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WATER CONSERVATION PLAN UPDATE

OCTOBER 2019

This plan updates the plan prepared in 2014 and was prepared pursuant to the Utah Water Conservation Plan Act (73-10-32 UCA)

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Executive Summary

This plan updates the Water Conservation and Management Plan prepared October 2014 and was prepared pursuant to the Utah Water Conservation Plan Act (73-10-32, UCA). The Act requires water conservancy districts and water retailers to file water management and conservation plans with the Utah Board of Water Resources.

These plans are intended to describe the extent to which a retail provider will use certain measures to achieve its water conservation goals. Plans must contain a clearly stated water use reduction goal and implementation plan for each conservation measure, including a timeline for action and evaluation process to measure progress. The Act also requires that plans be updated at least every five years.

American Fork has a current population estimated at 32,425 people. Over the next ten years the projected growth rate is 2.30 percent. The City provides water to the growing population.

During the past forty years, two 5 million gallon (MG) tanks and one 4.5 MG tank have been constructed to provide adequate storage and pressure to the water system. The City has a culinary system and pressurized irrigation that serves all of its residents. The City is implementing this water management and conservation plan to reduce demands on culinary water while providing high quality water to its growing population. American Fork has established goals that will help reduce the culinary water use. The goals of this plan are the following:

1. Reduce annual per capita culinary water use 10 percent.
2. Fully implement the pressurized irrigation system citywide.
3. Increase public conservation awareness.
4. Continue emergency planning for system failures and droughts.
5. Reduce the amount of water used for irrigation by at least 5% per year.

The conservation plan describes what best management practices (BMPs) the City is currently implementing and what actions may be taken in the future. Twenty conservation BMPs have been identified which fall under the following general descriptions:

1. System Operation, Repair, and Maintenance Options
2. User Conservation Options
3. Regulatory and Rate Options
4. Behavioral and Education Options

Each of these options have been evaluated to determine which ones should be implemented based on conservation benefits, costs, public reaction, and required staff time and effort. These options are listed below in Table 1 by category and order of ranking. The lower totals indicate options that have the most potential to conserve water compared to cost.

Table 1: Conservation BMP Evaluations

ALTERNATIVE	Benefit	Cost	Public View	Time	Effort	TOTAL
System Operation, Repair and Maintenance Options						
Water Loss Budget	4	1	2	3	2	12
Leak Detection System	7	3	2	3	3	18
Large Meter Replacement	3	1	2	3	3	12
System Repairs	1	2	2	3	3	11
Full Implementation of PI System	1	1	2	2	2	8
Water Reuse	4	4	5	4	5	22
User Conservation Options						
Water Leak Detection and Repair	3	2	4	2	2	13
Voluntary Water Audits	4	1	3	3	3	14
Efficient Fixtures and Appliances	6	2	4	2	2	16
Regulatory and Rate Options						
Water Conservation Committee	3	1	1	3	2	10
Efficient Landscaping Practices	3	1	2	3	3	12
Enforcement of Ordinances	3	2	4	2	2	13
Conservation Water Rate Structure	2	1	4	4	3	14
Shortage and Emergency Planning	8	2	3	1	1	15
Conservation Building Codes	5	2	4	3	2	16
Incentive to Wholesale Users	7	3	4	2	2	19
Behavioral and Educational Options						
Public Conservation Education	4	2	1	2	2	11
Peak Use Reduction	6	2	1	2	2	13
Improved Commercial Processes	8	2	2	3	3	18
Water Rationing Policies	8	2	3	3	3	19

Recommended water conservation programs have been selected based on highest ranked conservation options. With the completion of the pressurized irrigation system, most of the City’s water conservation efforts will focus on its successful implementation. Water users within American Fork, whether commercial, industrial or residential customers, are invited to participate in city meetings and provide feedback in establishing priorities for conservation activities. Decisions made by the City regarding establishing

conservation goals and priorities will attempt to reflect suggestions and comments offered by customers and interested parties.

The goals set on the 2014 Water Management and Conservation Plan resulted in a reduction in water use. There is a high demand for irrigation water and the City is taking steps to reduce water waste and bring the amount of water per capita to a number that matches the state's average more closely.

Opportunities for public involvement and comment will be provided through public hearings as this plan is approved and as future updates to the plan are made.

Introduction

The purpose of this Water Management and Conservation Plan is to identify conservation programs and opportunities supporting the City of American Fork's water management objectives.

The Plan will describe how the City can implement these opportunities to more effectively conserve its culinary water. This will help American Fork and its residents increase their desire and capabilities to become responsible stewards to its valuable natural resource and provide long-term financial solvency to the water system.

This report complies with requirements from the Utah Water Conservation Plan Act (73-10-32 UCA). The Utah Water Conservation Plan Act requires water conservancy districts and water retailers to prepare and adopt, or update, a water conservation plan, which must be filed with the Utah Board of Water Resources.

Water Conservation plans identify recommendations for water saving practices. Some examples would include such measures as the following:

1. Installation and use of water efficient fixtures and appliances
2. Landscaping that require less water to maintain (xeriscaping)
3. Water reuse systems
4. Water rate structures designed to encourage more efficient use of water

Water Management and Conservation Plans must contain a clearly stated water use reduction goal and implementation plan for each conservation measure, including a timeline for action and an evaluation process to measure progress.

Background Information

The first settlers settled in American Fork Creek, now known as American Fork River. As stated in George Shelley's Early History of American Fork, early settlers located here "primarily for the purpose of establishing a big pasture and cattle ranch. But as more people came, it was necessary to raise crops for their sustenance" (page 31). Because of an inadequate rainfall, these early settler's developed methods for diverting water out of the creek to their farmlands.

The American Fork City water system, in Utah County, was established in the early 1900's. Since then, improvements have been made to the system to expand its service to its current size.

In 1981, the first five-million-gallon (MG) storage tank was built and the system was broken into two pressure zones. Additional storage was added to the system in 1991 and 2001. The current water system provides pressurized culinary water to American Fork City residents.

American Fork's current population, estimated at 32,425, is served by culinary water system through nearly 9,863 connections.

Historically, approximately 40 percent of the culinary water supply has been used indoors and 60 percent outdoors. However, in 2007 the Public Works Department implemented a pressurized irrigation system that delivers untreated water throughout the City. Construction of the pressurized irrigation was completed in 2010.

While connection to the pressurized irrigation system is not mandatory, the City has implemented a revised culinary water rate structure that is designed to motivate residents to connect to the PI system.

The City's current policy is to deliver safe drinking water to its customers. Rates and fees are set to cover the cost of operation and expansion, while encouraging water conservation.

System Profile

In 2018 the system has 9152 (92.8%) residential connections, 658 (6.7%) commercial connections, 2 (0.02%) industrial connections, and 51 (0.5%) institutional connections. Total connections to the system are 9863. Figure 1 shows a map of the current water system.

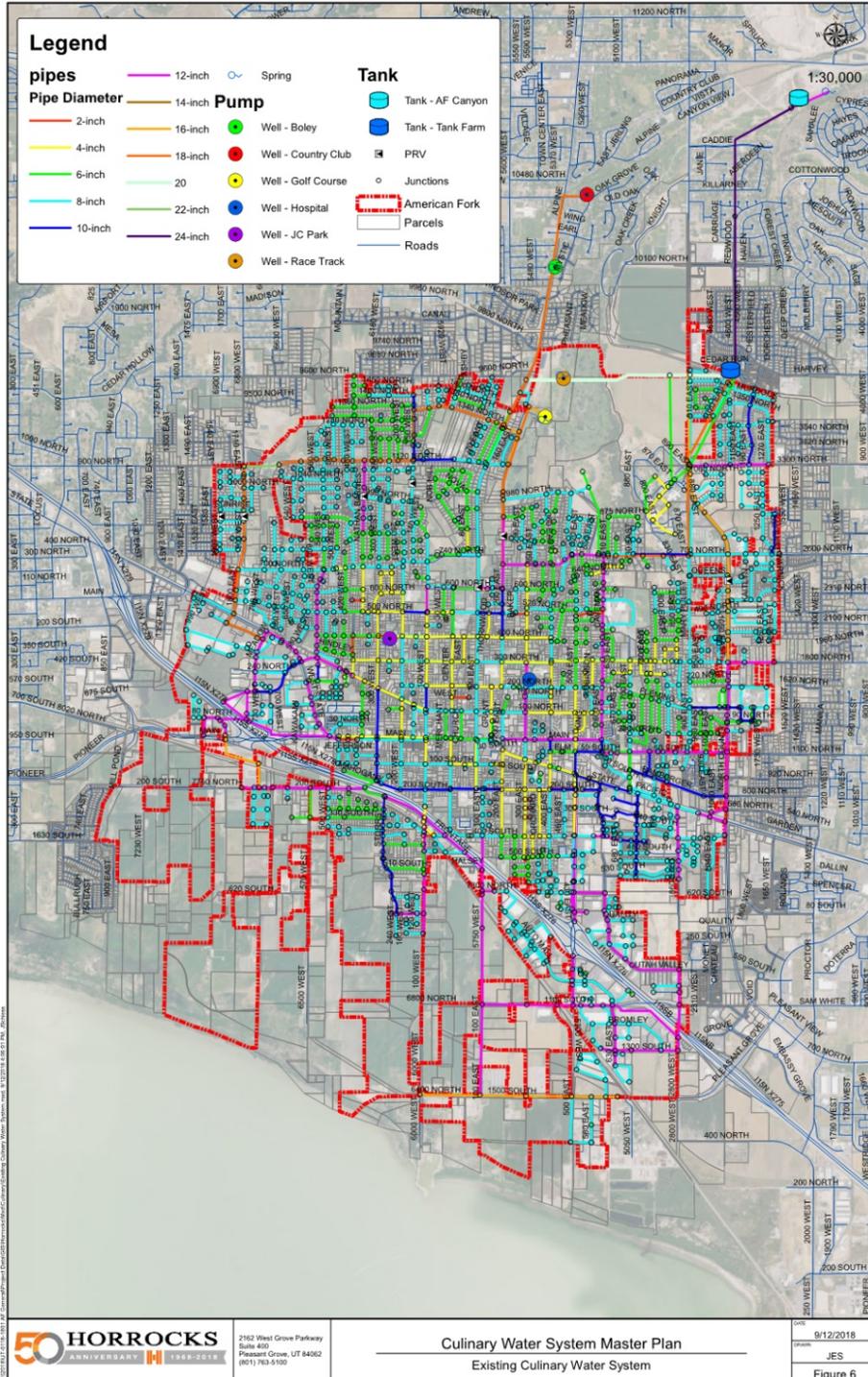


Figure 1 Map of Current Service Area

Supply

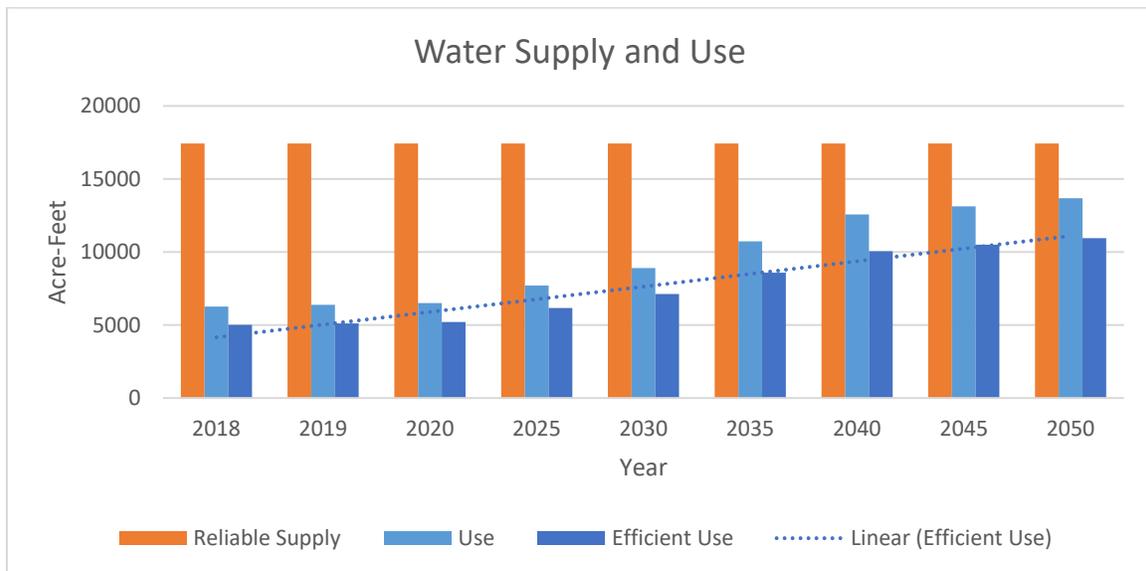
The City’s operating water sources have a capacity of 27,925 acre-feet per year. Table 2 shows the sources and their capacities and usage:

Table 2 Current Water Source Capacity and Usage

Source	Capacity (acre-feet)	Usage (acre-feet)
Wells	25,020	2,712
Springs	2,905	2,578
Surface	0	0
Purchased	0	0
Exchanged	0	0
Total	27,925	5,290

As pumping is used to offset use over the available capacity groundwater will be depleted. American Fork works to find ways to help with groundwater recharge and other recovery practices when available and practical.

American Fork has a reliable supply of 17,432 acre-feet annually. Figure 2 Shows the current estimated use, reliable supply, and efficient use from 2018 to 2050.



Figur 2 Water Supply and Use

Water Measurement & Billing

American Fork has a practice of metering the sources and end users of the culinary water system. Water user readings are taken quarterly. Meters that are out of calibration are calibrated and those giving faulty readings are replaced as needed.

In 2018 the total amount of water supply was 5,402 acre-feet of water with metered usage being retail and wholesale use being 2,841.1 acre-feet and the unmetered or water losses being 2,560.9 acre-feet. American fork is working to prevent the water losses through many various methods. Some of these include replacement of old leaking water pipes, rehabilitating storage tanks.

Additionally, the City has implemented policies where all contractors doing work in the City are required to meter the water they use. Tracking this use will help understand the true amount of loses due to leaks or other system failures. The City has also required all new developments to install meters on both the culinary and secondary system.

The City's culinary water rates are shown in Table 3. These rates are designed to encourage use of the City's pressurized irrigation system. The base rate is intended to provide for the indoor needs of an average family. Culinary water rates for Commercial, Multi-Family, Industrial and Institutional land uses are also shown. Commercial, multi-family, industrial and institutional culinary water base rates and base allowances are assessed on a per a meter bases, not per unit. As the City implements new secondary water meters a rate structure will be established to help encourage conservation.

Table 3: Culinary Water Rates

Single Family Rates	
Monthly Base Rate (\$/meter/month)	
3/4" and smaller	\$16.17
1"	\$17.77
1.5"	\$19.38
2"	\$23.80
Volume Rates (\$/thousand gallons)	
<i>Base Allowance</i>	
0 to 3,000 gallons/month	\$0.00
<i>Block 2 Rate</i>	
3,000 to 6,000 gallons/month	\$3.52
<i>Block 3 Rate</i>	
6,000 to 9,000 gallons/month	\$4.24
<i>Block 4 Rate</i>	
Above 9,000 gallons/month	\$4.96
Multi-Family Rates	
Monthly Base Rate (\$/unit/month)	
First Unit	\$16.17
Each Additional Unit	\$11.66
Volume Rates (\$/thousand gallons)	
<i>Base Allowance</i>	
0 to 3,000 gallons/month/unit	\$0.00
<i>Block 2 Rate</i>	
3,000 to 6,000 gallons/month/unit	\$3.52
<i>Block 3 Rate</i>	
6,000 to 9,000 gallons/month/unit	\$4.24
<i>Block 4 Rate</i>	
Above 9,000 gallons/month/unit	\$4.96
Commercial, Industrial, and Institutional	
Monthly Base Rate (\$/meter/month)	
3/4" and smaller	\$17.78
1"	\$19.39
1.5"	\$20.99
2"	\$25.41
3"	\$57.96
4"	\$70.00
6"	\$98.13
8"	\$130.27
10"	\$174.46
Volume Rates (\$/thousang gallons)	
<i>Base Allowance</i>	
0 to 3,000 gallons/month	\$0.00
<i>Block 2 Rate</i>	
Above 3,000 gallons/month	\$3.09

Water Use

The 2018 total potable and non-potable water deliveries by volume, categorized by type are shown in Table 4.

Table 4: 2018 Water Delivery by Type

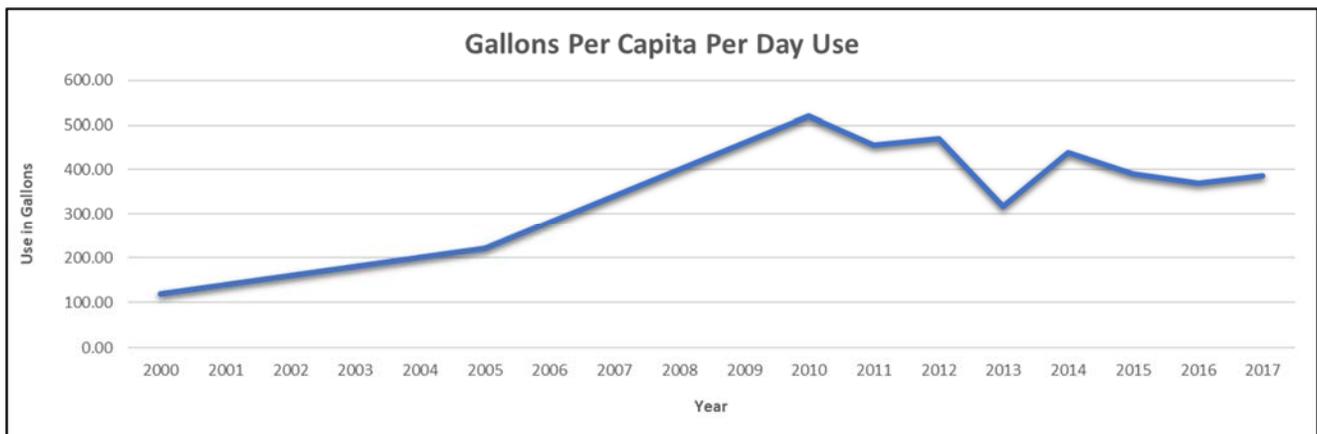
Delivery Type	Delivery (acre-feet)
Residential	1720
Commercial	733
Institutional	1.8
Industrial	142
Total	2596.8

Table 5 shows the 2018 per capita water use in gallons per capita per day (GPCD) by type and use. Figure 3 shows the current gallons per capita per day for both indoor and outdoor use in American Fork.

Table 5: Current per Capita per Day Water Use by Type

	Indoor (Winter Use)	Potable (Outdoor)	Non-Potable (Secondary)	Total
Residential	3	5	N/A	8
Commercial	1	4	N/A	4
Institutional	1	0	N/A	1
Industrial	0	0	N/A	0
Total	4	10	203	216

Figure 3 Gallons per Capita Per Day Use



Conservation Practices

The City of American Fork has many opportunities and challenges to face as it pursues its conservation goals continuing growth. The water system must be managed to keep pace with the community for stable growth.

Conservation can be an effective management tool to reduce the impact of growth. Conservation increases the available capacity of a system with little or no capital investment. Saved water can be reallocated to new users. Several conservation programs have been identified to help meet future water needs. Ongoing programs include full implementation of the pressurized irrigation system, a water conservation committee, and implementing outdoor water use restrictions as needed.

Below is a list of those responsible for conservation from the City and local organizations.

Brad Frost – Mayor mayorfrost@afcity.net (Mayor)
David Bunker – dbunker@afcity.net (City Administrator)
Barbara Christiansen – BChristiansen@afcity.net (Councilmember)
Clark Taylor – clarktaylor@afcity.net (Councilmember)
Kevin Barnes – KBarnes@afcity.net (Councilmember)
Rob Shelton – RShelton@afcity.net (Councilmember)
Stacie Carroll – SCarroll@afcity.net (Councilmember)
Scott Sensanbaugher – ssensanbaugher@afcity.net (American Fork City Public Works Director)
Jay Brems – jbrems@afcity.net (American Fork City Water Division Superintendent)
Barry Dayton – bdayton@afcity.net (Water Operator)
Brandon Mortensen – mortensenbt@ldschurch.org (Church of Jesus Christ of Latter-day Saints)
Bruce Hoggard – bruce-hoggard@yahoo.com (Committee chairman, Resident, Stakeholder)
Dee Howard – dhoward@afcity.net (American Fork City Public Infrastructure Manager)
Ernie John – erniej50@gmail.com (President, American Fork Irrigation Company)
Jason Thomson – jthomson@afcity.net (American Fork City Parks Manager)
John Hansgen – jmhansgen@comcast.net (Fox Hollow Golf Club)
John Schiess – jschiess@horrocks.com (American Fork City Resident)
Mike Privett – mprivett@alpinedistrict.org (Alpine School District)
Aaron Wilson – awilson@afcity.net (American Fork City Engineering Division/Resident)

Conservation Best Management Practices (BMPs)

The City of American Fork has set conservation BMPs. These are based on the projected needs of the community and the system analysis. These BMPs were classified into four main categories:

1. System Operations, Repair and Maintenance Options
2. User Conservation Options
3. Regulatory and Rate Options
4. Behavioral and Educational Options

System Operations, Repair and Maintenance Options

Water Loss Budget BMP 1:

American Fork currently compares supply and use annually. However, the net system loss is not tracked from year to year. The City could develop a water budget for the water system.

By tracking the difference between the water delivered and the water used on a quarterly basis, it is possible to identify increasing system leakage and where conservation programs are needed. The source meters measure the total water delivered. The connection meters show the water used. The sum of the connection meters measures the total water used. The amount of water lost through the system could then be calculated on a quarterly basis to determine if leaks are developing within the system.

Leak Detection System BMP 2:

American Fork performs leak detection surveys with acoustical equipment periodically. Recent leaks detection surveys identified only small leaks that were difficult and costly to pinpoint and repair. Use methods consistent with American Water Works Association's *Water Audit and Leak Detection Guidebook*.

System Repairs BMP 3:

Several improvements have been made to the water system including securing supply and rights and increasing storage. However, much of the distribution piping is over 50 years old. Capital Improvement Plans include replacement of aging pipes. In most years, at least one well pump fails during peak demand. It is likely that the failure may be due to the prolonged use of the pumps. The pumps should be evaluated and fixed or be budgeted for replacement. The construction of the pressurized irrigation will reduce the usage of the pumps.

Pressurized Irrigation System BMP 4:

The construction of the pressurized irrigation has been completed and it is being implemented. Approximately 95% of the residents are connected to the PI system.

Water Reuse BMP 5:

The City could explore water reuse. A study of the City could be made to determine potential water sources and reuse sites, including City-wide use in the pressurized irrigation system. Possible reuse sources include groundwater drain water, treated municipal and industrial wastewater and storm drain runoff. Possible reuse sites include municipal parks, school yards, cemeteries and public building grounds. By reusing water, the City would be able to reduce the amount of water needed from springs and wells.

Large Water Meter Replacement BMP 6:

The large water meters are more than 10 years old (>1 ½ inch). It is possible that these meters are losing accuracy. Replacing these meters would improve the water budget and billing accuracy.

Water Meter Change-Out Program BMP 7:

A well-developed method of keeping the water meters up-to-date would also keep water cost down. The typical meter age is 10 years. Over time, the meters wear out and their accuracy decreases. Systematic review and maintenance will reduce meter wear, increase meter life, and improve meter accuracy. When the meters eventually wear out, they should be replaced to keep the water measurements accurate. Also, advancements in meter technology provide additional benefits such as automated alarms for apparent water leaks. In recent years, the City has replaced 7 percent of the meters per year.

User Conservation Options

Residential Leak Detection and Repair BMP 8:

Residential users may not know how to test for leaks in their home. Leak detection instructions could be distributed with educational literature. Assistance could be provided for those requesting some help. Use methods consistent with American Water Works Association's *Water Audit and Leak Detection Guidebook*.

Voluntary Water Audits BMP 9:

City staff would advertise and perform water audits with residents to quantify how much water is being used by various tasks including watering yards, household use, etc. Once residents know how much water they are using and how much is necessary, it would be easier for them to conserve water. Use methods consistent with American Water Works Association's *Water Audit and Leak Detection Guidebook*.

Water Efficient Fixtures and Appliances BMP 10:

Current building codes require that water efficient fixtures be installed in new building. However, older sections of American Fork were fixtures be installed in new buildings. However, older sections of American Fork were developed before these codes were in developed before these codes were in place. The City could develop a budget to assist with the replacement of wasteful fixtures. Assistance may include rebates for replacing shower heads and toilets, discounts on efficient appliances or other measures that would help to compensate for the replacement cost.

Regulatory and Rate Options

Water Conservation Committee BMP 11:

A Water Conservation Committee has been established with citizens and public officials including the Water Superintendent, Public Works Director, a Council Member and two more citizens. The committee is responsible for distributing information to the public, receiving public comments, and making recommendations to the City Council regarding water conservation planning, regulations, and rates.

Conservation Oriented Rate Structure BMP 12:

A conservation-oriented rate structure not only pays for the production and distribution of water, but also rewards users for reducing system demand and penalizes users for increasing demand. The City would need to study which rate would most fairly distribute the cost among the water users and promote conservation. Factors that may affect the rate structure include lot sizes, family size, land uses, housing density, water metering and economics.

Review Enforcement of Existing Ordinances BMP 13:

Prior to adopting new conservation ordinances, it is important to review existing ordinances and building codes and enforcement. The review will limit duplication and conflict with new ordinances. Regulation of multiple-family units, including accessory apartments, on single family parcels, may improve water use management.

Shortage Management and Emergency Planning BMP 14:

The City's shortage management and emergency plan limits public water use and restrict watering to weekdays during droughts. These measures are easy to enforce and can be very effective. The City also plans for system failures such as a main break, a pump failure, a well collapse, etc. with system improvements. The City's planned responses to these emergencies decrease water service interruptions.

Conservation Incentives to Wholesale Users BMP 15:

American Fork sells approximately 10 MG per month to Cedar Hills City. As with the residential users, it may be possible to provide incentive pricing to Cedar Hills City and other wholesale or large-scale water users. It is also possible to limit the total of park supply to wholesale users.

Water Efficient Landscape Practices BMP 16:

Extensive research has been done in recent years to find ways to reduce landscape water use. The City could plant demonstration gardens around City buildings and prominent areas of parks so that citizens can see the beauty and effectiveness of water efficient landscape practices. These practices include selecting drought tolerant plants, shrubs, trees, efficient irrigation systems, and mulching.

The Division of Water Resources, in cooperation with USU Extension, Bureau of Reclamation, and numerous other water providers and interested agencies, has helped developed a water-wise plant tagging program to promote the use of native and other well-adapted plans in Utah landscapes. The information can be downloaded from the following link: www.waterwiseplant.utah.gov .

Water Rationing Policies BMP 17:

The City uses water rationing for its drought emergency plan. As the City, and surrounding areas, continues to grow and become more crowded, the chances of implementing water rationing will rise. American Fork could strengthen its emergency response by developing inter-city agreements to share resources, materials, and personnel in emergencies.

Behavioral and Educational Options

Public Conservation Education BMP 18:

American Fork send educational mailers to its users. Continued education through the mail, advertising, schools, civic meetings, and Water Conservation Committee meetings could improve conservation by involving the public in its water conservation efforts. The City needs to develop additional methods of providing the public with information on water conservation. The Utah State Division of Water Resources and other agencies have already developed various pamphlets on water conservation. Basic conservation information can be issued by:

1. Providing a conservation hotline and water saving surveys.
2. Providing funding for a public information campaign and program.
3. Providing information on low water use plants and efficient irrigation systems.

4. Providing information on water pricing improvements to reduce water consumption.
5. Providing information on system improvements.

Improved Industrial and Commercial Processes BMP 19:

American Fork could explore or provide funding for companies to explore new methods that have been developed to reduce the amount of water used in industrial and commercial processes. If some of these methods could be implemented in the City, new ordinances could be created that would require new and existing companies to provide water conserving processes.

Peak use Reduction BMP 20:

The demand for water is greatest during summer months. Encouraging evening, night, and early morning watering can reduce peak demand and overall water usage.

Evaluation of Conservation Options

The conservation BMPs are evaluated in Table 6. Cost, public view, staff time and effort are rated from 1 to 5, with 1 being inexpensive and 5 being expensive. Benefits are rated from 1 to 10, with 1 being a large benefit and 10 being a minimal benefit. The benefit of each BMP was weighed so that the BMPs with maximum benefit to culinary water conservation would rank better. The BMPs with lower totals are preferred.

Table 6: Conservation BMP Evaluations

ALTERNATIVE	BENEFIT	COST	PUBLIC VIEW	TIME	EFFORT	TOTAL
System O&M and Repair Options						
Water Loss Budget	4	1	2	3	2	12
Leak Detection System	7	3	2	3	3	18
Large Meter Replacement	3	1	2	3	3	12
System Repairs	1	2	2	3	3	11
Full Implementation of PI System	1	1	2	2	2	8
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Water Leak Detection and Repair	3	2	4	2	2	13
Voluntary Water Audits	4	1	3	3	3	14
Efficient Fixtures and Appliances	6	2	4	2	2	16
Regulatory and Rate Options						
Water Conservation Committee	3	1	1	3	2	10
Efficient Landscaping Practices	3	1	2	3	3	12
Enforcement of Ordinances	3	2	4	2	2	13
Conservation Water Rate Structure	2	1	4	4	3	14
Shortage and Emergency Planning	8	2	3	1	1	15
Conservation Building Codes	5	2	4	3	2	16
Incentive to Wholesale Users	7	3	4	2	2	19
Behavioral and Educational Options						
Public Conservation Education	4	2	1	2	2	11
Peak Use Reduction	6	2	1	2	2	13
Improved Commercial Processes	8	2	2	3	3	18
Water Rationing Policies	8	2	3	3	3	19

Recommended water management and conservation program goals have been selected based on highest ranked conservation BMPs.

Most of the City’s water conservation efforts will focus on successful implementation of the secondary water system. Other programs will provide additional water conservation and provide information needed for updating the conservation plan in five years.

Programs recommended to be implemented over the next five years are summarized in Table 7. The table also lists water use reduction goals, implementation schedules and evaluation processes to measure progress. Table 8 shows an evaluation of the water management and conservation plan goals adopted in October 2014.

Table 7: Recommended Water Conservation Goals 2019-2023

DESCRIPTION	GOAL	DEADLINE	EVALUATION
System Repairs	Upgrade the culinary system by replacing older infrastructure	December 31, 2023	Specific infrastructure replaced.
Enforcement of Existing Ordinances	The City has recently adopted an ordinance restricting the use of pressurized irrigation to certain days of the week.	Ongoing program	Collect data and calculate the use per capita per month and annually and compared with State’s average use.
Water Conservation Committee	Organize a Water Conservation Committee and implement water conservation options.	Ongoing program	Organize meetings at least quarterly and evaluate the water use and reductions based on implemented options.
Public Conservation Education	Distribute two water conservation newsletters per year with utility bills.	Ongoing program	Document by using work orders the number of newsletters distributed per year.
Water Meter Change – Out Program	Change out 300 residential water meters per year	Ongoing program	Number of meters replaced.

Water users within the City of American Fork, whether commercial or residential customers, are invited to participate in city meetings and establishing priorities for conservation activities. Decisions made by the City regarding establishing conservation goals and priorities will attempt to reflect suggestions and comments offered by customers and interested parties.

Opportunities for public involvement and comment will be provided through public hearings as this plan is approved and as future updates to the plan are made. Staff attend water conferences and receive training and education on water conservation and practices. Staff help educate public through mailings, scout groups, and individual interaction with homeowners or residents.

Table 8: Water Management and Conservation Goals 2013-2018

TABLE 11: EVALUATION OF THE WMCP 2014 TO 2019			
Description	Goal	Deadline	Evaluation
System Repairs	Upgrade the culinary system by replacing older components. Reduce water use to 150 gpd per capita	December 31, 2019	Collect data and calculate the use per capita per month and annually. Completed. 2018 water consumption per capita = 75.28 gpd
Enforcement of Existing Ordinances	The City has recently adopted an ordinance restricting the use of pressurized irrigation to certain days of the week.	December 31, 2019	Collect data and calculate the use per capita per month and annually and compared with State's average use. Ongoing program
Water Conservation Committee	Organize a Water Conservation Committee and implement water conservation options.	December 31, 2015	Organize meetings at least quarterly and evaluate the water use and reductions based on implemented options. Complete
Public Conservation Education	Distribute two water conservation newsletters per year with utility bills.	2014 until 2019	Document by using work orders the number of newsletters distributed per year. Ongoing program
Water Meter Change – Out Program	Change out 300 residential water meters per year	2015 until 2019	Number of meters replaced. Ongoing program

Conclusions

The City of American Fork is documenting its updated Water Management and Conservation Plan (WMCP) with this report. With recent construction of the pressurized irrigation, the culinary water system has adequate source, right, storage and distribution for the foreseeable future. Some additional water source and conservation measures will be needed to meet demand at total built out. The distribution system is aging and needs some repair. The implementation of the pressurized irrigation represents the best option for conservation of culinary water supplies.

The goals set on the 2014 Water Management and Conservation Plan were all met. There is a high demand for irrigation water and the City is taking steps to reduce water waste and bring the amount of water per capita to a number that matches the state's average more closely. Ordinances have been adopted to restrict watering times and days to help conserve water. The City is taking steps to further reduce excess water use by implementing water meters on all new secondary water connections. The City Council recently approved changes to city code and standards making this change possible. The city is also applying for grants to help convert existing secondary connections to metered connections. City staff are reviewing codes to implement changes as needed.

The WMCP identifies and prioritizes several conservation options based on benefits, cost, and other factors. The recommended programs will be implemented in phases over the next five years.