CITY OF EUREKA CALIFORNIA

AGENDA SUMMARY CITY COUNCIL

TITLE: **Data Center Regulations Discussion**

DEPARTMENT: Development Services

PREPARED BY: Cristin Kenyon, AICP, Development Services Director

PRESENTED FOR

☐Action ☐Information only ☒Discussion

RECOMMENDATION

Receive a report on potential permanent regulations for data centers and provide direction to staff regarding the scope and content of a future ordinance.

FISCAL IMPACT

☒No Fiscal Impact ☐Included in Budget ☐Additional Appropriation

COUNCIL GOALS/STRATEGIC VISION

Effective governance.

BACKGROUND

On September 1, 2026, the City Council adopted an urgency ordinance establishing a temporary moratorium on the establishment of data centers within the City. The moratorium provides the City an opportunity to evaluate potential impacts associated with data centers and consider appropriate permanent land use regulations.

Data centers provide infrastructure necessary for cloud computing, telecommunications, artificial intelligence (AI), financial services, government operations, and many other activities that increasingly rely on the processing and storage of digital information. At the same time, data centers can consume substantial amounts of electricity and water, require extensive backup power and cooling infrastructure, generate noise, affect air and water quality, present public safety concerns, and occupy large buildings with blank walls and relatively few employees. The magnitude of these impacts varies significantly depending on the size, design, and operating characteristics of an individual facility.

Staff has conducted preliminary research into these issues and potential regulatory approaches. Council direction will inform preparation of permanent regulations for subsequent Planning Commission and City Council consideration.

DISCUSSION

The City's Inland and Coastal Zoning Codes do not currently identify data centers as a separate land use classification. Staff recommends establishing data centers as a distinct industrial land use classification so the Zoning Codes can clearly identify where they are allowed or prohibited and, where allowed, apply standards tailored to their impacts.

From there, staff sees three primary regulatory options:

(1) **Option 1: Prohibit Data Centers**. Prohibit data centers as the primary land use of a site. Computing infrastructure that is incidental and subordinate to another primary use would continue to be allowed as an accessory use. For example, the City's information technology infrastructure would remain accessory to the City's primary "Government Facilities" use rather than being classified as a data center.

(2) **Option 2: Allow Only Smaller Data Centers**. Allow data centers below specified thresholds, subject to use-specific standards, and prohibit large facilities. The Code could establish "Small" and "Large" data center subcategories based on electrical demand, floor area, water demand, or a combination of measures, similar to other land use classifications that the Inland Zoning Code divides by scale (e.g., the code includes three subcategories of the General Retail Indoor use classification: larger than 50,000 sq. ft., between 20,000 and 50,000 sq. ft., and less than 20,000 sq. ft.). Council would need to determine the general parameters for distinguishing smaller from larger facilities and where smaller facilities could potentially be appropriate. Given the concerns associated with data centers, staff recommends that any data center allowed as a primary use require a Conditional Use Permit rather than being permitted by right, allowing site-specific consideration and discretionary review through a noticed public hearing. This would allow the City to impose project-specific conditions or outright deny a project if it was found that the use is not consistent with the General Plan, not suitable for the site, not compatible with existing and planned land uses in the vicinity, or detrimental to public health, safety, or welfare. The City could also require a neighborhood information meeting before the public hearing process, similar to the process required for certain wireless telecommunication facilities.

(3) **Option 3**: **Tiered Regulation.** Allow smaller data centers as described under Option 2, while allowing larger facilities only in more limited circumstances and subject to substantially more stringent requirements. For larger facilities, the central policy question is whether their impacts could be sufficiently avoided, mitigated, or offset—

and sufficient long-term community benefits provided—for the project to result in a net benefit to Eureka.

If Council believes a larger facility could potentially meet that standard, but only at particular locations, the City could prohibit large data centers generally while allowing them at specifically identified sites through a Special Considerations Overlay (SCO). The City could identify and apply the SCO to appropriate sites in advance, or require a property owner or applicant to request the SCO in conjunction with a specific development proposal. In either case, the SCO would be applied through Zoning Code and Zoning Map amendments to a specific property or properties, and the implementing ordinance would modify the base zone to allow a large data center and would establish site-specific requirements for the proposed use.

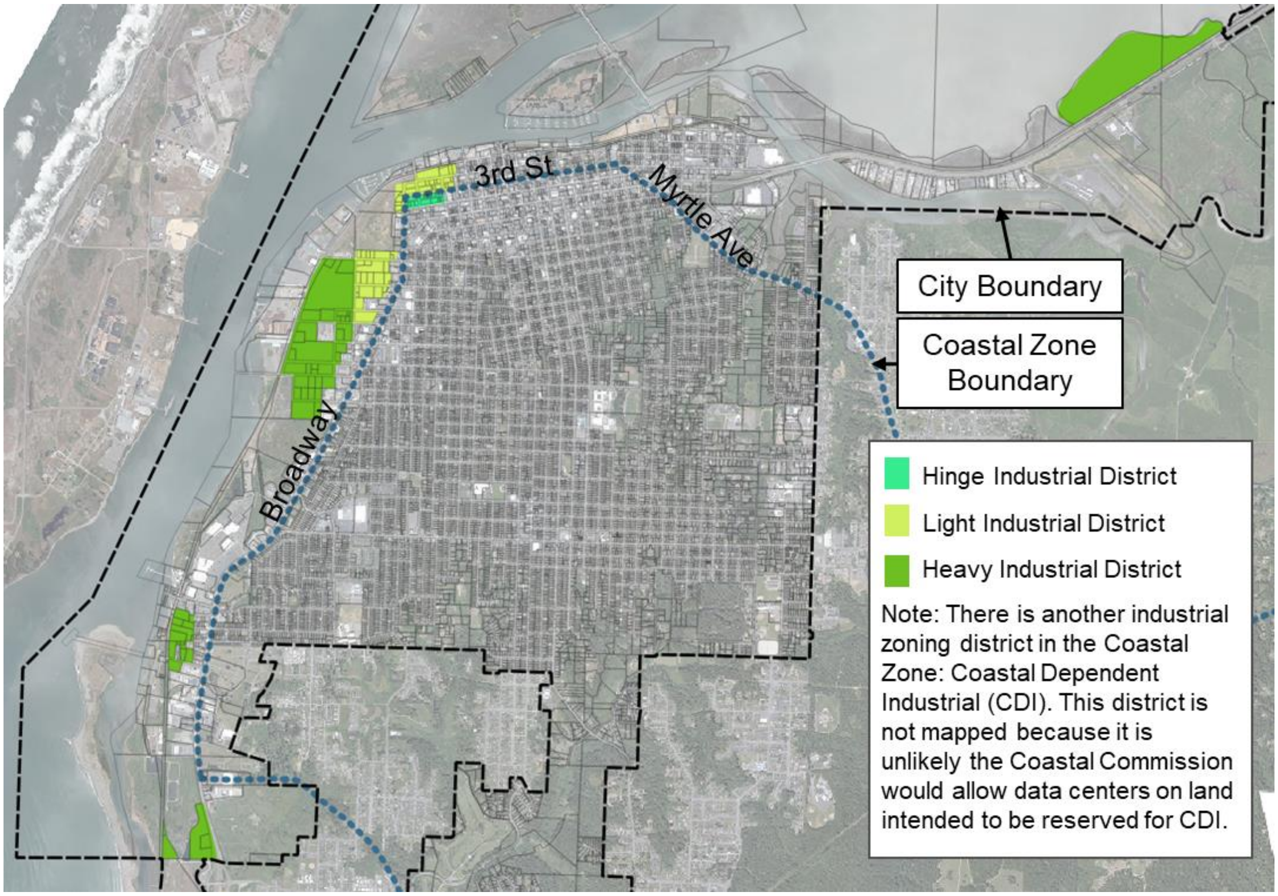
For a larger data center, the City and applicant could also agree to enter into a Development Agreement. A Development Agreement is a negotiated contract between a local government and property owner or developer that establishes the terms governing development of a property over an agreed period of time. For the developer, an agreement can provide greater certainty regarding the regulations and development rights that will apply to a long-term project. In exchange, the City can negotiate binding commitments that provide long-term community benefits. Because a Development Agreement is negotiated between the parties, it may provide opportunities to establish mutually agreed-upon commitments that would not otherwise be imposed as standard project conditions. Potential community benefits are discussed below under "Economic and Community Impacts."

The primary direction requested from Council is whether to pursue Option 1, 2, or 3; the remaining discussion is intended to inform that choice and the parameters of a future ordinance.

Implementation

Industrial uses are typically limited to the Industrial zoning districts, with certain industrial uses like light manufacturing and warehousing also allowed in the Service Commercial and Downtown West zoning districts.

Figure 1. Industrial Zoning Districts



The vast majority of the City's industrial zoning is within the Coastal Zone, where changes to the Coastal Zoning Code require certification by the California Coastal Commission before taking effect. Staff is already preparing a comprehensive update to the Coastal Zoning Code and recommends extending the data center moratorium until the new land use classification and regulatory framework can be incorporated into that update.

Changes to the Inland Zoning Code could be adopted and take effect sooner. If Council determines that data centers should not be allowed as a primary use anywhere in the Inland portion of the City, the Inland amendment could be relatively straightforward: establish the new land use classification and expressly prohibit it in the zoning district use tables. If Council identifies circumstances in which data centers should be allowed inland, the amendment would also need to establish the applicable siting, permitting, and use-specific standards.

Figure 2. Mixed-Use Commercial Districts that Allow Certain Industrial Uses

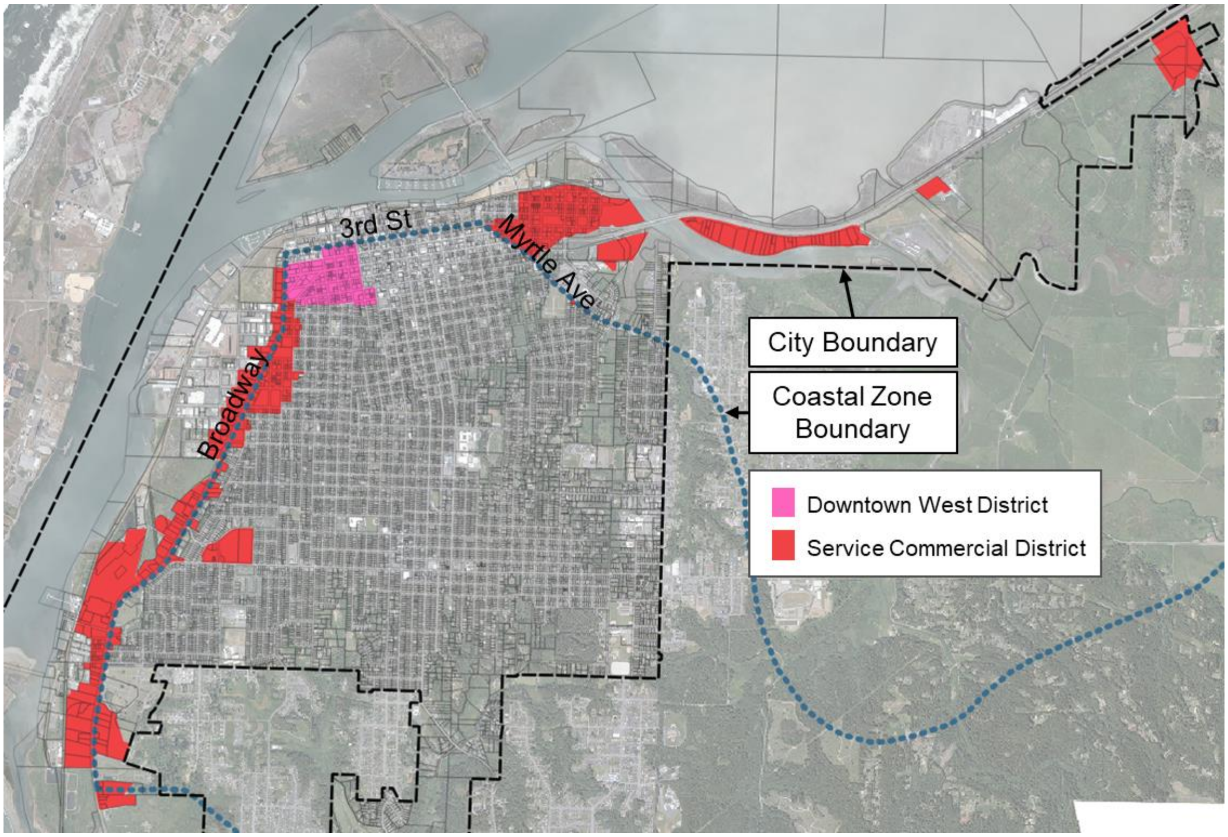
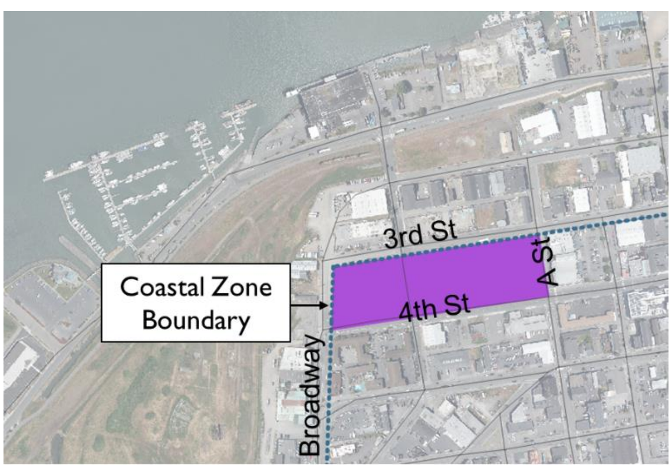


Figure 3. The Hinge Industrial Zoning District (the extent of Eureka's industrial zoning outside of the Coastal Zone)



What Is a Data Center?

At its September 1 meeting, the Council expressed particular interest in how a data center should be defined. There is a range of approaches; a few examples are provided below.

Table 1. Example Definitions

Jurisdiction/Source	Definition
California AB 1577 (2026, enrolled)	A facility or part of a facility housing computing infrastructure, including processors, servers, storage, networking equipment, and associated power/cooling systems, for the primary purpose of processing, storing, or distributing electronic data. Excludes facilities under 10 megawatt (MW) electrical capacity.
California Energy Commission	Buildings designed and equipped for high-density computing equipment**,** usually with dedicated uninterruptible power supply (UPS) and cooling systems. For a data center within a larger building, the Commission notes it will usually have its own power/cooling systems and a constant power load of 75 kilowatts (kW) or more.
Mesa, Arizona	Facility or portion thereof whose principal use is storing/managing computer systems, servers, networking equipment and digital-data operations; expressly includes AI, blockchain, cryptocurrency mining, computational modeling, genome sequencing and other computationally intensive applications.
Waxahachie, Texas	Structure housing a large grouping of network computer servers used by businesses, governments and organizations for remote storage, processing and distribution of large amounts of data.
Georgia HB 1012 proposal	Facility, campus of facilities, or array of interconnected facilities housing working servers and developed to cool, secure and connect data associated with applications and services.

Data centers also take different forms depending on who they serve and where computing occurs. Enterprise data centers primarily serve a single organization; colocation data centers provide computing space, power, and connectivity to multiple customers; and edge data centers are generally smaller facilities located closer to users or network endpoints. At the other end of the spectrum, hyperscale data centers support very large-scale cloud and computing operations, while the newest AI data centers can require particularly high-density computing and electrical infrastructure. Multiple facilities may also be developed together as a data center campus, with aggregate demands far greater than any individual building. These categories overlap and are not necessarily appropriate regulatory classifications, but they illustrate the wide range of facilities encompassed by the term “data center.”

As reflected in the example definitions, data centers can be distinguished from ordinary server rooms and other accessory information technology infrastructure by identifying data processing and storage as the principal use or primary function of the facility or business, and by setting an electrical-demand threshold.

However, electrical demand alone does not define a data center because high utility demand is not unique to data centers. Advanced manufacturing, research and development facilities, laboratories, cold storage, food processing, electric vehicle charging hubs, and other industrial or commercial uses can also place substantial demands on electrical, water, and/or wastewater systems. The City of San José, for example, distinguishes data centers from other “large energy-use projects,” generally defined as projects using 20 MW or more.

This raises a broader policy question regarding whether standards intended to protect limited utility capacity and existing ratepayers should apply specifically to data centers or more generally to extraordinary utility users, regardless of land use type. Eureka could establish data-center-specific standards for impacts particular to that use while separately considering whether additional regulations are needed for other extraordinary electrical, water, or wastewater users.

Data Center Issues and Impacts to Consider

If Council chooses to allow data centers under either Option 2 or Option 3, the following issues would inform the standards incorporated into the permanent regulations. In general, the appropriate requirements would increase with the scale and potential impacts of the facility, with substantially greater requirements necessary if the City chooses to allow large data centers.

1. <u>Energy Demand and Electrical Capacity</u>

Data centers vary enormously in scale and electrical demand, and the average size of new facilities is increasing rapidly. The existing EdgeConneX data center in Arcata has approximately 1 MW of power capacity. By comparison, the average size of data centers entering service nationally increased from approximately 25 MW in 2020 to nearly 80 MW in 2025. Industry analysts now describe 20 MW as relatively small, with facilities commonly in the 50–100 MW range and new developments regularly seeking 100 MW or more. At the upper end, large multi-building and AI-focused data center campuses may require hundreds of MWs, with some proposed campuses exceeding 1,000 MW (1 GW).

For comparison, PG&E has advised City staff that approximately 1–2 kW per housing unit can be used as a general planning estimate for residential electrical demand. Using that estimate, a 1-MW data center is comparable to approximately 500–1,000 homes, while an 80-MW data center is comparable to approximately 40,000–80,000 homes.

The ability to accommodate new electrical demand depends on capacity at multiple levels of the electrical system, including generation, regional transmission, and local distribution. Capacity limitations at each level require different infrastructure improvements, with substantially different costs and timelines.

PG&E staff has advised City staff that one of the electrical substations serving Eureka is currently at capacity and another has approximately 10 MW of remaining capacity, but anticipates adding a transformer bank, and can further expand local distribution capacity with sufficient advance notice of anticipated demand.

Larger loads must also be considered in the context of Humboldt County's regional transmission system, which has finite capacity to import electricity from the broader California grid and is more difficult and costly to expand. However, long-range plans contemplate major new transmission infrastructure, while development of new local renewable energy resources could also increase the electricity available to serve regional demand.

While facilities below 10–20 MW are often characterized as relatively small in the current data center market, staff recommends a substantially lower threshold for Eureka. A 10-MW facility alone would equal the currently available capacity at Eureka Substation E and, using PG&E's residential planning estimate, could represent the electrical demand of approximately 5,000–10,000 housing units. Given the scale of Eureka's electrical system and the need to accommodate future housing, commercial and industrial growth, electric vehicles, building electrification, and other demands, what constitutes a "small" data center in a major metropolitan market may not be small in the Eureka context.

A large data center could place substantial demand on existing electrical capacity and potentially accelerate infrastructure improvements otherwise needed in the future. Whether the net impact to Eureka is positive or negative depends in part on how necessary improvements are funded and the amount of additional capacity they create.

Utilities plan generation, transmission, and distribution investments based on forecasts of future electricity demand. If those forecasts include a large data center, utilities may plan or procure infrastructure and energy resources to serve that anticipated demand even if the project is later delayed, downsized, or never developed. This creates a risk that costs incurred in anticipation of a project that does not materialize could ultimately be borne by other ratepayers. To address the costs and risks associated with very large new electrical loads, California utilities and regulators are actively developing new approaches including PG&E's Electric Rule 30 for transmission-level large loads.

Potential regulations could require a project to demonstrate that adequate capacity will remain for planned community growth and, where legally and technically feasible, fund system improvements to create net positive system capacity. The City could explore mechanisms to ensure that the applicant, rather than other utility customers, bears the costs of electrical infrastructure improvements needed to serve the project.

Electricity costs can be thought of as being based on both how large a “pipe” (i.e., poles and wires sized to deliver sufficient energy) is needed to serve a given customer, and how much energy is delivered through that “pipe” in each billing period. In Humboldt County, all electric delivery is provided by PG&E. Thus costs addressing how large the “pipe” is are borne by PG&E and reflected in the delivery portion of customers’ electric bills. Electric generation is provided either by Redwood Coast Energy Authority (RCEA) as the default provider, or by PG&E if a customer opts out of RCEA service. A third option for large industrial and commercial customers is to seek direct access service. The amount of direct access energy that can be provided statewide is capped by policy, so this is not a guaranteed option for a given customer. Whether a customer gets their generation from RCEA, PG&E, or a direct access provider, generation is charged separately from delivery on their bill and reflects that volume of electricity that is provided each month through the “pipe.” RCEA’s Board-approved process for negotiating non-standard rates for exceptionally large electricity users may provide an additional mechanism for addressing the costs and characteristics of unusually large loads. To date, this negotiated rate mechanism has not yet been used.

Separate from electrical capacity is the environmental impact of the amount and source of electricity consumed. Large new loads can affect utility resource planning. If growth in electricity demand outpaces development of new renewable generation, storage, and transmission, serving that demand can increase reliance on natural gas or other non-renewable power sources, or delay the retirement of existing fossil-fueled power plants needed for grid reliability. Accordingly, the environmental impact of a data center depends not only on its own electricity procurement, but also on how its load affects the broader electrical system.

Potential standards could include requiring electricity from 100 percent renewable or other carbon-free sources; requiring or incentivizing new renewable generation and energy storage associated with the project rather than relying solely on existing renewable resources or renewable energy credits; establishing energy-efficiency standards for computing, cooling, and other equipment; requiring energy management and demand-response capabilities; and requiring ongoing reporting of energy consumption and efficiency. On-site or locally developed renewable energy generation and storage could further reduce reliance on imported electricity and, depending on system design, help reduce peak demand on the electrical grid.

2. Water and Wastewater

Data center water demand varies dramatically depending on facility size and, particularly, the cooling technology employed. Some facilities rely primarily on air or closed-loop cooling and consume relatively little water, while facilities using evaporative cooling can consume substantial amounts of water continuously. Cooling technology can involve a tradeoff between water and energy use: systems that reduce water consumption may require more electricity for cooling, while evaporative cooling can reduce energy demand at the expense of greater water consumption. Electricity generation itself can also consume water, depending on the energy source and generation technology. Accordingly, water and energy usage should be considered together, including both direct water use at the facility and indirect water use associated with its energy supply. As one example of the potential upper range, a 50-MW data center evaluated in San José was projected to require approximately 1.5 million gallons per day for cooling—equivalent to nearly 60 percent of Eureka's total average daily water use in 2020—although the facility was designed to meet that demand almost entirely with recycled water (i.e., treated wastewater effluent) rather than potable water.

Eureka currently has substantial available water capacity, but that capacity should not be characterized as unlimited or permanently guaranteed. The City also has an interest in maintaining beneficial use of its existing water resources. The significance of a data center's water demand would depend on the amount and type of use, cooling technology, infrastructure requirements, wastewater generation, and potential implications for the City's long-term water supply and rights. As with electricity, a large facility could hog existing capacity or help fund infrastructure improvements that expand capacity for other development.

Potential standards could require applicants to disclose projected water use and wastewater generation, demonstrate adequate system capacity, and fund necessary infrastructure improvements without shifting project-related costs to existing ratepayers. Additional standards could require water-efficient cooling; limit or prohibit potable water for cooling where feasible alternatives exist; establish water-efficiency standards; require ongoing monitoring and reporting; and require initial filling, flushing, draining, or refilling of large cooling systems to occur only at times and under conditions approved by the applicable water and wastewater utilities.

Use of recycled water could be particularly beneficial in Eureka because the City currently discharges treated wastewater effluent to Humboldt Bay and is required to address the State's prohibition on wastewater discharges to enclosed bays and estuaries. Certain cooling systems could provide a substantial beneficial use for treated wastewater and reduce the volume ultimately requiring discharge, although the amount would depend on the cooling technology and how cooling-system blowdown or other residual wastewater is managed. A large project could also potentially help finance recycled-water infrastructure that serves other users.

3. Fire and Public Safety

Data centers present specialized fire and life-safety considerations associated with high-density electrical equipment, battery energy storage systems, backup power systems, cooling equipment, and potentially large quantities of stored fuel. National Fire Protection Association (NFPA) 75 establishes nationally recognized fire-protection standards for information technology facilities, while additional Fire and Building Code requirements apply to battery storage and other associated equipment.

Permanent regulations could require review by Humboldt Bay Fire, compliance with applicable Fire and Building Codes and NFPA standards, project-specific emergency response plans, and other measures recommended by the Fire Chief based on the size, design, and configuration of the proposed facility.

Backup power presents its own tradeoffs. Battery energy storage can avoid the air quality, greenhouse gas, and noise impacts of diesel or other fossil-fueled generators, but large lithium-ion battery installations present significant fire risks of their own, and would require careful consideration.

4. Noise and Air Quality

Data centers operate continuously and may generate persistent noise from cooling systems, fans, transformers, generators, and other mechanical equipment. Unlike intermittent construction or commercial activity, this equipment may operate 24 hours a day. For nearby residents and other noise-sensitive uses, persistent tonal or low-frequency noise may be disruptive even when it does not exceed conventional noise-level limits. Backup generators can also produce substantial short-term noise during testing and emergency operation.

Air quality impacts are primarily associated with diesel or other fossil-fueled backup generators, which may be numerous at larger facilities and require periodic testing even when emergency operation is infrequent. These systems can also contribute to greenhouse gas emissions and local air pollutants.

Potential regulations could require acoustical studies; establish property-line noise standards, including standards addressing tonal and low-frequency noise; require equipment screening, enclosure, or other noise attenuation measures; limit the frequency, duration, and hours of routine testing and maintenance of emergency power systems; and require post-construction testing to verify compliance with approved noise levels. Air quality impacts could be reduced through limitations or prohibitions on fossil-fueled backup generation.

5. Community Character, Building Size, and Decommissioning/Adaptive Reuse

Data centers can involve large, relatively blank buildings surrounded by mechanical equipment, substations, security fencing, generators, cooling equipment, and other infrastructure. These characteristics may be inconsistent with Eureka's desired community character.

The City's industrial zoning districts currently regulate building size and placement, parking lot landscaping, signs, exterior lighting, and screening, but do not contain the comprehensive objective building design standards applicable in residential and commercial mixed-use districts that, for example, limit massing parallel to street frontages, prohibit large continuous blank walls, prohibit surface parking lots in front of buildings, and require visual interest from the street including through requirements for ground-floor transparency (i.e., windows), prominent entrances, and architectural detail. Council could consider adding certain objective design standards to industrial zoning districts or applying them specifically to data centers.

Council could also consider limiting the size of individual purpose-built data center buildings. Not only would this break up the massing, but it would avoid the construction of new big box buildings that tend to be difficult to adaptively reuse in the future. Limiting individual building size would not necessarily limit the size of an overall data center campus; larger facilities could be distributed among multiple buildings that may be more compatible with Eureka's development pattern and more readily adapted to future uses.

The speculative nature of AI data center development and rapid changes in computing technology create uncertainty regarding the useful life of purpose-built data center facilities. Building design standards could encourage or require buildings to be configured to facilitate future conversion to other industrial or employment-generating uses. Regulations could also require a decommissioning plan addressing removal of specialized equipment, hazardous materials, batteries, and other infrastructure; restoration or reuse of the site; and continued availability of public utility infrastructure constructed as part of the project. For larger facilities, financial assurance (e.g., a bond, letter of credit, or other security) could ensure that decommissioning costs do not become the responsibility of the City or community if a facility is abandoned.

6. <u>Economic and Community Impacts</u>

Data centers represent substantial private investment and can generate significant construction activity. However, they generally create relatively few permanent jobs compared with their size, capital investment, and infrastructure demands. For example, a $1 billion Meta facility reportedly generated about 1,500 construction jobs but only 100 permanent operating jobs. Many of the construction and ongoing technical jobs—including electricians and other skilled trades—can be well-paying, creating an opportunity for workforce development if local residents have access to the training needed to compete for them.

The same investment fueling rapid data center development is associated with AI technologies that may substantially change or displace employment in other sectors. While the extent and distribution of those impacts remain uncertain, they reinforce the importance of considering not simply the amount of investment entering a community, but how that investment translates into lasting local economic opportunity.

For Eureka, a large data center could represent a significant influx of private capital. Whether that investment ultimately extracts local resources or leaves the community better positioned for future growth would depend in part on the infrastructure, workforce, revenues, and other lasting benefits associated with the project.

Council expressed interest in whether larger data center projects should provide identifiable community benefits commensurate with their scale and resource demands. Potential benefits could include utility and other infrastructure improvements that create capacity for surrounding development or improve grid resilience and stabilization; workforce training, apprenticeships, and local hiring programs, particularly for electricians and other skilled trades; partnerships with local educational institutions and businesses; broadband infrastructure, public Wi-Fi, and other investments that expand digital access; renewable energy and storage investments; environmental restoration; direct financial contributions for community programs, facilities, or other local priorities; or other community investments.

For larger projects, these benefits could potentially be secured through a Development Agreement, community benefit agreement, or other appropriate mechanism, subject to review by the City Attorney.

Conclusion

The potential impacts of data centers vary substantially by scale and design. A relatively small data center may have utility demands and physical characteristics comparable to other industrial or technology uses, while larger facilities can have utility demands and physical characteristics at a scale far beyond development Eureka has historically experienced.

Data center development is expanding at an extraordinary pace, driven increasingly by competition to develop the computing capacity needed for AI. The United States currently has approximately 4,000 operating data centers, nearly eight times as many as any other country, and development continues to accelerate with the growth of generative AI. In the first half of 2026, North American demand reached approximately 25 GW, twice the level one year earlier and five times the level two years earlier. This expansion represents substantial investment not only in data center buildings and computing equipment, but also in the electrical, cooling, telecommunications, and other infrastructure needed to support them.

At the same time, the expansion of data centers reflects the increasing reliance of individuals, businesses, governments, and other institutions on the digital services they support, including AI. This infrastructure increasingly supports basic economic and societal functions. The question for Eureka is therefore not whether this infrastructure will be built, but whether the City should accommodate some portion of it and, if so, under what conditions.

Communities throughout the country are confronting similar decisions. For Eureka, the central question is whether the impacts of data center development can be avoided or adequately addressed and whether there are circumstances in which a facility—particularly a larger facility—could provide sufficient lasting benefits to result in a net benefit to the community. Council direction on that question will establish the foundation for permanent regulations developed during the moratorium.

COUNCIL DISCUSSION QUESTIONS

1. Does Council wish to prohibit data centers as a primary use, allow only smaller data centers, or consider a tiered approach that would allow larger data centers only when specified standards and community-benefit requirements are satisfied?

2. If smaller data centers are allowed, what characteristics and quantitative thresholds should distinguish a smaller facility from a larger facility?

3. If data centers are allowed, in what zoning districts and/or specific locations should they potentially be allowed, and through what permitting processes? If larger data

centers are limited to sites with a Special Considerations Overlay, should the City identify those sites in advance or consider an overlay in response to a specific development proposal?

4. Are there circumstances under which Council would consider a larger data center acceptable? If so, what outcomes would Council expect regarding electrical and water infrastructure, renewable energy, public safety, community character, decommissioning, workforce development, and other community benefits? Should staff explore the use of Development Agreements to secure long-term community-benefit commitments for larger projects?

5. Does Council support exploring utility-capacity and cost-allocation standards applicable to all extraordinary utility users, rather than applying those requirements exclusively to data centers?