

Maeser Water Improvement District

Water Conservation Plan

Introduction:

The Maeser Water Improvement District's (MWID) 2025 Water Conservation Plan has been prepared to comply with the Utah Water Conservation Plan Act (Utah Code Section 73-10-32). The act requires water conservancy districts and water retailers serving more than 500 connections to file a water conservation plan with the Utah Board of Water Resources and ensure that it is updated every five years. This update outlines MWID's water conservation efforts and presents its conservation goals.

Considering recent water shortages and drought in the area, MWID is acutely aware of the need to maintain a supply of water to its customers, both existing and future. The District is committed to joining with the rest of the State of Utah to decrease the per capita water use and ensure they continue to meet the regional goal in Uintah County of 234 gpcd by the year 2030.

System Profile:

Maeser Water Improvement District is in the northwest area of the Ashley Valley near Vernal, Utah. They serve approximately 3,985 residents. The district has always strived to provide clean, safe, drinking water to its residents and businesses. The district has 1,430 active connections. This includes 1382 Residential connections, 17 Commercial connections, 12 Institutional connections and 19 Industrial connections. The system is comprised of 48.9 miles of transmission and distribution water lines and 215 fire hydrants. The district has 2.8 Million gallons of water storage between four separate tanks. See Figure 1 below for a map of the system.

Connection Type	Number of Connections
Residential	1382
Commercial	17
Institutional	12
Industrial	19

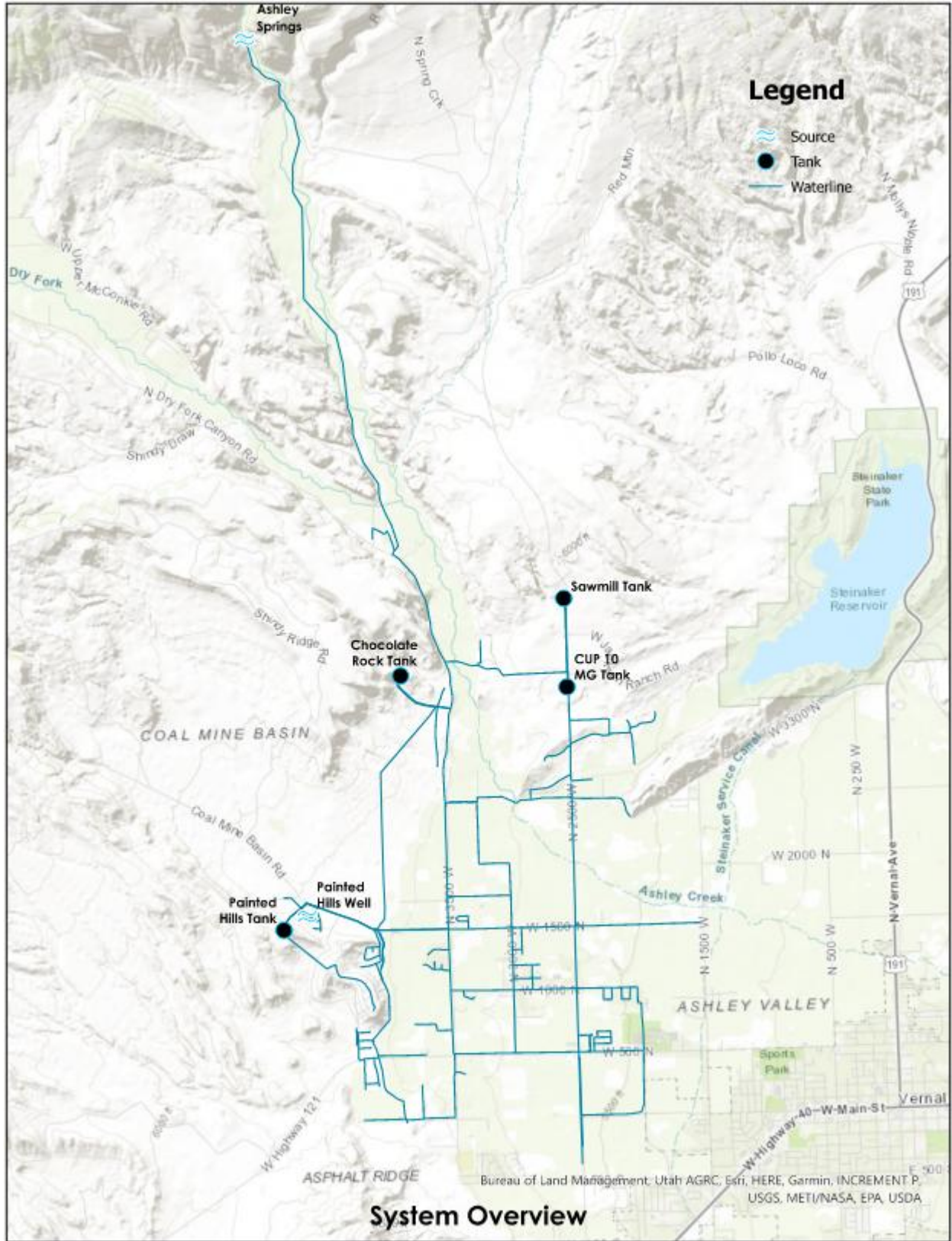


Figure 1: System Map

Supply:

Maeser Water Improvement District gets its supply of water from two main sources. Ashley Spring and Red Fleet Reservoir. The District also has the Painted Hills Well. Table 2 is a summary of the water rights owned by MWID.

Table 2 – Water Rights		
Water Source	Average Year (ac-ft per year)	Dry Year (ac-ft per year)
Ashley Creek Primary Allotment (0.6% of flow)	251	83
Ashley Creek Winter Stock Water	36	36
Steinaker M&I Water	200	200
Ashley Reservoir Company Stock	70	8
Underground Water Right*	2100	2100
Maeser WID Secondary (non-potable)	290	290
Red Fleet Reservoir	560	560
Total	3507	3277

*Hullinger Well exchanges 336 Ac-ft per year. Other wells' flow varies by year.

The yield of current supplies average 2,418 acre-feet per year. A dry year will yield less due to fluctuations in the creek flow. A dry year average supply is 2,188 acre-feet per year. The most recent master plan completed by the district identifies a projected 3% growth rate based on data gathered from 2001 to 2018. An average current use of 724 acre-feet per year projected at 3% growth rate to the year 2060, will require the district to have 2,099 acre-feet of water available. This is less than the current supply, even on a dry year.

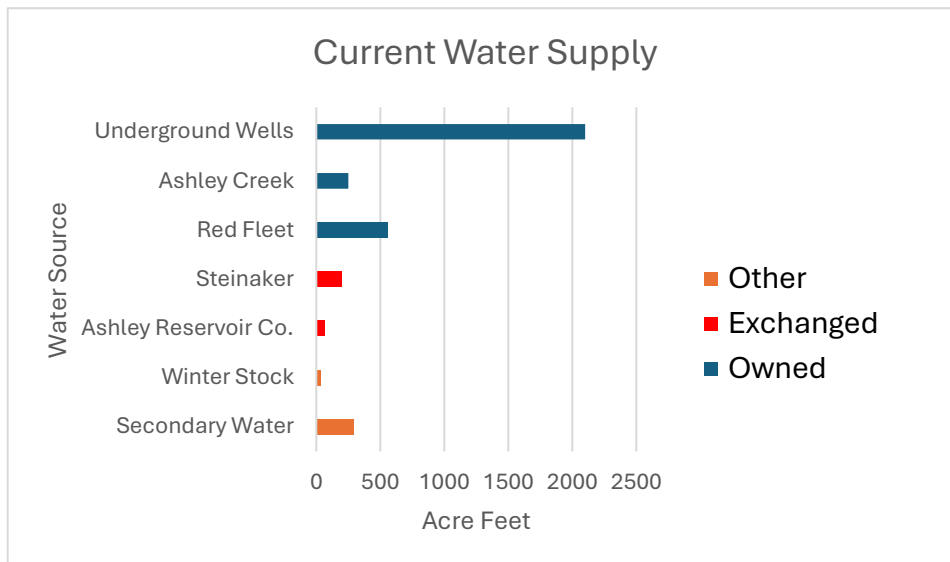


Figure 2: Current Water Supply Graph

Water Measurement:

All surface water used in the Maeser Water Improvement District is treated through the Ashley Valley Water Treatment Plant, or the Ashley Valley Water Purification Plant. Water from the Painted Hills well is only used in emergencies and doesn't have any treatment requirements. It has an iron odor undesirable to residents.

All water is measured through master meters at system entry points. The water is measured again at each customer meter. Master meters total continuously, and the data is collected and reviewed monthly, providing record for peak day demand and peak instantaneous demand. Customer meters are read on a monthly basis. This information helps the district make educated decisions on water conservation.

MWID has a monitoring program in place for their meters. The meters use radio read technology to monitor consumer usage. When large fluctuations appear in metering, a leak is suspected and the customer is notified they may have a leak needing repair. Meters suspected to read inaccurately are tested and replaced as necessary.

Water Loss Control:

Preventing water loss is a top priority for Maeser Water Improvement District. Maintenance on the system is being performed daily. When leaks are discovered, the district personnel correct the water loss immediately. Sometimes leaks are on the customer side of the meter. If a leak is seen on the customer side of the meter, MWID notifies the customer so action can be taken to repair the leak.

The district tracks and reports unaccounted water within the district. Unaccounted water may consist of construction flushing, large leak events, tank leaks and hydrant meters. This tracking helps the district manage the cost of water loss. Table 3 shows the unaccounted water in the past 5 years.

Year	Total Water Purchased	Total water Sold	Unaccounted Water	% Water Loss
2020	302,462,429	256,521,000	35,941,429	11.88
2021	256,973,000	223,721,700	33,251,300	12.94
2022	265,345,000	238,737,000	26,608,000	10.03
2023	259,825,000	234,033,000	25,792,000	9.93
2024	271,734,000	247,482,309	24,251,691	8.92

Billing:

Maeser Water uses a tiered billing rate as shown in the table below.

Table 4 – Current Water Usage Rates	
Usage Rates	
\$32.50	6,000 Gallons
2.26 per Thousand	7,000 to 50,000 Gallons
3.16 per Thousand	51,000 to 100,000 Gallons
4.16 per Thousand	101,000 + Gallons

Water Use:

The regional goal for Uintah County is 234 Gallons per Capita per Day (GPCD) by 2030. MWID is currently below that goal and intends to stay below. The GPCD is calculated by the following formula:

$$GPCD = \frac{\frac{\text{Total Water Delivered}}{365 \text{ Days/Year}}}{\text{Population}}$$

Table 5 – Water Usage		
Connection Type	Total 2024 Use (MG)	GPCD Use (gal)
Residential	224	154
Commercial	1.2	0.83
Institutional	21.7	14.91
Industrial	0.6	0.41
Total	247.5	170.16

A graphical depiction of the regional goal, charted with the actual gpcd, is shown in Figure 3 below. Even with slightly upward trends in water use being shown, the District is still well below the regional conservation goal of 234 gpcd.

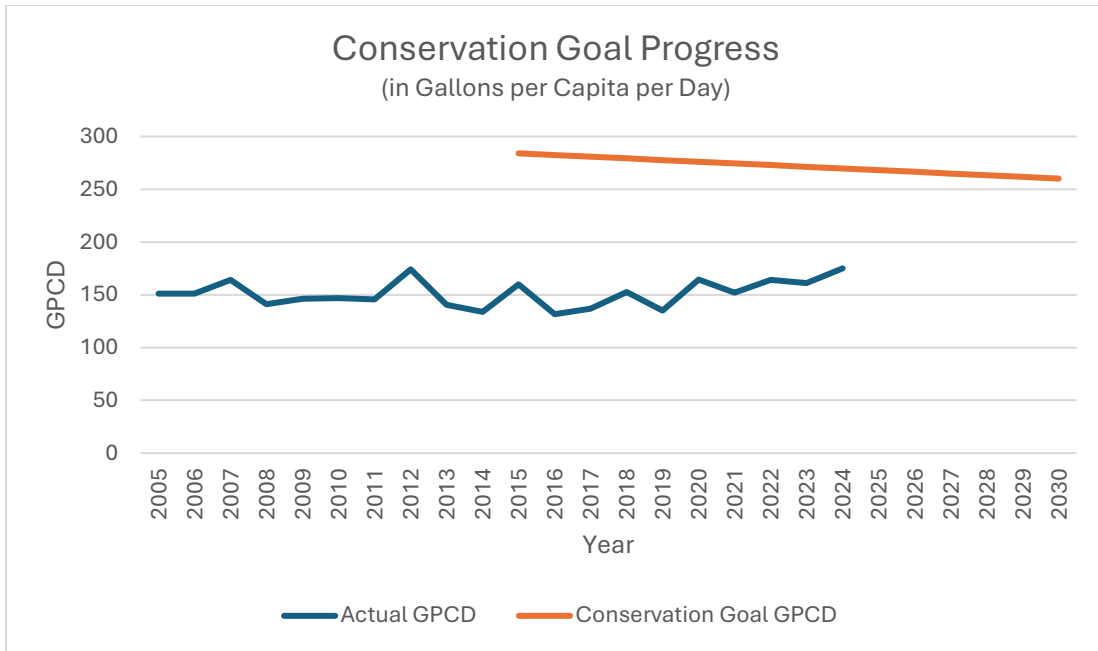


Figure 3: Conservation Goal Progress

Current Conservation Practices:

The district manager coordinates water conservation programs to educate the customers about conservation. Best conservation practices are found both on the district website, and on the printed invoices going to the public.

The board of trustees has elected to approach the topic of culinary water use and reduction with a conservative point of view. Their goals have been chosen to allow the District to provide water to its customers at a reasonable rate while encouraging smart water usage.

Measure 1: Rates

The first measure of conservation practice is completed by monitoring rates and effectiveness of conservation through using a tiered structure. The tiered structure is used to increase the cost of water based on increased use. The tiered approach encourages water users to use less water by making additional amounts of water increasingly more expensive. Table 4 above shows the current tiered structure.

Measure 2: Education

To assist water customers in their conservation efforts, each year on the April bill, the District will remind users of the goal to conserve water.

For situations such as dry years when water availability is low, the district has an Emergency Conservation Plan which outlines steps to take to ensure clean drinking water is available for life sustaining needs. The plan outlines graduated steps from self-imposed conservation measures to mandated/enforced measures as the situation worsens.

Measure 3: Water Meter Upgrades

The District has a program in place to continually monitor meters needing replacement every year. A portion of the District's maintenance budget goes toward replacing approximately 10% of the meters every year.

Tracking Progress:

Figure 3 above shows the District is below the average expected per capita use for the Green River region and the trend of per capita use is downward. Conservation efforts will continue with the District.

The District will measure the progress toward the conservation goal by calculating the per capita use of water each year in November and review it with the Board of Trustees. This will provide a sense of whether the education and other conservation efforts are effective. Additionally, it will help maintain focus on the goal. If it is determined adjustments are needed to the plan, they will be discussed at that time.

Rate adjustments will be the subject of public hearings during December each year as it is reflected within the annual budgeting process. Should the need arise for emergency rate adjustments measures, this action will be announced in advance and the public invited to participate in public hearings prior to any change taking effect.

APPENDIX A:
MWID EMERGENCY CONSERVATION PLAN

APPENDIX B:
RESOLUTION ADOPTING 2025 WATER CONSERVATION PLAN