

The Unequal Burden of Data Centers: An Examination of the Environmental and Public Health Impacts on Communities in California



EXECUTIVE SUMMARY

The rapid growth of generative artificial intelligence (AI) has prompted Big Tech to accelerate its investments into and construction of facilities to support AI infrastructure that require high-performance computing power and data storage. This surge is raising critical concerns among researchers, advocates, and policymakers about the environmental and public health impacts of data centers, especially amongst the most marginalized communities.

Our report highlights the disproportionate location of data centers in communities in California that already face unhealthy air quality, groundwater threats, and the presence of hazardous waste, as well as the environmental and health risks that expanding AI infrastructure poses to communities across the state. We present three case studies of communities of color that are host to data centers and experience high pollution and asthma rates. These cases highlight the lack of accountability from data centers that claim sustainability when exempting their locations from Environmental, Social, and Governance (ESG) frameworks. The locations of these data centers reveal a troubling trend about whose health is disproportionately being impacted in the race for global AI dominance. These cases further highlight the lack of accountability from data centers that claim sustainability when exempting their locations from Environmental, Social, and Governance (ESG) frameworks. We conclude with local and state policy recommendations aimed at promoting responsible data center development.

Key Research Questions

- What relationships exist between data center locations and the environmental and health patterns of communities across California?
- Are existing ESG goals at data center companies sufficiently accounting for community impact at data center locations in California?

Methodology

- To assess the extent to which data centers are disproportionately located in overburdened Californian communities, a spatial analysis was conducted to compare the state's data center locations by community air quality index, groundwater quality, and presence of hazardous waste.
- To contextualize the state-level analyses at a localized community level, we investigated three data center sites: Bayview-Hunter's Point (San Francisco), Del Paso Heights (Sacramento), and Hawthorne (Los Angeles). We highlighted majority-minority communities that have high pollution burden and asthma rates and are colocated with data centers, highlighting the potential for further data center development to exacerbate existing environmental and health burdens in communities across the state.
- The case studies were further used to examine the strength and accuracy of the sustainability claims made by the data centers planned and operating in these communities, and to evaluate how these companies with public ESG goals have addressed their impacts on the overburdened communities in which they are located.

Key Findings

- California has a high proportion of the nation's data centers, and the location of existing centers presents a pattern of being disproportionately sited in communities that already face unhealthy air quality, groundwater threats, and the presence of hazardous waste.
 - **Unhealthy air quality:** 82% of data centers in California are located in communities with poor air quality.
 - **Groundwater threatened areas:** 65% of data centers are in areas facing the highest groundwater threat levels.
 - **Hazardous waste areas:** 79% of data centers in California are located in the top 20th percentile for hazardous waste levels.
- In Bayview-Hunter's Point (San Francisco), Del Paso Heights (Sacramento), and Hawthorne (Los Angeles), data centers are colocated in majority-minority communities with high rates of pollution (CES scores) and asthma.
- Among data centers located in communities already facing environmental and health hazards, the companies themselves often exempt location considerations from their ESG frameworks, create greenwashing narratives, and have limited accountability for harms to public and environmental health.

Policy Recommendations

- 1 Prohibit data center development on contaminated and environmentally overburdened sites and modernize zoning ordinances.**
 - **Prohibit land use** at the state-level on Superfund sites for data centers.
 - **Update outdated zoning ordinances** at the local-level to prevent data centers from being sited in overburdened communities.
- 2 Strengthen government capacity for air quality monitoring and enforcement.**
 - **Invest in proactive monitoring** to ensure accurate reporting, while holding data center developers and AI companies accountable for potential community harm.
- 3 Require that data centers' utility usage and environmental impact data be publicly accessible.**
 - **Require that information on data center water consumption, energy usage, pollution emissions from standby generators, and contaminant discharge be publicly accessible** to government officials and residents alike.
 - Require proposed data centers to **disclose 90 days in advance of their expected water and power use** so that community-based organizations (CBOs) and local governments are fully apprised.
- 4 Require data center developers to develop and implement community benefit agreements (CBAs).**
 - **Require the development and implementation of CBAs** to enable coalitions and organizations to negotiate with legally binding power, enhancing transparency and clarifying the projected impacts of a data center project on a neighborhood.