

45-DAY DATA CENTER MORATORIUM REPORT: INITIAL ASSESSMENT OF LAND USE AND ENVIRONMENTAL ISSUES

November 10, 2026

Prepared in response to Mayor Lurie request and Ordinance 215-26

Cover photo: Data center at 200 Paul Avenue in the Bayview, San Francisco.
Google Earth

San Francisco Planning

Executive Summary

Data centers play an increasingly important role in supporting cloud computing, artificial intelligence, telecommunications, financial systems, and other digital services that are integral to modern life. At the same time, data centers can require substantial electricity infrastructure, backup power systems, cooling equipment, and specialized building design that may create land use, environmental, and community impacts distinct from other forms of development.

San Francisco currently has a relatively small number of stand-alone data center facilities and no active applications for new stand-alone data centers. Nevertheless, evolving technology trends and growing demand for digital infrastructure have prompted policymakers throughout California and the nation to consider whether existing regulatory frameworks are prepared for potential future data center development.

In response to these emerging issues, Mayor Lurie directed the Planning Department to assess considerations related to future data center development. Subsequently, the Board of Supervisors adopted a 45-day moratorium on approvals for data centers and directed the Planning Department to prepare a related report.

This report provides an initial assessment of San Francisco's existing regulatory framework for data centers and identifies key policy considerations related to environmental justice, land use compatibility and urban design, electricity demand and grid infrastructure, water use and wastewater infrastructure, air quality, noise, and potential regulatory approaches.

The assessment finds that data centers present both opportunities and challenges. Data centers can support digital infrastructure investment and may contribute to utility and infrastructure improvements. However, they can also place significant demands on electricity systems, generate air quality and noise impacts from backup power equipment, and raise questions about the use of limited land and infrastructure. Important questions remain regarding the cumulative impacts such development could have on City infrastructure systems and whether existing regulations adequately address those impacts. Environmental justice considerations are relevant across many of these issues because future decisions regarding facility siting, infrastructure investments, backup power systems, and operational impacts may have implications for communities already experiencing elevated environmental burdens.

Main Findings

Key takeaways regarding the regulatory framework for data centers are that:

- State oversight of data centers recently substantially expanded and, together with regional oversight, already addresses many environmental and infrastructure-related issues associated with these facilities.
- Data centers may create land use, urban design, and economic-development trade-offs related to location, building design, employment density, compatibility with surrounding uses, and preservation of land for other industrial uses. San Francisco already has a discretionary review framework capable of

evaluating many of these issues, though additional study may be warranted to examine evolving facility types and future development scenarios.

- San Francisco has experience reviewing and permitting data center projects, but such proposals have been relatively infrequent. The City's approved stand-alone data centers have generally been concentrated in areas with existing industrial and utility infrastructure. At the time this report was prepared, no active applications for new stand-alone data centers were pending before the City.
- Across California and the United States, jurisdictions are increasingly evaluating how existing land use and environmental regulations apply to data centers. San Francisco's review is consistent with this broader trend, although local conditions, development patterns, and regulatory approaches vary considerably.

Key issues and potential policy approaches that policymakers may wish to consider as they determine whether changes to local controls are warranted are presented in Table 1. These are included to illustrate initial options that could be explored in the future and should not be interpreted as comprehensive, prescriptive recommendations.

Table 1. Summary of Data Center Issues and Potential Policy Approaches for San Francisco

TOPIC	ISSUE	POTENTIAL POLICY APPROACH
Environmental Justice	Existing stand-alone data centers are in communities that already experience elevated environmental burdens. Environmental justice considerations intersect with issues related to facility siting, infrastructure investments, air quality, noise, and cumulative environmental impacts.	• Evaluate whether the land use, electricity grid, water and wastewater, air quality, and noise considerations that follow would help advance environmental justice objectives by avoiding or minimizing environmental burdens associated with data centers. • Consider approaches that ensure communities most likely to experience potential impacts from data center development have meaningful opportunities to participate in project review and policy development processes. • Consider ongoing coordination with community-based air quality planning efforts and other environmental justice initiatives when evaluating future data center policies and proposals.
Land Use and Urban Design	Data centers may create land use, urban design, and economic-development trade-offs related to location, building design, employment density,	• Consider modernizing the Internet Service Exchange (ISE) definition, including terminology, in consideration of statewide definitions for data centers. • Consider establishing a maximum power-demand threshold above which a data center or similar high-intensity computing use would no longer qualify as an

	compatibility with residential and mixed-use areas, preservation of production, distribution, and research (PDR) uses, and the opportunity cost of using limited urban land and infrastructure for data center development.	accessory use. Such a threshold (e.g., 5 megawatts [MW], with a specific value to be determined) could help distinguish accessory computing functions that are incidental and subordinate to a principal use from larger facilities that may warrant review through a Conditional Use (CU) authorization. • Consider maintaining the CU authorization requirement in all districts where data centers are allowed. • Consider not permitting stand-alone (i.e., non-accessory or not part of mixed-use structures) data centers in certain districts or locations, such as residential and neighborhood commercial districts and in close proximity to major transit stations, and adding CU criteria for evaluation of cases of conversion of existing structures to data centers or mixed-use data center projects. • Consider revising Planning Code Section 202.11 to require a CU authorization for data centers with electricity demand greater than an appropriate threshold (e.g., 5 MW, with a specific value to be determined) in historic buildings, rather than allowing such uses to be principally permitted through the historic-building provisions of the Planning Code. • Consider monitoring or limiting the extent to which data centers might decrease (or potentially increase) the available land and building stock for PDR uses in PDR districts.
Electricity Grid Planning	Data centers can require substantial amounts of electricity and may compete with housing, commercial development, electrification goals, and other users for limited transmission and distribution capacity. Their growth may also influence the timing, funding, and prioritization of future grid improvements.	• As part of the Planning Department entitlement process, consider requiring all proposed data centers (including accessory ones) with electricity demand greater than an appropriate threshold (e.g., 5 MW, with a specific value to be determined) to submit an assessment prepared or approved by the serving utility, in coordination with any other affected utility as needed, identifying available capacity, anticipated grid impacts, necessary upgrades, and expected service timelines. • Consider studying the feasibility of establishing an upper limit (e.g., 50 MW, with a specific value to be determined) for cumulative data center power capacity

		to be entitled relative to the city's overall transmission capacity. Such limit could be based on an evolving assessment of remaining years projected until additional transmission capacity will come online minus the power demand associated with projected needs for housing, commercial, medical, and other development, as well as electrification growth in the City for those intervening years (not just based on applications for electric service submitted to Pacific Gas & Electric/San Francisco Public Utilities Commission). This would provide a buffer to ensure that housing and other growth in electricity demand for other city uses is not at risk of being stymied by data center demand. This buffer could also help ensure that at no point would the city have less transmission capacity than is needed to accommodate its state-mandated annual Regional Housing Needs Allocation housing targets. • Consistent with San Francisco's existing clean energy requirements, consider requiring proposed data centers to use clean electricity for normal operations. • Consider the upgrades to the local distribution and transmission grid within the City that data center development could bring that could improve infrastructure generally benefitting other users beyond the immediate data center. Provided that data center growth does not crowd out power needs of other users in the City, consider the extent to which data center development could help fund and expedite delivery of expanded transmission capacity serving San Francisco and other grid reliability improvements.
Water and Wastewater	Data centers may affect water supplies and wastewater infrastructure through cooling systems, wastewater discharges, and indirect water consumption associated with power generation. Future impacts remain uncertain and depend on facility size, cooling technology, operating practices, and water-supply conditions.	• Consider how to utilize data provided by state reporting requirements to develop local policies, regulations, and performance metrics for water efficient data center performance. • Consider advocating for industrywide benchmarking studies that would allow local utility providers to better understand trade-offs between water and energy use. • Consider potential effects on the City's combined sewer system based on anticipated wastewater discharge volumes, peak flow rates, discharge frequency, and available collection system capacity, particularly during

		wet-weather conditions.
Air Quality	Construction activities and backup diesel generators can contribute to regional and localized air-quality impacts. Particular concerns include generator emissions, compliance with permit requirements, cumulative pollution burdens, and potential impacts in environmental justice communities.	• Consider alternatives to diesel-powered backup generators that would reduce operational air quality impacts from testing. These alternatives may include battery energy storage systems (BESS), fuel cells, or other forms of fossil fuel-free/zero-emission backup systems. • Consider elements of data center design that may reduce overall backup needs, which could include thermal waste reuse.
Noise	Data centers can generate noise from mechanical equipment, cooling systems, and backup generator testing and operation. Concerns include both persistent tonal noise and intermittent generator noise, particularly in proximity to residential areas and other sensitive uses.	• Explore addressing tonal noise in the Noise Ordinance through coordination with the Department of Public Health and by reviewing other jurisdictions that have accounted for tonality in their noise ordinances. • Consider updating the Noise Ordinance to include the recommended backup generator criteria, namely that noise levels shall not exceed 75 dBA at the property plane and testing of emergency generators shall only occur between 7 am to 8 pm. • Consider conditions of approval requiring alternatives to diesel-powered backup generators that would substantially reduce operational sources of noise, such as BESS or other zero-emission backup sources.
Regulatory Approaches	Existing regulations address many data-center-related issues, but questions remain regarding the most effective mechanisms for addressing project-specific impacts, community benefits, transparency, and long-term operational commitments.	• Consider the extent to which a citywide community benefits agreement framework could be established for use with individual agreements, especially for proposed data centers over a certain size, so that each proposal is not entirely a novel bespoke negotiation starting from scratch each time. • Consider whether development agreements may be appropriate for certain larger data center projects. • Consider re-evaluating the City's impact fee levels and structure to determine if they are appropriate as related to data centers, including the Jobs-Housing Linkage Fee.

Part One: Context

Data centers have become increasingly important infrastructure supporting the modern economy. They enable cloud computing, digital communications, artificial intelligence, financial transactions, and countless other services used by residents, businesses, and governments. At the same time, data centers can differ from many other forms of development because of their potentially significant demand for electricity, backup power systems, cooling infrastructure, and building design.

San Francisco has relatively few known data center facilities compared to many other jurisdictions in California and nationwide. Nevertheless, evolving technology trends and increasing demand for digital infrastructure have prompted questions about whether the City's existing regulations are sufficient to address future proposals. This section provides the regulatory, environmental, and local context needed to evaluate those questions and understand the policy considerations discussed later in this report.

Purpose and Need

Interest in data center development has increased substantially in recent years due to growth in artificial intelligence, cloud computing, and other forms of digital infrastructure. Across California and the United States, governments are evaluating whether existing land use, environmental, utility, and infrastructure regulations are prepared to address the evolving characteristics and potential impacts of these facilities.

Although San Francisco currently has no active applications for new stand-alone data centers and relatively few known facilities compared to other major data center markets, policymakers have expressed interest in evaluating whether the City's existing regulatory framework is prepared for potential future development. Questions have been raised regarding issues including electricity demand, backup power systems, water use, air quality, land use compatibility, environmental justice, and the potential implications of future data center growth for City infrastructure and policy objectives.

On September 17, 2026, Mayor Daniel Lurie's Office directed the San Francisco Planning Department (the department) to conduct a comprehensive, cross-departmental 60-day analysis of criteria and considerations the City and County of San Francisco (City) should use when evaluating and potentially constraining future data center development. This work includes evaluating technical, environmental, land use, and community impacts—with an emphasis on how these impacts scale with facility size and power demand.

Roughly a month later, on October 16, 2026, Mayor Lurie signed Ordinance No. 215-26 (Board File No. 261021) introduced by Supervisor Walton, enacting an interim zoning moratorium on data centers, as defined. The ordinance prohibits the City from issuing any approvals or authorizations for data centers for 45 days and directs the department to submit a report to the Board of Supervisors within 25 days of enactment (i.e., by Tuesday, November 10) describing measures taken to alleviate the conditions justifying the moratorium. Within 35 days of enactment (i.e., by Friday, November 20), the ordinance requires the Board to hold a hearing to consider and approve said report. The moratorium expires on Monday, November 30, 2026, unless extended.

On October 27, 2026, Supervisor Walton introduced an ordinance (Board File No. 261175) which proposes extending the data center moratorium for 10 months and 15 days from the termination date of Ordinance 215-26.

This report responds to the direction of both the Mayor and the 45-day moratorium legislation by providing an initial assessment of the key factors that should be taken into consideration in determining if changes to permanent data center controls are warranted. Given that this report was required to be delivered within 25 days of enactment of the moratorium, the information contained herein is not exhaustive and more research on a variety of topics will be needed. Therefore, the report does not recommend specific measures to be taken but rather identifies issues and actions that should be considered.

Methodology

This report was prepared through a rapid, cross-departmental review conducted in response to direction from the Mayor's Office and the requirements of Ordinance No. 215-26. Given the limited timeframe provided for preparation of the report, the analysis is intended to identify key issues and policy considerations for further evaluation rather than provide a comprehensive assessment of all aspects of data center development.

The Planning Department conducted interviews and information-gathering with City departments and external agencies with expertise in topics relevant to data center development, including the Port of San Francisco (Port regulatory review), the San Francisco Public Utilities Commission (electricity, water, and wastewater infrastructure), the San Francisco Department of Public Health (noise and environmental health), the San Francisco Environment Department (energy and climate policy), and the Bay Area Air Quality Management District (air quality and backup generator regulation).

Staff also consulted with representatives from other California jurisdictions that are currently evaluating, adopting, or modifying data center regulations, including Oakland, Richmond, and Santa Clara. In addition, the Department reviewed publicly available reports, academic and policy research, state legislation, local land use regulations, environmental review documents, and emerging best-practice guidance related to data center planning and regulation.

The report incorporates information from existing Planning Department records regarding previously approved data center projects, as well as data and information provided by partner agencies regarding electricity infrastructure, water use, wastewater systems, air quality regulation, environmental justice, and related topics.

The department notes that significant uncertainties remain regarding the scale and nature of potential future data center development in San Francisco, the characteristics of future facilities, and the cumulative demands such development could place on infrastructure systems. As a result, the report focuses on identifying issues, opportunities, constraints, and potential policy approaches that may warrant further study rather than recommending specific regulatory actions.

What Is a Data Center?

For purposes of this report, a data center is a facility or portion of a facility primarily devoted to the processing, storage, transmission, or management of digital information and computer systems. Data centers support a wide range of technologies and services, including cloud computing, internet services, telecommunications, financial systems, and artificial intelligence applications. Data centers may occur as stand-alone facilities, occupy portions of larger buildings, or function as accessory facilities supporting another principal use. Typical building-serving computing equipment, such as server rooms, network closets, and equipment rooms designed to serve a building's occupants, generally differs from more power-intensive data centers in its scale, backup power infrastructure, cooling systems, and primary purpose. Because data centers that are principally devoted to providing computing and data storage capacity beyond the needs of a single building or on-site tenant(s) are generally the type most likely to raise citywide land use, infrastructure, and environmental policy questions, this report focuses primarily on those uses while recognizing that data center functions may also occur within other building types.

Data centers vary significantly in size, from smaller facilities of a couple megawatts (MW) serving a single organization to very large “hyperscale” regional facilities with over 100 MW of power demand supporting millions of users. In between are medium-sized data centers, in the range of about 5 to 50 MW that are often co-located facilities serving the data storage and processing needs of multiple organizations that rent space and computing capacity. Unlike most commercial uses, data centers are often characterized by substantial electricity demands, specialized cooling systems, and backup power infrastructure designed to ensure uninterrupted operations.

Based on information reviewed for this report, no operating data center in California was identified with power demand exceeding 100 MW, a threshold often associated with hyperscale facilities. The highest concentration of data centers in California is in Silicon Valley, with a much smaller number in San Francisco. The ones in San Francisco are in the small- to medium-sized range, as described later in more detail.

Existing Regulatory Framework

Data center development in San Francisco is already subject to a multi-layered regulatory framework involving federal, state, regional, and local agencies. These requirements address a broad range of topics, including land use, environmental review, air quality, noise, energy demand, water use, and utility infrastructure.

Recent legislation adopted by the State of California has significantly expanded data-center-specific oversight, adding new environmental review, reporting, and infrastructure-planning requirements. As a result, future data center proposals in San Francisco would be reviewed through multiple regulatory processes, each focused on different aspects of project design, construction, and operation.

Rather than starting from an absence of regulation, San Francisco is considering potential future data center development within an already extensive regulatory environment. Additional detail on applicable state, regional, and local regulations is provided in Appendix A: State and Regional Regulatory Framework.

STATE AND REGIONAL OVERSIGHT

California has recently adopted several laws that increase oversight of data center development and operations. These laws generally expand environmental review requirements, require greater reporting of electricity and water use, establish new planning expectations for utility infrastructure, and create additional transparency regarding operational impacts. State agencies, including the California Energy Commission and California Public Utilities Commission, also play important roles in energy planning, electricity infrastructure, and, in some circumstances, permitting of associated power-generation facilities. A summary of these requirements is provided in Appendix A: State and Regional Regulatory Framework.

In addition, data center projects are subject to environmental review under the California Environmental Quality Act (CEQA). Depending on the characteristics of a proposed project, environmental review may examine issues such as energy demand, air quality, noise, water use, transportation, greenhouse gas emissions, and other potential environmental effects. A discussion of CEQA requirements, recent legislative changes, and agency responsibilities is included in Appendix A.

Regional agencies also regulate specific operational impacts. For example, backup generators typically require permits from the Bay Area Air Quality Management District (air district) and must comply with applicable air quality standards.

SAN FRANCISCO LAND USE REVIEW

At the local level, San Francisco regulates most stand-alone data centers through Planning Code provisions governing Internet Service Exchange (ISE) uses, a land use category established in 2002. While the terminology predates the current generation of cloud-computing and artificial-intelligence facilities, the ISE framework was developed to address concerns associated with large digital infrastructure facilities.

In most circumstances, establishment or expansion of ISE use requires Conditional Use (CU) authorization from the Planning Commission. Through this discretionary process, the City may evaluate site-specific considerations such as neighborhood compatibility, building design, rooftop equipment, energy consumption, backup-power systems, and compliance with applicable noise and air quality requirements. At present, these considerations do not have any objective metrics by which to evaluate a proposed project’s performance.

Notably, many of the issues identified in current discussions regarding data centers, including electricity demand, generator emissions, noise, building design, and potential land use conflicts, were also concerns when the ISE regulations were adopted. Existing review criteria were designed, at least in part, to address these considerations.

In addition to the ISE-specific requirements, proposed facilities would be subject to the City's broader zoning and development standards, which regulate issues such as building size, height, urban design, historic resources, and the preservation of industrial and other designated uses where applicable. A detailed discussion of ISE regulations, CU findings, zoning controls, accessory-use provisions, historic-building provisions, and other relevant Planning Code requirements is provided in Appendix B: Local Land Use and Development Regulations.

OTHER LOCAL REGULATIONS AND POLICY CONTEXT

Data center projects are also subject to generally applicable building, energy, environmental, and public health regulations. These include building and green-building requirements, noise standards, renewable electricity requirements applicable to certain commercial buildings, and other operational standards. Additional information on these requirements is provided in Appendix C: General Plan and Climate Policy Context.

Several City policy documents, including the General Plan and Climate Action Plan, contain goals related to climate protection, environmental quality, public health, environmental justice, industrial land preservation, and economic development. While these documents do not establish a specific policy framework for data centers, they provide broader policy context that may be relevant when evaluating future proposals. Relevant policies are summarized in Appendix C.

POLICY CONSIDERATIONS AND AREAS OF UNCERTAINTY

This initial assessment identified several questions that may warrant further evaluation as the City considers whether existing regulations remain appropriate for future data center development.

First, San Francisco's primary regulatory framework for data centers was adopted more than two decades ago, before the emergence of large-scale cloud computing and artificial intelligence applications. Additional analysis may be needed to determine whether existing definitions, review criteria, and reporting requirements fully capture the characteristics of newer facility types.

Second, while data centers are subject to extensive regulation, oversight is distributed across multiple agencies and levels of government. Understanding how these processes interact in practice may require additional coordination and analysis.

Third, some aspects of the existing regulatory framework may warrant further study, including how current regulations apply to evolving facility types, how data-center-related uses are distinguished from accessory computing functions within larger developments, and how existing regulations would apply in areas governed by specialized planning frameworks. These issues are discussed in greater detail in the appendices.

Finally, there remains substantial uncertainty regarding the scale, timing, and characteristics of any future data center development that could occur in San Francisco. Given these uncertainties, it may be premature to draw conclusions regarding whether additional local regulations would be warranted or what form they should take.

As discussed throughout this report, San Francisco's current regulatory framework already addresses many issues commonly associated with data centers. The key policy question is not whether regulation exists, but whether existing regulations are sufficient and appropriately tailored to potential future conditions.

Key takeaways:

- State oversight of data centers recently substantially expanded and, together with regional oversight, already addresses any environmental and infrastructure-related issues associated with these facilities.

- Data centers may create land use, urban design, and economic-development trade-offs related to location, building design, employment density, compatibility with surrounding uses, and preservation of land for other industrial uses. San Francisco already has a discretionary review process capable of evaluating many of these issues, though additional study may be warranted regarding evolving facility types and future development scenarios.

Existing and Proposed Data Centers in San Francisco

San Francisco has relatively limited experience with large stand-alone data center development compared with some other jurisdictions in the Bay Area. Based on Planning Department records reviewed for this report, three major stand-alone data center projects have received Planning approvals over the past several decades. One project was approved before adoption of the City's current ISE regulations, while two projects were reviewed under the ISE framework discussed above.

These projects demonstrate that San Francisco has previously evaluated many of the issues commonly associated with data centers, including energy demand, backup power systems, land use compatibility, industrial land use considerations, environmental review, and operational impacts. In addition, project approvals have included monitoring and reporting requirements intended to provide information regarding facility operations over time.

The projects reviewed as part of this assessment vary substantially in age, scale, approval history, and current operational status. Together, however, they provide examples of how the City's existing regulatory framework has been applied to data center-type uses. More detailed case histories are provided in Appendix D: Existing Data Center Entitlements.

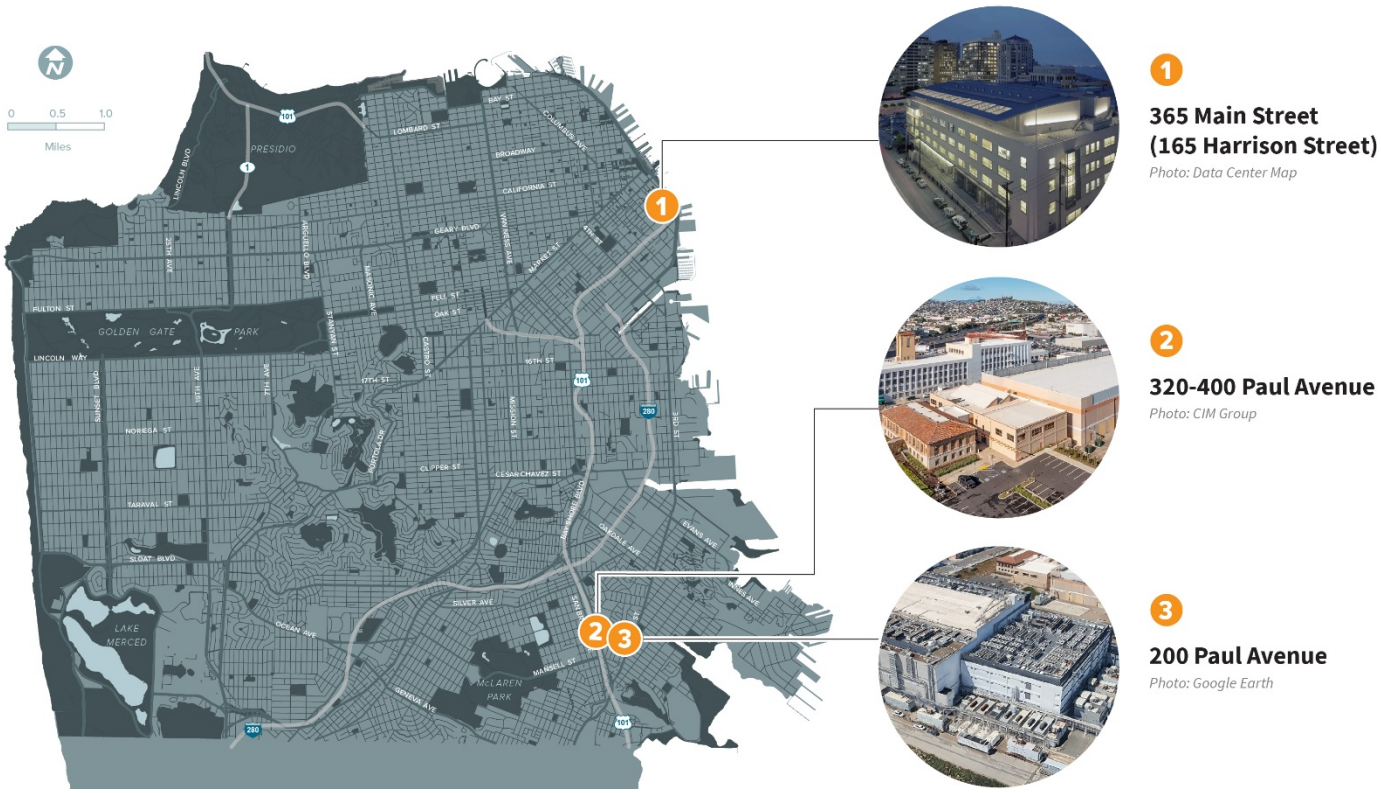
Previously Approved Projects

The three major stand-alone data center projects identified through Planning Department records are:

- **365 Main Street (160 Harrison Street)** in the Rincon Hill area, approved in 2000 prior to adoption of the City's current ISE regulations.
- **200 Paul Avenue**, an existing data center campus that received approval for expansion under the ISE framework in 2013.
- **320-400 Paul Avenue**, immediately adjacent to 200 Paul Avenue, received approvals for new data center facilities under the ISE framework in 2014.

Notably, two of the three projects are in the Paul Avenue corridor in southeastern San Francisco, an area characterized by industrial land uses and proximity to major utility infrastructure. The projects are shown in Figure 1 and additional information regarding project size, estimated power capacity, environmental review, approval history, and operating status is provided in Appendix D.

Figure 1. Stand-Alone Data Center Locations in San Francisco



Limitations of Available Records

The projects discussed above represent stand-alone data center facilities identified through Planning Department records. They should not be interpreted as a complete inventory of all data-center-related facilities within San Francisco.

Some computing and server facilities may operate as accessory uses within office, institutional, utility, or other developments and therefore may not appear as stand-alone data center approvals. In addition, some facilities may predate current regulatory requirements or may be reflected differently in records maintained by other agencies. Consequently, estimates of the number of data centers in San Francisco may vary depending on the definition used and the source of information consulted.

Current Development Activity

As of the date of this report, the Planning Department does not have any active applications pending for new stand-alone data centers or major expansions of existing facilities.

The Department recently reviewed environmental analysis associated with proposed amendments to the Potrero Power Station Development Agreement that would have allowed future consideration of a data

center on the project site, subject to subsequent approvals. No data center was proposed at that time, and the provision was ultimately removed from the proposed amendments. Additional discussion is provided in Appendix D.

Key takeaway: San Francisco has experience reviewing and permitting data center projects, but such proposals have been relatively infrequent. The City's approved stand-alone data centers have generally been concentrated in areas with existing industrial and utility infrastructure. At the time this report was prepared, no active applications for new stand-alone data centers were pending before the City.

Data Center Development and Regulatory Responses in Other Jurisdictions

Data center development has expanded rapidly in several parts of the United States in recent years, driven by growth in cloud computing, artificial intelligence, and digital services. Development has been concentrated in a relatively small number of markets with access to major fiber networks, electrical infrastructure, available land, and favorable regulatory or tax environments. Major data center markets include Northern Virginia, metropolitan Phoenix, Dallas-Fort Worth, Atlanta, and portions of the Midwest. Within California, data center development has historically been concentrated in Silicon Valley, in particular in Santa Clara County.

As data center development has increased, policymakers have raised questions regarding electricity demand, backup power generation, water use, air quality, noise, industrial land preservation, and utility infrastructure capacity. In response, a growing number of states and local governments have begun evaluating whether existing regulatory frameworks adequately address these issues.

Public concern regarding data center development has also become increasingly visible in state and local policymaking, including ballot measures, legislative proposals, moratoria, and zoning initiatives addressing data center siting, infrastructure demands, and community impacts.[1] Several measures considered by voters in 2026 reflected growing interest in increased oversight of these issues.

Several states have considered legislation to pause, study, or modify aspects of data center development, utility rate structures, or incentive programs. Legislative activity has occurred in states including Arizona, New York, Pennsylvania, Texas, Nebraska, Delaware, Georgia, Michigan, New Jersey, South Carolina, Vermont, Virginia, and others.

In California, local governments have pursued a variety of approaches (see Table 2 below). Some jurisdictions have adopted temporary moratoria while evaluating potential regulatory changes. In 2026, Oakley, Gilroy, Richmond, Oakland, Hayward, and San Francisco each adopted temporary pauses on certain data center approvals while studying land use, environmental, and infrastructure considerations. Richmond subsequently extended its moratorium through September 2028.

Other jurisdictions have focused on developing new regulatory standards. Benicia has advanced zoning regulations that would establish location and operational requirements for data centers, including limits on power consumption and restrictions on certain forms of backup power generation. San José has released proposed standards addressing data centers and other large energy users, while Santa Clara has initiated a

review of future data center regulations focused on electricity demand, water use, and air quality. Monterey Park adopted a prohibition on new data center development in 2026.

These examples illustrate that jurisdictions are pursuing a variety of regulatory approaches rather than a single model. While local circumstances differ, many reviews have focused on issues similar to those examined in this report, including energy demand, backup generation, water use, environmental review, industrial land preservation, and compatibility with surrounding land uses.

Unlike some jurisdictions that are responding to multiple active data center proposals or substantial existing industry growth, San Francisco currently has no active applications for new stand-alone data centers. The City's review is therefore best understood as a proactive evaluation of whether existing regulations are prepared for potential future development rather than a response to a surge in pending projects.

Key takeaway: Across California and the United States, jurisdictions are increasingly evaluating how existing land use and environmental regulations apply to data centers. San Francisco's review is consistent with this broader trend, although local conditions, development patterns, and regulatory approaches vary considerably.

Table 2. Examples of Regulatory Responses

REGULATORY RESPONSE	CALIFORNIA JURISDICTION
Temporary moratoria	Oakland, Richmond, Hayward, Gilroy, Oakley, San Francisco
New zoning standards	Benicia
Regulatory studies	Santa Clara
Proposed development standards	San José
Permanent prohibition	Monterey Park

Part Two: Data Center Land Use and Environmental Policy Considerations

The first part of this report describes the regulatory framework that currently governs data center development in San Francisco and summarizes the City's experience with existing facilities. This second part examines a range of land use, infrastructure, environmental, and community considerations that may be relevant if additional data center development is proposed in the future.

A key theme that emerged throughout this assessment is the importance of environmental justice. Existing stand-alone data centers in San Francisco are located in communities that already experience elevated environmental burdens, and many of the issues commonly associated with data centers, including air quality, noise, energy infrastructure, and industrial land use, have the potential to affect these communities differently than other parts of the city. For this reason, environmental justice functions throughout this chapter as a cross-cutting consideration that informs discussion of the topics that follow.

The issues discussed below emerged through research conducted for this initial assessment, review of practices in other jurisdictions, and discussions with public agencies and stakeholders. They include environmental justice, land use and urban design, electricity infrastructure, water and wastewater systems, air quality, noise, and potential regulatory approaches.

These topics are closely interconnected. Decisions regarding facility siting can influence environmental justice outcomes, electricity demand, air quality, noise exposure, and development patterns. Similarly, utility infrastructure constraints may affect future land use opportunities and broader citywide goals related to housing production, economic development, and climate action. As a result, these issues are best understood together rather than in isolation.

The discussion is intended to identify considerations that may warrant further evaluation rather than to recommend policies or regulations. In many cases, available information remains limited, industry practices continue to evolve rapidly, and the scale and characteristics of any future data center development in San Francisco remain uncertain. Accordingly, the observations presented below should be viewed as preliminary and as a foundation for future analysis.

Each section concludes with a series of potential policy approaches identified during this assessment. These are included to illustrate initial options that could be explored in the future and should not be interpreted as comprehensive or prescriptive recommendations.

Cross-Cutting Consideration: Environmental Justice

Environmental justice is an important consideration in evaluating potential future data center development in San Francisco. Unlike topics such as land use, air quality, or water use, environmental justice functions as a cross-cutting policy lens that considers how the benefits and burdens of development may be distributed across communities, particularly those that have historically experienced disproportionate environmental and public health challenges.

Several of San Francisco's existing stand-alone data centers are located in areas identified through local and state environmental justice initiatives. The facility at 365 Main Street (160 Harrison Street) is located within the SoMa Environmental Justice Community, while the facilities at 200 Paul Avenue and 320-400 Paul Avenue are located within the Bayview Hunters Point Environmental Justice Community. All three facilities are also located within the City's Air Pollutant Exposure Zone (APEZ), which identifies areas with elevated exposure to air pollution. In addition, the Paul Avenue facilities are located within the Bayview Hunters Point/Southeast San Francisco AB 617 community air quality planning area.

These geographic overlaps do not necessarily indicate that existing facilities are causing significant environmental impacts. However, they illustrate why issues such as backup generator emissions, noise, cumulative environmental burdens, and infrastructure investments have become important considerations in discussions regarding future data center development. Community planning efforts currently underway in Southeast San Francisco have identified backup generators and localized air quality impacts among the issues warranting continued attention.

San Francisco's General Plan Environmental Justice Framework emphasizes reducing pollution exposure, addressing cumulative environmental burdens, and supporting meaningful community participation in land use decision-making. These objectives may be particularly relevant when evaluating future data center proposals in areas already experiencing environmental and public health challenges.

Additional information regarding Environmental Justice Communities, AB 617 planning efforts, the Air Pollutant Exposure Zone, and related policy frameworks is provided in Appendix E: Environmental Justice.

ENVIRONMENTAL JUSTICE POLICY CONSIDERATIONS

- Evaluate whether the land use, electricity grid, water and wastewater, air quality, and noise considerations that follow would help advance environmental justice objectives by avoiding or minimizing environmental burdens associated with data centers. *Administrative Process*
- Consider approaches that ensure communities most likely to experience potential impacts from data center development have meaningful opportunities to participate in project review and policy development processes. *Administrative Process or Planning Code Amendment*
- Consider ongoing coordination with community-based air quality planning efforts and other environmental justice initiatives when evaluating future data center policies and proposals. *Administrative Practice*

Land Use and Urban Design

A fundamental land use question is where data centers are most appropriately located within the city. The answer has implications not only for urban design and economic development, but also for environmental justice, infrastructure planning, compatibility with surrounding uses, and the long-term allocation of limited land resources. The following discussion examines these considerations and the trade-offs associated with accommodating data center development in different contexts.

In considering where data centers are appropriate, both the operational and physical characteristics of these facilities must be evaluated in relation to the specific contexts of locations throughout the City.

Data centers are not particularly job-dense facilities, especially compared to other non-residential uses such as office, retail, labs, medical, and other institutional uses. Compared to the wide range of PDR uses, data centers may be similar to some, but larger data centers likely have significantly fewer workers per square foot than the average PDR use (one worker per 570 gross square feet [gsf]).[2] Data centers require a certain number of electrical, hardware, and software engineers to keep the facility maintained, as well as basic building facilities staff. A preliminary review of available information suggests that a small data center (e.g., less than 5 MW) may require two to three staff per MW,[3] but that this ratio likely drops considerably as the facility scales up, such that larger facilities, especially over 50 MW, may require substantially less than one permanent on-site job per MW.[4] While data center size is typically measured by its power usage, for scale, the 200 Paul Ave facility has 493,000 gsf and estimated 38 MW, or roughly 13,000 gsf per 1 MW. One of the reasons that large data centers have been able to be built in more rural areas is that, relatively speaking, they are not highly labor-intensive operations for their physical size. Advances in automation and efficiency may also be trending toward fewer workers over time for the same size facility.

Given this condition, there are land use, transportation, and economic development planning trade-offs in accommodating data centers, especially stand-alone facilities, in certain kinds of locations where higher population density uses are desirable to increase access to and usage of transit, services, and to generate foot traffic and economic activity for brick-and-mortar businesses. These locations could include close to major transit stations and corridors, in neighborhood commercial districts, in central business districts, and adjacent to parks or other public services. Siting a data center in such context could represent the lost opportunity for denser and more active development on such site, and, depending on specific siting, scale, and design, could create a deadening effect on pedestrian activity and foot traffic around its location.

Additionally, data centers typically feature large backup generators and other heating, ventilation, and air conditioning (HVAC) equipment external to the building, typically at ground level because such equipment is very bulky and heavy (e.g., a typical 2 MW backup generator is the size of a cargo container for an 18-wheel truck) and needs to be ventilated. There may be potential to site generators and other equipment on rooftops that are designed to support them.

It is important to note, however, that not all data centers are low-scale, completely featureless single-use boxes, and though less common, there are examples of vertically mixed data centers, often as partial conversions of former telecom buildings. For example, in Manhattan, 375 Pearl Street (near the Brooklyn Bridge), is a 32-story building built for NY Telephone in 1975 as a telecom switching center (whose physical presence at that location was described by some media as “disturbing” and one of the “ugliest buildings in the world”) that was renovated starting in the late 2010s as a mixed-use modern data center[5] (that reports 18 MW of capacity) and office building. Also in Manhattan is 32 Avenue of Americas, a 549-foot tall Art Deco structure completed in 1932 whose exterior and lobby are NY City historic landmarks, and was at one point the largest building in the world for long-distance telephone switching; the building, which has over 1 million square feet, has a large amount office space, a still substantial amount of telecom facilities, as well as at least one data center.[6] Here in San Francisco, 365 Main Street was a large multi-story warehouse in the Rincon Hill

area that was converted into telecom usage and ISE, of which portions were later approved for conversion to lab and office.

These examples show that there are situations where major structures from past eras, which may be challenging to reuse for other purposes, could be used, at least partially, for data center usage. They additionally show the possibility of vertically mixing other uses, such as office space, with small to moderate sized data centers. These examples also show that the land use trade-offs described above may be considered in balance on a case-by-case basis against the economically practical future uses for some existing structures or portions of structures (which may not meet current urban design standards already).

To the extent that new standalone modern data centers are being permitted and constructed in urban areas outside of San Francisco, they are not surprisingly most often permitted only or primarily in industrial districts, as is the case, for example, in Santa Clara. Physically, within San Francisco, such uses are generally compatible with the other activities existing and intended for PDR districts (which the General Plan recognizes as appropriate places for utilities and infrastructure). However, consideration should be given to the extent to which there is the potential for a significant number of data centers to physically and economically crowd out or outcompete PDR uses and businesses in the city's limited PDR districts which were intended to protect such uses and the diverse types of jobs, economic activities, and functional support they provide for the city's economy, social diversity, and daily needs.

Further research is needed to explore the extent to which data centers are allowable and consistent with state and local controls and policies for uses on Port of San Francisco property and in various redevelopment plans areas under San Francisco Office of Community Investment and Infrastructure jurisdiction.

LAND USE POLICY CONSIDERATIONS

- Consider modernizing the ISE definition, including terminology, in consideration of statewide definitions for data centers. *Planning Code Amendment*

- Consider establishing a maximum power-demand threshold above which a data center or similar high-intensity computing use would no longer qualify as an accessory use. Such a threshold (e.g., 5 MW, with a specific value to be determined) could help distinguish accessory computing functions that are incidental and subordinate to a principal use from larger facilities that may warrant review through a CU authorization. *Planning Code Amendment*

- Consider maintaining the CU authorization requirement in all districts where data centers are allowed. *Planning Code Amendment*

- Consider not permitting stand-alone (i.e., non-accessory or not part of mixed-use structures) data centers in certain districts or locations, such as residential and neighborhood commercial districts and in close proximity to major transit stations, and adding CU criteria for evaluation of cases of conversion of existing structures to data centers or mixed-use data center projects. *Planning Code Amendment*

- Consider revising Planning Code Section 202.11 to require a CU authorization for data centers with electricity demand greater than an appropriate threshold (e.g., 5 MW, with a specific value to be determined) in historic buildings, rather than allowing such uses to be principally permitted through the historic-building provisions of the Planning Code. *Planning Code Amendment*

- Consider monitoring or limiting the extent to which data centers might decrease (or potentially increase) the available land and building stock for PDR uses in PDR districts. *Planning Code Amendment*

Electricity Grid Planning

Data centers are major electricity consumers, especially compared to other land uses, and much of the current attention on data centers focuses on the tremendous and increasing amount of energy consumed and demanded individually and cumulatively by data centers. Global electricity demand increases by about 3 percent per year, but demand from data centers has been increasing globally by up to 20 percent per year.[7] In local contexts, data center electricity demand can represent a substantially greater outsize share of local demand compared to other uses, like residential and commercial users. Existing residential users in San Francisco use approximately 1 to 1.5 MW per 1,000 housing units and new all-electric housing development may require up to 2 MW per 1,000 units. A data center of 50 MW would use as much power as over 25,000 new homes, and a "hyperscale" facility of 100 MW or more would use as much power as over 50,000 or more new homes.

Data center growth has necessitated the expansion of both power generation and power transmission in many places nationally and internationally, and data centers have often been sited in locations where the quantity and price of power is available or is planned to be available. At present there are no existing data centers in California of greater than 100 MW, though there are numerous existing in the 50 to 99 MW range or larger, including in Silicon Valley, as well as one or more proposed data centers larger than 100 MW, also including in Silicon Valley.

While electricity generation capacity is a consideration, at a local level, particularly in San Francisco, the greater constraint is often transmission capacity since significant utility-scale power generation does not typically happen in dense urban areas due to siting difficulties and the higher cost of land. This is especially the case in San Francisco since the city's two major power plants – in Hunter's Point and Potrero, both fossil-fuel powered – were decommissioned, the last in 2011. Essentially all of San Francisco's power comes into the city via a limited number of connections, specifically underwater cable across the Bay and overland up the peninsula from the south.

The total peak transmission capacity into San Francisco is approximately 1 gigawatt (1 GW, or 1,000 MW). Forty percent (400 MW) of this capacity comes from the Transbay Cable, which was completed in 2010 and enabled shutdown of the Potrero Power Station. At its peak demand in 2019 just prior to the pandemic, San Francisco's peak usage was approximately 900 MW. Available information from Pacific Gas & Electric (PG&E) indicates that in 2025 because of post-pandemic factors, including high office vacancy and some population loss, San Francisco's peak usage had dipped to around 800 MW, but has been rising since.

In addition to electricity demand that would come from new construction and recovery of demand from post-pandemic declines, growth in demand also comes annually from increasing electrification of the existing building stock, increased usage of electric vehicles, and general increased demand from consumers. PG&E and SFPUC estimate this annual growth to be 2 percent, or up to about 20 MW per year in the City. Note that while power customers in San Francisco can purchase power from either SFPUC or PG&E, all transmission into the City is under the operational control of the California Independent System Operator (CAISO), and physically comes through the same transmission bottlenecks, regardless of power provider.

In the near future, San Francisco will need additional transmission capacity. The time and cost to design, permit (which requires state approvals), and construct a new transbay cable or similar major transmission expansion project is significant. There is no current active proposal to increase capacity into SF. The SFPUC estimates that once approved, it could take eight or more years before a new transmission line is complete and operational, based on current timelines for transmission projects. Until then, all new development and background demand growth will have to be accommodated by the existing available capacity. While construction of new development has slowed significantly since before the pandemic, San Francisco has high annual housing targets, over 70,000 units of already entitled or proposed housing as well as significant proposed commercial, medical, and other development. As part of its Climate Action Plan and other city policy, San Francisco is also aggressively pursuing electrification of existing building stock and the transportation sector.

Concern exists that construction of one or more large data centers in the nearer term could crowd-out available capacity needed for development of new housing and commercial space and for efforts to advance electrification before additional transmission capacity comes online. The City of Santa Clara, which already has 55 existing data centers, has its own municipal utility (Silicon Valley Power, SVP) that stopped taking new applications for service from data centers (but not other development) in 2023 while it assessed the ability to provide power for these uses and while they await the completion of a major transmission expansion project expected to be completed in the next couple years.

Conversations with other jurisdictions suggest that data centers may request more power than they ultimately need initially or ever, to “reserve” that amount of power with the utility and allow for phased growth. More importantly, it is important that the City be able to be an informed participant with utilities in decision-making about the allocation and timing of constrained power capacity, especially for potential large users. This would help ensure that planned housing growth or other future City needs will be accommodated even if these future uses do not already have electric service applications submitted. More information is needed to understand the trade-offs the utility makes in deciding what projects to energize and to ensure the City can meet its projected power needs to accommodate growth and electrification goals.

Existing electricity customers in San Francisco have experienced reliability problems, and developers of new buildings have faced delays in obtaining upgrades and new connections, reflecting challenges with PG&E infrastructure and service delivery. There is national concern about the extent to which the cost of power system upgrades needed to serve data center growth is being disproportionately borne by non-data center power customers, like residents and other businesses. Recently adopted California laws (discussed above) establish requirements for the California Public Utilities Commission, investor-owned utilities, and community choice aggregators (like CleanPowerSF) to establish tariffs and rules to ensure that data centers

bear the appropriate and incremental costs of grid network upgrades needed to serve their projects, and to protect existing customers from stranded assets in the event data center loads do not materialize. New state laws don't apply to local publicly owned utilities, but they are consistent with SFPUC's rules and practice of establishing agreements with large customers that define funding, construction, and cost responsibilities while protecting existing ratepayers.

However, there is the potential for the power demands and resources of data centers to support and advance local grid and reliability improvements in the City that could benefit users beyond the data center itself. Data centers could help finance transmission, substation, and other grid improvements that serve both their own needs and facilitate grid expansion to serve other customers. Realizing such benefits would require coordinated grid planning, applicable approvals, and enforceable agreements with customers that address funding, construction timing, operating commitments, and responsibility for costs if the project is delayed, downsized, or abandoned.

Ultimately, because potential data centers could seek power directly from PG&E, the local land use permitting process is the primary vehicle by which the City would have any visibility and influence into the grid impacts and decision-making around prioritization for power capacity and potential grid improvements in the City.

ELECTRICITY GRID POLICY CONSIDERATIONS:

- As part of the Planning Department entitlement process, consider requiring all proposed data centers (including accessory ones) with electricity demand greater than an appropriate threshold (e.g., 5 MW, with a specific value to be determined) to submit an assessment prepared or approved by the serving utility, in coordination with any other affected utility as needed, identifying available capacity, anticipated grid impacts, necessary upgrades, and expected service timelines. *Planning Code Amendment*

- Consider studying the feasibility of establishing an upper limit for cumulative data center power capacity (e.g., 50 MW, with a specific value to be determined) to be entitled relative to the city's overall transmission capacity. Such limit could be based on an evolving assessment of remaining years projected until additional transmission capacity will come online minus the power demand associated with projected needs for housing, commercial, medical, and other development, as well as electrification growth in the City for those intervening years (not just based on applications for electric service submitted to PG&E/SFPUC). This would provide a buffer to ensure that housing and other growth in electricity demand for other city uses is not at risk of being stymied by data center demand. This buffer could also help ensure that at no point would the city have less transmission capacity than is needed to accommodate its state-mandated annual Regional Housing Needs Allocation housing targets. *Planning Code Amendment*

- Consistent with San Francisco's existing clean energy requirements, consider requiring proposed data centers to use clean electricity for normal operations. *Planning, Building, or Environment Code Amendment*

- Consider the upgrades to the local distribution and transmission grid within the City that data center development could bring that could improve infrastructure generally benefitting other users beyond the immediate data center. Provided that data center growth does not crowd out power needs of other users in the City, consider the extent to which data center development could help fund and expedite delivery of expanded transmission capacity serving San Francisco and other grid reliability improvements. *Planning Code Amendment*

Water and Wastewater

Data centers can have important implications for local water and wastewater infrastructure due to their reliance on direct use of water for cooling, the indirect use of water used in power generation, and the resulting wastewater generated during operations. Water used by data centers for cooling is used to dissipate heat generated by data servers during data processing. The amount of water used by data centers for cooling purposes varies widely based on factors such as data center type, capacity, cooling system, number of server racks, and other design characteristics, as well as climate. Some data centers use a closed-loop water system whereby the water is moved in a continuous circuit, absorbing and transferring heat with the need to replenish the system. A trade-off exists between a data center's water and energy use, as use of less water is often at the expense of higher energy use. In San Francisco, since SFPUC provides water and generates most of the electricity used by the City's residents, such trade-offs could be considered by this agency.

Water used by data centers for cooling systems is typically discharged into the City's wastewater conveyance and treatment system. This "blowdown" water may contain various minerals and chemicals, which must be treated by the City's wastewater treatment facilities. Quantity of wastewater discharge is typically based on the type of cooling system used by a data center (e.g., evaporative, closed loop, etc.), with data centers that use a closed loop cooling system having much lower volumes. Non-domestic wastewater discharges must at a minimum comply with local limits for pollutants,[8] Article 4.1[9] (sewer use ordinance), and 40 CFR 403[10] (federal General Pretreatment Regulations for Existing and New Sources of Pollution). SFPUC has concerns for existing and potential future data centers about the types of chemicals (and their concentrations and amounts) that are being used for cooling systems; whether wastewater discharges from data centers are within the local temperature limit of 125 °F; and whether the combined sewer system has the capacity to handle the data center's wastewater flow, especially during wet weather. Depending on the water quality, there's a risk of causing additional corrosion to sewers. SFPUC uses site-specific wastewater discharge permits to regulate non-domestic and temporary discharges into the City's combined sewer system.

The exact total water demand for all the existing operating data centers in San Francisco is currently unknown, as these numbers are aggregated by buildings, which are identified in SFPUC's billing system by addresses and may not have water meters that correlate specifically to data center cooling-related use. Taking this into account, a non-site-verified maximum water use for the City's data centers noted in Part One of this report, between April 2023 and April 2026, was estimated to be approximately 1,050,000 gallons per month, according to SFPUC billing records. The estimated maximum average was estimated to be approximately 786,300 gallons per month. It is noted that the highest monthly water usage was 1,050,000 gallons/month or 0.035 million gallons per day or MGD, which is within the range of other large development projects, which average around 0.1 MGD. As discussed in Appendix A: State and Regional Regulatory

Framework, Assembly Bills (AB) 2619 and AB 2469 will require data tracking and water use transparency from data center operators. However, expectations for how this data will be used by local utility providers are unclear.

In San Francisco, there are no local water use regulations specific to data centers as an ISE use; however, certain regulations generally apply to data centers that exceed size thresholds. For example, new development projects over 40,000 square feet are required to submit water budget calculations to SFPUC, and those over 100,000 square feet must install onsite treated non-potable water systems under the Non-potable Water Ordinance. Moreover, owners of properties located within the City's Recycled Water Use Areas (as described in Section 1209, Article 22 of the Public Works Code) that have 40,000 square feet or more of construction or major alteration or have 10,000 square feet or more of new or existing landscaping, are subject to the Recycled Water Use Ordinance and must install recycled water piping to serve the development. Lastly, projects that expect to use over 50,000 gallons per day or 18.25 million gallons per year of water are required to work with SFPUC to prepare water supply assessments to determine whether projected water supplies are sufficient to meet existing and new demands over the next 20 years. Smaller data centers, if proposed as a standalone project and subject to environmental review under CEQA, are unlikely to trigger some or any of the above requirements.

Regardless of a data center's size and whether it is a standalone project or part of a larger mixed-use development project, if the project meets the definition of a water demand project as defined by Water Code Section 10912, then a water supply assessment is required.

In terms of possible impacts on rate payers, SFPUC conducts rate studies every four years for water and wastewater. In the next rate study, SFPUC is planning to more closely evaluate the usage patterns of existing data centers, leading to better data center water usage projections. The SFPUC also must update its Urban Water Management Plan (UWMP) every five years. The 2025 UWMP[11] published in June 2026 incorporates updated water demand projections, supply reliability, and strategies to meet future challenges. Retail water demand by in-city customers is estimated at 62.5 MGD in 2025 and projected to rise by 17 percent, or to 73.4 MGD by 2050 based on San Francisco housing and employment growth projections. Large or unprecedented industrial projects, such as data centers, are not included in the UWMP's demand projections if they are not currently proposed in the development pipeline and their water use cannot be reasonably estimated from residential and employment growth forecasts. If future data center development becomes reasonably foreseeable, its projected water demand may need to be added to the plan's existing demand projections.

Regarding whether a data center of any size could be problematic in terms of water supply, it may largely depend on whether the City is experiencing a wet or normal water year, when supply is abundant, or if it is experiencing a dry year and subject to potential Bay-Delta Plan Amendment restrictions.[12] All existing and new customers that rely on potable water, regardless of whether they are accounted for in citywide water demand projections, will be subject to a higher degree of rationing if the Bay-Delta Plan Amendment is implemented. New data centers could exacerbate this already difficult condition and/or could be one of the first sectors to be rationed before other businesses. While SFPUC does not currently have a policy on which types of non-residential customers would be rationed first, it is likely that rationing would target highest water users (based on consumption history) that don't have a water reuse/recirculation system and don't provide an essential health and safety service. Some data centers could meet these criteria.

WATER AND WASTEWATER POLICY CONSIDERATIONS

- Consider how to utilize data provided by state reporting requirements to develop local policies, regulations, and performance metrics for water efficient data center performance. *SFPUC Rules and Regulations*
- Consider advocating for industrywide benchmarking studies that would allow local utility providers to better understand trade-offs between water and energy use. *Administrative Practice*
- Consider potential effects on the City's combined sewer system based on anticipated wastewater discharge volumes, peak flow rates, discharge frequency, and available collection system capacity, particularly during wet-weather conditions. *Administrative Process, Public Works Code*

Air Quality

Data centers can result in air quality impacts during their construction and operation. As with nearly all types of building construction, construction of data centers utilizes diesel-powered off-road construction equipment. Diesel-powered construction equipment releases criteria air pollutants, which include ozone precursors, particulate matter, and greenhouse gases. These pollutants are of concern on a regional as well as global basis. The construction equipment also has localized health impacts, as diesel pollution is considered a toxic air contaminant (carcinogen) by the CARB, in addition to many other regulatory agencies. Construction of data centers may also require improvements to the electric grid and/or the construction and operation of new sources of power. These improvements would also likely require the use of primarily diesel-powered construction equipment, similar to construction of other types of infrastructure.

Data center operations require an uninterrupted power source for the storage, processing, and transmission of data. Grid reliability is a concern in California in general and specifically in San Francisco. In the past few years, portions of San Francisco have experienced multiple unplanned localized power outages. Data centers typically require backup power capacity to be between 1.25 to 1.5 times the total power usage (e.g., a 10 MW facility would typically need 15 MW of backup power to provide redundancy in case of a power outage). Data centers primarily utilize diesel-powered generators as backup power supply.

The main air quality impacts from data center operations are from diesel-powered backup generators. Emission from diesel-powered backup generators have similar impacts to construction equipment with respect to regional air quality impacts and localized health impacts. Diesel-powered backup generators over 50 horsepower require a permit from the air district to operate. Each facility owner must record information about usage and submit it to the air district.

Backup generators are also accounted for in environmental review under CEQA. The CARB has set a limit of 50 hours per year for testing and maintenance for diesel-powered backup generators. Backup generators are typically tested monthly to ensure reliability. There are no limits to the use of a backup generator during an emergency, which is typically defined as an unforeseen loss of power, declared power emergency, or a Public Safety Power Shutoff (for wildfire prevention). For the purposes of environmental review, the air district

recommends assuming backup generators would operate 150 hours per year, which accounts for 100 hours of emergency operation.

The number of diesel-powered backup generators within the nine-county Bay Area has increased in the past few years, such that there are approximately 9,000 backup generators permitted by the air district, according to a 2023 review.[13] However, the review found that nearly one-quarter of the diesel-powered backup generators self-reported operational usage higher than their permitted limits. The air district recently presented that a review of 25 inspected data center backup generators over a two-year period found that over one-third (36 percent) of the data centers were not in compliance with air district regulations. The air district issued seven notices of violation for data centers using backup engines as a primary source of power, which is against state law and air district permitting requirements.

According to information provided by the air district, one existing data center facility in San Francisco has several unresolved notices of violation related to backup generator operation. Specifically, the data center at 200 Paul Avenue currently has five active notices of violation from the air district (A65557A, A64032A, A65554A, A65555A, A65555B), which were issued between February and March of 2026. The notices were given for certain generators for failure to meet permit conditions, operating with expired permits, and exceeding reliability-related run time limits of 35 hours. The air district is processing these notices and has not yet resolved if they can be addressed through corrective action, settlement agreements, monetary penalty, or non-fee agreement. As noted above under "Environmental Justice," community members have also raised concerns about air quality impacts from data centers in the Bayview Hunters Point neighborhood. The operations of the data center at 200 Paul Avenue may be of concern given the site's location within the Bayview Hunters Point/Southeast San Francisco Community Emission Reduction Plan area and the APEZ, the concentration of large diesel-powered backup generators, the outstanding notices of violation, and the proximity to sensitive residential receptors.

AIR QUALITY POLICY CONSIDERATIONS

- Consider alternatives to diesel-powered backup generators that would reduce operational air quality impacts from testing. These alternatives may include battery energy storage systems (BESS), fuel cells, or other forms of fossil fuel-free/zero-emission backup systems. *Planning, Building, and/or Health Code Amendment*

- Consider elements of data center design that may reduce overall backup needs, which could include thermal waste reuse. *Building Code Amendment*

Noise

Data center operations can generate noise from fixed mechanical equipment, such as rooftop air-cooled chillers, HVAC equipment, as well as the periodic testing and maintenance of the emergency backup generators. Fixed mechanical equipment from data centers can produce tonal noise. Tonal noise generated by some mechanical noise can be an annoyance to surrounding land uses. By definition, tonal noise is present when a single third octave noise level is more than 5 decibels (dBA) greater than the average of the

two adjacent third octave noise bands. It is usually perceived as a whine, screech, or hum emanating from mechanical equipment. The San Francisco Noise Ordinance (Article 29 of the San Francisco Police Code) does not include a measure for determining potential annoyance generated by tonal noise. A commonly accepted standard for assessing the potential for annoyance from tonal noise sources is to assess a 5 dBA "penalty" if tonal noise sources are part of the environment. So, while the SF Noise Ordinance restricts fixed mechanical equipment to an 8 dBA increase in noise levels over the ambient noise level, it does not incorporate the potential for tonal noise.

The other primary source of noise from data centers is backup generators. As described above in "Air Quality," backup generators are used for monthly testing and maintenance and during emergency power outages. As data centers generally require multiple backup generators, testing may occur frequently throughout the month. The testing of backup generators at existing data centers has created significant sources of noise that have resulted in 311 noise complaints. Those complaints are then addressed by the San Francisco Department of Public Health. As noted below in Appendix E: Environmental Justice, community members have also raised concerns about noise impacts from data centers in the Bayview Hunters Point neighborhood.

To address noise issues associated with backup generators in general, the Environmental Health Division of the San Francisco Department of Public Health recommend backup generators meet the following criteria: noise levels shall not exceed 75 dBA at the property plane and testing of emergency generators shall only occur between 7 am to 8 pm. The Planning Department uses these recommendations in environmental review, and has found that these criteria are achievable with standard noise acoustic treatments, such as enclosing generators in a building electrical room, adding absorptive materials to interior surfaces, and requiring an exhaust duct to the building exterior. These recommendations are to ensure generator testing would not result in sleep disturbance at night and would limit the amount of noise that is permitted to leave the property boundaries.

NOISE POLICY CONSIDERATIONS

- Explore addressing tonal noise in the Noise Ordinance through coordination with the Department of Public Health and by reviewing other jurisdictions that have accounted for tonality in their noise ordinances. *Police Code Amendment*

- Consider updating the Noise Ordinance to include the recommended backup generator criteria, namely that noise levels shall not exceed 75 dBA at the property plane and testing of emergency generators shall only occur between 7 am to 8 pm. *Police Code Amendment*

- Consider conditions of approval requiring alternatives to diesel-powered backup generators that would substantially reduce operational sources of noise, such as BESS or other zero-emission backup sources. *Planning, Building and/or Health Code Amendment*

Regulatory Approach Considerations

While there is some level of discretionary consideration that weighs the proposed community benefits and community impacts of a project that happens as part of the existing discretionary CU permitting process, there can be limits to what can be memorialized through this process. Many of the topics discussed above could potentially be regulated or established as requirements in typical Planning Code or other local regulations.

Some topics and considerations may best be established, negotiated, and memorialized through other types of agreements, such as development agreements (DAs) that include community benefit agreements (CBAs).

A development agreement is a bi-lateral voluntary contract between the City and a developer/property owner to approve a project subject to a set of negotiated public benefits agreed to by the developer. A development agreement must be approved by the Planning Commission and the Board of Supervisors.

Many jurisdictions nationally have been pursuing CBAs[14] with large and hyperscale data center developments to attain both project performance features and binding commitments to deliver a variety of community benefits, from local infrastructure investments and funding for community programs to workforce hiring and job training commitments. The City could explore the extent to which a citywide CBA framework could be established for use with individual agreements, especially for proposed data centers over a certain size, so that each proposal is not entirely a novel bespoke negotiation starting from scratch each time. A CBA framework could also ensure an adequate level of transparency and public engagement to the entitlement process.

Additionally, the City could re-evaluate its impact fee levels and structure to determine if they are appropriate as related to data centers. In particular, the Jobs-Housing Linkage may be appropriate to revisit in this context.

Next Steps

This report fulfills the Planning Department's responsibilities under Ordinance No. 215-26 by providing an initial assessment of data center land use and environmental policy considerations.

The analysis conducted during the 45-day moratorium period highlights that data centers present a range of complex and interrelated planning issues involving electricity infrastructure, environmental impacts, land use compatibility, environmental justice, and long-term citywide growth objectives. While the report identifies potential policy approaches, additional technical analysis and interagency coordination would be necessary before permanent regulatory changes are considered.

Future work could include:

- Evaluating whether amendments to the Planning Code, Building Code, Health Code, or other City regulations are warranted;
- Identifying appropriate thresholds for differentiated regulation based on facility power demand;

- Establishing consistent tracking of electricity demand, water use, and backup power infrastructure and integrating this data as well as upcoming state-mandated reporting requirements into local planning and policy-making processes;
- Evaluating cumulative impacts on electricity transmission capacity and other utility systems, considering priorities for development in San Francisco; and
- Assessing experiences and regulatory approaches in other California jurisdictions.

As the Board of Supervisors considers whether to extend the interim moratorium, this report provides a foundation for continued evaluation of how future data center development can be aligned with San Francisco's environmental, infrastructure, economic development, and environmental justice goals.

Additional Resources

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Report Preparers

San Francisco Planning Department staff
- Josh Pollak, Senior Planner
- Lisa Gibson, Environmental Review Officer and Director of Environmental Planning
- Joshua Switzky, Deputy Director of Community Planning
- Mat Snyder, Senior Planner
- Tania Sheyner, Principal Planner
- Chelsea Fordham, Principal Planner

Report Contributors

Port of San Francisco staff
San Francisco Department of Environment staff
San Francisco Department of Public Health staff
San Francisco Public Utilities Commission staff

Other Agencies and Jurisdictions Consulted

Bay Area Air Quality Management District
City of Richmond
City of Oakland
City of Santa Clara

Appendices

Appendix A: State and Regional Regulatory Framework
Appendix B: Local Land Use and Development Regulations
Appendix C: General Plan and Climate Policy Context
Appendix D: Existing Data Center Entitlements
Appendix E: Environmental Justice

Endnotes

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Appendix A: State and Regional Regulatory Framework

State and Regional Oversight

State 2026 Data Center Laws. On September 21, 2026, Governor Newsome signed a seven-bill package that overhauls California's data center permitting, reporting, and utility-cost rules. Most provisions are effective January 1, 2027, with others phasing in through 2028. The centerpiece, Senate Bill (SB) 887, removes California Environmental Quality Act (CEQA) categorical exemptions for data centers, requiring at least an initial study—leading to a negative declaration, mitigated negative declaration, or full environmental impact report—for every project after January 1, 2027. SB 887 also establishes an optional Environmental Leadership Development Project (ELDP) pathway that provides streamlined judicial review for projects of 50 MW peak demand or greater meeting strict requirements: full payment of grid-interconnection costs; no net increase in fossil-fuel consumption within the state; four hours of zero-carbon storage at 100 percent of peak demand; use of onsite zero-carbon energy storage to support the electrical grid; maximum behind-the-meter zero-carbon generation; an enforceable commitment to pay all grid investments; use of recycled water and water-efficient or waterless cooling; 100% usage of zero-carbon energy for hourly needs within five years, of which 75 percent is newly developed; and an enforceable community benefits agreement.

Other bills address operational reporting and cost allocation. Assembly Bill (AB) 1577 requires disclosure of estimated energy use, on-site generation, and noise during permitting, and annual reporting of power usage effectiveness (PUE), generator fuel consumption, cooling metrics, carbon-free energy procurement, and noise to the California Energy Commission (CEC). AB 2619 ties water-use reporting to business licensing. AB 2469 requires an applicant for data center construction or expansion to provide the city and county a water-supply assessment (for projects meeting certain thresholds), a water scarcity plan (beginning January 2028), projected water use and efficiency measures, and estimated workforce needs before land use approvals. Additionally, it requires the applicant to assume the full cost of any required water conveyance, treatment, storage or distribution infrastructure improvements to serve the project as determined by the applicable water supplier. AB 2383, SB 886, and SB 1168 collectively direct the creation of data center-specific utility tariffs, a transmission interconnection tariff assigning cost responsibility to data center customers, and a California Public Utilities Commission study of future rate design. Large operators must also comply with the California Air Resources Board (CARB) corporate climate disclosure rules under SB 253, which require U.S. entities with over $1 billion in revenue doing business in California to report specified greenhouse gas emissions beginning in 2026 and 2027.

California Environmental Quality Act. As noted above, CEQA was recently amended to prohibit issuance of a categorical exemption for a data center beginning in 2027. The CEC serves as CEQA lead agency for data centers with 50 megawatts (MW) or more of onsite power generation.

California Energy Commission. The CEC does not permit data centers, but it does assess their impact on future electricity demand and, in some cases, permits or exempts on-site power generation associated with these projects. The CEC has exclusive permitting authority to certify all thermal generating facilities with 50 MW and larger total fossil fuel backup generators. Data centers with between 50 MW and 100 MW of fossil-fuel

backup generators can be eligible for a Small Power Plan Exemption, which transfers permitting jurisdiction to local land use authorities. If a data center has greater than 100 MW of backup generation, it triggers additional permitting requirements wherein the CEC acts as the master regulatory license in lieu of individual local and state government permits. As of the writing of this report, there are no operating data centers in California that have greater than 100 MW of power demand.

Other State Requirements. Two compliance areas influence physical design: Title 24, Part 6 of the Building Energy Efficiency Standards, specifically Section 140.9(a), governs data center computer-room efficiency. CARB and regional-air-district rules for backup generators limit non-emergency operating hours.

Regional Regulation

The Bay Area Air Quality Management District (air district) requires permits for diesel-powered backup generators over 50 brake horsepower. Data centers backup generators typically substantially exceed this threshold. The air district considers the total number of generators proposed at a location as part of the permitting process. It is also responsible for enforcing permit conditions related to the operation of diesel-powered backup generators, such as limitations on non-emergency operations, including testing and maintenance. The air district does not have specific policies related to backup generators for data centers but is exploring whether they are warranted.

Appendix B: Local Land Use and Development Regulations

San Francisco Planning Code

At the local level, San Francisco layers its own entitlement process on top of state requirements. San Francisco has no formal policy stance on whether data centers should be promoted or limited; instead, the City regulates certain data center development through Planning Code zoning controls.

The Planning Code regulates data centers within the definition of "Internet Service Exchange" (ISE) uses, a definition and regulatory structure for such uses originally adopted in 2002 (Ordinance No. 77-02). The Planning Code defines those uses as "a Utility and Infrastructure Use defined as a location that contains any of the following uses (excluding a Wireless Telecommunications Services Facility): switching equipment (whether wireline or wireless) that joins or connects occupants, customers, or subscribers to enable customers or subscribers to transmit data, voice or video signals to each other; one or more computer systems and related equipment used to build, maintain, or process data, voice or video signals, and provide other data processing services; or a group of network servers."

Under the Planning Code, all ISE uses typically require a discretionary Conditional Use (CU) authorization, citywide. The ability to seek a CU for approval of an ISE is available in most zoning districts citywide, including residential; Neighborhood Commercial; Commercial; Production, Distribution, and Repair (PDR); and some mixed-use districts. This is either the case generally because ISEs are explicitly permitted with CU or because the broader category of Utility and Infrastructure Uses (which includes ISEs) are permitted via CU. There are limited districts where such uses are explicitly not permitted, such as several mixed-use districts including MUR, MUO, UMU where Utility and Infrastructure Uses are not permitted. Utility and Infrastructure Uses are principally permitted in the Service Arts Light Industrial (SALI) district in the SoMa area.

History of the ISE Use Provisions. Ordinance No. 77-02 was adopted in response to growing concerns about ISE uses and similarly impactful uses being proposed in San Francisco during the initial Dot Com Boom period in the late 1990s, particularly, but not exclusively, in industrial neighborhoods adjacent to residential areas. The ordinance identified many of the same concerns now being raised nationwide and locally regarding artificial intelligence-related data centers. These included the scale and design of ISE buildings, particularly in the context of lower-scale residential neighborhoods; relatively low employment generation and the displacement of potentially more employment-intensive light industrial uses; noise and emissions associated with backup diesel generators; and disproportionately high electricity and water consumption relative to building floor area.

The ordinance established a CU authorization requirement for ISEs in almost all use districts subject to the Planning Code. However, this requirement generally does not extend to Redevelopment Project Areas, Port property, or most Development Agreement (DA) areas, which are governed by separate land use regulations; further research is needed to take exhaustive inventory of the rules applicable to these areas and present them relative to the generally prevailing Planning Code standards.

Prior to the establishment of the ISE definition and the corresponding CU requirement, data center uses fell under different use definitions in the Planning Code. For example, the data center at 160 Harrison Street (currently known as 365 Main Street) (Case No. 1999.827CE), was approved as a Utility Facility use and the CU was required for establishing such a use in a P (Public) District. Specific ISE CU findings and conditions were not in effect.

ISE Conditional Use Findings and Conditions. The required Commission CU findings per Planning Code Section 303(h) are as follows:

(1) With respect to application for development of Internet Services Exchange as defined in Section 102, the Planning Commission shall, in addition to the criteria set forth in Subsection (c) above, find that:

(A) The intensity of the use at this location and in the surrounding neighborhood is not such that allowing the use will likely foreclose the location of other needed neighborhood-serving uses in the area;

(B) The building in which the use is located is designed in discrete elements, which respect the scale of development in adjacent blocks, particularly any existing residential uses;

(C) Rooftop equipment on the building in which the use is located is screened appropriately.

(D) The back-up power system for the proposed use will comply with all applicable Federal, State, regional and local air pollution controls.

(E) Fixed-source equipment noise does not exceed the decibel levels specified in the San Francisco Noise Control Ordinance.

(F) The building is designed to minimize energy consumption, such as through the use of energy-efficient technology, including without limitation, heating, ventilating and air conditioning systems, lighting controls, natural ventilation and recapturing waste heat, and as such commercially available technology evolves;

(G) The project sponsor has examined the feasibility of supplying and, to the extent feasible, will supply all or a portion of the building's power needs through on-site power generation, such as through the use of fuel cells or co-generation;

(H) The project sponsor shall have submitted design capacity and projected power use of the building as part of the conditional use application; and

(2) As a condition of approval, and so long as the use remains an Internet Services Exchange, the project sponsor shall submit to the Planning Department on an annual basis power use statements for the previous twelve-month period as provided by all suppliers of utilities and shall submit a written annual report to the Department of Environment and the Planning Department which shall state: (a) the annual energy consumption and fuel consumption of all tenants and occupants of the Internet Services Exchange; (b) the number of all diesel generators located at the site and the hours of usage, including usage for testing purposes; (c) evidence that diesel generators at the site are in compliance with all

applicable local, regional, State, and Federal permits, regulations and laws; and (d) such other information as the Planning Commission may require.

Expansion of ISE Uses. By establishing ISEs as requiring CU authorization, the ISE ordinance also required any existing ISEs that predated its adoption to be subject to CU authorization requirements for subsequent expansions of use, pursuant to Planning Code Section 178(c). In addition to increases in floor area, such expansions include new electrical service requiring a building permit.

Other Planning Code and Land Use Regulatory Provisions Affecting Data Center Uses and Development

Accessory Uses. Data center uses that qualify as accessory uses under Planning Code Sections 102 (Definitions) and 204 et seq (Rules and Limits on Accessory Uses) are not subject to the ISE CU authorization requirement. An Accessory Use is defined as a "related minor Use that is either necessary to the operation or enjoyment of a lawful Principal Use or Conditional Use, or appropriate, incidental, and subordinate to any such use, and is located on the same lot." Section 204 et seq generally limits accessory uses to not more than one-third of the size of the principal use to which it is accessory, among other provisions. For instance, an office building could have space dedicated to computer servers and data-center type equipment on the same lot, provided such space did not exceed the percentage of the development allowed as accessory in the zoning district (typically not more than 33 percent) and, critically, the data center met the definition of an Accessory Use that such use is necessary or incidental and subordinate to the primary office use on the lot.

This qualitative provision, which is in the essential definition of an Accessory Use in Section 102, is critical, because the 33 percent limit is the *maximum* amount of space allowable to qualify as an accessory, but a use may still fall under the 33 percent and be deemed *not* accessory because the use is not incidental and subordinate to the primary use. Such situations where a use is less than one-third of the primary use but not accessory would be if the smaller use was a separate business or tenant than the primary use or potentially if the smaller use was so large in an absolute sense (e.g., tens or hundreds of thousands of square feet) or situated physically in such a way relative to the primary use that it no longer met the test of being "incidental and subordinate".

Historic Buildings. Planning Code Section 202.11 allows uses otherwise either not permitted (NP) or CU authorized to be considered principally permitted in historic buildings in certain districts if the project is compliant with the Secretary of Interior Standards. While these provisions often exempt Industrial Uses from this benefit, they do not exempt Utility uses, which include ISEs. Therefore, data centers could be established in historic buildings and be considered principally permitted and not require a CU authorization in some circumstances.

PDR Districts/Replacement of Use Requirements. Planning Code Section 202.7 requires that projects involving the demolition of sound industrial buildings in PDR Districts provide replacement space suitable for Industrial uses. Similarly, Planning Code Section 202.8 requires projects in certain Mixed-Use Districts that involve the demolition of sound structures or changes of use resulting in the loss of existing PDR, Institutional Community, or Arts Uses to provide replacement space for those uses. The applicable replacement requirements vary depending on the district, the type of use being displaced, and other project-

specific circumstances. ISE projects that involved demolishing sound industrial buildings or displacing industrial and other uses would be subject to these replacement requirements. It is important to clarify that ISEs (and Utility and Infrastructure uses generally) are *not* considered PDR uses in the Planning Code definition of PDR. Though many Utility and Infrastructure uses (a category that includes, among other things, Recycling Center, ISE, Power Plant, Public Transportation Facility, Public Utilities Yard, and Utility Installations like water, gas, electric and sewer facilities) are found in PDR districts, Utility and Infrastructure Uses are only permitted with CU in PDR districts just like in other districts.

Active Use Requirements/New Development Use Requirements. Per Planning Code Section 145.1 and 145.4, in Mixed-Use, Neighborhood Commercial, and Commercial Districts, developments are generally required to incorporate ground-floor uses and design features that promote active street frontages, regardless of the primary use occupying the building. Utility and Infrastructure uses, including data centers/ISEs would not be considered Active Uses. Additionally, a few districts (e.g., RH DTR, MUR) and special use districts (e.g., Van Ness SUD) require any new development or major additions to be primarily residential (though this would not necessarily limit conversions of existing structures).

FAR. The size of non-residential developments is generally restricted citywide based on floor area ratio (FAR) as determined by the underlying use district, sometimes in combination with the Height and Bulk District. The Commercial, Mixed Use, and PDR districts of the City that would be most likely to see ISE development proposals have relatively high FAR limits, which are unlikely to limit such development if multi-story. However other districts, such as Residential Districts and many Neighborhood Commercial districts, have lower FAR limits.

Height/Bulk. Bulk controls, which regulate a building's exterior dimensions above specified heights, apply only at heights exceeding certain height thresholds. In PDR and M Districts, bulk is typically regulated only above 40 or 65 feet in height and so would not impact data center proposals that are at heights lower than these heights.

Urban Design Guidelines. Data center projects that are in districts outside of RH, RM, RTO, PDR and M districts would be subject to review under the Urban Design Guidelines, which provide subjective context-oriented criteria to evaluating projects and address scale, modulation, articulation, ground floor activation and other topics.

Siting Implications. Despite being theoretically permissible with CU throughout most of the city, given the practical considerations of available parcel sizes, proximity and connectivity to existing major infrastructure (e.g., electric transmission/distribution facilities), existing building stock, and other zoning restrictions such as height/bulk/FAR/required uses, the most likely viable locations for data centers is presumed to be on the east side of the city in PDR, commercial, and some mixed-use districts.

Interim Data Center Controls. A 45-day moratorium on issuance of approvals or authorizations for data centers is currently in effect, prohibiting the City from issuing any approvals or authorizations for data centers, as defined. The ordinance (Ordinance No. 215-26; Board File No. 261021), sponsored by Supervisor Walton, was signed by Mayor Lurie on October 16, 2026, directs the department to submit a report to the Board of Supervisors within 25 days of enactment (i.e., by Tuesday, November 10) describing measures taken to alleviate the conditions justifying the moratorium. Within 35 days of enactment (i.e., by Friday, November

20), the ordinance requires the Board to hold a hearing to consider and approve said report. The moratorium expires on Monday, November 30, 2026, unless extended.

San Francisco Building Code

The San Francisco Building Code does not specifically define or address data centers in a standalone section, but it does contain code requirements that are relevant to the operation of data centers. The San Francisco Green Building Code includes requirements for energy efficiency, and new projects must meet either GreenPoint or LEED standards. Data centers, which may have higher power demands, can meet Building Code requirements through operational efficiency, renewable energy use, or advanced cooling systems. San Francisco also has a phased requirement for the use of 100 percent renewable electricity for commercial buildings (in Chapter 30 of the San Francisco Environment Code), which requires commercial buildings (including data centers) to procure all electricity from 100 percent renewable or greenhouse gas-free sources. (Note that this requirement does not apply to backup power.) The phased approach applies to 500,000-square-foot and larger buildings as of the end of 2022 and 250,000- to 499,999-square-foot buildings as of the end of 2024. 50,000- to 249,999-square foot buildings will need to meet the requirement after the end of 2030. These requirements can be met using the CleanPowerSF program, or other utility programs.

Appendix C: General Plan and Climate Policy Context

San Francisco General Plan Policies

The San Francisco General Plan includes the Air Quality Element, Environmental Protection Element, and Commerce and Industry Element, which can be relevant to data centers. The Environmental Justice Framework is discussed in Appendix F: Environmental Justice.

The Air Quality Element's goal is to give high priority to air quality improvement in San Francisco to protect its population from adverse health and other impacts of air pollutants. The element includes policies to implement stationary source controls (1.3), to promote development of non-polluting industries and insist of compliance with regulations by existing industries (3.8), and to minimize exposure of San Francisco's population, especially children and the elderly, to air pollutants (4.3), which may relate to data center development.

The Environmental Protection Element similarly has objectives and policies that may apply to data centers, such as assuring that all new development meets strict environmental quality standards and recognizes human needs (policy 1.4). The element has objective 4 to assure that the ambient air of San Francisco and the bay region is clean, provides maximum visibility, and meets air quality standards. Policy 4.4 is to promote the development of nonpolluting industry and insist on compliance of existing industry with established industrial emission control regulations. Objective 14 is to promote effective energy management practices to maintain the economic vitality of commerce and industry, and policy 14.5 is to encourage use of integrated energy systems.

The Commerce & Industry Element includes objectives to attract and retain a diverse economic base and encouraging employment opportunities and nurturing "emerging" industries. Policies in the element (4.2, 4.3, and 4.5) address attracting and retaining businesses in the city generally and preserving industrial/PDR land for such activities. Policy 4.5 recognizes that utilities are a major feature of PDR areas. Policy 4.12 recognizes that past polluting utilities and infrastructure –including fossil fuel power plants–created environmental justice issues and that new development should not replicate those impacts.

San Francisco Climate Action Plan

San Francisco's 2026 Climate Action Plan, published in April 2026 by the San Francisco Environment Department, targets net-zero greenhouse gas emissions by 2040 and aims to reduce climate pollution and improve public health, among other goals. The Climate Action Plan does not directly address data centers. In October 2026, the San Francisco Environment Department issued a report on "Artificial Intelligence &

Climate Action: Implications for San Francisco's Climate Action Plan."[1] The report notes that "energy demand, data centers, backup generators, water use, Scope 3 emissions and consumption-based emissions, equity, workforce disruption, public trust, and governance are emerging areas of concern." The report also finds that "data centers and other digital infrastructure can place significant demands on electricity, water, land, and local infrastructure."

1 San Francisco Environment Department, 2026. *Artificial Intelligence & Climate Action: Implications for San Francisco's Climate Action Plan*. Available: https://www.sfenvironment.org/media/16067

Appendix D: Existing Data Center Entitlements

Existing Data Centers Permitted by Planning Department

Three data center projects have been permitted by the Planning Department: one that pre-dated the establishment of the ISE provisions described above (365 Main Street / 165 Harrison Street), and two that were approved under the ISE controls (200 Paul Street and 320-400 Paul Street). The power capacity for these projects ranges from a rough estimate of 14 MW to 41 MW, and their entitlements are described below. Data centers may also exist elsewhere in the City as accessory uses to other primary uses (see discussion above regarding Planning Code Accessory Use provisions). Because accessory uses do not require separate Planning approvals, these data centers may not be reflected in Department records. Additionally, some data centers may have been established before Planning approval requirements took effect. Consequently, Department records may not capture all existing data centers.

365 Main Street (160 Harrison Street) (Block/Lot 3745/008; Case No. 1999.827CE). This data center project in Rincon Hill was approved in 2000, prior to the establishment of the ISE definition and associated CU provisions. The project converted a vacant, four-story, 195,000-square-foot warehouse to what in the Commission motion described as a "communications utility service" use, with most of the building dedicated to the operation of servers, a defining characteristic of data center uses in what is currently a 300-W Height and Bulk District. It required a CU authorization for a Utility use in a P (Public) District. (The site was subsequently rezoned to Rincon Hill – Downtown Residential.) The Planning Commission approved the project on July 6, 2000 (Motion No. 15908, with supporting department-issued negative declaration). The mitigation measures in the negative declaration included preparing an archeological testing plan and abating hazardous materials.

Based on information provided by the air district, there are 10 permitted diesel-powered backup generators at this site, with a total backup power capacity of 21.6 MW. Assuming typical backup capacity of between 1.25 to 1.5 times total power demand, this suggests that the power capacity of the data center would range from approximately 14 to 17 MW.

200 Paul Avenue (Block/Lots 5431A/001G and 001F; Case No. 2012.0153CE). This project to expand an existing ISE use was approved in 2013. The project involved converting approximately 60,000 square feet of vacant tenant space to ISE use and reconfiguring and expanding an existing backup generator service yard to accommodate 18 additional diesel backup generators and associated rooftop equipment, in a 65-J Height and Bulk District. Approximately 424,000 square feet of data center use across two buildings on the seven-acre site existed on the site at the time of the proposed expansion[2]. CU authorization was required for (1)

2 According to the mitigated negative declaration (Case No. 2012.0153E), four buildings existed on the site at the time of the proposed ISE expansion. The two front buildings (Buildings F and D), totaling approximately 425,000 square feet, were used for ISE purposes, including approximately 55,000 square feet for telecommunications, 212,000 square feet for data center operations, 60,000 square feet for combined telecommunications and data center uses, and 38,000 square feet for supporting office uses. The remaining 60,000 square feet were unoccupied.

expansion of an existing ISE use and (2) provision of fewer parking spaces than otherwise required by the Planning Code.

The department issued a mitigated negative declaration for the project (Case No. 2012.0153E), finding that it would have significant impacts in the areas of cultural and paleontological resources, noise, and air quality that would be reduced to a less-than-significant level with implementation of mitigation measures. The mitigation measures, which were adopted as conditions of project approval, included preparing an archeological testing plan, attenuating noise from outdoor equipment, minimizing construction emissions, and retrofitting four existing diesel backup generators.

The Planning Commission approved the project by CU authorization in 2013 (Motion No. 18978). The approval anticipated that the 18 additional backup generators (in addition to the 17 existing generators, as well as 3 additional permitted under Case No. 2000.0232) would be installed incrementally over a six-year period as additional data center tenant space became available for occupancy. The CU authorization included several conditions of approval intended to monitor the facility's ongoing operations and environmental impacts. Among these, the project sponsor is required to submit annual reports documenting electricity and fuel consumption, the number and usage of diesel generators on the site, and evidence of compliance with applicable local, regional, state, and federal permits.

Following approval, the project sponsor submitted several building permit applications to install the authorized backup generators. However, it is unclear whether the sponsor ever submitted the required annual monitoring reports. Based on information provided by the air district, there are 26 permitted diesel-powered backup generators at 200 Paul Street, with a total backup power capacity of 51.1 MW. Assuming typical backup capacity of between 1.25 to 1.5 times total power demand (see “Air Quality” above for more explanation), this suggests that the power capacity of the data center would range from approximately 34 to 41 MW.

320–400 Paul Avenue (Block/Lots 5431A/014 and 015; Case No. 2011.0408CE). This data center project, approved in 2014, involved construction of a 187,000-square-foot, 55-foot-tall ISE building (400 Paul Avenue); renovation of two buildings totaling approximately 56,000 square feet (320 and 350 Paul Avenue) to establish a new ISE use; and installation of two underground 12-kilovolt electrical distribution circuits connecting the site to PG&E’s Martin Substation in Brisbane to provide 24 MW of electrical service. The project also demolished a 95,000-square-foot warehouse building.

The approximately 319,000-square-foot (7.34-acre) site is located immediately north of 200 Paul Avenue. within a PDR-2 (Core Production, Distribution & Repair) District and a 65-J Height and Bulk District.

The project required CU authorization for (1) establishment of an ISE use; (2) provision of fewer off-street parking and loading spaces than otherwise required by the Planning Code; and (3) construction of a building exceeding the bulk limitations of the 65-J Height and Bulk District. The Planning Commission approved the CU authorization in September 2014 (Motion No. 19236). The CU authorization included generally standard

Buildings A (35,412 square feet), B (33,560 square feet), and F (337,173 square feet) were constructed in the early 1950s, with Building F subsequently expanded in 1963. Building D (87,310 square feet) was constructed in 2001, prior to the adoption of the ISE controls, and was subject to a mitigated negative Declaration and mandatory Discretionary Review (Case No. 2000.232ED).

conditions of approval, along with the annual reporting requirements applicable to ISE uses under Planning Code Section 303(h), as discussed above. In addition, it established a 12-year period during which the 18 proposed generators with a total capacity of 36 MW could be installed. That period expired in September 2026.

The new ISE building at 400 Paul Avenue was constructed under Building Permit Application No. 201411171675 and was issued October 2015. The project has received several Temporary Certificates of Occupancy with the most recent issued October 16, 2026, which has enabled the building to be occupied.

Based on information provided by the air district, there is one permitted diesel-powered backup generator at 320-400 Paul Avenue, with a total backup power capacity of 2.15 MW.

Active Applications for Proposed Data Centers

As of the date of this report, the department does not have any active CU applications on file for any new or expanded data centers/ISEs.

Withdrawn Data Center Proposal and Demonstration Project

In the summer of 2026, the SF Planning Department completed environmental review for updates to the Development Agreement to the Potrero Power Station project. Among other changes, the proposed modifications would have allowed a data center on one block if one was proposed in the future subject to discretionary CU approval by the Planning Commission. No data center was proposed at that time, but for the purposes of environmental review, a 4 MW data center was assumed, with 6.5 MW of backup generators. The environmental review addressed the potential impacts of the data center and included mitigation measures to address operation of the data center. However, during the process to update the Development Agreement, the project was modified to remove the possibility of allowing a data center.

In October 2026, the Port of San Francisco authorized a demonstration project in the San Francisco Bay offshore from Pier 70. At the event, 16 floating solar panels were temporarily deployed to operate a processor, which was onboard a tugboat. The demonstration was a one-time event and has not been permitted for implementation.

Appendix E: Environmental Justice

Environmental justice considerations are central to evaluating future data center development in San Francisco. Several of the City's existing data centers are located within Environmental Justice Communities and within areas that already experience elevated exposure to air pollution and other environmental burdens. As a result, decisions regarding backup generators, air quality, noise, infrastructure investments, and facility siting may have disproportionate implications for communities that have historically experienced environmental inequities.

Environmental justice is defined by the City as: “The equitable distribution of environmental benefits and the elimination of environmental burdens to promote healthy communities where all San Franciscans can thrive. Government can foster environmental justice through processes that address, mitigate, and amend past injustices while enabling proactive, community-led solutions for the future.” Environmental justice context relevant to data centers in San Francisco is discussed below.

SB 1000 required cities and counties to adopt policies in their General Plan to address environmental justice. In response to this requirement, the Environmental Justice Framework was adopted in 2023 as part of the General Plan and includes polices to limit and protect against pollution exposure and prioritize participation of Environment Justice Communities in decision-making process, among others. The Planning Department also created the Environmental Justice Communities Map. The map identifies areas in the city that face a disproportionate burden of environmental health challenges and social vulnerabilities, as informed by state and local data. The map identifies the top one-third of areas experiencing environmental burden and social vulnerability in San Francisco as Environmental Justice Communities. These Environmental Justice Communities include the Mission, Potrero Hill, Excelsior, Outer Mission, Oceanview-Merced Heights-Ingleside, Chinatown, SoMa, Japantown, Western Addition, Bayview Hunters Point, Visitacion Valley, Treasure Island, and the Tenderloin. The existing data center at 365 Main Street is located within the SoMa Environmental Justice Community and the data centers at 200 Paul Avenue and 320-400 Paul Avenue are located within the Bayview Hunters Point Environmental Justice Community.

AB 617 tasks the air district with developing community-led plans to reduce air pollution and health risks in Environmental Justice Communities with high cumulative exposure to air pollutants. The California Air Resources Board (CARB) approved the self-nomination from Bayview Hunters Point/Southeast San Francisco community to participate in the AB 617 process due to longstanding air quality challenges, environmental justice issues, and health inequities. The community boundary is mostly comprised of San Francisco Supervisorial District 10, with portions located in District 9, and a few blocks in District 6.

The community has a long history of environmental contamination. The former Hunters Point Naval Shipyard, the Hunters Point Power Plant, and the Potrero Power Plant have left a legacy of environmental contamination. Through a community-led process, a Community Emission Reduction Plan (CERP) was drafted (anticipated CARB Board consideration in Summer 2027). The CERP includes strategies for: permitting and enforcement; traffic and transportation; particulate matter, dust, and construction impacts; monitoring and data; community health Impacts; and production, distribution and repair and land use. The draft CERP was released in September 2026 for public review through October 14, 2026. The data centers at

200 Paul Avenue and 320-400 Paul Avenue are within the CERP plan area. The draft CERP includes a strategy to reduce emissions from diesel generators, and the two Paul Avenue addresses are mentioned in strategy Permitting & Enforcement 6.1, to evaluate opportunities to reduce localized emissions and address impacts from backup generators.

San Francisco Health Code Article 38 created the Air Pollutant Exposure Zone (APEZ) map, which identifies areas in the city with higher levels of air pollution, based on modelled particulate matter concentrations and cancer risk from air pollution sources. The APEZ map is maintained by the Planning Department and SFDPH. The map was updated most recently in 2025. The data centers at 365 Main Street, 200 Paul Avenue, and 400 Paul Avenue are located within the APEZ.

A 2025 report[3] highlights the disproportionate location of data centers in California in areas that face unequal environmental and health risks and cited the data centers at 200 Paul Avenue and 320-400 Paul Avenue as concerns. The report notes that the data centers are adjacent to residential areas, and that there are community concerns from noise and air quality impacts from the use of diesel-powered backup generators.

3 Kapor Foundation, 2025. *The Unequal Burden of Data Centers: An Examination of the Environmental and Public Health Impacts on Communities in California.* Available: https://kaporfoundation.org/wp-content/uploads/2025/12/The-Unequal-Burden-of-Data-Centers-2025.pdf