



PUBLIC NOTICE IS HEREBY GIVEN THAT THE PLANNING COMMISSION WILL
MEET FOR A REGULAR MEETING IN THE

Grand County Commission Chambers 125 East Center Street, Moab, Utah
May 26, 2026 - 5:30 PM

Call To Order

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Meeting ID: 420 993 8173

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Citizens To Be Heard

We are receiving public comments by phone and online through Zoom. Dial: (669) 900 - 6833 Meeting ID: 420 993 8173 Planning Commission Zoom Link When joining the meeting, you will be placed in a waiting room and be added to the meeting by the moderator. Your comments will be recorded and on YouTube. (Unmute for public comment: *6)

Ex Parte Communications And Disclosures

Approval Of Meeting Minutes

Presentations (15 Min)

County Commission Update

Public Hearings

General Business - Action Items - Discussion And Consideration Of Approval

Discussion Items

1. Water Use & Preservation Element Of The General Plan

Andrew Jackson, Planning and Zoning Director

2. Data Center Staff Report

Andrew Jackson, Planning and Zoning Director

Future Considerations

Adjourn

NOTICE OF SPECIAL ACCOMMODATION DURING PUBLIC MEETINGS. In compliance with the Americans with Disabilities Act, individuals with special needs requests wishing to attend Grand County Commission meetings/hearings and other Grand County Boards, Commissions, or Committees are encouraged to contact the County two (2) business days in advance of these events. Specific accommodations necessary to allow participation of disabled persons will be provided to the maximum extent possible. T.D.D. (Telecommunication Device for the Deaf) calls can be answered at:(435) 259-1346. Individuals with speech and/or hearing impairments may also call the Relay Utah by dialing 711. Spanish Relay Utah: 1 (888) 346-3162

It is hereby the policy of Grand County that elected and appointed representatives, staff and members of the Grand County Commission meetings/hearings and other Grand County Boards, Commissions, or Committees may participate in meetings through electronic means. Any form of telecommunication may be used, as long as it allows for real time interaction in the way of discussions, questions and answers, and voting.

At the Grand County Commission meetings/hearings and other Grand County Boards, Commissions, or Committees any citizen, property owner, or public official may be heard on any agenda subject. The number of persons heard and the time allowed for each individual may be limited at the sole discretion of the Chair. On matters set for public hearings there is a three-minute time limit per person to allow maximum public participation. Upon being recognized by the Chair, please advance to the microphone, state your full name and address, whom you represent, and the subject matter. No person shall interrupt legislative proceedings.

Requests for inclusion on an agenda and supporting documentation must be received by 5:00 PM on the Tuesday prior to a regular Commission Meeting and forty-eight (48) hours prior to any Special Commission Meeting.

Information relative to these meetings/hearings may be obtained at the Grand County Commission's Office, 125 East Center Street, Moab, Utah; (435)259-1346.

WATER USE & PRESERVATION ELEMENT

Of the Grand County General Plan

May 2026



In cooperation with the Grand Water and Sewer Service Agency, the Thompson Special Service Water District, and the Arches Special Service District.

DISCLAIMER

This Water Use and Preservation Element is part of the Grand County General Plan and serves as a planning and policy document. It guides land-use decision-making and establishes a framework for evaluating the relationships among development, water demand, and available infrastructure. It does not constitute a regulatory document, a capital improvement commitment, or a guarantee of water availability.

1. No Guarantee of Water Availability or Service

Nothing in this Element shall be interpreted as:

- A guarantee of water availability for any property, project, or use;
- An assurance of water service by any water provider; or
- A commitment by Grand County or any other entity to construct, finance, or maintain water infrastructure.

All development proposals are subject to independent verification of water availability by the applicable provider.

2. No Allocation or Control of Water Rights

Grand County does not own, allocate, or administer water rights. Authority over water rights is vested in the Utah Division of Water Rights, governed by state law. This Element does not allocate, modify, or create any entitlement to water use.

3. Planning Assumptions and Projections

Analyses, projections, and estimates are based on the best available data at the time of adoption and are intended for planning purposes only. They are subject to change and should not be relied upon as precise forecasts for specific projects or investments.

4. Infrastructure and Funding Uncertainty

Infrastructure projects identified in this Element are conceptual and subject to engineering feasibility assessments, environmental reviews, funding availability, and interagency coordination. Inclusion of a project does not constitute a commitment to construct or fund it.

5. Third-Party Systems and Operations

Water systems in Grand County are owned and operated by independent entities. The County does not control system operations, maintenance, or service decisions. County development approvals do not obligate providers to deliver water service.

6. No Creation of Vested Rights or Entitlements

This Element does not create vested development rights, entitlements to water service, or legal claims against the County or any water provider. All land use decisions remain subject to applicable laws, regulations, and approval processes.

7. Relationship to Other Plans and Regulations

In the event of conflict, state law and water rights administration shall control; water provider determinations regarding capacity and service shall prevail. This Element shall be interpreted as a policy guide rather than a controlling regulatory document.

8. Limitation of Liability

Grand County shall not be liable for decisions made by third-party water providers, changes in water availability or system capacity, or reliance on planning-level projections contained in this Element.

This Element provides a framework for planning and coordination, not a guarantee of water service. All development decisions must be supported by independent verification of water availability, infrastructure capacity, and regulatory compliance.

DOCUMENTS REVIEWED

This Element is based on a review of planning documents, water system data, state guidance materials, and technical resources relevant to water demand and land use in Grand County.

1. Grand County Planning Documents

- Grand County General Plan (current adopted version)
- Spanish Valley Future Land Use Plan
- Grand County Land Use and Development Management Code
- Previous planning studies and policy documents related to land use, growth, and infrastructure

2. Water Provider Plans and System Data

- Grand Water & Sewer Service Agency (GWSSA) planning documents and system data
- Arches Special Service District (ASSD) system information and operational data
- Thompson Special Service Water District (TSSWD) system information
- Moab City Water Conservation Plan Update
- Castle Valley Water Management Plan

3. State Planning Guidance and Technical Resources

- Utah Division of Water Resources – State Water Plan and regional planning documents
- Utah Division of Water Resources – Water conservation guidance and per capita use targets
- Utah Division of Water Rights – water rights administration and regulatory information
- Relevant provisions of Utah Code §17-79-403(2)(v), including amendments under Senate Bill 110 (2022) and Senate Bill 76 (2023)

4. Local and Project-Specific Information

- Data related to the Uranium Mill Tailings Remedial Action (UMTRA) project in Crescent Junction and Thompson Springs
- Local water use estimates, including culinary and irrigation demand
- Population projections and demographic data used for demand modeling

5. Funding and Implementation Resources

- Guidance materials and program information for the Permanent Community Impact Board (PCIB)
- State and federal funding program information relevant to water infrastructure and conservation

SECTION 1. INTRODUCTION

Grand County, Utah, lies in an arid high-desert environment where water availability is limited and variable. Precipitation is low, evapotranspiration rates are high, and groundwater recharge depends on the snowpack in the La Sal Mountains. These conditions create a constrained water supply that does not inherently expand with population growth or development.

The County's primary water sources include groundwater from the Glen Canyon Aquifer and the Valley Fill Aquifer, supplemented by surface water stored at Ken's Lake Reservoir and by limited spring-fed systems. These sources underpin culinary and irrigation uses throughout the County but are subject to physical and operational limitations.

Grand County continues to experience steady population growth and significant seasonal fluctuations driven by tourism and recreation. These factors increase both baseline and peak water demand, placing additional pressure on water systems, storage capacity, and distribution infrastructure.

This Water Use and Preservation Element is adopted in accordance with Utah Code §17-79-403(2)(v), as amended by Senate Bill 110 (2022) and Senate Bill 76 (2023). This Element addresses:

- The effect of permitted development and land use patterns on water demand and infrastructure;
- Methods of reducing water demand and per capita consumption for future development;
- Methods of reducing water demand and per capita consumption for existing development; and
- Opportunities for the County to modify its operations to eliminate practices or conditions that waste water.

The purpose of this Element is to integrate water resource considerations into land use planning and decision-making. A central premise is that water availability is a limiting constraint on development, not a condition that can be assumed to expand with growth.

The County does not own or control water rights and does not operate public water systems. Water service is provided by independent entities, including the Grand Water & Sewer Service Agency, the Arches Special Service District, the Thompson Special Service Water District, and other providers. This Element serves as a policy and coordination tool to align land-use decisions with water conditions and to support coordination between the County and water providers.

The Grand Water & Sewer Service Agency (GWSSA) provides drinking and irrigation water to Spanish Valley and nearby unincorporated areas. The system includes four production wells that draw from the Glen Canyon Aquifer, an EPA-designated Sole Source Aquifer, and diverts surface water from Mill Creek through the Sheley Tunnel into Ken's Lake Reservoir. It maintains

about 4.5 million gallons of drinking water storage and supplies about 3,631 acre-feet of drinking water rights and 7,823 acre-feet of irrigation or secondary water rights annually.

The Arches Special Service District provides sanitary sewer service within its service area. Culinary water is sourced from private shares of Colorado River Water, serving two hotel properties and the Canyonlands by Night and Day tour company.

The Thompson Special Service Water District serves a small community and relies on two springs in Thompson Canyon for its drinking water. System reliability depends on the continuous operation of production, storage, and distribution components, as well as the district's ability to prevent and repair leaks.

The County also recognizes the unique conditions associated with the completion of the UMTRA project at Crescent Junction and Thompson Springs. Although legacy contamination has been removed, these areas remain constrained by limited water infrastructure. Future development will require demonstrated water rights and long-term reliability of infrastructure.

Implementing this Element will require coordination, investment, and funding. Grand County will seek financial support through programs such as the Permanent Community Impact Board (PCIB) to advance infrastructure projects and support system improvements in water-constrained areas.

SECTION 2. POPULATION GROWTH AND DEMAND DRIVERS

Population growth is the primary long-term driver of water demand in Grand County and provides the analytical foundation for evaluating future water needs. This section establishes the relationship among projected population trends, seasonal demand variability, and land use patterns.

Grand County is expected to grow from approximately 10,000 residents in 2025 to approximately 14,300 by 2065. Although moderate in rate, this growth reflects a sustained increase in baseline demand that must be accounted for in long-term water planning.

2.1 Seasonal Demand

In addition to permanent residents, Grand County experiences substantial seasonal fluctuations associated with tourism and recreation. These increases have important implications:

- **Peak Demand:** Visitor activity increases short-term water demand about one and a half times the demand associated with permanent residents. Outdoor watering during the summer months increases demand by about four times that of winter demand;
- **Infrastructure Sizing:** Water systems must be designed to accommodate peak rather than average demand; and
- **Operational Stress:** Wells, storage tanks, and distribution systems experience increased stress during high-use periods.

2.2 Land Use Patterns and Demand

The manner in which growth occurs — particularly land use patterns and development design — has a direct effect on per capita water use:

- **Low-Density Development:** Larger lots with large irrigated landscapes increase outdoor water demand;
- **Higher-Density Development:** Compact development may reduce irrigated area and lower per capita use; and
- **Landscape Design:** Turf-intensive landscaping significantly increases demand, while drought-tolerant landscaping reduces it.

2.3 Spatial Distribution of Growth

Growth is expected in Spanish Valley and GWSSA-served areas, in unincorporated areas with limited infrastructure, and in Crescent Junction and Thompson Springs (post-UMTRA). In water-constrained areas, development must be evaluated based on demonstrated water rights, infrastructure feasibility, and long-term reliability.

2.4 Key Findings

- Grand County will continue to experience population growth over the planning horizon;
- Population growth will increase baseline water demand in the absence of conservation measures;
- Seasonal tourism slightly increases peak demand;
- Land use patterns and development design are critical determinants of per capita water use, especially in areas with large outdoor turf areas; and
- The spatial distribution of growth affects infrastructure needs and system capacity.

SECTION 3. GRAND COUNTY WATER PROFILE

This section describes the physical water systems, infrastructure conditions, and institutional framework that define water availability in Grand County.

3.1 Water Sources

Groundwater

Groundwater is the primary drinking water source in the County. The principal aquifers include:

- Glen Canyon Aquifer, designated as a Sole Source Aquifer by the EPA;
- Valley Fill Aquifer, which provides a localized supply in developed areas.

Recharge occurs slowly and is largely dependent on snowpack in the La Sal Mountains. These systems must be managed conservatively to maintain long-term sustainability.

Surface Water and Storage

Ken's Lake Reservoir stores diverted water and supports irrigation and secondary water systems in Spanish Valley. Surface water availability varies with hydrologic conditions and cannot be relied on as a fully stable source without careful management.

Spring Systems

Spring-fed systems supply water in localized areas, particularly in Thompson Springs. These systems have limited capacity and minimal redundancy, making them sensitive to demand increases and fluctuations.

Non-Potable Colorado River Water for Irrigation

Colorado River water represents a significant opportunity to reduce pressure on drinking water systems by serving outdoor irrigation demand with non-potable water. Grand County holds Colorado River water rights that are not currently developed for large-scale use, but which could be applied to irrigation and landscape watering in areas where infrastructure allows.

The core principle is straightforward: drinking water — drawn from the Glen Canyon Aquifer and treated to culinary standards — is a finite and carefully managed resource. It should be reserved for indoor uses where water quality is essential: drinking, cooking, and sanitation. Outdoor irrigation, which accounts for the majority of total water demand in the summer months, does not require that level of treatment. Supplying it with non-potable Colorado River water frees up drinking water capacity and reduces the burden on groundwater systems.

GWSSA currently operates a secondary water system in Spanish Valley that delivers non-potable irrigation water separately from its culinary supply. This dual-system model is the foundation for expanding non-potable use. Where secondary water infrastructure is available or can be extended, new development should be required to use it for all outdoor irrigation rather than drawing from the culinary system.

In areas where secondary infrastructure does not yet exist, the County will coordinate with GWSSA and other providers to evaluate the feasibility of extension. Development in those areas may be conditioned on participation in future secondary system expansion, particularly for higher-intensity uses with significant irrigation demand.

Use of non-potable Colorado River water for irrigation is subject to state water rights administration and must comply with applicable diversion and use requirements. The County will coordinate with the Utah Division of Water Rights and relevant providers to ensure that expanded non-potable irrigation use is consistent with existing rights and approvals.

3.2 Infrastructure Systems and Service Areas

Water service is provided by multiple independent entities, including GWSSA, ASSD, and TSSWD. These systems include production wells, storage tanks, pumping facilities, and distribution networks. Infrastructure capacity varies significantly across the County. The County neither owns nor operates these systems, nor does it control water rights; its role is to align land use decisions with these providers' capabilities.

3.3 System Constraints

- Groundwater recharge is slow; water availability cannot be assumed to increase with demand;
- System capacity is limited by well production rates, storage volume, and distribution network limitations;
- Peak demand during the irrigation season can strain system capacity;
- Smaller rural systems have limited redundancy, increasing vulnerability to supply interruptions.

3.4 Crescent Junction and Thompson Springs

These areas remain water-constrained despite completion of the UMTRA project.

- Crescent Junction lacks a centralized culinary water system and requires well, storage, and distribution infrastructure before significant growth can occur;
- Thompson Springs relies on limited spring-fed systems with minimal redundancy and requires upgrades to support reliability.

Development in these areas must be evaluated based on demonstrated water rights, infrastructure feasibility, and long-term reliability.

3.5 Funding and Implementation Context

The development of water infrastructure requires substantial financial investment. Grand County will pursue funding through the Permanent Community Impact Board (PCIB) and other state and federal programs to support rural system improvements, expansion of storage and distribution systems, and conservation and efficiency programs.

3.6 Key Findings

- Water availability in Grand County is constrained by natural and infrastructure conditions;
- Groundwater systems provide the primary water source, but recharge slowly;
- Infrastructure capacity varies significantly and limits development potential in certain areas;
- Crescent Junction and Thompson Springs remain water-constrained; and
- Long-term water planning depends on coordination, funding, and infrastructure development.

SECTION 4. WATER USE CONDITIONS

This section describes existing water use patterns, including total demand, per capita consumption, outdoor irrigation, system efficiency, and seasonal variability. These conditions establish the baseline against which future demand projections and conservation strategies are evaluated.

4.1 Total Water Demand

Based on available provider data, total system demand is approximately:

- Culinary Demand: ~988 acre-feet per year
- Irrigation and Secondary Demand: ~1,490 acre-feet per year
- Total System Demand: ~2,400–2,500 acre-feet per year

Culinary demand is relatively stable and predictable. Irrigation demand varies significantly based on weather conditions, landscape design, and seasonal occupancy.

4.2 Per Capita Water Use

Average system-wide water use is estimated at approximately 184 gallons per capita per day (GPCD), currently within the regional conservation target established by the Utah Division of Water Resources. Maintaining or reducing per capita water use over time is necessary to offset the effects of population growth.

4.3 Outdoor Water Use and Irrigation

Outdoor irrigation is the largest discretionary component of water demand and the most significant opportunity for long-term reduction. In peak months, outdoor use significantly exceeds indoor demand, making it the primary driver of both total demand and peak system stress.

4.4 Seasonal Demand and Peak Conditions

Peak demand typically occurs during spring and summer irrigation seasons. Infrastructure must be sized to meet peak demand, not average demand. Managing peak demand is essential to avoiding costly infrastructure expansion.

4.5 System Efficiency and Water Loss

Current system losses are estimated at approximately 7–8 percent of total culinary production, or roughly 80–90 acre-feet per year. Sources of loss include distribution system leaks, meter inaccuracies, and system flushing. Reducing system losses effectively increases available water without developing new infrastructure.

4.6 Key Findings

- Outdoor irrigation represents the largest and most controllable component of water demand;
- Total water demand is driven more by irrigation and seasonal factors than by indoor use;
- Per capita water use is within regional targets but should continue to decline to offset growth;
- Peak demand is the primary driver of infrastructure requirements; and
- System losses present opportunities for improvement.

SECTION 5. EFFECT OF DEVELOPMENT ON WATER DEMAND (§17-79-403(2)(v)(A))

This section evaluates the relationship between projected development patterns and future water demand, and assesses the implications on existing and planned water infrastructure. The analysis is based on population projections from Section 2 and current water use patterns from Section 4.

5.1 Demand Management

Water demand in Grand County is not solely a function of population growth. It is shaped by how development is designed, how landscapes are managed, and what conservation standards are applied. Without intervention, continued growth will increase total demand and place additional pressure on infrastructure. However, achievable conservation measures — such as limiting non-functional turf, requiring efficient irrigation systems, and expanding use of non-potable water for outdoor uses, and some indoor uses — can offset growth-related increases and keep total demand at or near current levels. More aggressive measures can reduce demand below current levels even as the population grows.

5.2 Interpretation of Demand Scenarios

- Under the Baseline Scenario, total demand increases through 2060;
- Under the Moderate Conservation Scenario, total demand increases more slowly than in current conditions;
- Under the High Conservation Scenario, total demand increases significantly less than current levels.

These results establish that water demand is not solely a function of growth, but is strongly influenced by policy, design, and management decisions.

5.3 Infrastructure Implications

Without conservation, continued growth would necessitate significant capital investment in system expansion. Peak demand conditions represent the most critical constraint on infrastructure, as they can exceed pumping capacity, deplete storage reserves, and increase the risk of service interruptions.

Development in areas with limited infrastructure — such as Crescent Junction and Thompson Springs — may require new water sources, infrastructure construction, and demonstrated long-term reliability before proceeding.

5.4 Key Findings

- Population growth will increase baseline water demand in the absence of conservation measures;
- Outdoor irrigation is the primary driver of increased demand associated with development;
- Moderate conservation measures can offset the additional demand associated with projected growth;
- Peak seasonal demand is the primary constraint on infrastructure capacity; and
- Development design and land use policy are the primary determinants of water demand.

SECTION 6. METHODS OF REDUCING WATER DEMAND FOR FUTURE DEVELOPMENT (§17-79-403(2)(v)(B))

This section identifies methods to reduce water demand associated with future development. The most effective demand-reduction strategies are those embedded in land use regulations, development standards, and infrastructure requirements.

6.1 Land Use and Development Pattern Controls

- Encourage compact and clustered development to reduce irrigated areas;
- Discourage large-lot, water-intensive development in areas with limited infrastructure;
- Align zoning and future land use designations with long-term water availability; and
- Limit development intensity in areas where infrastructure capacity is constrained.

6.2 Landscape Design Standards

The County will require:

- Limitation or prohibition of non-functional turf;
- Use of drought-tolerant and climate-adapted plant materials;
- Hydro zoning to group plants with similar water needs; and
- Reduction of irrigated areas to those that serve a functional purpose.

6.3 Irrigation System Requirements

The County will require:

- Installation of drip irrigation systems or equivalent high-efficiency technology;
- Encourage the use of secondary water;
- Use of smart irrigation controllers that adjust watering based on weather conditions; and
- Design standards that minimize overspray, runoff, and evaporation losses.

6.4 Water-Efficient Building Design

The County will require or encourage the installation of high-efficiency plumbing fixtures and water-efficient appliances in new construction. The County may also encourage the use of non-potable water for certain indoor uses.

6.5 Development Review Requirements

All development proposals must demonstrate:

- Availability of legally recognized water rights;
- Confirmation of system capacity from the applicable water provider; and

- Ability to deliver water under both average and peak demand conditions.

Development reliant on new or expanded water infrastructure must demonstrate a credible funding strategy. Development shall not rely on speculative or unproven water availability.

6.6 Water-Constrained Areas

In Crescent Junction, Thompson Springs, and similar areas:

- Development shall be limited by demonstrated water availability;
- New infrastructure must be constructed prior to or concurrent with development; and
- Development intensity may be restricted based on system capacity.

6.7 Key Findings

- Water demand associated with future development can be significantly reduced through design and regulatory standards;
- Outdoor irrigation is the primary controllable component of demand;
- Development review processes provide an effective mechanism for implementing demand reduction; and
- Water-constrained areas require stricter controls to ensure long-term reliability.

SECTION 7. METHODS OF REDUCING WATER DEMAND FOR EXISTING DEVELOPMENT (§17-79-403(2)(v)(C))

Where Grand County's built environment is already in place, reducing water use in existing development offers the most immediate opportunity to improve system efficiency and reduce total demand.

7.1 Landscape Conversion and Outdoor Water Use Reduction

The County will support and coordinate programs that:

- Provide incentives for removal of non-functional turf;
- Prioritize high-water-use properties; and
- Encourage replacement with drought-tolerant, climate-adapted landscaping.

7.2 Irrigation System Retrofits

The County will support programs that encourage:

- Installation of smart irrigation controllers;
- Conversion to drip irrigation systems or other high-efficiency technologies; and
- Repair or replacement of inefficient or outdated irrigation systems.

7.3 Pricing and Demand Management

The County will support provider efforts to maintain or expand tiered pricing structures that increase rates for high-volume use and implement seasonal watering restrictions and drought response measures.

7.4 System Efficiency and Water Loss Reduction

The County will support providers' efforts to conduct system-wide leak-detection programs, implement advanced metering infrastructure, and reduce system losses.

7.5 Public Education and Outreach

The County will support public education campaigns focused on water-wise landscaping and irrigation practices, as well as partnerships with water providers, schools, and community organizations.

7.6 Targeted Regulatory Measures

Where voluntary measures are insufficient, the County may implement ordinances addressing water waste, requirements for landscape upgrades during major redevelopment, and limitations on irrigation of non-functional turf.

7.7 Key Findings

- Existing development represents the largest opportunity for near-term water demand reduction;
- Outdoor irrigation is the primary driver of discretionary water use;
- Incentive programs and irrigation retrofits can produce significant and measurable savings;
- Pricing and demand management strategies are effective tools for influencing behavior; and
- Targeted regulatory measures may be necessary to achieve long-term conservation goals.

SECTION 8. COUNTY OPERATIONAL IMPROVEMENTS TO ELIMINATE WATER WASTE (§17-79-403(2)(v)(D))

Although the County does not operate public water systems, it owns and manages facilities, parks, landscapes, and infrastructure that contribute to overall water demand. These assets provide an opportunity to achieve direct reductions while demonstrating best practices for the community.

8.1 County Facilities and Indoor Water Use

Based on funding availability, the County will retrofit facilities with high-efficiency plumbing fixtures, replace outdated equipment with water-efficient systems, and incorporate water-efficient design into all new County facilities. Protocols for prompt detection and repair of leaks will be established.

8.2 County Landscapes and Outdoor Water Use

Within approved budgets, the County will:

- Replace non-functional turf with drought-tolerant, climate-adapted landscaping;
- Retrofit irrigation systems with drip irrigation or equivalent high-efficiency technology;
- Install smart irrigation controllers that respond to weather conditions; and
- Eliminate overspray, runoff, and unnecessary watering.

8.3 Operational Policies

The County will establish policies requiring timely repair of leaks and irrigation failures, limit irrigation during peak daytime hours to reduce evaporation, and incorporate water efficiency into procurement and operational decisions.

8.4 Monitoring and Performance Tracking

The County will track water use at County facilities regularly, establish baseline usage levels, evaluate the effectiveness of conservation measures over time, and incorporate water use data into broader planning and reporting efforts.

8.5 Key Findings

- County operations represent a controllable source of water demand;
- Outdoor irrigation at County facilities is the largest contributor to operational water use;
- Facility upgrades and irrigation improvements can significantly reduce consumption; and
- The County can influence broader community behavior through demonstration and leadership.

SECTION 9. REGIONAL COLLABORATION

Long-term water reliability in Grand County depends on coordination among multiple jurisdictions, water providers, and regulatory agencies. Water resources, infrastructure systems, and demand patterns extend beyond jurisdictional boundaries, and no single entity has comprehensive authority over all aspects of water management.

9.1 Institutional Context

Water management involves multiple independent entities:

- Grand County – responsible for land use planning, zoning, and development approvals;
- Water Providers – GWSSA, ASSD, and TSSWD, responsible for water rights, system operations, and infrastructure;
- Municipalities and Neighboring Jurisdictions – including Moab City, Castle Valley, and San Juan County; and
- State Agencies – Utah Division of Water Resources and Division of Water Rights.

9.2 Coordination Objectives

Grand County will pursue regional collaboration to:

- Align land use decisions with available water and infrastructure capacity;
- Ensure growth occurs within long-term resource constraints;
- Improve the effectiveness of conservation and demand management; and
- Maintain compliance with state and interstate water policies.

9.3 Coordination Mechanisms

- Maintain regular communication with water providers regarding system capacity and infrastructure planning;
- Require consultation with water providers during review of development proposals;
- Utilize data from water provider master plans, conservation plans, and state resources; and
- Participate in regional initiatives related to water infrastructure development.

9.4 UMTRA Transition Coordination

The County will coordinate with state agencies and water providers to evaluate infrastructure needs in Crescent Junction and Thompson Springs, and ensure that post-remediation development does not exceed available resources.

9.5 Funding Coordination

Grand County will collaborate with partners on applications to the Permanent Community Impact Board (PCIB), prioritize projects that reduce water demand, and align funding applications with regional planning efforts.

9.6 Key Findings

- Effective water planning requires coordination across jurisdictional and institutional boundaries;
- Land use decisions must be informed by accurate data from water providers;
- Regional collaboration is necessary to develop long-term infrastructure solutions; and
- Coordinated funding strategies are essential to implementing priority projects.

SECTION 10. GOALS, POLICIES, AND IMPLEMENTATION

This section establishes the goals, policies, and implementation measures necessary to manage water demand and align land use decisions with available resources. The policies are implemented through land use regulation, development review, interagency coordination, and capital planning.

Goal 1: Align Growth with Water Availability and Infrastructure Capacity

Policy 1.1 – Water Availability Verification

All development proposals shall demonstrate the availability of a reliable water supply prior to approval.

- Require documentation of legally recognized water rights or service commitment from a provider;
- Require verification of system capacity, including peak demand conditions; and
- Coordinate with water providers during development review.

Policy 1.2 – Infrastructure Capacity and Phasing

Development shall be limited by the capacity of existing and planned water infrastructure.

- Condition approvals on necessary infrastructure improvements;
- Require phasing of development based on system capacity; and
- Align development intensity with service area capabilities.

Goal 2: Reduce Per Capita and Total Water Demand

Policy 2.1 – Demand Reduction Targets

- Support conservation programs and provider initiatives;
- Track system-wide water use and performance metrics; and
- Integrate demand reduction goals into planning decisions.

Policy 2.2 – Peak Demand Management

- Promote irrigation efficiency and landscape standards;
- Support provider efforts to implement seasonal demand controls; and
- Align infrastructure planning with peak demand conditions.

Goal 3: Reduce Outdoor Water Use

Policy 3.1 – Landscape Efficiency Standards

- Limit or prohibit non-functional turf;
- Require drought-tolerant landscaping; and
- Encourage hydro zoning and efficient design.

Policy 3.2 – Irrigation System Efficiency

- Require drip irrigation or equivalent systems;
- Require smart irrigation controllers; and
- Prohibit inefficient irrigation practices.

Policy 3.3 – Non-Potable Water for Outdoor Irrigation

Grand County shall prioritize the use of non-potable Colorado River water for outdoor irrigation to preserve treated drinking water for indoor use.

- New development where GWSSA secondary water infrastructure is available shall connect to the secondary system for all outdoor irrigation and shall not use the culinary system for landscape watering;
- New development in areas without existing secondary infrastructure shall be evaluated for the feasibility of connection or participation in future system expansion, and approvals may be conditioned accordingly;
- The County shall coordinate with GWSSA and other providers to identify priority areas for secondary system extension and to align capital planning with development patterns;
- Existing development is encouraged to convert outdoor irrigation to secondary water where connections are available; and
- The County shall not approve development that proposes to use culinary water for large-scale irrigation where a non-potable alternative exists or can feasibly be made available.

Goal 4: Improve System Efficiency and Reduce Water Loss

Policy 4.1 – System Efficiency

- Support leak detection and repair programs;
- Encourage advanced metering infrastructure; and
- Coordinate with providers on system performance improvements.

Goal 5: Address Water Constraints in Rural Areas

Policy 5.1 – Crescent Junction and Thompson Springs

- Require verification of water rights and infrastructure capacity;
- Condition development on the construction of necessary infrastructure; and
- Limit intensity of development based on system capability.

Goal 6: Support Conservation in Existing Development

Policy 6.1 – Existing Development Programs

- Support turf conversion and irrigation retrofit programs;
- Encourage provider-led pricing and demand management strategies; and
- Promote public education and outreach.

Goal 7: Improve County Operations

Policy 7.1 – County Water Use Reduction

- Retrofit County facilities with efficient fixtures;
- Convert landscapes to drought-tolerant designs; and
- Monitor and track water use at County properties.

Goal 8: Strengthen Regional Coordination

Policy 8.1 – Interagency Coordination

- Maintain regular communication with providers;
- Integrate provider data into planning decisions; and
- Participate in regional water planning efforts.

Goal 9: Pursue Funding for Infrastructure and Conservation

Policy 9.1 – Funding Strategy

- Pursue funding through the Permanent Community Impact Board (PCIB);
- Coordinate regional funding applications; and
- Align capital planning with funding opportunities.

Phasing Strategy

Phase 1: 2026–2030 (Immediate Impact)

Focus: Rapid demand reduction, system efficiency improvements, and rural system stabilization.

- Leak detection and Advanced Metering Infrastructure
- Turf conversion programs
- Thompson Springs system upgrades

Phase 2: 2030–2040 (System Expansion)

Focus: Infrastructure expansion and demand offset through improvements to irrigation systems.

- Secondary irrigation system expansion
- Storage improvements

Phase 3: 2040+ (Long-Term Reliability)

Focus: System optimization and regional integration.

SECTION 11. CONCLUSION

This Water Use and Preservation Element establishes a comprehensive framework for integrating water resource considerations into land use planning and decision-making in Grand County. The Element demonstrates that water availability is constrained by limited groundwater recharge, variable surface water conditions, and finite infrastructure capacity. These constraints must be recognized as governing factors in future growth and development.

Projected population growth and seasonal demand will increase baseline and peak water demand over time. However, as shown in Section 5, water demand can be stabilized or reduced through conservation measures, efficient development design, and coordinated infrastructure planning.

A central conclusion of this Element is that water demand is determined by policy choices. Land use patterns, landscape standards, irrigation practices, and system management collectively define the relationship between growth and water use. This Element establishes a framework in which development is aligned with available water resources rather than assuming that resources will expand to meet demand.

This Element also recognizes the institutional structure of water management in Grand County. Water providers retain authority over water rights, system operations, and service delivery, while the County is responsible for land use planning and development approvals. Effective water management depends on ongoing coordination among these entities and with state agencies.

The Element also addresses the unique conditions associated with Crescent Junction and Thompson Springs following completion of the UMTRA project. While environmental constraints have been reduced, water infrastructure limitations remain. Development in these areas must be supported by demonstrated water rights, infrastructure investment, and long-term reliability.

Implementation of this Element will require sustained coordination, investment, and funding. Grand County will pursue financial support through programs such as the Permanent Community Impact Board to advance infrastructure improvements and support conservation initiatives.

Through the goals, policies, and implementation measures established in this Element, Grand County commits to:

- Treating water availability as a governing constraint on development;
- Reducing per capita and total water demand through conservation and efficiency;
- Promoting land use patterns and development practices that minimize water use;
- Improving system efficiency and reducing water waste; and
- Coordinating with water providers, regional partners, and state agencies to ensure long-term sustainability.

By adopting this Element, Grand County affirms its commitment to managing growth in a manner that protects limited water resources, maintains system reliability, and supports the long-term health, safety, and welfare of its residents, businesses, and visitors.

APPENDIX A: CAPITAL PROJECTS STRATEGY

A.1 Purpose

This appendix identifies priority water infrastructure and conservation projects necessary to implement the Water Use and Preservation Element. It serves as a capital planning tool, a funding support document, and a prioritization framework for infrastructure investment.

A.2 A.3 Demand Reduction Summary

Combined implementation of conservation and infrastructure projects can achieve an estimated total reduction of 800–1,500+ acre-feet per year. The primary source of savings is the reduction of outdoor irrigation, with secondary benefits of reduced peak demand and improved system reliability. This reduction is sufficient to offset projected growth-related increases in demand and maintain total system demand at or near current levels.

A.4 Funding Strategy

Grand County and its partners will pursue funding through:

- The Permanent Community Impact Board (CIB) – primary funding source;
- State water infrastructure and conservation programs;
- Federal funding where applicable; and
- Local funding and partnerships.

CIB funding is particularly critical for rural system development, infrastructure improvements, and conservation program implementation.



AGENDA SUMMARY

Planning Commission Meeting

Date: May 26, 2026

Title: Data Center Staff Report

Fiscal Impact:

If this submission is from the general public you will need a commission sponsor, feel free to contact the Commission Administrators Office with any questions commadmin@grandcountyutah.net (435) 259-1342 or contact the Commissioners directly at commission@grandcountyutah.net

Presenter(s): Andrew Jackson, Planning and Zoning
Director

Department: Planning and Zoning

Legal Review: Not Applicable

Approved and Not Applicable
within budget?

Budget Number:

Recommended Motion:

Background:

Attachments:

1. GrandCounty_DataCenter_StaffReport_7

DATA CENTERS IN GRAND COUNTY

Planning Commission Staff Report

May 2026



Grand County Planning & Zoning Staff
125 East Center Street • Moab, Utah 84532

TO: Grand County Planning Commission
FROM: Grand County Planning & Zoning Staff
DATE: May 26, 2026
RE: Planning Considerations for Data Center Development in Grand County
AGENDA ITEM: Discussion — Data Center Land Use Policy

EXECUTIVE SUMMARY

Data centers are becoming a sought-after land use across the American West, and Grand County may face proposals from this sector. This report provides the Planning Commission with an overview of the land use, infrastructure, environmental, and fiscal implications of data center development, with specific reference to Grand County's unique characteristics—including its high-desert climate, aquifer-dependent water supply, rural electric grid, scenic landscapes, and tourism-dependent economy. Staff recommends that the Commission initiate a policy discussion to determine whether and how data centers should be accommodated in the County's land use regulations.

WHAT THIS REPORT COVERS

Sections 1–2 — Background and What Is a Data Center: Context for why data centers are appearing in rural Utah, and a plain-language explanation of facility types (enterprise, colocation, hyperscale, edge) and their physical characteristics—power demand, water use, noise, employment, and security footprint.

Sections 3–6 — Land Use, Infrastructure, Environment, and Fiscal Impacts: Analysis of how data centers interact with Grand County's zoning code, electric grid, water system, air quality standards, and tax base. Examines the gap between data centers' substantial infrastructure demands and the County's current capacity to accommodate them.

Section 7 — Comparable Jurisdictions: Lessons from Mesa County (CO), Crook County (OR), Churchill County (NV), and San Bernardino County (CA)—rural and semi-rural jurisdictions that have developed data center land use policies.

Section 8 — Utah Context—Santaquin, Box Elder, and Beyond: A review of recent and highly publicized data center controversies across Utah, including the Summit Ridge project in Santaquin and the "Stratos Project" in Box Elder County—a proposed 40,000-acre, 9-gigawatt campus that drew hundreds of protesters and generated nearly 4,000 formal water rights protests in 2026. Also covers active projects in Delta, Duchesne County, and Nephi.

Section 9 — Is Grand County a Viable Location? A Critical Assessment: Staff's direct evaluation of Grand County as a potential data center site—including the electric grid barrier, aquifer water constraints, the UMTRA site, tourism economy incompatibility, and quantitative comparisons of data center water and power demands against the County's actual current usage.

Sections 10–11 — Discussion Topics and Staff Recommendation: Seven specific policy questions for Commission direction, followed by five recommended actions to guide proactive code development, utility outreach, and intergovernmental coordination.

Addendum A — Utah Data Center Inventory: A comprehensive table of every known data center in Utah by status—operating, under construction, approved, and proposed—including name, city, operator, and capacity.

KEY FINDINGS

- 1. Grand County's electric grid cannot support large-scale data centers.** The entire County currently consumes approximately 99,300 MWh of electricity per year. A single mid-scale data center (20–50 MW) would require nearly double to four times that amount. Accommodating it would require building new high-voltage transmission infrastructure—at a cost of hundreds of millions of dollars—with a five- to ten-year lead time.
- 2. Grand County's aquifer is already at or near its sustainable yield.** Unlike most of Utah, Grand County's water comes entirely from underground aquifers—not the Colorado River. A single mid-scale data center could consume 25–50% of the county's entire annual aquifer draw. Over-withdrawal depletes a finite resource that recharges over decades, not years.
- 3. The UMTRA site is not suitable for a data center.** The former uranium mill site adjacent to the Colorado River and the Arches National Park entrance corridor has residual groundwater contamination, ongoing federal remediation, complex regulatory oversight, and direct visual prominence along the County's most important scenic corridor. This site would require significant studies to determine its compatibility for a data center.
- 4. Utah communities that approved data centers without adequate public process faced significant backlash.** Santaquin approved a data center over two years of largely unattended hearings; the public reaction upon learning of it included a 1,350-signature petition within a week. Box Elder County's approval of the Stratos Project drew hundreds of protesters, nearly 4,000 water rights objections, and multiple referendum filings. Proactive, transparent policy development is far preferable to reactive crisis management.
- 5. Small-scale “edge” facilities may be appropriate with the right standards.** Staff does not recommend a blanket prohibition. Edge data centers serving local connectivity needs in existing industrial zones—with enforceable standards for water use, noise, lighting, and visual impact—may be conditionally compatible with County goals. The Commission's code development should establish a clear size threshold distinguishing these from mid-scale and hyperscale facilities, which are presumptively incompatible with Grand County's infrastructure and resource constraints.

1. BACKGROUND AND PURPOSE

Data centers—large facilities housing computer servers, networking equipment, and storage systems—have become a major category of industrial development nationwide. Driven by the growth of cloud computing, artificial intelligence, streaming services, and financial technology, data center operators are actively seeking sites across the United States, including in rural areas of the West.

Grand County has not historically been a target for data center siting. Still, several factors are changing the development landscape: the expansion of renewable energy resources in the region, available land, and the general westward push of the industry as established markets in Northern Virginia, Phoenix, and the Dallas–Fort Worth Metroplex become saturated.

This report is intended to inform the Planning Commission about the planning implications of data centers before any formal application is received, enabling the Commission and the public to engage in proactive policy development rather than reactive, case-by-case decision-making.

2. WHAT IS A DATA CENTER?

A data center is a facility that houses computing infrastructure—servers, data storage systems, and networking equipment—supporting digital services for businesses, governments, and consumers. They range in scale from small “edge” facilities of a few thousand square feet to hyperscale campuses exceeding one million square feet.

2.1 Types of Data Centers

- Enterprise / Corporate: Operated by a single company for its own internal IT needs. Typically, smaller; not usually a significant land-use concern.
- Colocation (Colo): Third-party facilities that lease space and infrastructure to multiple tenants. Medium to large scale; significant power and cooling demands.
- Hyperscale: Operated by major cloud providers (Amazon Web Services, Microsoft Azure, Google Cloud, Meta, etc.). Extremely large campuses, often 100 MW or more of power demand; major infrastructure requirements.
- Edge Data Centers: Smaller facilities sited closer to end users to reduce latency. Increasingly distributed; lower individual impact, but can proliferate.

2.2 Key Physical Characteristics

Regardless of type, most data centers share the following characteristics relevant to land-use planning:

- Large, low-profile buildings with minimal windows and heavy mechanical equipment on rooftops and surrounding areas
- Significant electrical infrastructure, including substations, high-voltage transmission lines, and on-site backup generators (typically diesel)
- Cooling systems requiring large amounts of water or energy, often visually prominent (cooling towers, dry coolers, chillers)
- High-security perimeters with fencing, lighting, cameras, and controlled access
- Limited employment—typically 20 to 50 full-time employees per facility—despite very large capital investment
- 24/7 operations with continuous noise from mechanical equipment

3. LAND USE AND ZONING CONSIDERATIONS

3.1 Appropriate Zones

Data centers are generally classified as heavy industrial or technology-industrial uses due to their power consumption, mechanical systems, and limited employment density. They are most appropriately sited in areas with:

- Existing or planned high-capacity electrical transmission infrastructure
- Access to an adequate water supply or alternative cooling solutions
- Separation from residential areas and sensitive land uses due to noise, lighting, and visual impacts
- Access to fiber optic and telecommunications networks
- Flat or gently sloping terrain to minimize grading

Grand County's current zoning code does not explicitly define or address data centers as a land use category. Under existing code, a data center application would likely require classification as a "heavy industrial" or "light industrial" use, depending on scale. It may require a conditional use permit or variance in most zones. Staff recommends that the Commission consider adding a defined data center use category with specific standards.

3.2 Siting Conflicts in Grand County

Grand County presents several siting sensitivities that would need to be carefully weighed in any data center proposal:

- **Scenic Landscapes and Dark Skies:** The County's scenic corridors, proximity to Arches and Canyonlands National Parks, and dark sky designation create heightened standards for lighting, visual impact, and aesthetic compatibility that most data center designs do not meet without significant mitigation.
- **Agricultural and Rural Character:** Data centers in agricultural or rural zones would represent a fundamental change in land use character and may be incompatible with the County's General Plan goals.
- **Proximity to Public Lands:** Much of Grand County is federal land. Data center siting must account for viewshed protections, buffer requirements, and federal review processes on BLM or NPS-managed lands.
- **Tourism Economy:** Grand County's economy is highly dependent on tourism tied to natural landscapes and outdoor recreation. Industrial development visible from key corridors or recreation areas could have adverse economic effects on this sector.

4. INFRASTRUCTURE AND UTILITY IMPACTS

4.1 Electrical Power

Power demand is the single most significant infrastructure impact of data center development. A single hyperscale data center can consume as much electricity as a small city. Even mid-scale colocation facilities may require 20–50 megawatts (MW) of power—equivalent to serving 15,000 to 40,000 homes.

Grand County’s electrical service is provided by Rocky Mountain Power (PacifiCorp). The existing grid in the Moab area was designed to serve a rural community and a tourist-oriented economy; it was not designed to accommodate industrial-scale loads of the magnitude required by data centers. A large data center proposal would likely require:

- New or significantly upgraded electrical substations
- New high-voltage transmission line extensions or upgrades
- Multi-year lead times for utility infrastructure construction
- Significant capital expenditure—potentially hundreds of millions of dollars—for grid upgrades

A critical planning question is who bears the cost of these upgrades—the developer, the utility, or ultimately the ratepayers. The Commission should require any data center applicant to provide a written commitment from Rocky Mountain Power confirming grid capacity and responsibility for upgrades before a conditional use permit is considered complete.

4.2 Water Resources

Water is perhaps the most acute concern for data center siting in Grand County. Traditional data centers use evaporative cooling systems (cooling towers) that consume substantial quantities of water. A single large data center can consume one to five million gallons of water per day—comparable to the daily water use of thousands of households.

Staff recommends that the Commission evaluate whether any data center proposal could be conditioned on the use of air-cooled or advanced liquid-cooling technologies that significantly reduce or eliminate consumptive water use. These technologies exist and are increasingly used by operators in water-constrained regions.

4.3 Transportation and Roads

Data centers generate relatively low volumes of daily vehicle traffic compared to other industrial uses, primarily from employees and periodic equipment delivery. However, construction phases can involve substantial heavy truck traffic for concrete, steel, and large mechanical equipment. Applicants should be required to submit traffic impact analyses and construction traffic management plans.

4.4 Telecommunications Infrastructure

Data centers require high-capacity fiber optic connectivity. Moab has limited fiber infrastructure compared to metropolitan markets. Applicants would need to coordinate with telecommunications providers—potentially including installation of new fiber routes—which may involve additional permitting, easements, or impacts to public rights-of-way.

5. ENVIRONMENTAL CONSIDERATIONS

5.1 Air Quality

Data centers typically operate large banks of diesel backup generators, used during grid outages or maintenance. While these generators may run infrequently, they still emit air pollutants (particulate matter and NO_x) and require permits from the Utah Division of Air Quality. Staff recommends requiring air quality analysis as part of any conditional use application, with attention to cumulative impacts in a region valued for its clean air.

5.2 Noise

The mechanical cooling systems of data centers—fans, compressors, and cooling towers—operate continuously and can generate significant noise. This is particularly relevant in Grand County’s quiet rural environment. Applicants should be required to provide acoustic analyses and demonstrate compliance with County noise standards, with attention to nighttime operations.

5.3 Greenhouse Gas Emissions

Data centers are major consumers of electricity and, despite industry commitments to renewable energy, continue to contribute to carbon emissions. Some operators have pursued on-site renewable energy generation (solar, wind) and power purchase agreements. The Commission may wish to establish requirements or incentives for the use of renewable energy as a condition of approval, consistent with any applicable County sustainability policies.

5.4 Hazardous Materials

Data centers typically store significant quantities of lithium-ion batteries (for uninterruptible power supplies) and diesel fuel (for generators). These materials pose a fire hazard and a risk of

groundwater contamination. Applicants should be required to submit hazardous materials management plans that are coordinated with Grand County Emergency Services and the Utah Department of Environmental Quality.

6. FISCAL AND ECONOMIC CONSIDERATIONS

6.1 Tax Revenue

Data centers can represent substantial taxable property value due to the high cost of their equipment and infrastructure. In some states and jurisdictions, data center equipment is exempt from property or sales taxes as an economic development incentive. Utah offers certain sales tax exemptions for data center purchases. The Commission should consult with the Grand County Assessor and County Attorney regarding the actual fiscal benefit to the County under current Utah law before treating data center tax revenue as a significant financial benefit. An additional consideration is that technology changes quickly; in some instances, a state-of-the-art facility may be outdated in a couple of years. Any tax increment financing should account for this shortened return period.

6.2 Employment

Data centers provide relatively few direct jobs relative to their footprint and infrastructure demands. A large facility may employ 30 to 100 full-time workers, primarily in technical operations and security roles. These are typically skilled positions, and it is unclear whether the local labor market would supply a significant share of this workforce. The Commission should avoid overstating the local employment benefit in its deliberations.

6.3 Opportunity Costs

Land committed to data center use is effectively removed from other productive uses for an extended period. In Grand County, this opportunity cost includes potential agricultural use, conservation, recreation-oriented development, or other economic development consistent with the tourism and outdoor recreation economy. The Commission should consider whether data center development is the best use of the County's limited industrial-zoned or developable land.

6.4 Infrastructure Cost-Sharing

As noted in the infrastructure section, data centers often require significant investment in public or utility infrastructure. The Commission should ensure that applicants are required to demonstrate full funding responsibility for infrastructure upgrades—including roads, water, sewer, and electrical systems—as a condition of any approval, and that the County is indemnified against infrastructure costs.

7. EXAMPLES FROM COMPARABLE JURISDICTIONS

Several rural western counties and municipalities have recently developed or are developing data-center land-use policies. Key lessons from these jurisdictions include:

- Mesa County, Colorado: Adopted a specific data center use classification with conditional use permit requirements, including mandatory renewable energy commitments and water use standards. Required pre-application meetings with utility providers.
- Crook County, Oregon (Prineville area): Home to large Meta and Apple data centers; has used development agreements to secure infrastructure cost-sharing and local hiring commitments. Has also experienced pressure on water resources and power grid capacity.
- Churchill County, Nevada: Developed a data center attraction policy focused on renewable energy alignment. Requires facility operators to participate in master planning for grid expansion.
- San Bernardino County, California: Updated its general plan to include data center siting criteria, separating hyperscale from smaller facilities and applying different standards to each. Required visual impact studies for facilities near state routes and recreational areas.

Staff recommends that the Planning Commission request that staff conduct a more detailed survey of Utah County and municipal data center regulations and report back the findings at a future meeting.

8. PUBLIC CONCERNS: DATA CENTERS ELSEWHERE IN UTAH

Grand County is not alone in confronting the data center question. Utah has become a focal point of data center development—and public opposition—across multiple counties in 2025 and 2026. The experiences of other Utah communities provide direct, highly relevant lessons for the Commission.

8.1 Santaquin, Utah County — Summit Ridge Data Center

In 2024, the City of Santaquin approved the Summit Ridge Data Center, proposed by Utah-based company DCPC. The facility is planned for the southern edge of town near I-15 exit 242, in proximity to a newer residential subdivision. It will not connect to the power grid—instead generating its own electricity using on-site natural gas generators—and will employ a closed-loop water system with minimal consumptive water use.

Despite these technology commitments, the project sparked significant community backlash when residents learned of it in early 2026, more than a year after approval. Key public concerns included:

- Air quality: Even with a closed-loop system, natural gas-powered generators produce particulate matter and nitrogen oxides. Residents cited Utah County's already poor air quality and argued the facility would add to existing pollution burdens.

- Process transparency: The city held multiple hearings over two years with virtually no public attendance, then approved the project. Meaningful public awareness came only afterward. One resident asked at a public meeting: “If this was such a great idea, why did nobody know about it, except you guys?” A Change.org petition gathered more than 1,350 signatures in its first week opposing the project.
- Noise and proximity: The facility’s mechanical systems will operate continuously adjacent to a residential neighborhood.

The Santaquin case illustrates how approval processes conducted without meaningful public awareness—however technically compliant—can produce significant community conflict and erode trust in local government. Grand County should structure any data center review process to ensure robust early public notice.

8.2 Box Elder County — The Stratos Project

The most consequential and controversial data center proposal in Utah history is the “Stratos Project” in Box Elder County: a planned 40,000-acre AI data center and energy campus in the remote Hansel Valley, south of U.S. Highway 84, near the Great Salt Lake. The project is backed by celebrity investor Kevin O’Leary (of television’s Shark Tank), developer West GenCo, and the Utah Military Installation Development Authority (MIDA). At projected full buildout, the campus would reach 9 gigawatts of power capacity—more than twice the current electricity consumption of the entire state of Utah.

Box Elder County Commissioners voted unanimously to approve the project on May 4, 2026. The meeting drew hundreds of protesters. Key public and environmental concerns include:

- Great Salt Lake impacts: The facility is sited in the Great Salt Lake watershed. Environmental groups warn that water transfers for the project could reduce inflow to the already critically low lake. The Utah Division of Water Rights received approximately 3,900 formal protests to the project’s initial water rights application—an extraordinary level of public opposition. The initial application was subsequently withdrawn and is expected to be refiled.
- Water volume: Developers have acknowledged acquiring or contracting for up to approximately 13,000 acre-feet of water rights—sufficient to supply basic needs for more than 20,000 Utah households.
- Heat island effects: A Utah State University physics professor estimated the facility’s combined thermal output could release heat equivalent to 23 atomic bombs daily, potentially raising local ambient temperatures by up to 12 degrees Fahrenheit—a significant concern in an already drought-stressed high-desert environment.
- Carbon emissions: Sierra Club Utah projects the facility could increase Utah’s total carbon emissions by approximately 50% at full buildout, due primarily to associated natural gas power generation.
- Process concerns: Residents and environmental groups argued the project was fast-tracked without adequate environmental review or meaningful public process. Multiple referendum

petitions were filed seeking to overturn the commission's approval. A new state law that took effect the day before the water rights application was withdrawn also narrowed the grounds on which the public can protest water transfer applications, further limiting avenues for public participation.

- Economic framing: Governor Spencer Cox and project backers have argued the project is a national security priority given U.S.-China competition in AI computing capacity. Proponents assert 10,000 construction jobs, 2,000 permanent positions, and \$30 million in initial annual county revenue growing to \$108 million at full buildout.

The Stratos Project has become a national flashpoint for the broader debate over AI infrastructure, environmental protection, and democratic oversight of large-scale industrial development in rural communities. Its outcome will significantly shape Utah's data center policy for years to come.

8.3 Other Utah Data Center Activity

Santaquin and Box Elder are not isolated cases. Utah is experiencing a broad wave of data center proposals:

- Delta, Millard County: Two hyperscale campuses are under active development. Joule Power is developing a 4,000-acre, six-facility AI campus. Delta's proximity to existing high-voltage transmission infrastructure and sparse population has made it a preferred target for large-scale development.
- Duchesne County (Uinta Basin): The Nine Mile Data Center, proposed by Energence Utah LLC, would occupy approximately 475 acres near Wells Draw, six miles southwest of Myton. The Duchesne County Planning Commission approved conditional use permits in April 2026; resident appeals were denied. The project targets an operational date in 2029 and includes on-site solar and natural-gas power generation.
- Nephi, Juab County: BluSky AI entered a non-binding agreement in September 2025 to lease a site in Nephi for a modular AI data center. The project remains in early planning.

Utah currently has approximately 50 data centers statewide, compared to nearly 700 in Virginia. Industry analysts view Utah as a high-growth target because of available land, expanding renewable energy, and a generally permissive regulatory environment—making proactive policy action by jurisdictions like Grand County all the more important.

9. IS GRAND COUNTY A VIABLE DATA CENTER LOCATION? A CRITICAL ASSESSMENT

Given the wave of data center interest across Utah, the Planning Commission should directly address whether Grand County is a viable location for a data center and, if so, under what conditions. Staff assesses that Grand County faces fundamental structural barriers that make it a poor fit for large-scale data center development, and that smaller-scale facilities face significant challenges of their own. These barriers should be clearly understood before any application is received.

9.1 Electric Grid: A Critical Disqualifier for Large-Scale Development

The single greatest barrier to data center development in Grand County is electrical infrastructure. Rocky Mountain Power's service to the Moab area operates on a transmission system designed to serve a rural community of approximately 10,000 residents and a seasonal tourism economy—not industrial-scale loads.

A hyperscale data center would require 50 to 100+ megawatts of dedicated power—an amount that would dwarf the entire existing load on the Moab grid. Meeting that demand would require a new dedicated high-voltage transmission line (likely 50 to 100 miles to reach a suitable interconnection point), a new substation, and hundreds of millions of dollars in capital investment, with a permitting and construction timeline of five to ten years. These facts alone effectively rule out large-scale data center development in Grand County under foreseeable conditions. Staff recommends that the Commission require any applicant to provide a written study from Rocky Mountain Power demonstrating available capacity and a binding commitment on upgrade cost responsibility before any application is deemed complete.

9.2 Water: An Acute and Structural Constraint

Introducing a large-scale industrial water consumer into the county could be unjustifiable from a sustainability standpoint. It would generate significant opposition from downstream users, state water authorities, and federal agencies. Grand County should treat any facility relying on the Colorado River system water as presumptively incompatible with sustainable development unless an applicant can demonstrate proven water rights.

9.3 The UMTRA Site: Opportunity or Illusion?

One specific location that may be raised in connection with data center development is the former Moab uranium mill site—subject of the federal Uranium Mill Tailings Remedial Action (UMTRA) Project. This 480-acre site lies approximately three miles northwest of downtown Moab along U.S. Highway 191, adjacent to the Colorado River and approximately one mile from the Arches National Park entrance. As of early 2025, more than 98% of the estimated 16 million tons of radioactive uranium mill tailings have been removed to an engineered disposal cell near Crescent Junction.

Federal legislation—the Moab UMTRA Project Transition Act of 2025, with support from all Utah members of Congress—would transfer the site to Grand County and the City of Moab. A community planning committee has been examining potential uses, including recreation, open space, and compatible economic development.

The UMTRA site might appear attractive to a data center developer: flat, large, near a highway, and potentially available. Staff urges the Commission to treat this possibility with significant care:

- **Residual contamination:** Groundwater beneath the site remains contaminated and is subject to ongoing active remediation. A data center's construction activities—excavation, foundation work, underground utilities—could disturb residual contaminated materials or compromise groundwater remediation systems that must continue operating for decades.
- **Federal regulatory complexity:** The site remains under U.S. Department of Energy and Nuclear Regulatory Commission oversight. Any proposed use change would require federal agency review, potentially including a full NEPA analysis, and would have an uncertain outcome and timeline.
- **Visual impact:** The site sits immediately adjacent to the Colorado River within clear view of the Arches National Park entrance corridor—one of the most photographed landscapes in the American West. Industrial buildings, mechanical equipment, security fencing, and generator systems at this location could affect the scenic and tourism values that define Grand County's economy.
- **Water quality risk:** Siting any industrial facility with diesel fuel storage, battery systems, and chemical cooling agents immediately adjacent to the Colorado River presents unacceptable risk to water quality and the downstream municipal water supplies that depend on it.
- **Community vision:** The emerging community planning process for the UMTRA site has focused on uses compatible with Moab's character. A data center could potentially be inconsistent with this vision and would generate significant opposition from residents and conservation organizations.

Staff assesses that, at this time, the UMTRA site is not a suitable location for a data center of any scale.

9.4 Scenic and Tourism Economy Compatibility

Grand County's economy is built almost entirely on tourism tied to Arches and Canyonlands National Parks, the Colorado River, and the surrounding canyon country landscape. Moab welcomes more than three million visitors annually—a visitor-to-resident ratio among the highest of any rural community in the United States. The County's scenic corridors—U.S. 191, State Route 128 along the Colorado River, and the national park approaches—are the foundation of this economy.

A data center visible from any of these corridors, or generating noise, light, or air pollution detectable to visitors, would directly threaten the economic base that sustains the community.

Unlike many rural western counties where data center development competes with limited agricultural uses, in Grand County, it competes with the County’s primary industry. The Commission should weigh this incompatibility heavily in any policy deliberation.

9.5 What Might Be Appropriate: Small-Scale and Edge Facilities

Staff does not recommend a blanket prohibition on all data center uses in Grand County. Small-scale or “edge” data centers—facilities of a few thousand square feet serving local or regional connectivity needs—may be appropriate in limited locations within existing industrial zones, provided they comply with noise, lighting, water, and aesthetic standards. These facilities are qualitatively different from the mid-scale and hyperscale developments that dominate current proposals in Utah.

The Commission’s policy development should establish clear size thresholds that distinguish edge facilities (which may be conditionally permitted with appropriate standards) from larger facilities (which should be presumptively prohibited absent demonstrated solutions to the grid and water constraints described above).

9.6 Putting It in Perspective: Water and Electricity Comparisons

Abstract infrastructure numbers can be difficult to interpret in isolation. The following comparisons place data centers' water and electricity demands against Grand County’s current usage, making the potential scale of impact concrete for planning purposes.

WATER CONSUMPTION COMPARISON

Grand County’s water supply comes entirely from a network of groundwater aquifers—primarily the Spanish Valley aquifer system underlying Moab and the surrounding valley—supplemented by springs and limited surface diversions from Mill Creek.

This distinction is critical. Unlike river-based supplies that can fluctuate with seasonal flows, aquifer systems recharge slowly—over years to decades—through precipitation percolating into the ground. Once depleted beyond its natural recharge rate, an aquifer may not be able to recover quickly.

Water Consumer	Est. Daily Use	Est. Annual Use	Notes
Grand County total (all uses)	~3.6M gal/day	~1.3B gal/yr	Moab city + GWSSA; drawn entirely from the Spanish Valley aquifer system
City of Moab (municipal)	~2.0M gal/day	~748M gal/yr	Approx. 2,300 acre-ft/yr; resident + commercial use from aquifer wells & springs

Water Consumer	Est. Daily Use	Est. Annual Use	Notes
Average Utah resident	~200 gal/person	~73,000 gal/yr	Based on ~200 GPCD statewide average (Utah Division of Water Resources)
Typical mid-scale data center (20–50 MW)	~500K–1M gal/day	~180–365M gal/yr	Evaporative cooling towers vary with climate and load factor
Google hyperscale facility (per building)	~550K gal/day	~200M gal/yr	Google 2024 Environmental Report: company average across all facilities
Hyperscale campus (100+ MW)	~1–5M gal/day	~365M–1.8B gal/yr	EESI 2024; range reflects cooling technology and climate; equals water use of 10,000–50,000 people
NSA Utah Data Center (Bluffdale, operating)	~345K gal/day	~126M gal/yr	Actual metered data reported by Salt Lake Tribune via public records request, Oct 2024–Sep 2025

Key takeaway: A single mid-scale data center (20–50 MW) would consume water at a rate equivalent to 25–50% of the entire City of Moab’s current annual draw from the aquifer. A hyperscale facility at the low end of typical consumption would equal or exceed the entire County’s current water use.

ELECTRICITY CONSUMPTION COMPARISON

Grand County is served by Rocky Mountain Power (PacifiCorp) and consumes approximately 99,300 megawatt-hours (MWh) of electricity per year across all residential and commercial customers—one of the smallest county electricity footprints in Utah, reflective of the County’s small, non-industrial economy.

Electricity Consumer	Peak Demand	Annual Use (MWh)	Comparison to Grand County Total
Grand County (all customers)	~11 MW*	~99,300 MWh/yr	Baseline — the entire County’s consumption
Average Grand County household	<1 kW avg	~8,600 MWh/yr*	Per capita, estimated from the statewide average
Small edge data center (1–5 MW)	1–5 MW	8,760–43,800 MWh/yr	9–44% of the county’s entire annual use
Mid-scale colocation (20–50 MW)	20–50 MW	175,000–438,000 MWh/yr	1.8–4.4× the entire County’s annual use

Electricity Consumer	Peak Demand	Annual Use (MWh)	Comparison to Grand County Total
Large hyperscale facility (100 MW)	100 MW	~876,000 MWh/yr	~8.8× the entire County's annual use
Stratos Project full buildout (Box Elder Co., proposed)	9,000 MW	~78,840,000 MWh/yr	~794× Grand County; >2× entire state of Utah's annual use
Joule HP Campus Phase 1 (Delta, under construction)	455 MW	~3,985,800 MWh/yr	~40× Grand County's annual use

** Grand County peak demand estimated from annual consumption (99,300 MWh ÷ 8,760 hrs). Household figure estimated from statewide average. Source: FindEnergy.com / EIA county-level data.*

Key takeaway: Even a relatively modest mid-scale data center (20–50 MW) would require nearly double to four times the electricity currently consumed by everyone in Grand County combined—residential, commercial, and industrial. Rocky Mountain Power’s existing transmission infrastructure serving Moab was sized for the County’s actual load; it has no latent capacity for industrial-scale additions without fundamental infrastructure investment. The numbers make clear that large data center development is not simply a “lot of power” in abstract terms—it would require rebuilding the County’s electrical infrastructure from the ground up.

10. RECOMMENDED DISCUSSION TOPICS FOR THE COMMISSION

The Planning Commission should consider the following policy questions:

- **Zoning:** Should data centers be a permitted, conditional, or prohibited use in each of the County's zoning districts? Should the code distinguish between small-scale ("edge") and large-scale ("hyperscale") facilities?
- **Water Standards:** Should the County establish maximum water consumption standards or require air-cooled or alternative cooling technology for any data center approval?
- **Power:** Should the County require applicants to demonstrate committed grid capacity from Rocky Mountain Power before application acceptance?
- **Renewable Energy:** Should the County require or incentivize on-site renewable energy generation or renewable power purchase agreements?
- **Visual and Aesthetic Standards:** Should the County establish specific design, lighting, and landscaping standards for data center facilities to minimize visual impact along scenic corridors?
- **Fiscal Policy:** Should the County adopt a formal policy on infrastructure cost-sharing for data center developments?
- **General Plan Alignment:** Does data center development align with the goals and vision of the Grand County General Plan, and if not, should the General Plan be amended to address this use?

11. STAFF RECOMMENDATION

Staff recommends that the Planning Commission:

- Receive this staff report and conduct a public discussion of the planning implications of data center development in Grand County;
- Direct staff to prepare draft land use code amendments establishing a “Data Center” use classification with appropriate use-specific standards, for future Commission consideration;
- Direct staff to conduct outreach to Rocky Mountain Power and the Central Utah Water Conservancy District to understand current grid and water supply constraints relevant to potential data center siting;
- Direct staff to survey comparable rural county and municipal data center regulations and return with a summary report; and
- Schedule a future joint study session with the Grand County Council to align data center policy direction across governing bodies before any formal application is received.

ADDENDUM A

Utah Data Center Inventory

Status as of May 2026

The table below identifies known data centers in Utah, organized by status. The inventory covers operating colocation and hyperscale facilities, projects currently under construction, approved projects awaiting construction, and proposed projects under regulatory or community review. It is based on publicly available sources, including industry registries, news reporting, and county records, current as of May 2026. This list focuses on purpose-built data center facilities; it does not include small enterprise or government server rooms not visible in public records.

STATUS KEY ● OPERATING ● UNDER CONSTRUCTION ● APPROVED ● PROPOSED

Facility / Project Name	City / Location	Operator / Developer	Capacity	Status
OPERATING FACILITIES				
Meta Eagle Mountain Campus (7 buildings)	Eagle Mountain (Utah Co.)	Meta Platforms	~450 MW	OPERATING
Novva West Jordan Campus (Bldg. 1–2)	West Jordan (Salt Lake Co.)	Novva Data Centers	~120 MW	OPERATING
Aligned SLC-01	West Jordan (Salt Lake Co.)	Aligned Data Centers	34 MW	OPERATING
Aligned SLC-02	West Jordan (Salt Lake Co.)	Aligned Data Centers	48 MW	OPERATING
Aligned SLC-03	West Jordan (Salt Lake Co.)	Aligned Data Centers	80 MW	OPERATING
NSA Utah Data Center	Bluffdale (Salt Lake Co.)	Natl. Security Agency	~65 MW	OPERATING
DataBank Granite Point SLC2	Bluffdale (Salt Lake Co.)	DataBank	3 MW	OPERATING
DataBank Granite Point SLC3	Bluffdale (Salt Lake Co.)	DataBank	7 MW	OPERATING
DataBank Granite Point SLC4	Bluffdale (Salt Lake Co.)	DataBank	4 MW	OPERATING
DataBank Granite Point SLC5	Bluffdale (Salt Lake Co.)	DataBank	10 MW	OPERATING
DataBank Granite Point SLC6	Bluffdale (Salt Lake Co.)	DataBank	22 MW	OPERATING
eBay Data Center	South Jordan (Salt Lake Co.)	eBay	N/A	OPERATING
Oracle West Jordan Data Center	West Jordan (Salt Lake Co.)	Oracle	N/A	OPERATING
EdgeConneX Salt Lake City	Salt Lake City	EdgeConneX	N/A	OPERATING
Cirrus Data View 78 Campus	West Valley City (Salt Lake Co.)	Cirrus Data Services	N/A	OPERATING
Syringa Networks West Valley	West Valley City (Salt Lake Co.)	Syringa Networks	N/A	OPERATING
UNDER CONSTRUCTION				
Novva West Jordan Campus (Bldg. 3–4)	West Jordan (Salt Lake Co.)	Novva Data Centers	~144 MW (add'l)	UNDER CONST.

Facility / Project Name	City / Location	Operator / Developer	Capacity	Status
Aligned SLC-04	West Valley City (Salt Lake Co.)	Aligned Data Centers	N/A	UNDER CONST.
Joule HP Compute Campus — Phase 1	Delta (Millard Co.)	Joule Capital Partners	455 MW	UNDER CONST.
Creekstone Delta Gigasite — Phase 1	Delta (Millard Co.)	Creekstone Energy	220 MW	UNDER CONST.
B+F Timpanogos Data Center	Provo (Utah Co.)	B+F Timpanogos	5–30 MW	UNDER CONST.
APPROVED — AWAITING CONSTRUCTION				
Summit Ridge Data Center	Santaquin (Utah Co.)	DCPC	N/A	APPROVED
Nine Mile / Uinta Basin Data Center	Near Myton (Duchesne Co.)	Energence Utah / Nine Mile Data LLC	960+ acres	APPROVED
Wonder Valley (Stratos Project) — Phase 1	Hansel Valley (Box Elder Co.)	O'Leary Digital / West GenCo / MIDA	3,000 MW	APPROVED
Wonder Valley (Stratos Project) — Phase 2	Hansel Valley (Box Elder Co.)	O'Leary Digital / West GenCo / MIDA	6,000 MW	APPROVED
PROPOSED — UNDER REVIEW OR IN PLANNING				
Antelope Data Center	Nr. Cedar City (Iron Co.)	Pronghorn Development LLP	1,500 MW	PROPOSED
CyrusOne at Dugway Proving Ground	Dugway (Tooele Co.)	CyrusOne (KKR / BlackRock)	1,000 MW	PROPOSED
Joule HP Campus — Full Buildout	Delta (Millard Co.)	Joule Capital Partners	4,000+ MW	PROPOSED
Creekstone Delta Gigasite — Expansion	Delta (Millard Co.)	Creekstone Energy	9,700+ MW	PROPOSED
Tract Pole Canyon	Eagle Mountain (Utah Co.)	Tract	1,700 MW	PROPOSED
Tract Pony Express	Eagle Mountain area (Utah Co.)	Tract	120 MW	PROPOSED
BluSky AI Modular Campus	Nephi (Juab Co.)	BluSky AI	9.3 MW	PROPOSED

Notes on This Inventory

- Capacity figures are approximate and based on publicly reported data. Many facilities do not publicly disclose power consumption. “N/A” indicates capacity not publicly confirmed.
- The Stratos Project (Box Elder County) was approved by county commissioners on May 4, 2026. Multiple referendum petitions have been filed seeking to overturn the approval. Construction has not begun.
- The Nine Mile / Uinta Basin Data Center (Duchesne County) received conditional use permit approval in April 2026; resident appeals were denied. Construction has not begun.
- The CyrusOne / Dugway Proving Ground project involves U.S. Army “exclusive negotiations” entered in March 2026. The project requires an environmental review by the Army Corps of Engineers before construction.
- Utah has approximately 50 additional smaller colocation and enterprise data centers across the Wasatch Front, not individually enumerated here. This addendum focuses on purpose-built, purpose-disclosed AI and hyperscale colocation facilities.
- Sources: Cleanview Energy (May 2026), ABC4 Utah data center tracker (May 2026), Baxtel data center registry, Salt Lake Tribune, Deseret News, and individual project records.