

Mapleton Water District

Drinking Water Rate Analysis

October 19, 2026

**Rural Community
Assistance Corporation**

The industry standard is to conduct a water rate study every five years to ensure revenues are covering expenses and costs are being applied to customer classes. Public entity water systems must ensure rate structures are consistent with current case law, which has specific guidance on what is considered fair and equitable ways to distribute costs to customers.

RCAC conducted this water rate study on behalf of Mapleton Water District to establish rates that will allow Mapleton to operate and maintain the water system for the next five years and collect the necessary reserves for emergencies. RCAC analyzed data for the fiscal year ending FYE 2024, and 2025 and budgeted data for FYE 2026 and 2027 to set rates for FYE 2027 through FYE 2031.

Mapleton Water District requested a water rate analysis to evaluate these primary areas:

- To ensure that their revenue from water rates covers the true cost of service.
- To begin fully contributing to emergency reserves by year five.
- To cover current and future debt service with Business Oregon.

Current Rate Structure:

Mapleton Water District currently charges a base rate and a usage rate as seen below:

Current Customer Classes			
Class ID	Name of Class	Rate Structure	Schedule
1	Residential	Uniform Block	A
2	Non-residential	Uniform Block	B
3	Residential 2 on 1 Meter	Uniform Block	C

Current Base Rates			
	Customer Class Schedule (see prior table)		
Meter Size	A	B	C
3/4	\$54.00	\$54.00	\$66.00
1.000	\$54.00	\$102.00	
1.500		\$102.00	
2.000		\$117.00	
3.000		\$162.00	
4.000		\$192.00	

Current Uniform Usage Rate			
	Customer Class Schedule (see prior table)		
Unit	A	B	C
\$/CF	\$0.10	\$0.10	\$0.10

Key Assumptions					
Financial Assumptions					
Inflation and Loan Rates					
Return on Invested Funds	0.50	%			
Past Inflation	3.50	%			
Future Inflation	4.00	%			
Future Loan Interest Rate	2.00	%			
Future Loan fees, legal, costs	1.00	%			
Existing Debt					
Description	Annual Payment	Maturity	Reserve Required	Reserve Allocated	Make Up Period
Y21004	\$55,200	2054	\$0	\$0	
Total	\$55,200		\$0	\$0	
Existing Reserves					
Debt Reserve	\$0				
Operating Reserve	\$0				
Emergency Reserve	\$0				
Capital Reserve	\$0				
Total	\$0				

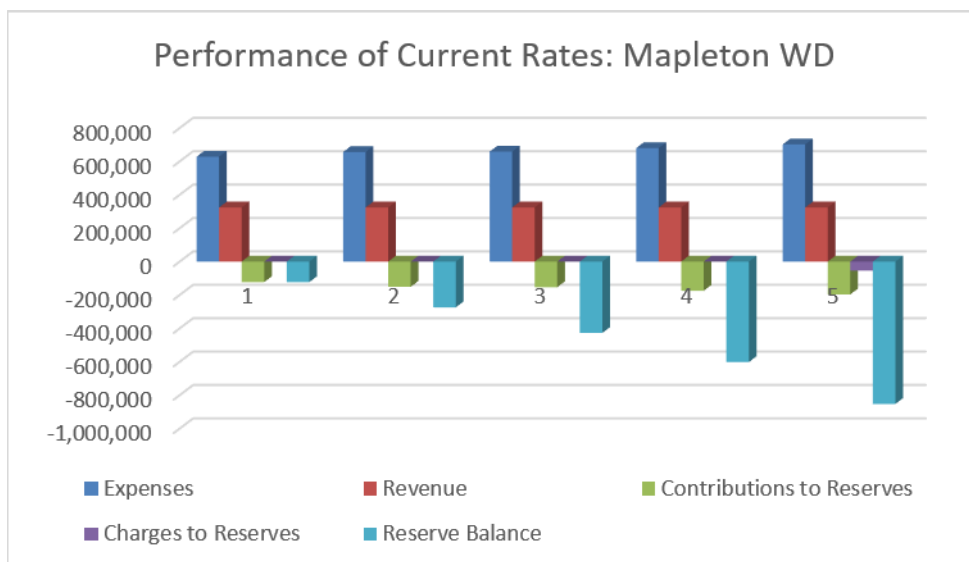
Reserve Targets					
	Amount	Make Up Period	First Year Reserve Addition	Excess funds to be transferred to CIP	Goal
Debt Reserve	\$0		\$0	\$0	As per lending agreement(s)
Operating Reserve	\$48,992	10	\$4,899	\$0	1.5 times the expenses during a billing cycle
Emergency Reserve	\$300,000	10	\$30,000	\$0	Critical equipment replacement cost
Available for Capital Reserve	\$0				

Current rate performance:

The following table summarizes the performance of current rates over the next five years. With the current drinking water rates, the utility is experiencing a loss annually and not adequately able to generate a positive cash flow or set aside reserves.

Results of Rate Option #3						
	2027	2028	2029	2030	2031	5 Years
Total Expenses	\$628,094	\$656,191	\$658,450	\$679,565	\$701,735	\$3,324,034
Total Revenue	\$324,169	\$324,169	\$324,169	\$324,169	\$324,169	\$1,620,844
Net Loss or Gain (Short/Over to Reserves)	-\$303,925	-\$332,022	-\$334,281	-\$355,396	-\$377,566	-\$1,703,190
Net Cash Flow (Contribution to Reserves)	-\$122,971	-\$151,068	-\$153,327	-\$174,442	-\$196,612	-\$798,420
Affordability of average residential bill.	2.22%	2.22%	2.22%	2.22%	2.22%	
In Simple Terms:						
Are you putting enough \$ into reserves?	No	No	No	No	No	No
Positive Annual Cash Flow?	No	No	No	No	No	No

The graph below shows the performance of current rates over the next five years



Findings from current rates:

- Current rates are not generating adequate revenue to cover the cost of providing service to customers
- No reserves were reported from the utility. Not having reserves on hand can increase the vulnerability of the system to cash flow fluctuations as well as emergencies requiring urgent repair or replacement of assets.

- Affordability is currently 2.22%. This meets the affordability threshold of 1.25%, which is requested by Business Oregon of their borrowers to demonstrate the ability to build and maintain financial capacity.
- An asset management plan developed by RCAC for the utility was used to estimate capital improvement costs and schedule.
- Revenue projections assume no additional customer growth over the planning period.
- Scenario 1 assumes 50% principal forgiveness for a Water/Wastewater Financing Program loan from Business Oregon. While this is the maximum potential forgiveness that could be available for a project that is less than \$750,000, it is not guaranteed that Mapleton Water District will receive this amount of forgiveness.
- Scenario 2 models no principal forgiveness for the same loan from Business Oregon as mentioned above. This is the lowest possible amount that the District could be awarded. It should be noted that the actual awarded amount of principal forgiveness could fall somewhere between 50% and 0% at the time of loan signing.

Rate Alternative 1:

This option looks at the rates necessary to cover Mapleton Water District's expenses, contributions to reserves, and debt service. This was achieved by increasing rates uniformly across base and usage rates and all customer classes, with the goal of covering the full cost of service. This Option assumes 50% principal forgiveness for a \$372,284 loan with Business Oregon for the rehabilitation of their two 300,000 gallon water tanks. This places the total loan at \$186,142, with annual payments being \$7,213, beginning in 2028. This amount of principal forgiveness was modeled because it is the maximum amount that Mapleton Water District could qualify for, based on the type of loan they are pursuing.

This option was created with the goal of making full contributions to reserves by year five to reduce the burden on customers.

Base Rates for Alternative 1 – 50% principal forgiveness

Rate Option #1					
Residential Base Rates					
Meter Size	2027	2028	2029	2030	2031
3/4	\$ 73.44	\$ 85.34	\$ 99.16	\$ 115.23	\$ 133.89
1	\$ 73.44	\$ 85.34	\$ 99.16	\$ 115.23	\$ 133.89

Rate Option #1					
Non-Residential Base Rates					
Meter Size	2027	2028	2029	2030	2031
3/4	\$ 73.44	\$ 85.34	\$ 99.16	\$ 115.23	\$ 133.89
1	\$ 138.72	\$ 161.19	\$ 187.31	\$ 217.65	\$ 252.91
1.5	\$ 138.72	\$ 161.19	\$ 187.31	\$ 217.65	\$ 252.91
2	\$ 159.12	\$ 184.90	\$ 214.85	\$ 249.66	\$ 290.10
3	\$ 220.32	\$ 256.01	\$ 297.49	\$ 345.68	\$ 401.68
4	\$ 261.12	\$ 303.42	\$ 352.58	\$ 409.69	\$ 476.06

Rate Option #1					
Residential 2 on 1 Meter Base Rates					
Meter Size	2027	2028	2029	2030	2031
3/4	\$ 89.76	\$ 104.30	\$ 121.20	\$ 140.83	\$ 163.65

Usage Rates for Alternative 1 – 50% principal forgiveness

Rate Option #1			
Standard Usage Rates Per CF			
Tier Block	Residential	Non-Residential	Residential 2 on 1 Meter
Per CF	\$0.14	\$0.14	\$0.14

How Rate Alternative 1 will perform:

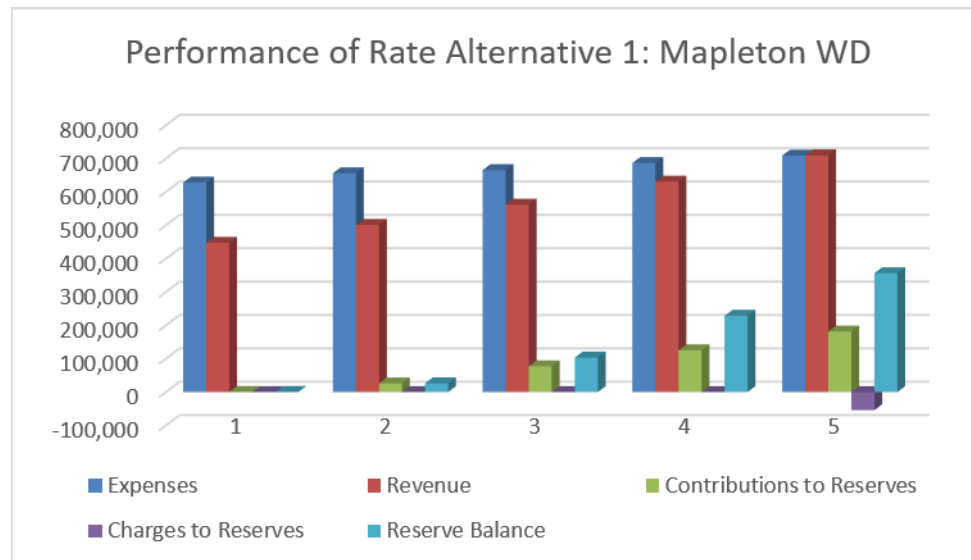
Results of Rate Option #1						
	2027	2028	2029	2030	2031	5 Years
Total Expenses	\$628,094	\$663,404	\$665,663	\$686,778	\$708,948	\$3,345,673
Total Revenue	\$447,504	\$501,190	\$562,050	\$631,122	\$709,603	\$2,851,469
Net Loss or Gain (Short/Over to Reserves)	-\$180,589	-\$162,213	-\$103,613	-\$55,656	\$655	-\$494,204
Net Cash Flow (Contribution to Reserves)	\$365	\$18,741	\$77,341	\$125,298	\$181,609	\$410,567
Affordability of average residential bill	3.06%	3.43%	3.85%	4.34%	4.88%	
In Simple Terms:						
Are you putting enough \$ into reserves?	No	No	No	No	Yes	
Positive Annual Cash Flow?	Yes	Yes	Yes	Yes	Yes	

The table below shows average customer bills for Residential customers
Alternative 1:

Average Bill Every M by Meter Size for the Residential Class

Count	Meter Size	Current	Year 1	Year 2	Year 3	Year 4	Year 5
216	3/4"	\$105.20	\$145.13	\$162.83	\$182.93	\$205.78	\$231.78
4	1"	\$97.57	\$134.43	\$151.27	\$170.44	\$192.27	\$217.18

The graph below shows the performance of Rate Alternative 1 over the next five years



Rate Alternative 2:

This option also looks at the rates necessary to cover Mapleton Water District's expenses, contributions to reserves, and debt service. This Option assumes no principal forgiveness for a \$372,284 loan with Business Oregon for the rehabilitation of their two 300,000 gallon water tanks. For this Option, annual payments were modeled at \$14,425, beginning in 2028. This amount of principal forgiveness was modeled because it is the lowest possible amount that Mapleton Water District could potentially receive. The actual amount of principal forgiveness awarded to the District will be determined by the amount of funding that Business Oregon has available at the time of loan signing.

This option was also created with the goal of making full contributions to reserves by year five to reduce the burden on customers.

Base Rates for Alternative 2 – No Principal Forgiveness

Rate Option #2					
Residential Rates					
Meter Size	2027	2028	2029	2030	2031
3/4	\$ 73.44	\$ 85.63	\$ 99.85	\$ 116.42	\$ 135.75
1.000	\$ 73.44	\$ 85.63	\$ 99.85	\$ 116.42	\$ 135.75

Rate Option #2					
Non-Residential Rates					
Meter Size	2027	2028	2029	2030	2031
3/4	\$ 73.44	\$ 85.63	\$ 99.85	\$ 116.42	\$ 135.75
1.000	\$ 138.72	\$ 161.75	\$ 188.60	\$ 219.90	\$ 256.41
1.500	\$ 138.72	\$ 161.75	\$ 188.60	\$ 219.90	\$ 256.41
2.000	\$ 159.12	\$ 185.53	\$ 216.33	\$ 252.24	\$ 294.12
3.000	\$ 220.32	\$ 256.89	\$ 299.54	\$ 349.26	\$ 407.24
4.000	\$ 261.12	\$ 304.47	\$ 355.01	\$ 413.94	\$ 482.65

Rate Option #2					
Residential 2 on 1 Meter Rates					
Meter Size	2027	2028	2029	2030	2031
3/4	\$ 89.76	\$ 104.66	\$ 122.03	\$ 142.29	\$ 165.91

Usage Rates for Alternative 2 – No principal forgiveness

Rate Option #2			
Standard Usage Rates per CF			
Tier Block	Residential	Non-Residential	Residential 2 on 1 Meter
Per CF	\$0.14	\$0.14	\$0.14

How Rate Alternative 2 will perform:

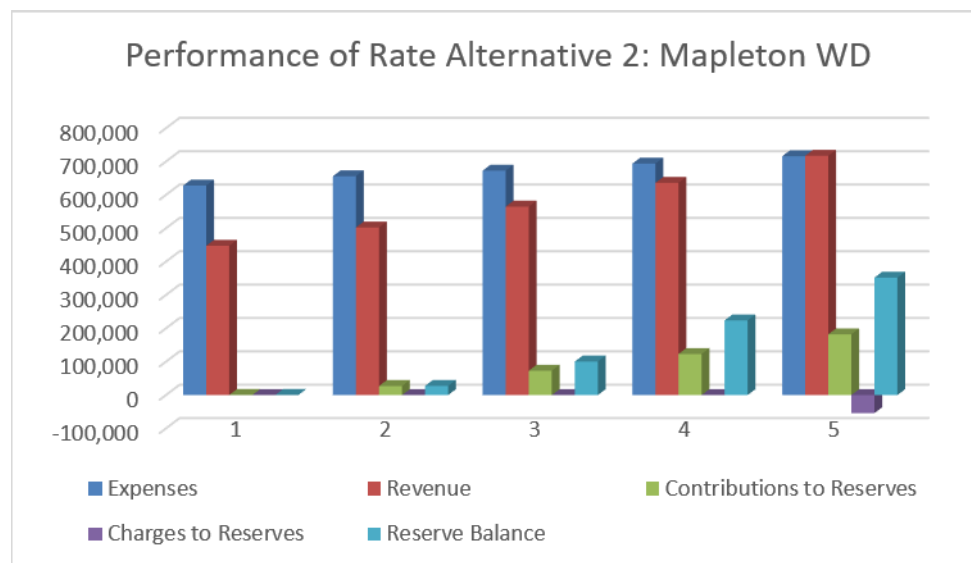
Results of Rate Option #2						
	2027	2028	2029	2030	2031	5 Years
Total Expenses	\$628,094	\$670,616	\$672,875	\$693,990	\$716,160	\$3,367,309
Total Revenue	\$447,504	\$502,516	\$565,060	\$636,253	\$717,389	\$2,868,722
Net Loss or Gain (Short/Over to Reserves)	-\$180,589	-\$160,100	-\$107,815	-\$57,736	\$1,228	-\$498,587
Net Cash Flow (Contribution to Reserves)	\$365	\$12,854	\$73,139	\$123,218	\$182,183	\$406,183
Affordability of average residential bill	3.06%	3.44%	3.88%	4.37%	4.94%	
In Simple Terms:						
Are you putting enough \$ into reserves?	No	No	No	No	Yes	
Positive Annual Cash Flow?	Yes	Yes	Yes	Yes	Yes	

The table below shows average customer bills per customer class in Scenario 2

Average Bill Every M by Meter Size for the Residential Class

Count	Meter Size	Current	Year 1	Year 2	Year 3	Year 4	Year 5
216	3/4"	\$105.20	\$145.13	\$163.27	\$183.93	\$207.48	\$234.36
4	1"	\$97.57	\$134.43	\$151.69	\$171.38	\$193.90	\$219.65

The graph below shows the performance of Rate Alternative 2 over the next five years



Conclusion:

This rate study has analyzed various pricing structures for the water utility, considering the financial needs of the system, equitable distribution of costs among customers, and

the promotion of water conservation. After careful evaluation, the recommended rate options are included in this report to allow the governing body to select the fairest, sustainable, and financially viable approach for their community.

The rate options presented both allow the utility to cover its expenses including additional debt service payments to Business Oregon for a \$372,284 loan. Option 1 demonstrates the rates necessary to cover expenses if the system is awarded 50% principal forgiveness, while Option 2 demonstrates the rates needed to cover all expenses including annual debt service payments if the system is awarded no principal forgiveness. RCAC recommends that the system adopt the option that best reflects the principal forgiveness they are awarded. If the system is awarded somewhere in between 0 and 50% principal forgiveness, rates could be reassessed to cover the exact payments that are required.

RCAC values affordability when analyzing rate options for small water systems. However, governing body responsibilities for the water system include maintaining sufficient revenue and reserves to provide for ongoing maintenance for the foreseeable future. The ultimate responsibility of the governing body is to ensure preserved public health and compliance with environmental regulations.