



JORDAN VALLEY WATER
CONSERVANCY DISTRICT

8215 SOUTH 1300 WEST
WEST JORDAN, UT 84088
801-565-4300

WWW.JVWCD.ORG

2019 CONSERVATION PLAN UPDATE

JORDAN VALLEY WATER CONSERVANCY DISTRICT

Jordan Valley Water Conservancy District (JVWCD) was created in 1951 to provide water to residents of a growing Salt Lake County. Primarily a wholesaler of water to cities and improvement districts, JVWCD also has a retail service area in parts of Salt Lake County, including unincorporated areas.

- RICHARD BAY richardb@jvwcd.org, General Manager/CEO
- BART FORSYTH bartf@jvwcd.org, Assistant General Manager
- ALAN PACKARD alanp@jvwcd.org, Assistant General Manager

PROJECT TEAM:

- MATT OLSEN (PROJECT MANAGER) matto@jvwcd.org, Communications Dept. Manager
- COURTNEY BROWN courtneyb@jvwcd.org, Conservation Programs Manager
- TODD SCHULTZ todds@jvwcd.org, Data Analytics Manager
- LINDA TOWNES lindat@jvwcd.org, Public Information Manager
- MEGAN HATCH meganh@jvwcd.org, Communications Coordinator
- SHAUN MOSER shaunm@jvwcd.org, Garden Manager

Delivering Quality Every Day

TABLE OF CONTENTS

1.	BACKGROUND	1
	Resolution Adopting the Plan Update	2
	Meeting the Requirements of the Plan Act	3
	Definitions for Measuring Water Use	3
2.	SYSTEM PROFILE	4
	Water Supply	7
	Water Deliveries	9
	Water Measurement and Billing	10
	Retail Rate Structure	10
	Water Losses and Control Practices	12
3.	WATER CONSERVATION GOAL	13
	Overall Water Conservation Goal	13
	Water Use Status	14
	History of JWCD's Water Conservation Goal	15
4.	WATER CONSERVATION PROGRAMS, INITIATIVES, AND MEASURES	16
	Pillar 1: Education	17
	Existing Education and Outreach Programs	17
	Education and Outreach Programs Under Development	19
	Pillar 2: Incentives	20
	Existing Incentives Programs	20
	Incentives Programs Under Development	23
	Pillar 3: Regulations	23
	Water Efficiency Standards	23
5.	IMPLEMENTATION ASSUMPTIONS AND PLAN	25
	Implementation Plan	32
6.	EVALUATION PROCESS	34
7.	SUMMARY	35
8.	APPENDIX	36

1 BACKGROUND

In 1998 the Utah State legislature passed the “Water Conservation Plan Act,” which requires culinary water providers and conservancy districts to submit water conservation plan updates to the Utah Division of Water Resources (DWR) every five years. JWCD submitted its first water conservation plan in 1999 with updates in 2004, 2009, and 2014.

This 2019 Water Conservation Plan Update satisfies the requirements of the Water Conservation Plan Act as the update required every five years.

A copy of this plan has been sent to each of JWCD’s Member Agencies (wholesale customers), each county served by JWCD, and to the media. It has also been posted on JWCD’s website and social media outlets.

RESOLUTION ADOPTING THE PLAN UPDATE

JWCD’s Board of Trustees passed the following resolution (pg. 2) adopting the 2019 Water Conservation Plan Update on November 13, 2019.

RESOLUTION NO. 19-34

APPROVING THE WATER CONSERVATION PLAN UPDATE

WHEREAS, pursuant to §73-10-32 Utah Code Ann. (1953) (the "Act"), Jordan Valley Water Conservancy District ("Jordan Valley") prepared a Water Conservation Plan in 1999, prepared updates to its Plan every five years, as required by law, and has now prepared an additional update to its Plan, (the "Updated Plan") as set forth in attached Exhibit 1 (the "Updated Plan");

WHEREAS, Jordan Valley has established in its Updated Plan a conservation goal to reduce water use within its service area to 187 gallons per capita per day by 2030;

WHEREAS, Jordan Valley has determined that achieving this conservation goal will sustain existing water supplies, eliminate or delay more expensive water supply and infrastructure projects, and assist in providing an adequate water supply for future generations;

WHEREAS, the Updated Plan identifies existing and proposed water conservation measures and programs needed to continue making progress towards achieving the goal; and,

WHEREAS, pursuant to the Act, Jordan Valley has held a public hearing, after reasonable and advance public notice, for purposes of inviting and encouraging discussion and public comment on the Updated Plan.

NOW, THEREFORE, BE IT RESOLVED by the Jordan Valley Water Conservancy District Board of Trustees:

1. Jordan Valley has met the requirements of the Act in its preparation of the Updated Plan.
2. The General Manager is authorized and directed to cause a copy of the Updated Plan to be filed with the Utah Division of Water Resources and with all other persons or entities deemed appropriate.


Resolution of the Board of Trustees (No. 19-34)
November 13, 2019
Page 2

3. This Resolution shall take effect immediately upon execution by an authorized member of the Board.

PASSED, ADOPTED, and APPROVED this 13th day of November, 2019.



Corey L. Rushton
Chair of the Board of Trustees

ATTEST:


Richard P. Bay
Clerk

MEETING THE REQUIREMENTS OF THE PLAN ACT

Section 73-10-32 of State Code requires that the following be included in each water conservation plan:

73-10-32-2 (a)(i) A clearly stated overall water use reduction goal is found in section 3, an implementation plan and timeline are found in section 5, and an evaluation process to measure progress is found in section 6.

(a)(ii) The requirement to devote at least one regular meeting every five years of its governing body is found on page 36.

(a)(iii) The notification requirements were met and are listed on page 36.

(a)(iv) Minutes and notification procedures are added in the appendix, starting on page 36.

DEFINITIONS FOR MEASURING WATER USE

Municipal and Industrial Water (M&I) – Both potable (drinking) and non-potable (secondary) water supplies and uses, excluding agricultural water. All references to water in this plan are referring to M&I water.

Total Water Supplied (gross use) – The total volume of treated and untreated water supply entering the distribution systems of an urban retail water supplier.

Total Water Delivered (end use) – The total volume of metered and unmetered water that is delivered to residential, commercial, industrial, and institutional users. It is billed and revenue producing and excludes water that is lost before it makes it to the end user.

Acre-feet (AF) – The volume of one acre of surface area to a depth of one foot (approximately 325,851 gallons). It is used for measuring large-scale water resources and deliveries. Acre-feet are also commonly given in thousands of acre-feet, abbreviated (TAF).

Per Capita Water Use – The total water delivered in a calendar year divided by the permanent population within a defined geographic boundary or water service area.

Gallons Per Capita Per Day (GPCD) – The unit of measure for per capita water use expressed in gallons. It approximates the average amount of gallons used per day, per person, in one year.

SYSTEM PROFILE

Currently, JWCD serves 17 Member Agencies (cities, improvements districts, and wholesale customers) and 8,893 retail service connections. A population breakdown of JWCD's service area is listed in Table 2.1. Figure 2.1 shows a map of JWCD's service area which includes most of Salt Lake County outside of Salt Lake City and Sandy City. Table 2.2 shows the total number of service connections in JWCD's service area, categorized by type.

TABLE 2.1 – JWCD's Member Agencies and Service Area Population

AGENCY NAME	2015	2016	2017	2018
BLUFFDALE CITY	11,822	13,246	14,280	14,695
CITY OF SOUTH JORDAN	66,841	70,312	72,602	76,483
CITY OF SOUTH SALT LAKE	11,890	11,900	11,977	12,325
CITY OF WEST JORDAN	100,171	101,000	102,000	102,944
DRAPER CITY	17,635	17,930	18,060	18,649
GRANGER HUNTER IMPROVEMENT DISTRICT	116,989	117,955	118,921	119,314
HERRIMAN CITY	34,345	36,316	38,899	40,912
JVWCD RETAIL SERVICE AREA	46,435	46,714	46,811	47,756
KEARNS IMPROVEMENT DISTRICT	50,564	50,867	51,200	51,332
MAGNA WATER COMPANY AND IMPROVEMENT DISTRICT	31,111	31,383	31,667	31,946
MIDVALE CITY	27,613	28,333	31,100	31,413
RIVERTON CITY	41,500	41,900	42,838	44,426
TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT	69,835	70,299	70,613	70,753
WATERPRO, DRAPER IRRIGATION CO.	28,747	29,331	29,550	29,687
WHITE CITY WATER IMPROVEMENT DISTRICT	15,000	15,000	15,000	14,985
HEXCEL CORPORATION	0	0	0	0
UTAH DEPARTMENT OF CORRECTIONS	0	0	0	0
WILLOW CREEK COUNTRY CLUB	0	0	0	0
TOTAL	670,498	682,486	695,518	707,620

General Notes:

- (1) Data for this table was provided by JWCD's Member Agencies, JWCD estimations, and the Wasatch Front Regional Council.

FIGURE 2.1 – Map of JWCD’s Service Area

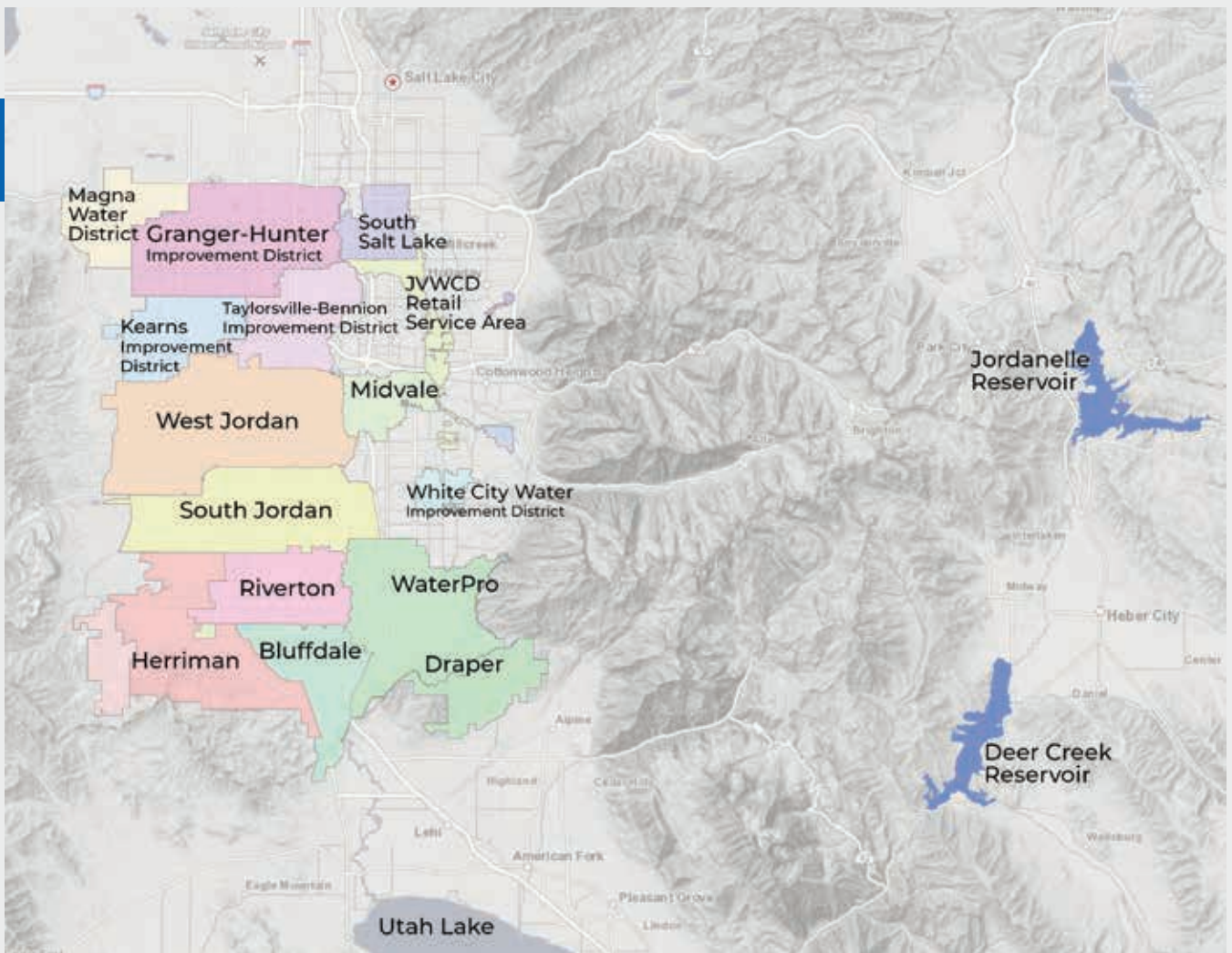


TABLE 2.2 - Total Service Connections by Type

AGENCY NAME	2018 TOTAL RESIDENTIAL CONNECTION COUNT	2018 TOTAL CII ^(A) CONNECTION COUNT
BLUFFDALE CITY	5,289	169
CITY OF SOUTH JORDAN	23,410	1,329
CITY OF SOUTH SALT LAKE	2,423	963
CITY OF WEST JORDAN	22,984	2,437
DRAPER CITY	3,779	330
GRANGER HUNTER IMPROVEMENT DISTRICT	26,010	1,533
HERRIMAN CITY	12,450	425
HEXCEL CORPORATION	0	0
JORDAN VALLEY WATER RETAIL	7,801	1,092
KEARNS IMPROVEMENT DISTRICT	13,696	307
MAGNA WATER COMPANY AND IMPROVEMENT DISTRICT	8,525	238
MIDVALE CITY	6,405	998
RIVERTON CITY	19,890	898
TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT	16,528	740
UTAH DEPARTMENT OF CORRECTIONS	0	0
WATERPRO, DRAPER IRRIGATION CO.	10,806	680
WHITE CITY WATER IMPROVEMENT DISTRICT	4,127	94
WILLOW CREEK COUNTRY CLUB	0	0
TOTAL	184,123	12,233

References:

- (a) Commercial, industrial, and institutional service connections

General Notes:

- (1) Data for this table was provided by JWCD's Member Agencies and JWCD estimations. CII includes some uncategorized connections.
(2) Connection types include metered culinary, metered secondary, and estimated secondary

WATER SUPPLY

JWCD’s water comes from the Provo, Weber, and Duchesne rivers; local Wasatch streams; and groundwater in the Salt Lake Valley. A breakdown of JWCD’s water supplies can be found in Table 2.3. Potential future water supplies are listed in Table 2.4.

TABLE 2.3 – JWCD’s Current Water Supply

NAME OF SUPPLY	NORMAL YEAR YIELD (AF)	RELIABLE DROUGHT YEAR YIELD (AF)
CENTRAL UTAH PROJECT ^(A)	50,000	50,000
PROVO RIVER WATER USERS COMPANY SHARES		
PROVO RIVER DIRECT FLOW	17,200	11,455
DEER CREEK STORAGE	11,300	8,881
ECHO STORAGE	3,500	3,206
WEBER RIVER DIRECT FLOW	0	826
UINTA LAKES	3,000	2,400
CONTAINED SHARES	7,600	5,000
CENTRAL WATER PROJECT (CWP)	11,680	10,500
WEST UNION CANAL RIGHT	5,300	3,070
HIGH QUALITY GROUNDWATER ^(B)	22,500	22,500
LOCAL MOUNTAIN STREAMS	3,000	2,000
SOUTHWEST GROUNDWATER PROJECT (ZONE B AND LOST USE) ^(C)	7,000	7,000
TOTAL:	142,080	126,838

References:

- (a) Includes 6,300 AF currently turned back to CUWCD for instream fishery flows in the Provo River.
- (b) Includes additional 1,500 AF yield from equipping Etienne Way, Murray-Holladay Road, and other new high-quality wells. Also includes 1,000 AF estimated yield from treating Casto and Dry Creek Springs.
- (c) Includes additional groundwater development to support the third treatment train at SWGWTP.

TABLE 2.4 – Potential Future Water Supply

NAME OF SUPPLY	RELIABLE DROUGHT YEAR YIELD (AF)
ULS^(A) (STRAWBERRY STORAGE)	16,400
EXPAND SWGWTP & NEW R/O TREATMENT PLANT^(B)	18,000
BEAR RIVER	50,000

References:

- (a) Utah Lake System (component of the Central Utah Project)
- (b) Expanding the Southwest Groundwater Treatment Plant and a new reverse osmosis treatment plant.

FIGURE 2.2 Reliable Water Supply Through 2065

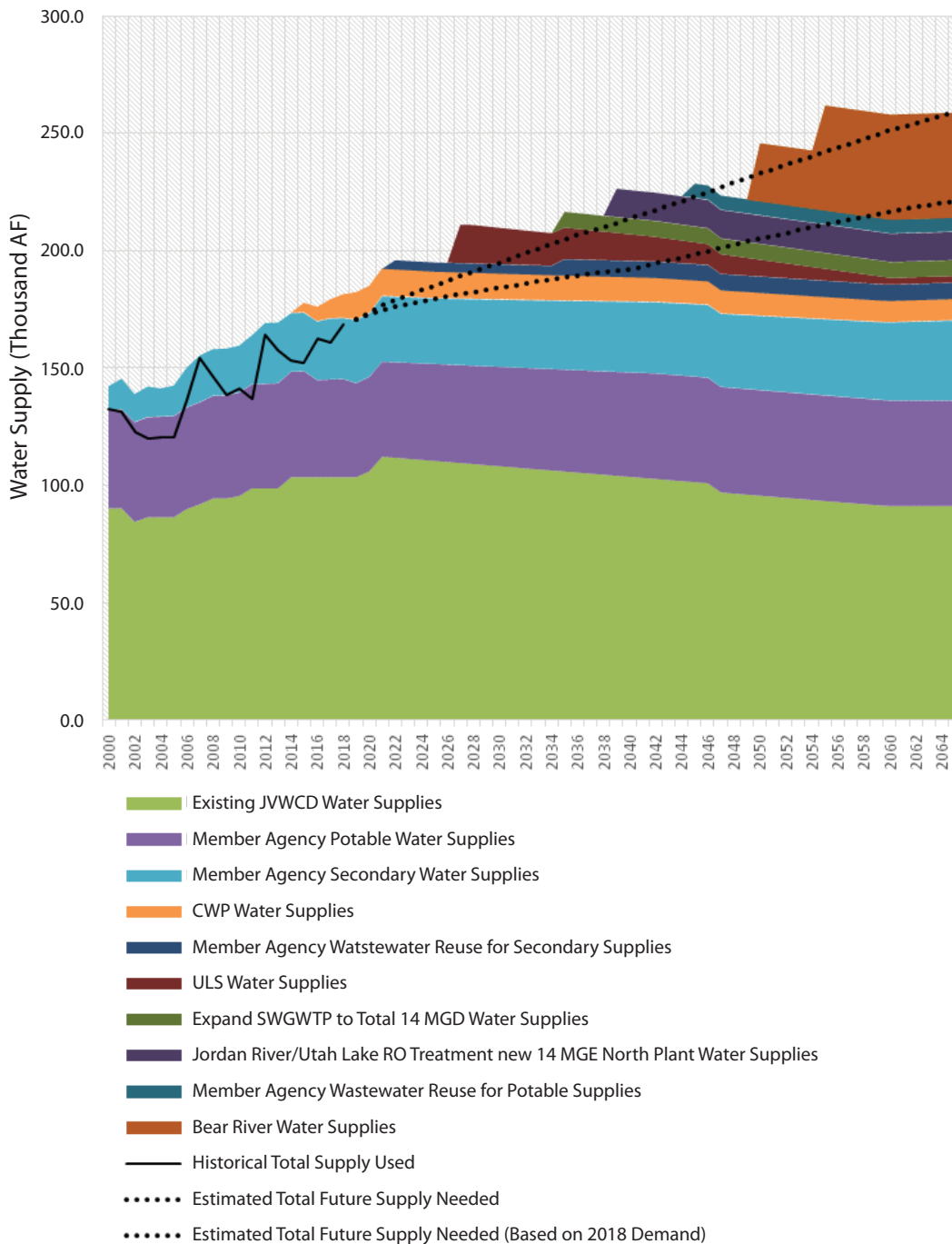


Figure 2.2 charts JWWCD’s reliable supply through 2065. This chart incorporates the potential impact of climate change and compares a demand forecast based on 2018 water usage with a demand forecast assuming future water conservation goals and projections are met.

GROUNDWATER STORAGE AND RECOVERY

In 2001, JWCD completed construction of facilities for an artificial groundwater recharge project in the southeast area of the Salt Lake valley. These facilities allow JWCD to inject surplus supply from its water transmission system into a deep principle aquifer (typically from March-May). Injected water can then be recovered by pumping wells later in the summer or in subsequent years when it is needed. While JWCD typically injects less than 1,000 AF per year, its facilities are capable of injecting around 5,000 AF annually if needed.

WATER DELIVERIES

JWCD's water primarily supports residential, commercial, industrial and institutional potable use within Salt Lake County. A breakdown of its water deliveries can be found in Table 2.5.

TABLE 2.5 - 2018 Total Potable and Non-potable M&I Water Deliveries

AGENCY NAME	RES. ^(a) (AF)	RES. ^(a) (GPCD)	CI ^(b) (AF)	CI ^(b) (GPCD)	TOTAL (AF)	TOTAL (GPCD)
JORDAN VALLEY WATER RETAIL	6,643	124	2,523	47	9,165	171
BLUFFDALE CITY	4,001	243	809	49	4,810	292
DRAPER CITY	2,294	110	1,820	87	4,114	197
WATERPRO, DRAPER IRRIGATION CO.	9,143	275	2,917	88	12,060	363
GRANGER HUNTER IMPROVEMENT DISTRICT	16,599	124	6,208	46	22,806	171
KEARNS IMPROVEMENT DISTRICT	5,762	100	3,031	53	8,793	153
MAGNA WATER COMPANY AND IMPROVEMENT DISTRICT	4,231	118	517	14	4,748	133
HERRIMAN CITY	6,849	149	1,973	43	8,822	192
CITY OF WEST JORDAN	13,810	120	7,634	66	21,444	186
CITY OF SOUTH JORDAN	17,546	205	4,309	50	21,855	255
RIVERTON CITY	8,539	172	5,389	108	13,928	280
TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT	9,903	125	2,719	34	12,622	159
HEXCEL CORPORATION	0	0	897	0	897	0
CITY OF SOUTH SALT LAKE	1,065	77	1,322	96	2,387	173
MIDVALE CITY	3,090	88	2,171	62	5,261	150
WHITE CITY WATER IMPROVEMENT DISTRICT	2,498	149	477	28	2,975	177
UTAH DEPARTMENT OF CORRECTIONS	0	0	761	0	761	0
WILLOW CREEK COUNTRY CLUB	0	0	372	0	372	0
Total	111,972	141	45,848	58	157,820	199

References:

- (a) Residential service connections
- (b) Commercial, industrial, and institutional service connections

General Notes:

- (1) Data for this table was provided by JWCD and its Member Agencies.

WATER MEASUREMENT AND BILLING

All of JWCD's wholesale water connections are metered and monitored in real time using JWCD's Supervisory Control and Data Acquisition (SCADA) system. The meters are regularly maintained and calibrated to ensure accurate operations and billing data. Meters in JWCD's retail service area were recently replaced to transmit hourly water consumption through an Advanced Metering Infrastructure (AMI) system. These meters are warrantied for 20 years and are replaced as needed. As part of this project, customers now have access to an online web portal and receive enhanced bills and semi-annual reports showing exactly how and when water is used.

RETAIL RATE STRUCTURE

JWCD fully implemented a tiered water rate structure for its retail system in July 2018. Before implementing these rates, JWCD conducted research to understand how other western water providers were implementing tiered rates for various customer classes (i.e. residential, commercial, institutional and industrial). Applying a single rate approach for all customers can introduce equity concerns because of significant differences in water use patterns between and within customer classes.

The purest form of ensuring relevant rates and pricing signals for customers would involve creating personalized water budgets and rate tiers for each account. Because of the significant complexity and administrative difficulties this approach would create, JWCD chose to group its accounts based on similar water use patterns. Rather than using customer classes, JWCD found that grouping accounts based on meter size had stronger water use correlation. This grouping also created more customer equity because meter size already determines impact fees, base charges, and a customer’s ability to consume water. In JWCD’s model, the cost per thousand gallons of water increases with water use. Each meter size has three pricing tiers as shown in Tables 2.6 and 2.7, below:

TABLE 2.6 – Water Rates Per 1,000 Gallons

RATE AREA	TIER 1	TIER 2	TIER 3
STANDARD RATE	\$1.80	\$2.68	\$3.75
RIVERTON FOOTHILLS*	\$1.98	\$2.86	\$3.93
CASTO/UPPER WILLOW CREEK AREA*	\$2.13	\$3.01	\$4.08

*Rates for the Riverton Foothills area and the Casto/Upper Willow Creek area are more expensive because water delivery to these areas requires pumping or treatment surcharges.

TABLE 2.7 – Tier Thresholds by Meter Size

METER SIZE	TIER 1 (X 1,000 GALLONS)	TIER 2 (X 1,000 GALLONS)	TIER 3 (X 1,000 GALLONS)
3/4"	1-12	13-53	54+
1"	1-24	25-106	107+
1-1/2"	1-48	49-212	213+
2"	1-77	78-339	340+
3"	1-187	188-827	828+
4"	1-343	344-1516	1517+
6"	1-686	687-3032	3033+
8"	1-1366	1367-6031	6032+

Example: Accounts with a 3/4" meter will pay \$1.80 per one thousand gallons for the first 12,000 gallons of water used and \$2.68 per one thousand gallons for additional water used, up to 53,000 gallons. Any water used over 53,000 gallons will be charged at a rate of \$3.75 per one thousand gallons.

WATER LOSSES AND CONTROL PRACTICES

JVWCD has implemented several practices designed to audit its water supply deliveries and implement controls to minimize system losses. Each wholesale meter receives a monthly diagnostic check and is calibrated twice a year. In addition, JVWCD staff validates meter data monthly and is moving to do this on a weekly basis to identify issues even sooner. Any problems related to these meters are considered high priority by JVWCD staff and are expected to be addressed immediately.

AWWA Free Water Audit Software is also used on an annual basis to help measure the quality of JVWCD's data, determine if any improvements are needed, and quantify the impact to JVWCD. For calendar year 2018, JVWCD's non-revenue water was 1,810 AF or 1.6% of deliveries. The audit software valued that water at \$947,137. JVWCD staff is currently updating standard operating procedures to better document the sources of water losses such as when lines are drained for maintenance or due to mainline water breaks.

3 WATER CONSERVATION GOAL

JVWCD'S OVERALL
WATER CONSERVATION
GOAL:

187
GPCD BY
2030

This goal is based on the Salt Lake regional goal established in the "Utah's Regional M&I Water Conservation Goals" report publicized in 2019 and sponsored by DWRe.

WATER USE STATUS

In 2018, per capita water use in JWCD’s service area was 199 GPCD. Figure 3.1 shows JWCD’s annual water use since 2000 as reported by JWCD’s Member Agencies. JWCD staff made several estimates with varying levels of confidence in earlier years. Over time the data has become more accurate. Figure 3.2 breaks down the 2018 water demand by month.

FIGURE 3.1 – JWCD Service Area Water Demand (End Use)

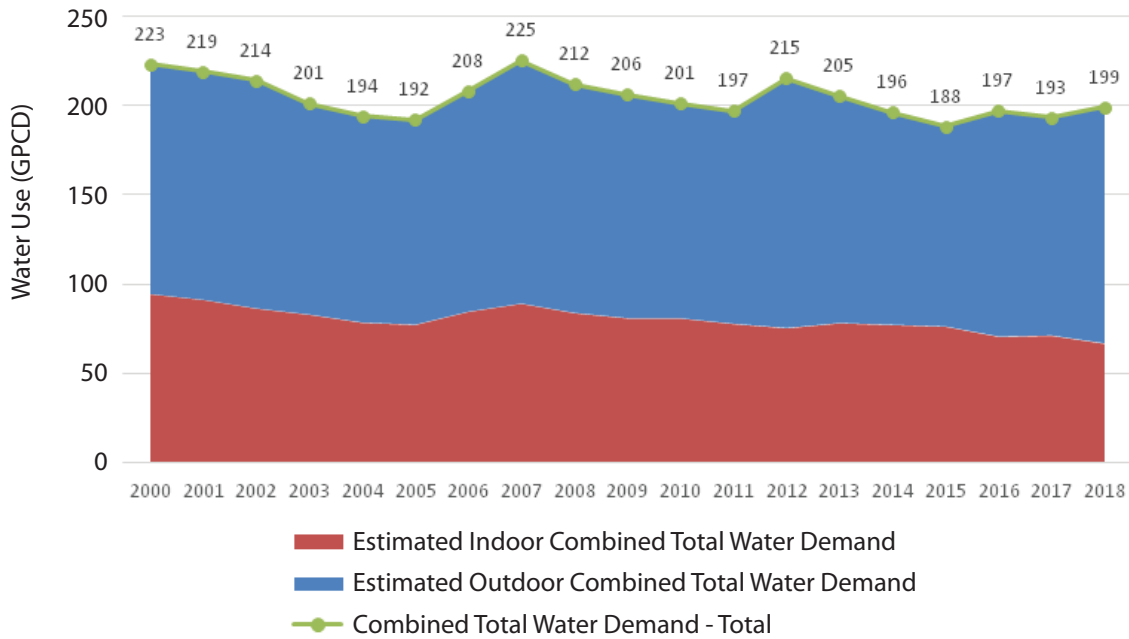
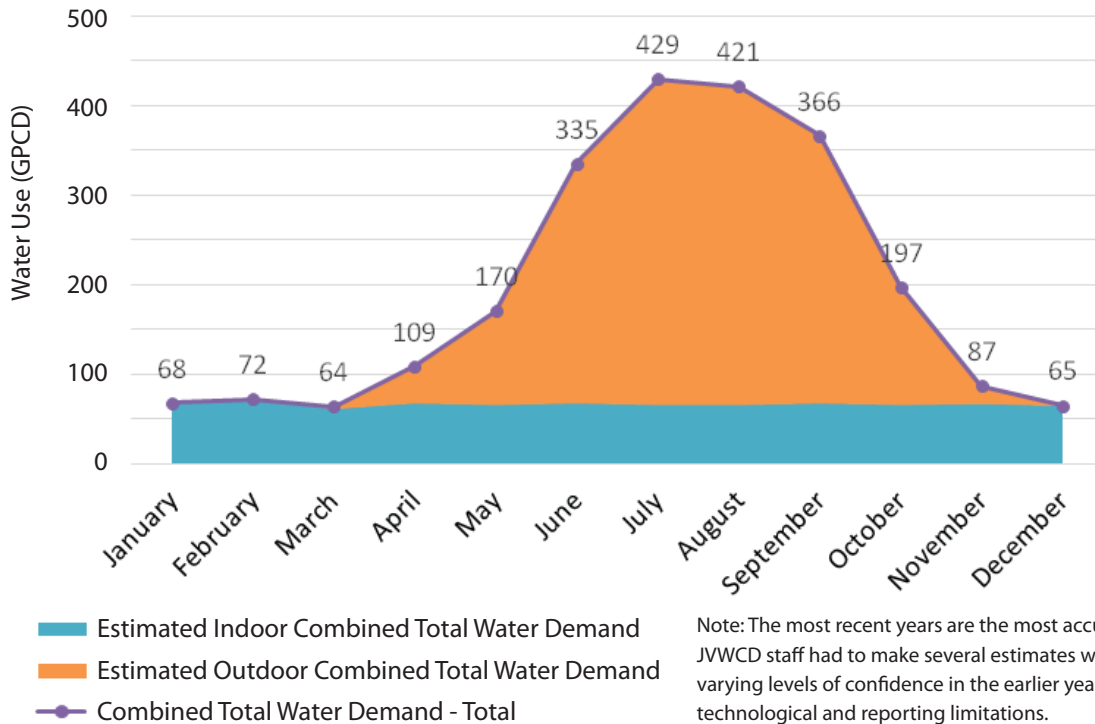


FIGURE 3.2 – 2018 JWCD Water Demand (End Use)



Note: The most recent years are the most accurate. JWCD staff had to make several estimates with varying levels of confidence in the earlier years due to technological and reporting limitations.

HISTORY OF JWCD'S WATER CONSERVATION GOAL

In JWCD's original 1999 Water Conservation Plan, a conservation goal of 10 percent reduction by 2020 was established. The following is a timeline of how this goal has changed over time:

- May 2001 - DWRe issues "Utah State Water Plan, Planning for the Future," with a goal of reducing per capita water use 25 percent by 2050 and used 2000 as the baseline year.
- August 2001 - Governor Michael Leavitt announced a water conservation goal of reducing consumption statewide 25 percent by 2050.
- May 2002 - JWCD's Board of Trustees adopt a water conservation goal of 25 percent reduction per capita by 2025 in JWCD's boundaries and used 2000 as the baseline year.
- January 2013 - Governor Gary Herbert, in his State of the State address, announced a new statewide goal of reducing water use 25 percent by 2025, matching JWCD's goal.
- August 2019 - DWRe issues its draft "Utah's Regional M&I Water Conservation Goals" report which sets new regional water conservation goals by 2030 and uses 2015 as a new baseline year. JWCD is part of the Salt Lake region with a goal of 187 GPCD by 2030, which for JWCD would amount to a 13% reduction from the year 2015.

* Note: Historically, JWCD used total gross water supplied as the basis for determining GPCD and previous conservation goals. Going forward, JWCD will use total water delivered to end uses for two reasons: 1) the new regional goals are derived from total water delivered to end uses, and 2) JWCD's water conservation programs primarily focus on end use demand management.

4 WATER CONSERVATION PROGRAMS, INITIATIVES, AND MEASURES

Reducing overall water use can be accomplished by persuading water users to modify their behaviors (water conservation) or by creating structural changes that allow water consuming tasks to be accomplished using less water (water efficiency). In order to meet JWWCD's goal, both approaches are needed.

Effective strategies for water conservation and efficiency are built on three pillars: education, incentives, and regulations. JWWCD offers a variety of programs, initiatives, and measures to target each of these pillars.

PILLAR 1: EDUCATION

Effective education helps water users make sound choices and preserve water resources for the future.

PILLAR 2: INCENTIVES

Effective incentive programs can influence water users to make structural changes that reduce water demand.

PILLAR 3: REGULATIONS

Effective regulations have indoor and outdoor water efficiency standards to help create more sustainable communities.

PILLAR 1: EDUCATION

Effective education helps water users make sound choices and preserve water resources for the future.

EXISTING EDUCATION AND OUTREACH PROGRAMS:

1. SLOW THE FLOW:

“Slow the Flow: Save H2O” is a public information and education campaign launched by JWCD in 1999. In 2001, it was adopted by the Governor's Water Conservation Team (a team which consisted of five of Utah's largest water districts and DWRe) as a statewide initiative to raise awareness and connect Utahns to water conservation tips, tools, and resources. The campaign has continued to evolve over the years. Future adjustments to the campaign may be appropriate to emphasize new water conservation opportunities for Utahns. JWCD continues to provide significant input and financial support to the campaign.

2. LOCALSCAPES

A recent focus of JWCD has been to educate communities about Localscapes®—a simplified approach to landscaping for Utah. Localscapes use 66 percent less water than typical landscapes while reducing maintenance, increasing curb appeal and providing better landscape functionality. What sets Localscapes apart from previous approaches to water-efficient landscaping is that it offers a comprehensive solution to major landscape challenges faced by homeowners while also saving water. Education efforts include community outreach, online and in-person classes, a learning exhibit at JWCD's demonstration garden, and partnerships with industry professionals.

3. CONSERVATION GARDEN PARK

With more than nine acres of exhibits, pathways and Utah-friendly plants, Conservation Garden Park (Garden) is Salt Lake County's premier destination for information about water-efficient landscaping. Owned and operated by JWCD, the Garden is open year-round with free admission to all patrons.

A list of the Garden's primary activities and programs include:

- **Community Classes:** Garden classes teach Utahns how to design, install, or maintain Utah-friendly landscapes. During 2018, more than 50 community classes were taught at the Garden.

- **Tours:** Garden staff regularly conduct free tours of the Garden for school groups, VIPs, church groups, class attendees, and plant enthusiasts.
- **Educational Exhibits:** More than 40 educational exhibits teach and reinforce principles of water-efficient landscaping. A brand new Locascapes exhibit is expected to be completed this year, which will provide hands-on residential landscape instruction.
- **Field Trips:** More than 5,000 school children visit the Garden each year. A bus transportation assistance program enables wide-spread participation in this program—providing the opportunity for a younger generation of Utahns to learn about water use efficiency.
- **Work and Learn Workshops:** Participants work alongside staff to help maintain the Garden while learning important skills hands-on.
- **Immersive Learning:** These sessions turn the Garden into an interactive learning environment to replicate common scenarios participants may face when installing or maintaining their landscapes. Some of the techniques taught include pruning, planting, lawn maintenance, and irrigation system repairs.
- **Garden Events:** Events range from fewer than 100 people to more than 3,500 participants. Types of events include Party in the Park (garden fair for families), an Urban Homestead Expo, and conservation conferences.
- **Plant Database:** JWCD maintains a searchable database of Utah-friendly plants on the Garden’s website. Visitors can find plants, view their watering requirements, and see pictures of each from various seasons. Future enhancements are planned where more information about plant maintenance and selection will be added.
- **Online Education:** New this year, JWCD has produced online versions of some of its most popular courses, including: Introduction to Locascapes and Locascapes University. Anyone can access these classes online and on-demand. In the coming years, JWCD will work to refine existing courses and to create additional online educational opportunities.

FIGURE 4.1 – Conservation Garden Park Visitation



4. LANDSCAPE CONSULTATIONS

Free landscape consultations are available to residents in JWCD's service area. These consultations are designed to overcome barriers to homeowners in water efficient use and provide important information about a homeowner's landscape and irrigation system. Key to the consultations are correlating meter data with actual water use, providing watering schedules, and offering short-term and long-term recommendations for improved water efficiency.

Program Costs

This program involves site visits, coordination, communication with homeowners, preparation, and reporting. The average cost of water saved through this program is \$1,576 per acre-foot.

5. CUSTOMER FEEDBACK TOOLS

Most Utahns are unaware of how much water they use. Direct feedback about water consumption coupled with suggested actions has been shown to decrease water use. JWCD uses enhanced water bills, semi-annual reports, and a personalized web portal in its retail service area to provide this type of feedback and encourages its Member Agencies to adopt similar programs. These feedback tools are enhanced further by JWCD's advanced metering infrastructure (AMI) which allows for leak detection alerts and water use notifications.

Program Costs

This program involves either developing custom software or purchasing the services from a third party. The average cost of water saved through this program is \$1,164 per acre foot.

EDUCATION AND OUTREACH PROGRAMS UNDER DEVELOPMENT:

1. LEAK MITIGATION

Household leaks are responsible for an average of 8% of the total water used indoors annually. JWCD is currently developing a leak mitigation program to help homeowners in its retail area locate and stop leaks. JWCD has produced a leak mitigation guide that can help customers identify and fix leaks. This guide is distributed and used by field and customer service staff to address issues. In the future, JWCD will use meter data to proactively identify accounts with potential leaks. Those customers will be notified and provided with information and materials.

Program Costs

This program requires staff time to create educational materials, communicate with customers, and analyze data. The average cost of water saved through this program is \$921 per acre-foot.

2. STRATEGIC WATER MANAGEMENT

While this program is still in development, here is a description of how it is intended to work:

Strategic Water Management is a joint effort between JWCD and eligible commercial, industrial, and institutional water users to identify practices and measures that can save water. A water conservation technician will first perform an audit of indoor and outdoor water use. A report will then be prepared that outlines a list of recommendations, estimated water savings, estimated implementation costs, and industry benchmark comparisons. An economic analysis will be performed on recommended projects with estimates on any applicable incentive or rebate opportunities.

Program Costs

This program requires staff time for coordination with various agencies, meetings, site visits, and report generation. The average cost of water saved through this program is estimated to be \$1,648 per acre-foot.

PILLAR 2: INCENTIVES

Effective incentive programs can influence water users to make structural changes that reduce water demand.

EXISTING INCENTIVES PROGRAMS:

Grants from DWR and the federal WaterSmart program have been pivotal in reducing the net cost of these programs to JWCD. JWCD will continue to seek grant funding and requests that these funds continue to be made available in the future.

UTAH WATER SAVERS

In 2017, JWCD developed UtahWaterSavers.com to host several turnkey water conservation programs for its service area. In 2018, the website was expanded in partnership with DWR to host additional statewide rebate programs. This project is mutually beneficial to both agencies because it allows the agencies to share promotional, hosting, and development costs and provides a single resource for the public to use. Currently the following programs are managed through the Utah Water Savers website: Localscapes Rewards, Flip Your Strip, Toilet Replacement Rebates, Smart Controller Rebates, and Landscape Consultations. Widescale public recognition and use of Utah Water Savers will be essential to escalate the programs to the levels described in this plan.

1. LOCALSCAPES REWARDS

Because landscapes that use the Localscapes method are more sustainable and water thrifty, JWCD provides incentives for residents within its service area to install Utah-friendly Localscapes. Applicants apply through Utahwatersavers.com and must either provide a professional landscape design or take Localscapes University to qualify for the reward. Payment is provided based on the actual square footage of irrigated and non-irrigated areas and participants must install any combination of the following: complete front yard, back yard, side yard, and/or park strip.

Program Costs

This program requires project design reviews, at least one site visit, coordination, and communication with the homeowner and/or landscape contractor. The average cost of water saved through this program is \$585 per acre-foot.

2. LOCALSCAPES REWARDS FOR CONTRACTORS/DESIGNERS

Localscapes Professional Partners can receive a cash incentive for helping their clients participate in Localscapes Rewards. Designers receive a 10% match of their client's reward while contractors receive a 90% match of their client's reward. If one partner provides both the design and installation, they can receive the full reward amount. Localscapes partners must make sure their designs and installed landscapes for this program meet all Localscapes requirements.

Program Costs

Staff time for this program is mostly included in the homeowner reward program, with some additional coordination, communication, and administrative costs. This program adds to the cost of water saved through Localscapes Rewards. The average total cost to rebate both homeowner and contractor is \$1,143 per acre-foot.

3. LOCALSCAPES REWARDS FOR HOME BUILDERS

Home builders who become Localscapes partners can receive a reward for installing a Localscape as part of home construction. Payment is provided based on actual square footage of irrigated and non-irrigated areas and landscapes must meet all Localscapes requirements.

Program Costs

This program requires project design reviews, at least one site visit, coordination, and communication with the home builder. The average cost of water saved through this program is \$1,143 per acre-foot.

4. FLIP YOUR STRIP

Park strips are one of the easiest places to begin the transition to a more Utah-friendly landscape because they require minimal landscape design and are usually on their own sprinkler zone. A rebate of \$1.00 per square foot is available to homeowners who convert their park strips from lawn to a water-efficient design. Only park strips with existing lawn qualify for the program. Finished projects must include 60% plant coverage, drip irrigation, and mulch. The rebate increases to \$1.25 per square foot for participants who attend a free park strip class.

Program Costs

This program requires project reviews, two site visits, coordination, and communication with homeowners, and a rebate amount. The average cost of water saved through this program is \$1,973 per acre-foot. Grant funds continue to help this program remain cost effective.

5. TOILET REBATES

Toilets use more water than any other indoor fixture and because toilets manufactured before 1994 use more gallons of water per flush, replacing them is an easy way to conserve water. A statewide toilet rebate program funded by DWRe allows homeowners to receive up to \$100 per toilet when they replace a pre-1994 toilet with a WaterSense labeled toilet (limit two toilets per property). Applications are submitted through Utahwatersavers.com and routed to the appropriate water district to be reviewed for eligibility and accuracy before payments are processed and distributed by DWRe.

Program Costs

Since this program is funded by DWRe, costs for JWCD are minimal. Some staff time is required to process applications and coordinate with other agencies. For JWCD, the average cost of water saved through this program is \$25 per acre foot.

6. SMART CONTROLLER REBATES

Smart controllers can turn irrigation systems on and off based on local weather and landscape conditions. A statewide smart controller rebate program, funded by DWRe, rebates Homeowners 50 percent of the cost of a WaterSense labeled smart controller, up to \$150. Applications are submitted through Utahwatersavers.com and routed to the appropriate water district to be reviewed for eligibility and accuracy before payments are processed and distributed by DWRe.

Program Costs

Since this program is funded by DWRe, costs for JWCD are minimal. Some staff time is required to process applications and coordinate with other agencies. For JWCD, the average cost of water saved through this program is \$127 per acre foot.

7. LANDSCAPE LEADERSHIP GRANTS

JVWCD's Landscape Leadership Grant program was created to help businesses, institutions, and associations become community leaders in water conservation. Funding is provided for landscaping projects that provide measurable water savings and have high promotional appeal. Projects may include landscape renovation projects that convert lawn to water-efficient landscaping, or new landscape construction projects that install water-efficient landscaping instead of considerable lawn areas.

Program Costs

This program requires project reviews, site visits, coordination, and communication with contractors and project owners. The typical cost of water saved through this program is \$1,035 per acre-foot but can range between \$500 and \$1,600 per acre-foot depending on the project score.

8. MEMBER AGENCY GRANTS

The Member Agency Grant Program assists Member Agencies in funding and implementing water conservation measures, projects, and programs in their respective service areas. Funding matches are determined by the following tier structure:

- **Tier 1 Measure (Agency matches at least 20%):** This is for projects with proven, quantifiable water savings resulting in direct water use reduction. Upon applying, JVWCD will estimate the potential water savings to determine the funding match level. Examples of potential projects include landscaping projects that reduce turf or implement waterwise practices, indoor fixture replacement programs, Irrigation product rebates, secondary water metering for existing secondary connections, leak mitigation programs, or customer feedback programs.
- **Tier 2 Measure (Agency matches at least 40%):** This includes studies and projects that have a strong research component with the potential for significant future water use reduction. Examples of potential projects include studies relating to secondary water metering, water rate structures, demand management, end use, or cost effectiveness of conservation programs. Requests for consulting services are also considered Tier 2.
- **Tier 3 Measure (Agency matches at least 60%):** This involves conservation measures where water use reduction is difficult to determine. Examples of potential projects include promotion materials, public information campaigns, or demonstration gardens.

Program Costs

Depending on the project JVWCD will fund between 20-80 percent with a cap of \$50,000 plus \$1 per acre-foot of an agency's water purchase contract volume, in acre-feet per year.

INCENTIVES PROGRAMS UNDER DEVELOPMENT:

1. CUSTOM INCENTIVE PROGRAM

A custom incentive program is in development but is intended for commercial, institutional, or industrial properties with indoor or outdoor projects that do not involve landscaping but can produce quantifiable water savings. Examples include replacing high-flow plumbing fixtures (toilets, showerheads, urinals, faucets, spray valves, etc.), high-flow appliances, plumbing or irrigation improvements, and upgrading cooling towers. This program is designed to help offset the costs of improvements recommended in the Strategic Water Management program.

Program Costs

This program will require project reviews, site visits, coordination, communication with property owners or managers, and incentive amounts.

PILLAR 3: REGULATIONS

Effective regulations have indoor and outdoor water efficiency standards to help create more sustainable communities.

WATER EFFICIENCY STANDARDS

In 2019, JWCD developed a set of water efficiency standards based on extensive research into landscape ordinances, water conservation programs, and indoor fixture standards of many western water providers and cities. These standards are now being used to guide JWCD's planning, programs, initiatives, model landscape ordinances, and indoor fixture recommendations.

In summary, the water efficiency standards include the following:**INDOOR FIXTURES**

- Toilets should be WaterSense labeled and use 1.28 gallons per flush or less.
- Urinals should be WaterSense labeled and use 0.5 gallons per flush or less.
- Showerheads should be WaterSense labeled and use 2.0 gallons per minute or less.
- Kitchen faucets should be WaterSense labeled and use 1.5 gallons per minute or less.
Bathroom faucets should be WaterSense labeled and use 0.5 gallons per minute or less.
- Commercial pre-rinse spray valves should be WaterSense labeled and use 1.28 gallons per minute or less.
- Clothes washers should be ENERGY STAR certified and have an integrated water factor of 4.3 or less.
- Dishwashers should be ENERGY STAR certified and use 3.5 gallons per cycle or less.

RESIDENTIAL LANDSCAPES

- Lawn should not be used in park strips or other narrow areas that are less than eight feet wide.
- Plants, mulch, drip irrigation, and hardscape should be used instead.
- Lawn areas in residential landscapes should typically not exceed 35% of the total landscaped area and should be at least eight feet wide in all directions.
- Lawn areas should be free from obstructions such as trees, signposts, and boulders; and not used on steep slopes.

IRRIGATION DESIGN

- Outside of active recreation areas, lawn in commercial, industrial, and institutional landscapes should typically not exceed 20% of the total landscaped area.
- Lawn should not be used in park strips, parking lot islands, or other narrow areas that are less than eight feet wide. Plants, mulch, drip irrigation, and hardscape should be used instead.
- Lawn areas should be free from obstructions such as trees, signposts, and boulders; and not used on steep slopes.

**COMMERCIAL, INDUSTRIAL, AND
INSTITUTIONAL LANDSCAPES**

- Bare soil should be covered with at least 3 to 4 inches of mulch to discourage weeds and retain moisture. The placement of weed fabric under the mulch is discouraged.
- Plants should be watered with drip irrigation using separate irrigation zones from lawn areas.
- As much as possible, plants with similar watering needs should be grouped together and watered based on their own watering needs.
- Spray irrigation in lawn areas should have only one type of sprinkler per zone.
- The use of EPA WaterSense labeled irrigation controllers with the ability to automatically adjust watering frequency is recommended.
 - o For large landscapes and multiple sites, central irrigation control systems are preferred.
 - o For smaller landscapes, including residential, Wi-Fi smart controllers are recommended for automatic watering adjustments and scheduling convenience.

5

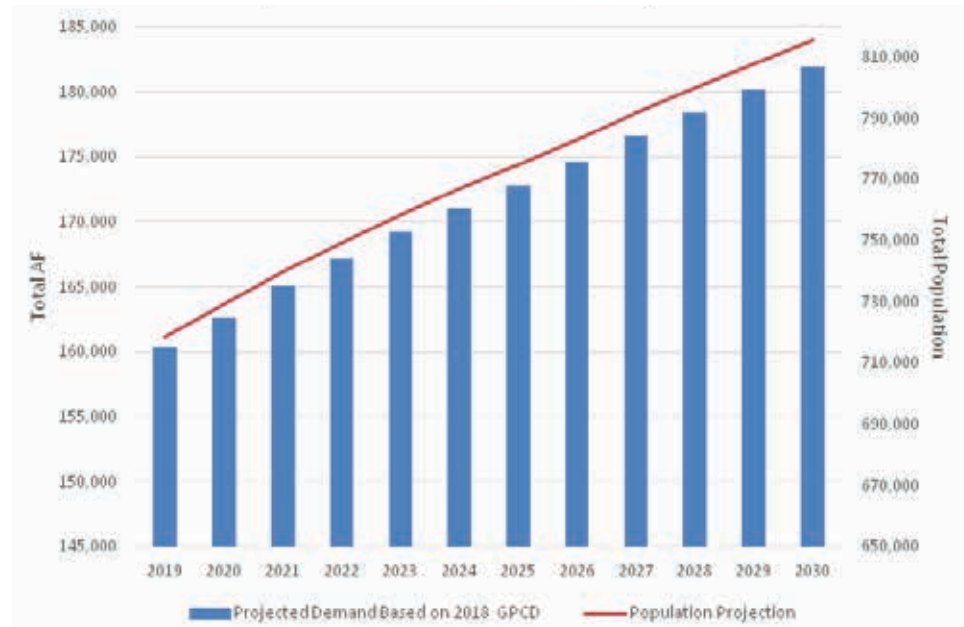
IMPLEMENTATION ASSUMPTIONS AND PLAN

Water use is influenced by a variety of factors. For example, changes in rainfall, temperature, regulations, or population density can significantly impact how much water is consumed from year to year. For the purposes of this plan, many of these influences will be assumed through 2030 so a comprehensive plan can be created. If the assumptions hold true, JWCD's population and water demand projections show an 11,064 AF gap in future 2030 demand relative to the 2030 goal. If widescale adoption of the water efficiency standards are achieved, that gap could be reduced to 2,770 AF. This section describes some of the influences and assumptions used for understanding these gaps.

POPULATION, DEMAND PROJECTIONS, AND TIMELINE

Population projections for this plan are based on JWCD’s 2019 major conveyance, supply, and demand study. This study uses JWCD’s 2018 population estimates and projections made by the Wasatch Front Regional Council to calculate the population growth rate for multiple geographic segments known as traffic analysis zones. By doing this, JWCD can estimate population growth for its entire service area and each Member Agency for each year through 2030.

FIGURE 5.1 – Population, Water Demand Projections, and Timeline



* Note: Wasatch Front Regional Council’s traffic analysis zone projections were extrapolated from Utah’s Long-term Demographic and Economic Projections, July 1, 2017, University of Utah Kem C. Gardner Policy Institute Projections

Water demand projections use the population projections and apply them to the 2018 per capita water use in JWCD’s service area for each year through 2030. The results are shown in Figure 5.1.

WEATHER

A recent study done by JWCD staff showed that water demand is heavily influenced by weather patterns, particularly in the residential sector. Since 2000, there has been an increasing trend of hot and dry weather in JWCD’s service area, with the most extreme hot and dry year in 2013 and the most extreme wet and cold year in 2011.

A separate study by JWCD staff normalized the impact of weather on water use in terms of GPCD by using the year 2000 as the baseline. The objective was to determine relative water use in each subsequent year if water demand was only influenced by weather, all other factors being equal. Table 5.1 shows the relative impact weather could have on water use in 2030 using different potential scenarios.

TABLE 5.1 – Population, Water Demand Projections, and Timeline

	2011 Weather Equivalent (cold/wet)	2013 Weather Equivalent (hot/dry)	2018 Weather Equivalent (latest dataset)	2030 Weather Trend (best fit from 2000)
NET DIFFERENCE IN 2030 DEMAND RELATIVE TO 2030 GOAL	-9,036 AF	17,460 AF	11,064 AF	12,892 AF

As can be seen by these results, if the weather in 2030 were like the cold and wet year of 2011, the 2030 goal would be achieved without additional water conservation efforts. However, due to the trend of hot and dry weather in recent years and the potential for continued warming, this report will use the latest dataset from 2018 as the basis for planning and prepare for a potential water savings gap of 11,064 AF.

POPULATION DENSITY

Population density is another factor likely to affect future water demand in JWCD's service area. A recent study done by JWCD staff led to four conclusions about the impact of higher residential population density on water demand, as follows:

1. As population density increases per acre, annual GPCD decreases.
2. Higher population density leads to a larger volume of water delivered per acre annually.
3. The increase in total volume per acre outpaces the reduction in GPCD.
4. The seasonal peak water use pattern becomes more buffered and less pronounced.

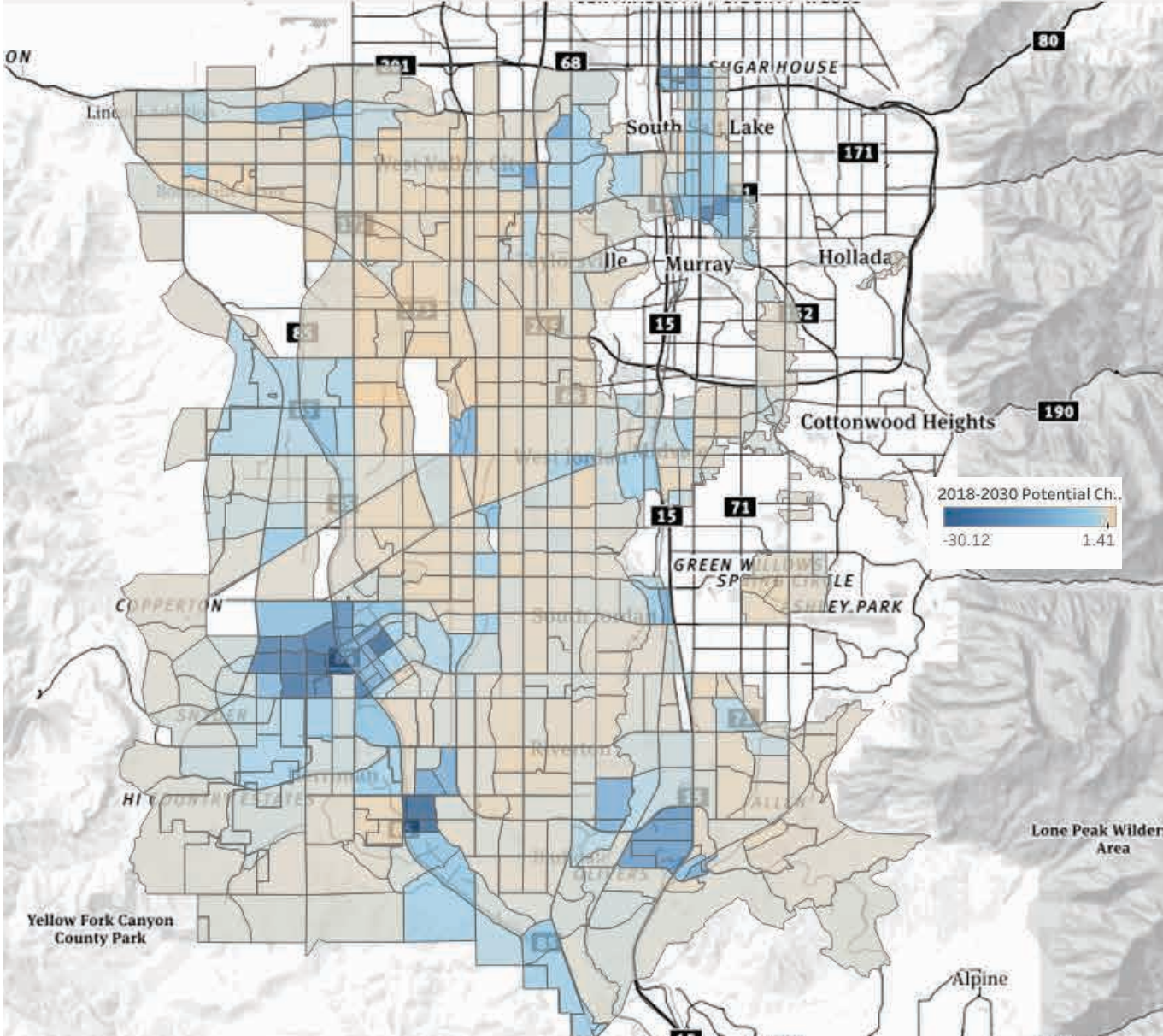
To determine the potential shift in GPCD due to changes in population density through 2030, the results of this study were combined with the Wasatch Front Regional Council traffic analysis zone population projections. The map in Figure 5.2 shows the potential shift in GPCD for each traffic analysis zone in JWCD's service area. While many areas will see decreased GPCD due to higher population density, many more areas will see a slight increase because they are becoming less dense. Overall for the entire service area, the analysis shows a reduction of 0.5 GPCD or a total of 604 AF by 2030 due to increases in population density.

IMPACT OF POPULATION DENSITY

$$11,064^{(AF)} - 604^{(AF)} = 10,460^{(AF)}$$

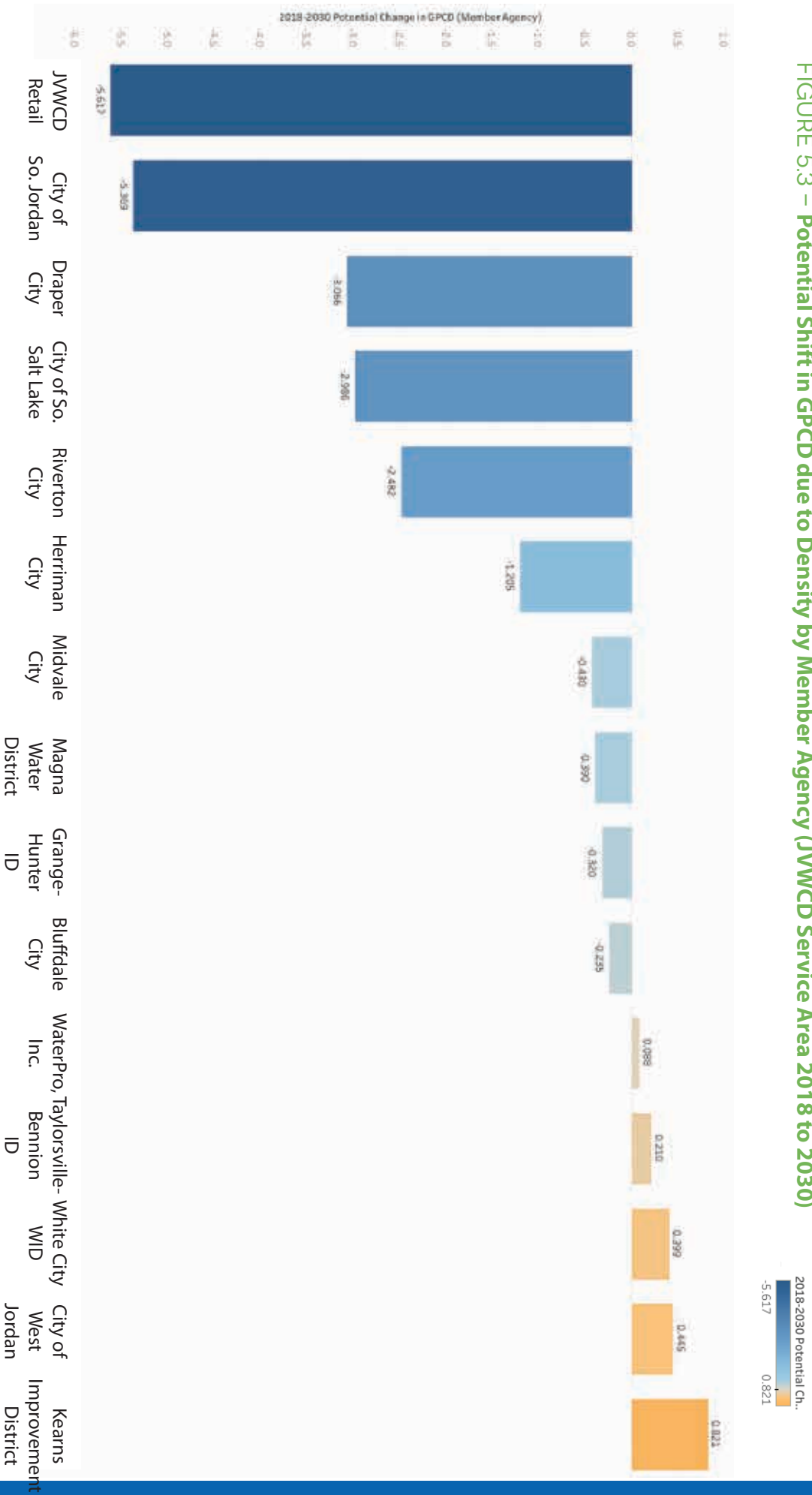
2030 GAP TO ACHIEVE GOAL REDUCTION DUE TO HIGHER DENSITY

FIGURE 5.2 Potential Shift in GPCD due to Density (JVWCD Service Area 2018 to 2030)



Even though the impact service area-wide is not great, each Member Agency is affected differently by population density, as can be seen in Figure 5.3 (shown on next page).

FIGURE 5.3 – Potential Shift in GPCD due to Density by Member Agency (JVWCD Service Area 2018 to 2030)



REGULATIONS

Water policy planning and regulations will play a major role in whether JWCD's conservation goal is achieved and how much it will cost. Though JWCD does not have the jurisdiction to enforce water-efficient landscape ordinances, establish plumbing standards, determine land use, or dictate growth trends, it has tools to encourage water efficiency standards within its service area. These tools include tax increment financing contracts, new land annexation petitions, and water fees and charges.

TAX INCREMENT FINANCING

Tax increment financing provides a method for entities that receive property tax revenue to refund a portion of the tax to subsidize new development. It is intended to spur new development, finance costs related to land improvements, increase property values, and create new tax revenue.

Development projects that seek tax increment financing from JWCD must receive approval from JWCD's Board of Trustees. As a condition of entering into these arrangements, JWCD can require the new development to conform to water efficiency standards.

ANNEXATION PETITIONS

Annexation is a legal process by which property located outside of JWCD's boundaries can become part of JWCD's water service area. Property owners of unincorporated land may need to do this to have access to and receive water service. Annexation petitions into JWCD are applicable for new lands annexing into Member Agencies and unincorporated areas that are doing so independent of a city or town. Annexation petitions to JWCD must receive approval from JWCD's Board of Trustees. As a condition of annexation, JWCD can require that the annexed area conform to water efficiency standards.

WATER FEES AND CHARGES

JWCD is currently studying multiple funding models to encourage the adoption of the water efficiency standards. Western water providers have employed a variety of techniques that have included adjustments to water impact fees, water purchase contracts, efficient landscape easements, multiple rate tiers, budget-based rates, water availability fees, etc. The results of the study are forthcoming and will be considered by JWCD staff and the Board of Trustees to determine the best course of action.

JVWCD GOAL FOR REGULATIONS

In preparing this plan, it has become clear that outdoor landscaping for new construction is one of the most urgent areas of concern for achieving JVWCD’s goal. Once installed, landscaping changes for water use efficiencies become cost prohibitive and often impractical for the property owners or JVWCD.

JVWCD has identified two tracks that may be taken to encourage water efficiency standards for new construction:

1. Aggressively escalate conservation staffing and spending as a counter to new developments. This would require extensive tracking and targeting of new developments and retrofitting those that are missed. Rebate incentive levels would likely need to increase for retrofits to ensure greater public participation.
2. Moderately increase conservation spending in conjunction with partnering with Member Agencies and cities to implement water efficiency standards on new construction and landscape installations. This would ensure indoor fixtures and landscapes are installed efficiently from the beginning and significantly reduce present and future costs of water conservation.

JVWCD’s Board of Trustees and staff are actively pursuing the second option as it offers the best course of action for providing a sustainable water supply. JVWCD is targeting the year 2023 for service area wide adoption of the water efficiency standards. Table 5.2 provides a comparison of these two options for achieving the 2030 goal.

TABLE 5.2 – Current and Future Budget and Staffing Requirements

	2019 Budget and Staffing (current)	2030 Budget and Staffing (if water efficiency standards are adopted by 2023)	2030 Budget and Staffing (if no water efficiency standards are adopted)
TOTAL ANNUAL BUDGET	\$1,655,242	\$4,017,587	\$17,846,925
FULL TIME EMPLOYEES	6	9	14
SEASONAL EMPLOYEE	10	12	16
TOTAL SPENDING (2019–2030)		\$34,414,665	\$116,487,082

Note: Both 2030 projections use a similar methodology to achieve the 2030 goal. Each conservation program has an estimated level of public participation, staffing time, budgetary cost, and associated water savings for each year through 2030.

If JVWCD’s service area were to adopt the water efficiency standards for new construction by 2023, it would produce an additional 7,690 AF of water savings towards the goal.

IMPACT OF REGULATIONS ON THE PLAN

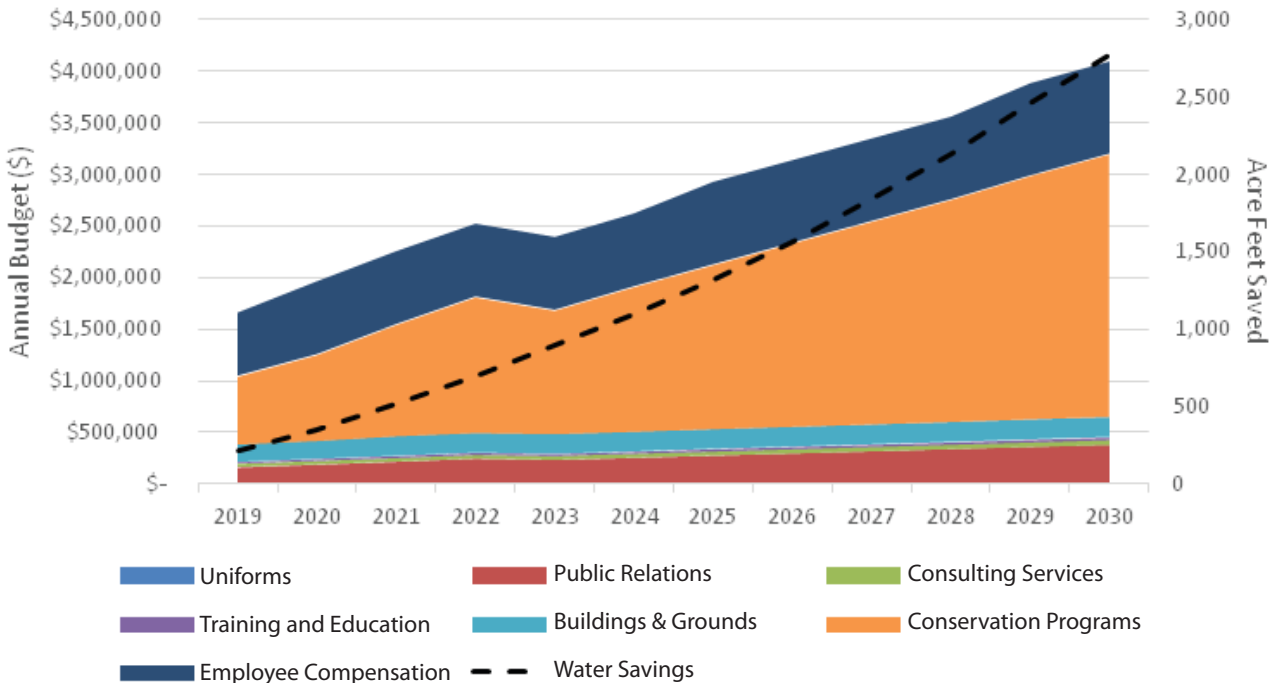
$$\begin{array}{l}
 11,064^{(AF)} - 604^{(AF)} - 7,690^{(AF)} = 2,770 \\
 \text{2030 GAP TO ACHIEVE GOAL} \quad \text{REDUCTION BECAUSE OF HIGHER DENSITY} \quad \text{REDUCTION FROM ADOPTION OF WATER EFFICIENCY STANDARDS BY 2023.}
 \end{array}$$

IMPLEMENTATION PLAN

Considering all previously stated assumptions and projections, JWCD will develop a plan to sequentially expand its programs to overcome the remaining gap of 2,770 AF by 2030. This section will describe the costs, programs, timing, and program participation necessary to achieve this water savings goal. Though other important efforts like education, outreach, and marketing campaigns will produce some water savings, they will not be considered as significant contributors to achieving the water conservation goal in this plan.

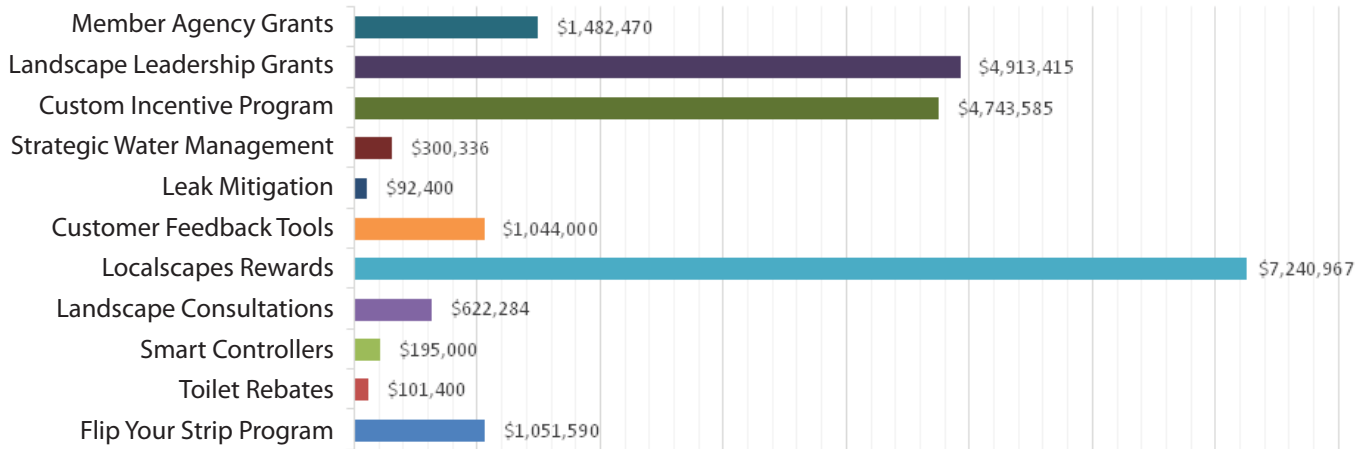
Figure 5.4 shows projections for all of JWCD’s conservation budget lines to accomplish the goal. Programs that incorporate structural efficiencies like landscape renovations, drip irrigation, toilet replacements, and indoor fixtures can produce water savings for many years and sometimes decades. For example, if a landscape were to be renovated in 2020, it would produce water savings each year through the planning period. Programs that rely on behavioral changes like customer feedback tools, consultations, audits, and smart controllers that have been disabled are less likely to produce savings for multiple years. Both program types and estimated annual savings are considered in the chart below.

FIGURE 5.4 – Conservation Budget and Water Savings Projections



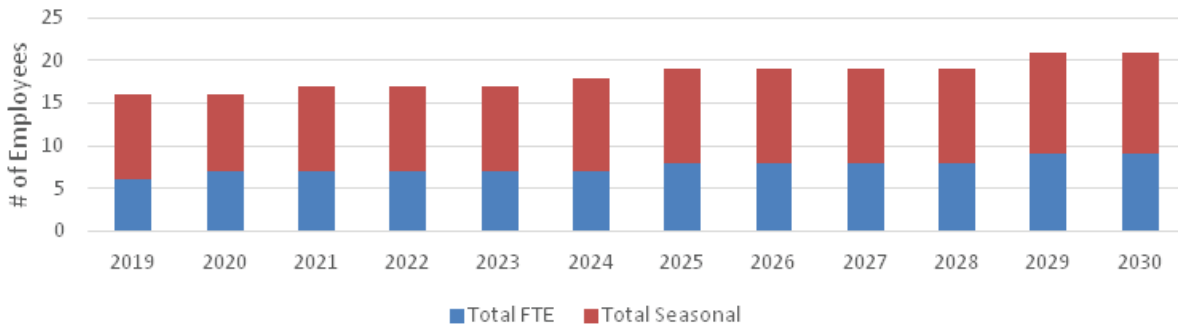
A breakdown of the conservation measures that produce water savings are provided in Figure 5.5. Each measure includes the rebate, staffing, marketing, and administrative expenses needed for program fulfillment.

FIGURE 5.5 – Breakdown of Program Expenses (2019-2030)



New full-time and seasonal positions will be needed to fulfill this plan as is shown in the chart below. To accommodate the projected demand for programs, 3 new full-time and 2 new seasonal positions will be needed through the planning period. The year 2020 shows need for the first of those three full-time positions.

FIGURE 5.6 – Staffing Projections



6 EVALUATION PROCESS

JVWCD's Board of Trustees and staff will perform an annual assessment of its conservation goal progress based on the following criteria:

1. Determine annual water use and GPCD
 - a. Collect data from Member Agencies and retail service area (supply, demand, and population)
 - b. Adjust projections and estimate water demand for the following year
2. Assess conservation need from JVWCD's programs
 - a. Determine water savings gap using latest projections (ex. demand, population, density, and climate trends)
 - b. Set needed conservation program participation levels to overcome identified gap (either maintain plan trajectory or escalate resource allocation)
3. Prepare and analyze water use and participation analytics
 - a. Breakdown progress in residential, CII, indoor, outdoor, land area, and Member Agency water use
 - b. Assess effectiveness of classes, advertising, marketing, and program participation
4. Prioritize and plan for the next year
 - a. Prioritize advertising and marketing budgets using water use stats for targeting users and areas
 - b. Track progress through year based on program level participation

SUMMARY 7

The previously stated implementation plan and conservation program descriptions outline important milestones and benchmarks for evaluating progress in executing this plan and achieving the 2030 goal. A summary of these major benchmarks is found below:

- Create leak mitigation program training, procedures, and materials.
- Create strategic water management program training, procedures, and materials.
- Create custom incentive program training, procedures, agreements, and materials.
- Require water efficiency standards for annexation petitions and tax increment financing requests.
- Target the year 2023 for service area wide adoption of the water efficiency standards for new construction.
- Hire 3 new full-time and 2 new seasonal positions through the planning period.
- Increase participation levels and budgets of conservation programs to the stated levels necessary to achieve the goal.

As a regional water provider, JWCD has taken a strong and aggressive approach to water conservation. JWCD's focus on, and investment in, conservation will only continue to expand as it considers growing populations, weather and climate uncertainty, and increasing costs of future water development. During the time period described in this plan, JWCD will work to improve and increase all of its water conservation programs and effectiveness.