



Town of Apple Valley

Adopted in 2024 as Big Plains Water Special Service District Water Conservation Plan

Adopted in November 2025 as Town of Apple Valley Water Department Water Conservation Plan

Amended August 19, 2026, to incorporate Water Conservation Stages and Emergency Water Rate Schedules

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The following Water Conservation Plan has been adopted by the Town of Apple Valley Town Council.

Town Council:

Michael Farrar- Mayor
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Date adopted

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This Water Conservation Plan was originally prepared and adopted by Big Plains Water Special Service District. Following the dissolution of the district and transfer of water system assets and management to the Town of Apple Valley, the Town has reviewed and formally adopted this plan to reflect its current authority and operations. All references to Big Plains have been updated accordingly.

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.

Town of Apple Valley Water Department System Profile

The town water department was created in 2025 after the town dissolved Big Plains Water Special Service District. The district was created in 2011 by the Town of Apple Valley and had previously served as water provider for the rural community of Apple Valley, Utah. Originally the district operated three distinct water systems: Apple Valley, Cedar Point, and Canaan Springs through which water is distributed to the most populous areas of town. In 2025 the district completed a transmission line project connecting the Apple Valley and Cedar Point systems. This line has increased system efficiency and reliability. And reduced the number of systems to two (2), Apple Valley and Canaan Springs.

At the writing of this plan all three systems were still in use. 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. Apple Valley 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.

Apple Valley Water Department 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 town 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 to service the town.

The Apple Valley Water Department has completed a new transmission line connecting the two main wells in the Apple Valley system to the Cedar Point system. This line has made it possible to remove the need to use water from the Cedar Point system. In Figure one you will find a map of the Town of Apple Valley boundaries.

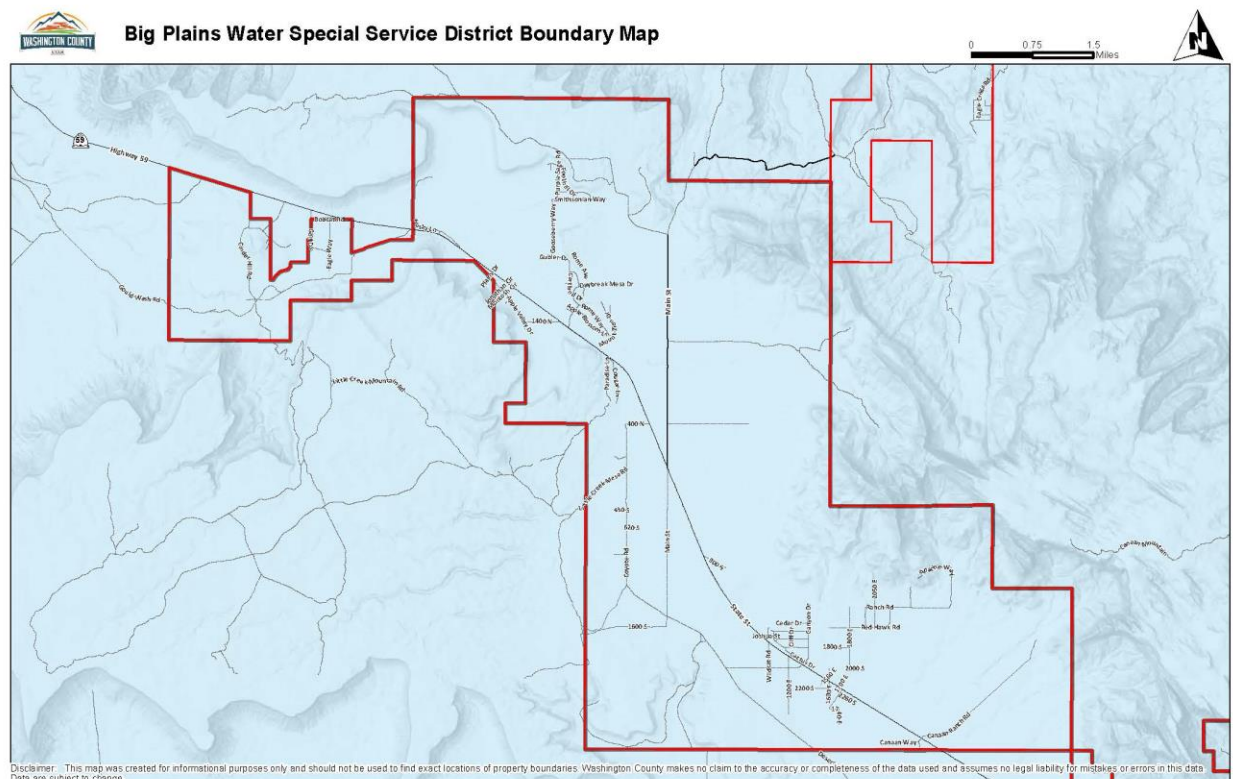
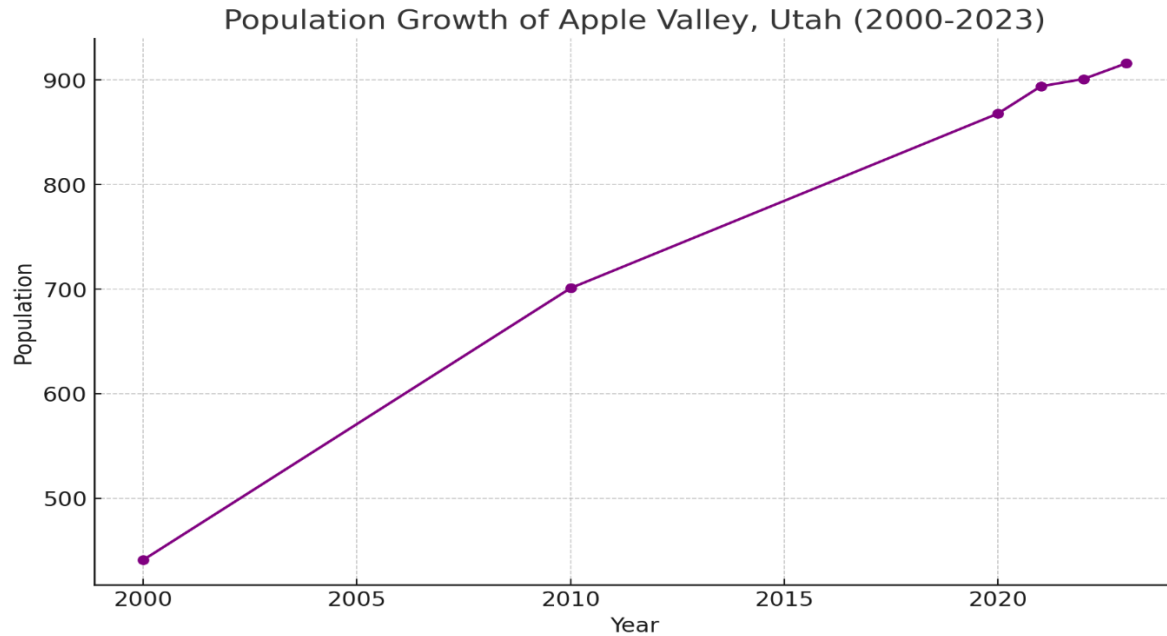


Figure 1 Apple Valley Boundary Map

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. With 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

Apple Valley 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

Apple Valley aims to implement a proactive Water Conservation Plan that aligns with local and regional goals. Given the town'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 Industrial) 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.

Apple Valley 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 town is experiencing. This will be the focus of our initial 5-year plan from 2025 to 2030.

Key Objectives:

1. **Reduce water loss:** Currently, Apple Valley 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:** Apple Valley 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 Town 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 town 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 Apple Valley 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:** Apple Valley 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 town 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 Apple Valley 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.

Water Conservation Stages and Emergency Water Rates

Purpose and Administration

To protect the Town's limited water supply and provide a structured response to changing water-supply conditions, the Town has established four water conservation stages. Each stage contains conservation measures appropriate to the severity of the water-supply condition. The Mayor may declare, increase, reduce, or terminate a conservation stage based on water availability, system capacity, infrastructure conditions, anticipated demand, drought conditions, well production, storage levels, public health and safety, or other circumstances affecting the Town's water system.

The Town shall provide notice of a declared conservation stage through methods reasonably calculated to inform affected water customers, including the Town website, social media, email, utility billing notices, posted notices, or other available communication methods.

Stage 1 – Normal Water Supply

1. Water shall be used for beneficial purposes only; all unnecessary and wasteful uses of water are prohibited.
2. Water shall be confined to the resident's property and shall not be allowed to run-off to adjoining properties or to the roadside ditch or gutter. Care shall be taken not to water past the point of saturation.
3. Free-flowing hoses for all uses are prohibited. Automatic shut-off devices shall be attached on any hose or filling apparatus in use.
4. Leaking customer pipes or faulty sprinklers shall be repaired within five (5) working days or less if warranted by the severity of the problem.
5. All pools, spas, and ornamental fountains/ponds shall be equipped with a recirculation pump and shall be constructed to be leak-proof. Pool draining and refilling shall be allowed only for health, maintenance, or structural considerations.
6. Washing streets, parking lots, driveways, sidewalks, or buildings, except as necessary for health, esthetic or sanitary purposes, is prohibited.

Stage 2 – Water Alert

1. Water shall be used for beneficial purposes only; all unnecessary and wasteful uses of water are prohibited.
2. Water shall be confined to the resident's property and shall not be allowed to run-off to adjoining properties or to the roadside ditch or gutter. Care shall be taken not to water past the point of saturation.
3. Free-flowing hoses for all uses are prohibited. Automatic shut-off devices shall be attached on any hose or filling apparatus in use.
4. Leaking customer pipes or faulty sprinklers shall be repaired within five (5) working days or less if warranted by the severity of the problem.
5. All pools, spas, and ornamental fountains/ponds shall be equipped with a recirculation pump and shall be constructed to be leak-proof. Pool draining and refilling shall be allowed only for health, maintenance, or structural considerations.
6. Washing streets, parking lots, driveways, sidewalks, or buildings, except as necessary for health, esthetic or sanitary purposes, is prohibited.

7. Reduce landscape and pasture irrigation by 5 – 10%. Customers with “smart” irrigation timers or controllers are asked to set their controllers to achieve 90 to 95% of the evapotranspiration (ET) rate. Drip irrigation systems are excluded from this requirement.
8. Users of construction meters and fire hydrant meters will be monitored for efficient water use.

Stage 3 – Water Crisis

1. Water shall be used for beneficial purposes only; all unnecessary and wasteful uses of water are prohibited.
2. Total outdoor water usage shall be reduced by a total of 50%. Customers with “smart” irrigation timers or controllers are asked to set their controllers to achieve 50 to 74% of the evapotranspiration (ET) rate. Drip irrigation systems are NOT excluded from this requirement.
3. Water shall only be utilized for irrigation three times a week on the assigned days and should only be used from the hours of 7:00 p.m. to 5:00 a.m.. To spread out the demands on the water distribution system, even number addresses may irrigate on Monday, Wednesday, Friday and odd number addresses may irrigate on Tuesday, Thursday and Saturday.
4. Water shall be confined to the resident’s property and shall not be allowed to run-off to adjoining properties or to the roadside ditch or gutter. Care shall be taken not to water past the point of saturation.
5. Free-flowing hoses for all uses are prohibited. Automatic shut-off devices shall be attached on any hose or filling apparatus in use.
6. All pools, spas, and ornamental fountains/ponds shall be equipped with a recirculation pump and shall be constructed to be leak-proof.
7. Construction meters and fire hydrant meters will not be allowed other than the town designated location at the Cooke Well.
8. Automobiles or equipment washing is prohibited.
9. Residents shall repair leaking pipes within 24 hours or less if warranted by the severity of the problem.
10. No potable water shall be used to fill or refill empty swimming pools or spas.
11. Water use for artificial lakes, ponds or streams is prohibited.
12. Water use for ornamental ponds and fountains is prohibited.
13. Washing streets, parking lots, driveways, sidewalks or buildings is prohibited, except as necessary for health or sanitary purposes.
14. Public sports fields/parks will limit irrigation to achieve at least a 50% reduction in water use.
15. Water for flow testing and construction purposes from District fire hydrants and blow-offs is prohibited. Use of reclaimed water for construction purposes is encouraged. Reclaimed water is not available within the towns retail service area and would have to be obtained elsewhere.
16. Installation of all new turf, lawn, and/or landscaping of any type is prohibited.
17. Water Emergency tiered pricing may be implemented at the discretion of the mayor.
18. Water Emergency enforcement measures, including fines and charges, for non-compliance with this stage’s requirements as noted above will be implemented in accordance with established towns Policies and Procedures.

Stage 3 Emergency Residential Water Rates

The regular \$75.00 monthly residential base or standby fee remains in effect. The following usage rates may be activated in accordance with the Town’s adopted Fee Schedule:

Gallons Used	Charge per 1,000 Gallons
0-5,000	\$1.50
5,001-12,000	\$1.50
12,001-25,000	\$2.50
25,001-35,000	\$3.00
35,001-45,000	\$3.50
45,001-55,000	\$4.50
55,001-75,000	\$6.00
75,001-100,000	\$7.00
Over 100,000	\$9.00

Stage 4 – Water Emergency

1. Water shall be used for beneficial purposes only; all unnecessary and wasteful uses of water are prohibited.
2. All outdoor water use is prohibited other than for watering animals.
3. Automatic shut-off devices shall be attached on any hose or filling apparatus in use for animals.
4. Leaking pipes or faulty sprinklers shall be repaired immediately. Water service will be suspended until repairs are made.
5. Reduce indoor water use by more than 50%.
6. Installation of new turf or landscaping is prohibited.
7. Construction meters and fire hydrant meters will not be allowed.
8. Water use for swimming pools or spas is prohibited.
9. Water use for artificial lakes, ponds or streams is prohibited.
10. Water use for ornamental ponds and fountains is prohibited.
11. Installation of new turf, landscaping, plants, shrubs, gardens or anything requiring outdoor water use is prohibited.
12. No commitments will be made to provide service for new water service connections.
13. New connections to the towns water distribution system will not be allowed.
14. Water Emergency enforcement measures, including fines and charges, for non-compliance with this stage's requirements as noted above will be implemented in accordance with established towns Policies and Procedures.
15. Water Crisis/Emergency tiered pricing may be implemented at the discretion of the mayor.
16. If necessary, a building moratorium will be issued at the discretion of the mayor.

Stage 4 Emergency Residential Water Rates

The regular \$75.00 monthly residential base or standby fee remains in effect. The following usage rates may be activated in accordance with the Town's adopted Fee Schedule:

Gallons Used	Charge per 1,000 Gallons
0-5,000	\$1.50
5,001-12,000	\$2.50
12,001-25,000	\$3.50
25,001-35,000	\$4.00
35,001-45,000	\$4.50
45,001-55,000	\$5.50
55,001-75,000	\$8.00
75,001-100,000	\$9.00
Over 100,000	\$11.00

Activation and Termination of Emergency Rates

Emergency rates shall apply only while the corresponding conservation stage is active and only when implemented by written declaration of the Mayor in accordance with the Town's adopted Fee Schedule. The written declaration should identify the conservation stage, the effective date, the conditions supporting the declaration, whether the corresponding emergency rate schedule will be implemented, and the date on which the rates will begin applying to water usage.

The Town shall provide notice to affected customers before emergency rates are assessed. When a declaration is terminated or reduced, customers shall return to the rates applicable to the newly declared stage or to the Town's regular water rates. Emergency rates shall be administered in accordance with the Town's adopted Fee Schedule and all applicable ordinances, resolutions, billing policies, and state-law requirements.

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 2026, begin implementing by end of 2026.

- 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 2026, begin implementing by end of 2026.

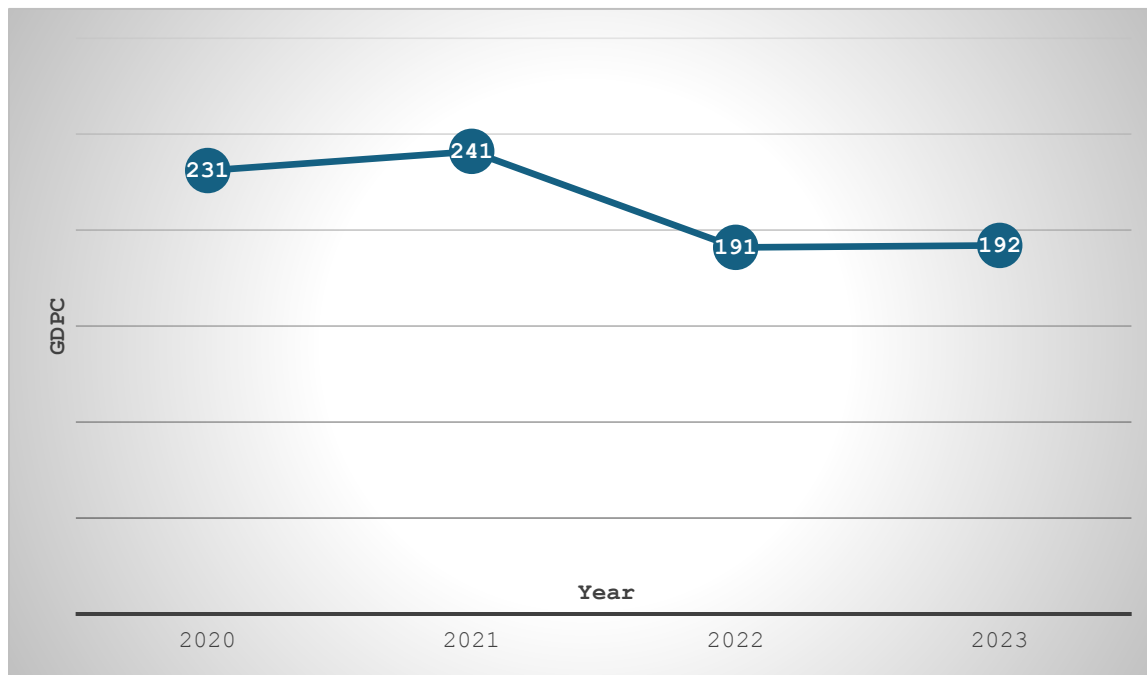
Strategy 1B: Reduce water loss by detecting leaks and metering inefficiencies.

- AWWA M36 water audit for assistance in analyzing the system. Complete audit by end of 2026.
 - 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 2026
- 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 town customers to participate in County and Statewide rebate programs.

- Establish written standards and incorporate into town policies.
 - Complete policy standards by end of 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 end of 2027
- Create a town wide newsletter with a water conservation message in each edition.

Evaluation Plan

Apple Valley 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.

Review of emergency measures: Following each Stage 3 or Stage 4 declaration, the Town will review the effectiveness of conservation measures, public notification, enforcement, and emergency rate schedules and will revise procedures as necessary to improve future implementation.

Conclusion

The Water Conservation Stages established in this plan provide a structured framework for responding to changing water-supply conditions. By combining public education, infrastructure improvements, conservation requirements, and temporary emergency pricing when necessary, the Town can respond promptly to protect public health, preserve available water supplies, and maintain reliable water service during drought and emergency conditions.

The Town of Apple Valley's Water Conservation Plan is a roadmap to managing the town's water resources sustainably. Through collaboration, education, and proactive system improvements, Apple Valley water department aims to ensure water security for the entire 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.