



2018

# Water Conservation Plan



Prepared by:

Rob Dotson, City Manager

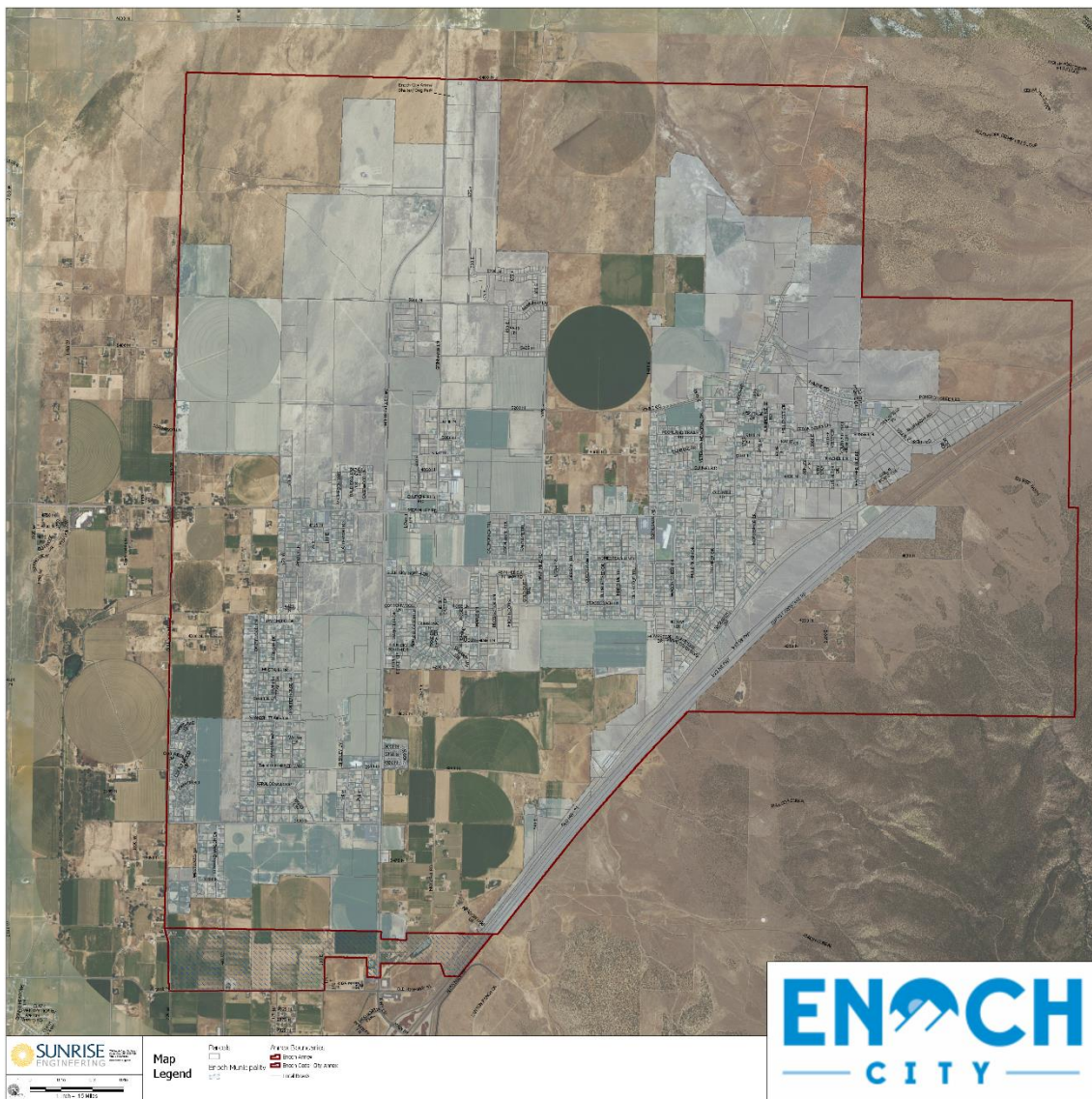
5/31/2018

## Introduction

In response to the rapid growth in Utah, Enoch City citizens and leaders are preparing for the future availability of water. This “Water Conservation Plan” is written to address the progress and concerns of Enoch City officials, in accordance with the Water Conservation Plan Act which was amended in the 2017 legislative session of Utah.

## System Profile

Enoch City, Iron County, Utah has a population of approximately 6,690 as of December 2017. Providing water to meet the needs of residents has always been a top priority of city leaders and planners. A well maintained and operated water system continues to provide high quality water to the community. Currently, Enoch City has 2,023 residential, 9 commercial, 8 stock water, and 10 institutional water connections. Enoch Water Service Area is designated below, in red.



## Supply

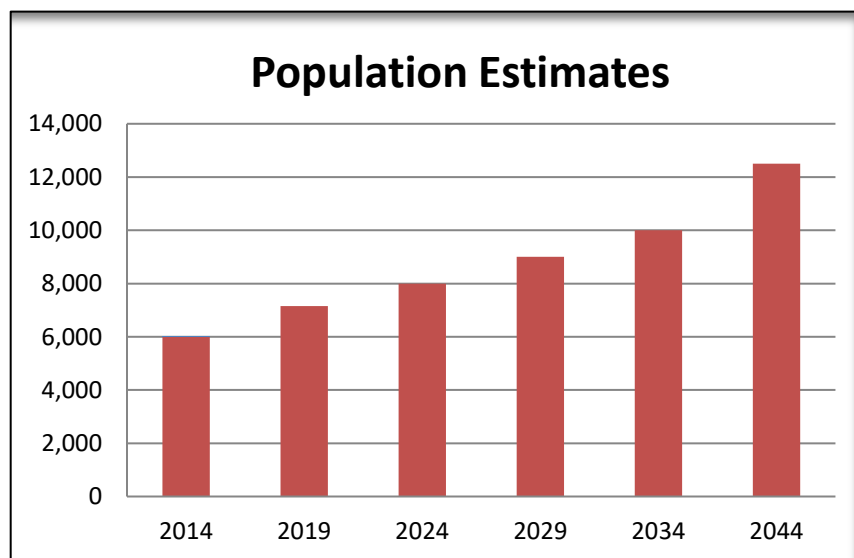
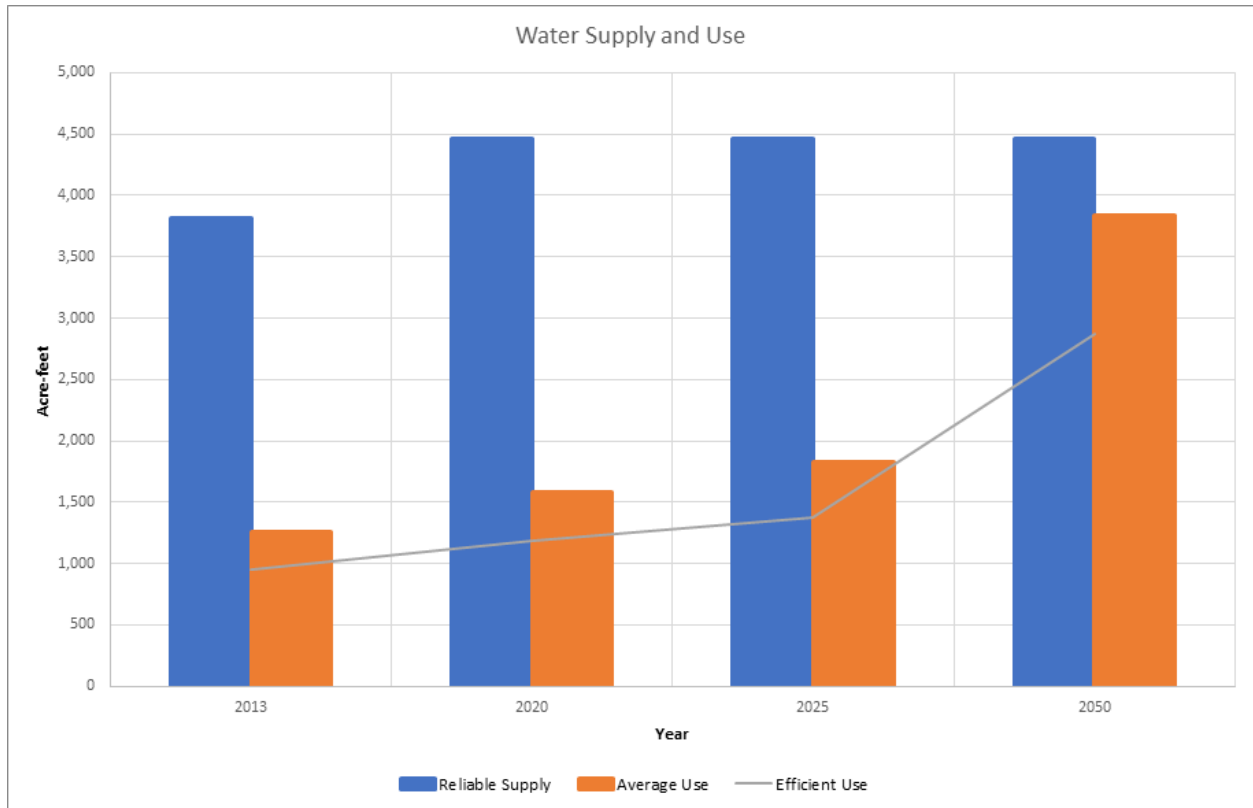
In 2017, approximately 1,465 acre foot of water was withdrawn from the underlying aquifers through 7 wells for indoor and outdoor use. 2 wells in the system are being used as irrigation wells in a separate “secondary system” to preserve the high quality culinary water for indoor use.

Five culinary wells with a total of 3,206 acre feet of water and over 66 miles of water lines are available to distribute water to the residents of Enoch. The wells are called “Homestead”, “Woolsey”, “Anderson”, “Ravine”, and “Iron Works”. The following table shows the amount of water delivered into the system and the number and type of connections for the years 2004 to 2017.

Year	Total Acre feet	Residential Connections	Commercial Connections	Stock Connections	Institutional Connections	Population	GPD per Person
2005	1056	1464	11	6	19	4366	216
2006	1283	1491	20	6	21	4762	240
2007	1510	1737	20	3	21	4938	273
2008	1509	1658	12	4	20	5076	265
2009	1485	1799	22	8	20	5236	253
2010	1797	1709	13	5	13	5803	276
2011	1862	1718	14	4	14	5989	278
2012	1331	1951	19	7	7	5992	198
2013	1595	1946	15	8	11	6005	237
2014	1200	2270	15	8	11	6005	237
2015	1137	2140	10	8	7	6550	155
2016	1199	2119	12	8	7	6690	160
2017	1465	2023	9	8	10	6690	196
2018	1325	2247	12	9	25	6756	185

## Present Water Use, Future Water Needs and Population

Enoch residents use approximately 185 gallons of water per capita per day (gpcd) compared to 240 gpcd statewide and 157 gpcd nationally. Irrigation water systems have been installed in some newly developed areas to make use of lower quality water while saving culinary water. The population of Enoch City is expected to double in the next 30 years.



## Water Measurement & Billing

Enoch City meters all sources and connections and reads these meters visually and by radio on a monthly basis. If any meter shows unusual usage, an investigation is completed by taking the following steps:

1. Notification to user by any communication available to ascertain reasons for high usage.
  - a. If the reason for unusual usage is unknown, information about possible leakage and/or conservation techniques are shared.
  - b. If the reason unusual usage is known, information about the cost to the user is given.
2. If there is no visible reason for the unusual high usage, the meter can be removed and tested by 3<sup>rd</sup> party.
3. If meter is found to be defective, replacement is immediate.

## System Water Loss Control

The current tiered pricing structure is as follows:

<b>ENOCH CITY</b>		
<b>Existing Residential Water Rate Structure</b>		
Total Base Rate		\$29.00 per Conn./Month
Includes		30,000 Gallons
Overage Steps		
Cost Per 1,000 Gal.	Low Gallons	High Gallons
\$0.40	30,001	50,000
\$0.65	50,001	70,000
\$0.85	70,001	90,000
\$1.00	90,001	120,000
\$1.20	120,001	& UP

## Water Use

Year	Domestic	Commercial	Industrial	Institutional	Stock	Wholesale	Other	Unmetered	Total
2018	2070	12	0	24	0	0	0	0	2106
2017	2015	13	0	24	0	0	0	0	2052
2016	1945	14	0	24	0	0	0	0	1983
2015	2140	10	0	7	0	0	0	0	2157
2014	2270	13	0	13	9	1	0	11	2317
2013	2013	16	0	143	12	1	0	0	2185
2012	1987	19	0	7	7	1	10	7	2038
2011	1718	2	0	14	4	1	0	6	1745
2010	1709	13	0	3	5	0	0	6	1736
2009	1799	22	0	0	8	0	1	0	1830
2008	1658	12	0	20	4	0	0	0	1694
2007	1737	20	0	0	3	0	0	20	1780
2006	1491	18	0	0	6	0	0	0	1515
2005	1464	11	19	0	6	0	0	0	1500

**2005 to current records of potable and non-potable water users by service**

## Water Challenges

1. Use of high water consumptive landscaping on large residential properties.
2. Limited personnel to enforce watering restrictions during annual high usage times.
3. Limited financial resources to implement user education programs.

## Water Conservation Goals

1. Reduce per capita use by at least 15% in five years, from 185 gpcd to 166 gpcd.
2. Improve the appearance of street landscapes, open spaces and yards with more water conserving landscape systems and continued education from the Water Board, Tree Committee, Economic Development Committee and Enoch City Staff.
3. Adaptations to rate structures and utility billing formats to inform water users of their personal watering decisions.

## Current Conservation Practices

Enoch City, Utah  
900 East Midvalley Road, Enoch Utah 84721  
435-586-1119

1. Emergency Water Conservation Contingency Plan
  - a. Level 1 – Normal Years:
    - i. Eliminate watering on City properties from 10 a.m. to 8 p.m.
    - ii. Initiate voluntary conserving measures.
    - iii. Issue similar conservation measures to all users.



- b. Level 2 – 75% of Normal:
  - i. Reduce watering on City properties based upon use.
  - ii. Educate and mandate conservation measures.
  - iii. Enforce outside watering restrictions.
- c. Level 3 – 50% of Normal:
  - i. Strictly enforce conservation mandates with fines.
  - ii. Restrict supply to non-life support areas.
  - iii. Ensure water availability for drinking, household use, and health facilities.

## 2. Water Education Program

Information on efficient water use is sent to residents by newsletter, radio, television, and social media from City, County, and State agencies which include the following tips:

### Outdoor Use

- ✓ Water landscape only as much is required by its type and the weather patterns.
- ✓ Do not water on hot or windy days.
- ✓ Sweep sidewalks and driveways instead of using the hose.
- ✓ Wash cars from a bucket and on the grass.
- ✓ Check for and repair all leaks in pipes, valves, and all areas of water systems.
- ✓ Use mulch and drip systems around trees, shrubs and gardens.
- ✓ Have a “water audit” done by a certified auditor and adjust time clock accordingly.



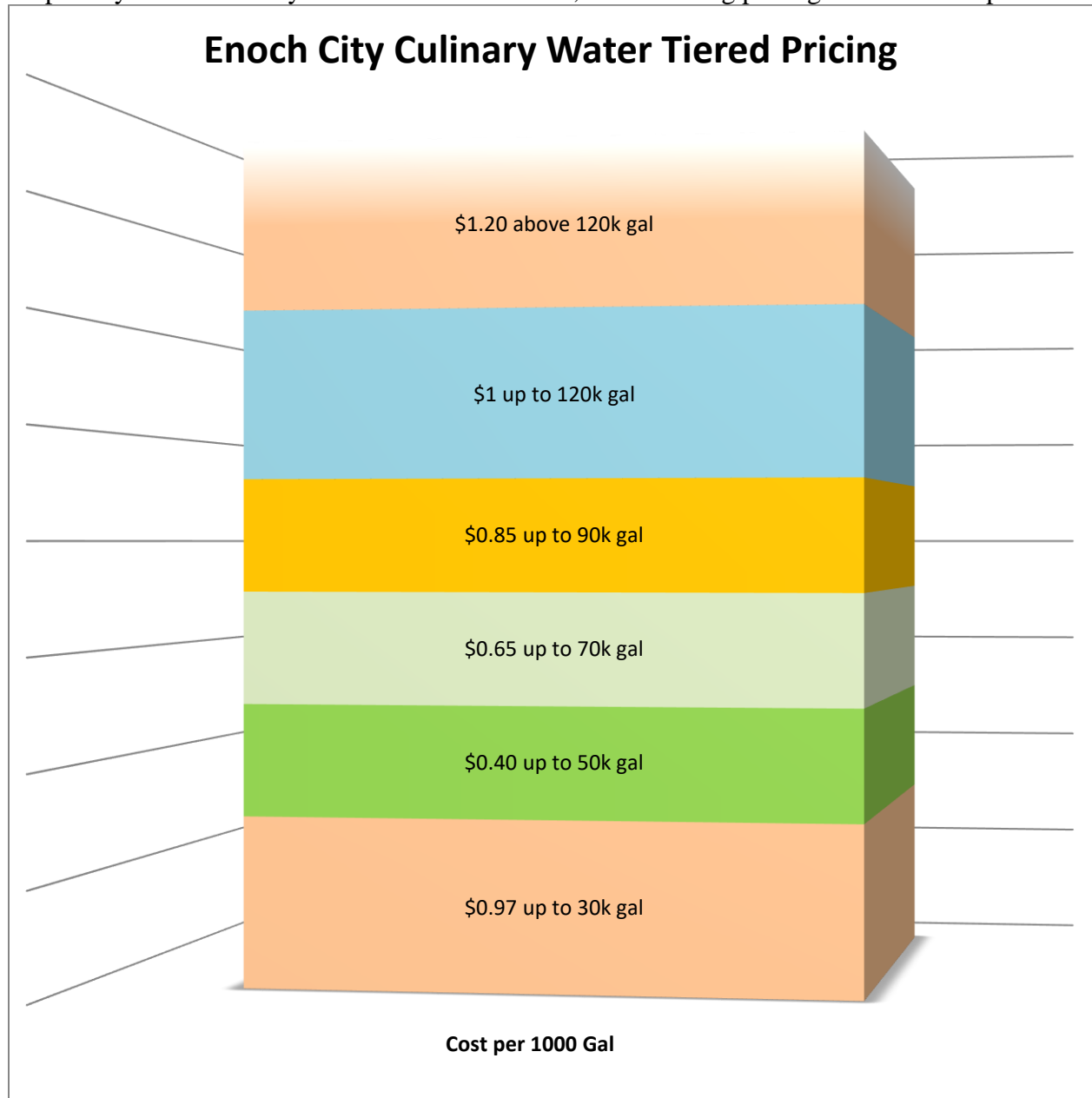
### Indoor Use

- ✓ Do not use toilet as a waste bucket. Put trash in a trash can.
- ✓ Check toilet for leaks and for high water settings to be adjusted lower.
- ✓ Use a plastic bottle full of sand in toilet tank to lower flush amounts.



## Current Conservation Rates

A new Culinary Water Impact Fee Facilities Plan was commenced in 2018 and includes suggestions for new water rate tiered pricing structures. As of the date of this plan, these new structures are not in place but will be considered by the Enoch City Water Board and possibly adopted by the Enoch City Council. Until that time, the following pricing structure is in place:





### **Additional Conservation Measures**

#### **1. Meter Replacement and Leak Detection**

Over time, meters can become less accurate in recording actual flows which lead to lost revenue and inaccurate data. For this reason, the City has an aggressive testing and change-out policy. Almost all meters have been changed to “radio read” methods and are read monthly the entire year to obtain accurate data for billing and leak detection purposes.

#### **2. Improved Efficiency in Irrigation City Parks and Open Spaces**

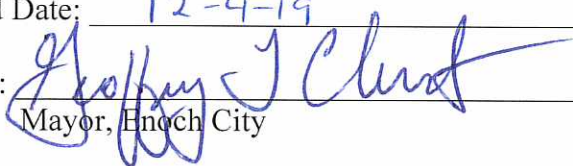
By proper maintenance and replacement of irrigation materials, the City increases irrigation efficiency. Landscaping other public open spaces with natural landscaping and using xeriscaping will further reduce water demands.

#### **3. Education**

Educating residents and businesses regarding the efficient use of water can enhance the likelihood that City goals will be met. Multiple sources of information can be used, i.e. Enoch City newsletter, an expanded utility bill, local media and Social Media.

### **Implementing and Updating the Water Conservation Plan**

The Enoch City Council has appointed and assigned a Water Board, a Tree Committee and an Economic Development Committee who assist in recommending and updating conservation methods. Also, the Enoch City Water Company and City Staff are committed to submitting required reports to various water agencies to support their efforts in creating plans for future water needs and resources in Iron County and Utah.

Approved Date: 12-4-19  
Signature:   
Mayor, Enoch City

**ENOCH CITY CORPORATION**  
**RESOLUTION NO. 2019-12-04-A**

**A RESOLUTION TO APPROVE THE 2019 ENOCH CITY WATER  
CONSERVATION PLAN**

**WHEREAS,** there is a requirement for Enoch City to have a water conservation plan and to update it every five years; and


**WHEREAS,** there was a need to update data and information to reflect current realities; and

**WHEREAS,** the Enoch City Water Board has reviewed the updated plan and sent a favorable recommendation to the City Council and the City Council has reviewed the 2019 Enoch City Water Conservation Plan;


**NOW, THEREFORE, BE IT RESOLVED,** by the Mayor and City Council of Enoch, Utah that the changes to the 2019 Enoch City Water Conservation Plan be approved and adopted. This Resolution was made, voted upon and passed by the Enoch City Council at a regular City Council meeting held on the 4th day of December 2019.

**DATED this 4th day of December, 2019**

**ENOCH CITY CORPORATION**

  
\_\_\_\_\_  
Geoffrey L. Chesnut, Mayor

**ATTEST:**

  
\_\_\_\_\_  
Julie Watson, City Recorder

**VOTING:**

David Harris	Yea <input checked="" type="checkbox"/> Nay <input type="checkbox"/>
Jolene Lee	Yea <input checked="" type="checkbox"/> Nay <input type="checkbox"/>
David Owens	Yea <input checked="" type="checkbox"/> Nay <input type="checkbox"/>
Katherine Ross	Yea <input type="checkbox"/> Nay <input checked="" type="checkbox"/> <i>absent</i>
Shawn Stoor	Yea <input checked="" type="checkbox"/> Nay <input type="checkbox"/>

**SEAL:**

