Colorado Springs Utilities

It's how we're all connected

2022 **Water Efficiency Plan**

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Executive Summary

A Municipal Water Efficiency Plan (Plan) is a Colorado regulatory requirement to "*enhance the efficiency with which water is used to meet end uses, with the objective of making water available for all beneficial uses in Colorado*." This seven-year plan is our third submission to the Colorado Water Conservation Board (CWCB).

The Plan includes all required elements specified by the CWCB. It steps through the many considerations needed to integrate water use and efficiency to stretch supplies, considering many inherent challenges and how best to anticipate and plan for what lies ahead.

Since peaking at more than 94,000 acre-feet (AF) in 2000, water demands have declined to levels on par with the mid-1980s while area population grew more than 92%. Fueling these changes were a declining per person rate of use which caused demands to no longer align with the growth in population between 2002 to 2013. Since 2013, usage rates have remained relatively flat and demand growth has again begun to align with population growth.

Changing economic conditions, land development patterns, usage rates in new construction and the mix of commercial and industrial end uses are influencing water demands in ways we need to consider and for which we must effectively plan. Increasing population density will tend to lower per capita usage rates but increase per acre demand. The important relationship between land and water use planning is reviewed throughout this Plan.

Since 2001, conservation programs have achieved measurable savings of more than 7,200 AF which includes reaching the annual savings goal in our 2015 Water Use Efficiency Plan of 1,123 AF. To reach the goal of 11,000 – 13,000 AF of water savings defined in the IWRP, we must continue to address inefficient use and reduce demands through comprehensive conservation programming.

Saving water through demand reductions stretches our supplies. Colorado Springs Utilities' 2022 WEP is designed to reduce residential and systemwide usage rates by 2.5% between now and 2030; the identified programs could provide an estimated 2,191 acre-feet of water savings by 2030.

This Plan is designed to support Colorado Springs Utilities' strategic goals: to support the community and focus on the customer, demonstrate environmental stewardship while keeping bills competitive, optimize operations and infrastructure, and provide safe, resilient, and quality services.

The activities outlined in this Plan will advance water efficiency by coupling broad-based foundational efforts, which establish wise water use, with targeted activities designed to address specific inefficiencies in use. Our core objectives address the most significant areas of inefficiency and maximize the value and health of the built landscape:

1. Achieving widespread efficiency in residential indoor use, regardless of income, housing type or ownership.
2. Meeting the increased need for resilient landscapes through programs that promote 12-16 inches of irrigation per season (compared to all-turf requirement of 24 inches).

3. Supporting updates to the City's Commercial Landscape Code and Policy Manual to introduce limits on high water use turf grass, improve irrigation equipment standards, and incorporate water needs in design requirements.
4. Implementing water loss control measures to gain savings and optimize water distribution system investments and operations.
5. Educating customers on personalized water use goals which reflect their efficient use and needs for home, business and landscape.

The CWCB identifies four primary categories of water efficiency activities. Multiple programs in each category will be implemented in this Plan.

1. **Foundational Activities:** those common to a successful efficiency plan and the broadest reaching elements upon which efficiency programs are built.
2. **Targeted Technical Assistance and Incentives:** a collection of activities that rely on indoor and outdoor efficient technologies and best practices.
3. **Ordinances and Regulation:** regulatory efforts to promote or require efficiency, typically where consistency is required or when other methods like education and incentives are not effective.
4. **Educational Activities:** a variety of techniques and venues to convey water efficiency information to customers and the public.

Program Category	2022-2030 Cumulative Savings (AF)
Foundational Activities (e.g., rates and water loss control)	270
Targeted Technical Assistance and Incentives (e.g., rebates and audits)	910
Ordinances and Regulation (e.g., landscape codes and limited watering rules)	590
Educational Activities (e.g., classes and demonstration gardens)	421
2022 WEP Savings Target (2030)	**2,191**

Introduction

Colorado Springs Utilities (Springs Utilities) is honored to develop the 2022 Water Efficiency Plan (Plan) to support our thriving community. This Plan is our third submission to the Colorado Water Conservation Board (CWCB) since the approval of The Water Conservation Act of 2004 (HB 04-1365). All retail water providers with annual sales of 2,000 acre-feet or more, must submit and gain state approval of a water efficiency plan every seven years.

Across the past twenty years, Colorado Springs has seen many changes:

- Our population has grown faster than expected with current service population over 520,000.
- We have substantially decreased water use moving the average per person use from 139 gallons each day to 77 gallons each day.
- Water use patterns have changed significantly. In the previous 20 years we gained the most significant savings from residential customers while in the next 10, our greatest opportunity for savings gains is from commercial and multi-family customers.

Our customers have told us that they value this limited resource, and that saving water is important. Technology has helped us use water more efficiently and our semi-arid climate coupled with multiple droughts have taught us valuable lessons. Together we have learned how to prioritize the most beneficial uses of water. And our work is not done.

Colorado and Colorado Springs face unprecedented challenges to our supplies, from long-term drought across the Colorado River Basin and the southwestern United States to climate change, accelerated growth, and fluctuating social, economic and political conditions.

Amidst these challenges, the work of water efficiency requires that Springs Utilities stay focused on our simple goals:

> **We ensure the beneficial use of this limited resource**. Water connects us all and the water we use also serves a larger community across Colorado and the west. For example, 60-70% of our water comes from Colorado River Basin sources. It will take all of us doing our part to ensure adequate supplies for our future. This means making careful water use decisions each day, and planning, inspiring and implementing programs and services that gain the most beneficial outcomes for each of us.
>
> **We value water for our best future.** Springs Utilities supports a planful community that remains vibrant regardless of growth or climate conditions. Our work ensures an economically vibrant community with a high quality of life.

This Plan includes all required elements specified by the CWCB. The activities outlined in this Plan will advance water efficiency by coupling broad-based foundational efforts that establish an ethic of wise water use, with targeted activities designed to address specific inefficiencies in use. It steps through the many considerations needed to integrate water use and water efficiency to stretch water supplies, considering many inherent challenges and how best to anticipate and plan for what lies ahead.

This Plan begins with a thorough overview of our water supply system, the sources of supply, the definition of our service territory and the many ways we manage water to serve our growing community. It reviews

the reliability of our water systems, its limitations, and future needs. It also provides an overview of our Integrated Water Resource Plan (IWRP) which mindfully outlines our supply requirements and solutions across the next 50 years. The Water Efficiency Plan determines efficiency programs for implementation across the next seven years (and within the much longer-term IWRP planning horizon).

Evaluating changing water demands and their relationship to water supply constraints is foundational to water demand and conservation planning. Changing water demands are a result of substantial conservation efforts, recurring drought, changing values around water, increasing efficiency standards, economic factors, and shifting development patterns, among other factors.

Because Colorado Springs has tremendous growth potential with thousands of acres of land remaining to be developed, we must consider the potential impacts of changing land use patterns to better predict water demands. As the density of land use increases across our city, water use will change. Increasing population density will tend to lower per capita usage rates but increase per acre demand. To help us best determine where we're headed, we include land use in our demand forecast modeling. This modelling allows us to examine the relationships between land use classifications and water use patterns which in turn helps us design and target water efficiency efforts.

Since 2001, conservation programs have achieved measurable savings of more than 7,200 acre-feet (AF) which includes reaching the annual savings goal in our 2015 Water Use Efficiency Plan of 1,123 AF. To reach the goal of 11,000 – 13,000 AF of water savings defined in the IWRP, we must continue to address inefficient use and reduce demands through comprehensive conservation programming.

Saving water through demand reductions stretches our supplies. Colorado Springs Utilities' 2022 WEP is designed to reduce residential and systemwide usage rates by 2.5% between now and 2030; the identified programs could provide an estimated 2,191 acre-feet of water savings by 2030.

1.0 Profile of Existing Water Supply System

As the largest city in Colorado that is not located on a major water source, Colorado Springs understands the value of water because it must travel long distances before it makes its way to the over 500,000 people we serve. That understanding guides how Springs Utilities manages every drop of this precious resource, every step of the way. We have built an elaborate and comprehensive system to store, transport and treat our water—from where it falls to where it is used and then returned or reused.

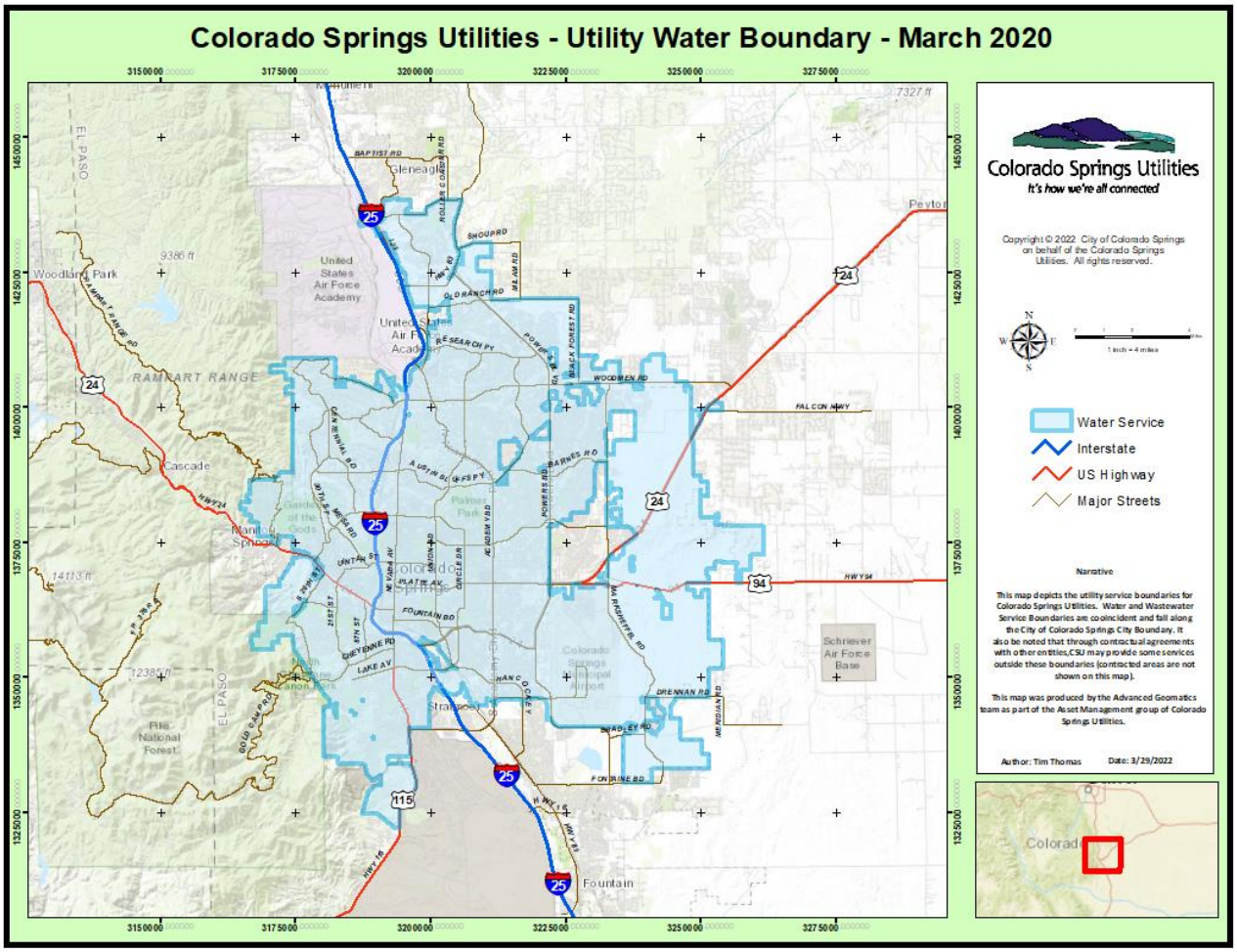

Figure 1 – Water Services Area

1.1 Overview of Existing Water Supply System

Our water service area covers 195 square miles. In 2021, the Water System served an estimated population of more than 520,000 persons, including City residents and customers living in the Ute Pass communities west of the City, military bases, and other suburban areas outside the City Limits.

Colorado Springs obtains water from local sources, transmountain sources, water reuse and exchanges, and minor groundwater supplies. Colorado Springs is dependent on local water collection systems along the Front Range, and transmountain collection systems which bring water across the Continental Divide. Water

is used from three major river basins: the Arkansas River Basin, the Colorado River Basin, and a small amount from the South Platte River Basin. Colorado Springs obtains water from the Twin Lakes, Fryingpan-Arkansas, Homestake, Blue River, Colorado Canal, and Local/Pikes Peak collection systems. This water comes primarily from surface water sources and is conveyed to Colorado Springs through four major pipelines and many other smaller raw water delivery pipelines.

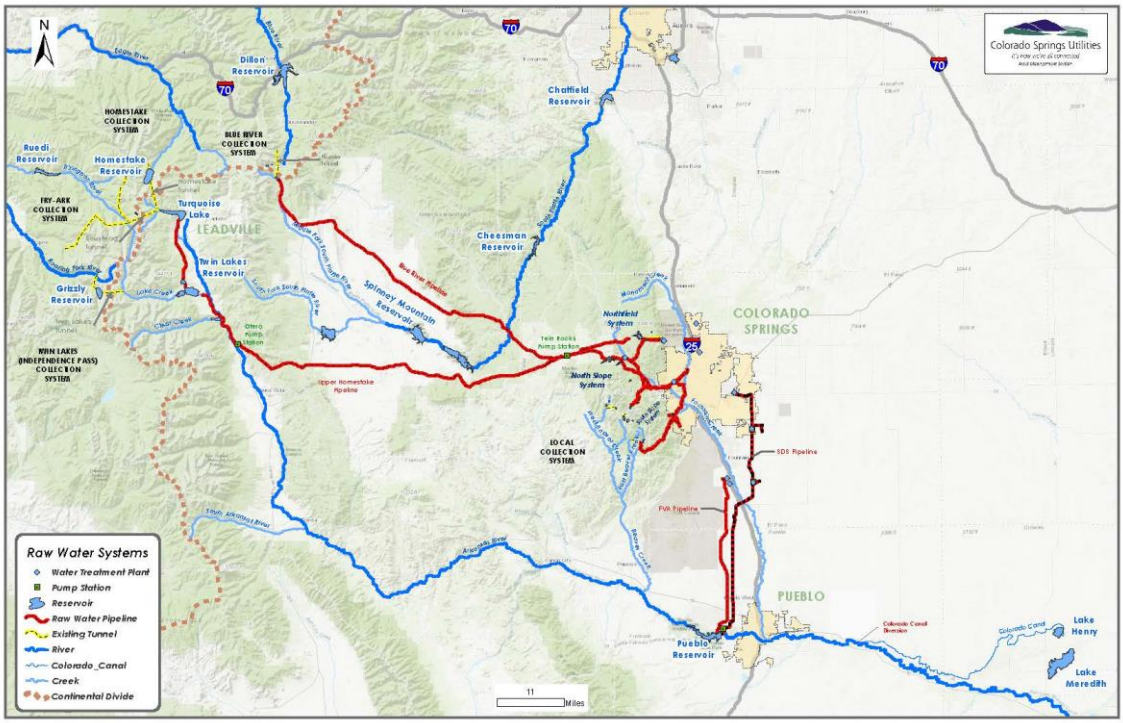

Figure 2 - Our raw water collection systems span some 200 miles

Water Systems and Storage

Our 25 reservoirs can hold up to three years of customer water demand, and water is conveyed from remote watersheds to Colorado Springs through four major raw water delivery systems. On average we treat these supplies in one of six treatment facilities and deliver about 70 million gallons a day (or about 25 billion gallons a year) through 2,411 miles of distribution pipe. We reclaim about 38 million gallons of water a day at two wastewater treatment plants and one solids handling facility. Springs Utilities maximizes water supply through exchanges and reuse. In 2021, approximately 70,985 acre-feet of treated water was distributed to customers.

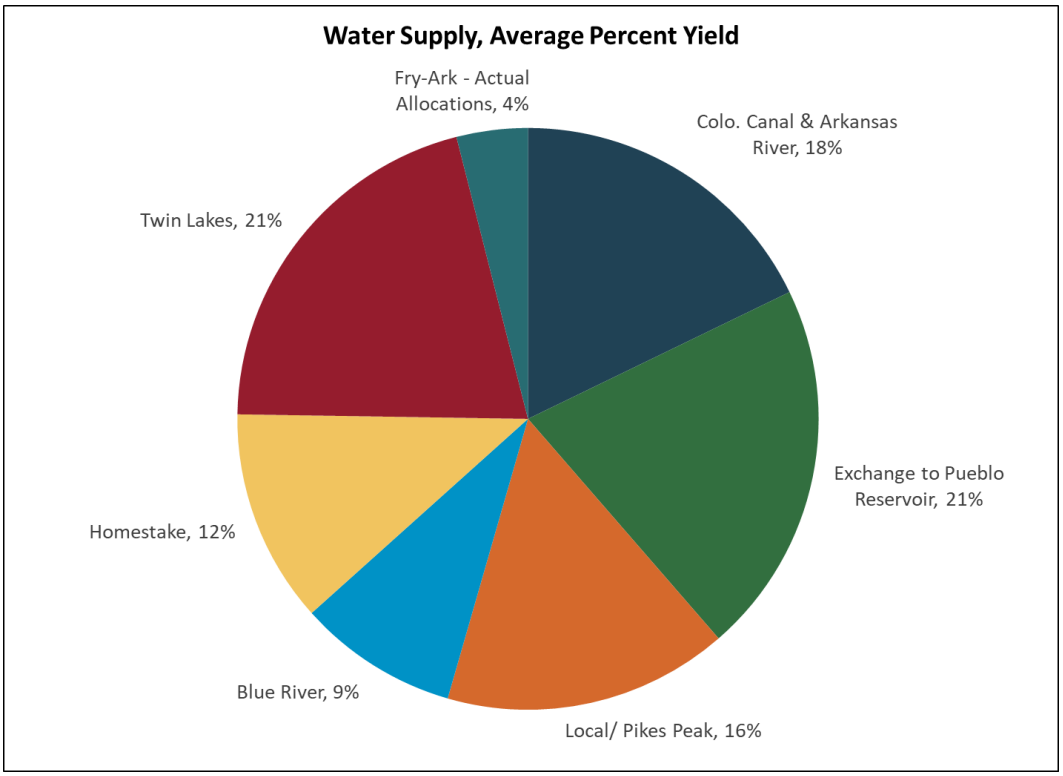

Figure 3 – Water Systems Average Percent Yield

Water Reuse and Exchanges

Approximately three quarters of Springs Utilities' water supply is legally reusable, meaning that Springs Utilities can reuse that water until extinction. These include transmountain water imported, transferred agricultural consumptive use water, and certain types of groundwater.

There are two ways Springs Utilities reuses this type of water: directly through our reclaimed water system or by recapture and reuse for potable supply through a series of water trades known as exchanges.

In addition to reusing fully consumable water through our reclaimed water system and exchanges, these water supplies may also be used for augmentation, delivered to agricultural water users through water sharing agreements or used for other nonpotable water uses. Nonpotable water can be in the form of reclaimed water, raw surface water or groundwater. In 2021, approximately 8,000 acre-feet per year came from non-potable sources.

Water exchanges are a common practice administered by the State Engineer's Office to move water to an upstream location by releasing an equal amount at a downstream location. This water exchange allows Springs Utilities to move water to upstream locations, such as the Local Collection System, Pueblo Reservoir and Upper Arkansas River reservoirs, for delivery to Colorado Springs' Water System. Reuseable waters held in the Colorado Canal System are moved upstream using water exchanges. In 2021, approximately 57,200 acre-feet were exchanged via local exchanges, river exchanges and reservoir trades within the Arkansas River basin.

Groundwater

Groundwater sources include wells owned by Springs Utilities in the Denver Basin aquifers, on Clear Spring Ranch, and wells in the shallow alluvial aquifers throughout the water service area. Colorado Springs also provides augmentation services for customer owned-and-operated wells within the water service area. In 2021, approximately 3,500 acre-feet of nonpotable water came from groundwater sources. No groundwater supplies were used in the potable system.

1.2 Water Supply Reliability

In February 2017, Springs Utilities completed its IWRP which provides a long-term strategic plan for providing a reliable and sustainable water supply to the Colorado Springs Metropolitan Area in a cost-effective manner.

In the IWRP, Springs Utilities evaluated the performance of the raw water system by determining the maximum annual demand that can be reliably met while maintaining certain levels of service criteria. This was termed Reliably Met Demand. The Reliably Met Demand was determined for the raw water system as it existed in 2016, and as it is proposed to exist at community buildout. At this buildout future, the existing system components were operated in combination with a balanced portfolio containing a diversity of demand management, supply, storage, reuse, and conveyance options that were recommended and approved in the IWRP for future implementation. The table below shows the summarized estimates of Reliably Met Demand for current conditions and expected conditions at community buildout.

Reliably Met Demand of the Water System	
System Configuration	**Reliably Met Demand**
Existing System (2016)	95,000 acre-feet/yr
Existing System plus Full IWRP Balanced Portfolio	136,000 acre-feet

Table 1 – Current and future reliably met demand

1.3 Supply-Side Limitations and Future Needs

The IWRP recommends that Springs Utilities pursue a balanced portfolio that contains a diversity of supply, storage, demand management, reuse, and conveyance options. The recommendations of this IWRP are built upon foundational assumptions about what the future could look like in terms of climate, water use, demographics, regulations, and regionalization. There is substantial uncertainty around all these factors. By monitoring indicators of future conditions, the recommendations of this Plan can be adapted to respond to changing trends.

Reliably Met Demand

The reliably met demand (RMD) of the existing system as presented today is 95,000 acre-feet. RMD is monitored and updated based on system changes such as addition of new supply sources, storage and changes to demand. In recent years, Springs Utilities' water system has served potable water demands ranging between 70,000 and 75,000 acre-feet per year, with the highest recent annual demand of about 88,000 acre-feet per year occurring in 2012.

Table 3 lists the future water supply needs and challenges according to CWCB reporting criteria.

Future Need/Challenge	Yes	No
System is in a designated critical water supply shortage area		X
System experiences frequent water supply shortages and/or supply emergencies		X
System has substantial real or apparent water losses		X
Experiencing high rates of population and demand growth	X	
Planning substantial improvements or additions	X	
Increases to wastewater system capacity anticipated		X
Need additional drought reserves	X	
Drinking water quality issues		X

Table 2 – Water supply challenges and future needs

2.0 Profile of Water Demands and Historical Demand Management

Monitoring and understanding potable water demands and the factors impacting them is critical to Springs Utilities' demand management efforts. Changing water demands are a result of substantial conservation, recurring drought, changing values around water, increasing efficiency standards, economic factors and shifting use. Increasing demands are generally driven by population growth.

2.1 Customer and Water Use Characteristics of the Service Area

Since peaking at more than 94,000 AF in 2000, as displayed in Figure 4, water demands have declined to levels on par with the mid-1980s. In that time, service area population has grown more than 92%. Current population growth trends of about 1.6% per year (since 2015) are faster than those projected under the IWRP (high demand scenario). Our current service area population is now over 520,000 with more than 154,000 service connections. Annual water demands for the most recent five years (2017-2021) have averaged 73,100 AF.

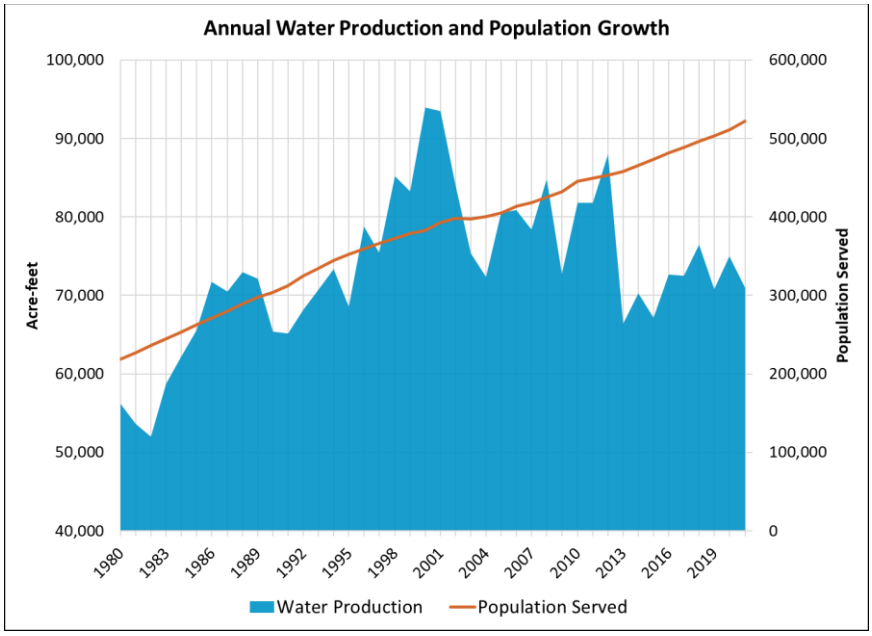

Figure 4 – Annual water production and population served

While annual demands are substantially lower than in the early 2000s, we have tracked steady demand growth since 2013, primarily driven by a growing population. Per person usage rates have continued to decline since 2001, but rates of decline have slowed as customer use gets more efficient.

Potable water demand in Colorado Springs is a function of population, culture, land use patterns, climate/weather, demographics, policy, economics and infrastructure. Springs Utilities provides water service to a changing mix of residential, multi-family, commercial, industrial, institutional, military and contract customers.

In 2021, single-family residential customers made up the large majority (90.5%) of potable water service connections, followed by commercial and industrial customers (5.7%) and multi-family residential customers (3.7%).

Figure 5 shows that single family residential users comprise nearly 47 percent of sales annually and multifamily residential customers make up another 15 percent. Commercial and industrial sales comprise more than 30 percent, while the remaining 7 percent goes to military and other potable water customers.

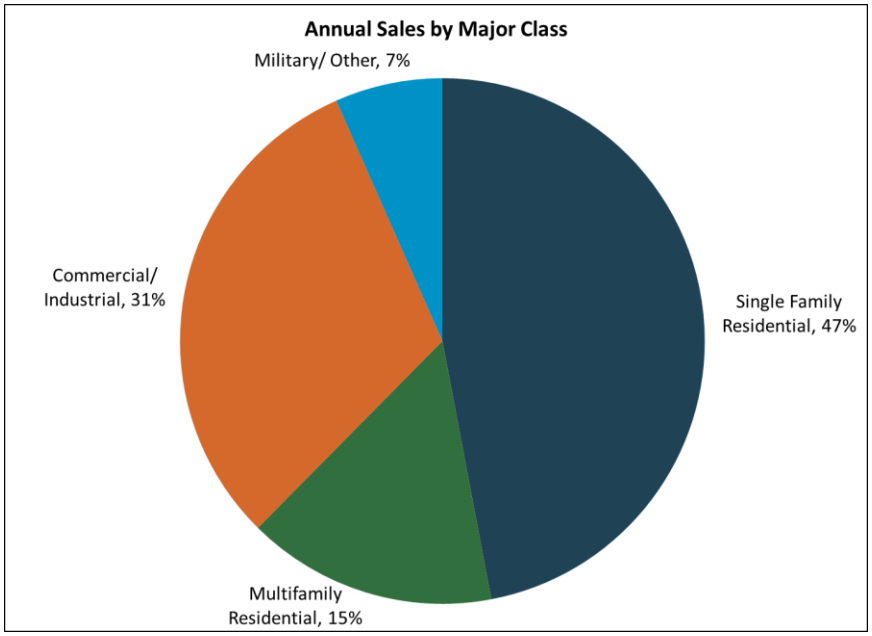

Figure 5 – Sales by major class

Demand Patterns and Trends

Variations in annual and seasonal demands are primarily due to the varying need for landscape irrigation in our semi-arid climate. Annual irrigation season evapotranspiration ranges from less than 30 to nearly 38 inches. Precipitation ranges from less than eight to more than 25 inches per irrigation season. The resulting annual irrigation water requirement for Kentucky bluegrass varies from about 15 to 30 inches per year with an average of 24 inches. Irrigation demands make up about 40% of annual potable water demand, on average. (Our recommended native grass seed mixes can cut water use by 50% or more.)

Monthly demands, including real and apparent distribution system losses (non-revenue water), average between 8,000 and 9,000 AF from June through September and drop below 4,000 AF in the winter months. Since 2018, non-revenue water is estimated at 9.5% average of total production and 12.5% of potable sales.

Systemwide water usage rates, including all potable water entering the finished water distribution system measured in gallons per capita per day (gpcd), have declined by more than 35% since 2000 as shown is Figure 6. However, use has remained relatively flat at around 130 gallons per capita per day (gpcd) since 2013.

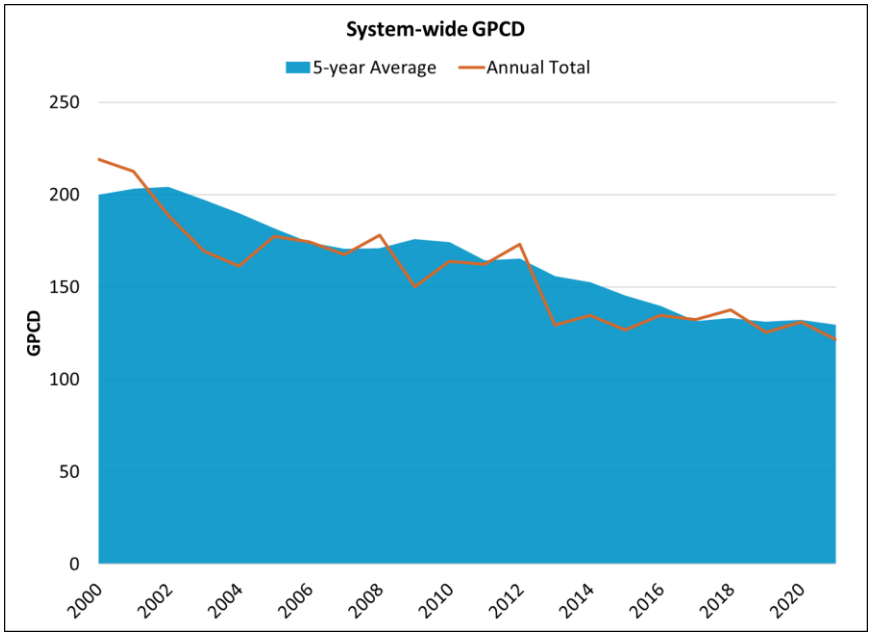

Figure 6 – Annual system-wide per capita usage rates

Single family residential gpcd has declined by 43% over the same period with indoor use down by 29% and outdoor use down 56%. Indoor gpcd continues to decline while outdoor gpcd appears to have flattened. Single family residential gpcd overall has varied between 74 and 82 gpcd for nine consecutive years.

Single family residential parcels have generally decreased in size since 1990. The average parcel developed since 2005 is roughly 30% smaller than those developed in the late 1980s, and this trend continues. Homes have not decreased in size, but the landscape area receiving irrigation has decreased by 50% or more. In theory, this fact combined with increasing indoor efficiency should result in far less water use in new homes. However, usage rates in newer residential construction are not lower than older homes. There are several factors influencing higher than expected use in newer homes including, a larger than average population per household, higher incomes, greater prevalence of irrigation systems, and higher deficit watering and rental rates in older homes.

Similar issues are observed among non-residential customers when usage rates are evaluated in terms of use per acre of development. Indoor and outdoor use per acre appear to be increasing somewhat in newer commercial construction. Increases are likely a function of the mix of new businesses and landscape design and irrigation practices.

Changing economic conditions, land development patterns, usage rates in new construction, and the mix of commercial and industrial end uses will continue to influence systemwide usage rates, both in terms of gpcd and water use per acre. These changes will continue to impact water conservation planning and implementation.

The Impact of Land Development

Springs Utilities' long-range water resource and demand planning requires a comprehensive understanding of factors that are likely to influence demands over the next thirty to fifty years. Because Colorado Springs is a large city with thousands of acres of vacant land to be developed, our planners across all four utility services consider how land will develop and how land uses will impact future demands, such as:

1. What mix of land uses are likely to occupy undeveloped land;
2. At what density, rate and location will land be developed;
3. How much additional land will be added to the service territory; and
4. How and to what extent will currently developed land be redeveloped.

An example of how these issues can impact demands is related to new housing unit density. According to the City of Colorado Springs (City), housing unit density for all existing residential development is 6.5 units per acre. The City's most recent comprehensive plan includes a goal to increase housing density in new development and recent development data suggests the goal is being met. From 2016 through 2020, new residential housing density averaged 8.6 units per acre, an increase of 32% over the city-wide average.

From a water demand perspective, increasing housing density is expected to result in lower residential gpcd due to decreased irrigation demands per person. Decreased irrigation demands may have the effect of "hardening" demand and reducing conservation potential over time because there will be less discretionary use to save. Increasing density will also result in higher usage rates per acre of development and a much larger "build out" population, assuming the same area of land is developed.

2.2 Historical Water Demand Management

For over seventy years, water efficiency has had an integral role in our water resource planning and management. Since the late 1990s, Springs Utilities has implemented more than 40 water efficiency programs, including conservation-based rates, incentives, retrofits and ordinances.

In the early 2000s, efficiency and demand management practices began to significantly influence water demands. During the 2002 drought, water restrictions were implemented as a demand management tool and numerous water efficiency measures were launched.

2.3 Past and Current Demand Management Activities and Impact to Demands

Springs Utilities' 2015 Water Use Efficiency Plan identified over 20 new or ongoing efficiency programs to implement by 2021 with a cumulative annual savings goal of 1,123 AF. Nearly all of the programs identified in the 2015 Water Use Efficiency Plan were implemented and the savings goal was exceeded with a total of 1,961 AF saved through 2021 as shown in Figure 7.

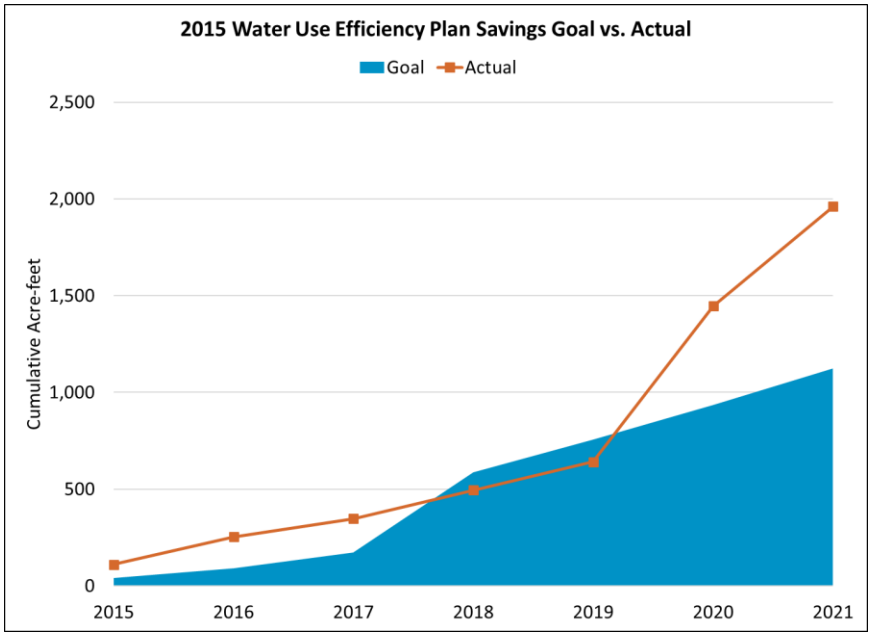

Figure 7 – 2015 Water Use Efficiency Plan Savings

By the end of 2021, Springs Utilities had achieved total cumulative conservation savings of more than 7,200 AF since 2001. To reach the 11,000 – 13,000 AF cumulative water savings goal in the IWRP, we will have to continue to address inefficient uses and reduce demands through comprehensive programming. Since approval of the IWRP in 2017, Springs Utilities has achieved more than 800 AF of savings toward the IWRP demand management goal.

Current Demand Management Activities

Table 4 provides a list of the current demand management activities and the initial year of implementation. Many of our activities, programs and ordinances have evolved over time and some programs defined in the 2015 Water Use Efficiency Plan were piloted and then ended where results were not as expected. Other programs not described in our 2015 update were developed as technology, resources and opportunities arose. A complete description of these programs can be found in Section 4.2.1.

Program Area	Date Initiated
Foundational Activities / Annual Savings: 75 AF	
Metering	1940s
Conservation-based Rates	2002
My Usage (customer self-monitoring)	2013
Water Loss Control Program	2020
Leak Detection Survey	2017
Targeted Technical Assistance and Incentives / Annual Savings: 180 AF	
Low Income Bathroom Retrofits (HEAP)	2009
Commercial Flow Sensing Shutoff Device Rebate	2009
Commercial Irrigation Equipment Rebate	2009
Residential Irrigation Equipment Rebate	2009
Commercial Fixture Retrofits	2010
Commercial Pre-Rinse Spray Valve Retrofit Program	2010

Commercial Irrigation Audit Program	2013
Residential Showerhead Exchange/Rebate Programs	2013
Commercial Smart Irrigation Controller Rebate	2015
Non-Profit Fixture Retrofits and CEO Toilet Replacements	2015
Commercial Turf to Native Grass Conversion Rebate	2017
Business Custom Rebate	2018
Residential Efficiency HELP Kit	2019
Landscape Industry Irrigation and Landscape Training	2019
Commercial Irrigation Efficiency Project-Based Rebate Program	2021
Business Customer Assessment Program(s)	2021
Ordinances and Regulation / Annual Savings: 28 AF	
Commercial Landscape Code	2000
Water Waste Ordinance (Water-wise Rules)	2020
Water-wise Rules – Rules Enforcement	2020
Educational Activities / Savings Driven Through Other Programs	
Water Wise Demonstration Gardens	1995
Demonstration Gardens Volunteer Program	1995
Landscape Education Programs, Tours and eNewsletter	1995
General K-12 Education Programs	2009
Landscape Industry Irrigation and Landscaping Training	2015
Water Wise Plants Database	2017
Landscape Industry Irrigation Equipment Coupon	2018

Table 3 – Current demand management activities

2.4 Water Demand Forecast

A Land Use-based Water Demand Model (Model) was developed in 2021 for the WEP and as part of an enterprise-wide effort to better align demand planning efforts across multiple service lines. The Model is based on 2016-2019 water use and 1990-2016 land development data.

This modeling approach provides a relatively simple platform to examine the effects of changes in growth rates by land use type, overall mix of land uses, service area boundaries, and water use rates by land-use type. This Model is useful in coordinating with land use planning entities, other utility services, and for targeting and designing conservation efforts.

Published studies have found this type of model can account for a substantial majority of the spatial variability in water use. Land use variables also have greater explanatory power than traditional socioeconomic variables and many water utilities are adopting this approach.

The Model's independent variables are annual acreage growth and water use per acre. Both are estimated in aggregate and by land use classification. Since 2001, average annual customer and acreage growth rates are almost identical. The Model's growth forecast adopted the most recent customer growth forecast used in Springs Utilities' Water Sales Forecast. Projected water usage rates for all new parcels and each land use are the median annual usage rates for all parcel acres developed from 1990-2016. This analysis of baseline use per acre includes more than 18,000 acres of land and over 23,000 AF of annual water sales.

Other Model inputs are added to this forecast to derive a total Annual Water Demand Forecast, which is equivalent to the water production volume. Additional sales data incorporated include suburban sales, military sales and hydrant sales.

Demand "reducers" and "influencers" are incorporated into the Model to account for known efficiency standards, water efficiency plans, climate change and non-revenue water (distribution system losses).

Demand reducers in the Model include:

1. Projections of passive water savings volumes resulting from existing federal energy policy and Colorado water efficiency standards are applied to existing residential customers.
2. Actual water savings as they are accrued and conservation scenarios, including the 2022 WEP can be incorporated.

Demand influencers in the Model include average annual non-revenue water and military sales.

The resulting demand forecast, displayed in Figure 8, predicts potable water demands to exceed 83,000 AF in 2030, 105,000 AF in 2050, and 131,000 AF in 2070 without additional conservation. Annual demands are likely to increase somewhat faster after the early 2040s when passive water savings are fully realized.

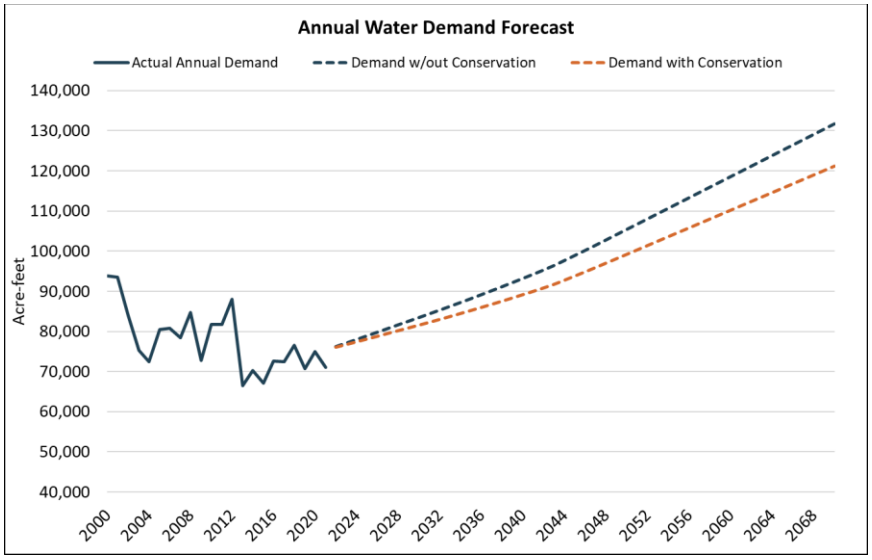

Figure 8 – Model Demand Forecast without future conservation

3.0 Integrated Planning and Water Efficiency Benefits and Goals

3.1 Water Efficiency and Water Supply Planning

Water efficiency is a critical component of long-range planning that includes the IWRP, Drought Response Plan and the Water Shortage Ordinance. The IWRP defines future water supply needs from water efficiency efforts to reach 11,000 to 13,000 acre-feet a year by buildout. Since 2017, Springs Utilities has achieved more than 800 AF of savings toward the IWRP target through 2021. Figure 9 below shows historical savings achieved through the 2015 Water Use Efficiency Plan plus IWRP savings achieved to-date and the proposed WEP savings target.

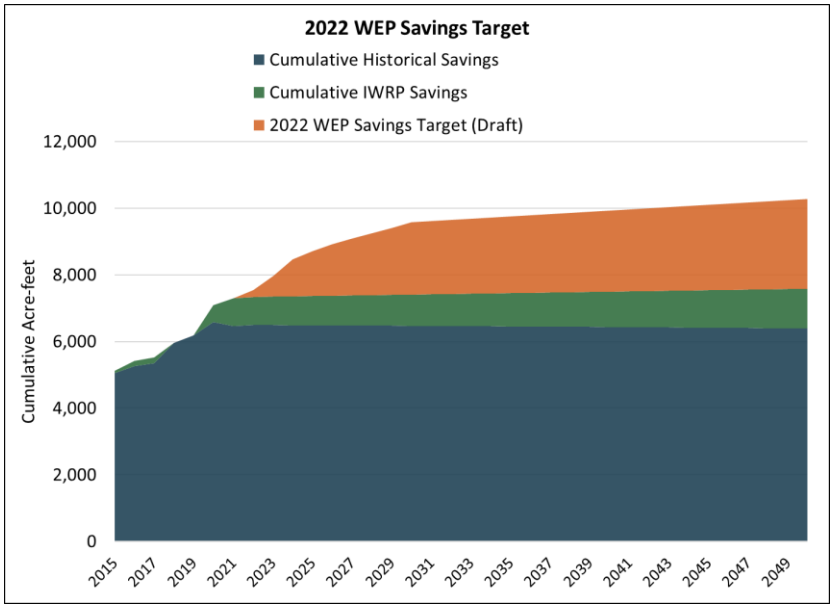

Figure 9 – 2022 WEP Savings Target

3.2 Water Efficiency Goals

This Plan is designed to support Colorado Springs Utilities' strategic goals: to support the community and focus on the customer, demonstrate environmental stewardship while keeping bills competitive, optimize operations and infrastructure, and provide safe, resilient, and quality services. We will accomplish this by:

> **Ensuring the beneficial use of this limited resource**. Water connects us all and the water we use also serves a larger community across Colorado and the west. As an example, 60-70% of our water comes from Colorado River Basin sources. It will take all of us doing our part to ensure adequate supplies for our future. This means making careful water use decisions each day, and planning, inspiring and implementing programs and services that gain the most beneficial uses for our community.
>
> **Valuing water for our best future.** Colorado Springs Utilities supports a planful community that remains vibrant regardless of growth or climate conditions. Our work ensures an economically vibrant and high-quality community.

Our conservation programs have been highly successful, and we must remain diligent as many factors including climate change, Colorado River supply curtailments and drought continue to strain our supplies.

This Plan is designed to reduce residential and systemwide usage rates by about 2.5% between now and 2030. The activities advance water efficiency by coupling broad-based foundational efforts, which establish wise water use, with targeted activities designed to address specific inefficiencies in use. Our core objectives address the most significant areas of inefficiency and maximize the value and health of the built landscape, by:

1. Achieving widespread efficiency in residential indoor use, regardless of income, housing type or ownership. Our largest opportunities for indoor savings are in multi-family apartments where efficient fixture upgrades are lagging.
2. Meeting the increased need for resilient landscapes through programs that promote 12-16 inches of irrigation level per season (compared to all-turf requirement of 24 inches). Our programs are designed to support customers with education and programs that bring irrigation to more efficient levels while supporting better landscape design and plant choices.
3. Supporting updates to the City's Commercial Landscape Code and Policy Manual to introduce limits on high water use turf grass, improve irrigation equipment standards, and incorporate water needs in design requirements. This effort will ensure a more balanced approach to landscape design, plant choices and irrigation management aligned with our climate.
4. Implementing water loss control measures to reduce system losses and optimize distribution system investments and operations. This program will ensure that Springs Utilities is maximizing every drop of water that flows from our diversions through our distribution systems.
5. Educating customers on personalized water use goals which reflect their efficient use and needs for home, business and landscape. This education will be supported by programs to help customers reach efficient use and eliminate waste. This work is our first step in moving towards more customized, conservation-based rates.

As shown in Figure 10, the water conservation goals proposed for implementation in this WEP could reduce forecasted demands by nearly 2,200 acre-feet by 2030 and 2,700 acre-feet by 2050. This could result in potable water demands of about 81,000 AF in 2030, 102,000 AF in 2050 and 128,000 AF in 2070.

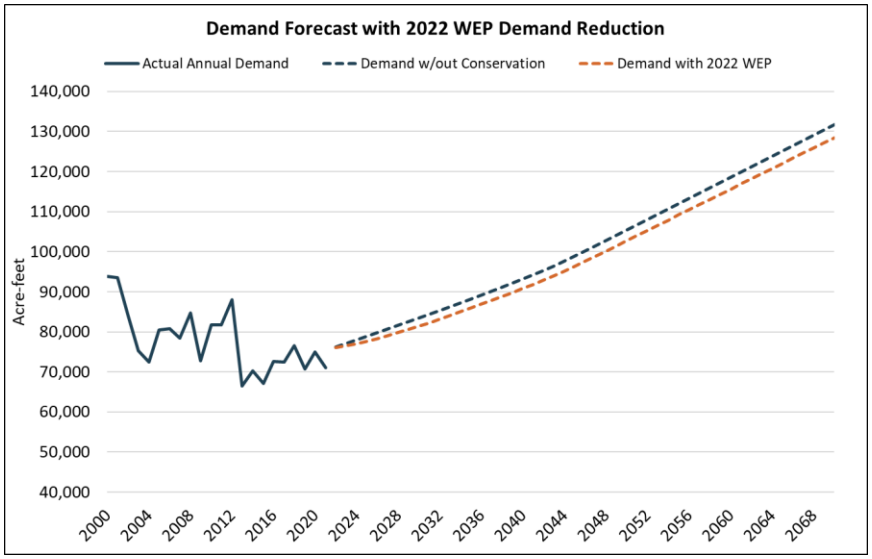

Figure 10 – Water Demand Forecast with 2022 WEP demand reduction

4.0 Selection of Water Efficiency Activities

4.0 Summary of Selection Process

Through rigorous analysis, Springs Utilities evaluated a host of water efficiency programs and offerings to meet the savings goals of this Plan and align with IWRP long-term planning goals. The inventory was developed after reviewing water demands, best management practices, consultant reports, end-use studies, customer feedback, and new innovative technologies, while also considering where we have found the most success with our customers historically. Staff also discussed a variety of potential programs with other Front Range and western water providers as well as CWCB staff. These programs and measures were evaluated based upon the five screening criteria listed below.

Evaluation Criteria	**Description**
Supply and demand risk mitigation	*Most critical programs to minimize water supply risks beyond typical savings.*
Water savings potential	*Savings by relative potential and from those customer groups and uses that are least efficient.*
Likelihood of success	*Best political acceptance, able to secure awareness/engagement from customers, and feasible to implement given available resources.*
Cost effectiveness	*Total benefit-cost ratio which defines the value of the water saved (avoided cost) divided by the total cost to implement, including net customer costs (customer cost – cost bill savings). The higher the ratio the better the cost effectiveness. Reusability of saved water is considered.*
Community vitality	*Ensure economic vitality and a high quality of life for our customers through programs that promote resilient landscape solutions.*

Table 4 – Evaluation Criteria

4.2 Demand Management Activities

The following programs could provide an estimated 2,190 acre-feet of water savings through a variety indoor and outdoor programs, ordinances, and water loss control by 2030. These programs are defined according to CWCB's four primary water efficiency categories: foundational activities, targeted technical assistance and incentives, ordinances and regulation, and educational activities. All programs are described in sections 4.2.1 - 4.2.4.

Foundational Activities	**2022-2030 Cumulative Savings (AF)**	**Resource Benefit-Cost Ratio**	**Start Year, Historical Activities**	**Start Year, New Activities**
Residential Conservation-based Rates	Provide significant historical baseline savings but will not increase savings between 2022 - 2030.		2002	
Commercial Seasonal Rates			2003	
AMI Metering	Supports conservation efforts but does not provide direct savings.			2021
Proactive Distribution System Leak Detection	150	1.35	2017	
Reduced Distribution System ALR (Response Time)	100	NA		2022
Distribution System Pressure Management	20	NA		2022

CUMULATIVE 2022-2030 SAVINGS	270	

Foundational Activities - Considered but Not Implemented		
Development Charge Incentives	84	2.10

Targeted Technical Assistance and Incentives	2022-2030 Cumulative Savings (AF)	Resource Benefit-Cost Ratio	Period, Historical Activities	Period, New Activities
Outdoor Programs				
Commercial Rotary Nozzle Rebates	207	7.54	2016	
Residential Rotary Nozzle Irrigation Rebates	48	5.69	2009	
Commercial Smart Irrigation Controller Rebates	26	5.40	2009	
Commercial Irrigation Audit Program	47	4.89	2015	
Residential Smart Irrigation Controller Rebates	61	3.44	2009	
Commercial Irrigation Equipment Retrofits	69	2.45	2021	
Commercial Turf to Native Grass Conversion Rebate	70	2.00	2016	
Residential Rain Sensor Rebate	4	1.35	2003	
Residential Irrigation Audit Program	19	1.55		2025
Indoor Programs				
Pre-rinse Spray Valve Retrofit	28	2.91	2010	
Residential UHE Toilet Rebate	61	2.74		2022
Business Custom Rebate	44	2.33	2018	
Commercial Smart Leak Detection Rebate	23	1.90		2025
Multifamily Affordable Housing Rehab Project	90	1.83		2022
Single Family Affordable Housing UHE Toilet Rebate	40	1.66	2015	
Commercial and Multifamily UHE Toilet Rebate	37	1.39		2022
Faucet Aerator Retrofit	1	1.06	2010	
Home Efficiency Assistance Program (HEAP)	28	NA	2003	
CUMULATIVE 2022-2030 SAVINGS	910			

Targeted Technical Assistance and Incentives – Considered but Not Implemented		
Outdoor Programs		
Residential Sprinkler Body Rebates	State standards in effect	
Commercial Sprinkler Body Rebates		
Residential Landscape Conversion Program	10	0.82
High Use Sports Artificial Turf Rebate	45	0.05
Indoor Programs		
Residential Smart Leak Detection Rebate	36	0.86
Commercial UHE Urinal Rebates	7	0.59

Ordinances and Regulation	2022-2030 Cumulative Savings (AF)	Resource Benefit-Cost Ratio	Period, Historical Activities	Period, New Activities
Commercial Landscape Code and Policy Manual				
25% Turf Limits (Commercial)	43	108.20		2022
Commercial Irrigation Equipment Requirements	53	20.42		2023
25% Turf Limits (Residential)	19	1.57		2022
Commercial Smart Irrigation Controller Requirements	303	1.55		2023
Water Waste Prohibition				
Water-wise Rules	172	45.1	2020	
CUMULATIVE 2022-2030 SAVINGS	**590**			

Educational Activities	2022-2030 Cumulative Savings (AF)	Resource Benefit-Cost Ratio	Period, Historical Activities	Period, New Activities
Indoor and Outdoor Programs				
AMI Leak Notifications	26	7.49		2024
Commercial Water Use Goals	251	8.62		2024
Residential Water Use Goals	144	4.69		2023
Landscape Education, Tours and Newsletter	Associated savings accounted for in other programs		2000	
Water Wise Demonstration Gardens and Volunteers			1992	
Water Wise Plants Database			2003	
Industry Technical Education and Incentives			2019	
General K-12 Education Programs			2012	
CUMULATIVE 2022-2030 SAVINGS	**421**			

Table 5 – All Programs Considered and Selected with Savings Goals

The WEP is designed to maximize water use efficiency and facilitate comprehensive demand management from the time of new construction through day-to-day use. Each of the programs planned for implementation can be mapped into the following four areas of effort that Springs Utilities integrates to maximize efficiency, steadily reduce demand and stretches our supplies.

4.2.1 Foundational Activities

Colorado Springs Utilities has identified the following foundational activities to meet our savings requirements through 2029. Foundational activities are efforts common to a successful efficiency plan and the broadest reaching elements upon which efficiency programs are built.

Residential Conservation-based Rates: These rates have been in effect for residential rate class customers since 2002. This structure is intended to provide a discounted rate for efficient indoor use, a higher rate for reasonable outdoor use and encourages conservation with a higher third tier for excessive outdoor use.

These rates could be updated in future to align with best practices related to the unique needs and efficient use goals for residential customers.

Commercial Seasonal Rates: These rates have been in effect for commercial rate class customers since 2003. This structure is intended to provide a discounted rate for winter (indoor) use and a higher summer (outdoor) use. It is intended to encourage conservation in landscape irrigation. These rates could be updated in future to align with best practices related to the unique needs and efficient use goals for commercial customers.

AMI Metering: Automated metering infrastructure will be installed and will provide a variety of potential water conservation benefits, including improved customer and distribution system leak identification and notification.

Water Loss Control Program: Springs Utilities formalized our program in 2020 and has integrated the tracking and review of all water loss components across our collection and distribution system using American Water Works Association tools. Results show small improvements in data validity and significantly improved communication and coordination across critical stakeholder groups.

Proactive Distribution System Leak Detection: Proposed program to expand existing Leak Survey and Detection Program from surveying 4.5% of the system to 10% to increase efficiency of existing program and further reduce losses.

Reduced Distribution System ALR (Response Time): Water Construction and Maintenance staff can limit all failure (leak) run times to no more than 14 days through new prioritization of maintenance activities. We expect associated reduction in known losses of nearly 20%.

Distribution System Pressure Management: Program will add flow meters and telemetry to five pressure relief valve vaults and AMI data will monitor customer consumption. Data can be collected to calculate how much water is lost in the pressure zone to determine best pressure reduction measures.

Customer Self-Service Portal: Springs Utilities is developing an online portal for customers to review, understand and make decisions about water and energy use. This program will enhance current usage and communication systems and allow customers to understand and move towards efficient use. This system also will support education and other data requirements needed for future conservation-based rates.

Billing System Upgrade: Springs Utilities is upgrading our four-service billing system. The new system will allow us to capture and provide more meaningful usage information to customers. This system also will support education and other data requirements needed for future conservation-based rates.

4.2.2 Targeted Technical Assistance and Incentives

Springs Utilities has identified the following technical assistance and incentives to meet our savings requirements through 2029. This assistance and incentives are a collection of activities that rely on indoor and outdoor efficient technologies and best practices.

Outdoor Programs

Irrigation Equipment Rebates (Commercial): Springs Utilities provides irrigation equipment rebates for high efficiency equipment from heads and nozzles and rain sensors (about 80 total rebated per year) to smart irrigation controllers (about 30 rebated per year).

Irrigation Equipment Retrofits: Commercial customers may apply for irrigation upgrades using grant funds and landscape contractors assist in performing significant upgrades. Landscape contractors qualify to bid on such projects by attending our industry training and certification programs. We anticipate this program could serve 10-15 customers per year and improve their overall irrigation efficiency by 25%.

Irrigation Audit Program (Commercial): Free audit for commercial customers to help identify scheduling changes, leaks and efficiency investments for optimal outdoor use. Customers receive information on our supportive programs. Audits include a consumption analysis and on average, 30-40 zones are examined. We perform about 50 audits each year which includes some quick retrofits and leak repairs.

Turf to Native Grass Conversion Rebate (Commercial): Rebate for conversion of turf to native grass. Includes converting abandoned landscapes (with irrigation systems) to native grass areas. Typically serve up to 10 customers per year and fund two conversion projects per year. To date, this program has removed approximately 1.8 million square feet of turfgrass.

Irrigation Equipment Rebates (Residential): Springs Utilities provides irrigation equipment rebates for high efficiency equipment from heads and nozzles and rain sensors (about 300 total rebated per year) to smart irrigation controllers (about 450 rebated per year).

Irrigation Audit Program (Residential): Free audit for commercial customers to help identify scheduling changes, leaks and efficiency investments for optimal outdoor use. Anticipate performing 250 audits per year starting in 2025.

Indoor Programs

Fixture Retrofits – Faucet Aerators, Showerheads and Pre-Rinse Spray Valves: Provide free retrofits as part of commercial indoor audits and other customer outreach programs (commercial and residential). Average annual retrofits are 100 faucet aerators, 50 showerheads and 50 pre-rinse spray valves.

Ultra-High Efficiency Toilet Rebate (Residential): Rebate offered for upgrade or new install of 0.8 gallon per flush toilet. Anticipate providing about 500 rebates per year.

Business Custom Rebate: Customers receive a substantial rebate for upgrading any combination of equipment, fixtures or building systems. The more saved, the higher the rebate. This program particularly targets multi-family properties, lodging, medical and retail. On average, we distribute five rebates per year.

Smart Leak Detection Rebate (Commercial): Rebate offered for the installation of smart leak detection devices that provide flow sensing in multiple remote locations throughout a site. The device disaggregates flow data to allow customers to quickly identify and address leaks and other efficiencies that an AMI meter will not address.

Multifamily Affordable Housing Rehab Project: Provides energy and water upgrades to qualifying affordable housing or naturally occurring affordable housing customers where typical use is far above efficient use. The program includes toilet, showerhead and aerator retrofits and leak identification and repair.

Non-Profit Fixture Retrofits and Colorado Energy Office Toilet Replacement Program: Non-profits and government entities that serve low-income customers receive free toilets, faucet aerators, showerheads, and pre-rinse spray valves to conduct their own retrofits and provide significant savings. *Savings evaluated per respective fixture replacements.*

Ultra-High Efficiency Toilet Rebate (Commercial): Rebate offered for upgrade or new install of 0.8 gallon per flush toilet or 1.1 gallons per flush valves. Anticipate providing average of 60 rebates per year.

Commercial Indoor Audit Program: Free indoor water use audit for commercial customers includes water consumption analysis and identifies areas for water efficiency investments. Springs Utilities performs about 25-30 audits each year which includes free efficiency retrofits—aerators, pre-rinse spray valves and showerheads—and information on supportive business rebate and incentive programs. *Savings evaluated per respective fixture replacements.*

Efficiency HELP Kits: Free kits for residential customers (includes LEDs, showerheads, aerators) that will decrease their energy and water utilities bill. This program is designed for low-income and fixed income customers. We distribute about 2,000 kits per year and this program will be discontinued after 2022. *Savings evaluated per respective fixture replacements.*

Affordable Housing Bathroom Retrofits (HEAP): Provides complete energy and water upgrades to qualifying, low-income customers that include toilet, showerheads and aerators. Typically upgrade 100-125 bathrooms per year.

4.2.3 Regulation and Ordinances

These are regulatory efforts to promote or require efficiency, typically where consistency is required or when other methods like education and incentives aren't effective.

Commercial Landscape Code: The current commercial landscape code will be updated by the City of Colorado Springs with important improvements that could gain savings from water wise landscape design, irrigation equipment and plant choices beginning 2022 and 2023.

> 25% Turf Limit (Commercial and Residential): The updated commercial landscape code includes a limit on turf install for all new development including residential development common areas.
>
> Irrigation Equipment and Smart Controller Requirements: The updated commercial landscape code will be supported by an updated Landscape Policy Manual that could require installation of highly efficient irrigation equipment and smart controllers in all new developments.
>
> Landscape Water Demand Calculation: Total landscape water requirements could be calculated and submitted with landscape and irrigation plans as specified in the updated Landscape Policy Manual.

Water-wise Rules and Enforcement: Our water waste ordinance requires best practices in landscape watering for commercial and residential customers by eliminating waste and watering landscapes no more than three days/week. Baseline savings was 560 AF in 2020. Incremental annual savings and enforcement gain of 15-20 AF per year thereafter.

4.2.4 Education Activities

Springs Utilities has identified the following education activities designed to drive customers to engage in all other programs, incentives and rebates to meet our savings goals through 2029. These activities convey water efficiency information to customers and the public.

AMI Leak Notifications: Once Springs Utilities transitions to AMI metering, customers will receive real-time alerts of leaks and excessive use and educational information to act on that information.

Commercial and Residential Water Use Goals: To help customers understand efficient use for their unique home/business need and landscape requirements, this program could educate customers towards these

conservation best practices and support with programs that optimize use and help customers stay within the goal.

Landscape Education Programs, Tours and Newsletter: A robust program offering that includes landscape education via webinars and further supported by a monthly e-newsletter for continuing education. Also includes a variety of customer support meetings, tours, consults and educational materials.

Water Wise Demonstration Gardens and Volunteer Program: Two gardens support customer education on water-wise landscape plants and designs towards more sustainable landscapes and efficient use. A large group of volunteers support general maintenance of these gardens and extend our education through their own community connections.

Water Wise Plant Database: Waterwiseplants.org is a plant database that works as a supportive tool for customers and landscape professionals in determining best plant and tree choices with proven success in our climate and region.

Industry Technical Education and Incentives: Irrigation maintenance personnel can qualify for coupons to purchase high-efficiency irrigation equipment by attending an irrigation class. This equipment is installed across our service territory. Springs Utilities also offers free irrigation management and efficiency education to landscape contractors/professionals which includes supplementing the cost of CLIA certification and providing an annual green industry continuing education forum for our community.

General K-12 Education Programs: Comprehensive water education includes robust programs for K-12 students and behavior-based water savings discussions as well as overviews of our water supply systems, water quality, watershed health, etc.

5.0 Implementation and Monitoring Plan

The following section specifies the strategy, steps and schedule Springs Utilities will employ to implement the 2022 Water Use Efficiency Plan. This section also addresses the timing for review and revision of the plan, and the process for adoption and approval.

5.1 Implementation Plan

Implementation Steps

Springs Utilities' process for developing and implementing demand-side management solutions include the following ten steps which are designed to address the unique characteristics of each program. The programs identified in this Plan will be implemented from 2022-2028.

Springs Utilities will implement programs that address customer needs and contribute to measurable water savings. To ensure best results, some programs may take several years to develop and implement. During the first year, internal processes are established, and market assumptions are tested. For most programs, a "pilot approach" will introduce the first year of a program. During the second year, Springs Utilities relies upon measurement and verification to confirm initial program assumptions. For most programs, water savings may not be realized for two to three years after program launch.

Step One: Review internal policy and procedure documents to ensure programs are implemented and consistent with organizational processes. Identify project manager, stakeholders, etc.

Step Two: Assess organizational policies (i.e., Strategic Plan, Excellence in Governance Policy Manual) and community plans (i.e., City Charter and Comprehensive Plan) for strategic alignment. Review City Code and Regional Building Code to ensure compliance.

Step Three: Investigate applicable state and federal regulations. Involve regulatory agencies early in the process. Make legislative changes as necessary. Identify potential issues for review by City Attorney.

Step Four: Ongoing research of water conservation studies, sources, standards, and industry best practices to ensure integrity of program design. Consistent review with other water conservation programs and professionals to identify strengths and weaknesses of program design and implementation.

Step Five: Perform the cost/benefit analysis and establish logic model for program development. Estimate market penetration rate. Agree on annual participation goals and market saturation objectives. Verify assumptions and calculations used in the technical analysis. Establish preliminary launch date.

Step Six: Develop budget. Estimate staffing resources necessary to develop and manage program. Formalize requests for regular, seasonal and temporary staff. Identify internal and external training needs.

Step Seven: Determine program requirements. Conduct pricing analysis for materials and services. Develop procurement strategy and schedule. Draft solicitation documents and evaluation criteria. Review and evaluate bids/proposals received. Award decision and finalize agreements with vendors and consultants.

Step Eight: Evaluate customer segments and assess segment potential. Define target segment. Develop marketing strategy, tactics and materials. Identify distribution channels.

Step Nine: Describe measurement and verification plan. Create activity numbers, work order numbers and accounting strings for budget and expense tracking. Develop management tracking reports.

Step Ten: Implement program. Routinely monitor and evaluate program. Track budget, expenses, water savings data, annual participation, market penetration, lessons learned, and customer feedback. Verify original assumptions and refine program over time.

Implementation Schedule

Various factors impact the implementation schedule including shifting organizational priorities that limit budget and staffing availability, regulatory and technology changes, drought and shifting water resource availability. Springs Utilities will adapt the implementation schedule, budget, and efficiency programs to keep up with these changes. The anticipated schedule is listed in Table 6 above.

5.2 Monitoring Plan

Springs Utilities monitors all conservation and efficiency program activity monthly, tracking program participation rates, costs, and water savings estimates. Accurate tracking is critical to understanding the impacts of conservation and efficiency programs on water use, customers and utility finances. It also is critical due to annual CWCB reporting requirements associated with House Bill 10-1051. In addition to monitoring program activities monthly, Springs Utilities monitors water demands and weather data on a daily, weekly, monthly and annual basis.

Water Conservation staff applies best practices in establishing and measuring standards for calculating savings/reductions for each of our efficiency programs and regularly evaluate program performance to continually improve effectiveness. Each year, multiple programs and the assumptions made to estimate water savings and other performance criteria are evaluated using actual water consumption and other benchmarking data. These analyses are generally performed using regression analysis or comparisons of participant and control groups. The results of these analyses are used to update and refine cost and savings assumptions, and the goals and direction of efficiency programs may be adjusted.

Springs Utilities routinely conducts water conservation surveys. These surveys provide information on customer values related to water efficiency and information about end use penetration rates and water use behaviors. Survey and other customer-specific data is used to derive water use benchmarks for a variety of commercial sectors such as hotels, restaurants, and office buildings. These benchmarks allow Water Conservation staff to effectively identify inefficient water users and supportive programs to address the same.

In addition to industry and local data sources, research from federal agencies and peer utilities is considered in establishing savings calculations. Water Conservation staff reports quarterly savings results to management and provides an update of results to executive management annually as part of the Integrated Water Resource Plan True-Up. As part of the evaluation and reporting process, Water Conservation staff adjust the Water Efficiency Plan to ensure we meet all savings goals while addressing organizational and customer needs.

6.0 Adoption of New Policy, Public Review and Formal Approval

6.1 Adoption of New Policy

For Springs Utilities this involves gaining feedback from internal and external stakeholders, addressing opportunities and challenges, and finalizing the plan with approval from our Chief Executive Officer. The following public process was implemented prior to finalizing this plan.

6.2 Public Review Process

Our Executive Team was briefed at various times across 2021-22 to keep them engaged in this effort, share our objectives, goals and learning and provide in-depth briefings on program options. These discussions also helped direct our work. The context of these discussions and decisions included preparation and contingency planning for potential future disruptions to Colorado River supplies, including identification, prioritization, and planning of supply and demand-side opportunities to best optimize our water resources and water system.

Technical Analysis: We received a grant from the Sonoran Institute to hire an outside consultant to help us broaden our understanding of how conservation-based rates could be improved, defined and implemented as a best practice in encouraging conservation and optimizing beneficial water use both indoor and outdoor. The consultant helped us analyze consumption data by customer type and land use to support a variety of methods. This work will help us educate our customers related to their unique water use goals.

Internal Staff and management had a chance to review the Plan and provide feedback. These same groups were given in-depth briefings on our program choices and helped us finalize the Plan.

60 Day Public Comment Period: The 2022 Water Efficiency Plan was posted on our website from April 1 – May 30, 2022 with promotion of this plan and solicitation for customer/public comment. Those comments are provided in the Appendix A of this document.

6.3 Local Adoption and State Approval Processes

The Chief Executive Officer of Colorado Springs Utilities approved this document. A copy of the adoption document can be found in Appendix B.

6.4 Periodic Review and Update

The Water Conservation Team will monitor progress, savings metrics and evaluate the benefits and costs of each program annually. An updated WEP will be submitted to the Colorado Water Conservation Board by June 2029.

Appendix A: Public Comment

Springs Utilities shared the 2022 Water Efficiency Plan with customers and the general public via our website with an opportunity to share comments. That feedback is provided below.

How will this water efficiency plan support you and our community? Please share any additional comments related to this plan and the efficient use of water.	
Customer Feedback	**Responses from Colorado Springs Utilities**
Programs for Homeowner's Associations	
It will encourage more native shrub and tree planting. Please reach out to HOAs. Some of them require a certain amount and type of lawn. All homeowners should be able to choose to put in native grasses and shrubs and or xeriscape. As a new homeowner, I want my landscaping to be the least amount of water as possible. If I could get away with not having to water anything, I would do it. I think CSU should or maybe they already do work hand in hand with HOAs in their plans and requirements that they have for homeowners. If not already doing so, maybe more resources can be saved.	Colorado Springs Utilities offers a robust program for homeowner's associations that includes audits, consumption analysis, irrigation and landscape assessments and recommendations for best savings and solutions. You can learn more on our HOA webpage.

Rebates for Turf/Landscape Replacement	
Positively impact water shortage issue, positively impact landscaping industry for landscaping, help CSU water supply. Please follow suit of castle rock, Denver and other cities that are providing rebates/reimbursements for xeriscaping. Residents will not be proactive enough to contribute to this crisis without a positive reinforcement, such as reimbursing their time/funds spent to help lessen the water crisis. May not. Give a substantial rebate for artificial grass and other water saving landscaping. Save water resources and save money. Use the same plan as Castle Rock and rebate for artificial turf.	Colorado Springs Utilities offers a commercial native grass conversion rebate, irrigation rebates for residential and commercial customers and a wide range of landscape education programs and resources. In our City Parks, the native grass conversion rebate has supported the removal of 1.8 million square feet of turfgrass since 2013 (reducing water use for those areas by 50%). For homeowners, turf removal is a very costly investment. To justify a rebate for this type of program we weigh costs to the customer and Springs Utilities against water savings gained. With these programs the high cost of water savings is balanced against costs of turf removal, water wise plant choices, landscape design, and efficient irrigation design, equipment, and scheduling. And, ensuring that our valuable tree canopy is still watered, where turf is removed, is a critical consideration for such projects. There are many important applications for artificial turf such as high use sports fields and small landscape areas, but Springs Utilities does not encourage it otherwise. Using artificial turf to cover large, residential areas is very similar to rocking previously landscaped areas which may create heat islands, damage mature trees and plants (previously watered) and contribute to stormwater runoff. Springs Utilities does offer other efficiency rebates for your home, which are located here. Our Conservation and Environmental Center offers demonstrations of several different water-efficient turf species, including some varieties that use less than half the water of typical turf grass. We have landscape professionals and energy efficiency experts available 8 a.m. to 5 p.m., Monday thru Friday for questions and support.
Fire Hydrant Use	
Stop allowing landscaping and construction companies to take as much water from the fire hydrants. Stop allowing companies from draining our fire hydrants.	Before using hydrant water for specific construction or health/safety related activities, a customer must gain formal approval to do so. Springs Utilities requires that companies have a meter and backflow before taking water from the hydrants, and we ensure that the intended use is approved and in line with our Tariffs. If a customer is connected to a hydrant without the proper hydrant meter, they are subject to applicable fines. If they are found connected to the hydrant without the proper backflow device, they are out of compliance with the permit and the permit can be revoked. (And, if they are out of compliance with the State's backflow regulations, they can be fined through that program.)

Promotion of Water Saving Programs and Reporting Waste	
Continued planning for a valuable resource in the long run is important. I'd like to see more widespread information about available incentive programs and rebates for water saving. Also, I'd love to have an easy way to report things like broken sprinkler heads in medians or public areas…like the ability to submit potholes or abandoned vehicles.	We are always developing new ways to promote our programs to customers that includes social media, bill inserts, direct mail/email, radio, etc. We also have begun targeted promotions to those customer segments who would most benefit from certain programs. We are working to develop an easy reporting system similar to the potholes reporting system. We are adding a customer self-service portal by 2024 that may make this much easier for customers to engage and share information with us related to active water waste like broken sprinkler heads.
I'm sure that if a significant number of residents participate it will help build our reserves and limit wasted water, I'm not sure that the city/CSU can provide enough education or over site to make it happen. We've actually had these conversations at our weekly happy hour. Most of us are already using drip systems to reduce evaporation and target each plant. We're not trying to grow more mulch or sidewalk which cannot be said of many of our neighbors or commercial properties. We've also wondered if the is recognition of those who have already implemented many of the proposed goals. It's also disheartening that your projection is for only 500 rebates on new toilet installs - that's less than 1% participation in the program…it doesn't sound like the plan has any teeth or aggressive education in place.	We are grateful that so many customers, like you, understand the limits in our water supplies and carefully manage use. Our suite of programs must be considered together. Each contributes to a different area of use where efficiency gains are important, and/or focuses on a certain customer segment. For example, water-wise rules are extremely important for everyone and beneficial for our community, but we know that about 16% of our customers consistently over water and we won't be able to influence their use unless we implement these rules for everyone. Another example: we know that our customers cannot purchase anything but efficient toilets due to state regulatory requirements. Our toilet rebate provides an incentive for those who are willing to do more by installing a 0.8 gallon per flush toilet. Each type of use and type of customer interest is addressed in our program offerings (including Springs Utilities' own water management) to ensure we maximize efficient use and get the most from every drop. And, we do have one of the strongest educational programs along the Front Range with important tools like two water-wise demonstration gardens and a water-wise plants database (waterwiseplants.org). We believe if we stay the course and remain on the trajectory outlined in this plan, we will hit the 11,000-13,000 AF savings target we need by 2070 and during that time our programs, tools and resources will give customers every opportunity to change their water use, to include landscape plant choices and design to have living landscapes that are sustainable on less water.

Water-wise Rules and Establishing New Sod, Plants and Seed	
I would like to know why commercial property's are not held to the same standards at property owners. I have see many businesses watering at all times of the day. I've also noticed them watering while it's pouring rain. It is a big waste of water. Business should also be held to the 3 times a week and between the hours before 10 am and after 6pm.	All landscapes must be managed according to the water waste prohibitions we call Water-wise Rules, including the 3 times per week limit and watering before 10 am or after 6 pm. Both commercial and residential customers receive educational letters, warnings, and visits to help them better understand these rules and how best to manage irrigation to stay within the rules. In 2022 Colorado Springs Utilities increased the number of staff identifying infractions to these rules so that we may contact and educate more customers, particularly commercial customers who are responsible for far more acreage of irrigated landscapes than residential customers.
My whole backyard recently has gotten new grass sods put in so what shall I need to do next? New sods installed now what is next?	You'll want to apply for an establishment permit to ensure you can water appropriately for the first month. You can find that information here. This webpage includes a recommended irrigation schedule for new sod. Please also see information we have on long-term lawn maintenance here.
Water Reuse	
Ensure adequate and clean water for safe and responsible lives in the future. Look forward to more options for returning water to the earth via responsible redirection of shower and laundry. More suggestions for using less water. A simple example, water used to cook vegetables. Can be reused to water houseplants as chlorine will be gone (a positive for plants) and some mineral nutrients may be added from the vegs.	The Colorado Department of Public Health and Environment controls regulations around reclaimed water Regulation 84). You can learn more and get involved in this discussion. As part of Colorado Springs Utilities' Integrated Water Resource Plan, direct potable reuse is part of our future and in 2021-22 we conducted a direct potable reuse project that you may want to learn more.

Growth and Water Supply	
Won't it support all communities? Why are you always advocating "saving" water, when the city & PPRBD keeps building apts & homes? More people moving here means more water usage, that you say we don't have. If you don't build it, they won't come?	Our integrated water resource plan (referenced in the water efficiency plan) identifies a balanced portfolio of water supply options that includes new supply, storage, conservation, water sharing and reuse options to meet projected future growth for our community. This plan is our roadmap for managing risks and securing a safe, reliable supply of water for current and future generations of customers. We are pursuing projects that build additional system resiliency, stretch our existing supplies and provide new sources of supply.
It will not support me or my community. We have lawns, we take showers, we use water to cook, clean and drink. Limiting our water usage will only hurt us instead of helping us. Stop the expansion of Colorado Springs and its surrounding cities. Quit building more homes and apartments that will use more utilities. This is how you will slow down the depletion of the water and other utilities.	The diversification in our portfolio allows us to address the compounding challenges of water scarcity, resource vulnerability, and the need for significant upgrades to our aging infrastructure even as we continue to grow. At the same time, we are being good stewards of the water have. Our current system can reliably deliver 95,000 acre-feet (AF) of water, and our average demands have been about 73,000 AF. This is due in part to conservation programming established decades ago that incentivizes appropriate outdoor watering use in our semi-arid climate, as well as installation of more efficient fixtures, appliances and irrigation systems.
It won't do nearly enough. You need to charge an insane fee for any new house or building that needs to be connected to city water. There isn't enough for those of us who were here in 2000 how is this going to help? I'm talking like $25,000 per residential home, education on water use, how to be better at it, and help to do it. We need to change our usage. No water for green grass, save that for community parks.	We are working collaboratively with city planners to ensure that availability of water resources is considered for future development. • We participate in Annexation COS and Retool COS. • A water resource fee for new connections to our system was approved last year to help pay for the storage, expansion and acquisition of water needed to support new growth. This fee will roll out in two stages beginning in July 2022. • We are working with our Utilities Policy and Advisory Committee to develop a water acquisition fund proposal. This fund, as identified in our integrated water resource plan, would allow us to more aggressively pursue new water supply as opportunities arise.
The city needs to quit issuing water taps to developers. As a homeowner I am expected to limit use of my water to support home development puts money in their pockets while I am expected to adjust my life to help make this happen. It has come to the point	Retool COS includes the City's commercial landscape code which in its proposed form requires a 25% limit on turf grass and will include more efficient irrigation equipment requirements that will help us gain considerable savings (as defined in this Water Efficiency Plan). This is an important, incremental step in defining the type of livable landscapes that are sustainable for our climate and with our water resource limits. This regulatory effort combined with our water

where the city needs to regulate how these homes are landscaped and the use of water to support lawns, trees, etc. that keep getting installed in new homes. I would be curious to know how much water is used for inappropriate ornamental landscape. Make developers equally accountable for future water use. With all this new building I really don't see us helping the situation. How about stop building so many apartments and houses. Colorado is already out of water, why bring more people here. Doesn't make since. Hopefully the high density of homes being approved will stop and we can assure a reliable, safe water supply for the future. Please stop approving the extremely high density housing developments. This will support our community by allowing the current residents to be able to have a reliable water supply for the future. The only water efficiency plan that will ever work is to stop the over the top building craze. Every water droplet that was available to me has to be divided by millions. I watch as new homes and apartments encroach on each drop of water that I can access. Restrictions are not the answer. Stop building and bringing millions of people to this desert. It's crazy. Think to the future and stop the building. Quality of life is deteriorating in the Springs. Too much growth, to quickly. No infrastructure for it and no water.	efficiency programs, tools and education offers ways to have livable landscapes that are sustainable in our climate.

Clearly with our climate emergency we HAVE TO BE SMARTER about not wasting water. Utilities has a history of long range planning and clearly continues to think well ahead. The plan does not consider a sense of place, both from simple recognition of our geography and its limits and our history. In this sense, it's remote to our development and geography. For example, Wallace Stegner noted that "Westerners have got to get over the color green." A greater effort could be made to help residents, especially newcomers appreciate the natural beauty of Colorado and its native vegetation rather than trying to look like Ohio. It limits current residents because of constant building and permitting new neighborhoods and developments. The current planning and process is on a glide path to constantly increasing restrictions because of unchecked allowance of growth. It is obvious the priority isn't conservation it is increased taxes and revenue feed by growth of new developments.	
City's Commercial Landscape Code and Policy Manual	
It doesn't. As a commercial property owner and new develop, your water wise plans are all talk. The city requires me to plant 25% more plants then Required by code. More plants = more water. I couldn't xeriscape any of my property and the fact I will have to water un-manned property is irresponsible to require of me.	The City of Colorado Springs Landscape Code and Policy Manual objectives (7.4.302) include landscaping code for commercial projects based on location, proposed use and site design. There are many options for good landscape design which include xeriscape principles with low water plant species that meet current code requirements. City Planning recommends coordinating with a landscape architect/designer for the project and using local resources (e.g., our Conservation & Environmental Center and Colorado State University Extension offices) to ensure a successful project that includes low maintenance, water conservation and water savings.

Appendix B: Adoption Document

Submission. Colorado Springs Utilities' 2022 Water Efficiency Plan has been developed based on the information provided and is herewith submitted for approval.

Julia Gallucci Water Conservation Supervisor	Julia K Gallucci Signature	6/9/22 Date

Agreement Approvals. Signatures below indicate that the signing parties:

- Have read and understand the 2022 Water Efficiency Plan
- Agree that the Plan accurately reflects the assumptions, expectations, commitments, and conditions of the work of water efficiency at Colorado Springs Utilities.
- Authorizes the Water Conservation Team to proceed on this project based on the assumptions, expectations, commitments, and conditions contained in this Plan.

Aram Benyamin Chief Executive Officer	 Signature	06/09/22 Date