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City Council Agenda Information

To: Mayor Miller and City Council

From: Tony Ekins, City Planner

Date: March 12, 2026

Subject: Resolution 26-01 – Amend the Hyrum City General Plan to include a new Chapter 10: Water Use and Preservation Element; Appendix K Water Use and Preservation Element and amending Table of Contents to include new Chapter 10: Water Use and Preservation Element.

Summary:

Hyrum City staff is requesting the Water Use and Preservation Element of the General Plan be adopted by the City Council to guide future decisions on how Water is used, preserved, and future land use is coordinated. The Water Use and Preservation Element at this time will be an element of the current General Plan and is also part of the current General Plan Update and may require minimal revisions while the City moves forward to the completion of the overall General Plan Update.

Planning Commission Recommendation:

On December 11, 2025, the Planning Commission held the required public hearing and made a motion (3-0) recommending approval to the City Council with the following recommendations:

1. Include an action item in Water Goal 1 Objectives to include the creation of a landscape requirements ordinance that includes water-wise landscaping standards.

City Council Meeting Details:

On January 6, 2026, staff and the consultant presented the resolution to the City Council and continued the resolution to include the following”

1. The Water Use and Preservation Element be revised into two (2) parts with general information in the new Chapter 10 and technical data content be in the Appendix of the current General Plan.
 - a. The consultant revised the Water Use and Preservation Element as requested into two (2) parts: Chapter 10 and Appendix K

City Council Meeting Details:

- Meeting Date: March 19, 2026
- Council Role: Legislative with Roll Call Vote

Attachments:

1. Prepared Resolution
2. Chapter 10
3. Appendix K
4. Table of Contents

RESOLUTION 26-01

A RESOLUTION APPROVING THE WATER USE AND PRESERVATION ELEMENT AND INCLUDING IT AS CHAPTER 10 IN THE HYRUM CITY GENERAL PLAN

WHEREAS, Utah State Code, Section 10-20-401 requires each municipality to prepare and adopt a comprehensive, long range general plan for: (a) present and future needs of the municipality; and (b) growth and development of all or any part of the land within the municipality; and

WHEREAS, the Hyrum City Council approved Resolution 08-21 adopting the revised Hyrum City General Plan on June 5, 2008; and

WHEREAS, the Hyrum City General Plan has been prepared to act as an advisory guide for land use decisions, to guide the growth, development, and improvement of the City; and

WHEREAS, the Hyrum City General Plan focuses on improving the physical environment of the City as well as the quality of life of the citizens; and

WHEREAS, The Utah Legislature passed S.B. 110 in 2022 which required municipalities to include a plan for water use and preservation as an element in their General Plans; and

WHEREAS, the water use and preservation element shall consider applicable water conservation goals and promote water efficiency for both current and future development; and

WHEREAS, the Hyrum City Council supports the concepts and guidelines for planning and land use as set forth in the Hyrum City General Plan.

NOW, THEREFORE, upon recommendation of the Planning Commission, and following a public hearing as required by Utah State Law, the Hyrum City Council hereby adopts, passes, and publishes the Water Use and Preservation Element (Hyrum City General Plan Chapter 10, Appendix K, and Table of Contents) attached hereto as Exhibit "A"

BE IT FURTHER RESOLVED, that this resolution shall be effective upon approval.

APPROVED AND PASSED by the Hyrum City Council this 19th day of March, 2026.

HYRUM CITY

BY: _____
Steve J. Miller
Mayor

ATTEST:

Stephanie Fricke
City Recorder

Roll Call Vote -	Aye	Nay	Absent
Councilmember Rebecca Foulger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Councilmember Michael Nelson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Councilmember Nalyn Nelson	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Councilmember Craig Rasmussen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Hyrum City General Plan



CHAPTER 10: Water Use and Preservation Element

10.1. INTRODUCTION

Hyrum City Water Use and Preservation Element

Hyrum City is planning today to protect its water future. Utah is one of the driest and fastest-growing states in the nation. By 2065, the state's population is expected to double, placing even greater demand on limited water supplies. In response, state law now requires cities to consider how land use decisions affect water use. This Water Use and Preservation Element explains Hyrum's current water supply, how water is used, and what the City will do to ensure enough water for future generations.

10.2 WHERE HYRUM'S WATER COMES FROM

Hyrum's water comes from three wells and four springs. The City holds approximately 11,500-12,000 acre-feet of culinary (drinking) water rights and 3,301 shares of irrigation water rights. It also maintains three culinary water storage tanks with a total capacity of 5 million gallons, along with irrigation reservoirs and a wastewater treatment facility that supports reclaimed water use. Overall, the City has sufficient water rights to meet current and projected needs. However, continued growth is placing stress on storage and delivery systems, especially in newer areas of town. Additional storage and system improvements will be needed as Hyrum grows.

10.3 HOW MUCH WATER IS USED

Water use is measured in gallons per capita per day (GPCD). In 2024, Hyrum averaged 244 GPCD—down significantly from prior years and below the state average in earlier reporting cycles. The City is on track to reduce use to below 200 GPCD by 2030 through conservation efforts.

Industrial users—particularly food processing facilities—account for a large portion of total water use. Residential use is also significant, especially outdoor irrigation. Secondary irrigation water, which is currently unmetered and unlimited in many cases, represents the largest opportunity for conservation.



CHAPTER 10: Water Use and Preservation Element

Without conservation, water demand could increase by as much as 94% by 2050 due to population growth. Conservation is the most realistic and cost-effective way to meet future demand.

10.4 WHAT THE COMMUNITY SAID

Public input shows strong concern about water availability and system capacity. Residents support conservation, stewardship, and practical incentives to help households upgrade fixtures and landscaping.

10.5 STRATEGIES TO REDUCE WATER USE

Hyrum's approach focuses on both existing neighborhoods and future development.

For existing development, the City will:

- Continue tiered water rates that reward conservation
- Promote water-wise landscaping and efficient appliances
- Provide education and demonstration gardens
- Limit turf in new residential and commercial landscaping

For future development, the City will:

- Encourage smaller lots and higher-density housing, which use less water per household
- Require water-wise landscaping standards
- Require new development to offset water demand through conservation or water rights transfers

The City will also lead by example by improving efficiency in public facilities and parks.

Hyrum City General Plan



CHAPTER 10: Water Use and Preservation Element

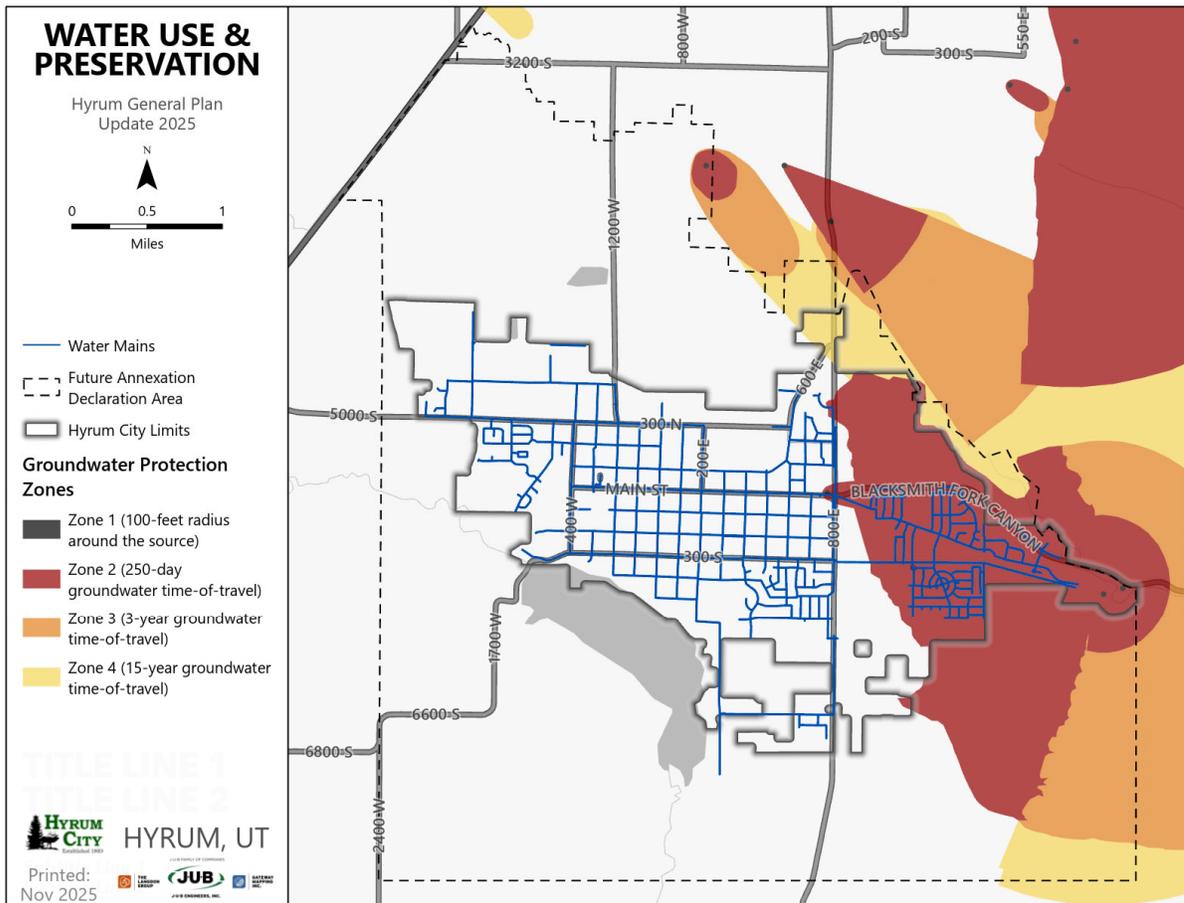
10.6 Moving Forward

Hyrum's two primary goals are to:

1. Reduce per capita water use in existing development.
2. Promote water-wise growth to ensure long-term sustainability.

By aligning land use planning, infrastructure investment, conservation programs, and public education, Hyrum can remain a thriving, water-wise community for generations to come.

10.7 Water Use and Preservation Map Element Map



Appendix K
Water Use and Preservation Element
Data Sources, Methodology, and Plan Assumptions
(Performed in 2026 by J-U-B Engineers, Inc. as part of the Hyrum City General Plan Update)

1. Purpose of This Appendix

This technical appendix documents the data sources, assumptions, and calculation methods used to prepare the Water Use and Preservation Element. It provides transparency regarding how water supply, demand projections, and conservation targets were developed.

2. Primary Data Sources

The following sources were used in preparing this element:

- **Hyrum City Water Conservation Plan (2022 Update)**
- **Utah Division of Water Resources (DWRe) – Municipal & Industrial (M&I) Water Use Data Reports (2015–2024 submissions)**
- **Utah Regional M&I Water Conservation Goals Report** (Bear River Region targets)
- **Utah Household and Job Forecast (2023)** – Utah Department of Transportation
- **2008 Potable and Secondary Water Systems 50-Year Demand Projections** (Aqua Engineering)
- Hyrum City internal records:
 - Annual water production reports
 - Metered delivery data (culinary system)
 - Water rights portfolio documentation
 - Storage and distribution system inventories

3. Water Supply Assumptions

3.1 Culinary Water Rights

- Approximate culinary water rights: **11,527–12,000 acre-feet**

- Sources: three (3) wells and four (4) springs
- Storage capacity: **5 million gallons** across three tanks
- Wastewater clarifier storage: **0.7 acre-feet**
- Secondary irrigation storage: approximately **100 acre-feet**

Supply totals are based on recorded water rights holdings and reported production capacity. No major new water source acquisitions are assumed in long-range projections.

3.2 Irrigation Water Rights

- 3,301 irrigation shares
- Acre-foot yield per share varies depending on company performance and hydrologic conditions
- Secondary system primarily dependent on stream flow

Because irrigation shares fluctuate in yield, projections assume conservative delivery estimates based on recent historical averages.

4. Water Use Calculations

4.1 Gallons Per Capita Per Day (GPCD)

The State-approved method for calculating GPCD is:

$$GPCD = \frac{\text{Total Annual Culinary Water Use (gallons)}}{\text{Population} \times 365}$$

Where annual water use in acre-feet is converted to gallons:

$$\underline{1 \text{ acre-foot} = 325,852 \text{ gallons}}$$

Example (2024):

- Total water use: 2,979 acre-feet
- Population: 10,891
- Conversion:

$$\underline{2,979 \times 325,852 = 970,961,508 \text{ gallons}}$$

$$GPCD = \frac{970,961,508}{10,891 \times 365} \approx 244$$

Reported GPCD values for 2020–2024 are derived directly from annual State Water Use Data Report Forms submitted to DWRe.

5. Baseline Adjustment (2015 Reporting)

The State requires 2015 as the benchmark year for conservation goals. However:

- 2015 reporting included total water produced prior to return flows.
- Excess water released back into Blacksmith Fork River was counted as produced and metered.
- This inflated total reported water use.

Reported 2015 values:

- Total use: 5,797 acre-feet
- Population: 8,070
- Reported GPCD: 641

Post-2016 changes:

- Major industrial water efficiency improvements (JBS USA modernization)
- Metering policy modified to record only water entering culinary distribution system

Because of these methodological differences, 2015 is retained as a reporting benchmark but not treated as representative of long-term per capita use.

6. Demand Projections

6.1 Population Forecast

Source: Utah Household and Job Forecast (2023)

Year Population

2023 10,792

2050 24,428

6.2 Household Water Use Assumption

Average Utah household water use assumption:

- **0.45 acre-feet per household per year**

6.3 2050 Water Demand Estimate

Projected households (2050): 4,914

Assumed household demand:

$$4,914 \times 0.45 = 2,211 \text{ acre-feet (residential base)}$$

Total projected municipal and industrial demand (per Conservation Plan):

- **Up to 7,494 acre-feet by 2050**

This reflects:

- Residential growth
- Continued industrial operations
- Commercial and institutional expansion
- No additional conservation measures beyond baseline

6.4 Growth Impact

2023 reported potable delivery:

- 3,857 acre-feet (2022 drought year comparable)

Projected increase to 7,494 acre-feet represents:

$$\frac{7,494 - 3,857}{3,857} \approx 94\% \text{ potential increase}$$

This scenario assumes no additional conservation beyond current measures.

7.1 Residential

- Largest discretionary use: outdoor irrigation (50–70% of household use)
- Secondary water largely unmetered
- Larger lot sizes correlate with higher demand

Assumption:

- Smaller lots and multi-family housing reduce per capita demand
- Turf reduction significantly reduces seasonal peak demand

7.2 Industrial

Industrial facilities account for approximately:

- 1.5 million gallons per day
- ~60% of culinary demand in recent reporting

Assumptions:

- Continued operational efficiency improvements
- Stable industrial footprint
- No major additional water-intensive industry assumed

7.3 Commercial and Institutional

Moderate contributors relative to industrial and residential sectors.

Landscape irrigation and building systems are primary drivers.

8. Conservation Target Assumptions

8.1 Regional Targets (Bear River Region)

- 18% reduction from 2015 baseline by 2030
- 24% reduction by 2040

8.2 Local Target

Hyrum is on track to reduce:

- GPCD below 200 by 2030

This assumes:

- Continued tiered rate structure
- Landscape regulations limiting turf
- Leak detection improvements

- Secondary irrigation efficiency coordination
- Public education

9. Infrastructure Assumptions

Growth-related assumptions include:

- Additional culinary storage tank required
- Distribution upgrades in eastern and western growth areas
- Secondary system delivery improvements in southeast quadrant
- Continued use of reclaimed water to supplement irrigation

No assumption is made that new large-scale water sources will be acquired. Conservation and infrastructure optimization are primary strategies.

10. Limitations and Uncertainty

Key uncertainties include:

- Hydrologic variability (drought conditions)
- Industrial production changes
- State regulatory adjustments
- Irrigation share yield variability
- Secondary system metering policy changes

All projections should be reviewed and updated at least every five years in coordination with the City's Water Conservation Plan update cycle.

11. Summary of Core Assumptions

1. Existing water rights are sufficient but infrastructure must expand.
2. Population growth will significantly increase demand without conservation.
3. Industrial efficiency gains have stabilized overall GPCD.

4. Outdoor irrigation remains the largest opportunity for reduction.
5. Conservation is more feasible than new water acquisition.
6. Land use policy directly influences long-term water demand.

This appendix provides the technical foundation supporting the policy direction and goals outlined in the Water Use and Preservation Element.

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