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Statistics show that 97% of American adults own a smartphone, and 76.6% of households in the U.S. have broadband internet as of 2023. The use of technology has skyrocketed over the past decade. Alongside the surge of technology comes the formation of data centers. Almost every digital action, photo, email, digital document, screenshot, etc., is stored in data centers and accessible to you. Everything that uses the internet, from businesses that sell and manufacture goods to the cars we use every day, requires data centers to operate. A data center is a building filled with servers that store, process, and move information, internet data, and cloud data we use every day. These servers contain a storage array, a data storage system using multiple drives to store huge amounts of data, and AI chips, switches, fiber optic cables, and routers to connect your devices to messages, photos, videos, documents, banking, and e-commerce. There are different types of data centers depending on the companies. Some data centers are built to serve the business solely and its customers, hospitals, or universities; these are called enterprise data centers. Data centers operated by large technology companies such as Meta, Amazon Web Services, Microsoft Azure, and Google are referred to as hyperscale data centers. Hyperscale data centers serve millions and billions of users, providing a wide range of cloud computing and data solutions to support businesses that need immense digital infrastructure, processing, and storage. Hyperscalers are significantly easier to scale up and meet increasing demands than traditional data centers due to the process by which they adjust their capacity to handle the increasing demands and workload. Traditional data centers scale up by updating their current software, meeting certain limits due to hardware constraints, while hyperscalers scale up by adding more computers to meet demand faster and more seamlessly. Data centers are crucial and the backbone of 21st-century technology, and the industry will continue to grow.

The emergence of data centers has caused discourse and debate among people. As data centers continue to grow, questions arise about the effects they may have on the communities surrounding them. As Fort Wayne is building a Google data center to support services such as Maps, Gmail, YouTube, Google Cloud, and AI infrastructure, many residents worry about the impacts it may have on the community. The negative impacts data centers have on the community include high energy demand: large data centers use 30 to 100 megawatts, while just 1 megawatt can power 750 homes. A study from Lawrence Berkeley National Laboratory predicts that data centers could account for up to 12% of total U.S. electricity consumption by 2028. These high electricity demands raise concerns about rising electricity bills.

Another concern is water usage. Data centers use enormous amounts of water to cool their servers so they can function. Mid-size centers can use up to 300,000 gallons of water, and large centers can use as much as 5 million gallons a day, as much as a small town uses. Estimates project that by 2028, the U.S. could require up to 32 billion gallons of water annually to run AI-related data centers. These data centers deplete water supplies and potentially cause droughts, affecting thousands of residents' access to water.

A crucial issue is land use, affecting how land is used in communities. The average data center covers 224 acres, about the size of 450 football fields. Hyperscale centers require more land, with the largest over 1,000 acres. The Fort Wayne center is going to be approximately 700 to 892 acres. Architects look for land that allows expansion and multi-building campuses, which require large plots of land. These infrastructures on these large plots of land interfere with agricultural and rural land uses. Residents have raised concerns that rezoning for data centers could increase the loss of productive farmland and wetlands, causing widespread opposition against data centers. An enormous concern for Fort Wayne residents is the use of diesel

generators and the pollution they cause. The Fort Wayne center included 34 diesel generators and know are asking for an additional 143. These diesel generators not only pose environmental risks by increasing CO2 emissions, but also pose a health risk. Diesel exhaust is classified as carcinogenic, putting people at risk.

Additionally, data centers cause a substantial amount of noise pollution. Fort Wayne would be facing a constant hum of cooling systems and the operation of 143 diesel generators, thousands of servers, and heavy-duty HVAC cooling fans, which create a steady, low-frequency hum constantly. This can be heard for distances up to 2.5 miles away. The closest home is one-tenth of a mile away from the Google data center. This is a huge concern for nearby residents, as it can cause major disturbances to the quality of life for many families.

Although there are negative impacts associated with the development of data centers, there are also positive impacts on the community. An important positive impact to notice is that they are economic catalysts. The recent economic analysis by S&P Global states that in the first half of 2025, data center and high-tech spending accounted for 80% of the increase in U.S. economic demand. Companies bring in a significant amount of money from capital investment and considerable tax revenue that can help fund the surrounding communities' schools, roads, and public services. In Fort Wayne, Google paid about $1 million in property taxes in 2025 and is projected to pay $5.9 million annually in property taxes. Since the project was approved two years ago, Google has invested money through grants and donations into the community. All these things combined make it a large investment in the city. In addition, jobs are created through the development of data centers. Many temporary construction jobs are created while the construction of the Fort Wayne center is ongoing. When the center is fully built and running, it is projected to create 200 jobs.

Although data centers provide huge short-term economic benefits and temporary jobs that could help the community. I believe Fort Wayne's Google data center is not good for the community, especially environmentally. We do not know the full consequences and long-term effects of continuous use of strenuous energy demand, heavy water usage, diesel emissions, noise pollution, and wetland destruction on our community in the future. These environmental issues accumulate over time, and once the damage is done, it cannot be easily undone. A healthy environment is fundamental for a healthy community. If our water, air, and natural resources are destroyed, it is the residents who will face the consequences. Economic development is important, but never at the expense of long-term environmental sustainability and the public's well-being.

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