

Chapter X: Water Use and Preservation

INTRODUCTION & STATUTORY CONTEXT

Purpose

The Water Use and Preservation Element is a required component of Piute County's General Plan under Utah Code 17-79-403. The purpose of this element is to provide a planning-level framework for understanding water resources, water use patterns, and water-related considerations relevant to unincorporated Piute County.

Water availability in the county is shaped by a fully appropriated water rights system, reliance on individual wells and small water systems, and the importance of agricultural irrigation. This Element is intended to support informed land use and development decisions by identifying how water supply conditions may interact with growth, agricultural activity, and rural living over time.

Advisory Nature and County Role

Piute County does not own or operate drinking water systems serving unincorporated areas, nor does it administer

or allocate water rights. Authority over water rights remains with the Utah State Engineer, and responsibility for water system operations rests with individual owners, irrigation companies, and water providers.

Accordingly, this Water Use and Preservation Element is advisory in nature. It does not establish enforceable standards, impose requirements on applicants or water users, or guarantee the availability of water for development. Instead, it identifies planning considerations, coordination opportunities, and analytical tools the County may reference when evaluating land use decisions. This approach allows flexibility while helping the County remain mindful of water availability and long-term supply constraints.

Statutory and Planning Framework

This Element is prepared in accordance with Utah Code 17-79-403, which requires counties to address water supply, water demand, conservation, and coordination as part of the General Plan. It also reflects guidance from the Utah Division of Water Resources regarding the integration of water considerations into land use planning.

Utah law requires counties to consider potential impacts to the Great Salt Lake. Piute County lies entirely within the Sevier River Basin and has no hydrologic connection to the Great Salt Lake system. This requirement is acknowledged for statutory compliance, but no further analysis is applicable.

Coordination and Consultation

In preparing this Water Use and Preservation Element, Piute County coordinated with relevant state agencies and local stakeholders consistent with statutory and grant requirements. This coordination included consultation with the Utah Division of Water Resources, the Utah Division of Drinking Water, the Utah Department of Agriculture and Food, and operators of unincorporated drinking water systems and irrigation companies, as appropriate.

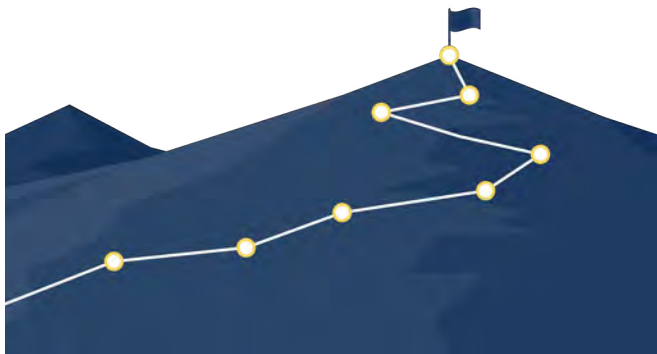
Ongoing coordination with these entities supports shared understanding of water supply conditions, infrastructure constraints, and available technical or funding resources and may continue as part of the County's broader planning and land use review efforts.

Organization of the Water Element

This Element is organized around the following topics:

- Water Resources
- Agricultural Water Resources
- Drinking Water Systems and Coordination

Each section addresses applicable statutory requirements using a planning-level, non-binding approach. The Element concludes with goals and implementation strategies that translate these considerations into actionable, but discretionary, direction for the County.



WATER RESOURCES

Effect of Permitted Development and Development Patterns on Water Demand and Water Infrastructure

In unincorporated Piute County, the effect of permitted development on water demand is shaped less by the overall scale of growth and more by the limited capacity and flexibility of existing water systems. The County is located within the fully appropriated Sevier River Basin, and most water supplies serving unincorporated areas are derived from small surface water diversions or localized groundwater sources with limited redundancy. As a result, even modest incremental development can place pressure on local water infrastructure if water availability and system capacity are not considered early in the planning process.

Development patterns also influence how water is used across the County. Rural residential development, seasonal and recreational uses, and dispersed land use patterns typically increase outdoor water demand, particularly during peak irrigation seasons. These demands often coincide with periods of limited supply and can strain small systems that were not designed for fluctuating or seasonal use. In some locations, development occurs in proximity to existing irrigation canals or shared agricultural infrastructure, increasing the importance of coordination to avoid conflicts with water delivery systems and to protect public health and safety.

Given these conditions, water planning in Piute County focuses on understanding how existing water resources are allocated, shared, and stressed over time rather than identifying opportunities for new water supply development. To support this planning effort, the County prepared a planning-level water budget for unincorporated public water systems. The water budget is intended to illustrate how projected water demand associated with permitted development and development patterns relates to estimated available supply under existing conditions.

The water budget evaluates projected water demand:

- by unincorporated public water system;
- by use category (residential, commercial, industrial, and institutional);
- across planning horizons of 2025, 2035, 2045, and 2055; and
- in relation to estimated remaining available supply for each system.



Projected Water Demand and Available Supply for Unincorporated Public Water Systems (2025 2055)						
	Residential	Commercial	Industrial	Institutional	Total Ac Ft Required	Additional Ac-Ft Available
2025						
SFRP	0	7	0	0	7	-1
PSDCWC	16	12	0	0	28	9
GWC	34	0	0	0	34	1
C&CLC	14	0	0	0	14	7
CCRAIC	100	0	19	31	150	1139
Total	164	19	19	31	233	1155
2035						
SFRP	0	7	0	0	7	-1
PSDCWC	16	12	0	0	28	8
GWC	34	0	0	0	34	0
C&CLC	14	0	0	0	14	7
CCRAIC	100	0	10	31	141	1139
Total	164	19	10	31	224	1153
2045						
SFRP	0	7	0	0	7	-1
PSDCWC	17	12	0	0	29	7
GWC	35	0	0	0	35	-1
C&CLC	15	0	0	0	15	6
CCRAIC	100	0	10	31	141	1139
Total	167	19	10	31	227	1150
2055						
SFRP	0	7	0	0	7	-1
PSDCWC	17	12	0	0	29	7
GWC	35	0	0	0	35	-1
C&CLC	15	0	0	0	15	6
CCRAIC	100	0	10	31	141	1139
Total	167	19	10	31	227	1150

Table 1. Projected Water Demand and Available Supply for Unincorporated Public Water Systems (2025-2055)

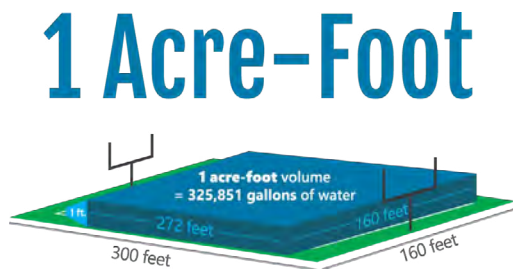
Abbreviations:

- SFRP = South Forty RV Park
- PSDCWC = Piute Sevier Deercreek WC
- GWC = Greenwich Water Company
- C&CLC = Coyotes & Cowboys Line Camp
- CCRAIC = City Creek Reservoir and Irrigation Company

Given the limited flexibility of local water systems, the water budget is intended to provide a general planning-level comparison of projected demand and estimated available supply. It does not represent a guarantee of water availability, an allocation of water rights, or a determination of system capacity for any specific development proposal. Instead, it serves as a planning tool to help the County understand where water demand may approach system limitations and where additional coordination or evaluation may be warranted as development occurs.

What is an Acre-Foot of Water?

This water budget estimates quantities in acre-feet of water. An acre-foot is the amount of water needed to cover one acre of land to a depth of one foot and is commonly used to describe water supply and water demand. As a general reference, one acre-foot of water can supply the indoor and outdoor water needs of two to three typical households for a year, depending on usage patterns and conservation practices.



The water budget indicates that overall demand in unincorporated Piute County is expected to remain relatively stable over time. However, available supply margins vary by system, and even modest increases in development or outdoor water use may be significant for systems with limited yield or storage. Development may also interact with existing irrigation canals and ditches that are essential to agricultural operations, raising considerations related to access, maintenance, and long-term functionality.

This analysis is intended to inform planning discussions and does not replace water-rights administration by the Utah State Engineer or system-specific engineering evaluations.

Why is Conservation Important?



Methods of Reducing Water Demand and Per Capita Water Use for Existing Development

In unincorporated Piute County, opportunities to reduce water demand in existing development are closely tied to the characteristics of rural land use and the limited capacity of local water systems. Much of the County's existing development consists of low-density residential uses, agricultural operations, and seasonal or recreational properties that rely on small public systems, private wells, or shared irrigation infrastructure. Because these systems often operate with little redundancy, reducing per capita water use can help extend system reliability during peak demand and drought conditions.

Water demand in existing development is driven largely by outdoor use, particularly landscape irrigation and seasonal activities that coincide with agricultural irrigation and periods of limited supply. While the County does not regulate individual water use or operate public drinking water systems in unincorporated areas, it may support voluntary reductions in water demand through planning, coordination, and public information efforts that emphasize efficient water use and awareness of local system limitations.

At a planning level, the County may support water demand reduction in existing development by promoting awareness of water-efficient landscaping and irrigation practices, encouraging routine maintenance and leak detection for private systems, and supporting drought-response communication during periods of limited water availability. In areas served by shared irrigation canals or small community

systems, coordination among landowners, system operators, and the County may also help reduce inefficiencies and avoidable losses.

Given the variability among water systems serving unincorporated Piute County, conservation efforts are most effective when they reflect local conditions and are implemented voluntarily by water users and system operators. The County's role is to provide information, support coordination, and consider water efficiency as part of broader land use planning discussions, rather than to mandate specific conservation measures.



Methods of Reducing Water Demand and Per Capita Water Use for Future Development

Future development in unincorporated Piute County is expected to remain modest in scale, but development patterns can still influence long-term water demand. Because water supplies are fully appropriated and new sources are difficult to obtain, the manner in which future development is planned and reviewed may influence long-term water use more than the overall pace of development.

Reducing per capita water use in future development is therefore primarily a matter of early coordination and informed land use planning. As part of development review in unincorporated areas, the County may consider water availability, system capacity, anticipated outdoor water demand, and the relationship between development and existing irrigation or water delivery infrastructure prior to approval. To support this review, the County may request information related to water availability or system capacity to better understand how a proposed subdivision or development could affect existing supplies. Early identification of proposed water sources and coordination with affected water systems or irrigation companies can help avoid unanticipated impacts on existing supplies.

As part of its planning role, the County may also explore the use of water efficiency guidance or conservation standards for future development. This may include consideration of low-water and non-turf landscaping options within public street rights-of-way, such as park strips, where appropriate. Emphasizing efficient site design and compatibility with existing water infrastructure may help manage long-term water use without limiting reasonable development opportunities. As part of ongoing planning efforts, the County may periodically review its land use ordinances to identify provisions that may unintentionally promote inefficient water use and consider whether updates or guidance may be appropriate.

County Operations and Regional Water Conservation Alignment

Piute County does not own or operate public drinking water systems in unincorporated areas; however, the County may support efficient water use through its own operations and planning activities in a manner that aligns with regional water conservation goals. County-owned facilities and properties, such as administrative buildings or County-managed grounds where irrigation occurs, provide opportunities to model efficient water practices and reinforce broader conservation objectives identified at the state and regional level.

The Utah Division of Water Resources has established regional municipal and industrial (M&I) water conservation goals to support long-term water supply sustainability across the state. While Piute County does not directly implement M&I conservation programs, these goals may inform County planning, coordination, and internal operations related to water use and conservation.

As part of its internal operations, the County may consider practices such as water-efficient landscaping at County facilities, routine maintenance of irrigation systems to minimize leaks and losses, and incorporation of water conservation principles into facility management and capital planning decisions. These actions are intended to reflect efficient water use where feasible and appropriate, rather than to establish operational mandates.

In addition to physical operations, the County may support regional water conservation goals through communication and coordination efforts. This may include sharing information consistent with state or regional conservation messaging, supporting drought-response communication



during periods of limited supply, and coordinating with local water systems or agencies to promote awareness of water availability conditions. Through these efforts, the County can help reinforce regional conservation priorities while remaining within its planning and coordination role.

Awareness of Municipal Water Conservation Planning

Several incorporated communities within Piute County's geographic boundary are required by state law to prepare and update water conservation plans. While Piute County does not oversee or implement municipal water conservation programs, the County remains aware of these planning efforts and may consider them in a general planning context. Awareness of municipal conservation planning supports coordination and consistency across jurisdictions, particularly where land use patterns, water resources, or infrastructure cross jurisdictional boundaries.

AGRICULTURAL WATER RESOURCES

Agricultural Protection Areas and Agricultural Lands

Agricultural Protection Areas (APAs) have been established within Piute County to recognize and support the continued use of land for agricultural purposes. These areas generally include irrigated farmland and associated lands that contribute to the County's agricultural economy and rural character. Water availability and water rights are integral to the long-term viability of these areas. At the time of adoption of this Water Use and Preservation Element, there are no formally adopted Agricultural Protection Areas within Piute County; however, APAs remain an available voluntary tool for landowners should interest arise in the future.

In addition to APAs, other agricultural lands outside formally designated protection areas may also rely on irrigation water and shared delivery infrastructure. Conservation easements and other voluntary tools may be used by landowners, land

trusts, or partner agencies to help protect agricultural lands and associated water uses over time. While Piute County does not require or administer agricultural easements, it recognizes their role in supporting long-term agricultural viability and water resource stability.

Agricultural irrigation in unincorporated Piute County is delivered primarily through private canal and ditch companies that divert and convey surface water from the Sevier River and its tributaries. These delivery systems are essential to agricultural production and often cross multiple parcels and land-use designations, sometimes intersecting with residential, commercial, or transportation corridors.



The above map illustrates the general locations of major irrigation delivery systems in Piute County. Canal and irrigation companies operating within the County include, but may not be limited to, the Koosharem Irrigation Company, Angle Irrigation Company, Bullion Creek Irrigation Company, Junction Irrigation Company, Kingston Irrigation Company, Circleville Irrigation Company, Otter Creek Reservoir Company, Clover Flat Irrigation Company, and the Coyote & East Fork Irrigation Company. Identification of these entities support planning-level awareness and coordination related to land use, infrastructure protection, and public safety.

As part of its planning responsibilities, the County may maintain general awareness of irrigation delivery systems operating within its boundaries to support informed land-use planning and coordination. This awareness may include consideration of the location of major canals and ditches, shared irrigation infrastructure, and facilities that intersect with developed or developing areas.

Piute County may coordinate with irrigation companies, incorporated cities, and other public entities where land-use decisions or infrastructure projects affect irrigation delivery systems. Planning-level coordination may include:

- awareness of canal and ditch locations during development review;
- encouraging appropriate setbacks or design considerations where development occurs near open canals; and
- communication with irrigation companies and adjacent jurisdictions when projects may affect shared delivery systems.

These coordination efforts are intended to support the safe and effective operation of irrigation systems and protect public health without transferring operational responsibility to the County.

Water-Efficient Irrigation Practices and Delivery Systems

Opportunities exist to improve water efficiency both on the farm and within irrigation delivery systems serving agricultural lands in Piute County. Water-efficient practices can reduce conveyance losses, improve system reliability, and support regional water conservation goals, particularly during drought conditions.

On-farm efficiency measures may include improved irrigation scheduling, application methods suited to local conditions, and soil management practices that enhance infiltration and reduce runoff. Within delivery systems, efficiency efforts may include routine maintenance, lining, or piping of high-loss segments, as well as operational upgrades that reduce leakage or evaporation.

While Piute County does not regulate agricultural water use, it may support water-efficient irrigation practices by coordinating with irrigation companies, landowners, and state or federal agencies, including through information sharing related to technical assistance or funding opportunities.



DRINKING WATER SYSTEMS AND COORDINATION

Drinking Water Systems in Unincorporated Piute County

Drinking water service in unincorporated Piute County is provided by a small number of public water systems and private entities that rely on localized surface water diversions or groundwater sources. These systems are generally limited in scale and capacity and often serve dispersed or seasonal development patterns. Production and storage capacities vary by system and are closely tied to available water rights, source characteristics, and infrastructure constraints. Because the Sevier River Basin is fully appropriated, opportunities to develop new drinking water sources are constrained, making long-term reliability and system capacity important planning considerations.

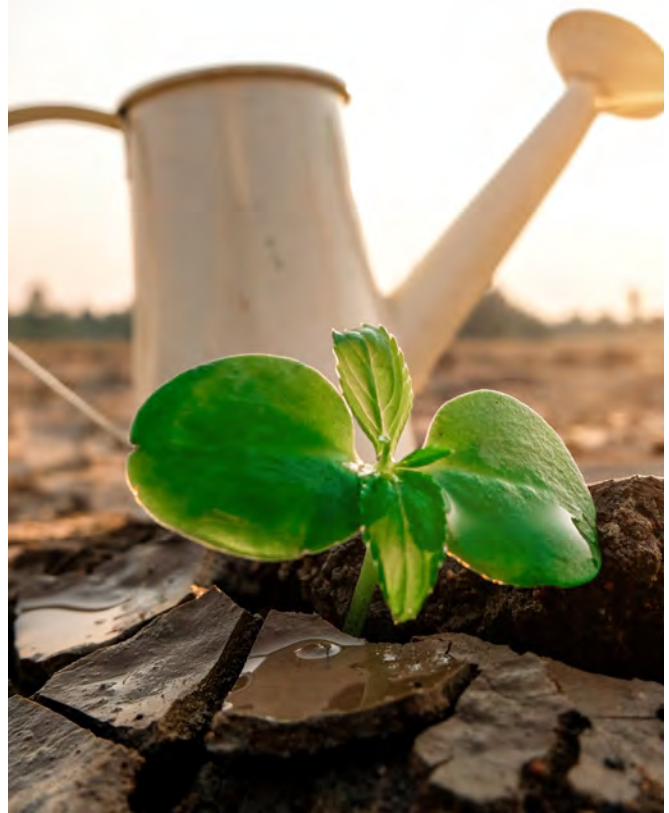
Detailed planning-level information regarding system demand, production capacity, and available supply is summarized in the water budget prepared for unincorporated public water systems.

Piute County does not own or operate public drinking water systems; however, land use decisions in unincorporated areas may affect system demand, infrastructure needs, and source protection. As part of its role, the County may consider the availability and general capacity of drinking water systems when reviewing development proposals, particularly where growth could increase demand on small or shared systems.

Planning-Level Coordination and System Resilience

Given the limited scale and redundancy of many unincorporated drinking water systems, planning-level coordination can support long-term reliability and resilience. While Piute County does not control system operations, it may support awareness of strategies that system operators could explore to improve system resilience. These strategies may include development of backup or secondary sources, increased storage capacity to buffer seasonal demand or emergency conditions, system interconnections or other forms of regional coordination where mutually beneficial, and coordination with state agencies to evaluate the feasibility of infrastructure improvements. Any such actions would be voluntary and implemented by system operators in coordination with applicable regulatory agencies.

In preparing this Water Use & Preservation Element, Piute County consulted with community drinking water systems serving unincorporated areas, consistent with Utah State Code requirements. The County also coordinated with the Utah Division of Water Resources and the Utah Division of Drinking Water during development of this Element. Ongoing consultation with drinking water systems may continue as part of land-use planning and development review process to support shared understanding of system conditions, planning constraints, and available technical or funding resources.



WATER USE AND PRESERVATION GOALS

Goal 1: Integrate Water Availability into County Land-Use Planning

A. Improve consideration of water availability and system capacity in County land-use planning and development review.		B. Promote development patterns compatible with limited and variable water resources.	
1	Reference the County's water budget and projected demand information during general plan updates, land-use amendments, and development review to inform planning discussions and staff recommendations.	1	Consider projected water demand and available supply when reviewing subdivision and zoning proposals.
2	Encourage early identification of proposed water sources and associated water rights as part of development applications for new development in unincorporated areas.	2	Explore the potential development and use of water efficiency standards or guidelines for future development, where appropriate and consistent with County authority.
3	Consider how development patterns may affect existing water infrastructure, including irrigation delivery systems and small community drinking water systems, particularly where shared facilities or limited system capacity are present.	3	Coordinate with irrigation companies and water providers when proposed development may affect water delivery systems or water availability.

Goal 2: Encourage Efficient and Responsible Water Use Across Sectors

A. Support voluntary reductions in water demand in existing development		B. Support water efficient agricultural irrigation practices and delivery systems	
1	Coordinate with state agencies, Extension services, and other partners to develop and share accessible water-efficiency and drought-response information tailored to rural residents and small water systems.	1	Maintain awareness of Agricultural Protection Areas and irrigated lands during land-use planning efforts.
2	Support public outreach and education efforts during periods of limited water supply.	2	Identify irrigation canal and ditch companies operating within the County to improve coordination and communication during land-use planning and infrastructure review.
3	Assist residents and small water systems in identifying available technical assistance or funding programs related to water efficiency, including state and federal cost-share or grant opportunities.	3	Support water-efficient irrigation practices and delivery-system improvements by facilitating information sharing and coordination with state and federal programs related to canal improvements, irrigation efficiency, and drought resilience.

Goal 3: Support Reliable and Resilient Drinking Water Systems Through Coordination

A. Support long term reliability of drinking water systems serving unincorporated areas		B. Align County planning efforts with regional and statewide water conservation goals	
1	Maintain planning-level awareness of community drinking water systems, including general production and storage characteristics.	1	Use this Water Use & Preservation Element to support regional municipal and industrial water-conservation objectives through planning coordination and information sharing.
2	Support consideration of water-supply diversification strategies, such as additional sources or storage, to improve system resilience during drought or emergency conditions, where feasible.	2	Participate in regional water-planning and information-sharing efforts where appropriate to share local conditions and remain informed of regional water initiatives.
3	Continue consultation with community drinking water systems and relevant state agencies during land-use planning efforts.	3	Periodically review and update this Water Element to reflect new data, guidance, or changing water conditions.