which the melting and refining of metals are accomplished by means of electrical energy.

"Electronic format," "electronic submittal," or *"electronic submittal format,"* for purposes of 567—Chapters 20 through 35, means a software, Internet-based, or other electronic means specified by the department for submitting air quality information or fees to the department related to but not limited to applications, certifications, determination requests, emissions inventories, forms, notifications, payments, permit applications and registrations. References to these information submittal methods in 567—Chapters 20 through 35 may, as specified by the department, include electronic submittal as stated in the applicable rules.

"Emergency generator" means any generator of which the sole function is to provide emergency backup power during an interruption of electrical power from the electric utility. An emergency is an unforeseeable condition that is beyond the control of the owner or operator. An emergency generator does not include:

1. Peaking units at electric utilities.

2. Generators at industrial facilities that typically operate at low rates but are not confined to emergency purposes.

3. Any standby generators that are used during time periods when power is available from the electric utility.

"Emission limitation" or *"emission standard"* means a requirement established by a state, local government, or the administrator that limits the quantity, rate or concentration of emissions of air pollutants on a continuous basis, including any requirements that limit the level of opacity, prescribe equipment, set fuel specifications or prescribe operation or maintenance procedures for a source to ensure continuous emission reduction.

"EPA conditional method" means any method of sampling and analyzing for air pollutants that has been validated by the administrator but that has not been published as an EPA reference method.

"EPA reference method" means the following methods used for performance tests and continuous monitoring systems:

1. Performance test (stack test). A stack test shall be conducted according to EPA reference methods specified in 40 CFR 51, Appendix M (as amended or corrected through March 29, 2023); 40 CFR 60, Appendix A (as amended or corrected through March 29, 2023); 40 CFR 61, Appendix B (as amended or corrected through October 7, 2020); and 40 CFR 63, Appendix A (as amended or corrected through March 29, 2023).

2. Continuous monitoring systems. Minimum performance specifications and quality assurance procedures for performance evaluations of continuous monitoring systems are as specified in 40 CFR 60, Appendix B (as amended or corrected through June 28, 2023); 40 CFR 60, Appendix F (as amended or corrected through March 29, 2023); 40 CFR 75, Appendix A (as amended or corrected through August 30, 2016); 40 CFR 75, Appendix B (as amended or corrected through August 30, 2016); and 40 CFR 75, Appendix F (as amended or corrected through August 30, 2016).

"Equipment" means the same as defined in 567—21.1(455B).

"Excess air" means that amount of air supplied in addition to the theoretical quantity necessary for complete combustion of all fuel or combustible waste material present.

"Existing equipment" means the same as defined in 567—21.1(455B).

"Foundry cupola" means a stack-type furnace used for melting of metals consisting of but not limited to the furnace proper, tuyeres, fans or blowers, tapping spout, charging equipment, gas cleaning devices and other auxiliaries.

"Fugitive dust" means any airborne solid particulate matter emitted from any source other than a flue or stack.

"Grain processing" means the equipment, or the combination of different types of equipment, used in the processing of grain to produce a product primarily for wholesale or retail sale for human or animal consumption, including the processing of grain for production of biofuels, except for "feed mill equipment" as defined in 567—22.10(455B).

"Grain storage elevator" means any plant or installation at which grain is unloaded, handled, cleaned, dried, stored, or loaded and that is located at any wheat flour mill, wet corn mill, dry corn mill (human consumption), rice mill, or soybean oil extraction plant that has a permanent grain storage capacity (grain storage capacity that is inside a building, bin, or silo) of more than 35,200 m^3 (ca. 1 million U.S. bushels).

"Greenhouse gas" means carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

"Heating value" means the heat released by combustion of one pound of waste or fuel measured in Btu on an as-received basis. For solid fuels, the heating value shall be determined by use of ASTM Standard D 2015-66.

"Incinerator" means a combustion apparatus designed for high temperature operation in which solid, semisolid, liquid or gaseous combustible refuse is ignited and burned efficiently and from which the solid residues contain little or no combustible material.

"Initiation of construction, installation or alteration" means significant permanent modification of a site to install equipment, control equipment or permanent structures. Not included are activities incident to preliminary engineering, environmental studies, or acquisition of a site for a facility.

"New equipment" means the same as defined in 567—21.1(455B).

"Number 1 fuel oil" and *"number 2 fuel oil,"* also known as "distillate oil," mean fuel oil that complies with the specifications for fuel oil number 1 or fuel oil number 2, as defined by the ASTM D 396-02, "Standard Specification for Fuel Oils."

1. For purposes of the air quality rules contained in Title II, and unless otherwise specified, number 1 fuel oil or number 2 fuel oil may contain a blend of up to 2.0 percent biodiesel fuel, by volume, as "biodiesel fuel" is defined in this rule.

2. The department shall consider air pollutant emissions calculations for the biodiesel fuel blends specified in paragraph "1" to be equivalent to the air pollutant emissions calculations for unblended number 1 fuel oil or unblended number 2 fuel oil.

3. Construction permits or operating permits issued under this chapter that restrict equipment fuel use to number 1 fuel oil or number 2 fuel oil shall be considered by the department to include the biodiesel fuel blends specified in paragraph "1," unless otherwise specified or in a permit issued under this chapter.

"One-hour period" means any 60-minute period commencing on the hour.

"Particulate matter" (except for the purposes of new source performance standards as defined in 40 CFR 60) means any material, except uncombined water, that exists in a finely divided form as a liquid or solid at standard conditions and includes gaseous emissions that condense to liquid or solid form as measured by EPA-approved reference methods.

"Plan documents" means the reports, proposals, preliminary plans, survey and basis of design data, general and detail construction plans, profiles, specifications and all other information pertaining to equipment.

"PM_{10}" means particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by an EPA-approved reference method.

"$PM_{2.5}$" means particulate matter as defined in this rule with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers as measured by an EPA-approved reference method.

"Potential to emit" means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the administrator. This term does not alter or affect the use of this term for any

other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations relating to acid rain.

For the purpose of determining potential to emit for country grain elevators, the provisions set forth in 22.10(2) shall apply.

For purposes of calculating potential to emit for emergency generators, "maximum capacity" means one of the following:

1. 500 hours of operation annually, if the generator has actually been operated less than 500 hours per year for the past five years.
2. 8,760 hours of operation annually, if the generator has actually been operated more than 500 hours in one of the past five years.
3. The number of hours specified in a state or federally enforceable limit.

If the source is subject to new source construction permit review, then potential to emit is defined as stated above or as established in a federally enforceable permit.

"Privileged communication" means information other than air pollutant emissions data, the release of which would tend to affect adversely the competitive position of the owner or operator of the equipment.

"Process" means any action, operation or treatment, and all methods and forms of manufacturing or processing, that may emit smoke, particulate matter, gaseous matter or other air contaminant.

"Process weight" means the total weight of all materials introduced into any source operation. Solid fuels charged will be considered as part of the process weight, but liquid and gaseous fuels and combustion air will not.

"Process weight rate" means continuous or long-run steady-state source operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof; or for a cyclical or batch source operation, the total process weight for a period that covers a complete operation or an integral number of cycles, divided by the number of hours of actual process operation during such a period. Where the nature of any process or operation, or the design of any equipment is such as to permit more than one interpretation of this definition, the interpretation that results in the minimum value for allowable emission shall apply.

"Six-minute period" means any one of the ten equal parts of a one-hour period.

"Smoke" means gas-borne particles resulting from incomplete combustion, consisting predominantly, but not exclusively, of carbon, and other combustible material, or ash, that form a visible plume in the air.

"Source operation" means the last operation preceding the emission of an air contaminant and that results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants but is not an air pollution control operation.

"Standard conditions" means a temperature of 68°F and a pressure of 29.92 inches of mercury absolute.

"Standard cubic foot" or *"SCF"* means the volume of one cubic foot of gas at standard conditions.

"Standard metropolitan statistical area" or *"SMSA"* means an area that has at least one city with a population of at least 50,000 and such surrounding areas as geographically defined by the U.S. Office of Management and Budget (Department of Commerce).

"Stationary source" means any building, structure, facility or installation that emits or may emit any air pollutant.

"Total suspended particulate" means particulate matter as defined in this rule.

"Untreated" as it refers to wood or wood products includes only wood or wood products that have not been treated with compounds such as, but not limited to, paint, pigment-stain, adhesive, varnish, lacquer, or resin or that have not been pressure treated with compounds such as, but not limited to, chromate copper acetate, pentachlorophenol or creosote. "Untreated" as it refers to seeds, pellets or other vegetative matter includes only seeds, pellets or other vegetative matter that has not been treated with pesticides or fungicides.

"Urban area" means any Iowa city of 100,000 or more population in the current census and all Iowa cities contiguous to such city.

"Variance" means a temporary waiver from rules or standards governing the quality, nature, duration or extent of emissions granted by the commission for a specified period of time.

"Volatile organic compounds" or *"VOC"* means any compound included in the definition of "volatile organic compounds" found at 40 CFR Section 51.100(s) as amended through February 8, 2023.

22.1(1) *Permit required.* No person shall construct, install, reconstruct or alter any equipment, control equipment or anaerobic lagoon unless a permit is first obtained pursuant to this chapter, 567—31.3(455B), or 567—33.3(455B), or the equipment qualifies for an exemption under 22.1(2). An air quality construction permit shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source or anaerobic lagoon, unless the parameters in 22.1(1)*"c"* are met.

a. Existing equipment is not subject to this subrule, unless it has been modified, reconstructed, or altered on or after September 23, 1970.

b. No person shall construct or reconstruct a major source of hazardous air pollutants, as defined in 40 CFR Section 63.2 and 40 CFR Section 63.41 as adopted by reference in 567—subrule 23.1(4), unless a construction permit has been obtained from the department, which requires maximum achievable control technology for new sources to be applied. The permit shall be obtained prior to the initiation of construction or reconstruction of the major source.

c. Construction prior to issuance of an air quality construction permit issued by the department may begin if the eligibility requirements stated in 22.1(1)*"c"*(1) are met. The applicant must assume any liability for construction conducted on a source before the permit is issued. In no case will the applicant be allowed to hook up the equipment to the exhaust stack or operate the equipment in any way that may emit any pollutant prior to receiving a construction permit.

(1) Eligibility.

1. The applicant has submitted a construction permit application to the department, as specified in 22.1(3);

2. The applicant has notified the department of the applicant's intentions in writing five working days prior to initiating construction; and

3. The equipment or process is not subject to:

- Prevention of significant deterioration (PSD), as set forth in 567—Chapter 33;
- New source performance standards (NSPS), as set forth in 567—subrule 23.1(2);
- National emission standards for hazardous air pollutants (NESHAP), as set forth in 567—subrules 23.1(3) and 23.1(4);
- Emission guidelines, as set forth in 567—subrule 23.1(5);
- Nonattainment new source review, as set forth in 567—Chapter 31; or
- The equipment or process is a major source of hazardous air pollutants, as defined in 40 CFR Sections 63.2 and 63.41, and as adopted by reference in 567—subrule 23.1(4).

The equipment and processes are subject to PSD until the owner or operator of a proposed project legally obtains permitted limits that limit the project below the PSD thresholds (i.e., PSD synthetic minor status).

(2) The applicant must cease construction if the department's evaluation demonstrates that the construction, reconstruction or modification of the stationary source will interfere with the attainment or maintenance of the national ambient air quality standards or will result in a violation of a control strategy required by 40 CFR Part 51, Subpart G, as amended through February 19, 2015.

(3) The applicant will be required to make any modification to the stationary source that may be imposed in the issued construction permit.

(4) The applicant must notify the department in writing of the actual start date of construction or reconstruction. All notifications shall be submitted to the department in writing no later than 30 days after construction or reconstruction started. All notifications shall include all of the information listed in 22.3(3)*"b."*

d. The owner or operator of a country grain elevator, country grain terminal elevator, grain terminal elevator or feed mill equipment, as "country grain elevator," "country grain terminal elevator," "grain terminal elevator," and "feed mill equipment," as these terms are defined in 22.10(1), may elect to comply with the requirements specified in 567—22.10(455B) as an alternative to the construction permitting requirements set forth in 22.1(1).

22.1(2) *Exemptions.* An owner or operator may opt to use one of the permitting exemptions in this subrule in lieu of obtaining an air quality construction permit if the equipment, control equipment, or process meets the conditions in the specific exemption and is not:

- Permitted under the provisions of the permit by rule for spray booths, as set forth in 567—22.8(455B);
- Subject to nonattainment new source review, as set forth in 567—Chapter 31; or
- Subject to PSD, as set forth in 567—Chapter 33;

A permitting exemption may be used only if a permit is not necessary to establish federally enforceable limits that restrict potential to emit.

An owner or operator shall keep records at the facility and will make the records available to the department upon request if any of the exemptions under the following paragraphs are claimed:

- 22.1(2)*"a"* (for equipment > 1 million Btu per hour input),
- 22.1(2)*"b,"*
- 22.1(2)*"e,"*
- 22.1(2)*"r,"* or
- 22.1(2)*"s."*

Records kept on site shall contain the following information:

- The specific exemption claimed; and
- A description of the associated equipment.

The permitting exemptions in this subrule do not relieve the owner or operator of any source from any obligation to comply with any other applicable requirements.

a. Fuel-burning equipment for indirect heating and reheating furnaces or cooling units using natural gas or liquefied petroleum gas with a capacity of less than 10 million Btu per hour input per combustion unit.

b. Fuel-burning equipment for indirect heating or indirect cooling with a capacity of less than 1 million Btu per hour input per combustion unit when burning untreated wood, untreated seeds or pellets, other untreated vegetative materials, or fuel oil, provided that the equipment and the fuel meet the conditions specified in this paragraph. Used oils meeting the specification from 40 CFR Section 279.11 as amended through July 14, 2006, are acceptable fuels for this exemption. When combusting used oils, the equipment must have a maximum rated capacity of 50,000 Btu or less per hour of heat input or a maximum throughput of 3,600 gallons or less of used oils per year. When combusting untreated wood, untreated seeds or pellets, or other untreated vegetative materials, the equipment must have a maximum rated capacity of 265,600 Btu or less per hour or a maximum throughput of 378,000 pounds or less per year of each fuel or any combination of fuels. Records shall be maintained on site by the owner or operator for at least two calendar years to demonstrate that fuel usage is less than the exemption thresholds. Owners or operators initiating construction, installation, reconstruction, or alteration of equipment (as defined in 567—22.1(455B)) on or before October 23, 2013, burning coal, used oils, untreated wood, untreated seeds or pellets, or other untreated vegetative materials that qualified for this exemption may continue to claim this exemption after October 23, 2013, without being restricted to the maximum heat input or throughput specified in this paragraph.

c. Mobile internal combustion and jet engines, marine vessels and locomotives.

d. Equipment used for cultivating land, harvesting crops, or raising livestock other than anaerobic lagoons. This exemption is not applicable if the equipment is used to remove substances from grain that were applied to the grain by another person. This exemption is also not applicable to equipment used by a person to manufacture commercial feed, as defined in Iowa Code section 198.3, that is normally not fed to livestock, owned by the person or another person, in a feedlot, as defined in Iowa Code section 172D.1(6), or a confinement building owned or operated by that person and located in this state.

e. Incinerators and pyrolysis cleaning furnaces with a rated refuse burning capacity of less than 25 pounds per hour for which initiation of construction, installation, reconstruction, or alteration (as defined in 567—22.1(455B)) occurred on or before October 23, 2013. Pyrolysis cleaning furnace exemption is limited to those units that use only natural gas or propane. Salt bath units are not included in this exemption. Incinerators or pyrolysis cleaning furnaces for which initiation of construction, installation, reconstruction,

or alteration (as defined in 567—21.1(455B)) occurred after October 23, 2013, shall not qualify for this exemption. After October 23, 2013, only paint clean-off ovens with a maximum rated capacity of less than 25 pounds per hour that do not combust lead-containing materials shall qualify for this exemption.

f. Fugitive dust controls, unless a control efficiency can be assigned to the equipment or control equipment.

g. Equipment or control equipment that reduces or eliminates all emission to the atmosphere. An owner or operator electing to use this exemption shall provide to the department the following information:

(1) Name and location of the facility;

(2) Detailed description of each change being made;

(3) Date of the beginning of actual construction and date that operation will begin after the changes are made;

(4) Detailed emissions estimates showing:

1. The actual and potential emissions, specifically noting increases or decreases, for the project for all regulated pollutants (as defined in 567—24.100(455B)); and

2. The accumulated emissions increases associated with each change when totaled with other net emissions increases at the facility contemporaneous with the proposed change (occurring within five years before construction of the particular change commences).

(5) Documentation of the basis for all emissions estimates;

(6) Height of the emission point or stack and height of the highest building within 50 feet;

(7) Statement that the provisions of 567—Chapters 31 and 33 do not apply; and

(8) Written statement containing certification by a responsible official as defined in 567—24.100(455B) of truth, accuracy, and completeness that:

1. Accumulated emissions with other contemporaneous net increases have not exceeded significant levels, as defined in 40 CFR 52.21(b)(23), and adopted in 567—33.3(455B);

2. The changes will not prevent the attainment or maintenance of the ambient air quality standards specified in 567—22.11(455B);

3. Based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

The conditions listed below also apply to this exemption:

- If an owner or operator opts to use this exemption for equipment or a process not yet constructed or modified, the information shall be provided to the department at least 30 days in advance of the beginning of construction on the project.
- If an owner or operator opts to use this exemption for equipment or a process that has already been constructed or modified and that does not have a construction permit for that construction or modification, the owner or operator shall not operate until the information listed above is provided to the department.
- If a construction permit has been previously issued for the equipment or control equipment, all other conditions of the construction permit remain in effect.
- If an owner or operator wishes to obtain credit for emission reductions, an air quality construction permit must be obtained for the reduction prior to the time the reduction is made.

h. Equipment (other than anaerobic lagoons) or control equipment that emits odors, unless such equipment or control equipment also emits particulate matter or any other regulated air contaminant (as defined in 567—24.100(455B)).

i. Reserved.

j. Residential heaters, cookstoves, or fireplaces that burn untreated wood, untreated seeds or pellets, or other untreated vegetative materials.

k. Asbestos demolition and renovation projects subject to 40 CFR Section 61.145 as adopted by reference in 567—subrule 23.1(3).

l. The equipment in laboratories used exclusively for nonproduction chemical and physical analyses. Nonproduction analyses means analyses incidental to the production of a good or service and includes analyses conducted for quality assurance or quality control activities or for the assessment of environmental impact.

m. Storage tanks with a capacity of less than 19,812 gallons and an annual throughput of less than 200,000 gallons.

n. Stack or vents to prevent escape of sewer gases through plumbing traps. Systems that include any industrial waste are not exempt.

o. A nonproduction surface coating process that uses only handheld aerosol spray cans.

p. Brazing, soldering or welding equipment or portable cutting torches used only for nonproduction activities.

q. Cooling and ventilating equipment: comfort air conditioning not designed or used to remove air contaminants generated by, or released from, specific units of equipment.

r. An internal combustion engine with a brake horsepower rating of less than 400 measured at the shaft, provided that the owner or operator meets all of the conditions in this paragraph. For the purposes of this exemption, the manufacturer's nameplate rated capacity at full load shall be defined as the brake horsepower output at the shaft. The owner or operator of an engine that was manufactured, ordered, modified or reconstructed after March 18, 2009, may use this exemption only if the owner or operator, prior to installing, modifying or reconstructing the engine, submits to the department a completed registration on forms provided by the department (unless the engine is exempted from registration, as specified in this paragraph or on the registration form) certifying that the engine is in compliance with the following federal regulations:

(1) NSPS for stationary compression ignition internal combustion engines (40 CFR Part 60, Subpart IIII); or

(2) NSPS for stationary spark ignition internal combustion engines (40 CFR Part 60, Subpart JJJJ); and

(3) NESHAP for reciprocating internal combustion engines (40 CFR Part 63, Subpart ZZZZ).

Use of this exemption does not relieve an owner or operator from any obligation to comply with NSPS or NESHAP requirements. An engine that meets the definition of a nonroad engine as specified in 40 CFR Section 1068.30, as amended through January 24, 2023, is exempt from the registration requirements of this paragraph.

s. Equipment that is not related to the production of goods or services and used exclusively for academic purposes, located at educational institutions (as defined in Iowa Code section 455B.161). The equipment covered under this exemption is limited to lab hoods, art class equipment, wood shop equipment in classrooms, wood fired pottery kilns, and fuel-burning units with a capacity of less than 1 million Btu per hour fuel capacity. This exemption does not apply to incinerators.

t. Any container, storage tank, or vessel that contains a fluid having a maximum true vapor pressure of less than 0.75 psia. "Maximum true vapor pressure" means the equilibrium partial pressure of the material considering:

(1) For material stored at ambient temperature, the maximum monthly average temperature as reported by the National Weather Service, or

(2) For material stored above or below the ambient temperature, the temperature equal to the highest calendar-month average of the material storage temperature.

u. Equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sandblast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals (other than beryllium), plastics, concrete, rubber, paper stock, and wood or wood products, where such equipment is either used for nonproduction activities or exhausted inside a building.

v. Manually operated equipment, as defined in 567—24.100(455B), used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, scarfing, surface grinding, or turning.

w. Small unit exemption.

(1) "Small unit" means any emission unit and associated control (if applicable) that emits less than the following:

1. 2 pounds per year of lead and lead compounds expressed as lead (40 pounds per year of lead or lead compounds for equipment for which initiation of construction, installation, reconstruction, or alteration (as defined in 567—22.1(455B)) occurred on or before October 23, 2013);

2. 5 tons per year of sulfur dioxide;

(4) The physical and chemical characteristics of the air contaminants;

(5) The proposed dates and description of any tests to be made by the owner or operator of the completed installation to verify compliance with applicable emission limits or standards of performance;

(6) Information pertaining to sampling port locations, scaffolding, power sources for operation of appropriate sampling instruments, and pertinent allied facilities for making tests to ascertain compliance;

(7) Any additional information deemed necessary by the department to determine compliance with or applicability of 567—22.4(455B), 567—22.5(455B), 567—31.3(455B) and 567—33.3(455B);

(8) Reserved.

(9) A signed statement that ensures the applicant's legal entitlement to install and operate equipment covered by the permit application on the property identified in the permit application. A signed statement shall not be required for rock crushers, portable concrete or asphalt equipment used in conjunction with specific identified construction projects that are intended to be located at a site only for the duration of the specific, identified construction project; and

(10) Application fee.

1. The owner or operator shall submit a fee as required in 567—Chapter 30 to obtain a permit under 22.1(1), 567—22.4(455B), 567—22.5(455B), 567—22.8(455B), 567—22.10(455B), 567—Chapter 31 or 567—Chapter 33;

2. For application submittals from a minor source as defined in 567—Chapter 30, the department shall not initiate review and processing of a permit application submittal until all required application fees have been paid to the department; and

(11) Quantity of greenhouse gas emissions for all applications for projects that will or do have greenhouse gas emissions. For all applications for projects that will not or do not have greenhouse gas emissions, the applicant shall indicate in the application that no greenhouse gases will be emitted and the applicant will not be required to file an inventory of greenhouse gases with that application, unless requested by the department.

c. Application requirements for anaerobic lagoons. The application for a permit to construct an anaerobic lagoon shall include the following information:

(1) The source of the water being discharged to the lagoon;

(2) A plot plan, including distances to nearby residences or occupied buildings, local land use zoning maps of the vicinity, and a general description of the topography in the vicinity of the lagoon;

(3) In the case of an animal feeding operation, the information required in 567—Chapter 65;

(4) In the case of an industrial source, a chemical description of the waste being discharged to the lagoon;

(5) A report of sulfate analyses conducted on the water to be used for any purpose in a livestock operation proposing to use an anaerobic lagoon. The report shall be prepared by using standard methods as defined in 567—60.2(455B);

(6) A description of available water supplies to prove that adequate water is available for dilution;

(7) In the case of an animal feeding operation, a waste management plan describing the method of waste collection and disposal and the land to be used for disposal. Evidence that the waste disposal equipment is of sufficient size to dispose of the wastes within a 20-day period per year shall also be provided;

(8) Any additional information needed by the department to determine compliance with these rules.

[**ARC 7951C**, IAB 5/15/24, effective 6/19/24]

567—22.2(455B) Processing permit applications.

22.2(1) *Incomplete applications.* The department will notify the applicant whether the application is complete or incomplete. If the application is found by the department to be incomplete upon receipt, the applicant will be notified within 30 days of that fact and of the specific deficiencies. Sixty days following such notification, the application may be denied for lack of information. When this schedule would cause undue hardship to an applicant, or the applicant has a compelling need to proceed promptly with the proposed installation, modification or location, a request for priority consideration and the justification therefor shall be submitted to the department.

22.2(2) *Public notice and participation.* A notice of intent to issue a construction permit to a major stationary source shall be published by the department in a newspaper having general circulation in the area affected by the emissions of the proposed source. The notice and supporting documentation shall be made available for public inspection upon request from the department's central office. Publication of the notice shall be made at least 30 days prior to issuing a permit and shall include the department's evaluation of ambient air impacts. The public may submit written comments or request a public hearing. If the response indicates significant interest, a public hearing may be held after due notice.

22.2(3) *Final notice.* The department shall notify the applicant in writing of the issuance or denial of a construction permit as soon as practicable and at least within 120 days of receipt of the completed application. This shall not apply to applicants for electric generating facilities subject to Iowa Code chapter 476A.

[**ARC 7951C**, IAB 5/15/24, effective 6/19/24]

567—22.3(455B) Issuing permits.

22.3(1) *Stationary sources other than anaerobic lagoons.* In no case shall a construction permit that results in an increase in emissions be issued to any facility that is in violation of any condition found in a permit involving PSD, NSPS, NESHAP or a provision of the Iowa state implementation plan (SIP). If the facility is in compliance with a schedule for correcting the violation and that schedule is contained in an order or permit condition, the department may consider issuance of a construction permit. A construction permit shall be issued when the director concludes that the preceding requirement has been met and:

a. That the required plans and specifications represent equipment that reasonably can be expected to comply with all applicable emission standards, and

b. That the expected emissions from the proposed source or modification in conjunction with all other emissions will not prevent the attainment or maintenance of the ambient air quality standards specified in 567—22.11(455B), and

c. That the applicant has not relied on emission limits based on stack height that exceeds good engineering practice or any other dispersion techniques as defined in 567—subrule 23.1(6), and

d. That the applicant has met all other applicable requirements.

22.3(2) *Anaerobic lagoons.* A construction permit for an industrial anaerobic lagoon shall be issued when the director concludes that the application for permit represents an approach to odor control that can reasonably be expected to comply with the criteria in 567—subrule 23.5(2). A construction permit for an animal feeding operation using an anaerobic lagoon shall be issued when the director concludes that the application has met the requirements of 567—Chapter 65.

22.3(3) *Conditions of approval.* A permit may be issued subject to conditions that shall be specified in writing. Such conditions may include but are not limited to emission limits, operating conditions, fuel specifications, compliance testing, continuous monitoring, and excess emission reporting.

a. Each permit shall specify the date on which it becomes void if work on the installation for which it was issued has not been initiated.

b. Each permit shall list the requirements for notifying the department of the dates of intended startup, start of construction and actual equipment startup. All notifications shall be in writing and include the following information:

(1) The date or dates required by 22.3(3)"*b*" for which the notice is being submitted.
(2) Facility name.
(3) Facility address.
(4) DNR-assigned facility number.
(5) DNR air construction permit number.
(6) The name or the number of the emission unit or units in the notification.
(7) The emission point number or numbers in the notification.
(8) The name and signature of a company official.
(9) The date the notification was signed.

c. Each permit shall specify that no review has been undertaken on the various engineering aspects of the equipment other than the potential of the equipment for reducing air contaminant emissions.

d. Reserved.

e. If changes in the final plans and specifications are proposed by the permittee after a construction permit has been issued, a supplemental permit shall be obtained.

f. A permit is not transferable from one location to another or from one piece of equipment to another unless the equipment is portable. When portable equipment for which a permit has been issued is to be transferred from one location to another, the department shall be notified in writing at least seven days prior to the transfer of the portable equipment to the new location. Written notification shall be submitted to the department through one of the following methods: electronic mail (email), mail delivery service (including U.S. Mail), hand delivery, facsimile (fax), or by electronic format specified by the department (at such time as an Internet-based submittal system or other, similar electronic submittal system becomes available). However, if the owner or operator is relocating the portable equipment to an area currently classified as nonattainment for ambient air quality standards or to an area under a maintenance plan for ambient air quality standards, the owner or operator shall notify the department at least 14 days prior to transferring the portable equipment to the new location. A list of nonattainment and maintenance areas may be obtained from the department, upon request, or on the department's Internet website. The owner or operator will be notified by the department at least ten days prior to the scheduled relocation if said relocation will prevent the attainment or maintenance of ambient air quality standards and thus require a more stringent emission standard and the installation of additional control equipment. In such a case, the owner or operator shall obtain a supplemental permit prior to the initiation of construction, installation, or alteration of such additional control equipment.

g. The issuance of a permit (approval to construct) shall not relieve any owner or operator of the responsibility to comply fully with applicable provisions of the SIP and any other requirement under local, state or federal law.

22.3(4) *Denial of a permit.*

a. When an application for a construction permit is denied, the applicant shall be notified in writing of the reasons therefor. A denial shall be without prejudice to the right of the applicant to file a further application after revisions are made to meet the objections specified as reasons for the denial.

b. The department may deny an application based upon the applicant's failure to provide a signed statement of the applicant's legal entitlement to install and operate equipment covered by the permit application on the property identified in the permit application.

22.3(5) *Modification of a permit.* The director may, after public notice of such decision, modify a condition of approval of an existing permit for a major stationary source or an emission limit contained in an existing permit for a major stationary source if necessary to attain or maintain an ambient air quality standard, or to mitigate excessive deposition of mercury.

22.3(6) *Limits on hazardous air pollutants.* The department may limit a source's hazardous air pollutant potential to emit, as defined in 567—24.100(455B), in the source's construction permit for the purpose of establishing federally enforceable limits on the source's hazardous air pollutant potential to emit.

22.3(7) *Revocation of a permit.* The department may revoke a permit upon obtaining knowledge that a permit holder has lost legal entitlement to use the property identified in the permit to install and operate equipment covered by the permit, upon notice that the property owner does not wish to have continued the operation of the permitted equipment, or upon notice that the owner of the permitted equipment no longer wishes to retain the permit for future operation.

22.3(8) *Ownership change of permitted equipment.* The new owner shall notify the department in writing no later than 30 days after the change in ownership of equipment covered by a construction permit pursuant to 567—22.1(455B). The notification to the department shall be mailed to the Air Quality Bureau, Iowa Department of Natural Resources, 6200 Park Avenue, Suite 200, Des Moines, Iowa 50321, and shall include the following information:

a. The date of ownership change;

b. The name, address and telephone number of the responsible official, the contact person and the owner of the equipment both before and after ownership change; and

c. The construction permit number of the equipment changing ownership.

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(6) Recordkeeping. The owner or operator shall keep the records of annual grain handled at the facility and annual PTE for PM and PM_{10} emissions on site for a period of five years, and the records shall be made available to the department upon request.

d. Group 4 facilities. A facility qualifies as a Group 4 facility if the facility is a stationary source with a PTE equal to or greater than 100 tons of PM_{10} per year, as PTE is specified in 22.10(2). For purposes of this paragraph, an "existing" Group 4 facility is one that commenced construction, modification or reconstruction before February 6, 2008. A "new" Group 4 facility is one that commenced construction or reconstruction on or after February 6, 2008.

(1) Air construction permit. The owner or operator of a Group 4 facility shall obtain the required construction permits as specified under 22.1(1). The owner or operator of an existing facility shall provide the construction permit applications, as specified by 22.1(3), to the department on or before March 31, 2008. The owner or operator of a new facility shall obtain the required permits, as specified by 22.1(1), from the department prior to initiating construction or reconstruction of a facility.

(2) Permit conditions. Construction permit conditions for a Group 4 facility shall include, but are not limited to, the following:

1. The owner or operator shall implement BMP, as specified in the permit, for controlling air pollution at the facility and for limiting fugitive dust at the facility from crossing the property line. If the department revises the BMP requirements for Group 4 facilities after a facility is issued a permit, the owner or operator of the Group 4 facility may request that the department modify the facility's permit to incorporate the revised BMP requirements. The department will issue permit modifications to incorporate BMP revisions on a case-by-case basis.

2. The owner or operator shall retain all records as specified in the permit.

(3) PSD applicability. If the PTE for PM or PM_{10} at the facility is equal to or greater than 250 tons per year, the owner or operator shall comply with requirements specified in 567—Chapter 33, as applicable. The owner or operator of a Group 4 facility that is a grain terminal elevator shall include fugitive emissions, as "fugitive emissions" is defined in 567—subrule 33.3(1), in the PTE calculation for determining PSD applicability.

(4) Recordkeeping. The owner or operator shall keep the records of annual grain handled at the facility and annual PTE for PM and PM_{10} emissions on site for a period of five years, and the records shall be made available to the department upon request.

(5) Operating permits. The owner or operator of a Group 4 facility shall apply for an operating permit for the facility if the facility's annual PTE for PM_{10} is equal to or greater than 100 tons per year as specified in 567—24.100(455B) through 567—24.300(455B). The owner or operator of a Group 4 facility that is a grain terminal elevator shall include fugitive emissions in the calculations to determine if the PTE for PM_{10} is greater than or equal to 100 tons per year. The owner or operator also shall submit annual emissions inventories and fees, as specified in 567—22.106(455B).

22.10(4) *Feed mill equipment.* This subrule sets forth the requirements for construction permits, operating permits, and emissions inventories for an owner or operator of feed mill equipment as "feed mill equipment" is defined in 22.10(1). For purposes of this subrule, the owner or operator of "existing" feed mill equipment shall have commenced construction or reconstruction of the feed mill equipment before February 6, 2008. The owner or operator of "new" feed mill equipment shall have commenced construction or reconstruction of the feed mill equipment on or after February 6, 2008.

a. Air construction permit. The owner or operator of feed mill equipment shall obtain an air construction permit as specified under 22.1(1) for each piece of feed mill equipment that emits a regulated air pollutant. The owner or operator of "existing" feed mill equipment shall provide the appropriate permit applications to the department on or before March 31, 2008. The owner or operator of "new" feed mill equipment shall provide the appropriate permit applications to the department prior to initiating construction or reconstruction of feed mill equipment.

b. Emissions inventory. The owner or operator shall submit an emissions inventory for the feed mill equipment for all regulated air pollutants as specified under 567—subrule 21.1(3).

c. Operating permits. The owner or operator shall sum the PTE of the feed mill equipment with the PTE of the equipment at the country grain elevator, country grain terminal elevator or grain terminal

elevator, as PTE is specified in 22.10(2), to determine if operating permit requirements specified in 567—24.100(455B) through 567—24.300(455B) apply to the stationary source. If the operating permit requirements apply, then the owner or operator shall apply for an operating permit as specified in 567—24.100(455B) through 567—24.300(455B). The owner or operator also shall begin submitting annual emissions inventories and fees, as specified under 567—22.106(455B).

d. PSD applicability. For purposes of determining whether the stationary source is subject to the PSD requirements set forth in 567—Chapter 33, the owner or operator shall sum the PTE of the feed mill equipment with the PTE of the equipment at the country grain elevator, country grain terminal elevator or grain terminal elevator. If the PTE for PM or PM_{10} for the stationary source is equal to or greater than 250 tons per year, the owner or operator shall comply with requirements for PSD specified in 567—Chapter 33, as applicable.

[**ARC 7951C**, IAB 5/15/24, effective 6/19/24]

567—22.11(455B) Ambient air quality standards. The state of Iowa ambient air quality standards shall be the National Primary and Secondary Ambient Air Quality Standards as published in 40 CFR Part 50 (1972) and as amended at 38 Federal Register (FR) 22384 (September 14, 1973), 43 FR 46258 (October 5, 1978), 44 FR 8202, 8220 (February 9, 1979), 52 FR 24634-24669 (July 1, 1987), 62 FR 38651-38760, 38855-38896 (July 18, 1997), 71 FR 61144-61233 (October 17, 2006), 73 FR 16436-16514 (March 27, 2008), 73 FR 66964-67062 (November 12, 2008), 75 FR 6474-6537 (February 9, 2010), 75 FR 35520-35603 (June 22, 2010), 78 FR 3086-3287 (January 15, 2013), and 80 FR 65291-65468 (October 26, 2015). The department shall implement these rules in a time frame and schedule consistent with implementation schedules in federal laws and regulations.

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These rules are intended to implement Iowa Code sections 455B.133 and 455B.134.

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ORDINANCE NO. _____

AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF CENTRAL CITY, IOWA, BY AMENDING CHAPTER 165, ZONING REGULATIONS, TO ADD DEFINITIONS, PERMITTED USES, AND SUPPLEMENTAL STANDARDS FOR INDUSTRIAL USES AND DATA CENTERS IN THE M-1 LIGHT INDUSTRIAL AND M-2 HEAVY INDUSTRIAL DISTRICTS.

BE IT ENACTED by the City Council of the City of Central City, Iowa:

SECTION 1. PURPOSE. The purpose of this ordinance is to update the City's industrial zoning regulations by establishing impact-based review standards for industrial development, clarifying the City's review authority for water, wastewater, infrastructure, operational, traffic, and closure impacts, and identifying Data Centers as regulated industrial uses. Tier 1 Data Centers are intended to be permitted in both the M-1 Light Industrial District and the M-2 Heavy Industrial District, while Tier 2 and Tier 3 Data Centers are intended to be permitted only in the M-2 Heavy Industrial District and subject to applicable general industrial and supplemental Data Center standards.

SECTION 2. DEFINITIONS ADDED. Section 165.03 of the Code of Ordinances of the City of Central City, Iowa, is amended by adding the following definitions in alphabetical order:

1. **Administrative Officer.** The Administrative Officer responsible for enforcement of Chapter 165, or a City official, employee, licensed professional, or qualified independent contractor appointed by the City Council to perform a specified duty under Chapter 165.
2. **Approved Impact.** A noise, vibration, water, wastewater, traffic, utility, environmental, safety, or other operational impact expressly evaluated and authorized by a permit, site plan, development agreement, or other final City approval.
3. **City engineer.** A professional engineer employed, retained, or authorized by the City to perform engineering review or make technical determinations under Chapter 165.
4. **Cumulative Gross Floor Area.** The aggregate gross floor area of all existing, proposed, and approved Data Center buildings and enclosed accessory structures counted under Section 165.__, including all phases shown in a single site plan, development agreement, utility-service request, infrastructure plan, or other coordinated development proposal under common ownership or control, but excluding utility-owned and customer-owned substations.
5. **Data Center.** A principal-use building, group of buildings, or enclosed site used to process, store, host, or transmit digital data or conduct digital asset mining, including related cooling, energy storage, backup power, and utility infrastructure. The term excludes server, telecommunications, network-equipment, and similar rooms that primarily support another principal use on the site.
6. **Material Impact.** A reasonably identifiable effect on noise, vibration, water supply, wastewater service, traffic, roads, utilities, the environment, public safety, emergency response, or public cost that is more than negligible and is supported by facts or accepted technical analysis.
7. **Material Modification.** A change reasonably expected to materially increase noise, vibration, water demand, wastewater discharge, electrical demand or connected load, generator capacity, the number, capacity, or operating characteristics of exterior mechanical equipment, lighting impacts, fuel storage, substation or transformer impacts, or another impact evaluated in an existing approval.

8. **Process Wastewater.** Wastewater generated by cooling, equipment operation, water treatment, equipment cleaning, or another industrial process, excluding domestic sanitary wastewater.
9. **Protected Use.** A residentially zoned parcel, existing residence, school, childcare facility, hospital, nursing facility, park, or place of worship. For noise and vibration requirements applicable at a Protected Use, the measurement or modeled receptor location is the nearest applicable property boundary or occupied outdoor area identified by a Qualified Acoustical Professional and accepted by the Administrative Officer or City engineer. This receptor location does not replace the industrial-site property-line measurement locations required for the 65 dBA noise limit in the General Industrial Standards.
10. **Public Works Director.** The City employee, official, or qualified contractor appointed or authorized by the City Council to administer public-works, utility, roadway, drainage, and infrastructure matters.
11. **Qualified Acoustical Professional.** A person with education, training, and demonstrated experience in environmental or industrial acoustics who is qualified to prepare or certify required acoustical assessments, modeling, testing, or findings. Before accepting work under Chapter 165, the Administrative Officer or City engineer shall confirm the person's qualifications in writing.
12. **Qualified Independent Professional.** A licensed or otherwise professionally qualified person who possesses education, training, and demonstrated experience relevant to the technical issue under review and who has no financial interest in the applicant, project, or outcome of the review other than compensation for professional services.
13. **Tier 1 Data Center.** A Data Center with a cumulative gross floor area of 30,000 square feet or less.
14. **Tier 2 Data Center.** A Data Center with a cumulative gross floor area of more than 30,000 square feet but less than 100,000 square feet.
15. **Tier 3 Data Center.** A Data Center with a cumulative gross floor area of 100,000 square feet or more.
16. **Water Impact Classification.** A classification assigned through the industrial water and wastewater impact review based on the project's reasonably anticipated effect on City water supply, treatment, storage, distribution, wastewater collection, wastewater treatment, discharge, and related utility capacity. "Low Water Impact" means no material utility impact is reasonably anticipated; "Moderate Water Impact" means a material impact may occur but can reasonably be evaluated and addressed through limited supplemental review or mitigation; and "High Water Impact" means a material impact is reasonably anticipated and requires detailed professional review of utility capacity, improvements, mitigation, or operating conditions.

SECTION 3. M-1 LIGHT INDUSTRIAL DISTRICT AMENDED. Section 165.13(1) of the Code of Ordinances is amended by adding Tier 1 Data Centers as a permitted principal use in the M-1 Light Industrial District. Tier 1 Data Centers shall comply with the general industrial standards and applicable Data Center supplemental standards adopted by this ordinance.

SECTION 4. M-2 HEAVY INDUSTRIAL DISTRICT AMENDED. Section 165.14(1) of the Code of Ordinances is amended by adding Data Centers as permitted principal uses in the M-2 Heavy Industrial District. Tier 1, Tier 2, and Tier 3 Data Centers shall be permitted in M-2 and shall comply with the general industrial standards and applicable Data Center supplemental standards adopted by this ordinance. Section 165.14(1) is further amended by adding City wastewater treatment plants as a permitted principal use in the M-2 Heavy Industrial District.

SECTION 5. GENERAL INDUSTRIAL STANDARDS ADDED. Chapter 165 is amended by adding a new section entitled GENERAL INDUSTRIAL STANDARDS, to read as follows:

165.__ GENERAL INDUSTRIAL STANDARDS. Industrial uses in the M-1 and M-2 Districts shall be subject to the standards of this section when applicable to the proposed use, expansion, Material Modification, construction activity, or operational impact. The standards shall be administered in a proportionate, impact-based manner and shall not require studies, improvements, mitigation, or financial assurance unless the Administrative Officer, Public Works Director, or City engineer makes a written determination identifying the site-specific impact or deficiency to be addressed.

1. **Industrial water and wastewater impact review.** When the Public Works Director or City engineer reasonably determines that a new industrial use, expansion, or operational change may create a Material Impact on City water or wastewater capacity or operations, the applicant shall provide a utility-impact statement sufficient to assign a Water Impact Classification. A Low Water Impact project requires no further study. A Moderate Water Impact or High Water Impact project may be required to provide proportionate professional review addressing demand, discharge, treatment, pretreatment, conservation, phased development, drought response, available capacity, and necessary improvements.
2. **Electrical-demand impact review.** When the Administrative Officer or City engineer reasonably determines that a new industrial use, expansion, or Material Modification may materially increase electrical demand or connected load, the applicant shall provide an electrical-impact statement describing existing and proposed peak demand, connected load, load profile, utility-service requirements, energization schedule, and reasonably anticipated changes to feeders, transformers, substations, generation, energy storage, cooling, or associated infrastructure. The City may require written utility coordination and proportionate professional review of project-attributable noise, vibration, cooling and water use, backup generation and fuel, battery energy storage and fire protection, emergency response, construction and transportation impacts, rights-of-way, screening, stormwater, and public infrastructure only to the extent supported by a written determination identifying the site-specific impact or deficiency. The City shall accept adequate studies, utility determinations, agency approvals, and professional certifications and shall not duplicate matters within the serving utility's technical jurisdiction absent a documented City impact.
3. **Infrastructure and costs.** The applicant, owner, or operator shall be responsible for documented, reasonable, and project-attributable costs of utility and infrastructure improvements needed to serve the project or mitigate project impacts. Required improvements shall meet City and utility-provider standards and shall be completed and accepted before operation unless deferred completion is authorized with financial assurance acceptable to the City.
4. **Application and pre-construction review.** An industrial site plan shall be required before permits are issued for new construction, expansions, Material Modifications, or projects involving exterior site or equipment changes. The City may require a construction-management summary, outside permit and utility approval documentation, electrical load coordination confirmation, and applicant-funded professional studies or peer review when reasonably necessary to evaluate an identified site-specific impact. **Construction Waste Management Plan.** A Tier 2 or Tier 3 Data Center, and any other industrial project of comparable scale as determined by the Administrative Officer or City engineer, shall provide a Construction Waste Management Plan identifying anticipated waste streams, recycling and diversion practices, temporary storage methods, hauling arrangements, disposal facilities, and material-recovery opportunities. The applicant shall develop the plan in consultation with the Linn County Solid Waste Agency and may satisfy this requirement through equivalent documentation accepted by that agency. **Administrative review.** The City shall determine application completeness and act on a complete

application within the otherwise applicable review periods. An application that satisfies this chapter and other applicable law shall be approved. Each request for additional information, a study, mitigation, or financial assurance shall identify in writing the site-specific concern, required scope, and applicable legal standard. A final administrative determination under this section may be appealed as otherwise provided by this chapter or applicable law. **Council final review.** Before material construction begins for a Tier 2 or Tier 3 Data Center or for a project classified as Moderate Water Impact or High Water Impact, the City Council shall conduct a final review after all required studies, plans, professional certifications, agency or utility documentation, and third-party reviews have been completed and reviewed by the appropriate City staff, City engineer, Public Works Director, and retained professionals. The Council's review shall confirm that the required review process is complete and that identified conditions, mitigation, infrastructure obligations, and financial assurances have been incorporated into the applicable approval. The Council shall not require duplicative studies or reopen a technical determination without identifying a documented deficiency, material new information, or a material change in the project. Material construction shall not begin until the Council completes this review and authorizes construction to proceed. **Professional review and project costs.** The City shall accept adequate utility reviews, agency approvals, studies, and professional certifications and shall require supplemental work only to address a documented deficiency. Before ordering applicant-funded peer review, the City shall provide a written scope and fee estimate. The applicant shall be responsible only for documented, reasonable, project-attributable costs and shall not be charged to correct an existing deficiency or fund improvements serving other users except to the extent of the applicant's proportionate project-attributable share.

5. **Operational impacts.** Exterior mechanical and electrical equipment shall be located, designed, oriented, screened, or acoustically treated as needed to meet applicable noise, vibration, fire, building, utility, access, safety, and screening requirements. Opaque screening shall be required for exterior mechanical and electrical equipment only along a side of an industrial site that adjoins or faces a Protected Use, unless the Administrative Officer determines in writing that another side creates comparable site-specific visual impact.
6. **Noise and vibration.** Combined operational noise from cooling and processing equipment, transformers, substations, routine generator testing, and other industrial sources shall not exceed 65 decibels, measured on the A-weighted scale (65 dBA), at any property line of the industrial site. Compliance shall be determined from the combined sound attributable to the industrial use, rather than unrelated ambient sound, using accepted acoustical measurement or modeling methods documented by a Qualified Acoustical Professional and accepted by the Administrative Officer or City engineer. The 65 dBA limit applies at all times, except to emergency generator operation as expressly provided in the generator operation and testing provisions of this section. Industrial noise shall also comply with other generally applicable City noise standards; where an applicable standard is more restrictive, the more restrictive standard shall control. Compliance with the numeric limit does not authorize unreasonable continuous noise at a Protected Use. The City may establish additional objective time-of-day or operational standards consistent with this limit and shall use consistent measurement methods for similarly situated industrial uses. Ground-borne vibration at a Protected Use shall not exceed the limit established by a Qualified Acoustical Professional using a nationally recognized engineering standard.
7. **Equipment, fuel, stormwater, and emergency response information.** Information required for backup generators, on-site generation, battery energy storage, underground or bulk fuel storage, project-specific substations, stormwater exposure, spill containment, fire protection, emergency access, shutdown, hazardous-material response, and contaminated-firewater isolation shall be proportionate to the systems

proposed and to the material safety, environmental, utility, or emergency-response concerns identified during review. **Emergency Management Consultation.** A coordinated emergency-response plan is required when the Administrative Officer, after consultation with the applicable fire department or other responding agency, makes a written determination that the nature or scale of the proposed systems, materials, operations, or site conditions creates a material need for coordinated emergency procedures among multiple responding agencies. When a coordinated emergency-response plan is required, the applicant shall consult with the Linn County Emergency Management Agency and provide documentation of that consultation. The City may consider recommendations of the Linn County Emergency Management Agency when evaluating emergency-response measures associated with the project.

8. **Generator operation and testing.** Emergency generator operation necessary during a utility outage or another actual emergency is permitted at any time and is exempt from the 65 dBA property-line limit only for the duration and to the extent reasonably necessary to address the outage or emergency. Installed attenuation systems shall be used during emergency operation when safely practicable. Required maintenance, commissioning, routine generator testing, manufacturer-required procedures, and required load-bank testing are permitted between 8:00 a.m. and 6:00 p.m., Monday through Friday, excluding federally recognized holidays, and shall use installed attenuation systems and comply with the 65 dBA property-line limit and any more restrictive generally applicable City noise standard. Generator operation as required by State or federal permits is permitted, with advance notice to the City when reasonably practicable, but such a permit does not by itself exempt nonemergency operation from applicable City noise limits.
9. **Lighting, fencing, roads, and traffic.** Industrial exterior lighting shall be fully shielded and directed downward to reduce glare, light trespass, and sky glow on adjoining properties and public rights-of-way. Secure fencing or access controls may be required when site conditions create a material safety or security need. Haul routes, traffic or road studies, and road use agreements may be required only when identified construction or operational roadway impacts create a material concern. A Tier 3 Data Center shall provide a traffic study prepared by a qualified independent professional that evaluates the construction period, including anticipated vehicle volumes and types, peak construction activity, worker traffic, delivery and haul routes, road and bridge capacity and condition, traffic-control needs, emergency access, project-attributable deterioration, and recommended mitigation. **County Road Coordination.** When construction traffic is reasonably expected to use county roads or bridges to access the project, the City may require the applicant to enter into, or demonstrate compliance with, any Road Use Agreement reasonably requested by the Linn County Engineer.
10. **Ongoing compliance and changes.** Upon a documented complaint or other reasonable indication of noncompliance, the City may require information, testing, professional review, mitigation, verification, or corrective action proportionate to the identified concern. Owners and operators shall maintain current ownership, operating responsibility, and 24-hour emergency contact information with the City and shall notify the City within 30 days after a transfer of ownership or operational control.
11. **Closure Impact Statement.** When the Administrative Officer or City engineer reasonably determines that a project may create material site-restoration, environmental, utility, or public-cost obligations upon closure, the applicant shall provide a Closure Impact Statement containing information reasonably necessary to determine whether a closure or site-restoration plan or financial assurance is warranted. Relevant information may include specialized infrastructure; water and wastewater infrastructure; treatment and pretreatment systems; cooling systems and cooling fluids; fuel systems; batteries; private utility facilities; hazardous materials; major equipment; anticipated removal considerations; and other

information relevant to potential closure-related obligations. Existing studies, decommissioning plans, engineering reports, agency filings, or utility documentation shall be accepted when they adequately address the issue, and supplemental information may be required only to resolve a documented deficiency.

12. **Closure and site restoration.** A closure or site-restoration plan, and any related financial assurance, may be required only upon a written determination that specialized infrastructure, hazardous materials, bulk fuel, batteries, substantial foundations, private utility facilities, or another identified condition creates a material abandonment-related cost, safety risk, environmental concern, or restoration obligation.

165.__ HOST COMMUNITY AGREEMENTS. Nothing in this chapter prohibits the City from negotiating a voluntary development agreement or similar instrument addressing infrastructure contributions, utility extensions, roadway improvements, public-safety costs, workforce-development initiatives, emergency-response capabilities, minimum assessment commitments, or other mutually agreed community benefits associated with industrial development.

SECTION 6. DATA CENTER SUPPLEMENTAL STANDARDS ADDED. Chapter 165 is amended by adding a new section entitled DATA CENTER SUPPLEMENTAL STANDARDS, to read as follows:

165.__ DATA CENTER SUPPLEMENTAL STANDARDS. Data Centers shall be subject to the General Industrial Standards in Section 165.__ and to the supplemental standards of this section. For tier calculation, the cumulative gross floor area of all existing, proposed, and approved Data Center buildings and enclosed accessory structures housing computing, cooling, electrical, energy-storage, or backup-power equipment shall be used, including all phases shown in a single site plan, development agreement, utility-service request, infrastructure plan, or other coordinated development proposal under common ownership or control. Utility-owned and customer-owned substations shall be excluded from gross floor area used for tier calculation, but remain subject to applicable electrical, building, fire, utility, and project-attributable noise requirements.

1. **District eligibility.** Tier 1 Data Centers are permitted principal uses in M-1 and M-2. Tier 2 and Tier 3 Data Centers are permitted principal uses only in M-2.
2. **Site-plan details.** A Data Center site plan shall identify Data Center buildings, accessory cooling areas, phased development, exterior mechanical and electrical equipment, generator areas, battery energy storage, fuel storage, utility connections, stormwater facilities, and, when proposed, the final location and general layout of a project-specific substation.
3. **Housing impact study.** A Tier 3 Data Center shall provide a housing impact study prepared by ECICOG, Iowa State University Extension and Outreach Community and Economic Development, or another comparably qualified independent public, nonprofit, or academic organization accepted by the City. The study shall evaluate reasonably anticipated temporary construction and permanent operational workforce housing demand; the availability, type, location, and affordability of housing; potential effects on rental and owner-occupied housing, public services, and vulnerable residents; and proportionate measures to address identified project-attributable impacts. The study shall be completed and reviewed by the appropriate City staff before the Council final review required by the General Industrial Standards.
4. **Acoustical studies and verification for all tiers.** Every Tier 1, Tier 2, and Tier 3 Data Center shall provide a pre-construction acoustical study prepared or certified by a Qualified Acoustical Professional. The study shall evaluate combined operational sound attributable to the Data Center, including cooling and processing equipment, transformers, substations, routine generator testing, and other proposed sound-producing equipment; identify the industrial-site property-line locations of highest predicted sound; and demonstrate compliance with the 65 dBA property-line limit, any more restrictive applicable City noise

limit, and applicable noise requirements at Protected Uses. Manufacturer data may support the study but shall not substitute for the required professional study. The study shall be completed and reviewed by the Administrative Officer or City engineer before material construction begins and, when Council final review is required, before that review. A Tier 2 Data Center shall provide post-construction verification when predicted sound is within 3 dBA of the 65 dBA property-line limit or any more restrictive applicable numeric City noise limit, or when warranted by written City determination. A Tier 3 Data Center shall provide a comprehensive independent sound and vibration study and shall verify compliance within 90 days after operations begin and after a Material Modification reasonably expected to materially increase noise or vibration. The comprehensive independent study required for Tier 3 may satisfy the pre-construction acoustical study requirement if it addresses all required matters. Required studies and verifications shall address applicable vibration requirements at Protected Uses. Emergency generator operation shall be evaluated consistent with the express exception in the General Industrial Standards.

5. **Substation assessment.** A new or modified utility-owned or customer-owned substation, transformer, or associated exterior electrical equipment shall require additional review only when the City, after considering an opinion from a Qualified Independent Professional, issues a written technical finding that the change will create a new Material Impact. The review shall be limited to that Material Impact and shall not change the facility tier for unrelated requirements. Applicable electrical, building, fire, utility, and project-attributable noise requirements, including the 65 dBA industrial-site property-line limit and any more restrictive applicable City noise standard, continue to apply regardless of whether additional review is required.
6. **Cooling and water disclosure.** Each Data Center shall identify its cooling technology and projected initial fill, flushing, water demand, makeup water, domestic use, wastewater discharge, and evaporative, once-through, emergency, or supplemental water use, as applicable. A Tier 1 Data Center using air-cooled, closed-loop, direct-to-chip, or comparable low-water cooling, with no routine evaporative or once-through use and no Process Wastewater, shall be classified as Low Water Impact unless the Public Works Director or City engineer issues a written technical finding that the project will create a Material Impact on City utility capacity or operations.
7. **Cooling-fluid containment.** When a Data Center cooling system contains glycol, refrigerants, water-treatment chemicals, or another regulated or potentially contaminating fluid, the applicant shall document the fluid type and approximate volume; leak detection; inspection and maintenance; spill response; lawful handling and disposal; and secondary containment or another protective measure reasonably designed to prevent discharge to soil, groundwater, surface water, storm sewers, or sanitary sewers. Protective measures shall be proportionate to the volume and characteristics of the fluid involved and shall be verified before operation and after a Material Modification affecting the cooling system or containment.
8. **Maintenance, expansion, and tier transition.** Routine maintenance and replacement of equipment with equipment of substantially the same type, capacity, operating characteristics, and Approved Impact do not require renewed review. An expansion that consists solely of office, restroom, employee-welfare, or comparable non-Data-Center support space and does not increase an Approved Impact shall not be counted toward a higher tier. When added Data Center floor area causes a facility to cross a tier threshold, the facility shall comply with the requirements of the higher tier for the entire site; provided, however, that the Administrative Officer or City engineer may approve a reasonable compliance schedule when immediate compliance is not necessary to address a Material Impact.

9. **Closure scope.** Data Center tier alone shall not require a closure plan or financial assurance. When the General Industrial Standards require a closure or site-restoration plan, the plan shall be supplemented as needed to address computing and cooling equipment, generators, fuel systems, batteries, private utility facilities, foundations, fencing, hazardous materials, stabilization, and restoration.

SECTION 6. CONFLICTING PROVISIONS. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict.

SECTION 7. SEVERABILITY CLAUSE. If any section, provision, or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of this ordinance as a whole or any section, provision, or part thereof not adjudged invalid or unconstitutional.

SECTION 8. WHEN EFFECTIVE. This ordinance shall be in effect from and after its final passage, approval, and publication as provided by law.

Passed by the Council the ____ day of _____, 20____, and approved this ____ day of _____, 20____.

_____
Mayor

ATTEST:

_____
City Clerk

First Reading: _____
Second Reading: _____
Third Reading: _____

I certify that the foregoing was published as Ordinance No. _____ on the ____ day of _____, 20____.

_____
City Clerk

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF CENTRAL CITY, IOWA, BY AMENDING CHAPTER 90, WATER SERVICE SYSTEM, TO AUTHORIZE EMERGENCY RESTRICTION OR DISCONTINUANCE OF WATER SERVICE.

BE IT ENACTED by the City Council of the City of Central City, Iowa:

SECTION 1. EMERGENCY RESTRICTION OR DISCONTINUANCE OF WATER SERVICE. Section 90.14 of the Code of Ordinances of the City of Central City, Iowa, shall be amended by changing the Section heading and adding subsections numbered 3 to 7 as set forth below:

90.14 MERGENCY RESTRICTION OR DISCONTINUANCE OF WATER SERVICE

3. Emergency restriction or discontinuance. When the Public Works Director determines, based on current or reasonably foreseeable water-system conditions, that continued or increased water use by any user presents an imminent and material threat to public health or safety, available water supply, minimum water-tower operating levels, fire-flow reserves, well or pumping equipment, treatment or distribution capacity, or reliable service to other consumers, the Public Works Director may immediately restrict or discontinue water service to said user to the extent reasonably necessary to address the threat determined to exist by the Public Works Director.

4. Written determination and notice. The Public Works Director shall notify the affected user in advance of the restricted or discontinued delivery of water whenever possible. When advance notice is not possible, the Public Works Director shall take immediate steps to inform the owner as soon as possible thereafter. The affected user shall be informed of the reason and rationale for the action, its scope, the conditions for restoration, and the user's right to demand an expedited hearing before the Mayor or the Mayor's designee, who shall be an elected councilperson. The expedited hearing shall be held within twenty-four hours whenever possible and, when not possible, as soon thereafter as possible. The Mayor or the Mayor's designee may affirm, modify, or rescind the decision and actions of the Public Works Director. The reasons for that decision shall be set out in writing within twenty-four (24) hours of the appeal hearing. The affected user may appeal that decision to the City Council by delivering a written notice of appeal to the City Clerk within seven (7) days after delivery to the user of the written decision resulting from the appeal. The City Council shall hear the appeal within seventy-two (72) hours after the City Clerk receives the written notice of appeal. If the seventy-two (72) hour period ends on a Saturday, Sunday, or recognized State or Federal Holiday, the hearing deadline shall be extended to 6:00 p.m. on the following day. The Council shall issue written findings and affirm, modify, or rescind the decision and actions of the Public Works Director within forty-eight (48) hours of the commencement of the appeal hearing. A hearing request does not stay an emergency restriction or discontinuance. The Mayor may authorize a stay or partial stay in advance of or during any level of the appeal process. Any stay or partial stay shall be in writing and shall include findings that it will not materially endanger the water system, public health or safety, or reliable service to other users.

5. Council hearing notice. A City Council appeal hearing shall be noticed and conducted in accordance with Iowa Code chapter 21. When good cause makes twenty-four hours' notice impossible or impractical, the City

shall give as much notice as is reasonably possible and shall state in the meeting minutes the nature of the good cause justifying the shorter notice, as required by Iowa Code section 21.4.

6. Duration and restoration. The restriction or discontinuance shall be as limited in scope and duration as determined reasonably necessary to address the threat. The City shall restore service, or reduce the restriction, when the Public Works Director determines that the threat has been adequately addressed. The City shall also restore service, or reduce the restriction, when the Public Works Director determines that interim operating limits, mitigation, monitoring, or other measures have been identified and implemented to adequately protect the water system, public health or safety, and reliable service to other users.

7. Nonemergency violations. Failure to provide notice, information, or consultation required by another provision of this Code does not, by itself, authorize immediate restriction or discontinuance under this subsection. Nonemergency violations shall be addressed through applicable notice, hearing, enforcement, and corrective-action procedures.

SECTION 2. SEVERABILITY CLAUSE. If any section, provision, or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of this ordinance as a whole or any section, provision, or part thereof not adjudged invalid or unconstitutional.

SECTION 3. WHEN EFFECTIVE. This ordinance shall be in effect from and after its final passage, approval, and publication as provided by law.

Passed by the Council the ____ day of _____, 20____, and approved this ____ day of _____, 20____.

_____
Mayor

ATTEST:

_____
City Clerk

First Reading: _____
Second Reading: _____
Third Reading: _____

I certify that the foregoing was published as Ordinance No. _____ on the ____ day of _____, 20____.

_____
City Clerk

ORDINANCE NO. 93-2026

AN ORDINANCE AMENDING CHAPTER 165 "ZONING REGULATIONS" OF THE CODE OF ORDINANCES OF THE CITY OF PALO, IOWA

SECTION I. PURPOSE. The purpose of this ordinance is to amend Chapter 165 to include an exclusive use district for data centers.

SECTION II. SECTION ADDED. Section 165.16A of the Palo, Iowa Code of Ordinances is hereby added as follows.

165.16A EU-1 DATA CENTER EXCLUSIVE USE DISTRICT

The purpose of the EU-1 Data Center Exclusive Use District is to provide a clear, comprehensive, and predictable regulatory framework for the siting and operation of large and small data centers within the City of Palo.

1. Permitted Principal Use

   A. Data centers

2. Permitted Accessory Uses and Structures.

   A. Battery energy storage systems (BESS).
   B. Solar arrays and other similar on-site renewable power generation systems.
   C. On-site standby or backup power generation.
   D. Electrical substations, switchyards, or power distribution equipment.
   E. District energy or microgrid infrastructure.
   F. Water treatment and recycling facilities.
   G. Office, maintenance, and employee support facilities incidental to the data center.

3. Major Site Plan Required. A major site plan shall be submitted and reviewed prior to the approval of a data center. A data center shall require rezoning to the EU-1 District, unless it is already located within the EU-1 District.

4. Additional Information.

   A. The following information shall be submitted on the major site plan, or in narrative form, supplied by the applicant with any application for rezoning to the EU-1 District:

      (1) Legal description of all parcels of real property leased and/or owned, that are identified to be part of the project area.

      (2) A description of the project including development timeline, location of buildings, parking, and approximate number of employees.

B. The following information shall be submitted prior to issuance of the first building permit for the data center:

(1) Planned location ofunderground or overhead electric lines, grid interconnection points, project entrances, staging areas, and access roads required during construction and post construction.

(2) Written verification from the proposed power provider that the applicant has verified the utility supply can be accommodated for the applicant's proposed use.

(3) Lighting Plan. A lighting plan shall be submitted providing details of the light spread and intensity diagrams, fixture specifications, and mounting height details. Any lighting used for outdoor illumination on the property shall be full-cutoff fixtures so that light does not shine upward or adversely impact adjoining properties.

(4) The applicant acknowledges that permits for generators and related equipment are issued by Linn County, Iowa. The applicant shall simultaneously provide to the City complete copies of all applications, plans, and supporting materials submitted to Linn County for such permits, including any revisions or supplements thereto. The plan shall demonstrate that the proposed data center will comply with all applicable local, county, state, and federal permitting requirements..

(5) Road use agreement. An approved Road Use Agreement containing the information and conditions specified in Section 165.16A(l I) is required before the start of construction.

(6) Pre-construction noise analysis. Completed analysis shall be submitted 111 accordance with 165.16A(12).

(7) Emergency Response Plan. The applicant shall submit an emergency response plan as described in I 65.16A(16).

(8) Site and structure requirements, including:

(a) Stormwater management plan.
(b) Stormwater pollution prevention plan.
(c) Erosion and sediment control plan.
(d) All Data Center production equipment (computers, servers, etc.) shall comply with Building Code requirements. Said structure(s) shall be placed on a permanent foundation.

(9) Economic Development Agreement. If incentives are requested by the Applicant, the applicant shall enter into an Economic Development Agreement ("EDA") with the City, approved by the City Council as described in Section 165.16A(15).

(10) For any data center facility consisting of one or more buildings (whether constructed simultaneously or in separate phases), the applicant shall not be required to submit or resubmit the items referenced in Sections 165.16A(4)(B)(1)-(9) as to any building or phase of buildings constructed after the initial building permit is issued, if such building or phase of buildings were contemplated on the relevant submission delivered under said Sections 165.16A(4)(B)(1)-(9) in connection with the first building permit issued for the data center and the scope and footprint of the project has not substantially changed from the time of initial submission.

5. Required setbacks.

A. 200 feet to property lines.

B. 1,000 feet (measured from the closest outer wall of the closest building on the data center property) to the closest outer wall of a place of public assembly (existing at the time the property is rezoned for data center uses) and 1,000 feet (measured from the closest outer wall of the closest building on the data center property) to the property line of any residentially zoned property. "Residentially zoned property" does not include non-conforming residential properties in non-residential zoning districts.

6. Street access. The site shall have access to a hard surfaced road of sufficient capacity to accommodate the traffic that the use will generate, with continuous hard surfaced connection to a City Street or state or federal highway.

7. Access. Vehicular access points shall create a minimum of conflict with through traffic movement.

8. Parking. Off-street parking and loading areas shall be required according to the following provisions.

A. Off-Street loading areas. The following off-street loading areas shall be provided and maintained for data centers.

(1) There shall be at least one off-street loading berth for each data center building; and

(2) In addition to the minimum berth, additional off-street loading berths shall be provided when any of the following thresholds are met. The number of additional berths required shall be determined as follows:

(a) Delivery/Service Trip Volume (30+ foot vehicles). One additional off-street loading berth shall be provided for each increment of ten (I0) delivery/service vehicle trips per business day, involving vehicles exceeding thirty (30) feet in length, above a baseline of ten (10) such trips per business day. (Example: 0-10 trips/day = no additional berth; 11-20 trips/day= 1 additional berth; 21-30 trips/day= 2 additional berths; etc).

(b) Tractor-Trailer Deliveries. One (1) additional off-street loading berth shall be provided if the facility is projected or documented to receive more than three (3) tractor-trailer deliveries in a day on a recurring basis, and an additional berth shall be provided for each additional increment of three (3) tractor-trailer deliveries per day on a recurring basis. (Example: 0-3 deliveries/day= no additional berth; 4-6 deliveries/day= I additional berth; 7-9 deliveries/day = 2 additional berths; etc).

(c) Security Checkpoint. Where a gated entrance, guardhouse, or security checkpoint is provided, the applicant shall demonstrate that delivery/service vehicles can queue entirely on-site without obstructing the public right-of-way. If the applicant cannot meet this standard, additional loading capacity or on-site staging/stacking shall be required as determined by the Zoning Administrator.

(3) When thresholds in subsection (A)(2) would require additional berths, Zoning Administrator may approve an alternative compliance plan in lieu of some or all additional berths, upon finding that the alternative will prevent on-street loading and off-site queuing and will not interfere with fire lanes or emergency access. Alternatives may include, without limitation:

(a) Scheduled delivery windows and appointment-only deliveries;

(b) a designated on-site staging/laydown area for short-term loading activity;

(c) reconfiguration of circulation or stacking to avoid spillback; or

(d) shared loading arrangements, where permitted, supported by a recorded easement or enforceable agreement.

B. Off-Street loading area design standards. Required off-street loading areas shall meet the following design standards;

(1) Size. Each loading berth shall not be less than 15 feet in width, 60 feet in length, and 15 feet in height.

(2) Location. Such berth may occupy part of a required yard space, however, required off-street loading areas shall not occupy required buffer areas between data center lots and adjacent non-commercial or non-industrial lots, and no berth shall be constructed in the required side yard of a building that is adjacent to a residential district.

C. Off-Street parking areas required. In areas of data center development, off-street parking shall be required based on 1.50 spaces per each full-time permanent employee.

D. Off-Street parking area design standards. Required off-street parking areas shall meet the following design standards.

(1) Parking space size. Each parking space shall contain a minimum area of not less than 300 square feet including parking stall area, backup area and aisle area. Parking stalls shall have a width of not less than 9 feet, and depth of not less than 18 feet.

(2) Handicapped parking. Off-street parking areas shall be designed to meet the number, placement, size and marking and identification requirements for handicapped parking contained in 42 USC 12181-9 and LC.A. §321L.5.

(3) Computation. When determination of the number of off-street parking spaces required by this chapter results in a requirement of a fractional space, the number of spaces shall be rounded up to the next whole number. Parking spaces required on an employee basis shall be based on the maximum number of employees on duty or residing, or both, on the premises at any one time.

(4) Access. Where a lot does not abut a public or private alley or easement of access there shall be provided an access drive not less than 18 feet in width leading to the loading and unloading space and parking or storage areas required hereunder in such manner as to secure the most appropriate development of the property in question.

(5) Surfacing, Grading, Drainage. All drives and parking areas are to be paved with an asphaltic concrete pavement, or such other hard but permeable pavement.

(6) Marking and delineation. Marking and delineation of off-street parking areas shall be required.

(7) Maintenance. Off-street parking areas shall be maintained in good condition and any required marking, surfacing, grading and drainage shall meet the conditions of approval on an on-going basis.

9. Buffers. A buffer shall be provided when a data center abuts non-commercial or non-industrial land uses or zoning districts. A buffer shall not be required where the data center site is separated from abutting property by a natural feature that functions as an effective visual and physical barrier similar to the below requirements, including but not limited to rivers with defined bed and banks, substantial wooded areas, or similar natural landforms, as determined by the Zoning Administrator or their designee.

A. The buffer shall be a minimum of 50 feet. The buffer width may be reduced by up to ten percent by requesting a variance from the Board of Adjustment. A variance may be granted when, because of an exceptional situation, topographical condition, surroundings, size, shape or other condition of the property, the strict application of the buffer width provision would result in practical difficulties for the owner of such property.

B. All buffer areas shall be landscaped or fenced to provide visual screen, and shall not include any structures other than allowed fencing, parking areas, storage areas, playgrounds, or other similar facilities.

(1) Fencing may be used to meet the buffer requirement but shall not exceed 50 percent of the total buffer distance required, provided fence height shall not exceed 12 feet. Height, for the purpose of meeting the requirements of this subsection, shall be measured from the ground surface to the highest point of the fence. Setback requirements shall not apply to fences.

(2) Landscaping shall use any combination of berms, native plants and tree species to achieve a visual buffer no less than 25 feet in height. Notwithstanding the foregoing, the 25 feet minimum height of the landscaping can be measured at maturity provided that tree species shall have a height of at least 6 feet within three years of installation. Berms must be vegetated to minimize erosion and to slow stormwater rnnoff.

(3) Visual screening shall be measured under leaf-on conditions and shall be measured from the elevation of the shared property line.

(4) Buffer areas may include drainage swales, stormwater retention or infiltration areas, or other stormwater management areas only if landscaping and visual screening requirements can also be met.

(5) Lot frontage on a public street shall be separated from the edge of the abutting property line by a landscaped yard of at least 20 feet in width, except where driveway accesses occur.

(6) All buffer areas shall be kept free of litter, debris, noxious weeds, and species of plants identified by the state IDNR as exotic or invasive.

10. Sewer and Water Connections. Applicants shall adhere to the City code sections pertaining to Sewer and Water Systems, including but not limited to Chapter 90 (Water Service), Chapter 92 (Water Meters), Chapter 92 (Water Rates), Chapter 93 (Water Conservation), Chapter 95 (Sanitary Sewer System), Chapter 96 (Building Sewers and Connections, Chapter 97 (Use of Public Sewers) and Chapter 99 (Sewer Service Charges), as amended. All connections, usage, construction, materials, design standards, fees, and rates shall conform to City requirements and adopted schedules.

A. Any extensions, upgrades, upsizing, or other additional infrastructure required to provide water and/or sanitary sewer service to the applicant or required to accommodate the applicant's proposed use or demand, shall be the sole responsibility of the applicant and shall be memorialized in a development agreement between the applicant and the city. Such responsibility includes all costs associated with planning, engineering, design, permitting, inspection, construction, and installation, whether the improvements are located on-site or within the public right-of-way, unless otherwise expressly agreed to in writing by the city.

B. Applicants shall utilize the City water supply and sanitary sewer systems for domestic demands when service is available, in accordance with City Code requirements. Alternative water supply or wastewater disposal systems may only be used when connection to the City system is determined to be not feasible, as mutually agreed upon by the applicant and the City.

C. Applicants may apply to use City water and/or sanitary sewer services for industrial, commercial, or process-related demands, but such use is not required. If the applicant elects to use City water and/or sewer services for these demands, the applicant shall be fully responsible for all additional infrastructure, system improvements, capacity upgrades, pretreatment requirements, and related costs necessary to support such use, including all planning, design, and construction costs, and shall pay all applicable rates and charges established by the City.

11. Avoidance and mitigation of damages to public infrastructure.

A. Roads. Applicants shall identify all roads planned to be used for the purpose of transporting equipment for construction, operation, or maintenance of the data center and obtain applicable weight and size permits from the impacted road authority prior to construction.

B. Existing road conditions. Applicant shall conduct and provide evidence of a pre-construction roadway conditions survey, in coordination with the City's Public Works Department and City Engineer, to determine baseline road conditions and authority. The survey shall adequately document all road, road right of way, and public drainage infrastructure conditions requested for use during all phases of construction.

C. Transportation Impact Analysis. Applicants shall submit a transportation impact analysis prepared by a licensed engineer detailing how the proposed data center development will impact the surrounding roadway network during and after construction. Roadways to be included shall not be limited to the roads within the City, the study shall be comprehensive of all roads to be impacted outside of the interstate system. Key intersections and corridors to be evaluated shall be discussed with the City Public Works Department and City Engineer prior to performing the analysis. The review shall address, at a minimum, capacity, delay, safety impacts, site access design, internal circulation, multimodal accommodations and anticipated trip generation based on industry-standard methodologies. The analysis shall recommend mitigation measures such as turn lanes, signal installation or timing adjustments, or roadway upgrades to ensure the transportation system can safely and efficiently accommodate the added demand. The report shall detail the timeline of improvements needed based on construction activities and anticipated full-time traffic volumes at the end of construction. Information from this analysis shall be used in determining the requirements of the road use agreement.

D. Road Use Agreement. An approved Road Use Agreement containing the information and conditions specified in this section is required before the start of construction. Applicants shall enter into a Road Use Agreement with the City that clearly details responsibilities for on-going road maintenance and dust control measures for all identified City streets during all phases of construction. The Road Use Agreement may require certain applicant undertakings, including but not limited to providing financial assurance in the form of an irrevocable letter of credit, bond, cash, escrow, parent guarantee, or other form of security or guaranty acceptable to the City. At construction completion, applicant shall, unless otherwise provided in the applicable Road Use Agreement, conduct and provide evidence of a post construction roadway conditions survey, in accordance with the Road Use Agreement and in coordination with the City's Public Works Department and City Engineer, to verify that road conditions, to the extent impacted by applicant's use in the construction of its data center, have been restored, as far as reasonably practical, to pre-construction conditions or as otherwise required by the Road Use Agreement.

E. Drainage system. The applicant shall be responsible for repair of damage to public drainage systems stemming from construction, operation, or maintenance of the data

center. Applicant shall acknowledge any damage to public drainage systems and the responsibility for repair in a timely manner within 72 hours of damage discovery.

12. Noise Analysis. No operating data center equipment shall produce decibel levels exceeding any of the following limitations except during initial construction and routine maintenance. Adequate setbacks and effective sound mitigating equipment shall be used to comply with these limitations:

    A. The average hourly noise level shall not exceed 55 dBA or 65 dBC as measured from the outer wall of any occupied structure within residentially zoned property adjacent to the proposed development. For property adjacent to the proposed development that is not residentially zoned, the average hourly noise level shall not exceed 65 dBA or 75 dBC as measured from the outer wall of any occupied structure. The average decibel limit is specific to source of the sound and does not count against cumulative ambient decibel levels as established in a baseline acoustic evaluation.

    B. Equipment testing, maintenance activities, and construction activities that generate elevated noise, including generator testing, shall be limited to the hours of 8:00 a.m. to 6:00 p.m., Monday through Friday, unless otherwise approved by the Mayor or his/her designee. City approval for excessive noise generation shall not be unreasonably withheld.

    C. The average hourly decibel level may be exceeded during short-term events such as severe windstorms.

    D. A pre-construction and post-construction noise evaluation shall be completed by a certified professional by the Institute of Noise Control Engineering (INCE), or a licensed Professional Engineer (PE) to verify compliance with the City's standards. The post-construction noise evaluation shall be completed after completion of all planned data center buildings at the end of construction (as defined in Sections 165.l 6A(l2)(E)).

    E. Commencing on the fifth anniversary of the end of construction, as defined hereafter, and continuing every 5 years thereafter, for so long as the data center operates, a noise evaluation shall be completed at the operators expense by a certified professional by the Institute of Noise Control Engineering (INCE), or a licensed professional engineer (PE) to verify compliance with the City's standards in Sections 165.16A(l2)(A). Completion of all data center buildings, or end of construction, means the date on which all of the following have occurred: completion of construction of the data center or, in the case of a phased or multi-building campus, all buildings of the multi-building data center campus, and issuance of a certificate of occupancy for all related buildings; and the data center operator has communicated, in writing, to the Mayor or his/her designee that it has completed the data center campus; provided, that, if all construction has

stopped on the property for more than 6 consecutive calendar months, other than due to delays by the City in processing related permits or approvals, then "end of construction" as used herein shall be deemed to have occurred as of the last day of such calendar month. This 6-month time frame may be extended by the mayor or his/her designee.

F. The owner(s) of adjacent property may voluntarily agree, by written and recorded waiver, to a higher average hourly decibel level than those allowed within this subsection. This agreement must be recorded with the office of the Linn County Recorder so that future owners of the property are on notice of the agreement.

13. Water Supply. The Applicant shall obtain all necessary Water Use Permits from the Iowa Department of Natural Resources (IDNR). The issuance of Water Use Permits by the IDNR shall serve as demonstration that there is a sufficient reliable water supply to meet all projected water demands without undue adverse impacts on existing users, aquifers or surface waters. To assist in the City's assurance the applicant must also comply with the following requirements:

A. The applicant shall submit the Water Use Permits to the City three weeks prior to submitting an application to the Iowa Department of Natural Resources for a Water Use Permit. This advance submission is to allow the City time to review and provide comment to the State during the applicable review and public comment process.

B. The applicant shall share the same water information with the City that it shares on a monthly and aimual basis with IDNR. Coordination is necessary during periods of water supply constraint, drought, and emergency conditions, and applicant shall act strictly in accordance with the priority allocation and restriction mandates issued by the IDNR or the State of Iowa pursuant to Chapter 50 of Part 567 of the Iowa Administrative Code and Subchapter III, Part 4, Chapter 455B of the Iowa Code and any other relevant local ordinance as amended. The applicant shall demonstrate coordination with the IDNR regarding applicable Water Use Permits, interference mitigation procedures, monitoring obligations, and compliance procedures. Demonstration of this coordination shall be, at a minimum, by supplying all documents submitted to the IDNR simultaneously to the City. Notwithstanding anything in this Section to the contrary, the applicant may redact confidential or proprietary information from any submission hereunder consistent with Chapter 22 of the Iowa Code.

14. Water Quality Review. The Applicant shall obtain all necessary National Pollutant Discharge Elimination System (NPDES) permits required through the IDNR, both Individual and General. Application documents shall be submitted to the City at the same time as to the IDNR to allow the City time to provide the IDNR any comments during the review process. Also, once a permit has been issued the City shall be copied on any

compliance documentation submitted to the IDNR for the duration of the permitted activities.

15. Economic Development Agreement. Prior to issuance of the first building permit for the data center and in the event the applicant requests incentives, the applicant of a data center shall enter into an Economic Development Agreement ("EDA") with the City, approved by the City Council. The purpose of the EDA is to establish ongoing cooperation between the City and the project operator, a description of any applicable incentives that the project operator will receive (subject to the terms of the EDA), and to provide ongoing contributions that advance the City's fiscal, infrastructure, and community goals related to hosting data center facilities. The City shall retain full reasonable discretion to determine the form, structure, and use of funds or benefits provided under any EDA. In the event the applicant does not request any incentives then this section shall not apply. Notwithstanding the foregoing, in the event the applicant is within 1,000 feet (measured from the closest outer wall of the closest building on the data center property) to the property line of any residentially zoned propelty, ("Residentially zoned property" does not include non-conforming residential properties in non-residential zoning districts) the applicant shall consider implementing a Property Value Protection Plan. The purpose of the Property Value Protection Plan is to address potential impact to nearby residential property values associated with the development and operation of the data center Nothing in this section shall limit the City's authority to negotiate terms appropriate to the scale, location, and nature of a specific project, or to enter into separate agreements addressing road use, infrastructure improvements, or other matters related to the development of the data center.

16. Emergency Response Plan. The applicant shall submit an emergency response plan prior to any ground disturbance at the project site detailing the planned response actions that will be taken by facility representatives in the event of an emergency. These actions are intended to minimize health risks to personnel and people in the surrounding community, as well as minimize adverse impacts to the environment. The emergency response plan shall also identify the applicants' actions when sustained drought conditions are incurred.

    A. The plan shall include, but is not limited to, a detailed narrative ofresponse procedures and the facility representatives responsible for management of the following plausible contingencies that could occur at the facility: natural disaster/severe weather, fire, security incident, capacity/transmission, environmental, chemical, pipeline (if applicable), sustained drought or water supply shortages, and medical. It shall include procedures for a site evacuation, designated egress routes, and emergency staging areas.

    B. The plan shall include a stand-alone section detailing the emergency response protocols specific to battery energy storage areas (if applicable).

C. The plan shall include a stand-alone section detailing the emergency response protocols specific to times of sustained drought conditions or water supply shortages. Surface water monitoring gauges and groundwater monitoring wells may be established to serve as indicators of water supply shortages. The plan should include specific water level triggers that will indicate emergency response actions.

D. The plan shall be developed in coordination with local first responders, City Staff and Linn County Emergency Management.

E. Notwithstanding anything in this Section to the contrary, the applicant may redact confidential or proprietary information from any submission hereunder.

17. Notification Requirements. To assist in providing adequate notice to interested parties, the applicant for a rezoning to the EU-I District shall:

A. Within 14 days of filing the rezoning application with the zoning administrator, mail a notice via first class mail to property owners and tenants within 1,000 feet of the subject site explaining the request and identifying the subject property.

B. Prior to the application being heard at the Planning and Zoning Commission meeting, the applicant shall host a public informational meeting held at a location reasonably accessible to all identified property owners. Applicants must mail a notice of the public informational meeting via first class mail to property owners and tenants within 1,000 feet of the subject site.

(l) Applicants must submit a list of the property owners and tenants contacted, a copy of the notice sent, and a notarized affidavit stipulating to the mailing to the City Cleric

SECTION III. SECTION MODIFIED. Section 165.02 of the Palo, Iowa Code of Ordinances is hereby modified to include the following additional definitions:

"Data center" means a building, structur[illegible], or facility, or group of buildings or structures, whose primary purpose is the centralized storage, processing, management, or transmission of digital data or information through computer servers or telecommunications equipment. A data center may include server farms, cloud computing facilities, colocation facilities, and similar uses.

"Places of public assembly means buildings or facilities where people gather for civic, educational, religious, or cultural purposes, including, but not limited to retirement and nursing homes, schools, childcare homes and centers, group homes, hospitals, detention facilities, or human service facilities, not including facilities allowed as an accessory use to the principal use in question.

SECTION IV. REPEALER. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed.

SECTION IV. SEVERABILITY. If any section, provision or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision, or pa1t thereof not adjudged invalid or unconstitutional.

SECTION V. EFFECTIVE DATE. This ordinance shall be in effect after its final passage, approval and publication as provided by law.

PASSED AND APPROVED this 20th day of July 2026.

Bryan Busch, Mayor

ATTEST:

Jennifer Fencl, City Clerk

First Reading: June 1, 2026

Second Reading: July 13, 2026

Third Reading: July 20, 2026

Final Approval Given: July 20, 2026

I certify that the foregoing was published as Ordinance No. 93-2026 on July 22, 2026

Jennifer Fencl, City Clerk