

Cryptocurrency Mining / Data Center Land Use Regulations

Community & Economic Development Department
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ADAMS COUNTY
COLORADO

Summary

- Background
- Current Regulations for Data Centers
- Potential Community Impacts
- Potential Economic Impacts
- Regulations & Best Practices
- Staff Recommendation

Background

What is a data center?

- A facility that centralizes an organizations shared IT operations and equipment for the purpose of storing, processing, and disseminating data and applications.

Example: Crypto Mining

- A continuous process where computers work to solve algorithms to maintain and build a blockchain, and in exchange are granted cryptocurrency.
- Mining is carried out using high-powered computers that compete to be the first to solve complex mathematical puzzles. As more miners join the system, algorithms become increasingly difficult requiring more computing power to solve.



Current Regulations

- Section 3-06 describes the land use categories in the DS&R
- Section 3-05-01 states:
“[n]o use not specifically permitted or conditionally permitted in a district shall be allowed unless the Director of Community and Economic Development determines the use is similar to an expressly permitted use.”
- No use is substantially similar to a data center or crypto mining, so it has been determined to be prohibited
- Regulations need to be amended to allow for the use and establish performance standards

Potential Community Impacts

- **Safety/Emergency Management Response**
- **Noise and Light Pollution:**
 - Data centers require soundproofing / special construction techniques
 - Data centers require bright lights, gated access for security
 - Crypto mining sites can reach levels up to 80dBA (power generators)
- **Electricity Demand:**
 - Data centers require large electrical load to power computers/servers
- **Water Usage:**
 - High volume of potable water used for cooling
 - Fire suppression
- **Air Pollution:**
 - Primarily from gas-powered generators at well-pad crypto mining sites
- **E- Waste:**
 - Systems need to be replaced periodically for faster processor capacity

Potential Economic Impacts

- **Jobs:**
 - Data centers typically require minimal staffing
 - Temporary construction jobs for the development of new data centers
- **County Tax Revenue:**
 - Real Property
 - Personal Property



Regulations & Best Practices

- **Safety:**
 - Approved electrical permit and written verification that the electrical work has passed a final inspection (**Moses Lake, WA / Wenatchee WA**)
- **Compatibility:**
 - Acoustical study prepared by a professional acoustical engineer that demonstrates that the use will not violate allowable noise levels in adjacent areas (**Prince George County, MD**)
 - All equipment necessary for cooling, ventilating, or otherwise operating the facility must be contained within an enclosed building where the use is located (**Fairfax County, VA**)

Regulations & Best Practices (continued)

- **Sustainability:**
 - Verification must be provided that all electronic waste generated at a crypto-mining operation will be handled by a DEQ-licensed electronic waste recycling firm (**Missoula, MT**)
 - Any crypto mining facility shall be required to develop or purchase sufficient new renewable energy to offset 100 percent of the electricity consumed by the cryptocurrency (**Missoula, MT**)
- **Public Notice:**
 - Public notice must be provided to adjacent owners as part of the permit process (**Wenatchee, WA**)
- **Emergency Preparedness:**
 - As part of any crypto mining permit, applicant will need to provide a contingency plan in the event of an emergency on site

Staff Recommendation

- Discuss feedback from multiple stakeholder discussions
 - Survey will be posted to County website
- Future study session with Board of County Commissioners
- Draft regulations
 - Multiple opportunities for public feedback
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