

MEMO

TO: Michelle Metteer, Manager

DATE: May 30, 2024

FROM: James Mann, Financial Analyst

RE: Tiered Rate Structure – Water Utility



In follow-up to the Town Council's May 1 discussion and feedback related to the proposed implementation of a tiered water rate structure, Town staff has readjusted the rate structure to address the concerns and suggestions that were raised. To reiterate, the implementation of a tiered water rate structure is in response to a recommendation identified in the Minturn Water Nexus Report and Action Plan (Resolution 5, Series 2024 approved on February 7, 2024).

Residential Tier Rate Structure

Currently, the rate methodology the Town is using for residential water users three-fold: base rate, debt repayment rate, volumetric rate. A summary of the rate components is as follows:

- Base Rate – monthly rate that covers the basic operation of the water treatment plant and system up to the point that water is being delivered to the customer (think before the meter). Current 2024 rate is \$116.77/month per SFE
- Debt Repayment Rate – monthly rate that is meant to cover the annual debt service payments and annual debt service coverage on the outstanding debt of the utility. Current 2024 rate is \$17.37/month per SFE
- Volumetric Rate – use rate per 1,000 gallons of water use (think after meter) that is meant to cover the added cost of water production for delivery. Current rate is \$8.82/1,000 gallons of use
 - For residential customers, the current volumetric rate structure will generate \$178,226 based on the test year data
- SFE Multiplier – for non-municipal/sprinkler accounts, a SFE multiplier is used that applies to the Base and Debt Repayment rates (i.e., if you are a 2.0 SFE customer, the Base/Debt calculation would be as follows: $(\$116.77 + \$17.37) \times 2.0 = \$268.28$)
- Municipal Code defines an SFE (single family equivalent) as "...the basic unit for determination of water charges and usage. One (1) SFE shall be equal to the water required to serve up to three thousand (3,000) square feet of building area as measured from the exterior dimensions of development and two thousand (2,000) square feet of outside irrigated area."

Following the feedback derived from the May 1 discussion, we have maintained a three-tiered rate structure that becomes more costly the more water that is consumed. As with the previous iteration, the goal of the structure was to generate relatively the same volumetric revenues as

are currently produced. Based on the average residential customer utilizing approximately 4,000 gallons/month, the following was developed:

- Tier 1 – 0 – 4,000 gallons \$ 4.25/1,000 gallons
- Tier 2 – 4,001 – 6,000 gallons \$ 9.75/1,000 gallons
- Tier 3 – 6,001 or more gallons \$15.00/1,000 gallons

Further, any single-family residence that is greater than 1 SFE calculation, the SFE multiplier is only applied to the base and debt rates. The SFE multiplier does not apply to the tier allowance in gallons. Utilizing the same 2 SFE example, the base and debt rates are doubled, however the gallon allowance in the tiers remain as stated above (there is no multiplier).

It should be noted that if a single meter is utilized for multiple dwelling units, that the multiplier on the tiered rate structure will continue to apply. This would mean, as an example, if a two dwelling structure had a 2.0 SFE calculation, that they would be charged 2x on the Base and Debt fees, but that account would also have the allowable gallons in the tiers on a 2x calculation. So, the tiers would be 0-8,000 gallons, 8,001 to 12,000 gallons, and 12,001 or greater.

This methodology, if implemented, would generate \$162,141 in volumetric revenues, a drop of \$16,085, which is based on the test year data. Our goal was to not increase the overall volumetric burden. **Most customers will see a reduction in their annual water liability, while a few heavy users will see increases.**

The chart below, which is also attached applies the new rate structure to 15 randomly selected water user accounts:

		January	February	March	April	May	June	July	August	September	October	November	December	Total	New Rates	Existing Rates	Difference	% Change
RES	DUPLEX WITH IRR	5.00	5.00	7.00	4.00	4.00	2.00	7.00	6.00	4.00	4.00	7.00	4.00	59.00	396.50	520.38	(123.88)	-23.81%
RES	DUPLEX WITH IRR	5.00	7.00	2.00	1.00	3.00	10.00	6.00	7.00	6.00	4.00	2.00	6.00	59.00	445.25	520.38	(75.13)	-14.44%
RES	DUPLEX WITH IRR	4.00	4.00	4.00	3.00	3.00	5.00	3.00	3.00	3.00	2.00	3.00	3.00	40.00	175.50	352.80	(177.30)	-50.26%
RES	SFR WITH IRRIGATION	5.00	5.00	5.00	4.00	7.00	14.00	6.00	6.00	4.00	5.00	4.00	6.00	71.00	514.50	626.22	(111.72)	-17.84%
RES	SFR WITH IRRIGATION	22.00	4.00	3.00	3.00	2.00	27.00	31.00	22.00	18.00	7.00	2.00	5.00	146.00	1,787.25	1,287.72	499.53	38.79%
RES	SFR WITH IRRIGATION	3.00	3.00	4.00	3.00	3.00	4.00	5.00	3.00	2.00	2.00	2.00	2.00	36.00	158.50	317.52	(159.02)	-50.08%
RES	SFR WITH IRRIGATION	2.00	2.00	2.00	2.00	2.00	3.00	6.00	3.00	2.00	2.00	2.00	2.00	30.00	138.50	264.60	(126.10)	-47.66%
RES	SFR WITH IRRIGATION	4.00	3.00	4.00	3.00	3.00	4.00	4.00	5.00	5.00	5.00	4.00	3.00	47.00	216.25	414.54	(198.29)	-47.83%
RES	SFR WITH IRRIGATION	7.00	6.00	8.00	5.00	6.00	7.00	5.00	7.00	7.00	6.00	7.00	6.00	77.00	640.50	679.14	(38.64)	-5.69%
RES	SFR WITH IRRIGATION	4.00	4.00	5.00	4.00	4.00	6.00	26.00	23.00	7.00	4.00	3.00	4.00	94.00	916.00	829.08	86.92	10.48%
RES	SFR WITH IRRIGATION	6.00	6.00	4.00	4.00	4.00	5.00	6.00	4.00	3.00	4.00	4.00	4.00	54.00	268.00	476.28	(208.28)	-43.73%
RES	SFR WITH IRRIGATION	4.00	3.00	3.00	2.00	4.00	4.00	5.00	4.00	3.00	4.00	2.00	3.00	41.00	179.75	361.62	(181.87)	-50.29%
RES	SFR WITH IRRIGATION	3.00	2.00	2.00	2.00	1.00	3.00	4.00	2.00	3.00	2.00	2.00	2.00	28.00	119.00	246.96	(127.96)	-51.81%
RES	SFR WITH IRRIGATION	0.00	12.00	6.00	3.00	6.00	7.00	11.00	7.00	5.00	5.00	4.00	4.00	70.00	592.25	617.40	(25.15)	-4.07%
RES	SFR WITH IRRIGATION	4.00	4.00	4.00	3.00	3.00	4.00	3.00	4.00	5.00	6.00	5.00	4.00	49.00	230.25	432.18	(201.93)	-46.72%
Average		5.20	4.67	4.20	3.07	3.67	7.00	8.53	7.07	5.13	4.13	3.53	3.87					
														Average	60.07			
														Average Monthly	5.01			

As you will note on the above, most customers in the random selection will see a drop in their annual water liability. However, those customers that are heavy water users for irrigation, will see significant increases.

Irrigation/Sprinkler Rate Modification

As you may recall, Town staff identified that the irrigation and sprinkler class of accounts were not paying the monthly Base or Debt fees and was utilizing a SFE multiplier on the tiers resulting in few accounts moving out of the lowest tier for volumetric usage. To simplify the rate methodology, we have eliminated the separate class for sprinkler/irrigation accounts (they had different tier structure), combining into a single irrigation class. Similar to the residential tier structure, no multiplier will be utilized on the tier structure.

With the change to the sprinkler/irrigation accounts to start charging the base and debt fees when the systems are operating, the rate structure can be set differently than what was previously established. Therefore, the recommendation on the tiered rate structure for the irrigation class is as follows:

- Tier 1 – 0 – 8,000 gallons \$ 6.38/1,000 gallons
- Tier 2 – 8,001 – 16,000 gallons \$14.63/1,000 gallons
- Tier 3 – 16,001 – 24,000 gallons \$22.50/1,000 gallons
- Tier 4 – 24,001 – 32,000 gallons \$27.50/1,000 gallons
- Tier 5 – 32,001 or more gallons \$32.50/1,000 gallons

As the water being used for irrigation is not returned to the system, I did apply a 1.5x multiplier to the tier rates for the first three tiers and utilized a \$5.00 increment thereafter. Of all the irrigation accounts, there are only five accounts that will reach Tier 5 based on their 2023 usage.

Another issue is that there is one account that utilizes non-potable water on what is a separate non-potable system. It would be difficult to justify charging the same rates as the potable water system, as the water is not treated and does not have the same distribution system. For this class, I applied a 0.50x multiplier to the tier rates and the same \$5.00 increment thereafter. The recommendation on the tiered rate structure for the non-potable system is as follows:

- Tier 1 – 0 – 8,000 gallons \$ 2.13/1,000 gallons
- Tier 2 – 8,001 – 16,000 gallons \$ 4.88/1,000 gallons
- Tier 3 – 16,001 – 24,000 gallons \$ 7.50/1,000 gallons
- Tier 4 – 24,001 – 32,000 gallons \$12.50/1,000 gallons
- Tier 5 – 32,001 or more gallons \$17.50/1,000 gallons

Also, without undertaking a much more detailed analysis of the historic infrastructure costs, annual maintenance and operation of said costs, and future capital needs, a 25% multiplier was applied to the standard base and debt fees for the non-potable system.

The above Irrigation//Sprinkler/Non-Potable Rates would result in the following revenues, based on the 2023 test year data:

All Sprinkler/Irrigation and Non-Potable Accounts				
Existing Rates		Proposed Rates		Change
Base/Debt Fees	0	Base/Debt Actual	33,039	33,039
Volumetric Target	40,999	Volumetric Actual	55,073	14,074
Base Year Revenues	40,999	Test Year Revenues	88,112	47,113

Because the Irrigation user classes were not being charged the Base/Debt Fees, all the Irrigation user class accounts would see an increase in their annual billings. The range of increases is from the low of \$472 to a high of \$9,720.

Between the proposed change in Residential rate structure and the new Irrigation rates, the change would result in an increase in total revenues of \$31,028. While the test data would suggest the above, given the nature of the test year data, the continued scrubbing of the raw data, and likely changes in irrigation behavior, it is anticipated that the amount of additional revenue will be reduced.

Random Account Selection:																		
		January	February	March	April	May	June	July	August	September	October	November	December	Total	New Rates	Existing Rates	Difference	% Change
RES	DUPLEX WITH IRR	5.00	5.00	7.00	4.00	4.00	2.00	7.00	6.00	4.00	4.00	7.00	4.00	59.00	396.50	520.38	(123.88)	-23.81%
RES	DUPLEX WITH IRR	5.00	7.00	2.00	1.00	3.00	10.00	6.00	7.00	6.00	4.00	2.00	6.00	59.00	445.25	520.38	(75.13)	-14.44%
RES	DUPLEX WITH IRR	4.00	4.00	4.00	3.00	3.00	5.00	3.00	3.00	3.00	2.00	3.00	3.00	40.00	175.50	352.80	(177.30)	-50.26%
RES	SFR WITH IRRIGATION	5.00	5.00	5.00	4.00	7.00	14.00	6.00	6.00	4.00	5.00	4.00	6.00	71.00	514.50	626.22	(111.72)	-17.84%
RES	SFR WITH IRRIGATION	22.00	4.00	3.00	3.00	2.00	27.00	31.00	22.00	18.00	7.00	2.00	5.00	146.00	1,787.25	1,287.72	499.53	38.79%
RES	SFR WITH IRRIGATION	3.00	3.00	4.00	3.00	3.00	4.00	5.00	3.00	2.00	2.00	2.00	2.00	36.00	158.50	317.52	(159.02)	-50.08%
RES	SFR WITH IRRIGATION	2.00	2.00	2.00	2.00	2.00	3.00	6.00	3.00	2.00	2.00	2.00	2.00	30.00	138.50	264.60	(126.10)	-47.66%
RES	SFR WITH IRRIGATION	4.00	3.00	4.00	3.00	3.00	4.00	4.00	5.00	5.00	5.00	4.00	3.00	47.00	216.25	414.54	(198.29)	-47.83%
RES	SFR WITH IRRIGATION	7.00	6.00	8.00	5.00	6.00	7.00	5.00	7.00	7.00	6.00	7.00	6.00	77.00	640.50	679.14	(38.64)	-5.69%
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RES	SFR WITH IRRIGATION	6.00	6.00	4.00	4.00	4.00	5.00	6.00	4.00	3.00	4.00	4.00	4.00	54.00	268.00	476.28	(208.28)	-43.73%
RES	SFR WITH IRRIGATION	4.00	3.00	3.00	2.00	4.00	4.00	5.00	4.00	3.00	4.00	2.00	3.00	41.00	179.75	361.62	(181.87)	-50.29%
RES	SFR WITH IRRIGATION	3.00	2.00	2.00	2.00	1.00	3.00	4.00	2.00	3.00	2.00	2.00	2.00	28.00	119.00	246.96	(127.96)	-51.81%
RES	SFR WITH IRRIGATION	0.00	12.00	6.00	3.00	6.00	7.00	11.00	7.00	5.00	5.00	4.00	4.00	70.00	592.25	617.40	(25.15)	-4.07%
RES	SFR WITH IRRIGATION	4.00	4.00	4.00	3.00	3.00	4.00	3.00	4.00	5.00	6.00	5.00	4.00	49.00	230.25	432.18	(201.93)	-46.72%
Average		5.20	4.67	4.20	3.07	3.67	7.00	8.53	7.07	5.13	4.13	3.53	3.87					
														Average Annual Kgals	60.07			
														Average Monthly Kgals	5.01			