Why AI Data Centers in Mat-Su? Tough Questions and Honest Answers

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For: Mat-Su residents, Assembly members, and community stakeholders

Introduction

The Matanuska-Susitna Borough is considering proposals for AI and data center development on borough-owned industrial lands near Port MacKenzie, Big Lake, and the West Susitna corridor[1][2]. These proposals have generated important questions about water use, jobs, environmental impacts, and community benefit. This document provides research-based answers to the most common concerns.

Question 1: Why do we even need AI data centers in Alaska?

The honest answer

We don't need *every* data center that wants to come here—but a small number of well-designed, tightly regulated projects could serve Alaska's own priorities while creating economic opportunity[3][4].

What data centers actually do:

Data centers are the infrastructure backbone for AI and cloud computing. They house the specialized hardware needed to train AI models, run real-time services, process medical imaging, support telehealth, manage logistics, and deliver secure cloud storage[5][6]. Modern healthcare, education, emergency services, and commerce increasingly depend on this infrastructure[5][6].

Why location matters for Alaska:

- **Lower latency for critical services:** Hosting infrastructure in-state improves speed and reliability for Alaska's hospitals, schools, government systems, and businesses[5][6]
- **Cold climate advantage:** Alaska's natural cooling reduces energy demands compared to hot regions, especially when efficient cooling systems are used[7][8]
- **Infrastructure leverage:** Large power users can justify grid upgrades and fiber expansion that benefit entire regions—if contracts are structured to avoid shifting costs onto ratepayers[3][9][10]

- **Waste heat utilization:** Properly designed facilities can redirect waste heat to greenhouses, fish hatcheries, district heating, or other community uses[3]

The Alaska-specific case:

A recent analysis argues that AI data centers near Port MacKenzie could support construction jobs, permanent technical positions, and workforce training while leveraging Alaska's cold climate and available industrial land to serve regional compute needs[3]. The key question is not *if* we host any data centers, but *under what conditions*.

Question 2: What about damage to our aquifers?

The honest answer

This is a legitimate, science-backed concern. Some large AI data centers use around one million gallons of water per day for cooling, and national studies warn about impacts on local wells and aquifers when siting and monitoring are inadequate[11][12].

The risk is real:

- Most of a data center's water footprint comes from cooling towers and power generation[7][11][12]
- Building in water-stressed regions or over sensitive aquifers can deplete groundwater, reduce flows to streams, and harm drinking water supplies[11][12]
- Without enforceable limits and independent monitoring, operators may exceed permitted use or fail to report accurately[12]

But design choices and regulations can dramatically reduce the risk:

Research and industry case studies show that facilities can cut water demand by 50-80% through[7][8][9]:

- **Closed-loop or air-based cooling:** Reduces or eliminates reliance on evaporative cooling towers
- **Use of reclaimed wastewater:** Substitutes treated municipal wastewater for fresh groundwater or drinking water supplies[9]
- **Water-positive commitments:** Some newer facilities pledge to restore more water to watersheds than they consume through conservation projects and wetland restoration[4][9]
- **Siting in low water-stress regions:** Avoiding areas with existing scarcity or drought conditions[7][11]

What Mat-Su should require:

1. Mandatory use of closed-loop or air-based cooling systems with minimal freshwater use
2. Reliance on reclaimed or non-potable water sources instead of aquifer withdrawals
3. Full public disclosure of water use with real-time monitoring and annual third-party audits

4. Independent hydrological review before permitting, with enforceable withdrawal caps tied to aquifer health
5. Hemp phytoremediation buffer zones to protect soil and shallow groundwater from construction-related contamination

Our position: We share concerns about aquifer protection. That's exactly why we're pushing for the strongest possible water safeguards *plus* living hemp buffer systems that help protect groundwater quality over time.

Question 3: What data is actually being stored at these facilities?

The honest answer

The physical data center building is essentially a specialized warehouse of servers and networking equipment. The *types* of data it handles—medical records, educational content, social media, financial transactions, government systems, cryptocurrency—depend entirely on what contracts the operator holds and what tenants they serve[5][6].

Why this question matters:

People are rightly concerned about:

- Surveillance and abuse of personal information
- Hosting of controversial or harmful content
- Law enforcement access and privacy protections
- Whether the facility serves Alaskans or just out-of-state speculators

What communities can ask for:

- **Transparency about major clients and data categories:** Operators should disclose at a high level what sectors they serve (healthcare, education, government, finance, social media, crypto mining, etc.)[5][6]
- **Compliance and security standards:** Require documentation of adherence to standards like HIPAA for health data, CJIS for criminal justice information, or FedRAMP for government workloads[5][6]
- **Priority for public-value tenants:** Any project receiving state or borough support should prioritize workloads that clearly benefit Alaskans—healthcare systems, educational platforms, emergency services, local research—rather than purely extractive or speculative uses
- **Community advisory role:** Establish a mechanism for Tribal, municipal, and community representatives to have ongoing input on data governance and acceptable use

Our position: We don't have to accept "all data, no questions asked." If Mat-Su hosts this infrastructure, we should insist it serves Alaska's priorities and operates with transparency and community accountability.

Question 4: Will this actually create good jobs for locals?

The honest answer

Data centers create two distinct waves of employment, and the long-term picture depends heavily on how deals are negotiated[13][14][15].

Construction phase:

Large facilities can generate hundreds to thousands of construction jobs over 1-3 years, including electrical, HVAC, concrete, and specialized technology installation work[13][14][16]. These jobs are real but temporary.

Permanent operations:

Once running, data centers employ far fewer people—typically 30-100 permanent staff for facilities management, IT operations, security, and maintenance[14][15][17]. These are often well-paid technical positions, but they represent a small job footprint relative to the facility's size and energy use[14][15][17].

The economic development challenge:

National research warns that data centers can become "economic development duds" if communities don't negotiate aggressively for[14][15][17]:

- Enforceable local hiring requirements and apprenticeship programs
- Workforce training partnerships with schools and community colleges
- Commitments to use local contractors and suppliers where possible
- Revenue-sharing or community benefit agreements that ensure property taxes or payments-in-lieu support schools, infrastructure, and services

The Brookings Institution and other policy groups recommend:

Communities should leverage the data center boom by requiring developers to invest in workforce development, anchor procurement locally, and share revenues equitably with host communities[4][13][16]. Projects that fail to include these provisions often deliver minimal long-term benefit[14][15][17].

Our position: We want to see enforceable community benefit agreements that guarantee:

- Priority hiring and training for Mat-Su and Alaska Native residents
- Contracts for local farmers to grow and process hemp from buffer zones
- Investment in local hemp processing, bioenergy, and advanced materials industries that create *additional* permanent jobs beyond the data center itself

Question 5: How does the hemp buffer proposal address these concerns?

The integrated answer

The hemp phytoremediation and buffer zone framework is designed to turn environmental risks into measurable, enforceable safeguards *and* create new local economic opportunities that outlast construction[18][19][20][21].

Protecting water and soil:

- Hemp's deep root systems and proven ability to capture heavy metals and other soil contaminants create a living remediation layer around industrial sites[18][19][20][21]
- Buffer zones reduce runoff and filter pollutants before they reach groundwater or salmon streams[18][19][20]
- Ongoing soil and water monitoring tied to hemp buffers provides transparent, publicly accessible data on environmental performance

Creating local jobs and industry:

- Hemp cultivation, harvest, and processing generate agricultural jobs for Mat-Su farmers and processors[18][19][20]
- Harvested hemp can supply emerging industries: hemp-based building materials, biofuels and biogas, advanced carbon materials for energy storage, erosion control products[22][23][24][25][26][27]
- These value chains create permanent Mat-Su jobs in farming, manufacturing, and clean energy—not just temporary construction work

Climate and energy benefits:

- Hemp sequesters 8-22 tons of CO_2 per hectare per season, comparable to or exceeding young forests[28][29][30][31]
- When directed into durable products or biochar, this carbon stays locked away for years to decades[28][30][32]
- Hemp-derived biofuels and advanced carbon materials can support microgrids and backup power, improving data center resilience while reducing fossil fuel dependence[22][23][24][25][26][27]

Visible accountability:

Unlike abstract promises or buried monitoring reports, hemp buffer zones are *visible*. Residents, Assembly members, and Tribal leaders can see whether the buffers are being maintained, whether monitoring is happening, and whether the promised value chains are being built.

Conclusion: A Path Forward

We are not anti-development. We are pro-accountability.

If Mat-Su hosts AI data centers, we should set the national standard for what responsible, community-centered development looks like:

- Enforceable water protections (closed-loop cooling, reclaimed water, independent monitoring, hard caps)

- Mandatory hemp phytoremediation buffers with transparent soil and water quality tracking
- Community benefit agreements with local hiring, workforce training, and revenue sharing
- Transparent data governance prioritizing public-value tenants
- Investment in local hemp-based industries that create permanent jobs and climate benefits

Yes to AI data centers in Mat-Su—but only if we write the rules, protect our land and water, and build lasting prosperity for our communities.

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