



TOWN OF MANILA

CULINARY WATER CONSERVATION PLAN 2025

August 12, 2025

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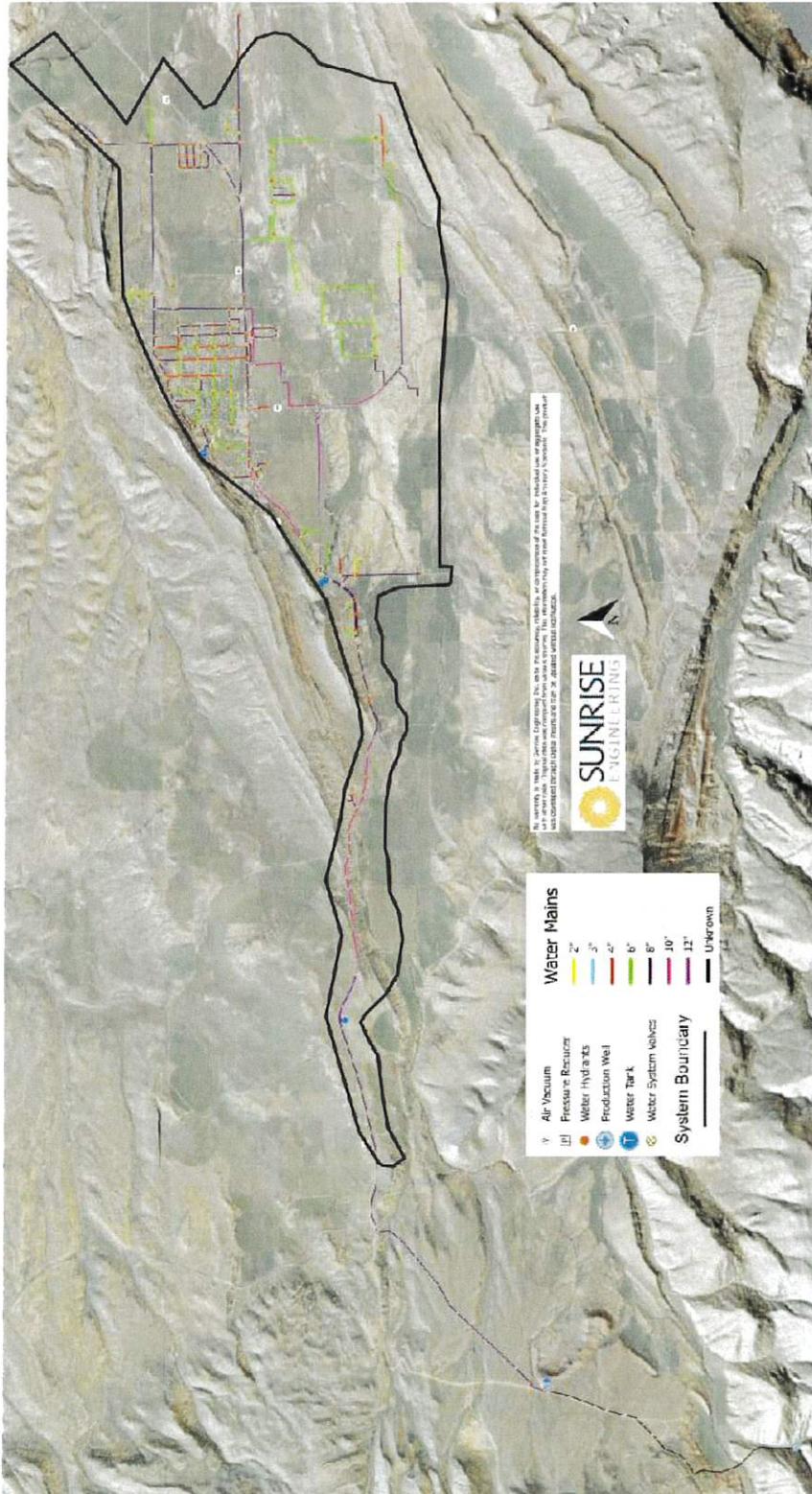
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1 SYSTEM PROFILE

The Town of Manila (Manila) is located along the northern edge of Daggett County, just south of the Wyoming border. A map of the service area is shown in Figure 1.1. The system includes 2, 3, 4, 6, 8, 10, and 12" lines, four tanks, and three supply wells. The service area extends over the Wyoming border into Sweetwater County. Daggett County's population is 747, and Manila's population is 425, according to 2023 data from Headwaters Economics. Many connections in Manila are seasonal residents, due to their proximity to Flaming Gorge Reservoir. Water use in the summer is very high due to tourism demand. Maintaining the water supply during the summer months is the primary focus of the water system. Leaders of the Town of Manila have always held the water needs of citizens as a top priority. As a result, a well-maintained and operated water system provides members with water where and when it is needed.

According to census and local population data, the Town of Manila is experiencing an average annual growth rate of 1.0%. As growth takes place, Manila's culinary water system must be improved to support that growth. In response to the rapid growth the state of Utah has experienced statewide in recent years, and with the influx of tourists during the summer months, citizens and leaders of the Town of Manila are concerned about the future cost and/or availability of a finite water supply. Similar concerns have been expressed by the state legislature, as demonstrated by the Water Conservation Plan Act (House Bill 418), passed in the 1998 session, and its revision (House Bill 153), passed in the 1999 session. This document constitutes the water conservation plan for the Manila water system. Manila's last Water Conservation Plan was from 2013. This updated plan is intended to address the concerns of both the Town of Manila and the State of Utah while complying with the State of Utah Water Conservation Plan Act.

Figure 1.1: Service Area Map



2 SUPPLY INFORMATION

Manila's water connections are listed by type in Table 2.1. The system's water supply comes from three wells as shown in Table 2.2. The two Sols Canyon wells are very close to each other. The Sols Canyon Well #1 is used more heavily, but the two wells have similar flow rates because they are so close to each other. The flow rates of the three wells, as determined by the DDW, are listed in cubic feet per second and gallons per minute. Manila's water rights are shown in Table 2.3 in cubic feet per second and gallons per minute.

Table 2.1: Connection Data by Sector

Year	Residential	Commercial	Industrial	Institutional	Total Connections	ERC Value
2010	861	35	0	0	896	861
2011	784	48	0	0	832	950
2012	784	48	0	0	832	950
2015	845	38	0	5	888	996
2016	813	15	0	9	837	1027
2017	825	16	0	9	850	1128
2018	827	16	0	9	852	905
2019	836	18	0	9	863	862
2020	850	19	0	9	878	956
2021	871	20	0	9	900	939
2022	887	22	0	9	918	944
2023	898	22	0	9	929	981
2024	943	22	0	11	976	1003

Table 2.2: Source Capacity

Existing Source Capacity			
Source ID	Sources	Total Flow	
WS008	Sols Canyon Well #1	0.41	183
WS009	Sols Canyon Well #2	0.26	117
WS012	Birch Springs Draw Well	0.52	233
Source Total (In Use)=		1.19 cfs	533 gpm

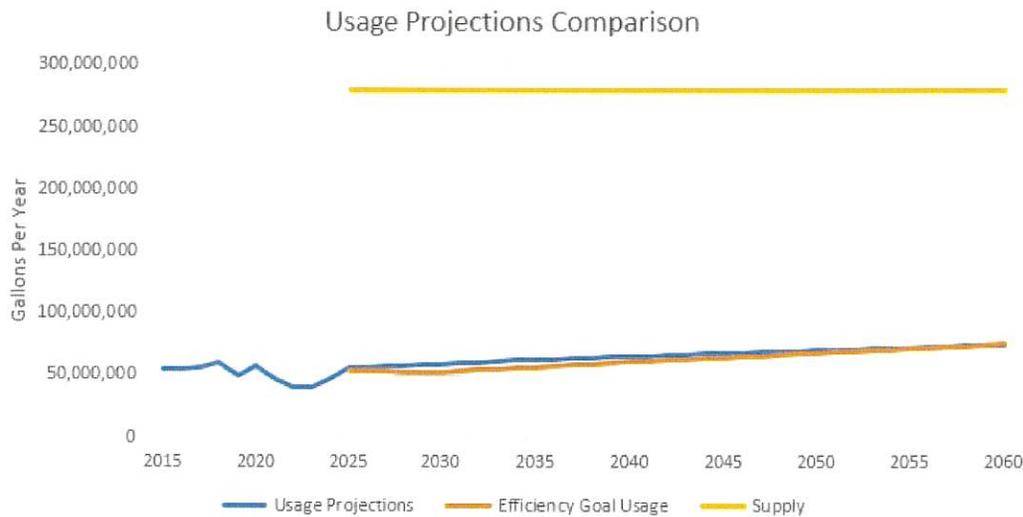
Table 2.3: Water Rights

Water Right	Period of Use	Priority Date	Source	Flow (cfs)	Flow (gpm)
41-3042/41-3202	1/01 - 12/31	3/15/2000	3 wells and Birch Spring	1.73	774.68
41-3164/41-660/41-205/ 41-206/41-2149	1/01 - 12/31	1/11/2002	4 wells and Birch Spring	0.83	371.54
41-3584	1/01 - 12/31	3/4/1964	4 wells and Birch Spring	0.19	87.12
41-3646	1/01 - 12/31	9/27/2005	3 wells and Birch Spring	0.77	347.40
41-3139	Lapsed		well		0.00
41-3151	Lapsed		well		0.00
41-3155	1/01 - 12/31	9/26/1969	unnamed spring	0.46	204.22
41-3183	1/01 - 12/31	1/5/1973	4 wells	0.23	105.03
41-3252	1/01 - 12/31	7/7/1988	unnamed spring	0.10	44.88
41-3260	1/01 - 12/31	11/3/1977	well	0.02	6.73
Total				4.33	1941.60

Although the Town of Manila has a deficit in source capacity to meet state requirements, it has sufficient capacity to keep up with usage, according to projections. Accomplishing its regional water conservation goal will help Manila in its efforts to meet state requirements.

Table 2.4 shows projected usage with and without the conservancy goal and the current supply. The usage projections without the conservancy goal were determined based on the average usage per ERC from Manila’s usage data in the past decade and an average growth rate of 1%. The efficiency goal usage shows an 18% reduction in per capita water use from 2015 to 2030 with additional goal projections as shown in Figure 6.2. The supply was calculated from the DDW minimum sizing standards for Manila, which show that their wells produce 533 gallons per minute.

Table 2.4: Water Usage Projections Comparison



The comparison above shows that the system has plenty of source capacity to keep up with usage. However, the usage data shown is from the customer meters. There is water loss between the source and the meters, meaning that the total system usage is higher than what is shown here. System Water loss is further analyzed in Section 4 of this plan.

3 BILLING

The Town of Manila uses a tiered water rate structure as shown in Table 3.1. The water system serves people within the town, in neighboring areas of Daggett County, and in Sweetwater County across the Wyoming border. Rates outside the service area are higher than those within it because its recipients do not pay the same taxes that support Manila.

Table 3.1: Water Pricing Structure

Base Rates		
Town of Manila		
Residential	3/4" Meter	\$ 53.00
Commercial	3/4"-1" Meter	\$ 72.00
	1.5" Meter	\$ 87.00
	2" Meter	\$ 112.60
	4" Meter	\$ 208.50
Mobile Home	1st Unit	\$ 35.21
	Additional Units	\$ 34.38
Daggett County		
Residential	3/4" Meter	\$ 65.50
Commercial	3/4"-1" Meter	\$ 89.25
	1.5" Meter	\$ 109.20
	2" Meter	\$ 140.25
	4" Meter	\$ 261.50
Sweetwater County		
Residential	3/4" Meter	\$ 72.00
Commercial	3/4"-1" Meter	\$ 98.50
	1.5" Meter	\$ 120.35
	2" Meter	\$ 154.85
	4" Meter	\$ 290.50
Jail Rate		
Base Rate		\$ 663.50
Steinaker Trailer Rate		
Base Rate		\$ 220.49
Scott's Trailer Rate		
Base Rate		\$ 220.49

Overage Rates Per 1,000 Gallons		
Town of Manila		
Residential	0 to 7,000	\$ -
	7,000 to 17,000	\$ 2.27
	17,000 to 33,000	\$ 3.16
	33,000 to 58,000	\$ 4.38
	58,000 and up	\$ 6.50
Commercial	0 to 13,000	\$ -
	13,000 and up	\$ 3.95
Daggett County		
Residential	0 to 7,000	\$ -
	7,000 to 17,000	\$ 2.83
	17,000 to 33,000	\$ 3.95
	33,000 to 58,000	\$ 5.50
	58,000 and up	\$ 8.15
Commercial	0 to 13,000	\$ -
	13,000 and up	\$ 3.95
Sweetwater County		
Residential	0 to 7,000	\$ -
	7,000 to 17,000	\$ 3.14
	17,000 to 33,000	\$ 4.38
	33,000 to 58,000	\$ 6.10
	58,000 and up	\$ 9.05
Commercial	0 to 13,000	\$ -
	13,000 and up	\$ 4.38
Jail Rate		
	0 to 150,000	\$ -
	150,000 and up	\$ 4.28
Steinaker Trail Rate		
	0 to 33,600	\$ -
	33,600 and up	\$ 6.28
Scott's Trailer Rate		
	0 to 150,000	\$ -
	150,000 and up	\$ 6.28

4 SYSTEM WATER LOSS

Manila's water usage and loss from the past five years are listed in acre-feet and percentage in Table 4.1.

Table 4.1: System Water Loss (in acre-feet)

Year	Total From Sources	Total Retail Use	Estimated Water Loss	Estimated Water Loss Percentage
2024	227.89	146.54	81.35	35.69
2023	227.22	124.43	102.79	45.24
2022	165.79	126.55	39.24	23.67
2021	224.81	146.08	78.73	35.02
2020	209.14	178.08	31.06	14.85
2019	220.03	157.59	62.44	28.38
Average	212.48	146.545	65.935	30.475

The Manila Water System monitors water usage and investigates abnormally high usage. The system replaces old lines to reduce leaks. All of Manila's connections are metered. They are read monthly. Manila does not calibrate its meters on a regular schedule but may calibrate them as needed. The system replaces its meters as needed.

Manila's revenue losses from water loss are minimal because the system does not treat its water. The only significant extra cost from water loss is due to system depreciation.

5 WATER USE AND MEASUREMENT

Available records of potable water use since 2005 are listed by sector in Table 5.1. The population is also listed. Manila does not supply non-potable water. The data in Table 5.1 is from data submitted to the Utah Water Rights website, which was questionably accurate before 2020. Figures 2.4 and 5.2 use Manila's records for all usage data.

Table 5.1: Water Use (in acre-feet)

Year	Residential Use	Commercial Use	Industrial Use	Institutional Use	Total Use	Population
2024	137.71	7.46	0	1.38	146.54	580
2023	113.96	7.97	0	2.51	124.43	589
2022	118.89	6.69	0	0.98	126.55	308
2021	135.56	9.59	0	0.93	146.08	300
2020	158.28	18.72	0	1.07	178.08	267
2019	134.1	20.63	0	2.87	157.59	700
2018	224.53	18.07	0	3.05	245.65	730
2017	161.18	53.18	0	5.99	220.35	430
2016	203.69	40.91	0	12.64	257.24	430
2015	422.94	53.94	0	21.62	498.5	420
2014						
2013						
2012	189.36	40.19	0	0	229.55	
2011	189.36	40.19	0	0	229.55	
2010	531.66	0	0	0	531.66	
2009						
2008						
2007						
2006						
2005						

Figure 5.2 shows Manila's water efficiency in gallons per capita per day (gpcd) since 2015. The water usage data is from Manila's usage records. The Manila system area's permanent residents are estimated to be about 580 people. However, using the number of connections multiplied by the population per household for the area, the population is estimated to be more than 1,900 people. This discrepancy is because of the large number of homes in the Manila area that are only used seasonally. During peak tourism times, the number of people in the area is much higher than the number of permanent residents. To calculate the water usage per capita for the system, the total estimated served population, including permanent and seasonal residents, was used. This makes the per capita water usage seem artificially low. That population data is still used for the plan because Manila believes it represents the system best. Water usage per capita has decreased by about 4.5% per year on average since 2015. This suggests that the system has already met its conservation goal.

Figure 5.2: Water Efficiency Progress

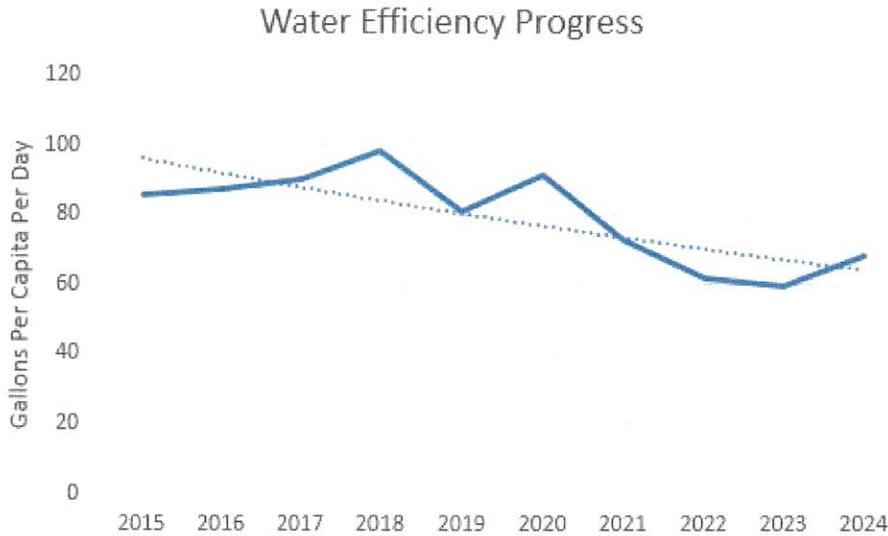


Figure 6.2 shows the current (2024) per capita use in gallons per day for the system. The indoor and outdoor usage data are provided by the Manila Town Water System. Outdoor use was calculated to be approximately 45% of the total culinary water usage based on winter versus summer use. Because of the large number of seasonal residents in the summer, the residential outdoor usage estimate is probably too high. However, this is the best method available for Manila to estimate outdoor use at this time.

Figure 5.1: Per Capita Use in Gallons Per Day

	Indoor	Outdoor	Total
Residential	35.8	28.8	65
Commercial	1.9	1.6	4
Institutional	0.0	0.0	0
Industrial	0.4	0.3	1
Total	38	31	69

Manila only supplies culinary water and does not supply secondary water. There is only a small section of the town with a secondary source of water. It is unmetered and there is no room for expansion. For this reason, secondary usage in the area is assumed to be negligible.

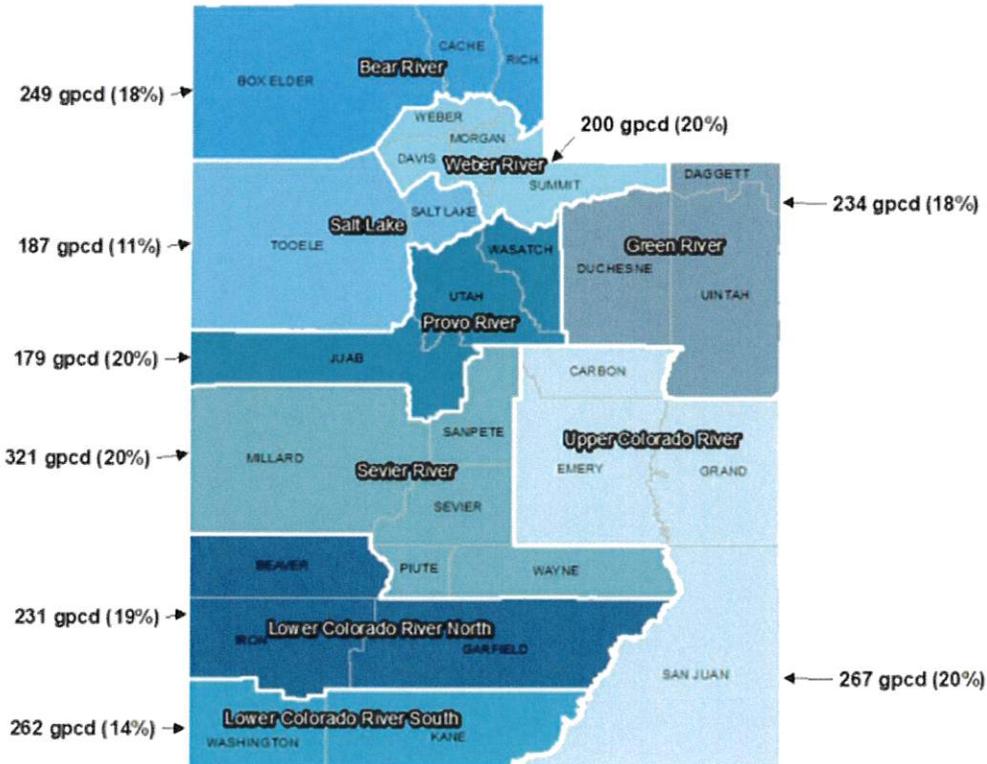
6 WATER CONSERVATION GOAL AND IMPLEMENTATION PLAN

In 2019, the Utah Department of Natural Resources released regional municipal and industrial (M&I) water conservation goals. These goals assessed current water usage as of 2015 and outlined efforts to reduce water consumption by 2030. DNR projected water usage for 2040 and 2065, based on anticipated efforts to reduce water consumption. The goals center on four key efforts:

- Reducing new lot sizes, as determined by both market forces and state or local elected officials setting land use policy;
- Adopting water-efficient practices and landscaping changes, including reductions in grass, as determined by both market forces and state or local elected officials through landscaping and water restricting ordinances;
- Installing secondary water meters and smart controllers on outdoor irrigation systems, as determined by water consumers through market forces and state or local elected officials;
- Increasing water pricing, as determined by municipal water retailers and state policies.

The regional goal for Daggett County, the Green River Region, is 234 gallons per capita per day. This equates to an 18% reduction in water usage between 2015 and 2030. The regions of Utah and their conservation goals are shown in Figure 6.1. Figure 6.2 shows conservation goal projections for 2040 and 2065.

Figure 6.1: Utah Regional Water Conservation Goals



Proposed M&I Water Conservation Regions and 2030 Goals

Figure 6.2: Water Conservation Goal Projections

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.

In compliance with state requirements, the Town of Manila (Manila) will adopt the regional water conservation goal of an 18% reduction in per capita use from 2015 to 2030. The system will also prepare to meet future goal projections of 21% in 2040 and 2065. Manila will work to achieve this goal by enforcing its municipal codes regarding water use, maintaining a financially feasible water system, and continuing its public conservation education program.

6.1 MUNICIPAL CODE ENFORCEMENT

The Town of Manila’s municipal code states in section 13.05.220 that the town can regulate the number of sprinkler outlets that run from a connection at one time if it is their opinion that it will affect the pressure or supply of water.

Section 13.05.240 of the town code states that the water system shall not permit users to run water wastefully. The town will regularly monitor water usage and notify and inspect customers who use abnormally high levels of water in their monthly usage reports. Notifying users who are using an abnormally high amount of water is very important to detect and fix leaks and to ensure that users are not wasting water.

Section 13.15.010 prohibits sprinkler irrigation between 10:00 a.m. and 6:00 p.m. that uses Manila culinary water. Violations of such result in fines and, in extreme cases, water shutoff. The water system employees are responsible for ensuring that this ordinance is followed.

State waterwise guidelines recommend that all new developments adhere to the following landscaping standards:

- No turf is allowed in park strips or areas less than 8 feet wide.
- Landscaping for a new single-family dwelling should be completed as soon as possible. Turf area on the lot shall be limited to 45% of the total landscape area up to 10,000 sq. ft. No more than 50% of front and side yard landscaping may be lawn. (This does not apply to lots with less than 250 sq. ft. of landscape area.)

The Town should consider adopting these landscaping guidelines as municipal ordinances for all new developments. The Manila Planning Commission will consider the ordinance and, if appropriate, draft and propose it to the Town Council. In addition, agency facilities should follow these guidelines and use efficient irrigation and smart controller technology.

The Town should also consider creating and adopting a drought contingency plan.

6.2 FINANCIALLY FEASIBLE SYSTEM

Manila's tiered rate system financially encourages water users to use less water and supports water conservation. Manila will review its rates at least every 5 years and update them as needed. Keeping rates updated will encourage water users to conserve water and will ensure that the system is financially able to manage itself. Feasible finances will allow the system to detect and fix leaks and use other methods to save water within the system.

6.3 PUBLIC CONSERVATION EDUCATION PROGRAM

The Town of Manila has initiated a public education program designed to promote water conservation. This includes periodically sending flyers with their annual consumer confidence reports, special mailings, or monthly bills to educate and give conservation tips to the water system users.

In addition to their own tips in fliers, Manila will reference water conservation programs, including Water Sense from the EPA and the Center for Water-Efficient Landscaping (CWEL) from the USU Extension. Manila will also promote existing water use incentives and guidelines, including Utah Water Savers and Slow the Flow. These rebates encourage Utah water users to conserve water through their landscaping and water fixtures. Increasing awareness of these programs will increase the use of such programs.

Manila will expand the public education program to reach out to as many users and future users (children) as possible. This will include the distribution of conservation tips for each connected household with monthly billing reports. The district will also participate in presentations on water conservation given by state or local water officials to elementary or middle schools or to customers. Presentations will be given at least every other year.

7 EVALUATION PROCESS

Manila will assess the system's progress with its water conservation goals in its board meetings as needed. The system's usage per capita will be analyzed. Their municipal codes and code enforcement relating to water efficiency, water rates, and public outreach efforts will be reviewed. If they do not meet their goals, additional efforts will be discussed.

Manila should review its Water Master Plan every 5 years. As part of the master plan review, water conservation will be reviewed. The review will analyze their per capita usage to make sure they continue to meet state goals. Their public outreach goal compliance will also be assessed. If goals are not met, they will discuss additional measures needed to improve performance, such as a dedicated water conservation manager.

The Manila mayor, town council, and planning and zoning commission are responsible for ensuring the water conservation plan goals are met. They should run the system based on the best management practices listed in this plan. Their contact information is listed below.

Kathi Knight, Mayor	kathik@manilautah.com
Gretchen Northcott, Town Council	gretchnorth7@gmail.com
Greg Scott, Town Council	gregs@manilautah.com
William Rylander, Town Council	wrylan7105@msn.com
Deborah Brown, Town Council	imabrown2@outlook.com
Jennifer Allphin, Town Clerk/Town Council	jennifera@manilautah.com
Chandra Brady, Deputy Clerk/Planning & Zoning	chandrab@manilautah.com

8 CERTIFICATION OF ADOPTION

I, Kathi Knight, the presiding officer and Mayor of the Town of Manila, hereby certify that the attached Water Conservation Plan has been established and adopted by our town council members on Thursday, September 11, 2025.


Kathi Knight, Mayor


Date