RESOLUTION NO. R-2025-14

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF APPLE VALLEY, UTAH, ADOPTING THE 2024 WATER CONSERVATION PLAN PREVIOUSLY ADOPTED AND APPROVED BY THE BIG PLAINS WATER SPECIAL SERVICE DISTRICT

RECITALS

WHEREAS, the Town of Apple Valley ("Town") is a municipal corporation duly organized and existing under the laws of the State of Utah;

WHEREAS, Utah Code § 73-10-31 requires culinary water providers to prepare and adopt a water conservation plan to promote efficient water use and ensure long-term sustainability;

WHEREAS, the Big Plains Water Special Service District ("District"), which previously provided culinary water service to the Town, prepared and formally adopted its 2024 Water Conservation Plan on December 11, 2024;

WHEREAS, on July 16, 2025, the Town Council adopted Resolution No. R-2025-13, dissolving the District and assuming its assets, liabilities, and operational responsibilities, including administration of its water system and water conservation functions;

WHEREAS, with the Town now serving as the culinary water provider, it is necessary and appropriate for the Town to formally adopt the 2024 Water Conservation Plan as its own in order to comply with state law and maintain continuity in water resource planning and conservation efforts;

WHEREAS, a public hearing to receive input on the adoption of the 2024 Water Conservation Plan was properly noticed and held on July 16, 2025;

RESOLUTION

1. Adoption of Water Conservation Plan.

The Town Council hereby adopts the 2024 Water Conservation Plan, originally approved by the Big Plains Water Special Service District on December 11, 2024, as the official water conservation plan for the Town of Apple Valley. A copy of the adopted plan is attached hereto and incorporated herein as Exhibit A.

2. Implementation.

The Town Water Department shall be responsible for implementing the strategies and objectives outlined in the adopted Water Conservation Plan, including monitoring water use, performing system audits, engaging in public education, and ensuring compliance with state and regional conservation goals.

3. Incorporation by Reference.

The 2024 Water Conservation Plan is incorporated herein by reference and made a part of this Resolution as though fully set forth.

4. Effective Date.

This Resolution shall take effect immediately upon adoption.

ADOPTED AND APPROVED BY THE TOWN OF APPLE VALLEY TOWN COUNCIL this 16th day of July, 2025 based upon the following vote:

Council Person:

Richard Palmer	AYE	_____	NAE	_____	ABSTAIN	_____	ABSENT	_____
Scott Taylor	AYE	_____	NAE	_____	ABSTAIN	_____	ABSENT	_____
Annie Spendlove	AYE	_____	NAE	_____	ABSTAIN	_____	ABSENT	_____
Kevin Sair	AYE	_____	NAE	_____	ABSTAIN	_____	ABSENT	_____
Michael Farrar (Mayor)	AYE	_____	NAE	_____	ABSTAIN	_____	ABSENT	_____

TOWN OF APPLE VALLEY
a Utah municipal corporation

ATTEST:

_____
Michael "Mike" Farrar, Mayor

_____
Jenna Vizcardo, Town Clerk

Exhibit A

Certification of Adoption

We hereby certify that the attached Water Conservation Plan has been established and adopted by our Board of Directors/Stockholders/Shareholders on December 11, 2024.

President/Chairman/Board Member

Vice-President/Vice-Chairman/Board Member

Secretary/Treasurer

BIG PLAINS WATER SPECIAL SERVICE DISTRICT
SEAL
UTAH

Big Plains Water Special Service District

2024 Water Conservation Plan

Prepared By:

Michelle Kinney
Big Plains Water Special Service District
1777 N Meadowlark Dr.
Apple Valley, Utah 84737

The following Water Conservation Plan has been adopted by Big Plains Water Special Service District Board.

Board Members:

Michael Farrar- Chairman
Scott Taylor
Annie Spendlove
Janet Prentice
Kevin Sair

December 11, 2024
_____

Date adopted

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Introduction

Apple Valley, Utah is a small, rural town with a population of approximately 916 people. Located in Washington County Utah, near the Southern end of the state. The town spans about 50 square miles with much of the land undeveloped. Residents value the town's open spaces, peaceful, rural lifestyle and small town feel as a way of life. The community is characterized by rural residential properties, small developments, and a limited number of tourism-oriented businesses.

Apple Valley is located within the Mojave Desert. This desert, which spans parts of California, Nevada, Arizona, and Utah, is known for its arid climate, high summer temperatures, and unique desert vegetation. The Mojave Desert is the smallest of the North American deserts but plays a significant role in shaping the environment and climate of the region. The region's dry summers and minimal annual rainfall underscore the ongoing scarcity of water, highlighting the critical need for robust water conservation measures.

According to Utah State Code 73-10-31, water providers must create a plan that identifies existing and proposed water conservation measures. This plan will clearly state the overall water use reduction goal for Apple Valley and how that goal is to be achieved.

Big Plains Water Special Service District System Profile

The Big Plains Water Special Service District (BPWSSD) was created in 2011 by the Town of Apple Valley and is the water service provider for the rural community of Apple Valley, Utah. BPWSSD operates three distinct water systems: Apple Valley, Cedar Point, and Canaan Springs through which water is distributed to the most populous areas of town. A transmission line project connecting the Apple Valley and Cedar Point systems is currently underway, which will increase system efficiency and reliability.

This plan consolidates the three systems for planning and conservation purposes.

Service Area

The region's semi-arid climate experiences hot summers, mild winters, and low annual precipitation, making water conservation essential. BPWSSD relies heavily on well and spring water sources, that are recharged by rainfall and surface water infiltrating into the ground. Without rivers or large bodies of water contributing to the natural recharge of our aquifer, we must rely on rainfall, and careful, conservative water management practices to maintain the aquifer's capacity and ensure a sustainable supply for the community.

BPWSSD currently supplies water to all major developments in the town of Apple Valley. Water distribution is challenging due to financial limitations and the area's undeveloped land, rugged terrain, and distances between developments. The district continues to work on expanding infrastructure to serve rural homes, but in many cases, homeowners must rely on private wells for water. This limitation creates many "straws" dipping into the aquifer utilized to service the town.

Within the next year, BPWSSD will complete a new transmission line connecting the two main wells in the Apple Valley system to the Cedar Point system. This line will provide cleaner water to residents and further expand BPWSSD's serviceable area. In Figure one you will find a map of the Town of Apple Valley and the Big Plains Special Service District boundaries.

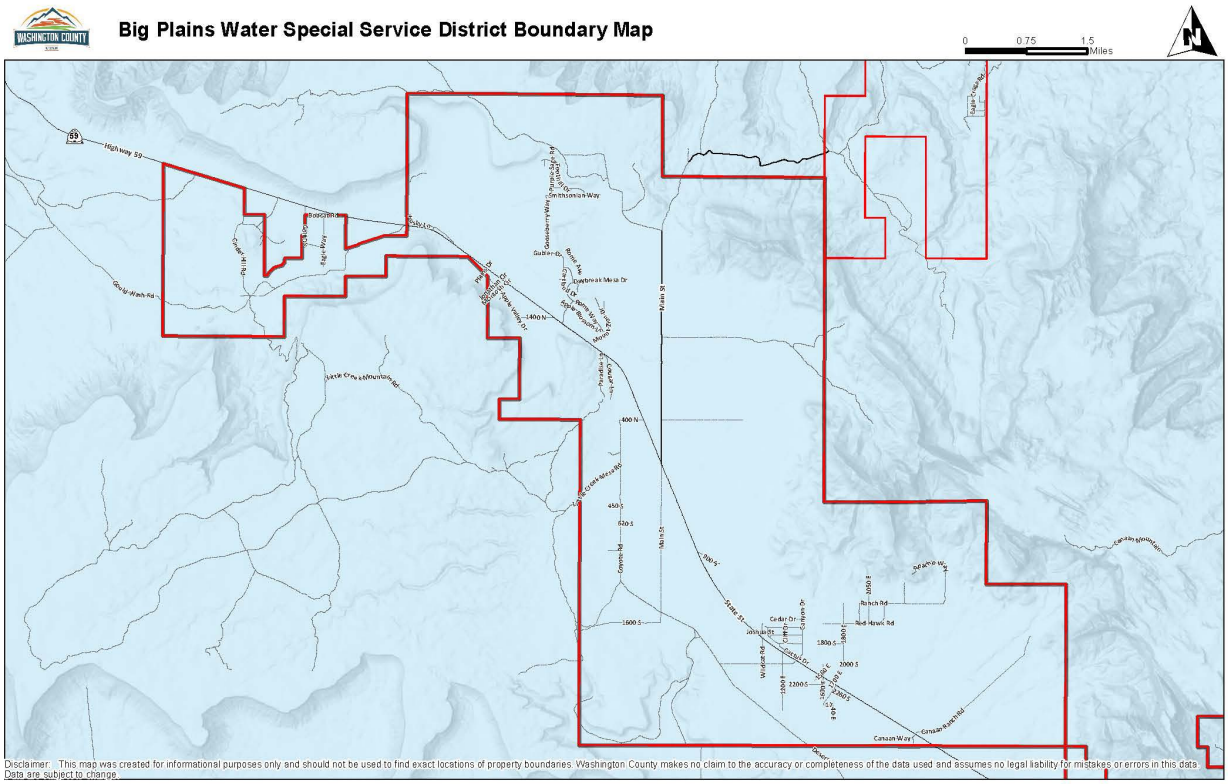
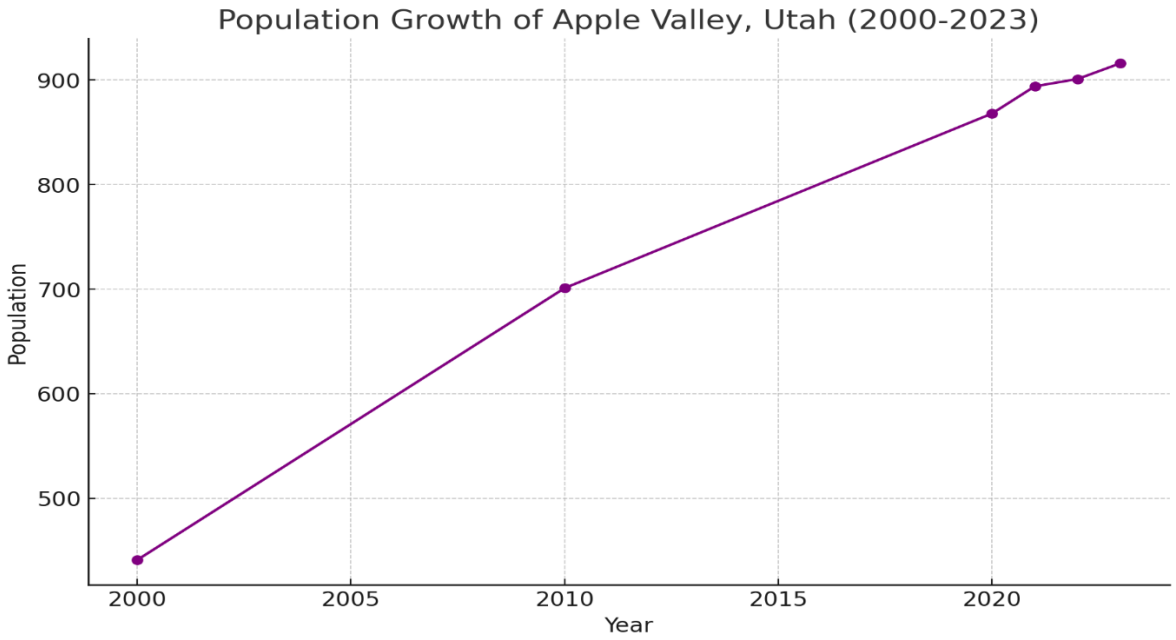


Figure 1 Big Plains Boundary Map

Water Supply and Usage

Apple Valley, Utah, has experienced significant growth since its incorporation in 2004. In 2000, prior to incorporation, the population was about 441. By 2010, the census recorded 701 residents, and by 2020, the population had grown to 868. The most recent data from 2023 estimates the population at 916, showing a steady annual growth rate of around 1.7%. Since 2000, Apple Valley has grown by more than 107%, making it one of the fastest-growing small towns in the region. (*https://www.biggestuscities.com/city/apple-valley-utah*)



At only 20 years old, the Town of Apple Valley is one of the newest towns in the State of Utah. BPWSSD has a total of 443 service connections, of which are predominantly residential. All water in the system is metered as culinary.

Table 1: Service Connection and Connection Type 2023

Type of Connection	Number of Connections
Residential	436
Commercial	3
Institutional	2
Industrial	2
Total	**443**

BPWSSD currently has 5 operational ground water wells for water distribution. These wells are used as needed to provide service to residents. The two main wells in the Apple Valley system are the Gregerson and Merritt wells. Cedar Point uses mainly Cooke and Jessup Wells, while Canaan springs service people in the southern portion of the town. Current water use for these connections is categorized as follows:

Table 1: Water Source and Acre Feet 2023

Water Source	Water (Acre-Feet)
Wells	198.0910
Spring	15.5346
Total	**213.6256Acre-Feet**

Table 2: Connection Type and Usage

Type of Connection	Total Water Use (Acre-Feet)
Residential	143.1443
Commercial	15.8743
Institutional	3.5265
Industrial	4.1996
Total	**166.7447 Acre-Feet**

Water Conservation Approach

BPWSSD aims to implement a proactive Water Conservation Plan that aligns with local and regional goals. Given the district's small size and the growing importance of sustainable water management, this plan focuses on reducing system water loss, promoting water-efficient technologies, and educating residents on conservation strategies.

The state has proposed regional M&I (Municipal and Regional) goals which created region specific goals for municipal and industrial areas of Utah. Washington County and the Town of Apple Valley lie within the Lower Colorado River South Region. The 2015 baseline for GPCD for Washington County was 302, with a 2030 goal of 260. Interestingly, in 2023 the GPCD for Apple Valley is already significantly lower than these goals at 191 gallons per person per day. Although the estimated population of Apple Valley is 916, the number of people estimated to be using our system as full-time residents is 777. Other residents in the area have private wells and are therefore not included in our GPCD estimation.

BPWSSD understands there is work to be done. Yet the population in Apple Valley leans toward water conservation naturally. Most residents are aware of our water situation and routinely conserve water. Therefore, strategic goals have been set focusing on infrastructure improvements and reporting, water efficient development, and community education. Our current ERC estimations are 520 indicating we are currently at .32 acre-feet per ERC. The greatest water conservation efforts identified in this report are aimed at the high-water loss rate the district is experiencing. This will be the focus of our initial 5-year plan from 2025 to 2030.

Key Objectives:

1. **Reduce water loss**: Currently, BPWSSD experiences a significant water loss rate of 21.94%. Immediate efforts to address leak detection, tracking of non-revenue generating water usage, system infrastructure upgrades and improvements will be prioritized.
2. **Improve community awareness**: Public education will play a role in shifting water usage behaviors.

3. **Creation of a waste policy**: This policy will allow the system to assess a fees or terminate service for customers who have chronic unrepaired leaks resulting in high water usage and loss.
4. **Align with regional conservation standards**: BPWSSD will work closely with the Washington County Water Conservancy District (WCWCD) to leverage existing rebate programs, educational resources, and conservation practices.
5. **Pass water efficiency standards**: The District will work to adopt water efficiency standards allowing residents to utilize state and district funded water rebate programs.

Water Conservation Practices

1. Water Audits and Data Management

- **AWWA M36 water audits**: Conduct comprehensive water audits of district lines and meters to identify sources of water loss and implement corrective measures.
- **SCADA system upgrade**: The new transmission line connecting the Apple Valley and Cedar Point system will be equipped with a Supervisory Control and Data Acquisition (SCADA) system. This system will continuously monitor key variables like water pressure, flow rates, and tank levels across the system. It will also identify deviations from normal operation that may include leaks, bursts, or unauthorized use.
- **Volumetric testing of meters**: Create a plan to test all water meters every 2 years to improve accuracy and detect leaks early. Replace old meters that may need to be recalibrated or repaired.
- **Tracking non-revenue water usage:** Some water loss on the BPWSSD system is due to non-revenue water usage. This would include water sent out to waste in unmetered situations from well heads and tanks for the purpose of flushing and cleaning the system. This includes unmetered water used in fire training and firefighting.

2. Public Education and Outreach

- **Distribution of educational materials**: Print and digital resources to educate residents about indoor and outdoor water conservation techniques.
- **Website**: Maintain updated online resources and create a conservation page to amplify the water conservation message.

3. Conservation Pricing

- **Tiered Rates**: BPWSSD has an increasing block tiered rate structure to incentivize conservation. Recently the rates for higher tier users increased. The base rate also increased and although not as effective in keeping usage down, the higher base rate does urge many residents to keep the bill as low as possible through water conservation. In the next 5 years the district will look at moving more of the revenue from fixed fees to variable fees. This may be accomplished by lowering the base rate and increasing the tiered usage rates.

Table 3: Usage Rates per 1,000 gallons/month

Base Rate	0 - 5000	5001 - 12,000	12,001- 25,000	25,001- 35,000	35,001- 45,000	45,001- 55,000	55,001- 75,000	75,001- 100,000	Over 100,000
$75.00	$1.50	$1.75	$2.0	$2.25	$2.50	$3.25	$4.00	$5.00	$7.00

4. Current Initiatives

- **Meter Upgrades:** Since May 2023 BPWSSD has removed 58 manual read meters and replaced them with radio read meters. There are currently 7 residential manual read meters awaiting replacement.

- **Public education**: Initial steps have been taken to inform residents about the importance of water conservation, primarily through necessity as we await the new transmission line.

Proposed 5-Year Water Conservation Strategies

The following strategies will be implemented over the next five years with the adoption of this plan.

Goal 1: Reduce and maintain the system water loss rate to 11.94% or less by 2029.

Strategy 1A: Minimize water loss resulting from wasted water and other non-revenue sources.

- Establish and implement written policies for tracking water going to waste at wells and tanks.
  - Complete policies for water tracking by the middle of 2025, begin implementing by end of 2025.

- Establish and implement policies in collaboration with the Apple Valley fire department for reporting water use.
  - Complete policies for water tracking by the middle of 2025, begin implementing by end of 2025.

Strategy 1B: Reduce water loss by detecting leaks and metering inefficiencies.

- AWWA M36 water audit for assistance in analyzing the system. Complete audit by end of 2025.
  - Purchase "M36 Water Audits and Loss Control Programs" manual.
  - Review manual for audit information and set strategies based on results of review.
  - Implement as many suggested strategies as appropriate by 2029.

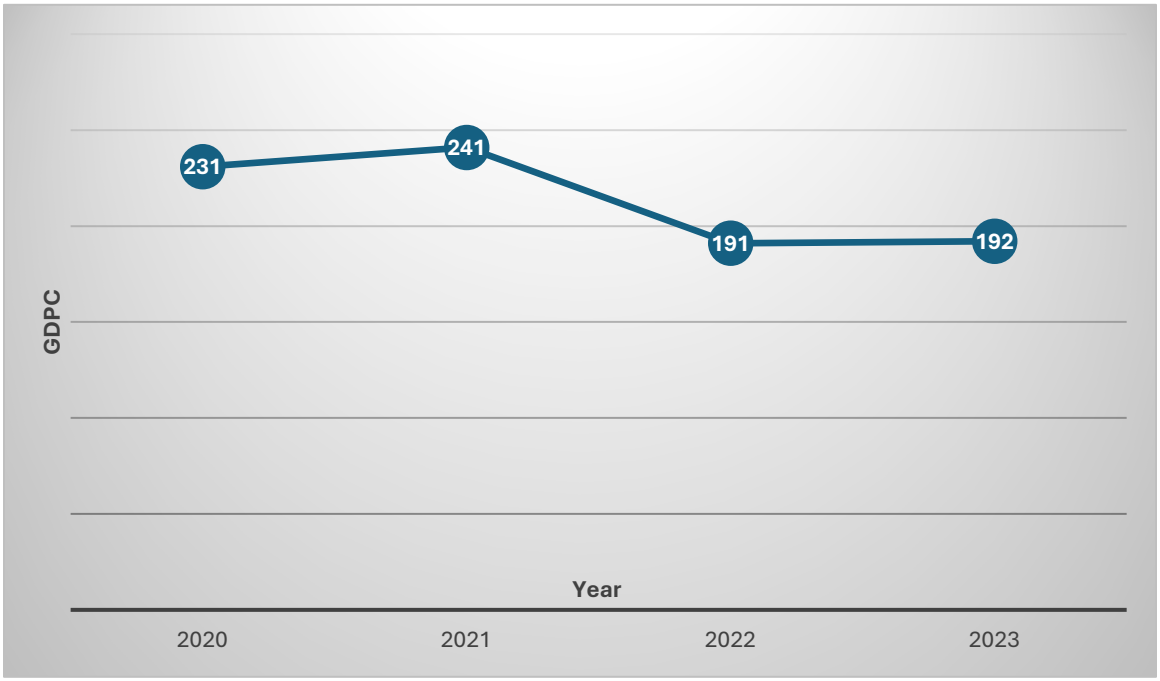
- Remove all manually read residential meters and replace with radio read meters.
  - Complete by the middle of 2025

- Establish and implement a policy for visual meter inspection, volumetric testing of every meter every 2 years, and replacement criteria that balances the cost of lost revenue as meters age.
    - Complete by the end of 2026

Goal 2: Reduce water usage in gallons by 2% from 192 GPCD to 188 GPCD by 2030

Figure 2 below shows the annual GPCD since 2020. Over the past 4 years we have seen a reduction in water use per capita. This plan aims to continue the trend of water reduction in a conservative manner until we can implement new systems and begin better tracking of all water usage through radio reading equipment.

Figure 2 GDPC Over 4 years



Strategy 2A: Create water efficiency standards and adopt to allow district customers to participate in County and Statewide rebate programs.

- Establish written standards and incorporate into district policies.
    - Complete policy standards by 2026

- Once standards are fully implemented begin educating residents about possible money saving upgrades to existing water fixtures and waterwise landscaping.
    - Implement educational programs by 2027

- Create a town wide newsletter with a water conservation message in each edition.

Evaluation Plan

BPWSSD will monitor water usage, system efficiency, and public participation to assess the success of its water conservation strategies. This evaluation will involve:

- **Monthly and annual water usage reports**: After implementing each strategy and correcting deficiencies, track the progress toward reduction targets. This will require documenting when deficiencies are corrected and then creating corresponding water usage reports and correlating results.
- **Regular review of plan calendar:** Set up a calendar with goal dates and review regularly to ensure we are on target to reach goals by the end of 2030.
- **Customer feedback**: Regular surveys to gauge the effectiveness of outreach, education and rebates.
- **System audits**: AWWA M36 audit to monitor and address water loss. Follow-up with this audit and implement findings and recommendations.

Conclusion

The Big Plains Water Special Service District Water Conservation Plan is a roadmap to managing the district's water resources sustainably. Through collaboration, education, and proactive system improvements, BPWSSD aims to ensure water security for the community of Apple Valley. This plan hopes to accomplish two main purposes; first, to provide clean drinking water to all those connected to the system and secondly, ensure water for future generations of Apple Valley residents.