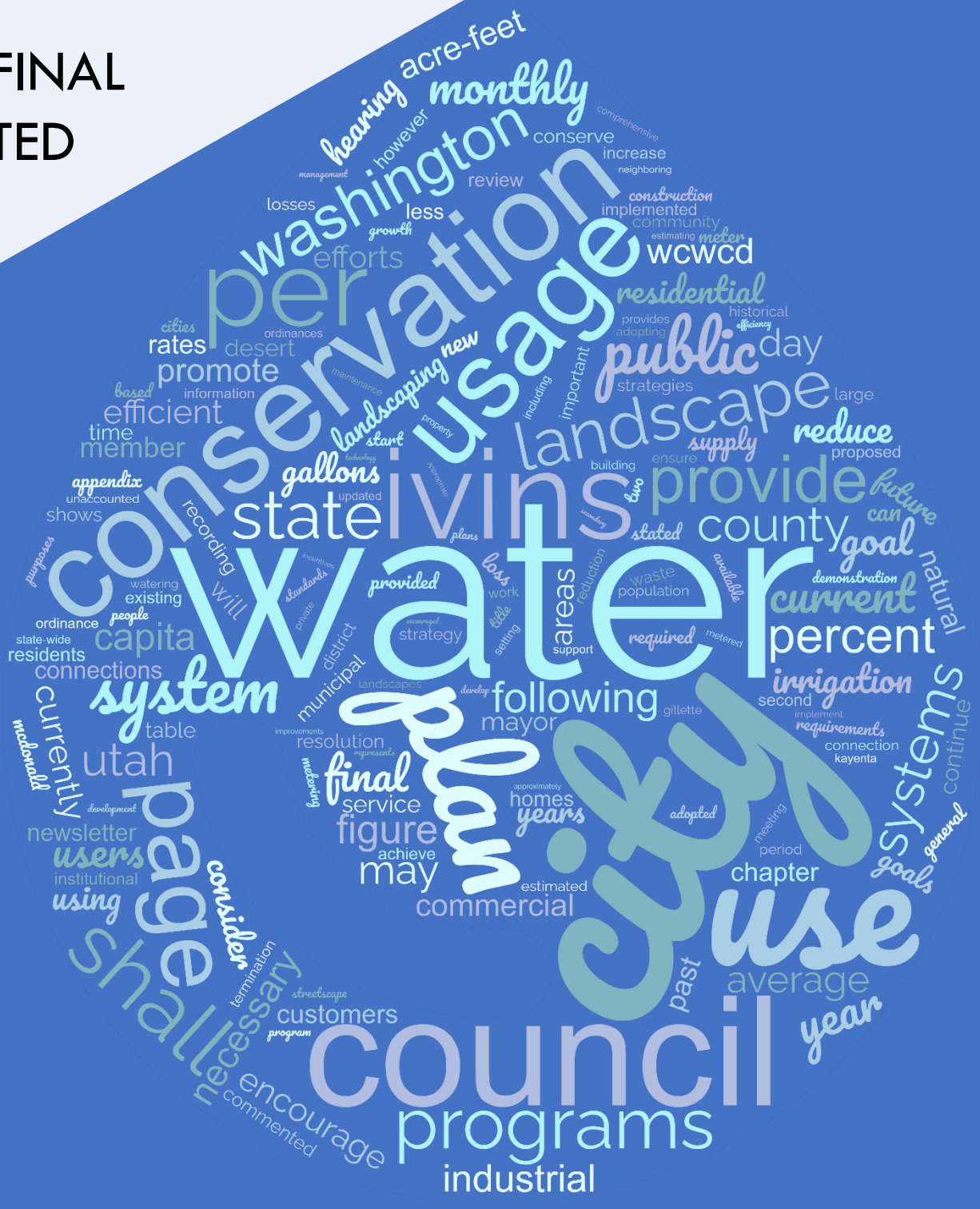
IVINS CITY WATER CONSERVATION PLAN

2023 FINAL ADOPTED



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Ivins City

Water Conservation Plan Update

2023 FINAL ADOPTED

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Adopted by Ivins City Council by Resolution on November 2, 2023.

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Introduction

Ivins City is a growing city with an estimated population of 10,500 residents located in sunny Southern Utah in the high elevations of the Mojave Desert. Ivins is part of a rapidly growing and thriving community in Washington County, Utah. It is known for being at the doorway to Snow Canyon State Park which along with the Red Mountain Wilderness area provides a stunning backdrop for our community. The arid desert climate, with an average of 8 inches of rainfall each year, makes us constantly aware of the scarcity of precious water.

Water supply is acknowledged to be in limited supply to our area, in fact, in our whole region and state. In compliance with Utah State Code 73-10-31, all water providers must present a plan that identifies existing and proposed water conservation measures. The plan must include a clearly stated overall water use reduction goal and every five years, review progress, allow public comment through a public hearing, update the plan, and then adopt it. Ivins City's last plan was adopted in 2018 and thus must adopt an updated plan in 2023.

Description of Ivins City

Ivins City is located on the west side of Washington County wedged between the City of St George and Santa Clara City on the east and Shivwits Indian Reservation on the west. To the north is the Snow Canyon State Park and Red Cliffs Desert Reserve which included the Red Mountain wilderness area. To the south is the BLM managed Santa Clara River Reserve. The city is estimated to be 54 percent developed based on the current population of approximately 10,500 and an estimated future buildout population of 19,500. This is inclusive of some private properties near the Santa Clara River, which are currently in the unincorporated county that are expected to be annexed at some point in the future when the owners decide to develop.

The City is served by two water systems. Figure 1, on page 2 provides a map of the coverage of the two systems. On the west side of Ivins in the Kayenta area, the residents are served by a private water system called KWU with approximately 412 connections. The remaining part of Ivins is serviced by the City with 4,138 connections (as of June 2023). This water conservation plan and all data presented herein only addresses water use and conservation for the portion of the City served by Ivins City. These connections can be further broken down as 3,939 single family residential, 7 stock water, 95 commercial, 84 institutional, and 351 multifamily residential.

Ivins Irrigation Company is a private irrigation company that provides irrigation water to agricultural properties. There are approximately 100 single family homes in Ivins that also receive irrigation water from this source of water. This analysis does not account for this usage.

Ivins City has grown up fast over the past two and a half decades. It originally began as a small farming community, an offshoot from Santa Clara City, when an irrigation canal diverted water from the Santa Clara River and brought to the area then called the Santa Clara Bench. Figure 2 on page 3 provides a chart of historical population and how the community began to rapidly grow, starting in the late 80's and has continued to grow at rapid but somewhat linear pace into the present.

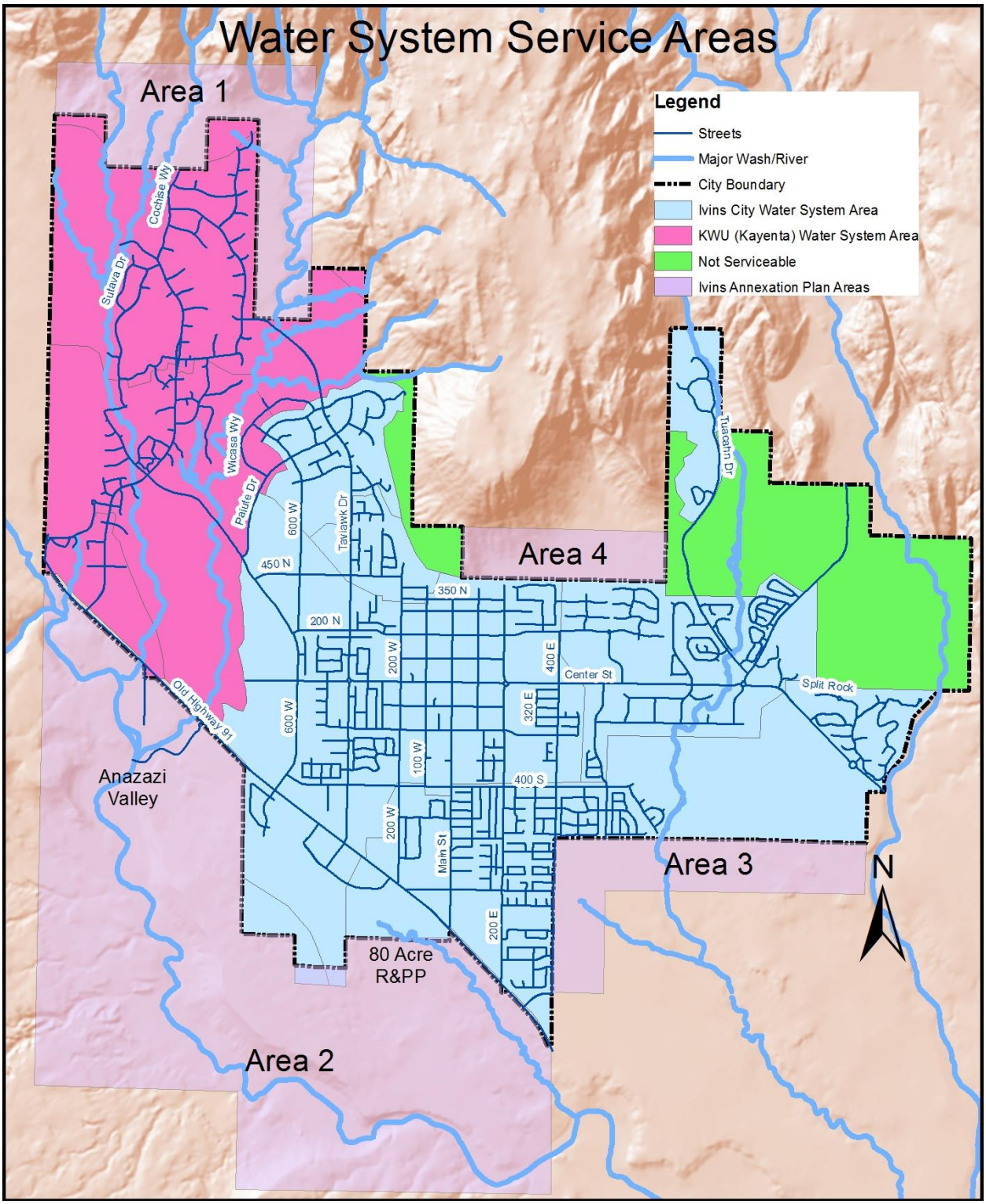

FIGURE 1. IVINS CITY WATER SYSTEM SERVICE AREAS

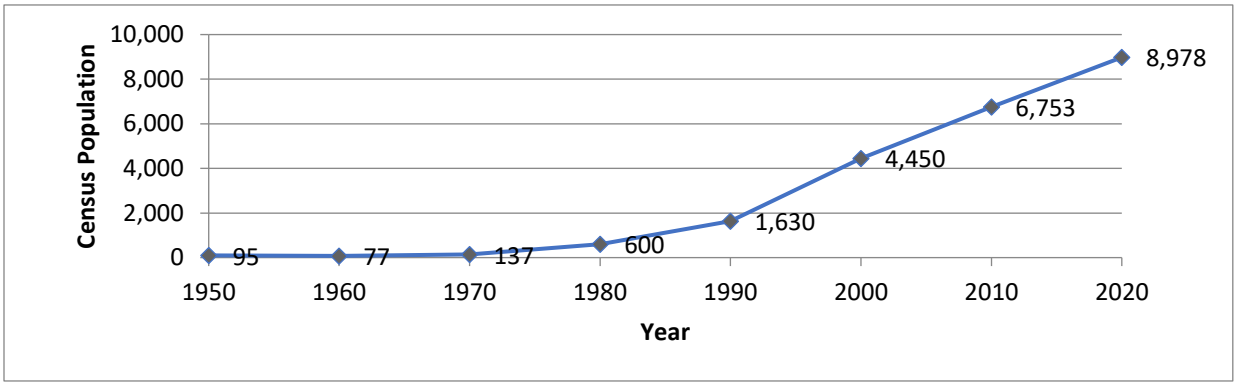

FIGURE 2 HISTORICAL CENSUS POPULATION

Water Supply

The City water supply is a mix of groundwater and surface water sources. The following table provides a list of these sources:

TABLE 1. SUMMARY OF IVINS CITY WATER RIGHTS/WATER SUPPLY AGREEMENTS

Description	Flow Capacity (gpm)	Annual Production (acre-feet/year)
Snow Canyon Compact Water Rights	350	393
Regional Pipeline (RWSA)	2700	Up to 3,000 (depending on supplies)
Gunlock Wells	As needed	614
Ence Wells	600	380
Total		4,387

Furthermore, the City has entered into the Regional Water Supply Agreement in 2006 with the Washington County Water Conservancy District (WCWCD). In this agreement the WCWCD agrees to "provide adequate water to meet the needs of" Ivins City and all other municipal customers in the County that have signed the agreement. A more detailed description of the City's water supply is provided in the Ivins City Water Master Plan.

Ivins City is currently considering pursuing the construction of an irrigation system that would provide a secondary water system to, at the least, a significant portion of the City. The City has 347 acre-feet of irrigation water shares to provide some of the water needed to feed the newly proposed system. However, additional water would be needed to make this system work. The City is looking at reuse water as a potential source of water for this system. The WCWCD has committed that, if the City will build the system, it will find the water sources necessary to supply the system. The WCWCD has also recently indicated that it is interested in constructing a surface water treatment plant somewhere in Ivins that would enhance culinary water supplies.

It is possible that Ivins City will pivot current plans to take advantage of this new source of water. Additional planning efforts are necessary to solidify this plan.

Estimated Growth

It is not hard to convince people that water conservation is important in Ivins when we live in such an arid environment. It is even clearer in this environment of growth as shown in Figure 3.

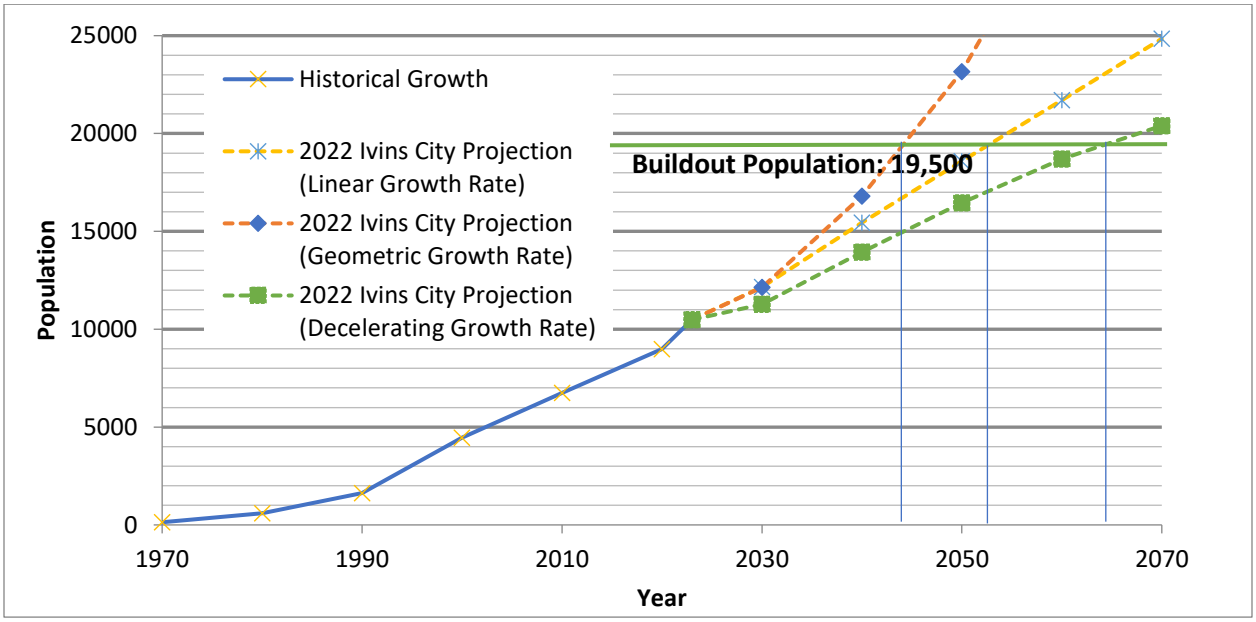

FIGURE 3 GROWTH PROJECTIONS FOR IVINS CITY TO 2070.

Ivins City comprises 10 square miles and is approximately 54 percent developed. When all the remaining land development occurs, the population is expected to reach an estimated 19,500. This number is calculated based on the existing Ivins Land Use Plan (Map 1 of the General Plan). If the plan is changed with higher densities, then the buildout population may increase or vice versa if land uses are changed to lower densities. Per the projections, we will reach that estimated build out at some point estimated between 2045 and 2065.

Looking at the municipal water system, Ivins City currently serves (as of Dec 2022) 4,268 equivalent residential connections (ERC's). This is based on using the State's method of calculation where the annual average usage of single-family homes is used to evaluate the ERCs of commercial, institutional, and multi-family accounts.

The state has currently approved for Ivins to plan for future system needs using a raw water demand of 0.59 acre-feet per year per ERC. Based on recent data it is possible that this number may decrease further in the future with additional water conservation efforts. It is estimated that the total buildout will require the system to serve 8800 ERCs which equates to 5,200 acre-feet of water that must be supplied. Current supplies are approximately 4,400 acre-feet.

State-Wide Water Conservation Goals

The State of Utah Division of Water Resources (DWRe) is responsible for leading water conservation efforts for the State and to ensure that water providers are complying with the Water Conservation Act. The State has its own plan and its own goals. Most recently, in November 2019, the state developed *Utah's Regional M&I Water Conservation Goals* which established region specific goals for nine municipal and industrial (M&I) areas of Utah. Washington County lies within the area identified as Lower Colorado River South.

Proposed Regional M&I 2030 Water Conservation Goals and Future Goal Projections

Region	2015 Baseline (gpcd)	2030 Goal		2040 Projection		2065 Projection	
		Goal (gpcd)	Reduction from 2015	Projection (gpcd)	Reduction from 2015	Projection (gpcd)	Reduction from 2015
Bear River	304	249	18%	232	24%	219	28%
Green River	284	234	18%	225	21%	225	21%
Lower Colorado River North	284	231	19%	216	24%	205	28%
Lower Colorado River South	305	262	14%	247	19%	237	22%
Provo River	222	179	20%	162	27%	152	32%
Salt Lake	210	187	11%	178	15%	169	19%
Sevier River	400	321	20%	301	25%	302	24%
Upper Colorado River	333	267	20%	251	25%	248	25%
Weber River	250	200	20%	184	26%	175	30%
Statewide	240	202	16%	188	22%	179	26%

Note M&I = municipal and industrial; gpcd = gallons per capita per day based on permanent population. Reported per-capita use includes all residential, commercial, institutional, and industrial uses averaged over the permanent population in each region.

FIGURE 4 PROPOSED REGIONAL M&I WATER CONSERVATION GOALS SET BY STATE OF UTAH IN 2019

In 2000, the state established a goal of a 25 percent reduction by 2025. After achieving an 18 percent reduction by 2015, these new goals were established to reduce usage further. As shown on Figure 4, based on a 2015 baseline for our area of 305 gallons per capita per day (gpcd), the State's goal was to reduce usage in our area by 14 percent to 262 gpcd by 2030, to 247 gpcd (19% total) by 2040, and 237 gpcd (22% total) by 2065.

The State plan indicated that conservation can be achieved by two different change instigators identified as Market and Social Trends and Policy Interventions as graphically shown in the Figure 5 below.

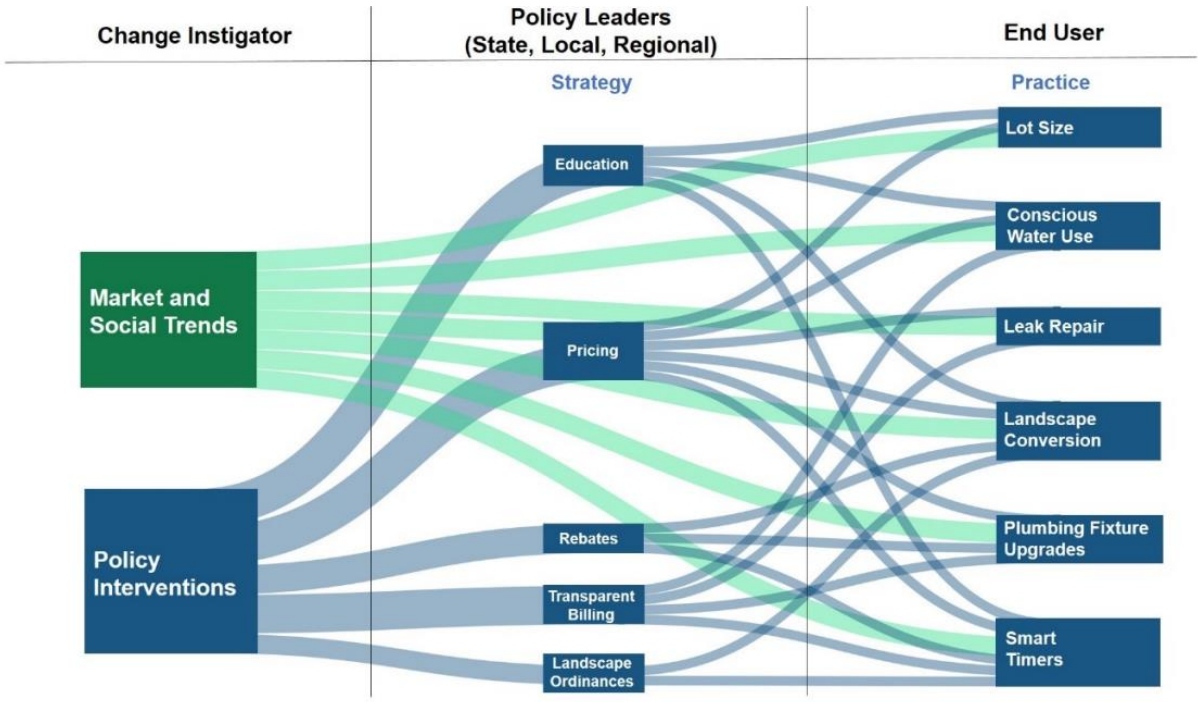

FIGURE 5 CHANGE IN FUTURE WATER USE (EXCERPTED FIGURE FROM UTAH REGIONAL M&I WATER CONSERVATION GOALS, 2019, FIGURE 4-2)

The plan acknowledges that there are likely hundreds of possible water conservation practices but then attempts to create a list of possible water conservation practices that could be used by an agency to promote water conservation. This list is provided as follows:

General

- Educate through demonstration gardens
- Provide landscaping classes
- Distribute educational booklets
- Distribute information mailers
- Create website resources
- Promote mass media messaging
- Target high residential and commercial water users
- Implement business water efficiency management plans
- Increase stakeholder coordination
- Create data management programs
- Provide rebates (indoor and outdoor)
- AWWA M36 water audits to identify and eliminate sources of water loss
- Enhance leak detection and repair
- Water pricing policies
- Ordinances and policies

Indoor

- Provide do-it-yourself water saving kits
- Incentivize shower head replacement
- Incentivize toilet replacement
- Incentivize faucet replacement
- Incentivize washing machine replacement

Outdoor

- Increase landscape watering at night
- Incentivize and educate on landscape conversion
- Implement landscape watering regulations
- Implement lawn installation regulations
- Establish irrigation water budgets
- Raise lawn mower cutting height to better shade grass and deepen roots
- Encourage rainwater harvesting
- Improve wastewater reuse
- Implement water waste fees
- Incentivize smart controllers
- Increase secondary water metering
- Implement irrigation schedules

From this list of possible practices, the plan identified a list of recommended water conservation practices:

General Recommended Practices:

- **Water conservation education.** Continued emphasis and funding of education and outreach must be fundamental components of any water conservation plan.
- **Conservation pricing.** Financial impacts will help motivate water conservation. Important features are lowering base rates, increasing tiers for usage, reviewing funding sources, and using customer feedback technology.

Indoor Recommended Practices:

- **Fixture conversion.** This will happen naturally with new construction and as old fixtures are replaced but may be accelerated through incentives and policies.
- **Other measures**. Fixing indoor leaks and inspiring changes in indoor water use habits will reduce consumption.

Outdoor Recommended Practices:

- **Improved irrigation efficiency.** Secondary metering, smart irrigation controls, and drip irrigation systems will improve irrigation efficiency for any landscape.
- **Water-wise landscaping.** New construction can be water-wise from the beginning, while existing landscapes can be converted.

- **Lot size and density guidelines.** Smaller lot sizes and less irrigated area will reduce the amount of water needed outdoors in new developments.

Washington County Water Conservation

Ivins City is a partner with the Washington County Water Conservancy District (WCWCD) and benefits from many of the programs they have implemented county-wide. The District last updated its water conservation plan in 2021.

The District identifies in their plan 20 conservation programs as shown in the following list that are either implemented or soon to be implemented.

They are listed as follows:

- **Real water loss reduction (system wide).** Find and replace leaks in the distribution system to reduce real water loss.
- **Tiered water conservation rate.** Continually evaluate water rate structure to incentivize conservation. Modifications could include adjusting the tiers or rates.
- **Advanced Metering Infrastructure (AMI).** Support municipal efforts to install AMI systems and make consumption data easily accessible to water users.
- **Weather-based irrigation controller rebates.** Provide a rebate for buying a weather-based irrigation controller.
- **Irrigation equipment rebates.** Offer rebates for converting to high-efficiency sprinkler nozzles, eliminating an irrigation station, and adding pressure reducer valves.
- **Efficient outdoor watering education.** Educate the public on outdoor efficiency initiatives, including workshops, certified landscaper training, plant tagging, speakers bureau, managing water conservation gardens, coordinated outreach to other water providers, local nurseries/landscapers etc.
- **Outdoor water audit.** Offer local water users a free, customized report on how to save water and irrigate responsibly.
- **Tree rebate.** Provide rebates for select water-efficient trees.
- **Public and school education.** Raise awareness of conservation benefits and measures via school programs, speaker's bureau, media coverage, advertising campaigns, and electronic/printed educational materials.
- **School building retrofit.** Offer schools grants to replace fixtures and upgrade irrigation systems.
- **High-efficiency fixture giveaway.** Offer free multifamily residential high efficiency showerhead and commercial pre-rinse spray nozzles to eligible customers.
- **Commercial washing machine rebate.** Provide a rebate for up to 50% of the cost of a high efficiency commercial washer.
- **Commercial toilet and urinal rebate.** Provide a rebate of up to $100 for the installation of an EPA Water Sense labeled high efficiency toilet and/or high efficiency urinal.
- **Residential landscape design consultations.** Help residential customers design a water-efficient landscape that follows the Localscapes principles.
- **Landscape conversion rebate (residential and commercial).** Provide a $2 per square foot incentive to remove turf and permanently replace it with low water use plants or hardscape.

- **Hot water on demand rebate.** Provide up to a $250 rebate to equip homes with efficient hot water on demand systems.
- **Leak devices/flow sensor rebate.** Offer up to $200 for qualifying flow sensors that provide water users instant access to use data.
- **Water audits for hotels/motels.** Provide free audits of indoor (bathrooms, kitchens, ice machines, laundry, cooling towers) and outdoor irrigation water use to hotels and motels.
- **New development standards.** Facilitate the enactment by municipalities of new construction standards requiring water efficient fixtures and landscapes.
- **Customized incentive program for high water users.** Offer site visits and water use analyses to top water users. Provide customized financial incentives for reducing water use.

The District has recently presented the 20-Year Water Supply Plan in the Summer of 2023. This plan has identified that water conservation is essential to providing water for future growth. Ordinances that have been passed by surrounding communities should keep a standard of 0.59 acre-feet per year of water usage per equivalent residential connection (ERC) for all new development. The new plan is also establishing a pathway for existing users to reduce usage from 0.78 to 0.63 acre-feet per year per ERC by 2042. This is a 20 percent reduction in usage.

Ivins City Current Achievements

Ivins City has always been a leader in water conservation in Washington County for many years by demonstrating that a community can be attractive while using less water. The Kayenta area of Ivins has especially been a demonstration of a manner to be water efficient, respect the natural beauty of the desert, and remain an attractive and vibrant place to live.

In 2018, Ivins City recognized that it had already met the State's 2000 to 2025 goal of reducing usage by 25 percent, it passed a water conservation plan that set a goal to reduce water usage by 10 percent for the 10-year period of from 2017 to 2027 setting the target goal at 197 gallons per capita per day (gpcd).

Due to these aggressive efforts and successes in reducing water usage, in 2019, Ivins was recognized by the Governor's Office earning the Water Efficiency Award.

FIGURE 6 2019 AND 2023 WATER CONSERVATION AWARDS FROM STATE GOVERNOR'S OFFICE

In 2023, Ivins City was again recognized by the State Of Utah for water conservation efforts. Governor Spencer Cox presented Mayor Chris Hart with the Natural Resources Water Conservation Award.

If you project back to the year 2000, Ivins City has reduced water by an impressive 38 percent.

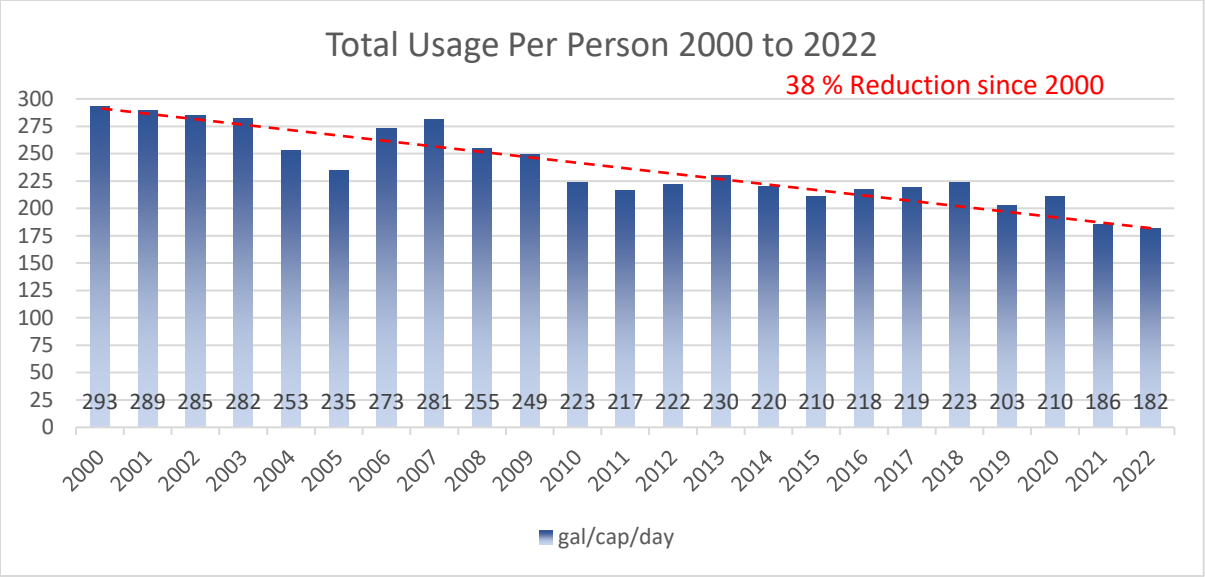

FIGURE 7 TOTAL USAGE PER CAPITA FROM 2000 TO 2022

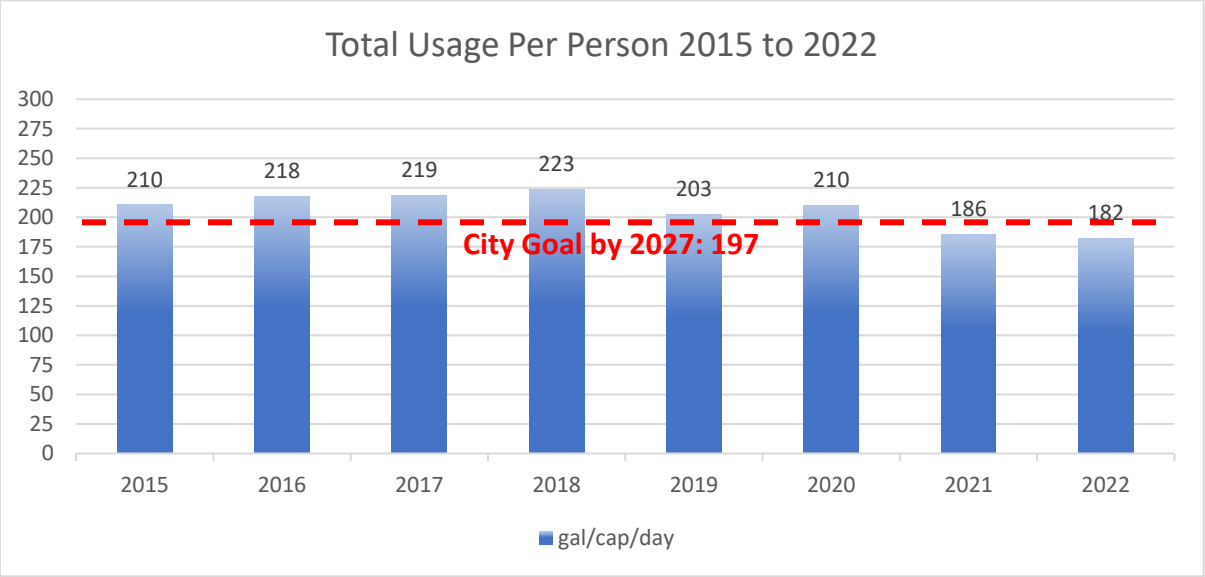

FIGURE 8 TOTAL USAGE PER CAPITA FROM 2015 TO 2022 COMPARED TO CITY GOAL

The Figure 8 chart shows how well Ivins City has performed since setting its last goal. In 2021 Ivins City surpassed its goal in 2022 extended even lower to 182 gpcd which represents an additional 18 percent reduction.

The State Regional Goal and WCWCD Goal is to reduce water consumption by 14 percent from the period 2015 to 2030. Ivins usage in 2015 was 210 gpcd, thus, to meet this goal water usage must be reduced to 179 gpcd or by an additional 2 percent below the 182 gpcd that has already been achieved.

Ivins City Current Conservation Efforts

Ivins has achieved its goal by implementing its water conservation plan and thus encouraging residents to use less water. We are grateful to the efforts of the WCWCD to implement water conservation audits, assistance, and rebate programs that have certainly contributed to the overall water conservation in Ivins. The WCWCD administers eleven rebate/grant programs and six education/assistance programs for various users to be incentivized to conserve water. We consider their efforts vital to our water conservation planning.

The following is a list of the programs and strategies that have already been implemented by Ivins City.

Water Conservation Education

The following efforts are in place for water conservation education in Ivins City:

- The City's monthly newsletter promotes water conservation in every edition with frequent reminders to reset water timers and tips on ways to conserve water.
- The website has a page dedicated to water conservation including providing a copy of this plan.
- Social media has been used to promote grass removals and irrigation timer adjustments.
- Brochures and flyers are kept at City Hall for residents and are offered for free to encourage water conservation.
- City Hall was constructed with an ultralow water consumption landscaping as a demonstration project.
- Ivins City also received a grant from the Division of Water Resources to implement a water transparency portal with customers to improve customer engagement with their water use. This portal is in the process of being established.

Water Conservation Pricing

Ivins City has some of the most aggressive water conservation rates in the County. This is partly since Ivins City has very few of its own water rights and purchases most of its water from the City of St George and the WCWCD, therefore, Ivins has higher source water supply expenses than other communities. The following chart shows the water rates as compared to other surrounding communities. The high cost of water may be one of the reasons that Ivins City has some of the lowest water usages.

	Usage Rates ($ per 1,000 Gallons/Month)			
Base Rate	0 to 7000 Gallons	7001 to 15,000 Gallons	15,001 to 30,000 Gallons	30,001 +
$20.60 per month	$2.74	$3.78	$4.65	$5.88

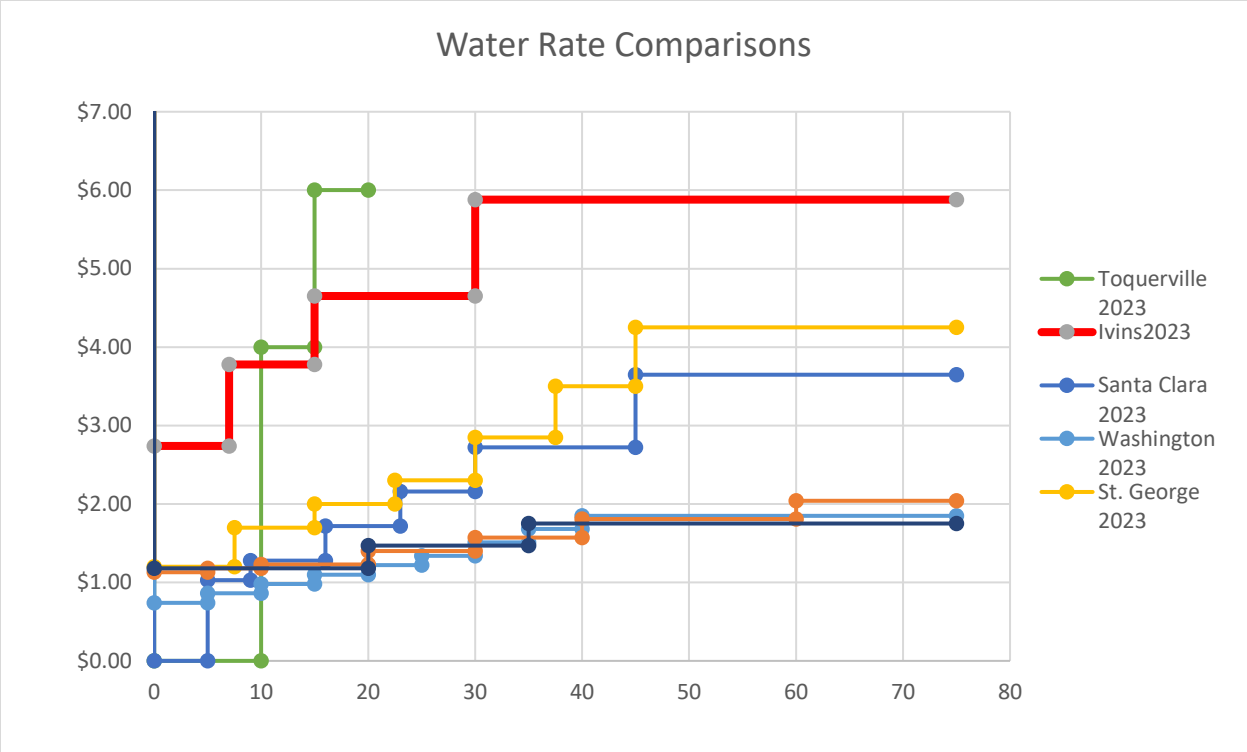

FIGURE 9 WATER RATES AS COMPARED WITH OTHER CITIES IN WASHINGTON COUNTY

In addition to the Ivins City rates, surcharge rates are billed by Ivins City and passed through to the WCWCD to help pay for water conservation programs as follows:

- Homes built before 2023: Add $1.00 per 1,000 gallons for usage above 36,000 gallons per month.
- Homes built on or after January 1, 2023 add $10.00 per 1,000 gallons for usage above the following seasonal limits:

Seasons	Excess Surcharge Limit
Winter (December, January, February)	8,000 gallons/month
Spring (March, April)	15,000 gallons/month
Summer (May, June, July, August, September)	20,000 gallons/month
Fall (October, November)	15,000 gallons/month

Water Conservation Ordinances

Since the last water conservation plan, the City has made adjustments to ordinances to improve water conservation. Also, the board of the Washington County Water Conservation District has adopted a set of Water Efficiency Standards that all entities that are part of the Regional Water Supply Agreement must adopt. These standards have been incorporated into the City's ordinances. The following table is a summary of the current ordinances that address water conservation:

Section	Summary
10.01.120	Waste of water is illegal. Waste includes leaky equipment or any other practice that is not a purposeful use of the water.
10.01.125	Sprinkler irrigation of lawns is prohibited between 8 AM and 8 PM.
10.01.126 & 127	Water conservation stages identified to limit water use in an emergency.
11.01.203	Unlawful to overflow water onto public property.
11.01.210	Unlawful to discharge water across the sidewalk.
14.11.101 to 707	Title 14, Chapter 11 Regulations for Landscaping and Water Conservation for Developing Land (Adopted November 2, 2023, See appendix for full ordinance.) • Water efficiency standards for landscapes for all new development. • New construction must significantly restrict grass to only active areas with maximums. • Requires Energy Star and WasterSense labeled appliances and fixtures. • Requires water efficient plant and tree selection. • Requires irrigation system to meet specific design standards including smart timers and drip systems. • Requires hot water recirculation required for residential with more than 1,200 square feet. • Restricts water features and pools.
16.33.102	Car washes are restricted to only hand operated facilities.

Physical System Operations

There are also physical system operations that can aid in water conservation which are as follows:

- **Reducing leaks in the system.** Ivins City has been experiencing a high volume of water leaks in the system. We have leak detection equipment that uses sounds to find leaks but so far it has been almost no use since our system is comprised of mostly PVC pipe, and it is buried in silty sand soils. This combination of pipe material and bedding material makes it very difficult to detect leaks via sounds.
- **Reduce water loss due to meter inefficiencies.** Some water losses are due to old meters or otherwise inaccurate meters. It is important to replace the old meters and defective meters with new, to ensure that an appropriate amount of revenue is being collected. It is also important so that residents respond appropriately to their own potential overuse of water.
- **Tracking non-revenue water usage.** We have started tracking non-revenue water usage which is the water that is used in unmetered situations such as when flushing the system or putting out structure fires. Tracking this number helps identify how much of the water loss is truly due to leaks or meter inefficiencies.

Other Factors Affecting Water Conservation

There are other influences contributing to the lower usage as well. Kayenta represents most of the west side, one third of Ivins. About 25 percent of this development is located in the boundary of the Ivins City culinary water system. They have been leaders in the area in promoting water efficient landscaping and

demonstrating how this can be done in a pleasing manner. All new commercial and multifamily developments are required to use water efficient landscaping.

Ivins City does have a private irrigation company that provides water to big agricultural properties and some residents, estimated at 150 connections. The users with irrigation water may appear in our database as super-efficient users when it is quite possible that the opposite is true. The Ivins Irrigation Company has secured a grant to install water meters on all of the irrigation connections.

There are a few factors that work against Ivins City's water conservation goal. The City's demographics are changing. The City has become a retirement community in the past two decades. This has caused the average household size to decrease from 3.5 persons per household to 2.8. This naturally impacts the ability to reduce the usage of water per person since a landscape, representing approximately 50 percent of total usage, is not dependent on the number of occupants of the home.

Another factor is that 18 percent of the homes in Ivins City are second homes. Second homes may use less water indoors, but they don't use less water outdoors, in fact, a recent study by the WCWCD indicates that second homes may use more water outdoors than primary residences. The lack of onsite care may be the reason for this statistic. These second homes increase water usage in the city but do not add population which hinders the city to achieve goals based on gallons per capita per day.

Water Conservation Reduction Goal

The City has already met its goal to reduce water usage by 10 percent from 2017 to 2027 by decreasing usage to 182 gpcd. It is also very close to meeting the State and WCWCD goal to reduce usage by 14 percent from 2015 to 2030.

Having achieved much in the past years, it is believed that water usage will continue to decrease per capita especially with the new water conservation ordinance for new development that was passed in 2022 combined with the District more aggressively offering to pay to remove grass and other measures aimed at reducing water usage for existing users.

The city, therefore, is setting the following new goals upon the adoption of this plan:

1. Reduce water usage in gallons per capita per day (gpcd) by 1 percent per year for the next 20 years.

Year	2022	2027	2032	2037	2042
Usage (gpcd)	182	173	164	155	146
Percent Reduction	baseline	5%	10%	15%	20%

2. Reduce and then maintain system water losses to 7 percent or less.

Proposed 5-Year Water Conservation Strategies

The following strategies are proposed and shall be implemented in the next 5 years upon the adoption of this plan:

Goal #1: Reduce water usage in gallons per capita per day (gpcd) from 2022 to 2032 by 10 percent from 182 to 164 gpcd.

Strategy 1A: Continue all current efforts.

- Awareness through monthly newsletter. Include regular monthly articles or reminders regarding water conservation.
- Every newsletter contains a water conservation tip with recommended watering schedules.
- Support WCWCD on all water conservation programs, especially on grass removals.

Strategy 1B: Setup Transparency Billing

- Grant has been awarded already, need to proceed with the project.

Strategy 1C: Water Education Billing

- Explore re-arranging the water bill such that residents that are overusing water may be better notified, more aware and feel a sense of social pressure to reduce.

Strategy 1D: Automated Meter Infrastructure

- Automated Metering Infrastructure allows for metering data to be collected continuously rather than monthly. This allows for more timely leak detection and water waste notifications.
- Estimated costs are $1.2 million. Apply for grants if possible to help fund.

Goal #2: Reduce and then maintain system water losses to 7 percent or less.

Strategy 2A: Reduce water loss due to meter inefficiencies.

- Establish a policy of meter replacement that balances the economics of the cost of the replacement versus the cost of lost revenue as meters age. Increase the replacement cycle when the economics supports it.

Strategy 2B: Reduce water leaks.

- Replace all known defective service piping in the system.
- Improve leak detection efforts using existing sound detection equipment.
- If the above listed efforts do not reduce system water loss, evaluate the usage of zone flow measurements to pin point locations of leaks.

Strategies to Consider for Future

This plan will be updated in 5 years. It may be necessary to improve water conservation efforts further than those listed in this plan. The City may want to consider the following measures.

- Create specific water budgets for each water account and provide feedback to customers when they exceed those budgets.
    - Consider setting water budgets for single family residential accounts.
    - Consider setting water budgets for multi-family residential accounts.

    - Consider setting water budgets for commercial accounts.
- Other ideas
    - Consider grey water reuse systems
    - Consider recycling showers
    - Consider artificial turf installations in certain situations

Appendix A: Resolution by City Council Adopting the Water Conservation Plan

RESOLUTION NO. 2023-14R

A RESOLUTION OF IVINS CITY, UTAH, ADOPTING THE 2023 WATER CONSERVATION PLAN FOR IVINS CITY

WHEREAS the Ivins City Council held a Public Hearing on November 2, 2023, to consider the attached updated Water Conservation Plan for 2023; and

WHEREAS following the public hearing on November 2, 2023, the Ivins City Council voted to formally adopt the 2023 Water Conservation Plan for Ivins City by Resolution;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF IVINS CITY, STATE OF UTAH:

The attached 2023 Water Conservation Plan for Ivins City is hereby approved and adopted by the City Council and the Mayor and City Recorder are authorized to sign this resolution.

EFFECTIVE DATE: This Resolution shall become effective immediately upon adoption by the City Council.

PASSED AND ADOPTED BY THE IVINS CITY COUNCIL, STATE OF UTAH, ON THIS 2nd DAY OF NOVEMBER, 2023 BY THE FOLLOWING VOTE:

	AYE	NAY	ABSTAIN	ABSENT
Dennis Mehr	X			
Mike Scott	X			
Jenny Johnson	X			
Adel Murphy	X			
Lance Anderson	X			

Chris Hart, Mayor

ATTEST:

Kari D. Jimenez
City Recorder

Appendix B: Public Notice

IVINS CITY
OFFICIAL NOTICE OF PUBLIC HEARING

Meeting Date:	**City Council Meeting** **Thursday, November 2, 2023**
Meeting Time:	**5:30 P.M.**
Meeting Place:	**Ivins City Hall, 85 N. Main St. Ivins, UT 84738** **435-628-0606**
Purpose:	**Public Hearing on Ivins City proposed Water Conservation Plan**
Contact:	**Public Works Director and City Engineer, Chuck Gillette, 435-634-0689**

All persons interested will be heard electronically, via email to City Recorder Kari D. Jimenez at kjimenez@ivins.com or may submit their views in writing to the City Council. A copy of the proposed plan is available by request through Ivins City Hall or on Ivins City website at www.ivins.com

In compliance with the Americans with Disabilities Act, individuals needing special accommodations (including auxiliary communicative aids and services) during these hearings should notify City Recorder Kari D. Jimenez at Ivins City Hall, 85 N. Main St., Ivins, UT 84738 or by calling 435-628-0606 ext. 705, at least three days prior to the hearing to be attended.

Kari D. Jimenez, MMC
City Recorder

Appendix C: Minutes of Public Hearing

VOTE: The motion carried.

Council Member Scott	AYE
Council Member Johnson	AYE
Council Member Murphy	AYE
Council Member Mehr	AYE
Council Member Anderson	ABSTAIN

Roll call vote. Four (4) Council Members voted in favor and one (1) Council Member abstained.

E. Public Hearing on Ivins City proposed Water Conservation Plan

Chuck Gillette provided an overview of the Water Conservation Plan. He received feedback from the City Council, made some changes, and created a new version of the plan referred to as the notice draft. Some clarifications were made, particularly related to the calculation of population numbers. **Council Member Scott** inquired about a change on page four (4) regarding population numbers. **Chuck Gillette** confirmed that the clarification was in his version. **Mayor Hart** opened the Public Hearing.

Kathy Barth, an Ivins resident, shared her thoughts and questions regarding the water plan. She raised concerns about the vagueness of incentives for water conservation and the focus on residential conservation over commercial. She also questioned the source of the extra water needed for potential growth and emphasized the importance of including commercial developments in water conservation efforts. **Mayor Hart** explained that the plan is in response to a 20-year growth plan and mentioned the ongoing conservation programs and a reuse program. **Kathy Barth** continued to express her desire for a more substantial focus on commercial water conservation and inquired how the cost to build a reuse plant would affect residents. **Mayor Hart** commented that impact fees may need to be increased but this is an intermediate step and the plan would be reviewed annually. **Mayor Hart** inquired if there was anyone on the Zoom application that wanted to make a public comment. **Cade Visser** indicated that there was no one wanting to make a comment. **Mayor Hart** closed the Public Hearing.

F. Discuss and consider approval of Resolution No. 2023-14R, a Resolution of Ivins City, Utah, adopting the 2023 Water Conservation Plan for Ivins City

Council Member Anderson pointed out a section in the plan discussing the construction of irrigation systems and a surface water treatment plant, which he was against. He expressed his reluctance to approve the plan with that information included. He also brought up language about watering times and discharge across the sidewalk, stating that different theories exist about watering times' effectiveness. He had concerns about discharging across the sidewalk and whether water could be discharged under the sidewalk. **Chuck Gillette** clarified that the plan summarized the current state of the City's ordinances. He preferred not to change the language in the plan, as it reflected the existing ordinances. He suggested that the language could be revisited in the future. **Mayor Hart** explained that adopting the plan was necessary to comply with the 20-year plan's requirements and that changes could be made as needed over time. He acknowledged that some aspects of the plan were speculative. **Council Member Scott** suggested amending the language on page three (3) of the plan to avoid creating the impression that Ivins City had a budget for the construction of an irrigation system and have it say "Ivins city is currently considering pursuing...". **Council Member Anderson** expressed his concerns with the language on page 18 of the plan, which prohibited sprinkler irrigation on lawns between 8 am and 8 pm. He referred to a presentation that challenged the effectiveness of those restrictions. **Council Member Scott** proposed rewording the section related to sprinkler irrigation on page 13 to avoid conflicts with potential changes to the ordinance. He suggested rephrasing it to state that

sprinkler irrigation of lawns is prohibited by the current ordinance between 8 am and 8 pm, which would make it align better with potential future changes. **Council Member Anderson** agreed with that change. **Council Member Scott** also discussed how to address the issue of unlawful discharge of water across the sidewalk, which was a part of the current ordinance. **Chuck Gillette** commented that they could revisit the ordinance and indicated that the State of Utah requires that the Water Conservation Plan be updated every five (5) years. **Mayor Hart** proposed adding a statement to the plan indicating that the ordinances might change, and when they did, the plan would need to be amended accordingly. **Council Member Mehr** referred to water budgeting and expressed concerns about penalizing households with more residents and potential issues related to second homes. **Mayor Hart** pointed out the issue of major abusers of water, particularly in cases where households use excessive amounts of water and mentioned that the City might need mechanisms to address extreme abuse. He also highlighted the need for a means to differentiate between larger families that genuinely need more water and those who abuse the system. **Council Member Anderson** emphasized that family size might not be the issue, and that the major concerns were related to landscape and excessive use. He discussed the historical changes in water permits and the importance of keeping water within Ivins City to ensure fair distribution among residents. **Mayor Hart** commented that all participating cities are required to conform to the 20-year plan. **Doug Bennett** with the Water Conservancy District clarified that the plan being considered is a State requirement and every City in Utah is mandated to submit a plan every five (5) years. He suggested that in the future, the State might accept a more streamlined process where cities subscribe to a regional plan and add city-specific information to it. He emphasized the significance of the 20-year plan for all jurisdictions served by the Water Conservancy District. Ivins City already receives water from the District and highlighted the role of this plan in making decisions regarding building permits. He praised Ivins for being a leader in water conservation and water efficiency and noted the need to move toward lower water demand per household. Regarding watering times, watering in the early morning hours is recommended due to calm winds. The 8 am to 8 pm restriction is broad and he suggested that the language could be adjusted. He emphasized the State's approval of the plan as a formality, and he supported making some tweaks to the plan to ensure the City was comfortable with it. **Council Member Mehr** suggested striking the word "encourage" and replace it with "consider" for greywater reuse, recycling showers, and artificial turf. He expressed concerns about the complexity and expense of greywater reuse. **Council Member Anderson** shared concerns about greywater reuse, emphasizing that it can be a complex and expensive process. He discussed the idea of creating water budgets for individual users based on the number of people in a household. He also mentioned the challenge of applying tiered rates to commercial properties due to variations in usage. **Council Member Scott** suggested leaving out the last bullet point in the document and agreed with the idea of striking the word "penalize." **Chuck Gillette** suggested adding separate bullet points to consider water budgets for commercial and residential use. The **City Council** agreed on the suggested amendments, including adding separate bullet points to consider water budgets for commercial and residential use. **Dale Coulam** recommended moving to approve the document as amended.

MOTION: Council Member Mehr moved to approve Resolution No. 2023-14R, a Resolution of Ivins City, Utah, adopting the 2023 Water Conservation Plan for Ivins City
SECOND: Council Member Scott
VOTE: The motion carried unanimously.

Council Member Scott	AYE
Council Member Johnson	AYE
Council Member Murphy	AYE
Council Member Anderson	AYE
Council Member Mehr	AYE

Roll call vote. All Council Members voted in favor.

5) DISCUSSION AND POTENTIAL ACTION ITEMS

A. Discuss and consider approval of Ordinance No. 2023-21, an Ordinance of Ivins City, Utah, amending regulations for landscaping and water conservation for developing land in Ivins City, Utah

Chuck Gillette presented the updated standards, following the Council's request to incorporate all water efficiency standards directly into the landscape ordinance. **Council Member Anderson** inquired about the mulch. **Chuck Gillette** confirmed it was in alignment with the water efficiency standards, allowing exceptions for areas restored to appear as native desert. **Council Member Mehr** expressed a concern about referencing external regulations without setting a specific parameter in the ordinance. He suggested a statement that clarifies that references to State codes are applicable at the time of the ordinance's passing, requiring the Council to re-evaluate any subsequent changes in the State code. **Mayor Hart** raised concerns about delaying the implementation of State code changes until the City updates its ordinance, highlighting potential risks and the obligation to abide by State regulations promptly. **Council Member Mehr** commented that there is a need to consider how State law changes could impact Ivins City and the responsibility of the Council to review those changes. **Dale Coulam** acknowledged that approach but highlighted the burden it would place on the Council to be aware of State law amendments and subsequently amend City ordinances. **Doug Bennett** with the Water Conservancy District indicated that referencing the Utah Code was primarily for convenience, presuming that all cities were already compliant. **Mayor Hart** inquired about the need to revise the specific language after the discussion. **Chuck Gillette** proposed an alternative. He suggested removing references to the State provided that the City's standards were already compliant with State requirements. **Doug Bennett** supported that notion. **Council Member Mehr** inquired as to the suggested amendment. **Chuck Gillette** emphasized the importance of aligning with the Water Conservancy District's water efficiency standards to avoid any conflict. **Council Member Anderson** raised concerns about specific statements within the ordinance, particularly the requirement that "grass shall not be within 10 feet of a roadway." There are scenarios where homes have short distances between sidewalks and roadways, causing concerns about the applicability of that rule. **Doug Bennett** clarified that the District's standards exempt residential properties from the 10-foot grass setback requirement. **Chuck Gillette** suggested removing the 10-foot setback requirement for residential properties. **Council Member Anderson** inquired about whether the ordinance changed the amount of lawn or turf residents could have. **Chuck Gillette** indicated that the ordinance had not altered the existing standards.

MOTION: Council Member Murphy moved to approve Ordinance No. 2023-21, an Ordinance of Ivins City, Utah, amending regulations for landscaping and water conservation for developing land in Ivins City, Utah as amended.
SECOND: Council Member Johnson
VOTE: The motion carried unanimously.

Appendix D: Existing Water Conservation Ordinances

10.01.120: FAULTY EQUIPMENT:
It is unlawful for any water user to:

(1) Waste water;

(2) Allow it to be wasted by stops, taps, valves, leaky joints or pipes, or to allow tanks or watering troughs to leak or overflow;

(3) Wastefully run water from hydrants, faucets or stops, or through basins, water closets, urinals, sinks or other apparatus; or

(4) Use the water for purposes other than for those which he has applied, or to use water in violation of the rules and regulations for controlling the water supply. (Prior Code § 14-128)

10.01.125: SPRINKLERS:
(1) Sprinkler irrigation of all lawns and landscapes using potable (treated) water is prohibited between the hours of eight o'clock (8:00) A.M. and eight o'clock (8:00) P.M.

(a) Secondary (untreated or reclaimed wastewater) water systems have limited capacity and are therefore exempt from this restriction. Facilities irrigated with secondary water systems include public amenities (parks, golf courses, schools, cemeteries) and some residential neighborhoods. Using secondary water for irrigation extends our water resources and saves residents millions of dollars in annual treatment costs.

(b) The provisions of this restriction shall apply to all landscapes watered with potable water within the city. This section does not apply in the following situations:

(i) New lawn that requires frequent irrigation for establishment purposes within ninety (90) days of planting.

(ii) Short cycles required for testing, inspecting, and maintaining irrigation systems.

(iii) Other situations as permitted by the city. (Prior Code § 14-103; Ord. 2021-06, 2021)

10.01.126: CONSERVATION STAGES:
(1) Stage 1: Reduction In Water Use: All of the conservation measures set forth in section 10.01.125 comprise Stage 1 and shall always be in effect. Voluntary conservation in other areas of water usage is also encouraged.

(2) Stage 2: Mandatory Water Restriction: In addition to all of the conservation measures of Stage 1, all parks and cemetery will only be allowed to water every other day during permitted hours. Residential and commercial water users will be allowed to water outside during permitted hours on an odd/even schedule as determined by street address (i.e. even addresses water on even days, etc.). Vehicles may be washed only

at commercial car washes. Use of water for street and/or driveway washing will not be permitted.

(3) Stage 3: Additional Mandatory Restrictions: All restrictions included in Stages 1 and 2 shall be in force. In addition, no use of fire hydrants for purposes other than fire protection shall be allowed. No use of water for ornamental use including, but not limited to, fountains, artificial waterfalls, and reflection pools shall be allowed. No use of water to fill or top off swimming pools shall be allowed.

(4) Stage 4: Water Rationing Plan: All restrictions included in Stages 1, 2, and 3 shall be in force. In addition, no watering of lawns, gardens, landscaped areas, trees, shrubs, and other outdoor plants shall be allowed, unless by means of a bucket, pail, or handheld hose equipped with an automatic shut-off nozzle during the permitted hours. (Ord. 2021-06, 2021)

10.01.127: EMERGENCY RESTRICTION:
In times of extreme scarcity of water, whenever in the judgment of the mayor and the city council be necessary, the mayor may by proclamation limit the use of water to such extent as may be necessary. It is unlawful for any person, his family, servants or agents, to violate a proclamation made by the mayor in pursuance of this chapter. (Ord. 2021-06, 2021)

11.01.203: OVERFLOWING OF WATER ON PUBLIC PROPERTY:
It is unlawful for any person to allow water to overflow from any ditch, canal and other irrigation systems onto the streets, sidewalks or property of the city. Exception: incidental water from small landscape sprinkler systems. (Ord. 2014-03, 2014)

11.01.210: DISCHARGE OF WATER ON SIDEWALK:
It is unlawful for any person owning, occupying or having control of any premises to fail, refuse or neglect to prevent water from the roof or eaves of any house, building or other structure, or from any other source under the control of such person, to be discharged upon the surface of any sidewalk. (Prior code § 11-365)

ORDINANCE NO. 2023-21

AN ORDINANCE OF IVINS CITY, UTAH, AMENDING REGULATIONS FOR LANDSCAPING AND WATER CONSERVATION FOR DEVELOPING LAND IN IVINS CITY, UTAH

RECITALS AND LEGISLATIVE FINDINGS

WHEREAS, on June 2, 2022, the Ivins City Council adopted Ordinance 2022-06, "An Ordinance of Ivins City, Utah, Adopting Regulations For Landscaping And Water Conservation For Developing Land In Ivins City, Utah";

WHEREAS, the Ivins City Council desires now to amend that ordinance in the manner attached hereto, and by this reference incorporated herein;

WHEREAS, establishing standards for all new construction including single family residential, multi-family residential, commercial, and manufacturing development will help sustain a reliable and resilient water supply to all residents; and

WHEREAS, it is in the public interest to conserve the public's water resources and to promote water efficient construction and landscaping to protect and enhance the community's environmental, economic, recreational, and aesthetic resources by promoting efficient use of water in our community's buildings and landscapes, reduce water waste, and establish a structure for designing, installing, and maintaining water efficient buildings and landscapes throughout the City;

WHEREAS, establishing updated standards for the use of water for outdoor landscaping and irrigation will help sustain a reliable and resilient water supply to all residents;

WHEREAS, carefully managing the county's water resources is of great importance to our community for the protection of present and future citizens;

WHEREAS, this proposed ordinance is necessary and proper for the safety, peace and good order of the City and its citizens; and

WHEREAS, this proposed ordinance is necessary for the preservation and longevity of these lands.

NOW THEREFORE, be it ordained by the City Council of Ivins City, Utah that the attached amended standards and regulations are hereby adopted and shall be incorporated into the ordinances of the City

This Ordinance shall become effective on the date executed below and upon posting as required by law.

APPROVED AND ADOPTED this 2nd day of November, 2023.

PASSED AND ADOPTED BY THE IVINS CITY COUNCIL, BY THE FOLLOWING VOTE:

	AYE	NAY	ABSTAIN	ABSENT
Mike Scott	X			
Dennis Mehr	X			
Jenny Johnson	X			
Adel Murphy	X			
Lance Anderson	X			

Ivins City

IVINS CITY Corporate Seal WASHINGTON COUNTY

Chris Hart, Mayor

ATTEST:

Kari D. Jimenez, City Recorder

CHAPTER 11
REGULATIONS FOR LANDSCAPING AND WATER CONSERVATION FOR DEVELOPING LAND

PART 1. GENERAL PROVISIONS

14.11.101: SHORT TITLE:
The short title for this ordinance is the "Landscaping and Water Conservation Ordinance." (Ord. 2022-06, 6-2-2022)

14.11.102: CONFLICT:
Restrictive Covenants in Conflict with Water Efficiency Standards: Any provisions in homeowners or property owners association governing documents, such as bylaws, declarations, operating rules, covenants, conditions, and restrictions that govern the operation of a common interest development, recorded after passage of this ordinance, are void and unenforceable if they conflict with the water efficiency standards in this ordinance, or if they have the effect of prohibiting or restricting compliance with this chapter. (Ord. 2022-06, 6-2-2022)

14.11.103: APPLICABILITY:
The provisions of this title are applicable to all new construction, development and major landscape improvements in the city served by the Water Conservancy District, excepting vested properties which are properties with a previously approved Development Agreement or Conditional Use Permit, and excepting K-12 schools.

The provisions of this ordinance are severable and if any provision, clause, sentence, word, or part thereof is held illegal, invalid, unconstitutional, or inapplicable to any person or circumstances, such illegality, invalidity, unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, clauses, sentences, sections, words or parts thereof of this ordinance or their applicability to other persons or circumstances. (Ord. 2022-06, 6-2-2022)

14.11.104: PURPOSE:
The provisions of this title have been established to reduce water usage due to stressed water supplies. Some provisions of this code are recommended by State regulations to comply and qualify for State water conservation rebate programs. Other provisions of this code are necessary to comply with the Water Efficiency Standards established by the board of the Washington County Water Conservancy District which are set as a requirement of the Regional Water Supply Agreement.

PART 2. DEFINITIONS

14.11.201: DEFINITIONS:
The following definitions shall apply to this chapter:

ACTIVE RECREATION AREA:	A dedicated active play area where irrigated grass is used as the playing surface, such as a sports field

	designed for public use. Active recreation areas shall be: i) a minimum of 1,500 contiguous square feet of grass area, ii) not less than 30 feet in any dimension, iii) not less than 10 feet from areas dedicated to vehicular use, such as a street or parking lot, iv) designed and located to be accessible to large populations, such as at a school, daycare, recreation center, senior center, public park, private park, water park or religious institution, and v) co-located with amenities, including but not limited to trash bins, benches, tables, walking paths, drinking water, playground equipment and/or other recreational amenities.
COMMON AREA:	The area which is available for common use by all owners or renters in a development.
CONTROLLER:	A device used in irrigation systems to automatically control when and how long sprinklers or drip irrigation systems operate.
DRIP IRRIGATION:	An irrigation system that delivers water by adding water at the plant's base and root zone, usually measured in gallons per hour. Drip irrigation exhibits a droplet, trickle, umbrella, or short stream pattern, to reduce evaporation, overspray, and water use, and improving water conservation.
DRIP EMITTER:	A drip irrigation fitting that delivers water slowly at the root zone of the plant, usually measured in gallons per hour.
GRADING PLAN:	The grading plan shows all finish grades, spot elevations, drainage as necessary, and new and existing contours with the developed landscaped area.
GRASS:	A surface layer of earth containing closely mowed and irrigated nonagricultural grass with its roots.
GRASS AREA:	The total square footage of grass located within the landscape area.
GROUND COVER:	Material planted in such a way as to form a continuous cover over ground that can be maintained at a height no more than twelve (12) inches.

HARDSCAPE:	Elements of landscape constructed from non-living materials such as concrete, boulders, brick, blacktop, and lumber. It includes patios, decks, and paths, but does not include driveways and sidewalks.
HYDROZONE:	Portion of landscape area having plants with similar water needs and rooting depth. A hydrozone may be irrigated or non-irrigated.
IRRIGATION PLAN:	A plan that shows the components of the irrigation system with water meter size, backflow prevention, precipitation rates, flow rate, and operating pressure for each irrigation circuit, and identification of all irrigation equipment.
LANDSCAPE ARCHITECT:	A person who holds a professional license to practice landscape architecture in the state of Utah. Per State Code, licensed landscape architects, licensed architects, licensed land surveyors, and licensed engineers can professionally stamp plans that fall under the practice of landscape architecture. This includes commercial landscape and irrigation plans.
LANDSCAPE AREA:	For developments regulated by Chapters 3 (single-family and twin home) or Chapter 4 (non-residential): Area within a lot or parcel that is not the home footprint, driveway, sidewalk, patio, swimming pool or water feature. For developments regulated by Chapter 5 (multifamily) or Chapter 7 (resorts): Area within the development that is not a building footprint, driveway, parking lot, sidewalk, patio, sports court, swimming pool, water feature, and other hard surfaces.
LANDSCAPE DESIGNER:	A person who may or may not hold professional certificates for landscape design/architecture and may be the owner of the property or in the landscaping business.
LANDSCAPE DOCUMENTATION PACKAGE:	The documentation of graphic and written criteria, specifications, and detailed plans to arrange and modify the effects of natural features to comply with the provisions of this ordinance. The Landscape Documentation Package shall include a project data sheet, a site plan, a planting plan, an irrigation plan, construction details, and a grading plan.
LANDSCAPE OR LANDSCAPING:	Any combination of berms; living plants, such as trees, shrubs, vines, ground covers, annuals, perennials, grass, or seeding; natural features such as rock, stone, or bark chips; and structural features, including but not

	limited to outdoor artwork, screen walls, fences or benches that create an attractive and pleasing environment.
MULCH:	Any organic material such as leaves, bark, wood chips, straw; inorganic material such as crushed stone or gravel; other materials left loose and applied to the soil surface for the beneficial purpose of controlling weeds and conserving soil moisture. For the purposed of this standard, ungrouted pavers, stepping stones and artificial turf manufactured to be permeable to air and water may be considered mulch.
MULTIFAMILY:	Any residential use comprised of a dwelling or dwellings designed for occupation by more than one family in any zone, but for purposes of this ordinance, excludes: Single-family dwellings and twin homes (two family dwellings), dwellings containing an approved internal accessory dwelling unit, dwellings which are an approved accessory dwelling unit to a primary dwelling, resorts, and hotel rooms.
PARK STRIP:	A typically narrow landscaped area located between the back-of-curb and sidewalk.
PLANT LIST:	A list of locally adaptable and environmentally sustainable plants for compliant Planting Plans as provided by the Washington County Water Conservancy District.
PLANTING BED:	Areas of the landscape that consist of plants, such as trees, ornamental grasses, shrubs, perennials and other regionally appropriate plants.
PLANTING PLAN:	A Planting Plan that clearly and accurately identifies the type, size, and locations for new and existing trees, shrubs, planting beds, ground covers, grass areas, driveways, sidewalks, hardscape features, and fences.
PRECIPITATION RATE:	The depth of water applied to a given area, usually measured in inches per hour.
PRESSURE REGULATING VALVE:	A valve installed in an irrigation mainline that reduces a higher supply pressure at the inlet down to a regulated lower pressure at the outlet.
RESORT:	A full-service lodging and recreational facility located in a Resort Commercial zone that is the primary provider of a range of amenities, recreation, or wellness facilities to emphasize a leisure or wellness experience beyond those found at motels and hotels. Separately platted residences or commercial facilities

	will be deemed part of the Qualified Resort so long as they are intended to be rented or otherwise used as a part of the hotel operations.
SECONDARY IRRIGATION WATER:	Non-potable water that is untreated and used for irrigation of outdoor landscaping Also called secondary water.
SINGLE-FAMILY:	Any residential use comprised of a dwelling designed for occupation by only one family in any zone, and for purposes of this ordinance includes primary dwellings, dwellings containing an approved internal accessory dwelling unit, and approved accessory dwelling units.
SLOPE:	A vertical rise in feet measured over a horizontal distance, expressed as a percentage, measured generally at right angles to contour lines.
SMART IRRIGATION CONTROLLER:	A smart/internet-connected device used in irrigation systems to automatically control when and how long sprinklers or drip irrigation systems operate.
TWO-FAMILY:	Any residential use comprised of a dwelling (twin home or duplex) designed for occupation by two families in any zone, but for purposes of this ordinance excludes dwellings containing an approved internal accessory dwelling unit, or dwellings which are an approved accessory dwelling unit to a primary dwelling.
VESTED PROPERTIES:	Properties with a previously approved Development Agreement or Conditional Use Permit.
WATER-CONSERVING PLANT:	A plant that can generally survive with available rainfall once established, with possible supplemental irrigation needed or desirable during spring and summer months or during drought periods.
WATER FEATURE:	Fountains, ponds, waterfalls, man-made streams, and other decorative water-related constructions provided solely for aesthetic or beautification purposes. May be referred to as decorative or ornamental water features. (Ord. 2022-06, 6-2-2022)

PART 3. SINGLE-FAMILY AND TWO-FAMILY RESIDENTIAL WATER EFFICIENCY STANDARDS

14.11.301: GENERAL:

These provisions are applicable to all new single-family and two-family (twin home/duplex) residential construction and development irrespective of its underlying zoning classification, except new single-family and two-family (twin home/duplex)

residential construction and development within a resort which is subject to the requirements of Chapter 7. (Ord. 2022-06, 6-2-2022)

14.11.302: CONSTRUCTION STANDARDS:

(1) New single-family and two-family (twin home/duplex) residential dwellings one thousand two hundred (1,200) square feet or greater shall install hot water recirculation systems.

(2) New single-family and two-family (twin home/duplex) residential dwellings shall install WaterSense labeled fixtures, or fixtures that are at least as water-efficient, including, but not limited to faucets, showerheads, toilets, and urinals.

(3) New single-family and two-family (twin home/duplex) residential dwellings shall install Energy Star qualified appliances, or appliances that are at least as energy efficient.

(4) Exterior, decorative water features must be limited to an aggregate capacity of three hundred (300) gallons or less and recirculating pumps are required in each feature. Exterior decorative water features shall only be located on individual single-family and two-family lots and not as entry features to a subdivision or community or in common areas. The feature is also limited to 25 square feet per parcel and is limited to the parcel. The capacity of the water feature in gallons shall be deducted from the allowed amount of grass using one gallon equals two square feet of grass.

(5) The square footage of any uncovered pool will be deducted from the allowed amount of grass. A pool is considered uncovered if it does not have a UL approved cover that is electrically operated. Twenty-five percent (25%) of the square footage of any pool with a UL approved electrically operated cover, or indoor pools, will be deducted from the allowed amount of grass. (Ord. 2022-06, 6-2-2022)

14.11.303: LANDSCAPE STANDARDS:

(1) For all new single-family and two-family (twin home/duplex) residential construction or development, the landscaping shall meet the following requirements:

(a) Grass area must not exceed eight percent (8%) of the lot square footage, up to a maximum of two thousand (2,000) square feet of grass area. However, all lots are permitted six hundred (600) square feet of grass even if the eight percent (8%) calculation is less.

(i) Grass areas shall have a minimum width of eight (8) feet in any dimension.

(ii) These restrictions also apply to single family developments with limited common areas designated for the exclusive use of the adjacent dwelling.

(b) Grass is not permitted in common areas of a development unless it is an active recreation area.

(c) In addition, grass is prohibited in park strips, landscape buffers, and on any slope that exceeds ten percent (10%); and

(d) Any lot in any zone which is larger than one-half (1/2) acre must use secondary irrigation where available to irrigate any agricultural, horticultural, or gardening uses which are permitted in the applicable zone. (Ord. 2022-06, 6-2-2022)

PART 4. MULTIFAMILY DEVELOPMENT WATER EFFICIENCY STANDARDS

14.11.401: GENERAL:
These provisions are applicable to all new multifamily construction and development irrespective of its underlying zoning classification, except new construction and development within a resort which will be subject to the requirements of Part 7. (Ord. 2022-06, 6-2-2022)

14.11.402: CONSTRUCTION STANDARDS:
(1) New multifamily dwellings shall install WaterSense labeled fixtures, or fixtures that are at least as water-efficient, including, but not limited to faucets, showerheads, toilets, and urinals. All fixtures shall meet or exceed the water conservation requirements specified by Utah Code.

(2) New multifamily dwellings shall install Energy Star qualified appliances, or appliances that are at least as energy efficient.

(3) Exterior, decorative water features must be limited to an aggregate capacity of three hundred (300) gallons or less and recirculating pumps are required in each feature. The feature is also limited to 25 square feet per parcel and is limited to the parcel. Exterior decorative water features shall not be located as entry features to the development or in common areas. The capacity of the water feature in gallons shall be deducted from the allowed amount of grass using one gallon equals two square feet of grass.

(4) The square footage of any uncovered pool will be deducted from the allowed amount of grass. A pool is considered uncovered if it does not have a UL approved cover that is electrically operated." Twenty-five percent (25%) of the square footage of any pool with a UL approved electrically operated cover, or indoor pools, shall be deducted from the allowed amount of grass.

(5) All townhome and condominium units shall be separately metered, submetered, or equipped with alternative technology capable of tracking the water use of the individual unit, and the information shall be made available to the individual unit.

(6) Separate water meters are required, where secondary water is available, for all outdoor water usage, including landscaping. (Ord. 2022-06, 6-2-2022)

14.11.403: LANDSCAPE STANDARDS:
For all new multifamily construction or development, the landscaping shall meet the following requirements:

(1) Grass area must not exceed five percent (5%) of the total development's square footage.

(a) Up to 100 square feet of grass per dwelling unit is allowed when used in functional applications.
(b) Properties with less than 6 dwelling units area allowed up to 600 square feet of grass.
(c) Grass areas shall have a minimum width of eight (8) feet in any dimension.

(2) Grass is not permitted in common areas of a development unless it is an active recreation area.

(3) In addition, grass is prohibited in park strips, landscape buffers, and on any slope that exceeds ten percent (10%); and

(4) Landscape and irrigation installers shall follow the planting plans that have been signed and approved by the city.

(5) Each project shall propose and follow an approved Planting Plan that has a minimum of twenty percent (20%) vegetative cover (based on the American Society of Landscape Architects "Landscape Architecture Documentation Standards: Principles, Guidelines and Best Practices") of a landscaped area with water-efficient shade trees (however, fruit and nut trees are allowed) and bushes adequate in number and configuration to visually enhance the project, prevent heat islands, and prevent soil erosion.

(6) If secondary irrigation water is available, each project shall connect to the system for all outdoor water use. A city may make minor exceptions, allowing use of treated water for outdoor plantings in small beautification areas, in its sole discretion. (Ord. 2022-06, 6-2-2022)

(7) Misting systems are permitted from May through September when temperatures exceed 90 degrees.

PART 5. NONRESIDENTIAL ZONES AND DEVELOPMENT WATER EFFICIENCY STANDARDS

14.11.501: GENERAL:
These provisions are applicable to all new construction and new development in all nonresidential zones, and nonresidential development in any zone, except development within a resort which is subject to the requirements of Chapter 7. (Ord. 2022-06, 6-2-2022)

14.11.502: CONSTRUCTION STANDARDS:
(1) Hot water recirculation systems shall be installed.

(2) WaterSense labeled fixtures, or fixtures that are at least as water-efficient, shall be installed, including, but not limited to faucets, showerheads toilets, and urinals. All fixtures shall meet or exceed the water conservation requirements specified by Utah Code.

(3) Energy Star qualified appliances, or appliances that are at least as energy-efficient, shall be installed.

(4) Except for hotels, all individually platted units shall be separately metered, submetered, or equipped with alternative technology capable of tracking the water use of the individual unit, and the information shall be made available to the individual unit. All nonresidential projects require separate water meters for all outdoor water usage, including landscaping, where and when secondary water is available.

(5) All carwash projects shall recirculate and limit the maximum amount of water to thirty-five (35) gallons per vehicle washed.

(6) Exterior, decorative water features must be limited to an aggregate capacity of three hundred (300) gallons or less for each individually platted property, and recirculating pumps are required in each feature. The feature is also limited to 25 square feet per parcel and is limited to the parcel. Exterior decorative water features shall not be located as entry features to a development. The capacity of the water feature in gallons shall be deducted from the allowed amount of grass using one gallon equals two square feet of grass. (Ord. 2022-06, 6-2-2022)

14.11.503: LANDSCAPE STANDARDS:

(1) All new construction and new development in all nonresidential zones, and nonresidential development in any zone, shall meet the Landscape Design Standards and Irrigation Design Standards of this ordinance.

(a) Grass is not permitted outside of an active recreation area, when appropriate based on the planned use. In addition, grass is prohibited in park strips, all landscape areas less than eight feet wide, and on any slope that exceeds ten percent (10%). Grass areas shall have a minimum width of eight (8) feet in any dimension. Grass shall not be within 10 feet of a roadway.

(b) Landscape and irrigation installers shall follow the plans that have been signed and approved by the city.

(c) Each project shall propose and follow an approved Planting Plan that has a minimum of twenty percent (20%) vegetative cover (based on the American Society of Landscape Architects "Landscape Architecture Documentation Standards: Principles, Guidelines and Best Practices") of a landscaped area with water-efficient shade trees (however, fruit and nut trees are allowed) and bushes adequate in number and configuration to visually enhance the project, prevent heat islands, and prevent soil erosion.

(d) If secondary irrigation water is available, each project shall connect to the system for all outdoor water use. A city may make minor exceptions, allowing use of treated water for outdoor plantings in small beautification areas, in its sole discretion.

(2) Required Documentation

(a) Landscape Documentation Package: A copy of a Landscape Documentation Package shall be submitted to and approved by the city prior to the issue of any building permit. A copy of the approved Landscape Documentation Package shall be provided to the property owner or site manager. The Landscape Documentation Package shall be

prepared by a landscape designer or a professional landscape architect (PLA). (Ord. 2022-06, 6-2-2022)

(3) Misting systems are permitted from May through September when temperatures exceed 90 degrees.

PART 6. LANDSCAPE AND IRRIGATION DESIGN STANDARDS FOR ALL NEW DEVELOPMENT IN ANY ZONE

14.11.601: GENERAL:
Landscape and irrigation design standards for all new development in any zone except new construction and development within a resort which will be subject to the requirements of Chapter 7. (Ord. 2022-06, 6-2-2022)

14.11.602: PLANT SELECTION AND MAINTENANCE:
Plants shall be well-suited to the microclimate and soil conditions at the project site. Native, locally adaptable, and environmentally sustainable plants are acceptable. See the Washington County Water Conservancy District's recommended plant list on wcwcd.org. Plants with similar water needs shall be grouped together as much as possible into hydrozones for efficient irrigation. Invasive plant species as identified by the city shall not be planted.

(1) Areas with slopes greater than ten percent (10%) shall be landscaped with deep-rooting, water-conserving plants that do not include grass.

(2) Park strips and landscape buffers shall be landscaped with water-conserving plants and/or mulch that do not include grass.

(3) Landscaping shall be maintained in a live and thriving condition, with consideration for normal growth and water needs; and fertilized, mowed, trimmed, edged, mulched and free from weeds, dead plants, litter, refuse, or debris in compliance with regionally accepted horticultural practice and city ordinances. (Ord. 2022-06, 6-2-2022)

14.11.603: TREE SELECTION:
Tree species shall be selected based on growth characteristics and site conditions, including available space, overhead clearance, soil conditions, exposure, and desired color and appearance. Trees shall be suited for water-efficient landscapes; however, fruit and nut trees are allowed. Trees shall be selected and planted in accordance with the following city guidance:

(1) Broad canopy trees are recommended where shade or screening of tall objects is desired;

(2) Low-growing trees are recommended for spaces under utility wires;

(3) Select trees from which lower branches will be trimmed to maintain a healthy growth habit where visual clearance and natural surveillance is a concern;

(4) Narrow or columnar trees are recommended for small spaces, or where awnings or other building features limit growth, or where greater visibility is desired between buildings and the street for natural surveillance;

(5) Tree placement shall provide canopy cover (shade) and avoid conflicts with existing trees, retaining walls, above and below ground utilities, lighting, and other obstructions. (Ord. 2022-06, 6-2-2022)

14.11.604: IRRIGATION DESIGN STANDARDS:

(1) Pressure Regulation. A pressure regulating valve shall be installed by the builder or developer, and maintained by the owner, if the static service pressure exceeds ninety (90) pounds per square inch (psi). The pressure-regulating valve shall be located between the meter and the first point of water use, or first point of division in the pipe, and shall be set at the manufacturer's recommended pressure for the sprinklers.

(2) Irrigation Controller. It is required that landscaped areas use a WaterSense labeled smart irrigation controller, or controllers that are at least as water-efficient, which automatically adjusts the frequency and/or duration of irrigation events in response to changing weather conditions. All controllers shall be equipped with automatic rain delay or rain shut-off capabilities and have memory retention capability to retain pre-programmed irrigation schedules. Sites are not exempt from water waste prohibitions.

(3) Low-volume irrigation equipment (i.e., drip emitters, bubblers) shall be provided for each tree.

(4) Drip irrigation shall be used to irrigate plants in non-grass areas. Sprinkler lines and drip lines shall not be connected to the same valve.

(5) High conservation efficiency spray nozzles are required for sprinkler applications.

(6) Sprinkler heads shall have matched precipitation rates with each control valve circuit.

(7) Filters, pressure regulators, flush end assemblies, and emitters rated for 20 gallons per hour or less shall be provided for drip irrigation lines.

(8) Landscape watering with potable (treated) water is prohibited based on Ivins City requirements, which are currently from eight o'clock (8:00) a.m. to eight o'clock (8:00) p.m., from June 1 to September 1, to maximize irrigation efficiency.

(9) Water waste is prohibited. Waste includes overwatering, irrigating during a precipitation event, water that sprays or flows off your property, failure to comply with drought restrictions and/or a failure to repair irrigation system leaks and/or malfunctions in a timely manner.

(10) Program valves for multiple repeat cycles are required to reduce runoff on slopes and for soils with slow infiltration rates. (Ord. 2022-06, 6-2-2022)

(11) To the extent possible, spray irrigation should be free from obstructions such as trees, signs, posts, enclosures, etc.

14.11.605: MULCH REQUIRED

(1) All Planting Beds must have mulch upon the soil surface with exceptions for areas being restored to appear as native desert.

14.11.606: METERING

(1) All attached and detached single-family dwelling units with ground floor square footage shall be separately metered, submetered, or equipped with alternative technology capable of tracking the water use of the individual unit.

(2) All non-single family residential projects require separate meters for outdoor water use when irrigating more than 5,000 square feet.

PART 7. RESORT DEVELOPMENT WATER EFFICIENCY STANDARDS

14.11.701: GENERAL:

The provisions of this Chapter are applicable to all new construction, and new development within any resort.

Specific provisions of this Chapter can be waived by the City if a hydrologist, water use engineer, landscape architect that is licensed in the State of Utah, or similarly qualified expert approved by the City provides a statement and supporting documentation showing that the design meets or exceeds all the water conservation measures and goals in this chapter. (Ord. 2022-06, 6-2-2022)

14.11.702: CONSTRUCTION STANDARDS:

(1) Within the resort development, new single-family, two-family (twin home/duplex), and three-family (triplex) residential dwellings 1,200 square feet or greater shall install hot water recirculation systems.

(2) All water fixtures shall be WaterSense labeled fixtures, or fixtures that are at least as water-efficient, including, but not limited to faucets, showerheads, toilets, and urinals. All fixtures shall meet or exceed the water conservation requirements specified by Utah Code.

(3) All appliances shall be Energy Star qualified appliances, or appliances that are at least as energy-efficient.

(4) Exterior, decorative water features must have recirculating pumps. The feature is also limited to 25 square feet per parcel and is limited to the parcel. This excludes any area of a golf course and water features within a golf course. Exterior decorative water features shall not be used as entry features to the resort development. The allowed amount of grass will be reduced based on the capacity of the water feature in gallons using one gallon equals two square foot of grass.

(5) The square footage of any uncovered pool will be counted towards the allowed amount of grass. A pool is considered uncovered if it does not have a UL approved cover that is electrically operated." Twenty-five percent (25%) of the square footage of

any pool with a UL approved electrically operated cover, or indoor pools, will be counted towards the allowed amount of grass.

(6) Except for hotel rooms, all residential and nonresidential units shall be separately metered, submetered, or equipped with alternative technology capable of tracking the water use of the individual unit, and the information shall be made available to the individual unit. All nonresidential projects require separate water meters for all outdoor water usage, including landscaping. (Ord. 2022-06, 6-2-2022)

14.11.703: LANDSCAPE STANDARDS:

(1) Grass area must not exceed eight percent (8%) of the square footage of the total resort development. This excludes the grass area of any golf course. Grass areas shall have a minimum width of eight (8) feet in any dimension. Grass shall not be within 10 feet of a roadway.

(2) Grass is not permitted outside of an active recreation area. Grass is prohibited in park strips, landscape buffers, and on any slope that exceeds ten percent (10%); and

(3) Any lot in any zone which is larger than one-half (1/2) acre must use secondary irrigation where available to irrigate any agricultural, horticultural, or gardening uses which are permitted in the applicable zone.

(4) Landscape and irrigation installers shall follow the plans that have been signed and approved by the city.

(5) Each project shall propose and follow an approved Planting Plan that has a minimum of twenty percent (20%) vegetative cover (cover based on landscaping standards at maturity) of a landscaped area with water-efficient shade trees (however, fruit and nut trees are allowed) and bushes adequate in number and configuration to visually enhance the project, prevent heat islands, and prevent soil erosion.

(6) If secondary irrigation water is available, each project shall connect to the system for all outdoor water use. A city may make minor exceptions, allowing use of treated water for outdoor plantings in small beautification areas, in its sole discretion. (Ord. 2022-06, 6-2-2022)

(7) Golf courses using district or city supplied water shall have a separate meter for irrigation.

(8) All golf courses, without regard to date of construction, shall be required to submit and follow a water budget and identify water conservation measures for regular city and water provider review.

(9) Misting systems are permitted from May through September when temperatures exceed 90 degrees.

14.11.704: REQUIRED DOCUMENTATION:

Landscape Documentation Package: A copy of a Landscape Documentation Package shall be submitted to and approved by the city prior to the issue of any building permit. A copy of the approved Landscape Documentation Package shall be provided to the

property owner or site manager. The Landscape Documentation Package shall be prepared by a professional landscape architect (PLA) and installed and maintained according to industry standards. (Ord. 2022-06, 6-2-2022)

14.11.705: PLANT SELECTION:
Plants shall be well-suited to the microclimate and soil conditions at the project site. Native, locally adaptable and environmentally sustainable plants are acceptable. See the Washington County Water Conservancy District's recommended plant list on wcwcd.org. Plants with similar water needs shall be grouped together as much as possible into hydrozones for efficient irrigation. Invasive plant species as identified by the city shall not be planted.

(1) Areas with slopes greater than 10% shall be landscaped with deep-rooting, water-conserving plants that do not include grass.

(2) Park strips and landscape buffers shall be landscaped with water-conserving plants and/or mulch that do not include grass. (Ord. 2022-06, 6-2-2022)

14.11.706: TREE SELECTION:
Tree species shall be selected based on growth characteristics and site conditions, including available space, overhead clearance, soil conditions, exposure, and desired color and appearance. Trees shall be suited for water-efficient landscapes (however, fruit and nut trees are allowed). Trees shall be selected and planted in accordance with the following city guidance:

(1) Broad canopy trees are recommended where shade or screening of tall objects is desired;

(2) Low-growing trees are recommended for spaces under utility wires;

(3) Select trees from which lower branches will be trimmed to maintain a healthy growth habit where visual clearance and natural surveillance is a concern;

(4) Narrow or columnar trees are recommended for small spaces, or where awnings or other building features limit growth, or where greater visibility is desired between buildings and the street for natural surveillance;

(5) Tree placement shall provide canopy cover (shade) and avoid conflicts with existing trees, retaining walls, above and below ground utilities, lighting, and other obstructions, and be placed to protect view corridors and viewsheds; and

Trees shall be irrigated on a separate hydrozone as needed for efficient irrigation and allow for watering under water-shortage conditions when other plant material may not be watered due to drought conditions. (Ord. 2022-06, 6-2-2022)

14.11.707: IRRIGATION DESIGN STANDARDS:
(1) Pressure Regulation. A pressure regulating valve shall be installed by the builder or developer, and maintained by the owner, if the static service pressure exceeds ninety (90) pounds per square inch (psi). The pressure-regulating valve shall be located between the meter and the first point of water use, or first point of division in the pipe, and shall be set at the manufacturer's recommended pressure for the sprinklers.

(2) Irrigation Controller. It is required that landscaped areas use a WaterSense labeled smart irrigation controllers or controllers that are at least as water-efficient, which automatically adjusts the frequency and/or duration of irrigation events in response to changing weather conditions. All controllers shall be equipped with automatic rain delay or rain shut-off capabilities and have memory retention capability to retain pre-programmed irrigation schedules. Sites are not exempt from water waste prohibitions.

(3) Low-volume irrigation equipment (i.e., drip emitters, bubblers) shall be provided for each tree.

(4) Drip irrigation shall be used to irrigate plants in non-grass areas. Sprinkler lines and drip lines shall not be connected to the same valve.

(5) High conservation efficiency spray nozzles are required for sprinkler applications.

(6) Sprinkler heads shall have matched precipitation rates with each control valve circuit.

(7) Filters, pressure regulators, flush end assemblies, and emitters rated for 20 gallons per hour or less shall be provided for drip irrigation lines.

(8) Landscape watering with potable (treated) water is prohibited based on Ivins city requirements, which are currently from eight o'clock (8:00) a.m. to eight o'clock (8:00) p.m., from June 1 to September 1, to maximize irrigation efficiency.

(9) Water waste is prohibited. Waste includes overwatering, irrigating during a precipitation event, water that sprays or flows off your property, failure to comply with drought restrictions and/or a failure to repair irrigation system leaks and/or malfunctions in a timely manner.

(10) Program valves for multiple repeat cycles are required to reduce runoff on slopes and for soils with slow infiltration rates. (Ord. 2022-06, 6-2-2022)

(11) To the extent possible, spray irrigation should be free from obstructions such as trees, signs, posts, enclosures, etc.

14.11.708: MULCH REQUIRED

(1) All Planting Beds must have mulch upon the soil surface with exceptions for areas being restored to appear as native desert.