

**EPHRAIM, UTAH**  
**ORDINANCE NO. 21-09**

**AN ORDINANCE OF EPHRAIM CITY ADOPTING THE EPHRAIM CITY WATER  
UTILITY AND CONSERVATION PLAN UPDATE**

**WHEREAS**, the State of Utah requires Ephraim City to review and update its Water Utility and Conservation Plan; and

**WHEREAS**, Ephraim City desires to comply with all state requirements; and

**WHEREAS**, water is a valuable resource for the City and therefore Ephraim City desires to update its water conservation plan to help protect this resource;

**NOW, THEREFORE, BE IT ORDAINED** by the Ephraim City Council as follows:

- A. That the Ephraim City Water Utility and Conservation Plan Update for 2021 be adopted.

This Ordinance, assigned Ordinance No. 21-09, shall take effect upon passing and approval.

**PASSED AND APPROVED** by the Ephraim City Council this 15th day of December, 2021.



  
\_\_\_\_\_  
**JOHN SCOTT, Mayor**

**ATTEST:**

  
\_\_\_\_\_  
**LEIGH ANN WARNOCK, City Recorder**

**MAYOR'S APPROVAL**

Passed with Mayor's approval   X    
Passed over Mayor's disapproval \_\_\_\_\_  
Mayor neither approved or disapproved \_\_\_\_\_

**COUNCIL VOTE**

Alma Lund	Aye <u>  X  </u>	Nay _____
Richard Wheeler	Aye <u>  X  </u>	Nay _____
Margie Anderson	Aye <u>  X  </u>	Nay _____
Lloyd Stevens	Aye <u>  X  </u>	Nay _____
Tyler Alder	Aye <u>  X  </u>	Nay _____



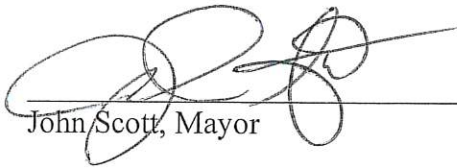
# Ephraim City Water Utility and Conservation Plan Update

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**2021**

A conservation report, updating the previous water utility conservation report of Ephraim City, in compliance with the Utah Water Conservation Plan Act (73-10-32, UCA). This report was updated and compiled by City Engineer Bryan Kimball, and Public Works Director Jeff Jensen.

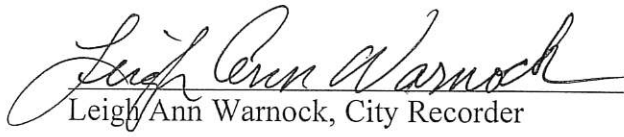
**EPHRAIM WATER CONSERVATION PLAN:**

  
\_\_\_\_\_  
John Scott, Mayor



12-15-21  
Date

**ATTEST:**

  
\_\_\_\_\_  
Leigh Ann Warnock, City Recorder

12-15-21  
Date

# Table of Contents

Executive Summary.....	3
History and System Profile.....	3
Current Water Connections.....	3
Water Storage.....	3
<i>Figure 1: Total Source vs. Metered Use, 2007 to Current (AC-FT)</i> .....	5
<i>Figure 2: Projected Water Use (AC-FT)</i> .....	6
<i>Table: Summary of current and future system improvements, 2018 Water Master Plan</i> .....	7
Population.....	8
System Water Loss Control.....	8
<i>Figure 3: Total Metered Water Use (1000 gallons), 2006 to current</i> .....	11
<i>Figure 4: Consumed gallons per day per capita, 2006 to present</i> .....	12
<i>Figure 5: Copy of local regional goals from the state Regional M&amp;I Water Conservation Goals</i> .....	14
Future Possible Strategies .....	16
Evaluation Period .....	17
Associated Plans – Emergency Response Plan .....	17
<i>Appendix A: System Map of the Water Sources and Facilities of Ephraim City:</i> .....	18
<i>Appendix B: Ephraim City Water Service Area Map:</i> .....	19
<i>Appendix C: Ephraim City Water System</i> .....	20
<i>Appendix D: Water Service Area Map - Current</i> .....	21
<i>Appendix E: Water Service Area Map - future</i> .....	22
<i>Appendix F: Utah’s Regional M&amp;I Water Conservation Goals</i> .....	23

## Executive Summary

Ephraim City has successfully implemented water conservation methods and has reduced the average per capita water use by roughly 25% since 2006, to approximately 166 gallons per day per capita (gpdpc) in 2020. This easily meets and exceeds the most recent state goal for our region of 321 gpdpc for 2030 and 301 gpdpc for 2040. This direct conservation translates to water savings of approximately 440K gpd in 2020 and over 3.6 million gallons per day when projected out to 2070 (50 years).

This conservation effort was achieved primarily by focusing on outdoor watering efforts, which represents the largest water use category. The single most effective factor in reducing water use was determined to be implementing a tiered schedule water rate that penalizes the highest users with increasing fees the more water is used.

Even though Ephraim City has far exceeded the state goals for conservation efforts in our region, Ephraim City intends to continue conservation efforts, and has a goal to reduce consumption by 5%-10% in the next 10 years. This will be accomplished by continuing to focus primarily on outdoor water reduction by encouraging water wise land scaping for new construction and conversing to waterwise landscaping for existing residents, in addition to implementing a transition to smart meters city wide within the next 10 years, and installing additional master meters and scada capabilities to the system within the next 5 years.

## History and System Profile

Ephraim City has been supplying culinary drinking water for over 100 years. When the city was founded water was supplied by Cottonwood Creek which runs through the community. As time went on springs were developed in the nearby mountains east of town and wood staved pipe was used to carry the water to the community. The springs and delivery systems have been updated over the years. Two wells were added to supplement the springs. A map of the overall water system and the distribution system, along with current and future anticipated service area is attached in the appendix.

## Current Water Connections

Water Use Breakdown (as of 2020)		
	Connections	Use
Residential	1,389	338,987,000
Commercial	102	35,080,000
Industrial	3	1,373,000
Institutional	23	73,164,000

Total Connections            1,571

## Water Storage

The following represents a summary of the existing water storage serving Ephraim City:

• Mill Hill Steel Tank	1 MG
• Mill Hill Concrete Tank	1 MG
• Lower Canyon Concrete Tank 1	0.75 MG
• Lower Canyon Concrete Tank 2	0.03 MG
• Lake Hill Concrete Tank	1 MG
• Ropes Course Concrete Tank	1.5 MG
<hr/>	
<b>Total Storage</b>	<b>5.28 MG</b>

## Current Sources

Ephraim City has two existing wells and several existing springs which provide water for Ephraim City. (see Appendix A for a system map). During normal water years, the springs, which are east of Ephraim in the mountains, are currently able to provide 100% of the indoor and outdoor water demand for the City. The wells are normally used only sparingly to supplement the springs during extended periods of drought and/or low flows from the springs. The sources for Ephraim City are summarized as follows:

- South Little Spring
- North Little Spring
- Big Spring
- Curley Hill Spring
- Black Stump Spring
- Sawmill Spring (1-5)
- Beck Spring
- Parry Spring
- Birch Spring
- Twin Spring
- Riddley Spring
- Maple Spring
- Left Hand Fork Spring
- GBEEC Spring
- Ephraim Culinary Well #1
- Ephraim South Well #2

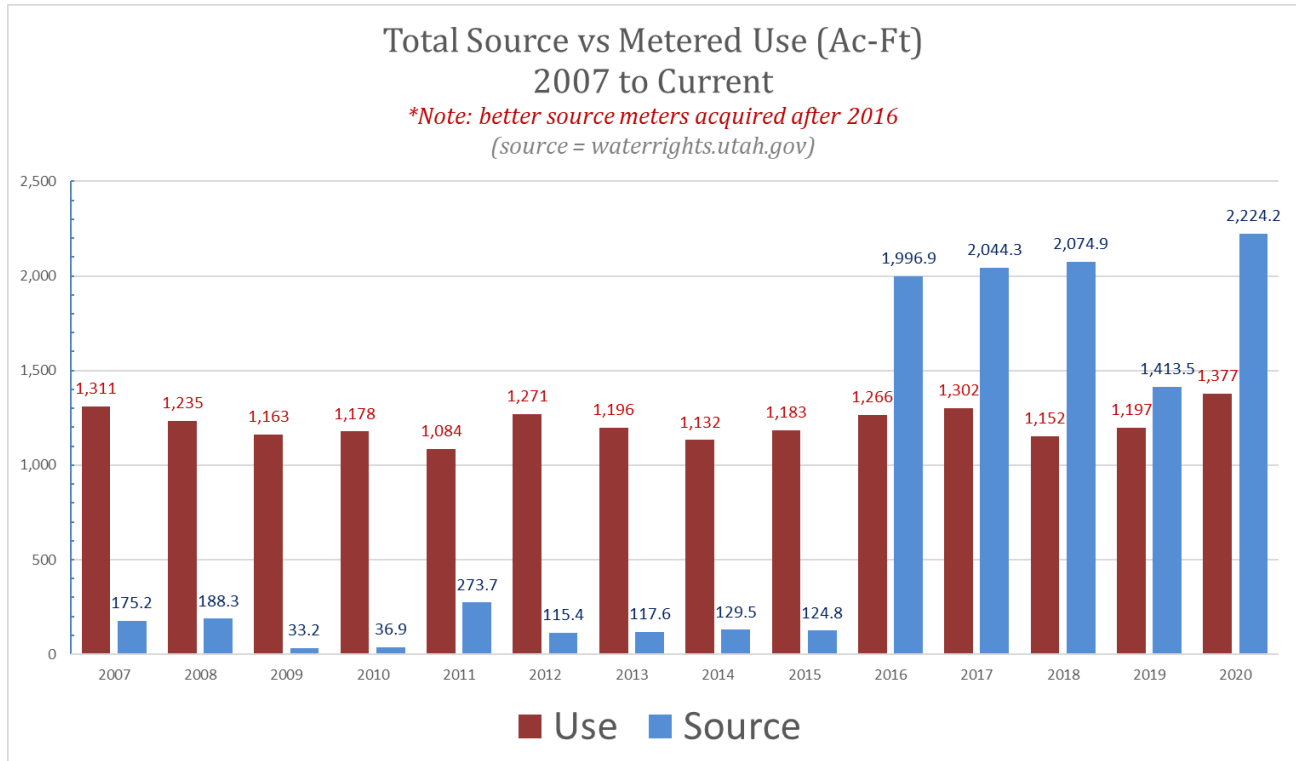
The springs are in remote mountainous areas and currently do not have telemetry or scada available to measure flows continuously, and high elevation springs are only accessible during summer months. In 2016 a consolidating meter was introduced to track the flows of all the combined springs prior to entering the water distribution system. This greatly affected the reported flows on the state water rights. Recorded/reported spring source flows prior to this combined flow meter in 2016 are deemed unreliable and inaccurate. For purposes of this document, projections for available source capacity will be based only from 2016 forward where better data is available. It is noted that spring flows vary greatly from year to year, depending on the water year. In a normal water year, the springs can provide 100% of the city demand. In drought years, the spring flows drop off and the wells are used as backup to the spring flows.

The current water supply from the combined springs is summarized as follows:

Summary: Total Source Capacity			
Spring Source Capacity	1,798.4	AC-FT (average 2016 to current)	
Well # 1 Capacity	1,451.70	AC-FT (900 GPM)	
Well # 2 South Capacity	645.2	AC-FT (400 GPM)	
<b>Total Average Source Capacity</b>	<b>3,895.3</b>	<b>AC-FT</b>	

This next chart shows total source versus metered use. As mentioned above, a new totalizing meter was implemented after 2016, which is considered more accurate data than that prior to 2016.

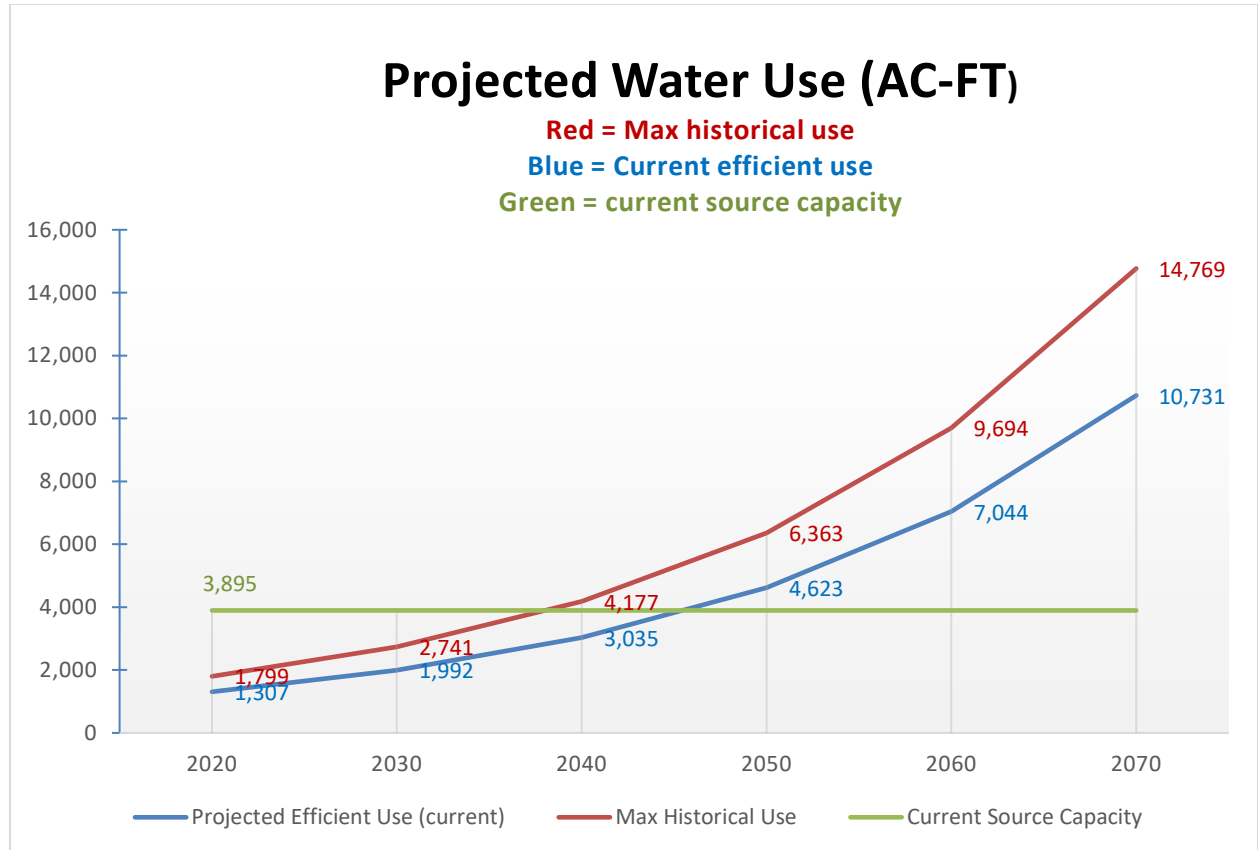
*Figure 1: Total Source vs. Metered Use, 2007 to Current (AC-FT)*



## Projected Water Use

This next chart shows the current average source capacity, projected out for the next 50 years. It shows the projections if the previous max use from 2007 were to continue, along with the projected efficient flow. Note that this represents average annual demand and does not represent peak day demand.

Figure 2: Projected Water Use (AC-FT)



As the above chart shows, the City does not have enough capacity to supply all the projected demand in 50 years. In 2018 the City completed a water master plan which projected out the water use for the next 20 years and identified capital projects to address existing deficiencies and future growth. These capital projects include at least 3 new wells to help ensure enough capacity to meet demand, and are summarized on the following page:



Table: Summary of current and future system improvements, 2018 Water Master Plan

SUMMARY OF RECOMMENDED WATER SYSTEM IMMEDIATE IMPROVEMENTS	
CONSTRUCT NEW WELL	
NEW 1,000 GPM WELL (WELL #3)	\$1,689,200
DISTRIBUTION SYSTEM IMPROVEMENTS	
NEW CHLORINATION SYSTEM - WELL #1	\$5,019,290
CONSTRUCT NEW PRV & 10" LINE TO PRV 1	
REPLACE 4" LINE W/10" LINE - SOUTH MAIN	
NEW 10" LINE FROM NEW WELL TO SOUTH MAIN	
NEW 8" LINE: 100 S FROM 100 E TO 300 E	
NEW 10" & 12" LINE: 400 E FROM 100 N TO 400 S; 400 E TO TANKS	
NEW 16" LINE: MILL HILL TANKS TO 400 N	
NEW 10" LINE: 300 N FROM 400 E TO 550 E; 8" IN CUL-DE-SAC	
NEW 10" LINE: 400 W FROM 300 N TO 400 S	
NEW 10" LINE - 100 N TO 350 N AT 700 E	
REPLACE EXISTING HWY 89 CROSSINGS	
NEW 10" OVERFLOW LINE: LAKE HILL TANK TO ROPES COURSE TANK	
NEW 10" SPRING LINE - TUNNEL TO FR 0114	
NEW 10" SPRING LINE - NORTH OF ROPES COURSE TANK	
TOTAL (WELL + DIST SYSTEM)	\$6,708,490

SUMMARY OF FUTURE SYSTEM IMPROVEMENTS	
WATER RIGHTS PURCHASE(S)	\$43,928,000
THREE NEW 1,000 GPM WELLS (WELLS #4-#6)	\$5,067,600
NEW 5 MG CONCRETE TANK	\$7,199,400
TOTAL	\$56,195,000

In addition to the above projects, other considerations on the radar for future water projects include an aquifer recharge and storage project to store excess drinking water during winter months in the underground aquifer and then pump it out during the summer when the demand is high. In the long term, a large reservoir or multiple smaller reservoirs are contemplated to meet the long-term needs of the city.

## Population

In the 2018 Water Master plan, analysis showed the city was projected to grow at an annual 4.3% a year. Using Census estimates for the year 2020, that growth rate projects out as follows:

Projected Population	
Year	Population
2020	7,102
2030	10,820
2040	16,484
2050	25,114
2060	38,261
2070	58,290

## System Water Loss Control

For leak detection, the City uses the following methods to help identify and address leaks:

- The City billing department reviews billing records every month before bills go out and flags all customers that appear to have leaks based on historical average water use. These customers are then notified that they have a leak.
- The City has previously used drive-by technology to read every meter monthly. The City has just recently begun to transition to smart meters, which monitor continuously and send out alerts immediately to the customer if leaks are detected.
- The City crews walk the entire delivery system from the springs on the mountain all the way down to town at least once a year to inspect for leaks or other issues. This represents over 17 miles of pipeline in the mountains that are inspected at least once every year.
- The City has a policy to quickly repair leaks as soon as they are discovered for any main lines throughout the system, and similarly replaces meters quickly when meters no longer read accurately.
- 

The city currently does not have means of accurately quantifying water loss, as the master meters we have currently do not provide enough information to get a true water balance. However, in the last few years, the city has implemented a program to purchase and install the necessary master meters over a several year implementation schedule at key points in the system to be able to get master metering for source, overflow, and consumption to be able to get a true water balance and tie this into the city scada system. One thing that is noted is that using scada records, we have determined that there is greater base line use during the

summer months when sprinkler systems are turned on. Because the baseline use is higher, it is assumed there are some leaks in the sprinkler lines, possibly as much as approximately 400 gpm total across the entire system. Over roughly 4 and half months of summer outdoor watering, this equates to roughly 77 million gallons lost during the summer season. Assuming this goes through the meter before it leaks in the sprinkler system, it does not necessarily mean revenue loss, but it does represent inefficient water use and affects the overall capacity of the system.

## Billing

The City has transitioned to a tiered water rate schedule that penalizes the higher users with higher costs. The newest effective rate is listed below.

### **Rate Schedule (Effective July1, 2021)**

#### **Within City Limits:**

\$24.96 minimum for first 7,000 gallons  
\$1.82 per 1,000 gallons for 7,001 – 30,000 gallons  
\$2.08 per 1,000 gallons for 30,001 – 60,000 gallons  
\$2.34 per 1,000 gallons for 60,001 – 90,000 gallons  
\$2.60 per 1,000 gallons for 90,001 gallons and over

#### **OUTSIDE CITY LIMITS:**

Base Rate: \$37.44 for 0 – 7,000 gallons  
\$2.73 per 1000 gallons for 7,001 – 30,000 gallons  
\$3.12 per 1,000 gallons for 30,001 – 60,000 gallons  
\$3.51 per 1,000 gallons for 60,001 – 90,000 gallons  
\$3.90 per 1,000 gallons for 90,001 gallons and over

## Water Use

The following table represents the total water use by sector, as taken from the state Water Rights website. This is based on actual metered use, and generally matches the city records for water use.

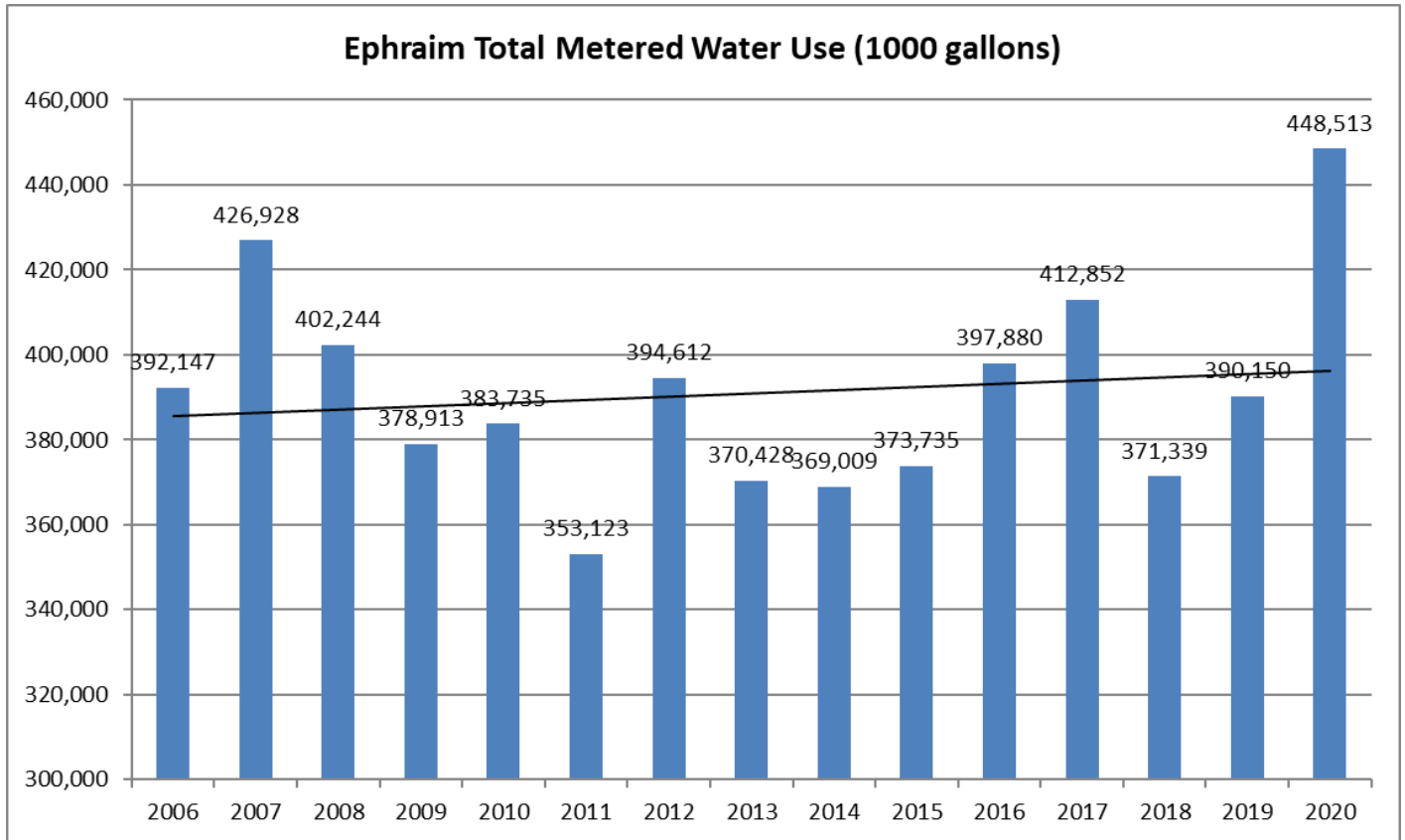
	Residential	Commercial	Industrial	Institutional	Stock	Wholesale	Other	Unmetered	Total (ACFT)
Year	AC-FT	AC-FT	AC-FT	AC-FT	AC-FT	AC-FT	AC-FT	AC-FT	
1999	583	190	0	0	0	0	0	0	774
2000	606	193	0	0	0	0	0	0	800
2001	619	209	0	0	0	0	0	0	828
2002	647	212	0	0	0	0	0	0	859
2003	662	212	0	0	0	0	0	0	874
2004	1,114	0	0	0	0	0	0	0	1,114
2005	1,064	0	0	0	0	0	0	0	1,064
2006	1,214	0	0	0	0	0	0	0	1,214
2007	1,038	33	1	211	29	0	0	0	1,311
2008	985	41	0	194	15	0	0	0	1,235
2009	953	41	1	158	9	0	0	0	1,163
2010	915	47	1	198	18	0	0	0	1,178
2011	789	86	5	187	17	0	0	0	1,084
2012	916	58	6	202	19	0	12	59	1,271
2013	855	53	8	182	30	0	9	59	1,196
2014	835	72	8	191	18	0	8	0	1,132
2015	908	80	4	191	0	0	0	0	1,183
2016	914	113	9	229	0	0	0	0	1,266
2017	939	115	11	237	0	0	0	0	1,302
2018	851	89	8	204	0	0	0	0	1,152
2019	877	96	5	219	0	0	0	0	1,197
2020	1,040	108	4	225	0	0	0	0	1,377

The City tracks all of the metered use each month. Here is a breakdown of water use in 2020

2020	(1000 gallons)												
Description	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Agricultural	317	210	384	425	515	273	327	318	443	343	247	391	4,205
City/School/Govt	642	881	926	485	9,164	10,889	14,327	13,058	9,003	9,431	1,488	1,136	71,430
City owned	2	3	2	2	319	349	381	394	108	145	23	6	1,734
Commercial	1,517	1,242	1,171	1,193	2,713	3,516	4,144	3,663	4,239	2,849	2,890	1,678	30,875
Industrial	58	61	75	66	117	185	182	125	167	176	97	64	1,373
Landlord	1,547	1,685	1,723	1,377	2,853	2,722	3,337	2,764	3,724	2,969	1,873	1,318	27,892
Residential	8,737	7,318	8,163	8,741	31,167	37,170	50,863	45,825	42,370	30,528	8,855	7,525	287,862
Tenant	512	479	514	489	1,322	1,987	2,605	2,271	2,098	1,507	591	522	14,897
Trailer Park	622	488	574	414	616	698	893	944	1,292	605	503	596	8,245
Totals	13,954	12,967	13,532	13,192	48,786	57,789	77,059	69,362	63,510	48,559	16,567	13,236	448,513
Total Water Units													(1000 gallons)

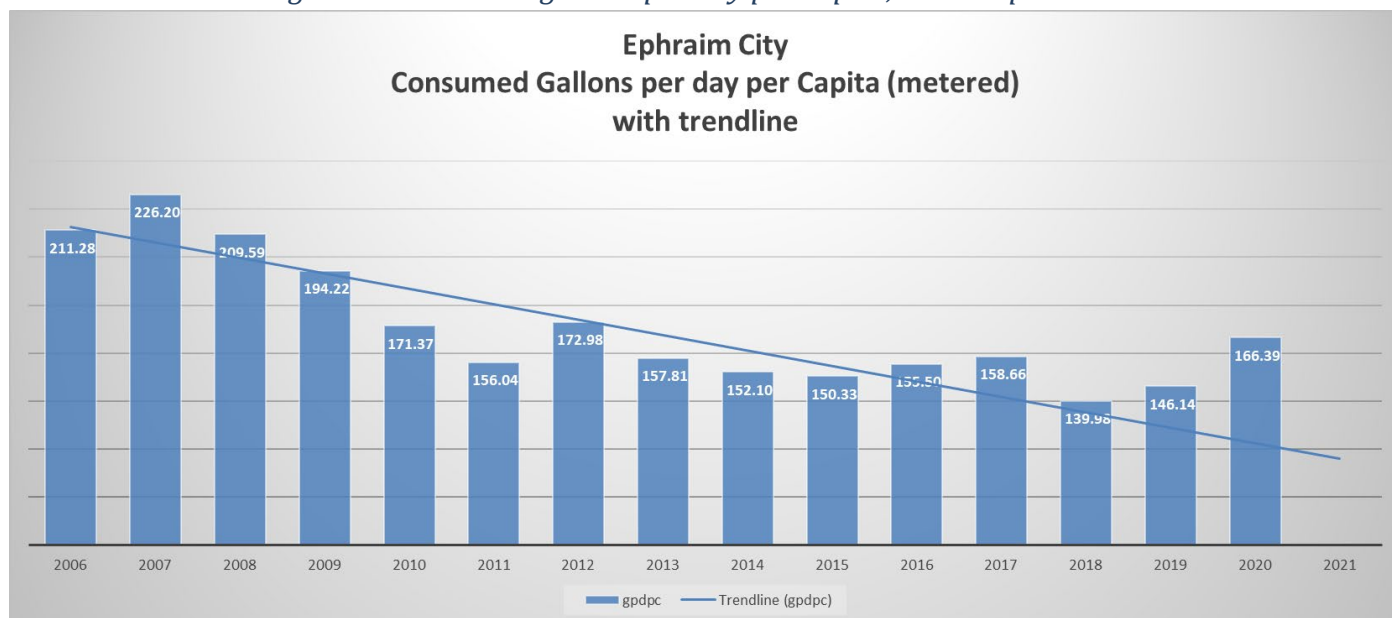
The following chart represents total metered water use in Ephraim since 2006. Note in this graph that 2007 was the highest total metered water use amount until just last year, 2020. **This is especially important because from 2007 to present the population increased by roughly 30%, but the total water use did not match the population growth. This shows that the city has been successful in reducing water consumption, with a per capita reduction of roughly 25%.**

Figure 3: Total Metered Water Use (1000 gallons), 2006 to current



It should be noted that the above figures represent actual metered water use for Ephraim City, and does not include unmetered water used for outdoor irrigation for the City Parks and Cemetery.

Figure 4: Consumed gallons per day per capita, 2006 to present



As mentioned above, **the overall per capita use for Ephraim City has declined roughly 25% since the 2007 high, even though the population has increased by roughly 30% in this same time period. Note the overall downward trend that continues to present.**

When comparing the previous use trends to the current reduced consumption, the savings are significant. The following table shows a summary of comparison of water savings based on current efficient trends:

Year	Previous max use trend	Current use trend	Water Saved
2020	1,799 ac-ft	1,307 ac-ft	492 ac-ft (440K gpd)
2030	2,741 ac-ft	1,992 ac-ft	750 ac-ft (669K gpd)
2040	4,177 ac-ft	3,035 ac-ft	1,142 ac-ft (1 mgd)
2050	6,363 ac-ft	4,623 ac-ft	1,740 ac-ft (1.5 mgd)
2060	9,694 ac-ft	7,044 ac-ft	2,651 ac-ft (2.4 mgd)
2070	14,769 ac-ft	10,731 ac-ft	4,038 ac-ft (3.6 mgd)

*Note: any discrepancies in water saved are due to rounding to nearest whole number*

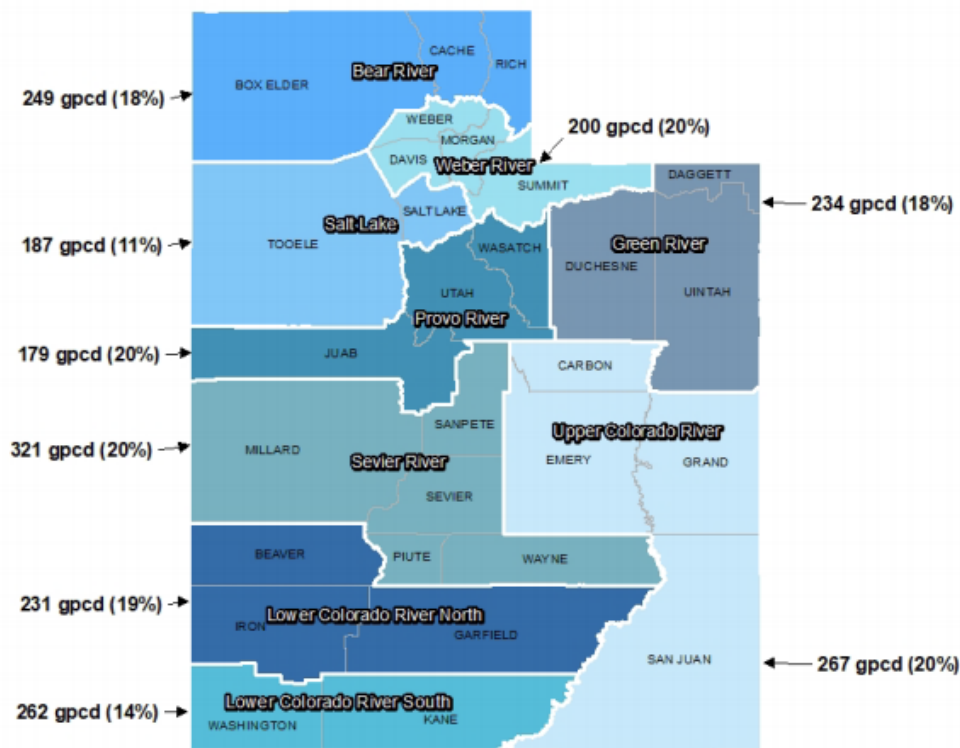
Basically, we have **already saved roughly 440K gpd in 2020** by implementing conservation efforts and projecting out to 2070 (60 years) results in a **projected savings of 3.6 million gpd**. This is substantial by any account.

## Conservation practices and goals

***With the 25% reduction in per capita water use noted above, the city has met and exceeded the previous goal set by Governor Herbert to reduce water consumption by 20% by the year 2020. Ephraim City achieved that goal more than 9 years early.***

In 2019, the state developed new conservation goals that were more specific to each region. This figure is shown on the following page.

Figure 5: Copy of local regional goals from the state Regional M&I Water Conservation Goals



Proposed M&I Water Conservation Regions and 2030 Goals

Proposed Regional M&I 2030 Water Conservation Goals and Future Goal Projections

Region	2015 Baseline (gpcd)	2030 Goal		2040 Projection		2065 Projection	
		Goal (gpcd)	Reduction from 2015	Projection (gpcd)	Reduction from 2015	Projection (gpcd)	Reduction from 2015
Bear River	304	249	18%	232	24%	219	28%
Green River	284	234	18%	225	21%	225	21%
Lower Colorado River North	284	231	19%	216	24%	205	28%
Lower Colorado River South	305	262	14%	247	19%	237	22%
Provo River	222	179	20%	162	27%	152	32%
Salt Lake	210	187	11%	178	15%	169	19%
Sevier River	400	321	20%	301	25%	302	24%
Upper Colorado River	333	267	20%	251	25%	248	25%
Weber River	250	200	20%	184	26%	175	30%
Statewide	240	202	16%	188	22%	179	26%

Note M&I = municipal and industrial; gpcd = gallons per capita per day based on permanent population. Reported per-capita use includes all residential, commercial, institutional, and industrial uses averaged over the permanent population in each region.

The state conservation goal for the Sevier River is 321 gpcd by 2030, 301 gpcd by 2040, and 302 gpcd by 2065. Ephraim City is currently averaging 165 gpcd and is well below the state goals for the goals any time



period. In fact, the current Ephraim levels are lower than any other area in the state for the 2065 goals except for the Provo River. ***Ephraim City has far exceeded the state goals for conservation in our area, by any measure.***

It is assumed the greatest reason for the success behind the water conservation efforts of Ephraim is primarily driven by water rates. Ephraim implemented a new, aggressive tiered water schedule that penalized the highest users in the form of increased fees. This provided the primary motivation and the customers responded across the entire system. The highest water users (schools and college) responded by investing in state-of-the-art sprinkler control systems and began implementing other water saving methods as well.

## Conservation Goals

Ephraim has had incredible success at conserving water, far exceeding the state's goals in every aspect. Now that the biggest gains have been made, there is still room for improvement, but the gains will be harder to come by. Going forward, Ephraim intends to achieve another 5%-10% reduction by 2030. The single biggest water use category is summertime outdoor watering, especially for grass areas, which therefore provides the lowest hanging fruit that could have the biggest impact on the water consumption rates. **Therefore, our goals will be primarily focused on reducing outdoor watering consumption.** This includes the following elements:

- Encourage efficient outdoor watering for new construction, and conversion to waterwise landscaping for existing customers
  - The city currently does not require waterwise landscaping by ordinance but does allow for xeriscaping and does not require any minimum percentage or square footage of actual grass, which is often the highest source of outdoor water consumption.
  - All new development is encouraged during the permit review process to implement waterwise landscaping.
  - The city allows onsite rainwater harvesting and encourages it where it makes sense to do so.
  - The city is contemplating offering additional incentives for existing residents to convert to waterwise landscaping.
- Additional BMPS to be implemented over the next 5 years include the following:
  - Continue to transition to smart meters across the entire system. Due to the expense and limited resources of staff/crew and budget, this is a multi-year process that will be completed over a 5-10 year timeline.
  - Install remaining master meters in the system to better track a total water balance of all water coming into and out of the system. This will be completed in 0-5 years.
  - Review current development ordinances to encourage waterwise landscaping, which might include limiting grass areas, requiring a minimum percentage of waterwise landscaping.

Those within Ephraim City responsible for meeting these conservation goals include the following individuals:

- Jeff Jensen, Public Works Director
- Shaun Kjar, City Manager
- Bryan Kimball, City Community Development Director and City Engineer
- John Scott, Mayor
- Margie Anderson, City Council
- Richard Wheeler, City Council
- Tyler Alder, City Council
- Alma Lund, City Council
- Lloyd Stevens, City Council

Each of these may be contacted through City Hall, located at 5 South Main, Ephraim City, UT 84627, or by phone at (435)-283-4631.

The city currently does not offer incentives or rebates for conservation. However, the city is currently in discussion to determine if that makes sense for us going forward.

The City currently has an ordinance prohibiting the waste of water. The city encourages waterwise landscaping for new construction and existing residents but does not yet have an ordinance which requires that. The city is currently reviewing a Drought Plan and Water Shortage plan.

The city does not prohibit the collection of rainwater, nor the use of gray water.

The City does not yet require efficient fixtures/sprinklers, nor specify landscape requirements, although we do encourage waterwise landscaping, especially for new construction.

### Future Possible Strategies

Because Ephraim City has no secondary watering system, all outdoor watering must be done with culinary water. Using monthly metering data, it was determined that winter time (indoor) usage was dramatically lower than summer time (indoor plus outdoor) use. It is clear that outdoor watering provides the greatest opportunity to conserve. Some possible concepts that can reduce outdoor watering are listed as follows:

- Review City landscaping requirements for new development to encourage/required more water wise landscaping.
- Ensure that all City properties (parks, cemeteries, soccer fields, etc.) are not being overwatered and are using efficient water systems. Consider alternate types of sod and landscaping which are more water wise.
- Work with other entities, including schools, the college, and others to ensure grass areas are not being overwatered and are using efficient water systems.
- Review the current rate structure and use pricing to encourage conservation. Consider alternative rate structures such as summer rates vs. winter months.
- Consider options to reuse existing wastewater for land application irrigation to both decrease the culinary water needed for outdoor watering and extend the life of our waste treatment system.
- Public outreach/education to promote proper outdoor watering techniques and methods to avoid excess watering of lawns and gardens.

- Consider rebate programs which help convert existing landscaping to water wise landscaping.

As discussed previously, Ephraim City has already **reduced its consumption approximately 25% per capita since 2007**, showing that there has been success in the existing strategies implemented by the City. Care should be taken, however, to ensure that as conservation strategies take hold and gain momentum with the public that the rate structure be reevaluated on an ongoing basis to ensure that revenues will remain adequate to ensure that operation and maintenance expenses can still be met for the water system.

The following items have been specifically identified as additional strategies of the City, in addition to those strategies already being implemented, to further reduce water consumption and better manage the existing water system:

- Encourage water efficient fixtures and appliances
- Install additional master meters, including on the tank overflow, to better understand the availability and usage patterns of the water available
- Maintain good practices for operation and maintenance, including repairing/replacing of old leaky lines and meters
- Ongoing education of the public in water conservation techniques, in the form of city web page and social media, newsletters, and local radio and media public announcements
- Maintain sound outdoor watering practices on City property to avoid excess watering of lawns
- Pursue secondary water and/or wastewater reuse for watering the parks and cemetery and other appropriate areas
- Require pressure reducers on each new house to reduce flows in houses, in accordance with standard plumbing codes
- Consider implementing an aquifer storage and recovery systems to store water underground in the aquifer during periods of abundant water and withdraw that water later during periods of drought.

It is anticipated that water saved will be used for recharging the aquifers, agriculture (surface irrigation), as well as maintaining stream and river flows and related habitats from the surface overflow which eventually ends up in the Sanpitch River west of town.

The city's current utility ordinance currently prohibits the waste of water, and the council has implemented mandates from time to time to conserve more aggressively during drought years. This is expected to continue in the foreseeable future. As noted by the 25% reduction in gpdpc figure above, the current measures appear to be working.

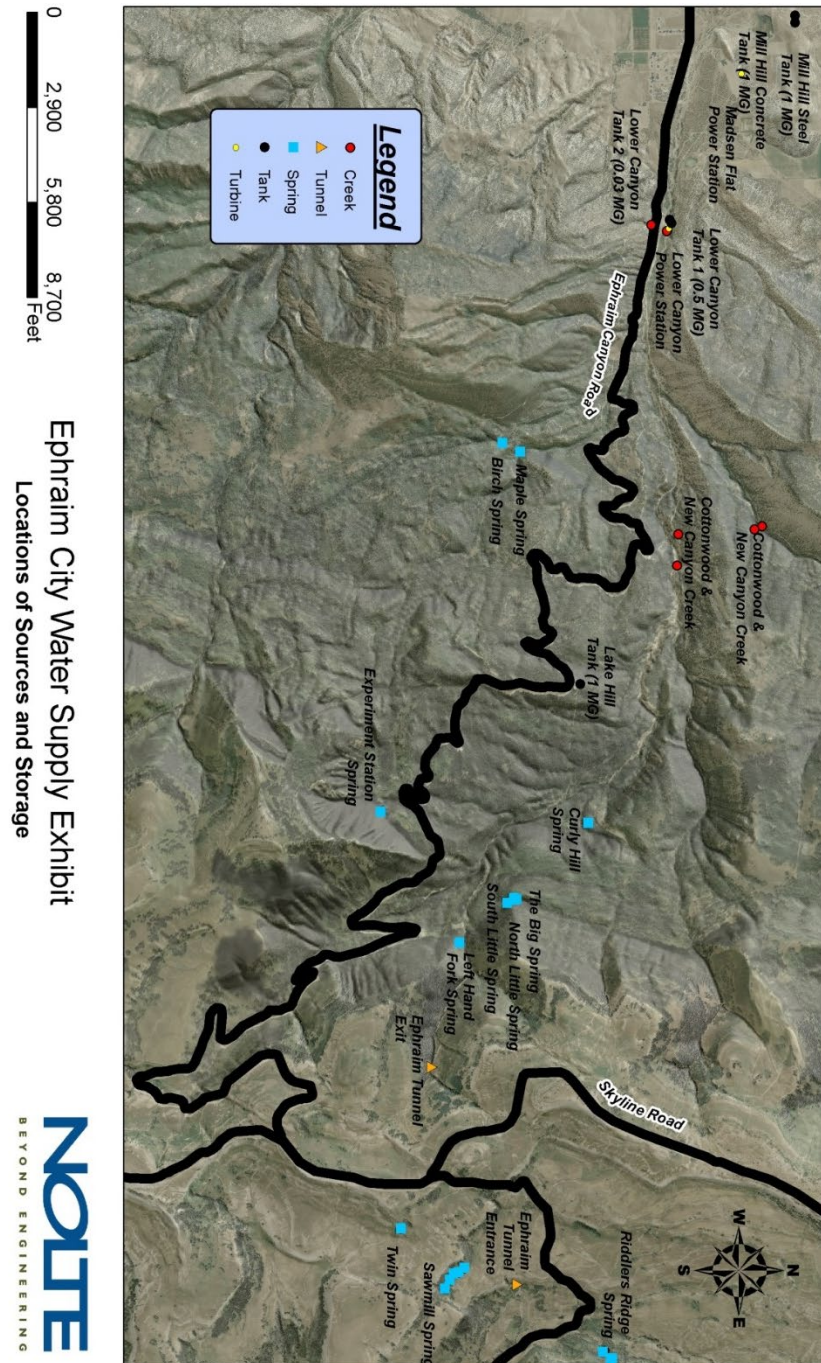
## Evaluation Period

The Water Management and Conservation Plan will be updated every 5 years as required by State law, or sooner as needed due to significant growth or other pressing circumstances.

## Associated Plans – Emergency Response Plan

Events that will activate the Emergency Response Plan include earthquakes, drought, mud slides which take out the main water feeders, contamination and terrorists. In such an event, the Emergency Response Plan will be activated and implemented.

Appendix A: System Map of the Water Sources and Facilities of Ephraim City:



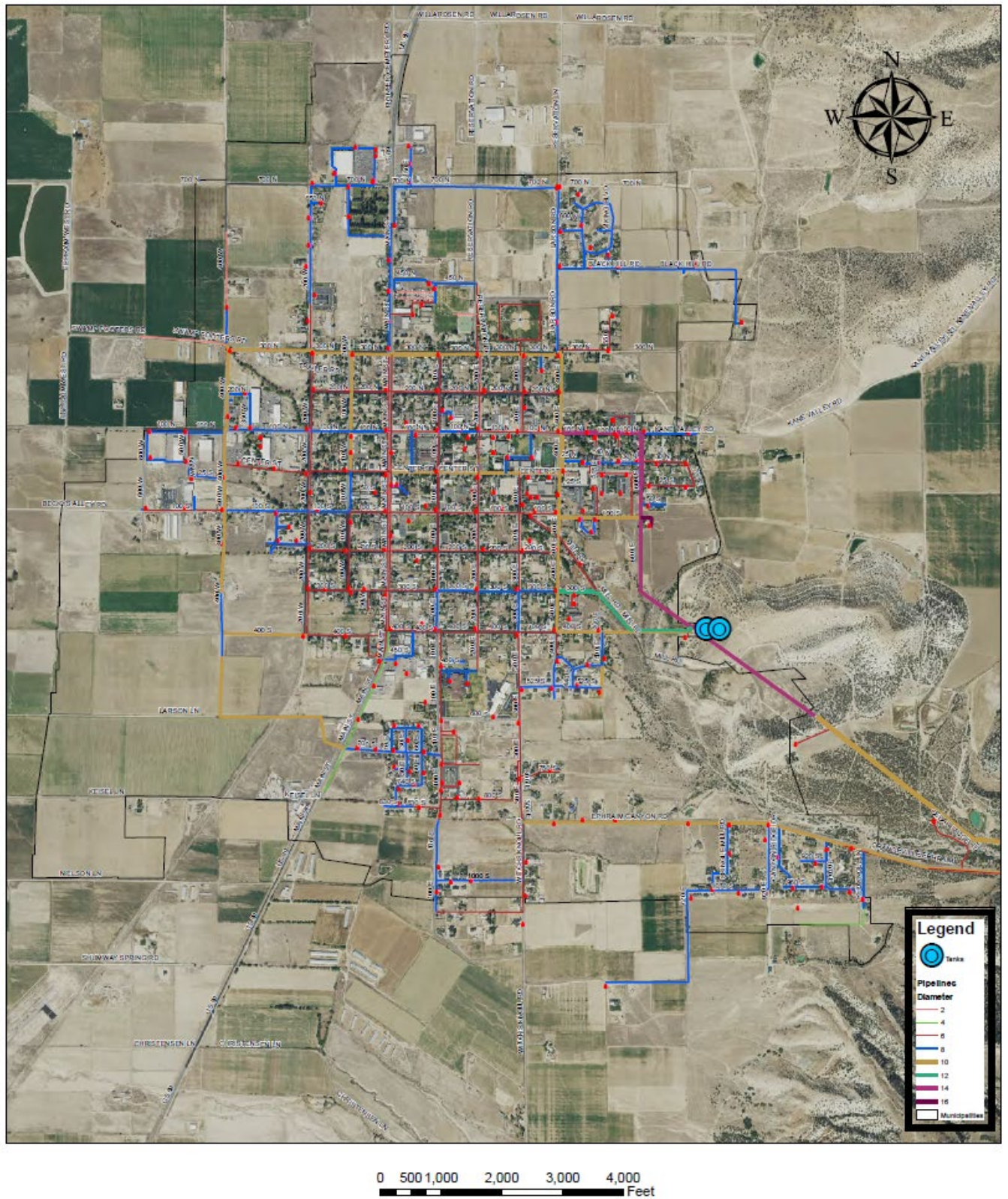


*Appendix B: Ephraim City Water Service Area Map:*



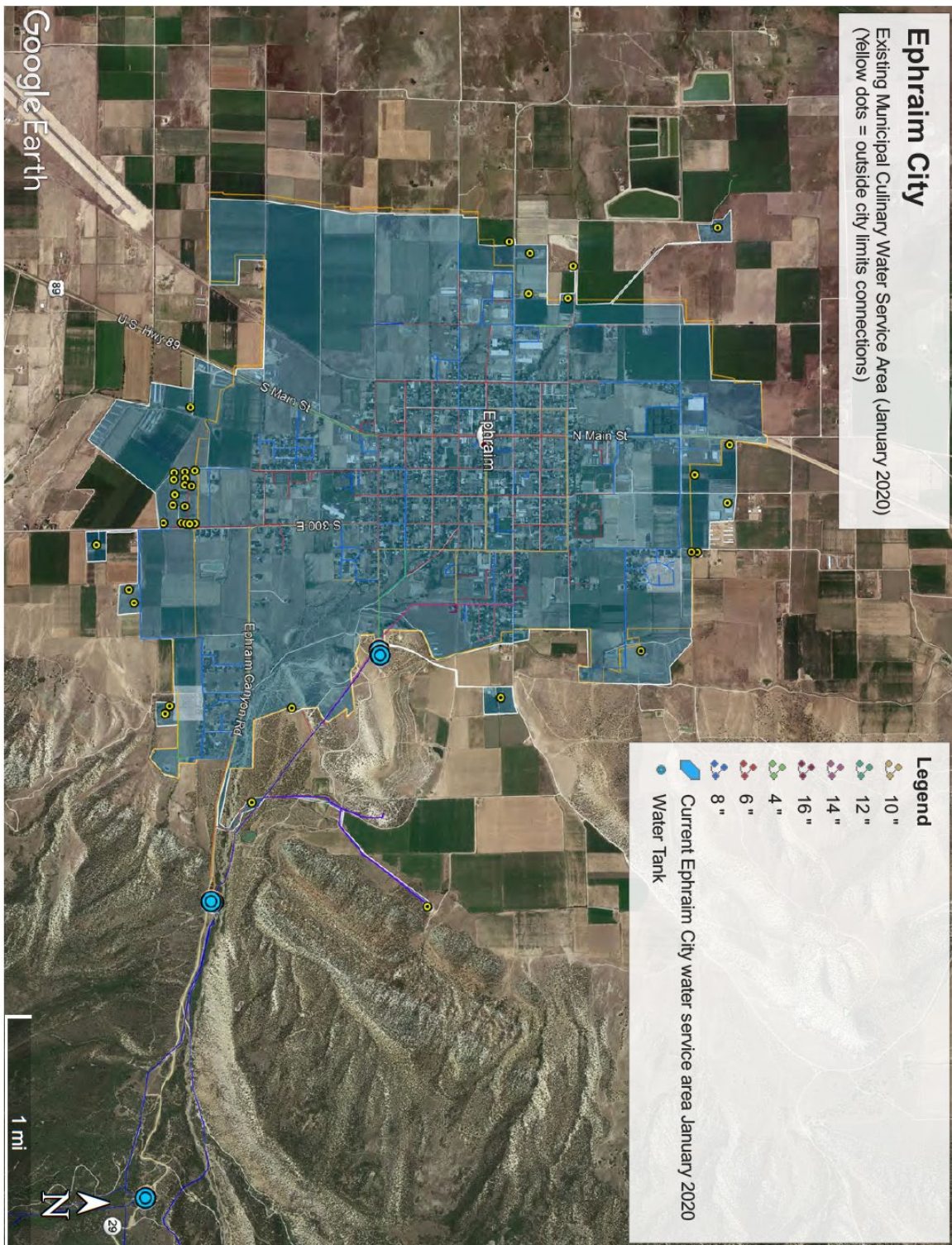


# Ephraim City Water System 2020



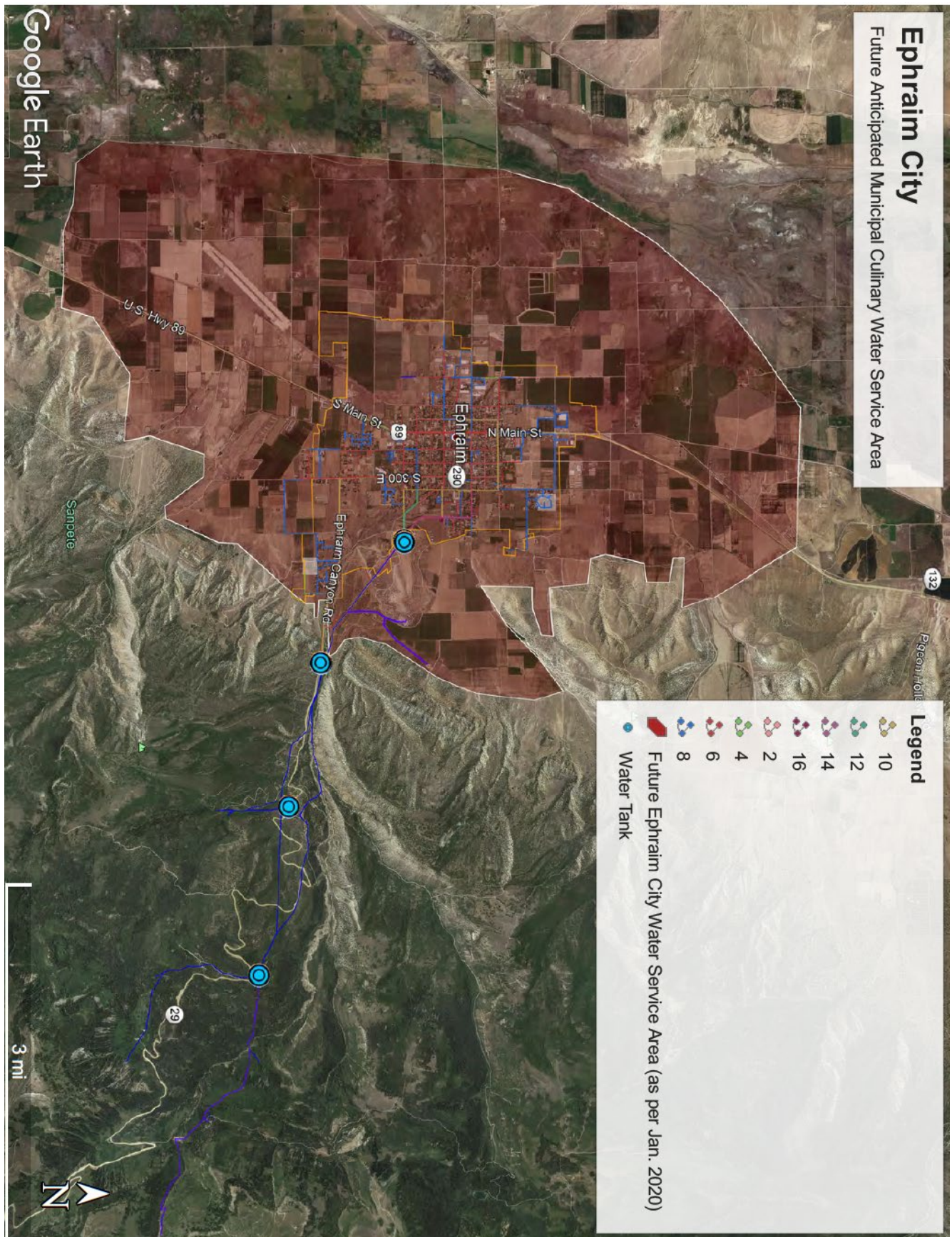


## Appendix D: Water Service Area Map - Current





## Appendix E: Water Service Area Map - future





PLAN, CONSERVE, DEVELOP, AND PROTECT UTAH'S WATER RESOURCES

# Utah's Regional M&I Water Conservation Goals

November 2019



Prepared for:



Prepared by:

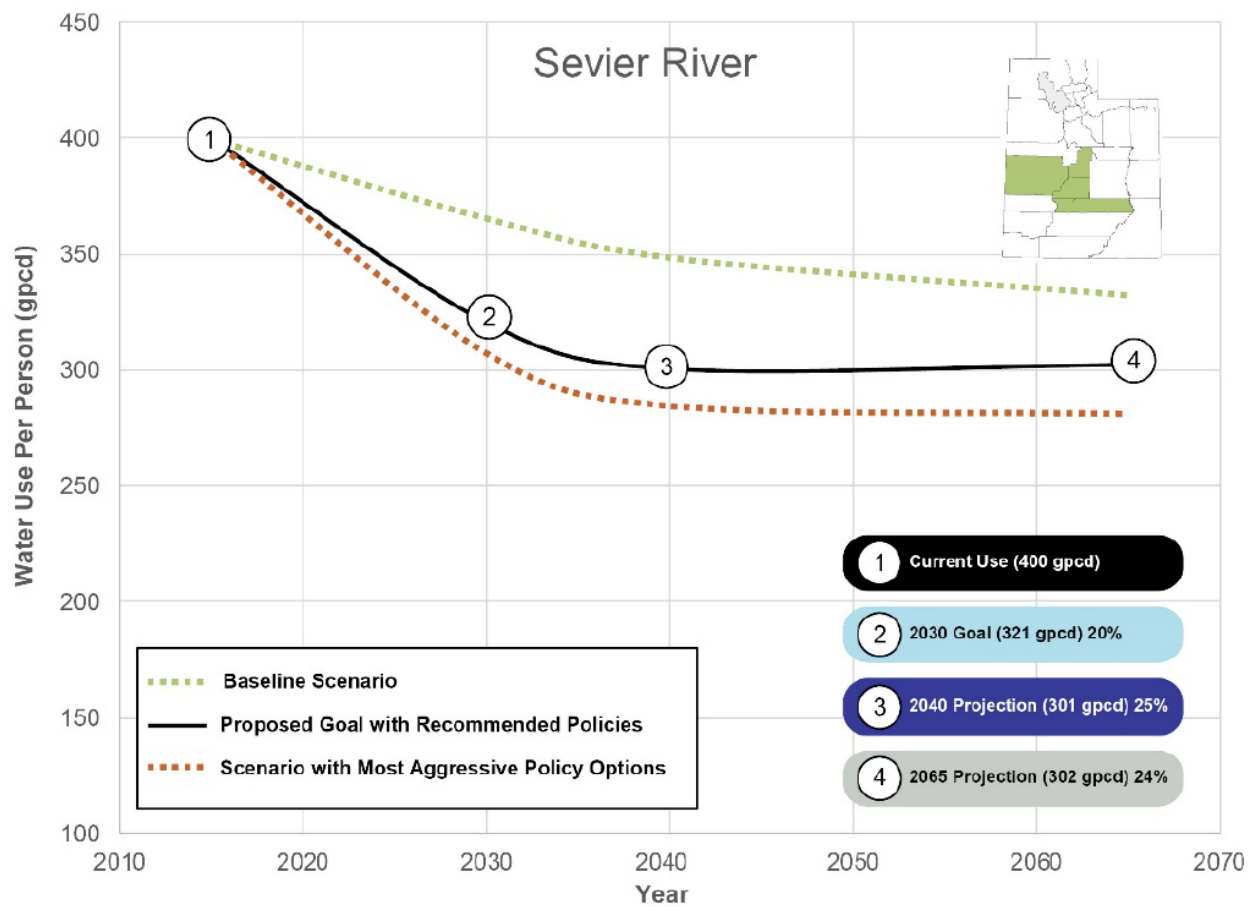


Table 7-1 presents M&I water conservation goals and projections for each of the regions shown in Figure 7-1.

**Table 7-1: Regional M&I 2030 Water Conservation Goals and Future Goal Projections**

Region	2015 Baseline (gpcd)	2030 Goal		2040 Projection		2065 Projection	
		Goal (gpcd)	Reduction from 2015	Projection (gpcd)	Reduction from 2015	Projection (gpcd)	Reduction from 2015
Bear River	304	249	18%	232	24%	219	28%
Green River	284	234	18%	225	21%	225	21%
Lower Colorado River North	284	231	19%	216	24%	205	28%
Lower Colorado River South	305	262	14%	247	19%	237	22%
Provo River	222	179	20%	162	27%	152	32%
Salt Lake	210	187	11%	178	15%	169	19%
Sevier River	400	321	20%	301	25%	302	24%
Upper Colorado River	333	267	20%	251	25%	248	25%
Weber River	250	200	20%	184	26%	175	30%
Statewide	240	202	16%	188	22%	179	26%

Note M&I = municipal and industrial; gpcd = gallons per capita per day based on permanent population. Reported per capita use includes all residential, commercial, institutional, and industrial uses averaged over the permanent population in each region.



Note: The baseline and aggressive policy scenarios do not consider the cost or feasibility of achieving the assumed use patterns. They have been included solely to provide perspective relative to past and current water use and to help each region understand what must occur to achieve the final goals.

**Figure 7-8: M&I Water Conservation Goals—Sevier River Region**

## AFFIDAVIT OF PUBLICATION

COUNTY OF SANPETE

STATE OF UTAH

SS:

I, Karen Christensen, employee of Sanpete News Company, Inc., publisher of the **Sanpete Messenger**, a newspaper of general circulation published weekly at Manti, Sanpete County, Utah, do solemnly swear that the

### Public Notice: Ephraim City – Water Conservancy Plan

As per clipping attached, was published once a week for one successive week(s) in the regular and entire issue of said newspaper and not in a supplement thereof, commencing with the issue dated **December 1, 2021** and ending with the issue dated **December 1, 2021**

Karen F. Christensen

Subscribed and sworn to before me this 9 day of December 2021

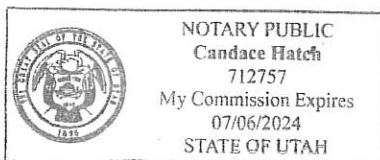
Candace Hatch

Notary Public signature

Notary public residing at MANTI, Utah

[SEAL]

My Commission will expire 7.6.2024



## PUBLIC HEARING

Public notice is hereby given that the Ephraim City Council will hold a public hearing for the purpose of receiving public comment regarding the proposed update to the Water Conservation Plan. The public hearing will be held Wednesday, December 15, 2021, at 6:00 p.m. in the Ephraim City Council Chambers located at 5 South Main Street, Ephraim, Utah.

In compliance with the Americans with Disabilities Act, individuals needing special accommodations (including auxiliary communicative aids and services) during this meeting should notify the Ephraim City Recorder, (435) 283-4631 at least three working days prior to this meeting.

/s/ Leigh Ann Warnock,  
Ephraim City Recorder

Publish Sanpete Messenger Dec. 1, 2021.

**MINUTES**  
**REGULAR CITY COUNCIL MEETING**  
CITY COUNCIL CHAMBERS, EPHRAIM CITY HALL  
5 SOUTH MAIN, EPHRAIM, UTAH  
**DECEMBER 15, 2021**  
**6:00 PM**

**CALL TO ORDER**

The Ephraim City Council convened in a Regular City Council Meeting on Wednesday, December 15, 2021, in the City Council Room. Mayor Scott called the meeting to order at 6:00 p.m.

**OPENING CEREMONY**

At the invitation of the Mayor, Councilmember Wheeler gave an opening prayer. Councilmember Lund led the audience in the Pledge of Allegiance.

**ROLL CALL**

**MEMBERS PRESENT**

John Scott, Mayor  
Margie Anderson, Mayor Pro Tem  
Alma Lund  
Lloyd Stevens  
Richard Wheeler

**MEMBERS EXCUSED**

Tyler Alder

**STAFF PRESENT**

Shaun Kjar, City Manager  
Brian Page, City Attorney (via Zoom)  
Leigh Ann Warnock, City Recorder  
Bryan Kimball, Community Dev.  
Devan Fowles, Planner  
Jeff Jensen, Public Works Director (via Zoom)  
Cory Daniels, Power Director  
Aaron Broomhead, Police Chief  
Jeff Hermansen, Fire Chief  
Michael Patton, Rec Director

**PUBLIC COMMENT**

No public comment presented.

**PUBLIC HEARINGS & RELATED ACTIONS**

**Public Hearing: Water Conservation Plan**

Public Hearing for the purpose of receiving public comment regarding the Water Conservation Plan. Mayor Scott called the public hearing to order. Bryan Kimball explained

the State requires the plan to be updated every five years. He said the bulk of the City's water is used for outdoor watering. Daily water use per person has declined 25% since 2007, while at the same time, the population has increased 30%. Ephraim has made good progress with water conservation efforts. The State has goals set for this area of 302 gallons per capita per day. Current use is 165, well exceeding the State's goals for water conservation.

No public Comment was received. The public hearing was closed.

#### **ECO 21-09**

Adoption of ECO 21-09 adopting the 2021 Water Conservation Plan.

*Councilmember Stevens moved to approve ECO 21-09 adopting the 2021 Water Conservation Plan as presented. The motion was seconded by Councilmember Wheeler. The vote was unanimous. The motion carried.*

#### **Public Hearing: Sale of Public Property**

Public Hearing for the purpose of receiving public comment regarding the sale/purchase of public property. Mayor Scott opened the public hearing. City Manager Shaun Kjar explained the City was approached for purchase of City property currently in use as the Public Works Yard. This would need to be rebuilt elsewhere and cost of buildings is included in the contract. Council has determined to go ahead with that property sale, ensuring equal consideration, making sure the City is not giving away public property.

No public comment was received. The public hearing was closed.

#### **ECO 21-15**

Adoption of ECR 21-15 approving the contract for sale/purchase of property.

*Councilmember Wheeler moved to approve ECR 21-15, a resolution approving the contract for sale of property currently known as the Public Works Yard. Motion was seconded by Councilmember Anderson. The vote was unanimous. The motion carried.*

### **PRESENTATIONS**

#### **T-MOBILE**

Presentation of T-Mobile's Hometown Grant award with a check in the amount of \$50,000 for the all-abilities park. Hundreds of applications were submitted nation-wide. 25 were selected, one of which was Ephraim City.

Shaun commented the all-abilities park will be the first in Sanpete County and is hard to get funding for. We are proud to be able to provide an all-abilities park and this check makes it happen.

### **APPROVAL OF WARRANT REGISTER**

The Council reviewed the Warrant Register of December 14, 2021.

*Councilmember Anderson moved to approve the December 14, 2021 Warrant Register as presented. The motion was seconded by Councilmember Wheeler. The vote was unanimous. The motion carried.*

#### **APPROVAL OF MINUTES**

The Council reviewed the minutes of the December 1, 2021 Work Meeting and Regular City Council Meetings.

*Councilmember Wheeler moved to approve the December 1, 2021 Council Work Meeting and Regular City Council Meeting Minutes as presented. The motion was seconded by Councilmember Stevens. The vote was unanimous. The motion carried.*

#### **CONTRACT: BIG T**

The contract for the All-abilities Park has been awarded to Big T in the amount of \$165,594. Michael commented they have put a lot of work into getting estimates and they are ready to go. Their designs and low costs far outweighed other vendors. The new playground will be located behind the Ephraim Library.

*Councilmember Anderson moved to approve the contract with Big T to complete the all-abilities park in the amount of \$165,594. The motion was seconded by Councilmember Wheeler. The vote was unanimous. The motion carried.*

#### **RAP TAX FUNDS**

RAP Tax applications were received on December 7<sup>th</sup>, and on the 8<sup>th</sup> the RAP Tax Committee met to review and determine their recommendation for distribution of the funds. Disbursements were recommended by the RAP Tax Committee as follows:

- Ephraim City Recreation Department: \$30,000.00 for skatepark
- Ephraim City Recreation Department: \$24,736.37 for all-abilities park
- Granary Arts: \$12,390.00 for doors for Christensen Cabin, materials and supplies for education, and supplies, materials, and instructors for Scandinavian Festival.

**Total Received from RAP Tax: \$72,843.55**

**Total Recommended Expenditure: \$67,126.37**

**Total Remaining in RAP Tax Fund: \$5,717.18**

*Councilmember Stevens moved to approve disbursement of the RAP Tax funds as recommended by the committee. The motion was seconded by Councilmember Wheeler. The vote was unanimous. The motion carried.*

#### **ECO 21-10**

Ordinance incorporating Ephraim City Fire Codes which reference International Code. The ordinance Empowers the Fire Chief to be the Fire Marshal on scene in the absence of the State Fire Marshall. It also establishes Division of Fire Inspections. A full copy of the ordinance may be obtained in the Ephraim City offices.

*Councilmember Stevens moved to approve ECO 21-10 an ordinance incorporating and updating Ephraim City Fire Codes. The motion was seconded by Councilmember Lund. The vote was unanimous. The motion carried.*

#### **DISCUSSION REGARDING MOBILE HOME PARK ON 430 N MAIN**

In 2017 Sunrise Engineering conducted a study in the trailer park to determine what building codes existing trailers were violating. This has been an ongoing project, with the City working closely with the park owner over the last couple of years to help him achieve the goals he first proposed in 2019. Those goals included road improvements, and upgrades to buildings and utility connections in order to meet State and City code. The Council approved his proposal, and he was instructed to move ahead, with monitoring from the City. In 2020 he began work on some of those proposals. Some trailers were hauled off. Some trailers were straightened out. Some utilities on the north and south were upgraded. He originally planned to replace some trailers with HUD manufactured homes but fell victim to COVID shortages and was not able to obtain those homes. With winter approaching and spaces still empty, he filled those with other trailers. City monitoring has determined that many trailers are still in violation requiring upgrades.

During that year, the City asked for a status report and met with the owner to come up with a plan to resolve some of the issues. He began to address those issues discussed, and in 2021, continued to work on some of the utilities. City Staff provided a significant amount of help with the power utilities (conduit wire run through conduit to pedestals.) He expressed gratitude for that.

A recent meeting was held to address a few issues that have been created over the year, as well as remaining unresolved issues from previous meetings. For the new plan to get more immediate issues resolved, trailers must obtain a certificate of occupancy as soon as possible and he must work towards completing the upgrades he had initially proposed in 2019. Next year will hopefully include a turnaround, and a hard-surface road with curb and gutter. They are optimistic they can resolve the road in the next year to two years. The City will continue to monitor the progress to ensure improvements are completed to code. Timelines have been set for specific improvements. Mayor Scott commented the City is working with both the owner of the property and trailer owners to bring things up to code for the health, safety, and welfare of all the neighbors.

#### **APPOINTMENTS AND COUNCIL REPORTS**

*Councilmember Alder moved to appoint Aaron Parry to the Rec Board and Tauna Anderson to the RAP Tax Committee. The motion was seconded by Councilmember Wheeler. The vote was unanimous. the motion carried.*

#### **Richard Wheeler**

**Airport Board** – The Board talked about hangar leases and contracts. Also discussed were State reports, water storage for fire suppression, AWOS updates, possible purchase of property around the airport, and mowing and snow removal solutions. The State gave verbal agreement that they will help with the mowers.



## DEPARTMENT REPORTS

### **Bryan Kimball, Community Development Director**

**Well** – Franson assures the City they have the experience and equipment available for their part on the well.

### **Cory Daniels, Power Director**

**Projects update:** Cory reported on the UAMPS meeting. He will call back IPP during the summer months to save money on power. The Carbon Free Project is moving along smoothly. Three emergency generators are in place.

### **Jeff Hermansen, Fire Chief**

**Fire Inspections** - since August, 49 inspections have been completed. 16 are waiting to be done. 6 need re-inspections. Ephraim City buildings do not pass inspection. Shaun is on that, and things will be upgraded soon. A company will be here Monday to do sprinkler systems for the City building and library.

## CITY MANAGER REPORT

**Sports Complex Agreement** - Met with the College regarding the north sports complex agreement so we can have a place we can count on for the next five years while we plan our future. We are hoping for long-term use of those fields. That will come to Council soon.

**Water Emergency Plan** – prepared and submitted water emergency plan with Jeff Jensen.

**Economic Development** – the College has a building coming for agricultural sciences which includes a barn on the north end of town.

**Road Survey** – the 100 S road survey will be done soon by property owners.

**Missing Student Maddy Allen** - Everyone is looking for her. Chief Walk of Snow College is over that investigation and Ephraim Police and FBI and other organizations are involved.

## CLOSED SESSION

*Councilmember Anderson moved to go into a closed session pursuant to the provisions of the Utah State Code, Section(s) 52-4-205(a), for the purpose of discussing the character, professional competence, or physical or mental health of an individual. The motion was seconded by Councilmember Wheeler. A roll call vote was called. Voting yes: Councilmembers Lund, Stevens, Wheeler, Anderson, and Alder. The vote was unanimous. The motion carried.*

*The Closed Meeting began at 7:43 p.m.*

*At 8:05 p.m. Councilmember Wheeler moved the Council adjourn the closed session and reopen the public meeting. The motion was seconded by Councilmember Stevens. The vote was unanimous. The motion carried.*

**ADJOURNMENT**

*There being no further business to come before the Council for consideration, Councilmember Anderson moved the Regular Council Meeting adjourn at 8:05 p.m. The motion was seconded by Councilmember Stevens. The vote was unanimous. The motion carried.*

The next regular City Council meeting is scheduled to be held on Wednesday, January 5, 2022, starting at 6:00 p.m. in the Ephraim City Council room.

**MINUTES APPROVED:**

\_\_\_\_\_  
John Scott, Mayor

\_\_\_\_\_  
Date

**ATTEST:**

\_\_\_\_\_  
Leigh Ann Warnock, City Recorder

\_\_\_\_\_  
Date