Water Conservation Plan

Kaysville City is a retail water provider supplying culinary water to a population of 30,888 through 8,207 residential and 451 commercial meters, for a total of 8,726 connections over a service area of over 11 square miles. It is our goal to decrease our water consumption to help meet the State goals of 25% reduction by 2050 through conservation measures.

Kaysville City is projecting build-out by 2040, with an estimated population of 42,000 needing 3,814 acre-feet of water. By implementing conservation programs and practices we could reduce consumption to 3,433 acre-feet, or 26,634 gallons per capita.

Kaysville City has historically used less water than what is required in R309-510 of the Utah Administrative Code. The following table outlines the last 4 years of usage for the City.

Year	Total Yearly Usage (acre-feet)
2014	2,323
2015	2,109
2016	2,312
2017	2,395
Average	2,285

Kaysville's current water supply comes from Weber Basin Water Conservancy District. The current contract with Weber Basin is for 2,786 acre-feet/yr with an ability to provide a peak rate of 3,100 gpm, which has typically been sufficient. The City receives a water credit from weber basin from an exchange out of Holmes Creek.

Existing Source Level of Service

The existing level of service for Kaysville City source water is the average of the used Weber Basin contract (2,285 acre-feet), including the water credit received from Holmes Creek, divided by the total number of equivalent residential connections (ERC). See equation below

$$\frac{2285 \text{ acre-feet}}{\text{Year}} \div 10{,}317 \text{ ERC's} = \frac{0.22 \text{ acre-feet}}{\text{ERC}}$$

Future Source and Supply Calculations

Using this analysis moving forward, the future source needed to maintain the level of service is shown in the calculation below.

$$\frac{0.22 \text{ acre-feet}}{\text{ERC}} \times 14{,}529 \text{ ERC's} = 3{,}196 \text{ acre-feet}$$

This calculation shows a future buildout deficit of 410 acre-feet. This deficit can be eliminated by purchasing more blocks of water from Weber Basin.

Recommended for Water Saving Measures

(A) Require the installation and use of water efficient fixtures and appliances, in compliance with Section 604 of the International Plumbing Code.

(B) Provide pressure irrigation to residential and commercial areas. Require the use of pressurized irrigation water on residential and commercial landscapes where available instead of flood irrigation. Encourage commercial areas to conserve water and use water conservation landscaping techniques suck at xeriscape, ect. Encourage and support pressure irrigation metering.

(C) Identify commercial water users and encourage them to increase process efficiencies. Separately meter multiple user sites to identify uses that can be improved.

(D) Use less water in City processes, such as vehicle washing, work area clean up and product application. Designated sites within the City will be using culinary water for irrigation to assist with water quality. This will provide sites with the necessary irrigation, and reduce the about of water lost to hydrant flushing for circulation.

(E) Encourage the reuse of both potable and non-potable water by the food processor, sewage treatment plant and other users.

(F) Detect distribution system leaks and make timely repairs. Upgrade system where and when possible. The City has implemented a three year program for upgrading our water meters to more accurate AMI capable meters to better track and report water usage.

(G) Disseminate public information regarding more efficient use of water via City newsletters, social media, City web site and public outreach programs, such as Kaysville University (a class to help educate our citizens about water conservation practices and tips).

(H) Use flat and increasing block rate structures to encourage more efficient use of water.

(I) Update standards, construction and development requirements, and codes/ordinances to encourage conservation measures for landscaping, watering times, rebates, etc.