CEDAR CITY GENERAL PLAN WATER USE AND PRESERVATION ELEMENT

(HAL Project No.: 457.07.100)

Adopted December 10, 2025

HANSEN ALLEN & LUCE inc
ENGINEERS

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

GLOSSARY OF TECHNICAL TERMS

Demand: Required water flow rate or volume.

Drinking Water: Water of sufficient quality for human consumption. Also referred to as Culinary or Potable water.

Equivalent Residential Connection: A measure used in comparing water demand from non-residential connections to residential connections.

Water Conservation: Planned management of water to prevent waste.

ABBREVIATIONS AND UNITS

ac	acre [area]
ac-ft	acre-foot (1 ac-ft = 325,851 gal) [volume]
CICWCD	Central Iron County Water Conservancy District
ERC	Equivalent Residential Connection
ft	foot [length]
HAL	Hansen, Allen & Luce, Inc.
SUU	Southern Utah University
yr	year [time]

CHAPTER 1 INTRODUCTION

PURPOSE AND SCOPE

In 2022, the Utah Legislature passed Senate Bill 110 (SB 110), a law requiring most cities in the state to incorporate water use and conservation planning directly into their overall land use planning efforts. This requirement applies to cities with a population of 10,000 people or more that are experiencing growth and development.

This report outlines the key information and analysis needed to meet these requirements and to support the Water Element of Cedar City's General Plan (Water Element). This element connects how land is used in the city with how water is used, preserved, and planned for in the future.

BACKGROUND

Cedar City was settled in 1851 and is located in Iron County at the mouth of Coal Creek in southwestern Utah. In addition to housing roughly 42,000 residents, it is the home to Southern Utah University, Cedar City Regional Airport, and a variety of commercial and industrial businesses. The surrounding area has a strong history of agricultural production. Cedar City considers agriculture as a benefit to the community and has included considerations to preserve agriculture in their General Plan.

Cedar City's water master plan was most recently updated in 2023. This study draws from information and strategies included in the master plan.

SCOPE OF STUDY

The following items were evaluated as a part of the general plan:

- Historical water use trends
- Existing and future water demands for Cedar City
- Comparison of State conservation goals
- Methods to reduce water demand per capita for existing and future developments
- Water supply diversification

COORDINATION WITH LOCAL AND STATE AGENCIES

As part of the Water Element, Cedar City coordinated with representatives from the following agencies:

- Central Iron County Water Conservancy District (CICWCD)
- Utah Division of Water Resources (DWRe)
- Utah Division of Drinking Water (DDW)
- Utah Department of Agriculture and Food (UDAF)

Input from these agencies was considered and incorporated throughout this report.

CHAPTER 2 HISTORICAL WATER USE TRENDS

This chapter addresses historical water use trends in Cedar City. It is intended to give an overview and provide context for following chapters, which will contain more detailed information.

Cedar City utilizes water from wells and springs to meet demands in the drinking water system and in a separate pressurized irrigation system serving certain large institutional users. To better understand how Cedar City uses water today—and how that might change in the future—we looked at how water use has changed over time. This includes how much water is used per person daily (gallons per capita per day, or gpcd) and how that use is split among different types of land (such as residential, commercial, and agricultural areas).

Cedar City considers agriculture and open space as a benefit to the community and has included considerations to preserve agriculture and open space in their General Plan while facilitating responsible development. Understanding water usage trends is especially important as land use can change over time–for example, when vacant or agricultural land is converted for residential or commercial development. The historical data used for this analysis comes from the Utah Division of Water Rights and focuses on two systems in the city: the drinking water system and the pressurized irrigation (PI) system.

Trends in per capita water usage since 2001 are shown in Figure 2-1.

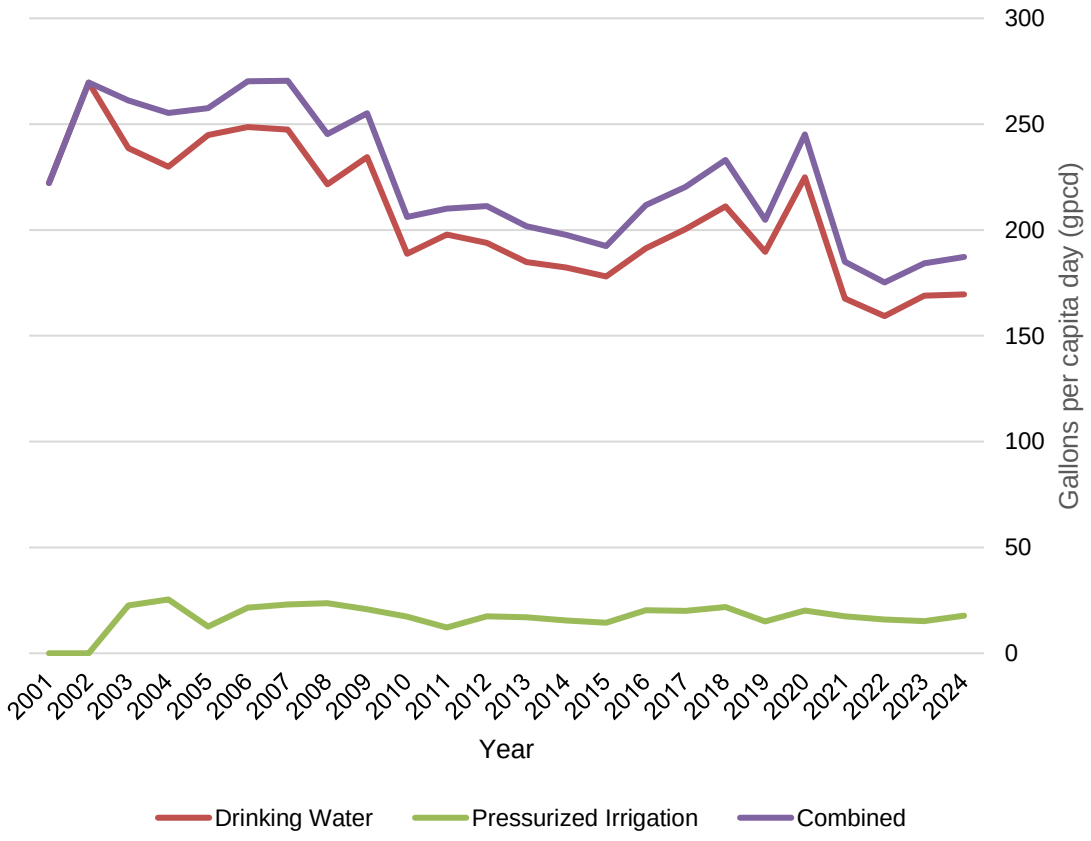

Figure 2-1. Gallons per Capita per Day Water Usage

Figure 1 shows a general decline in gallons per capita day (gpcd) for Cedar City's drinking water system over time, with some seasonal variation most likely due to weather conditions. Usage (gpcd) for the PI system has remained stable, with variation most likely dependent on weather conditions.

Reviewing connection types provides additional insight into where water demand is concentrated and how it is distributed among user categories. Figures 2-2 and 2-3 present trends in average annual water use per connection in both the drinking water and secondary water systems.

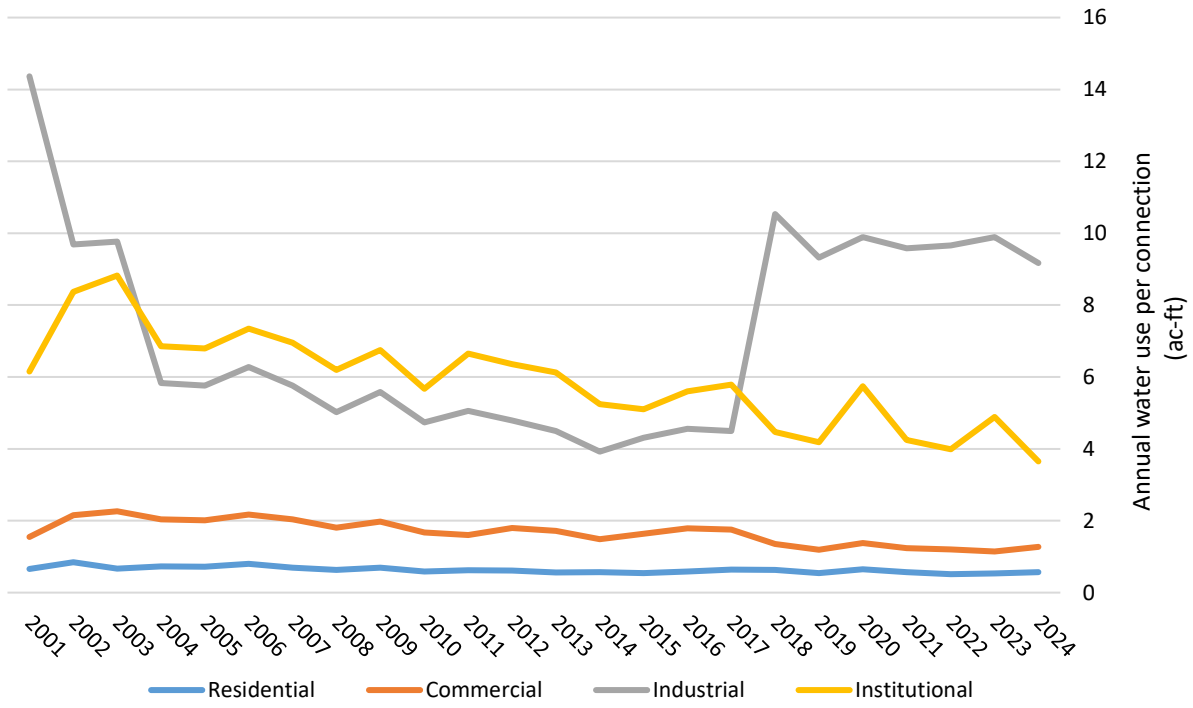

Figure 2-2. Annual Drinking Water Use per Connection

Comments on Figure 2-2 are as follows:

- Within the drinking water system, most connection types show a general downward trend in water use per connection over time, except for the industrial category. Between 2017 and 2018, the City's reported water use data shows an increase in reported industrial connections and a decrease in reported commercial connections. It appears that some connections which were previously reported as commercial were reclassified to industrial in 2018, causing a change in reported average commercial and industrial water use.
- On average, a residential connection in Cedar City has used between 0.50 and 0.56 ac-ft of water per year within the past five years. In the early 2000's, average use was closer to 0.70 ac-ft per year.

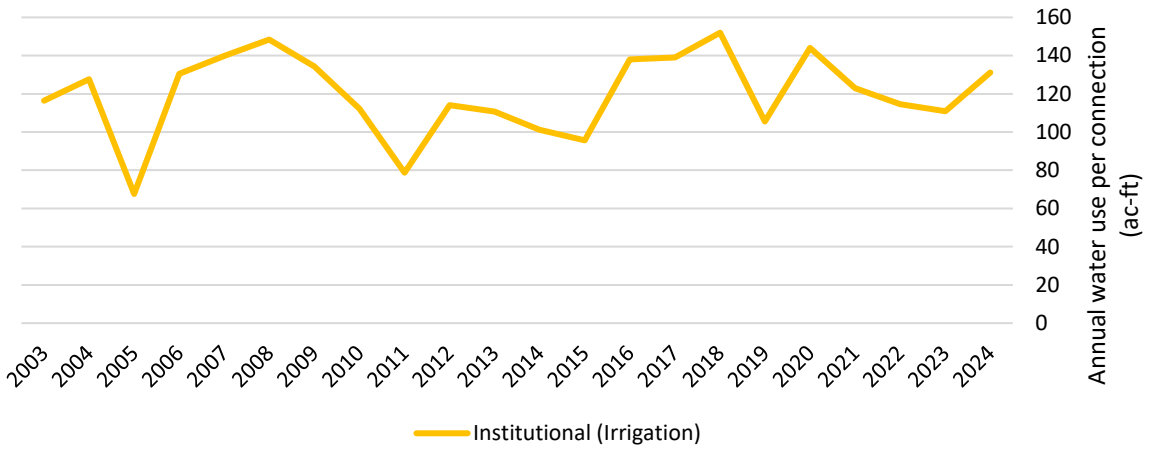

Figure 2-3. Annual (PI) Water Use per Connection

Comments on Figure 2-3 are as follows:

- The PI system only serves large institutional connections, whereas all other users use drinking water for irrigation. While the average water use per connection is significantly higher than other categories compared to the drinking water system, each institutional connection serves many users by providing functional turf. Current institutional accounts include the Cedar City Golf Course, Bicentennial Park and Cemetery, Southern Utah University (SUU), Cedar High School, Canyon View Middle/High School, and the Fields at the Hills sports complex.
- Institutional water use has shown greater variability from year to year compared to other customer types. This variability is expected, as facilities such as parks, schools, and cemeteries often experience fluctuating irrigation needs depending on weather conditions.
- On average, each institutional irrigation connection currently uses approximately 121 acre-feet of water annually. These large users significantly impact total water use in Cedar City and should be carefully considered when conservation strategies are developed. Conservation strategies for these users are discussed in detail in Chapter 4.

Cedar City has large institutional users in the PI system and large industrial users in the drinking water system. Conservation potential may exist for large industrial users but is highly dependent on their unique needs and water use practices.

CHAPTER 3 FUTURE DEMANDS AND CONSERVATION

This chapter addresses projected future water needs and available reliable water supply. The following are discussed in this chapter:

- State conservation goals
- Existing and future water demands
- Water supply diversification

Comparison to State Conservation Goals

The State Water Use 2065 Projection Goal for the Lower Colorado North region (consisting of Iron, Beaver, and Garfield Counties) is 205 gpcd. The sub-regional goal for Iron County is 193 gpcd by 2030 and 173 gpcd by 2065. Figure 3-1 shows historic water use (gpcd) compared to the State water use goal through 2060.

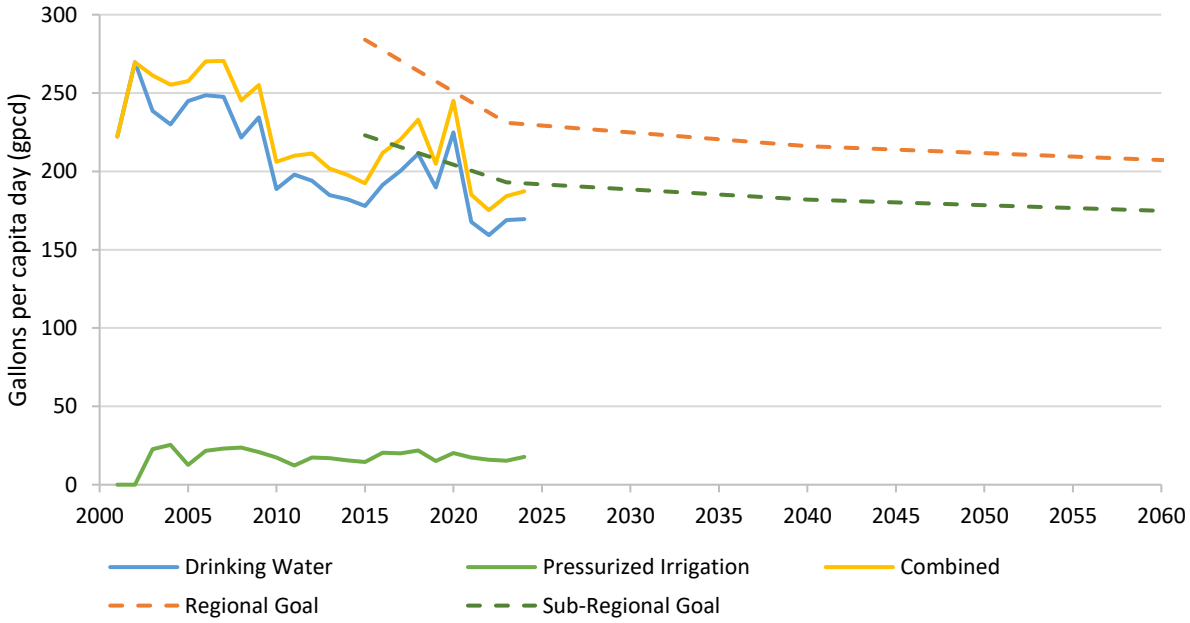

Figure 3-1. Historical and Projected per Capita Water Use

Cedar City's per-capita water use shows a decreasing trend between 2015 and 2025, with some of these years meeting the sub-regional goal. To meet the sub-regional goals into the future, continued emphasis on water conservation will be needed.

Existing and Future Water Demands

To help Cedar City prepare for long-term growth, a water budget was developed to compare current and future water supply and demand. This analysis is based on information in the Cedar City Drinking Water Master Plan (2023) and the Cedar City 2024 Water Report.

For the drinking water system, historical billing and water production data were used to estimate current Equivalent Residential Connections (ERCs), a standard unit that reflects the water use of a typical household. Using population growth projections and the City's land use plan, the number

of ERCs was projected through the year 2060. All customers use drinking water for outdoor irrigation except for 6 institutional users; this was also factored into demand estimates. Tools such as aerial imagery, utility system maps, and feedback from City staff were used to estimate the irrigated land served by the drinking water system. For the pressurized irrigation (PI) system, current irrigated acreage was calculated using aerial imagery.

The resulting figures are summarized in Figure 3-2, which shows indoor and outdoor water demands along with total system demand compared to the available water supply capacity.

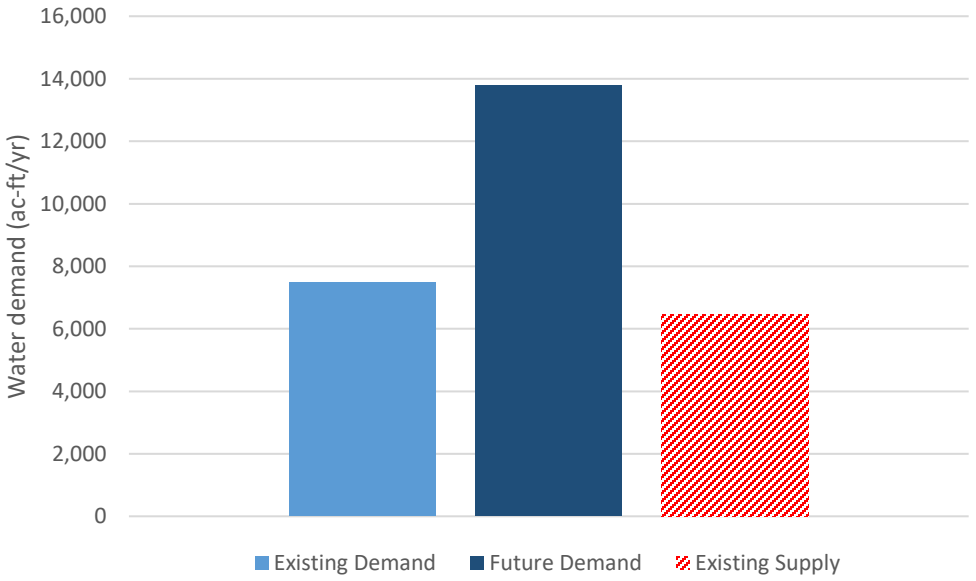

Figure 3-2. Cedar City Water Budget

Water Budget Summary

Figure 5 indicates that reliable source capacity for the water system is about 6,466 ac-ft/yr, which is less than the existing demand of about 7,477 ac-ft/yr. This is due to the Cedar City Valley Groundwater Management Plan, which imposes reductions in water rights to achieve balanced aquifer pumping. Cedar City currently has access to additional water rights totaling about 15,900 ac-ft/year, but many are not considered to be a reliable supply because they will eventually be eliminated under the current management plan. See Appendix B for additional information on the City's sources and water rights.

Cedar City's water budget analysis shows a pressing need to secure additional reliable supply to serve existing and future users. This difference between projected needs and existing reliable supply emphasizes the importance of taking proactive steps now to manage water use and ensure the long-term sustainability of Cedar City's water systems. Chapters 4 and 5 address water conservation efforts and strategies to address this need.

Cedar City maintains a water master plan with more details on sources, water rights, and potential future supplies.

Water Supply Diversification

Cedar City maintains a diverse supply of water sources that includes springs, groundwater wells, and surface water. The City is also working with CICWCD and the City of Enoch on a project to produce Type I effluent reuse at the Wastewater Treatment Plant (WWTP). Cedar City is planning to further diversify their water supply by constructing additional connections to the Central Iron County Water Conservancy District (CICWCD) System. The City currently has a contract with CICWCD to supply service to 196 lots in the western portion of the City. Additional agreements are needed to secure more supply. Once agreements are in place, the CICWCD system will eventually provide access to water from outside the Cedar City Valley basin when future projects are complete, reducing stress on water sources within the valley.

Water System Regionalization

Cedar City is currently exploring the potential opportunities and benefits of planning for water system regionalization. Potential regionalization opportunities are as follows:

- The western areas of Cedar City are at an elevation compatible with the existing service area of CICWCD. Cedar City could partner with CICWCD to buy wholesale water for these areas, or to provide water service to Cedar City residents through CICWCD infrastructure.
- Cedar City could consider implementing aquifer storage and recovery (ASR) using trans-basin water provided by CICWCD. During winter, water could be delivered to the Cedar City system from CICWCD and stored underground by injection using existing Cedar City wells. During summer, it could be pumped to meet higher seasonal demands. Additional study related to hydrogeologic and regulatory constraints is needed to determine feasibility of ASR. Successful implementation of ASR could help to stabilize groundwater levels in the Cedar City valley, which could trigger potential changes in the water rights reduction schedule as described in the Adaptive Management section of the plan.
- Emergency interconnections could be constructed with CICWCD and/or Enoch City to provide additional redundancy to all systems.
- Cedar City and CICWCD could consider wheeling water through their systems to convey water where it is needed and pump from the aquifer in a more balanced manner.

CHAPTER 4 CONSERVATION FOR EXISTING DEVELOPMENT

This chapter includes a review of methods and recommendations that Cedar City has implemented or could consider implementing to reduce water usage and promote water conservation within existing developments.

Methods to Reduce Water Demand and Per Capita Use for Existing Development

Cedar City has adopted or is working to implement several practices that reduce water use among existing customers:

- **Public Education & Outreach**
  The City's Water Education Program uses utility bills, Public Works, online platforms, and the City's monthly newsletter to regularly share conservation tips. Central Iron County Water Conservancy District (CICWCD), which serves Cedar City and surrounding areas, organizes a water conservation fair at the City's Main Street Park and a school education program for the 5th grade students attending school in the Iron County School District.

- **Coordination with CICWCD**
  Cedar City and CICWCD meet regularly to discuss their joint programs and projects, water conservation strategies, and other water-related concerns in central Iron County.

- **Promotion of Programs Available through CICWCD**
  CICWCD offers resources on water-wise plant selection, classes under the Localscapes program, rebates available through Utah Water Savers, and free landscape irrigation water checks. Cedar City provides a link to the CICWCD website on their website to direct residents to these resources.

- **Southern Utah University**
  - Cedar City maintains communication with Southern Utah University (SUU), which has been aggressively implementing water conservation measures. Cedar City will use their contacts at SUU as a resource for input on implementing effective water conservation measures.
  - A full list of conservation measures being employed by SUU is included in Appendix B.

- **Smart Irrigation Controls**
  City has implemented smart controllers at key facilities, including The Fort Cedar Trail, Iron West Soccer fields, and the renovated sections of the cemetery. The Fort Cedar Trail controller includes both flow sensors and weather-tracking capabilities, allowing irrigation to be adjusted during or after rain events to reduce unnecessary watering. The controllers at Iron West Soccer and the cemetery renovations also have advanced features. Once additional controllers are installed and ready, advanced features will be activated. As new parks are constructed, updated smart controllers will be installed as part of standard practice.

- **Tiered Water Pricing**
  The residential rate is based on a water budget for an inclining block rate structure. The first tier allows for indoor use. The second tier allows for average outdoor use. The third and fourth tiers are for excessive outdoor use. Conservation rates establish a specific tier for each customer based on the "usage units" for that account. The rate structure was updated in 2022 and has been adjusted annually since then.

- **Metering and Leak Detection**
  Water flow rates are metered and a water system audit is performed to determine the percentage of leakage and unaccounted-for water. The average leakage in the culinary system is 5.9% and the average unaccounted-for water in the culinary system is 9.4%. Broken water meters and known leaks are repaired promptly, and old waterlines are replaced when they are undersized or when leakage is detected.

- **Effluent Reuse**
  In partnership with CICWCD and the City of Enoch, Cedar City is currently in the process of treating wastewater effluent to Type 1 quality at the City's wastewater treatment plant. This treatment would allow Cedar City's portion of the effluent to be pumped back to Cedar City and used in the City's secondary irrigation system. Doing so would allow expansion of the secondary water system, reducing per-capita usage of potable water. There is potential to produce more than 3,400 ac-ft of effluent reuse per year, though conveying and using treated effluent in Cedar City would be very expensive. The City is preparing to commission a study regarding necessary infrastructure and costs to implement effluent reuse. Preliminary information indicates that effluent reuse could save about 800 ac-ft in the secondary water system and 530 ac-ft in the culinary water system. Alternate uses would need to be found for the remaining effluent produced.

- **Aquifer Recharge**
  Cedar City and CICWCD have worked cooperatively for several years to construct groundwater recharge projects. This allows the groundwater to be replenished with surface water, which benefits the City's efforts to maintain a sustainable aquifer.

- **Time-of-Day Watering Restrictions**
  Cedar City Ordinance 37-7-1 states that no outside watering is allowed from 8 a.m. to 6 p.m. beginning on April 1 and ending on October 31 to reduce evaporation and increase efficiency. The code instructs Water Division personnel to provide a notice regarding a customer's first violation of the ordinance. Subsequent violations incur financial penalties and shutoff of the customer's water supply.

- **Voluntary Watering Restrictions**
  Cedar City Resolution 22-0413-1 imposes a voluntary watering restriction schedule as follows:
    - Monday, Wednesday, and Friday: Even-numbered addresses shall water before 8:00 AM and after 6:00 PM
    - Tuesday, Thursday, and Saturday: Odd-numbered addresses shall water before 8:00 AM and after 6:00 PM
    - Sundays: No watering

- **Water Surveys**
  In partnership with CICWCD, water surveys are offered to existing single-family homes regarding outdoor water usage. Customers are provided with a report evaluating their water consumption and recommendations for conservation.

- **Smart Metering on Customer Connections**
  Cedar City is working to replace older meters with newer, "smart" meters (Neptune brand) capable of real-time monitoring. These meters can detect leaks in a customer's service main or home in real-time and issue notification to the customer and the Cedar City water department. They also enable the customer to log in to see their consumption data in real time through an online customer portal. The City plans to finish installing these meters and activate the customer portal in 2026.

Recommendations to Reduce Water Demand and Per Capita Use for Existing Development

To further strengthen Cedar City's water management strategy and reduce per-capita water demand for existing users, the following recommendations are proposed:

- **Public Education & Outreach**
  - New school programs could be organized as follows:
    - Obtain approval for the education program from the school superintendent.
    - Obtain relevant teaching materials and establish a curriculum that can be used by teachers in the local school district.
    - Coordinate teacher training.
    - Estimate the number of participants, including teachers, in the water conservation education program.
    - Distribute curriculum materials to teachers.
    - Monitor and follow the success of the program, adjusting as necessary to maximize student learning.
  - A water conservation committee could be created to receive input from consumers affected by the program, to advise the water conservation coordinator about new programs, materials, and means of communicating with target groups; assist in ideas; and help develop and implement specific education programs.
  - The City could organize a contest to recognize and promote properties with good examples of water-wise landscaping within Cedar City. These properties would be featured in the City's monthly newsletter.
  - The City could include a water conservation page for the City's website.
  - The City could develop lists of drought-tolerant plants that work well and are available in the area. The City could partner with local plant nurseries to develop this list.
  - The City could set up a water conservation booth at community events to distribute educational materials and hand out free water conservation items such as: shower timers, irrigation watering gauges, faucet aerators, and water conservation kits.

- **Supplementary items that could be considered to help aid public education and outreach are as follows:**
    - Poster contests.
    - Newspaper and radio advertisements.
    - Printed educational material distributed with the water bill and available at other public facilities such as the City library.
    - Providing water use information on customers' bills showing water use for the last billing period compared to the same period the year before.
    - Coordinating with other government agencies.
    - Presentations to school, civic, and religious groups.
    - Programs promoted by the CICWCD.

- **Rain Barrel Program**
  Cedar City should consider implementing a Rain Barrel Program to encourage residential stormwater capture. Under this program, residents could purchase rain barrels at a reduced cost, providing a simple method to collect and store roof runoff for irrigation use. The program would need to comply with State regulations on rainwater capture as specified in Utah House Bill 36 (2013 general session). Key regulations are summarized as follows:
    - The total volume of rainwater harvesting containers cannot exceed 2,500 gallons per land parcel.
    - The rainwater harvesting system must be registered with the Utah Division of Water Rights if there are more than two containers per parcel or if any one container has a maximum storage volume greater than 100 gallons.
    - Collected water must be beneficially used on the same parcel where it is collected.

- **Water Wise Garden**
  CICWCD has plans to construct a water-wise demonstration garden in the future. The garden will showcase low-water plant species, irrigation technologies, and landscape practices that residents can replicate at home. The facility will provide a visible, hands-on educational resource for promoting long-term water conservation. Cedar City can partner with CICWCD to promote the garden when it is constructed.

- **Low-Water Grass Seed Program**
  Cedar City should consider offering low-water grass seed for purchase to residents. Providing access to drought-tolerant turf options at a reduced cost would encourage homeowners to transition away from high-water-use grasses, reducing overall outdoor irrigation demand while maintaining functional landscape areas. This approach offers improvement as compared to standard turf grass but is not as effective as many other low water use landscaping options.

- **Reaching out to High Water Users**
  Identify high water users among industrial, institutional, and commercial customers and their rank regarding water usage. Offer incentives and water use surveys to at least the top 10% of users.

- **Metering and Leak Detection**
  Implementation of an active leak detection and repair program such as automated sensors or telemetry would be beneficial as it would reduce water loss and revenue loss caused by leakage.

- **Loss Prevention Programs**
  Cedar City currently does not have an official loss prevention program in place, although water loss is tracked and currently averages about 10%. Implementing a loss prevention program would increase employee focus on water conservation and provide methods for improved accountability and better tracking over time. A key first step in establishing a loss prevention program is to quantify the economic value of lost water. Once the economic value of lost water is understood, it can be compared to the cost of remediation efforts and the cost of developing additional sources, providing insight into ways Cedar City should prioritize leak detection and repair and other loss prevention efforts.

- **Landscaping Incentive Programs**
  Cedar City recently added language in its ordinances regarding a landscaping rebate program. It is recommended that the City develop procedures and approve funding to administer this program. Potential strategies are listed below.
    - Provide matching or additional rebates to residents who receive rebates through the Utah Water Savers program. Offering rebates in conjunction with the Utah Water Savers program would be simple to implement and ensure that citizens are using other available resources in addition to City funds to maximize impact.
    - Provide greater incentives for customers who replace turf grass in areas that are least water-efficient (park strips, narrow strips of turf, other non-functional spaces).
    - Provide incentives for existing residents to convert to drip irrigation. Incentives could be provided in partnership with local retailers.
    - Provide incentives for customers to replace existing irrigation controllers with smart irrigation controllers.
    - To implement this program, steps should be taken to verify that the program is meeting its intended purposes. Prior to making any landscape modifications, residents should be required to fill out an application and receive a preliminary inspection to verify that the area being modified has actively irrigated turf grass. The area should be measured and recorded by the inspector. After the landscaping has been modified, a final inspection should be required to verify completeness. Rebates can then be issued after the final inspection.

- **Low Flow Plumbing Devices**
    - Cedar City could identify residential buildings constructed prior to 1992 to target buildings that do not have low flow plumbing devices. The City could then develop a strategy to distribute or directly install low-flow showerheads, toilet displacement devices (as needed), toilet flappers (as needed), and faucet aerators.
    - Cedar City could encourage customers to purchase high-efficiency washing machines, low water use dishwashers, and point-of-use water heaters.
    - Cedar City could implement a toilet replacement program offering incentives to existing residential and non-residential customers who replace their high water-use toilets with ultra low-flush (ULF) toilets.

Modifications to City Operations to Reduce and Eliminate Wasteful Practices
Several operational changes have been made—or are under review—to improve efficiency:

- **Water Audits**
  Audits of the City's water systems are being carried out annually to assess leakage and unaccounted for water regarding the previous year. It is recommended that the City continue to perform the annual audit and also consider monitoring customer billing for extreme changes in individual customer usage as a maintenance measure.

- **Internal Metering and Monitoring**
  Installing meters at City facilities has helped monitor municipal water use and identify opportunities for internal conservation.

- **Water Budgets for City Properties**
  The City could identify the amount of water needed to support each major facility based on irrigated areas and indoor uses, then track actual water use at these facilities to determine whether watering could be reduced or changes could be made to reduce indoor demand.

- **Smart Irrigation Controls**
  The City has installed smart controllers at some facilities and is working to install them at others. Details on these facilities are listed below.
    - The Fort Cedar Trail has a smart controller with a flow sensor. It tracks rainstorms and reduces irrigation time during and after storms.
    - Smart controllers are installed at the Iron West soccer fields and areas of the cemetery which have experienced recent renovations. The City is planning to install them at other parks and implement the abilities of these smart controllers to adjust watering times based on weather conditions.
    - Smart controllers are installed in all new City-owned parks and open space.

Prioritized Ranking of Conservation Strategies for Existing Development

A prioritized summary of conservation strategies listed in this chapter is included in Table 4-1. Rankings are qualitative and based on impacts to Cedar City. Additional community engagement is needed to determine impacts of these strategies on end users.

Table 4-1
Prioritized Ranking of Potential Conservation Strategies for Existing Development

Strategy	Cost	Difficulty	Effectiveness	Priority
Expanded promotion of CICWCD and State conservation resources	Low	Low	Moderate	High
Smart Irrigation Controllers at City Facilities	Moderate	Low	High	High
Update City website with more educational materials and resources	Low	Low	Moderate	High
Convene a water conservation committee to identify and refine conservation priorities	Low	Low	High	High
Expanded promotion of rebates available through Utah Water Savers	Low	Low	Moderate	High
Modify customer bills to provide historic use and comparison to other similar users	Low	Moderate	Moderate	High
Establish water budgets for City properties and track against water use	Moderate	Moderate	Moderate	Moderate
Smart metering with leak alerts and customer portal	Moderate	Moderate	Moderate	Moderate
Public recognition for properties with water-wise landscaping	Low	Low	Unknown	Moderate
Implement an official loss prevention program	Moderate	Moderate	Moderate	Moderate
Implement landscaping incentive programs (including turf grass removal) in addition to those available through Utah Water Savers	High	Moderate	High	Moderate
Low-water grass seed program	Moderate	Moderate	Moderate	Moderate
Wastewater effluent reuse	High	High	High	Further Study Needed
Expand educational programs in schools	High	High	Unknown	Low
Rain barrel program	High	Moderate	Low	Low

CHAPTER 5 CONSERVATION FOR FUTURE DEVELOPMENTS

This chapter includes a review of methods and recommendations that Cedar City has implemented or could consider implementing to reduce water usage and promote water conservation within future developments.

Methods of Reducing Water Demand and Per Capita Use for Future Development
To ensure future development is water-efficient, Cedar City has adopted and recommended the following policies and standards:

- **Allocation-Based Tiered Pricing Models**
  Cedar City utilizes allocation-based water rates that incentivize conservation by imposing additional charges for excessive use. Separate rate structures exist for single-family, multi-family, and non-residential users, allowing the City to set appropriate usage targets for different types of water users. Several tiers either exist or are being explored as listed below.
    - Standard development (existing): properties under this tier structure are anticipated to consist of normal suburban development and are billed under standard tiered billing rates.
    - Recorded Conservation Agreement (existing) – 1,000 square feet of turf: properties under this tier structure are limited to no more than 1,000 square feet of turf grass on their property. Tiered billing rates charge escalating rates for properties that use more water than is needed to sustain normal indoor use and 1,000 square feet of turf grass.
    - Conservation – 3,000 square feet of turf (existing): properties under this tier structure are limited to no more than 3,00 square feet of turf on their property. Tiered billing rates charge escalating rates for properties that use more water than is needed to sustain normal indoor use and 3,000 square feet of turf grass.
    - Recorded Conservation Agreement – no turf (potential future): the City could consider reduced water allotments for properties with no turf grass.
    - Recorded conservation Agreement – property-specific landscape requirements (potential future): the City could consider conservation agreements specific to a property to allow for more flexibility in administering conservation-oriented rates.

- **Conservation Development and Water Rights Dedication**
  Cedar City code 37-32 requires new development to either dedicate water rights to the City to meet the needs of the development or pay a fee in lieu of water rights so the City can acquire water rights needed to support the development. The code allows developers to convey fewer water rights if their development includes restrictions on the amount of turf grass that can be planted on each lot. This provides a direct incentive for developers to construct conservation-oriented developments with low per-capita use.

Recommendations to Reduce Water Demand and Per Capita Use for Future Developments
To further reduce per-capita water use of future development, the following recommendations are proposed:

- **Landscape Efficiency Standards for New Development**
    - The City could encourage planting deciduous trees on the south, east, and west sides of buildings, and evergreen trees on the north side of buildings. Planting evergreen trees on the north side of a home allows them to act as a windbreak to shield the home from cold northern winter winds while allowing southern sunlight to warm the home, improving energy-efficiency.
    - The City could develop a water-wise information packet to be included with new building permits.
    - The City could include a water conservation page for the City's website.
    - The City could develop lists of drought-tolerant plants that work well and are available in the area. The City could partner with local plant nurseries to develop this list.
    - The City could require developers of non-residential properties to submit functional justification for proposed areas of turf grass within their development. Doing so would ensure that turf grass is not installed anywhere where it does not serve a clear purpose.
    - The City could implement an ordinance requiring water-wise landscaping in new developments not participating in the Conservation Development program, including Common Interest Community developments and multi-family housing projects. Components of the ordinance could include the following:
        - Turf limitations
        - Use of drought-tolerant or native plants
        - Drip irrigation systems for shrubs and trees
        - Smart irrigation controllers
        - Prohibition of decorative ponds, pools, or water features that contribute to unnecessary water evaporation.
    - The City could implement an ordinance requiring smart irrigation controls to be installed in certain types of development, potentially including projects for public agencies, private nonresidential projects, and developer-installed landscaping in residential projects.

- **Submission of Landscaping Plans:** Cedar City has explored requiring submission of a landscaping plan to receive a building permit; however, Utah HB 368 (2025 general session) does not permit a municipality to withhold an applicant's building permit or certificate of occupancy because the applicant has not submitted a private landscaping plan. Potential strategies to promote submission of landscaping plans while working within existing laws are as follows:
    - Require submission of a landscaping plan before landscaping is installed (this is explicitly permitted under HB 368). Create administrative penalties for citizens or businesses that install landscaping before submitting a landscaping plan.
    - Require submission of a landscaping plan to qualify for water conservation rate billing under a conservation agreement.

New or Modified Lot Sizes or Configurations: Residential developments participating in Cedar City's Conservation Development program must have a maximum of either 1,000 or 3,000 square feet of irrigated landscape. This approach ensures relatively consistent water use per housing unit regardless of lot size. Modifying lot sizes or configurations would, therefore, have little effect on per capita water use in future developments unless a new conservation rate option was implemented that allows for property-specific turf area requirements.

- **Additional Tier in the Conservation Development Program:** Cedar City could consider another tier in the conservation development program which would prohibit homes from having any turf grass and allow limited drip irrigation only.

- **Discouraging Incentives for Economic Development Activities that do not adequately account for water use or do not include strategies for reducing water demand:** Cedar City requires water rights sufficient to meet the needs of a proposed development to be dedicated to the City to meet the needs of the development. This provides an effective economic incentive for water-wise development. Because of the scarcity of available water rights in the Cedar City valley and the high cost of obtaining them, potential commercial users with high water demand typically find that Cedar City does not present a viable location for their business. Other potential discouraging incentives could include punitive rate structures for developments that don't meet water-wise landscaping standards, or modifications to the existing rate structure to disincentivize high water users.

Prioritized Ranking of Conservation Strategies for Future Development

A prioritized summary of conservation strategies listed in this chapter is included in Table 5-1. Rankings are qualitative and based on impacts to Cedar City. Additional community engagement is needed to determine impacts of these strategies on end users.

Table 5-1
Prioritized Ranking of Potential Conservation Strategies for Future Development

Strategy	Cost	Difficulty	Effectiveness	Priority
Include additional landscaping standards including limitations on pools or ponds and requirements for drip irrigation and water-wise landscaping	Low	Low	High	High
Partner with local plant nurseries to develop a list of water-wise plants that work well and are available in the area	Low	Moderate	Moderate	Moderate
Develop a water-wise information packet to be included with building permits	Low	Low	Unknown	Moderate
Implement an ordinance requiring smart irrigation controllers	Low	Low	Unknown	Further study recommended
Create administrative penalties (allowable by law) for developments that do not submit a landscaping plan prior to installing landscaping	Low	Moderate	Unknown	Further study recommended
Discouraging incentives for development that is not water-wise	Low	Moderate	Unknown	Further study recommended
Implement an additional conservation tier permitting no turf grass on a residential lot	Low	Moderate	High	Further study recommended
New or modified lot size configurations	Low	Moderate	Low	Low

CHAPTER 6 CONSERVATION POLICY RECOMMENDATIONS

This chapter includes a summary of policy-related items that will be considered by Cedar City. Where items have been discussed in previous chapters, a summary is listed here.

Future Planning Recommendations on Conservation Policy
To further improve water management, the City will consider the following policies and ordinance changes:

- **Water Conservation Policies:**
  - Develop methods to administer the City's landscape rebate/incentive programs, potentially to include using them as matching funds for current Utah Water Savers programs, or drip irrigation conversion programs in partnership with local retailers.

- **Landscaping Options Within Public Streets (Non-Turf Park Strips):**
  - Require water-wise planting or hardscape design in park strips.
  - Prohibit turf in non-functional areas.
  - Prioritize low-maintenance materials and drip irrigation by meeting with City landscape maintenance personnel to identify a variety of maintenance-friendly options with staff support, then working with City leaders to develop approved water-wise landscaping plans for City-maintained streetscapes.
  - Work with local plant nurseries to develop a list of drought-tolerant plants that are available and work well in Cedar City.

- **Ordinance Revisions to Eliminate Inefficient Water Use:**
  - The City could require developers of non-residential properties to submit functional justification for proposed areas of turf grass within their development. Doing so would ensure that turf grass is not installed anywhere where it does not serve a clear purpose.
  - The City could implement an ordinance requiring smart irrigation controls to be installed in certain types of development, potentially including projects for public agencies, private nonresidential projects, and developer-installed landscaping in residential projects.

- **Low Water Use Landscaping Standards for New Development Types:**
  - Commercial, Industrial, and Institutional: Require drought-tolerant planting, smart irrigation, and minimal turf in non-functional areas.
  - Residential: Require compliance with landscaping standards, turf limitations, and irrigation efficiency technologies as part of development approval.
  - Encourage planting deciduous trees on the south, east, and west sides of buildings, and evergreen trees on the north side.

CHAPTER 7 IMPLEMENTATION PLAN

This chapter includes a summary of Cedar City's implementation plan for water-related goals as outlined in this element of the General Plan.

Year 2026
Actions to be taken in 2026 are as follows:

- Provide expanded water conservation resources on the City's website. Promote these resources in City publications.
- Finish installing smart customer meters. Begin implementing customer portal access and leak detection notification.
- Complete a study regarding necessary infrastructure and costs to implement wastewater effluent reuse.
- Install smart controllers at remaining City parks and open spaces and implement advanced capabilities.
- Convene a water conservation committee. The committee will explore the following topics:
    - Political feasibility of strategies listed in the Water Use and Preservation Element
    - Finances and resources required to implement additional conservation strategies
    - Revisions to development standards and ordinances
- Determine additional conservation programs for implementation in future years.
- Develop a plan to provide the Water Division with additional staffing needed to implement desired conservation strategies.

Year 2027
Actions to be taken in 2027 are as follows:

- As needed, hire additional staff to provide capacity for implementation of further conservation goals.
- Begin implementation of conservation programs recommended by the water conservation committee, which may include the following:
    - Loss prevention plan
    - Landscaping incentive programs
    - Low-water grass seed program
    - Develop expanded educational programs
    - Public recognition of water-wise properties in Cedar City
- Establish water budgets for City-owned properties
- Evaluate participation in and effectiveness of conservation programs being implemented.
- Present results to the water conservation committee for consideration. Adjust policies and programs as needed.

2028 and Beyond
Actions to be taken in 2028 and beyond are as follows:

- Annual review of the participation in and effectiveness of available conservation programs
- Continuous updates to educational resources
- Continuous tracking of water use on City properties as compared to their respective water budgets.
- Continuous leak monitoring and loss prevention
- Budget and plan for wastewater reuse, if determined feasible
- Continuous coordination with CICWCD and State agencies
- Continuous participation in CICWCD and State conservation programs
- Present results to the water conservation committee for consideration. Adjust policies and programs as needed.

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APPENDIX A

Source and Water Rights Information

CULINARY SUPPLY DATA

WELL	DEPTH (FT)	CASING DIAMETER (INCHES)	DDW SOURCE CAPACITY[1] (GPM)	MAXIMUM CAPACITY FOR CONSUMPTION[2] (GPM)
Enoch Well #1	875	16	1300	1000
Enoch Well #3	1030	16	1461	1750
Quichapa Well #1	900	16	1100	1100
Quichapa Well #3	697	16	1300	1100
Quichapa Well #5	1006	16	1267	1300
Quichapa Well #6	604	16	1333	1200
Quichapa Well #7	1020	16	1500	1300
Quichapa Well #8	960	16	1391	1450
Shurtz Cnyn. Springs	N/A	N/A	181	350
Cedar Cnyn. Springs	N/A	N/A	441	400
Spilsbury Springs	N/A	N/A	101	200
		Total =	**11,375**	**11,150**

PRESSURIZED IRRIGATION SUPPLY DATA

WELL OR PUMP STATION	DEPTH (FT)	CASING DIAMETER (INCHES)	FLOW CAPACITY (GPM)	MAXIMUM CAPACITY FOR CONSUMPTION (GPM)
Cemetery Well	670	14	1400	1400
Northfield Well	865	12	900	900
200 North Pump Station	N/A	N/A	1800	1800
			Total =	**4,100**

Total Supply = <u>15,250 gpm</u>

CULINARY WATER TANK DATA

[1] This column is the allowable source capacity per the Division of Drinking Water (DDW) minimum sizing requirements. Refer to data submitted by Jonathan Stathis to Chris Martin of DDW by email on January 23, 2020.
[2] This column is the typical maximum capacity available at each source during peak summer months. Quichapa Well #1 was put back in service in 2019. The capacity for Enoch Well #1 was changed in 2019 from 800 to 1,000 gpm based on flow meter data.

Cedar City Corporation Municipal Water Rights - Groundwater (Sorted by Priority Date in Basin 73)

Water Right No.	Source/Seller	Source Name(s)	Diversion Flow (ac-ft)	Cumulative Diversion (ac-ft)	Flow (cfs)	Period of Use	Priority Date	Proof Due Date	Non-Use Expiration	Sole Supply (ac-ft)	Auxiliary to Irrigation Shares (ac-ft)	POD - North or South of SR-56?
73-627	Cedar Valley Ranch, LLC (Wayne LeBaron)		848.98	848.98	2	Mar 15 - Oct 31	1860	31-Dec-2030		848.98		North
73-4051	Chet & Kathy Perkins		1.0	849.98		Apr 1 - Oct 31	1860		30-Apr-2026	1.0		North
73-4134	Joe Burgess/Big Time Developers LLC (Tom Jett)		25.6	875.58		Mar 15 - Oct 31	1860		31-Jul-2026	25.6		North
73-476	Elmer Enterprises, LLC		28.0	903.58		Mar 1 - Nov 1	1865		30-Apr-2026	28.0		North
73-518	Elmer Enterprises, LLC		12.0	915.58		Mar 1 - Nov 1	1865		30-Apr-2026	12.0		North
73-519	Elmer Enterprises, LLC		12.0	927.58	0.011	Mar 1 - Nov 1	1865		30-Apr-2026	12.0		North
73-660	Elmer Enterprises, LLC		12.0	939.58	0.056	Mar 1 - Nov 1	1865		30-Apr-2026	12.0		North
73-666	Elmer Enterprises, LLC		10.68	950.26		Mar 1 - Nov 1	May 1865		30-Apr-2026	10.68		North
73-336	Elmer Enterprises, LLC		28.0	978.26	0.089	Mar 1 - Nov 1	1890		30-Apr-2026	28.0		North
73-337	Elmer Enterprises, LLC		28.0	1,006.26	0.004	Mar 1 - Nov 1	1890		30-Apr-2026	28.0		North
73-171	Cedar Valley Ranch, LLC (Wayne LeBaron)		1.65	1,007.91		May 15 - Oct 31	May 1896	31-Dec-2030		1.65		North
73-172	Joe Burgess		4.2	1,012.11		Jan 1 - Dec 31	Jun 1896			Unevaluated		North
73-387	JDL Investments, Inc. and Cedar Valley Holdings, LLC		11.1035	1,023.21	0.089	Apr 1 - Oct 31	1898		30-Apr-2026	11.1035		North
73-361	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	20.92	1,044.13		Jan 1 - Dec 31	1900	31-Dec-2029		20.92		South
73-362	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	62.44	1,106.57		Jan 1 - Dec 31	1900	31-Dec-2029		62.44		South
73-363	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	92.28	1,198.85		Jan 1 - Dec 31	1900	31-Dec-2029		92.28		South
73-365	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	93.94	1,292.79		Jan 1 - Dec 31	1900	31-Dec-2029		93.94		South
73-366	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	93.94	1,386.73		Jan 1 - Dec 31	1900	31-Dec-2029		93.94		South
73-367	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	0.45	1,387.18		Jan 1 - Dec 31	1900	31-Dec-2029		0.45		South
73-368	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	20.92	1,408.10		Jan 1 - Dec 31	1900	31-Dec-2029		20.92		South
73-2601	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	20.92	1,429.02		Jan 1 - Dec 31	1900	31-Dec-2029		20.92		South
73-369	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	40.0	1,469.02		Jan 1 - Dec 31	1903	31-Dec-2029		40.0		South
73-182	Cosmic Annexation		1.867	1,470.89		Jan 1 - Dec 31	1910			Unevaluated		South
73-1596	Cosmic Annexation		1.867	1,472.76		Jan 1 - Dec 31	1910			Unevaluated		South
73-2373	Enoch Well Field	Enoch Well North (#1) Enoch Well South (#2) Enoch Well #3	64.0	1,536.76 1,536.76 1,536.76		Jan 1 - Dec 31	Apr 1912	 31-Jan-2027		64.0		North
73-4698	Liberty Cove, LLC (Parkview Apartments)		1.6951	1,538.45		Jan 1 - Dec 31	1916	31-Mar-2035		1.6951		North
73-1085	MJB - Cedar City LLC		4.232	1,542.68		Jan 1 - Dec 31	Jun 1916		30-Apr-2026	4.232		North
73-4227	MJB - Cedar City LLC		1.148	1,543.83		Jan 1 - Dec 31	Jun 1916	31-Jan-2030		1.148		North
73-2595	South Cottonwood Annexation		0.46	1,544.29		Mar 15 - Oct 31	1917		30-Apr-2026	0.46		North
73-2596	South Cottonwood Annexation		0.056	1,544.35		varies by use	1917		30-Apr-2026	0.056		North
73-131	Enoch Well Field	Enoch Well North (#1) Enoch Well South (#2) Enoch Well #3	61.0	1,605.35 1,605.35 1,605.35		Jan 1 - Dec 31	1918	 31-Jan-2027		61.0		North
73-703	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	95.64	1,700.99		Jan 1 - Dec 31	1918	31-Dec-2029		95.64		South
73-4140	Tippetts Annexation		9.184	1,710.17		Mar 15 - Oct 31	1918		31-Jul-2026	9.184		North
73-2374	Enoch Well Field	Enoch Well North (#1) Enoch Well South (#2) Enoch Well #3	4.062	1,714.23 1,714.23 1,714.23		Jan 1 - Dec 31	1919	 31-Jan-2027		4.062		North
73-1962	Onado Investments II, LLC (Onado Annexation)		0.4	1,714.63		varies by use	1920			0.4		North
73-64	Son Builders, Inc.		1.832	1,716.47		Mar 15 - Oct 31	1-Dec-1922			Unevaluated	Yes	North
73-1500	Son Builders, Inc.		1.832	1,718.30		Mar 15 - Oct 31	1-Dec-1922			Unevaluated	Yes	North
73-4162	Brian Peterson Water Credits		14.3968	1,732.70		Mar 15 - Oct 31	1-May-1929		30-Apr-2027	Unevaluated	19.5317	North
73-4168	Brian Peterson Water Credits		14.396	1,747.09		Mar 15 - Oct 31	1-Dec-1922		30-Apr-2027	Unevaluated	19.5317	North
73-325	MJB - Cedar City LLC		5.01	1,752.10		varies by use	1923		30-Apr-2026	5.01		North
73-155	Steve Sevy Annexation and Lee & Amanda Grimm		160.0	1,912.10		Jan 1 - Dec 31	1924	30-Nov-2030		160.0		North
73-156	Steve Sevy Annexation		11.466	1,923.57		Mar 15 - Oct 31	Jun 1924			11.466		North
73-212	MJB - Cedar City LLC		3.584	1,927.15		Jan 1 - Dec 31	1925		30-Apr-2026	3.584		North
73-4667	Ceagle, LLC (Ekko View Estates Subd. Phase 2)		6.28	1,933.43		Jan 1 - Dec 31	1925	31-Dec-2034	31-Jul-2026	6.28		North
73-4142	Randy L. and Mary Lou Pazik		0.80	1,934.23		Mar 15 - Oct 31	1926		31-Jul-2026	0.80		South
73-2854	Cedar Valley Ranch, LLC (Wayne LeBaron)		1.0	1,935.23		Mar 15 - Oct 31	30-Jul-1927	30-Jun-2030		1.0		North
73-3250	Ronald K. Stanley		62.0	1,997.23		Apr 1 - Oct 31	30-Jul-1927		31-Jul-2025	62.0		North
73-3439	Cedar Valley Ranch, LLC (Wayne LeBaron)		49.3448	2,046.58		varies by use	30-Jul-1927	30-Jun-2030		49.3448		North
73-4130	MJB - Cedar City LLC		9.83	2,056.41		Jan 1 - Dec 31	1928		31-Jul-2026	9.83		North
73-4146	Tippetts Annexation		50.0132	2,106.42		Apr 1 - Oct 31	Sep 1928		31-Jul-2026	50.0132		North
73-4653	LSR Investments LLC (Old Farm Subd. Phases 2 & 3)		14.8	2,121.22		Jan 1 - Dec 31	Sep 1928	31-Oct-2034		14.8		North
73-3383	Preston Nelson (IDR Annexation)		25.2	2,146.42		Mar 15 - Oct 31	1929		30-Apr-2026	25.2		North
73-66	Son Builders, Inc.		0.94	2,147.36		Mar 15 - Oct 31	1-May-1929			Unevaluated	Yes	North
73-1499	Son Builders, Inc.		0.94	2,148.30		Mar 15 - Oct 31	1-May-1929			Unevaluated	Yes	North
73-4163	Brian Peterson Water Credits		14.3968	2,162.70		Mar 15 - Oct 31	1-May-1929		30-Apr-2027	Unevaluated	19.5317	North
73-4167	Brian Peterson Water Credits		14.3968	2,177.09		Mar 15 - Oct 31	1-May-1929		30-Apr-2027	Unevaluated	19.5317	North
73-3816	Ronald K. Stanley		79.85	2,256.94		Mar 15 - Oct 31	Feb 1930		28-Feb-2026	79.85		North
73-4090	MJB - Cedar City LLC		30.635	2,287.58		Jan 1 - Dec 31	Feb 1930	30-Apr-2028		30.635		North
73-4143	Tippetts Annexation		23.424	2,311.00		Mar 15 - Oct 31	Feb 1930		31-Jul-2026	23.424		North
73-4226	MJB - Cedar City LLC		30	2,341.00		Jan 1 - Dec 31	1-Feb-1930	31-Jan-2030		30		North
73-4084	Murray Jim Sorensen and Gay Sorensen		26.828	2,367.83		Jan 1 - Dec 31	Mar 1930	31-Mar-2028	31-Dec-2027	26.828		North
73-2594	South Cottonwood Annexation		56.99	2,424.82		varies by use	Apr 1930		30-Apr-2026	56.99		North
73-4559	Candela Financial, LC (Cascade Springs Apts. Phase 2)		15.36	2,440.18		Jan 1 - Dec 31	Apr 1930	31-Aug-2030	31-Jul-2029	15.36		North
73-4565	Candela Financial, LC (Cascade Springs Apts. Phase 2)		6.95	2,447.13		Jan 1 - Dec 31	Apr 1930	31-Aug-2030	31-Jul-2029	6.95		North
73-1969	Onado Investments II, LLC (Onado Annexation)		46.16	2,493.29		Mar 15 - Oct 31	Mar 1931			46.16		North
73-3440	Cedar Valley Ranch, LLC (Wayne LeBaron)		13.775	2,507.07		Mar 15 - Oct 31	Mar 1931	30-Jun-2030		13.775		North
73-3641	Hunter Family Living Trust (Development Team credits)		30.865	2,537.93		Jan 1 - Dec 31	Mar 1931	30-Jun-2034		30.865		North
73-798	Midvalley Water, LLC (Hardin)		120.0	2,657.93		Mar 15 - Oct 31	Apr 1931			120.0		North
73-799	Midvalley Water, LLC (Hardin)		93.36	2,751.29		Mar 15 - Oct 31	Apr 1931			93.36		North
73-773	Cedar Valley Ranch, LLC (Wayne LeBaron)		20.0	2,771.29		Mar 15 - Oct 31	1932	30-Jun-2030		20.0		North
73-3240	E.L.D. Investments, LLC		20.0	2,791.29		Mar 15 - Oct 31	1932		30-Apr-2026	20.0		North
73-3912	Janet G. Leigh Minor Lot		1.3	2,792.59		Mar 15 - Oct 31	Apr 1933		31-Aug-2028	1.3		North
73-4606	Shelley Whittaker Real Estate LLC (SSW Rentals LLC)		0.0737	2,792.66		Jan 1 - Dec 31	Apr 1933	31-Jan-2031	31-Jul-2025	0.0737		North
73-765	Midvalley Water, LLC (Hardin)		93.32	2,885.98		Mar 15 - Oct 31	1934			93.32		North
73-2180	Cedar Valley Ranch, LLC (Wayne LeBaron)		7.0	2,892.98		Mar 15 - Oct 31	1934	???		7.0		North
73-4009	Cedar Valley Ranch, LLC (Wayne LeBaron)		1.0	2,893.98		Mar 15 - Oct 31	1934	30-Jun-2030		1.0		North
73-190	Steve Sevy Annexation & Purchase from Sevy		214.12	3,108.10		varies by use	Mar 1934			Unevaluated	ELU's	North
73-4632	KS Cedar Ridge LC (RSC Ag. & Pasture Lane Phase 1)		1.505	3,109.61		Jan 1 - Dec 31	Mar 1934	30-Jun-2034		1.505		North
73-797	Midvalley Water, LLC (Hardin)		93.32	3,202.93		Mar 15 - Oct 31	Apr 1934			93.32		North
73-1442	Midvalley Water, LLC (Hardin)		120.0	3,322.93		Mar 15 - Oct 31	Apr 1934			120.0		North
73-62	Son Builders, Inc.		3.615	3,326.54		Mar 15 - Oct 31	10-Jun-1934			Unevaluated	Yes	North
73-1223	Son Builders, Inc.		3.615	3,330.16		Mar 15 - Oct 31	10-Jun-1934			Unevaluated	Yes	North
73-4161	Brian Peterson Water Credits		14.3968	3,344.56		Mar 15 - Oct 31	10-Jun-1934		30-Apr-2027	Unevaluated	19.5317	North
73-4166	Brian Peterson Water Credits		14.3968	3,358.95		Mar 15 - Oct 31	10-Jun-1934		30-Apr-2027	Unevaluated	19.5317	North
73-2593	South Cottonwood Annexation		16.08	3,375.03		Mar 15 - Oct 31	12-Jun-1934			16.08		North
73-4131	North Cottonwood Annexation		37.764	3,412.80		Mar 15 - Oct 31	12-Jun-1934		31-Jul-2026	37.764		North
73-4144	Tippetts Annexation		126.04	3,538.84		Mar 15 - Oct 31	12-Jun-1934		31-Jul-2026	126.04		North
73-2560	Hunter Family Living Trust (Development Team credits)		16.758	3,555.59		Jan 1 - Dec 31	16-Jun-1934	30-Jun-2034		16.758		North
73-3015	Heath W. and Elizabeth Sartini		0.5	3,556.09		Apr 1 - Oct 31	16-Jun-1934			0.5		North
73-4164	Jack Burns		4.0	3,560.09		Mar 15 - Oct 31	16-Jun-1934		31-Jul-2026	4.0		North
73-4171	Levine Annexation		16.832	3,576.93		Mar 15 - Oct 31	16-Jun-1934		30-Apr-2027	Unevaluated	16.832	North
73-4186	Mark Meisner Annexation		6.39	3,583.32		Mar 15 - Oct 31	16-Jun-1934			6.39		North
73-1078	Cox Well Field	1st Cox Well	398.189	3,981.51	0.55	Apr 1 - Nov 30	23-Jun-1934			398.189		South
73-4254	Brent Hunter		217.0	4,198.51		Mar 15 - Oct 31	26-Jun-1934	31-Aug-2025		217.0		North
73-3185	Sam Dodd		10.0	4,208.51		Jan 1 - Dec 31	30-Jun-1934	30-Nov-2032		10.0		North
73-4141	Bart Van De Car		2.0	4,210.51		Mar 15 - Oct 31	30-Jun-1934		31-Jul-2026	2.0		North
73-2542	JDL Investments, Inc. and Cedar Valley Holdings, LLC		5.0	4,215.51		Mar 15 - Oct 31	Jul 1934		30-Apr-2026	5.0		North
73-349	Heritage Subdivision, Windmill Plaza, Falcon Ridge		546.195	4,761.70		Mar 15 - Oct 31	25-Jul-1934			Unevaluated	546.195	South
73-189	Steve Sevy Annexation		238.656	5,000.36		Jan 1 - Dec 31	Dec 1934	30-Nov-2030		Unevaluated	238.656	North
73-154	Steve Sevy Annexation		39.6056	5,039.96		Mar 15 - Oct 31	Feb 1935			39.6056		North
73-2375	Enoch Well Field	Enoch Well North (#1) Enoch Well South (#2) Enoch Well #3	10.408	5,050.37 5,050.37 5,050.37		Jan 1 - Dec 31	23-May-1935	 31-Jan-2027		10.408		North
73-161	Enoch Well Field	Enoch Well North (#1) Enoch Well South (#2) Enoch Well #3	325.6	5,375.97 5,375.97 5,375.97	1.05	Jan 1 - Dec 31	3-Dec-1936	 31-Jan-2027		325.6		North
73-4135	Thomas Rossing and Alexandra Rossing		6.50	5,382.47		Apr 1 - Oct 31	15-Apr-1937		31-Jul-2026	6.50		North
73-4145	Big Time Developers LLC (Tom Jett)		9.0	5,391.47		Apr 1 - Oct 31	15-Apr-1937		31-Jul-2026	9.0		North
73-388	JDL Investments, Inc. and Cedar Valley Holdings, LLC		144.4	5,535.87		Apr 1 - Oct 31	2-Dec-1938		30-Apr-2026	144.4		North
73-3730	Paydirt Annexation		50.0	5,585.87		May 15 - Oct 31	14-Jan-1944		30-Apr-2031	50.0		North
73-4136	Sha-De K. LLC (Kleinschmidt)		0.90	5,586.77		Mar 15 - Oct 31	14-Jan-1944		31-Jul-2026	0.90		North
73-4138	Ned Donohue		3.0	5,589.77		Mar 15 - Oct 31	14-Jan-1944		31-Jul-2026	3.0		North
73-2122	Irrigation Wells	Cemetery Well Northfield Well	24.0	5,613.77 5,613.77		Jan 1 - Dec 31	17-Jul-1944	 30-Sep-2027		24.0		North
73-4137	Vernal Stratton Annexation		22.092	5,635.86		varies by use	17-Jul-1944		31-Jul-2026	22.092		North
73-1818	Russell Miller Annexation		2.964	5,638.83		varies by use	30-Nov-1945		31-Jul-2026	Unevaluated	2.4	North
73-2671	Russell Miller Annexation		0.45	5,639.28		Jan 1 - Dec 31	30-Nov-1945		30-Apr-2026	0.45		North
73-3731	Paydirt Annexation		40.0	5,679.28		Apr 1 - Oct 31	16-Feb-1946		30-Apr-2031	40.0		North
73-3732	Paydirt Annexation		5.0	5,684.28		Apr 1 - Sep 30	16-Feb-1946			5.0		North
73-1093	Cox Well Field	Warren Cox Well	2.19	5,686.47	0.015	Jan 1 - Dec 31	29-Jul-1947			2.19		South
73-1820	Cox Well Field	Cox Well	4.37	5,690.84	0.006	Jan 1 - Dec 31	2-Jun-1949			4.37		South
73-151	Martin's Flat Well	Martin's Flat Well	180.995	5,871.83	0.25	Jan 1 - Dec 31	24-Nov-1950			180.995		South
73-1924	Cox Well Field	2nd Cox Well	42.76	5,914.59	0.75	Mar 15 - Oct 31	24-Nov-1950	31-Mar-2033		42.76		South
73-1076	Enoch Well Field	Enoch Well North (#1) Enoch Well South (#2) Enoch Well #3 Regional WWTP Well	1,447.93	7,362.52 7,362.52 7,362.52 7,362.52	2.0	Jan 1 - Dec 31	25-Jan-1951	 31-Jan-2027 		1,447.93		North
73-4172	Big Time Developers LLC (Tom Jett)		10.0	7,372.52		Apr 1 - Oct 31	5-Mar-1951		31-Jul-2026	10.0		North
73-2574	JDL Investments, Inc. and Cedar Valley Holdings, LLC		100.0	7,472.52		Mar 15 - Oct 31	20-Sep-1951		30-Apr-2026	100.0		North
73-2902	Underground Water Well	Iron Mines	496.575	7,969.10	1.0408	Jan 1 - Dec 31	20-Sep-1951		31-Jul-2026	496.575		North
73-3302	Kleinschmidt Family Trust		4.0	7,973.10		Mar 15 - Oct 31	20-Sep-1951		30-Apr-2026	4.0		North
73-520	Underground Water Well	Iron Mines	696.855	8,669.95	1.46	Jan 1 - Dec 31	5-Apr-1952		31-Jul-2026	696.855		North
73-663	*Need more information*		0	8,669.95			12-Dec-1952			Unevaluated		
73-1788	*Need more information*		0	8,669.95			12-Dec-1952			Unevaluated		
73-1815	*Need more information*		0	8,669.95			12-Dec-1952			Unevaluated		
73-2357	Darla Allen		2.0	8,671.95		Apr 1 - Oct 31	12-Dec-1952			2.0		South
73-4165	Cordero Annexation		151.5193	8,823.47		Apr 1 - Oct 31	12-Dec-1952		30-Apr-2027	Unevaluated	151.5193	South
73-4169	Cordero Annexation		151.5193	8,974.99		Apr 1 - Oct 31	12-Dec-1952		30-Apr-2027	Unevaluated	151.5193	South
73-4170	Cordero Annexation		151.5193	9,126.51		Apr 1 - Oct 31	12-Dec-1952		30-Apr-2027	Unevaluated	151.5193	South
73-3688	Amy Dixie		29.0	9,155.51		Mar 15 - Oct 31	7-Feb-1953		31-Dec-2029	29.0		South
73-4132	Cordero Annexation		101.442	9,256.95		Mar 15 - Oct 31	7-Feb-1953		31-Jul-2026	101.442		South
73-2944	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	201.54	9,458.49		Jan 1 - Dec 31	23-Apr-1953	31-Dec-2029		201.54		South
73-1088	Cedar Park Townhomes PUD/Joe Burgess		31.2	9,489.69		Mar 15 - Oct 31	10-Jul-1953			31.2		North
73-1023	Irrigation Wells	Cemetery Well Northfield Well	1,200	10,689.69 10,689.69	5.0	Jan 1 - Dec 31	25-Sep-1953	 30-Sep-2027		1,200		North
73-2203	Sage Springs		2.0	10,691.69		Jan 1 - Dec 31	16-Dec-1953			2.0		North
73-2334	Wallace & Marilyn Heap		2.0	10,693.69		varies by use	16-Dec-1953			2.0		North
73-4133	Big Time Developers LLC (Tom Jett)		8.0	10,701.69		Apr 1 - Oct 31	16-Dec-1953		31-Jul-2026	8.0		North
73-4139	Levine Annexation		16.832	10,718.52		Mar 15 - Oct 31	16-Dec-1953		31-Jul-2026	16.832		North
73-1842	Cedar Park Townhomes PUD		3.0	10,721.52		Mar 15 - Oct 31	18-Jun-1954			3.0		North
73-1831	Cox Well Field	Cox Well	4.37	10,725.89	0.006	Jan 1 - Dec 31	23-Aug-1954			4.37		North
73-1919	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	3,619.82	14,345.71	5.0	Jan 1 - Dec 31	8-Feb-1956	31-Dec-2029		3,619.82		South
73-1048	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	882.45	15,228.16		Jan 1 - Dec 31	23-Feb-1956	31-Dec-2029		882.45		South
73-1049	Quichapa Well Field	Quichapa Wells #1,3,5,6,7,8	482.0	15,710.16		Jan 1 - Dec 31	2-Mar-1956	31-Dec-2029		482.0		South
73-2900	Underground Water Well	Iron Mines	33.32	15,743.48	0.046	Jan 1 - Dec 31	7-Apr-1956		31-Jul-2026	33.32		North
73-2901	Underground Water Well	Iron Mines	153.62	15,897.10	0.2164	Jan 1 - Dec 31	7-Apr-1956		31-Jul-2026	153.62		North
73-2913	E.L.D. Investments, LLC		17.0	15,914.10		Jan 1 - Dec 31	7-Apr-1956		30-Apr-2026	17.0		North
73-1925	Steve Sevy Annexation		2.496	15,916.60		Jan 1 - Dec 31	31-May-1962			2.496		North
		Total flow in ac-ft =	**15,916.60**							**13,486.21**	**1,375.83**	

Cedar City Corporation Municipal Water Rights - Groundwater (Sorted by Priority Date in Basin 71)												
Water Right No.	**Source/Seller**	**Source Name(s)**	**Diversion Flow (ac-ft)**	**Cumulative Diversion (ac-ft)**	**Flow (cfs)**	**Period of Use**	**Priority Date**	**Proof Due Date**	**Non-Use Expiration**	**Sole Supply (ac-ft)**	**Auxiliary to Irrigation Shares (ac-ft)**	
71-811	Escalante Farms, LLC (R. Jared Holt)		596.8	596.80		Mar 15 - Nov 1	13-Apr-1944			596.8		
71-1151	Escalante Farms, LLC (R. Jared Holt)		25.0	621.80		Mar 15 - Nov 1	12-Sep-1944			25.0		
71-1982	Escalante Farms, LLC (R. Jared Holt)		25.0	646.80		Mar 15 - Nov 1	12-Sep-1944			25.0		
71-1983	Escalante Farms, LLC (R. Jared Holt)		25.0	671.80		Mar 15 - Nov 1	12-Sep-1944			25.0		
71-1984	Escalante Farms, LLC (R. Jared Holt)		25.0	696.80		Mar 15 - Nov 1	12-Sep-1944			25.0		
71-4749	Escalante Farms, LLC (R. Jared Holt)		305.92	1,002.72		Mar 15 - Nov 1	10-Oct-1944			305.92		
		Total flow in ac-ft =	**1,002.72**									

Cedar City Corporation Municipal Water Rights - Springs								
Water Right No.	**Source**	**Source Name(s)**	**Flow (ac-ft)**	**Flow (cfs)**	**Period of Use**	**Priority Date**	**Proof Due Date**	**Non-Use Expiration**
73-434	Elmer Enterprises, LLC		69.32		Mar 1 - Nov 1	1865		31-Mar-2030
73-866	Spillsbury Springs		Combined w/ 73-990			1929		
73-904	Cedar Canyon Springs	Cluff Spring	609.8262	1.26	Apr 1 - Nov 30	1870		
73-905	Shurtz Canyon Springs		Covered by 73-1080, 1081, 1082, 1083			1856		
73-956	Cedar Canyon Springs	Upper Barnson Spring	161.4475	0.223	Jan 1 - Dec 31	1856		
73-957	Cedar Canyon Springs	Lower Will Wiliams Spring	48.5067	0.067	Jan 1 - Dec 31	1856		
73-958	Cedar Canyon Springs	Dry Spring	40.5429	0.056	Jan 1 - Dec 31	1856		
73-959	Shurtz Canyon Springs	Upper Black Rock Spring	32.5791	0.045	Jan 1 - Dec 31	1856		
73-960	Cedar Canyon Springs	Barnson Trail Spring	120.9047	0.167	Jan 1 - Dec 31	1856		
73-961	Cedar Canyon Springs	Lower Head House Spring	120.9047	0.167	Jan 1 - Dec 31	1856		
73-962	Cedar Canyon Springs	Raspberry Spring	48.5067	0.067	Jan 1 - Dec 31	1856		
73-963	Cedar Canyon Springs	White Rock Spring	161.4475	0.223	Jan 1 - Dec 31	1856		
73-990	Spillsbury Springs	3 spgs (Quichapa stream)	1,922.53	20.0	Jan 1 - Dec 31	1880	31-Oct-2028	
73-1001	Spillsbury Springs	Duncan Leeches Creek	Combined with 73-990			1893	31-Oct-2028	
73-1080	Shurtz Canyon Springs	Upper Posie Spring	Combined w/ 73-2139			1856		
73-1081	Shurtz Canyon Springs	Lower Posie Spring	Combined w/ 73-2139			1856		
73-1082	Shurtz Canyon Springs	West Big Spring	Combined w/ 73-2139			1856		
73-1083	Shurtz Canyon Springs	East Big Spring	Combined w/ 73-2139			1856		
73-1125	Spillsbury Springs	Watson Gulch	Combined w/ 73-990			1856	31-Oct-2028	
73-1133	Spillsbury Springs	Willow Spring Stream	Combined w/ 73-990			1856	31-Oct-2028	
73-1858	Cedar Canyon Springs	Chatterly Spring	260.6328	0.36	Jan 1 - Dec 31	Jun-1856		
73-1896	Shurtz Canyon Springs	Urie Spring	59.0	0.25	Nov 2 - Feb 28	21-Dec-1957		
73-2139	Shurtz Canyon Springs	Birch Spring Three Ledge Spring No. 1 Three Ledge Spring No. 2 Three Ledge Spring No. 3 Upper Posie Spring No. 2	1182.6	1.95	Jan 1 - Dec 31	1856		
		Total flow in ac-ft =	**4,838.75**					

Cedar City Corporation Irrigation Water Rights - Surface Water							
Water Right No.	**Source**	**Source Name(s)**	**Flow (ac-ft)**	**Flow (cfs)**	**Period of Use**	**Priority Date**	**Proof Due Date**
73-423	Coal Creek	Coal Creek	448.60	0.38	Apr 1 - Nov 30	1903	31-Mar-2033
73-529	Coal Creek	Coal Creek	Note 1	0.21	Apr 1 - Nov 30	1870	31-Mar-2033
73-1011	Coal Creek	Coal Creek	Note 1	1.92	Apr 1 - Nov 30	1870	31-Mar-2033
73-1390	JDL Investments, Inc. and Cedar Valley Holdings, LLC	Parowan Gap Wash (Note 2)	0		Apr 1 - Oct 31	1856	
		Total flow in ac-ft =	**448.60**				

Note 1: Water rights #73-423, #73-529, #73-1011, and #73-1924 are limited to a total yearly diversion of 491.36 ac-ft.
Refer to the Order of the State Engineer for Change Application #73-423 (a34526).
Note 2: Water rights #73-1390 and #73-387 are supplemental rights with all of the beneficial use set to WR #73-387.
Refer to Memo on the Division of Water Rights website dated June 25, 2024.

Cedar City Corporation Irrigation Shares - Surface Water					
Irrigation Company	**Shares Owned by Cedar City**	**Class**	**Water Yield per Share (ac-ft)**	**Flow (ac-ft)**	
South & West Field Irrigation Company	267.6	1	3.2882	879.922	Yield based on Div. of Water Rights website
Union Field Irrigation Company	0	1	6.11	0	Yield based on 2018 appraisal
East Extension Irrigation Company	7.5	1 & 2	3.18	23.850	Yield based on 2018 appraisal
	2.5	3 & 4	6.51	16.275	Yield based on 2018 appraisal
	0	A	3.13	0	Yield based on 2018 appraisal
North Field Irrigation Company	146.36	1	3.27	478.597	Yield based on 2018 appraisal
	142.75	3 & 4	5.3	756.575	Yield based on 2018 appraisal
	30.47	A	5.9	179.773	Yield based on 2018 appraisal
Old Fort and Old Field Irrigation Company	36.25	1	2.53	91.713	Yield based on 2018 appraisal
Bulldog Ditch Association (North West Field Irrigation Company)	131.027	A	4.1638	545.57	Yield based on Div. of Water Rights website
Coal Creek Irrigation Company	20	A	0.1	2.0	Yield based on Div. of Water Rights website
	805.0863	B	0.1	80.509	Yield based on Div. of Water Rights website
			Total flow in ac-ft =	**3,054.78**	

APPENDIX B

Southern Utah University Conservation Strategies

Southern Utah University Conservation Strategies

- The Southern Utah University (SUU) irrigation system uses a rainbird IQ irrigation system that adjusts water output based on ongoing weather data collected from a weather station on campus. The master controller adjusts irrigation water output based on the temperature, relative humidity, wind, and precipitation over the previous 24 hours. Additionally, systems can be turned on or off remotely, allowing the University to respond quickly when conditions require. Several watering controllers have flow sensors to shut down a branch system if a high-flow condition (leak) is detected.
- SUU planted areas of xeriscaping and drought-tolerant plants to lower the use of irrigation water and the use of fossil fuels for mowing and weed eating.
- SUU also utilizes secondary water for irrigating the campus between 800 W. and the freeway and is currently assessing the use of secondary water for upper campus.
- SUU has met the requirements of HB 121 which imposes water conservation requirements at state government facilities and by state agencies. The bill provides incentives to replace lawn or turf with drought resistant landscaping, grants rulemaking authority, requires the Legislative Water Development Commission to study water conservation in the state; and makes technical changes. The University is also currently undergoing irrigation system and landscape upgrades designed to further optimize water utilization.
- SUU replaced natural turf in the football stadium with synthetic turf, saving approximately 300,000 of gallons of water annually. Additional areas for synthetic turf installation are being explored.
- On the SUU campus 96 waterless urinals were installed, saving 40,000 gallons of fresh water annually on each urinal. Waterless urinals are part of the design standard for new construction.
- The school requires designers to select water-efficient fixtures and appliances, including low-flow faucets and showerheads, waterless or ultra-low flow urinals, sensor-operated flushometer toilets, etc. for new construction.
- SUU replaced water-cooled ice machines and split system A/C units with air-cooled units. Each new machine saves several hundred gallons of water each day.