

Hildale - Colorado City Rate Analysis

Proposed Alternatives

3/13/2024

Background:

Budget:

The attached budget is based on the current water system budget with the future year estimates in grey cells increasing based on an inflation factor of 3.5%. The budget has been reviewed by system staff. Several points to notice are:

Expenses:

- Equipment Supplies and Maintenance costs increase in base year from previous years (\$3,000 to \$50,000)
- Maintenance & Supply – System costs increase in base year from previous years (\$90,043 to \$177,700)
- Power costs increase in base year from previous years (\$135,000 to \$200,000)
- Laboratory costs are increasing due to additional sampling needs.
- System construction services expenses are increasing due to planned projects over the next 5 years.
- Reserves to be discussed in the next section.

Revenue:

- Sales Revenue is calculated off actual usage data, will vary based on proposals. Current revenue under existing rates and usage - \$955,016
- Additional revenue from new connections based on system growth.
- Interest income increased in base year from previous years (\$4,174 to \$22,000)
 - Increasing interest from PTIF rates

Affordability

- Based on Median Household Income (MHI) of \$62,857 (2020 Census for Hildale)
 - Please note, MHI for Colorado City in 2020 Census is \$41,250

Reserves:

- Existing Reserves
 - Total existing reserves available based on Water Fund Balance Sheet June 30, 2023
 - \$1,167,138 in 81-11900 Cash-Combined Fund, less the \$204,098 in 81-21350 Customer Deposits

Existing Reserves	Amount			
Debt Reserve	\$0	As per lending agreement(s)		
Operating Reserve	\$174,360	Often in Checking Account		
Emergency Reserve	\$20,000	Often in Savings Account		
Capital Reserve	\$768,680	Mostly in CDs or other investments		
Total	\$963,040			

- Debt Reserve is determined by WIFA Loan agreement.
 - A reserve equal to one annual loan payment (\$14,758)
 - Planning to build reserve over three-year window, no funds current allocated for this reserve.
- Operating Reserve
 - 1.5 times the expenses during a billing cycle
 - Assuming that of the available funds for reserves, the total amount required of \$174,360 can be internally restricted to cover this amount.
- Emergency Reserve
 - Often the critical equipment replacement cost.
 - In consultation with system staff, a target of \$20,000 was identified. It is assumed that \$20,000 of the existing available reserves can be internally restricted to cover this amount.
- Capital Reserve
 - Funds available to replace current system assets, or purchase future assets
 - Two options to consider for funds available for capital reserves. Option 1 would have the total amount available, \$768,680, go towards replacement of existing capital assets. Option 2 would allocate \$300,000 of the existing reserves towards future capital assets, leaving \$468,680 for replacement of existing assets.
- Replacement of Existing Capital Assets
 - Calculates replacement costs of current system assets and determined annual reserve requirements
 - Existing Reserves Column
 - Withdrawal of existing reserves available.
 - Annual Reserve Required Column
 - Annual contributions to reserve to cover cash replacement of asset at end of remaining life.
- Replacement of Funded Capital Assets
 - Replacement cost calculation for assets currently being constructed, funded by Mohave County ARPA Project
 - Fencing, raw water transmission line, 2 new wells.
- Reserves for Additional Capital Assets
 - Multiple projects identified in master plan.

- Some projects are combined in individual lines due to limitations of the rate model, but all costs and projects are accounted for.
- Reviewed by system staff for planned project dates and estimated project costs.
- The model calculates planned system contribution at time of planned project, divided by number of years to save. Calculation incorporates interest earned on reserves as well.
 - Two scenarios will be considered in the next section.
- Total future cost of planned projects totals \$31,301,101.
 - 2% to 10% of each project is expected to be paid as a system cash contribution.
- ***Please note that the amount saved for additional capital assets has changed since the original projections as the change from CY2023 to CY2024 resulted in calculation errors in the rate model***

Sales:

- Model uses 12 months of water use data from the system
- Using system data input customers by class and meter size
- Used to calculate base rate and sales revenue
- Review of usage data to impact proposed tiers

Internal Allocation of Existing Capital Reserves

- With the number of planned projects, RCAC assessed the impact on budget scenarios with some of the existing reserves available for capital replacement to be allocated towards future additional capital purchases. Scenario 1 below shows current projections with all available reserves dedicated to replacement of current assets. Scenario 2 has \$300,000 allocated to the initial purchase costs of planned additional capital assets, with the remaining \$468,680 allocated to replacement of current assets.
- Scenario 1 – All available reserves allocated to replacement of current assets.

Results of the new rates	2024	2025	2026	2027	2028	5 Years
TOTAL EXPENSES	\$1,903,198	\$1,842,707	\$1,978,020	\$1,801,712	\$1,932,541	\$9,458,179
TOTAL REVENUE	\$1,098,305	\$1,129,748	\$1,177,372	\$1,257,188	\$1,273,192	\$5,935,805
NET LOSS OR GAIN: (Short/Over to Reserves)	-\$804,893	-\$712,959	-\$800,648	-\$544,524	-\$659,349	-\$3,522,374
NET CASH FLOW (Contribution to Reserves)	-\$451,261	-\$502,278	-\$613,544	-\$374,812	-\$506,870	-\$2,448,766
Affordability assuming MHI of \$62857 for residential meters.	1.15%	1.17%	1.18%	1.19%	1.21%	
Are you putting enough money in reserves?	No	No	No	No	No	
Positive Annual Cash Flow?	No	No	No	No	No	

- Scenario 2 - \$300,000 of available reserves allocated to planned additional capital assets.

Results of the new rates	2024	2025	2026	2027	2028	5 Years
TOTAL EXPENSES	\$1,833,173	\$1,835,846	\$1,978,571	\$1,786,673	\$1,925,447	\$9,359,710
TOTAL REVENUE	\$1,098,305	\$1,129,748	\$1,177,372	\$1,257,188	\$1,273,192	\$5,935,805
NET LOSS OR GAIN: (Short/Over to Reserves)	-\$734,868	-\$706,098	-\$801,199	-\$529,484	-\$652,256	-\$3,423,905
NET CASH FLOW (Contribution to Reserves)	-\$451,261	-\$502,278	-\$613,544	-\$374,812	-\$506,870	-\$2,448,766
Affordability assuming MHI of \$62857 for residential meters.	1.15%	1.17%	1.18%	1.19%	1.21%	
Are you putting enough money in reserves?	No	No	No	No	No	
Positive Annual Cash Flow?	No	No	No	No	No	

- By allocating existing reserves towards planned additional capital purchases, overall system expenses across the 5-year period are reduced by approximately \$100,000. The overall expenses decrease with the allocation due to the timelines of new asset purchases compared to replacement of existing assets.
- The planned additional assets are all scheduled within the next 20 years, with most planned for the next 5 years. The planned dates for replacement of existing assets vary, but many of the assets will not be replaced in the next five years. Of the 60 capital assets included in the replacement schedule, only 14 are scheduled to be replaced in the next five years. These existing assets generally have a lower expected cost compared to the new purchases as well.
- **It is recommended the HCC Utility Department internally restrict \$300,000 of existing capital reserves for the purchase of additional capital assets. This will reduce overall system costs over the next five years, help stabilize system expenses, and reduce the overall burden on rate payers.**
 - For the following rate suggestions, RCAC has allocated \$300,000 towards the purchase of planned capital assets.

Current Status:

- Given the many capital projects planned, HCC Utility is not currently bringing in adequate revenue and will need to draw down reserves rapidly to cover anticipated costs that will occur in the next 5 years.
- In order to cover O&M expenses, as well as general and administrative expenses, the system needs to generate an average of \$1,679,866 in annual revenue. Currently, the system brings in approximately \$1,082,305 in revenue (including earned interest, penalties, and new connection revenue).
- If the utility is to cover system contributions to the capital replacement reserve and save for future capital additions, then system expenses will increase to \$1,833,173 in the first year (with average annual expenses of \$1,871,942 over the next five years).
- Under current conditions, HCC will be drawing on reserves to cover system operating and administrative expenses, potentially eliminating reserves in the next two to three years.
- **It is recommended that Hildale-Colorado City Utility increase rates and review the existing rate structure to generate revenue to cover all system expenses.**

Calculating Theoretical Base Rate:

Ideally, base rates charged to customers should be adequate to cover fixed costs in a water system. These base rates should be based on meter size, as larger meters have the capacity to put a greater demand on the system, and the system has certain fixed costs in order to be able to meet this demand. This allows us to determine base rates for all meters that would cover these fixed costs.

Meter Size in "	Decimal Size	Number of Meters	AWWA Safe Maximum Operating Cap. (GPM)	Max Demand (GPM)	% of Max Demand by Meter Size	Total Fixed Costs Allocated by Meter Size	Theoretical Base Rate by Meter Size per M
A	B	C	D	E= D * C	F= % of total	G= % * total	H=G/C/12
5/8"	0.625	0	20				
3/4"	0.750	845	30	25,350	59.38%	\$986,968	\$97.33
1"	1.000	118	50	5,900	13.82%	\$229,709	\$162.22
1.5"	1.500	28	100	2,800	6.56%	\$109,014	\$324.45
2"	2.000	34	160	5,440	12.74%	\$211,799	\$519.12
3"	3.000	10	320	3,200	7.50%	\$124,588	\$1,038.23
Total		1035		42,690	100.00%	\$1,662,078	

Notes:

1. Safe maximum meter capacity for 5/8" through 2" meters (column D) based on AWWA C700 displacement meters.
2. Safe maximum meter capacity for 3" through 8" meters based on AWWA C702 compound meters.
3. Safe maximum meter capacity for 10" meter based on AWWA C704 propeller type meter.

Alternative 1 – Maintain current rate structure, increase base rate only.

In this scenario, we look at increasing the base rate for all customers, based on a percentage of the theoretical base rates seen above. To balance the 5-year budget with a one-time rate increase, the new base rates would need to be raised to 73% of the theoretical base rates. The new rates can be seen in the table below.

Customer Class	Rate Structure	Base Rate	Usage Rates
¾" Meter	Tiered Block	\$71.00	0 – 20,000 - \$1.20/1,000 20,001-60,000 - \$1.50/1,000 60,001+ - \$1.80/1,000
1" Meter	Tiered Block	\$118.50	0 – 38,000 - \$1.20/1,000 38,001-115,000 - \$1.50/1,000 115,001+ - \$1.80/1,000
1.5" Meter	Tiered Block	\$237.00	0 – 56,000 - \$1.20/1,000 56,001-169,000 - \$1.50/1,000 169,001+ - \$1.80/1,000
2" Meter	Tiered Block	\$379.00	0 – 75,000 - \$1.20/1,000 75,001-224,000 - \$1.50/1,000 224,001+ - \$1.80/1,000
Hydrant Meter	Tiered Block	\$110.00	Any amount - \$5.00/1,000

In this scenario, all customers see a base rate increase, the current customer classes are maintained, and all customers pay an equitable base rate according to the theoretical base rate. This scenario would bring in adequate revenue over a five-year period. While reserve targets are not fully met in the first three years, the additional net gain in 2027 and 2028 balances the system's five-year budget.

Results of the new rates	2024	2025	2026	2027	2028	5 Years
TOTAL EXPENSES	\$1,833,173	\$1,835,846	\$1,978,571	\$1,786,673	\$1,925,447	\$9,359,710
TOTAL REVENUE	\$1,783,757	\$1,815,200	\$1,862,824	\$1,942,641	\$1,958,644	\$9,363,067
NET LOSS OR GAIN: (Short/Over to Reserves)	-\$49,416	-\$20,646	-\$115,747	\$155,968	\$33,197	\$3,356
NET CASH FLOW (Contribution to Reserves)	\$234,191	\$183,174	\$71,908	\$310,640	\$178,582	\$978,496
Affordability assuming MHI of \$62857 for residential meters.	1.97%	1.98%	1.99%	2.01%	2.02%	
Are you putting enough money in reserves?	No	No	No	Yes	Yes	
Positive Annual Cash Flow?	Yes	Yes	Yes	Yes	Yes	

Average customer bills under scenario 1

Average Bill Every M by Meter Size										
Meter Size	Count	Meter Size	Current	Year 1	Year 2	Year 3	Year 4	Year 5		
0.750	845	3/4"	\$59.10	\$102.28	\$102.97	\$103.66	\$104.34	\$105.03		
1.000	118	1"	\$103.25	\$168.84	\$169.93	\$171.02	\$172.12	\$173.22		
1.500	28	1.5"	\$144.00	\$302.43	\$303.87	\$305.31	\$306.76	\$308.22		
2.000	34	2"	\$244.85	\$521.86	\$524.87	\$527.88	\$530.90	\$533.92		

This scenario results in a substantial increase for all customers but would cover current and planned systems expenses.

Alternative 2 – One-time increase of base rate, usage rates, and usage tiers

In this alternative, the usage tiers have been adjusted based on actual residential customer usage. A review of customer usage in winter months and summer months was conducted. It was found that residential customers use an average of 13,911 gallons per month in the winter months (December, January, and February). Additionally, these same residential customers use an average of 37,270 gallons per month in the summer months (June, July, and August).

As the cost to produce water does not change depending on the customer's meter size, the scenario applies the same usage tiers to every customer. Additionally, the usage rates are increased in each tier by \$0.30 per thousand gallons.

With the changes to usage tiers and rates, the base rate has not increased as greatly.

Customer Class	Rate Structure	Base Rate	Usage Rates
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¾" Meter	Tiered Block	\$62.50	0 – 14,000 - \$1.50/1,000 14,001-38,000 - \$1.80/1,000 38,001+ - \$2.10/1,000
1" Meter	Tiered Block	\$104.00	0 – 14,000 - \$1.50/1,000 14,001-38,000 - \$1.80/1,000 38,001+ - \$2.10/1,000
1.5" Meter	Tiered Block	\$207.50	0 – 14,000 - \$1.50/1,000 14,001-38,000 - \$1.80/1,000 38,001+ - \$2.10/1,000
2" Meter	Tiered Block	\$332.00	0 – 14,000 - \$1.50/1,000 14,001-38,000 - \$1.80/1,000 38,001+ - \$2.10/1,000
Hydrant Meter	Tiered Block	\$110.00	Any amount - \$5.00/1,000

In this scenario, all customers see a base rate increase, the current customer classes are maintained, and all customers pay an equitable base rate according to the theoretical base rate. This scenario would bring in adequate revenue over a five-year period. While reserve targets are not fully met in the first three years, the additional net gain in 2027 and 2028 balances the system's five-year budget.

With an increase in usage rates, it is expected that customers will work to conserve water. This is reflected in a conservation factor, assuming that customers will reduce water use by 1.5% to 3% as they adapt to the rate increase.

Results of the new rates	2024	2025	2026	2027	2028	5 Years
TOTAL EXPENSES	\$1,833,173	\$1,835,846	\$1,978,571	\$1,786,673	\$1,925,447	\$9,359,710
TOTAL REVENUE	\$1,780,082	\$1,803,993	\$1,864,413	\$1,953,636	\$1,975,672	\$9,377,796
NET LOSS OR GAIN: (Short/Over to Reserves)	-\$53,092	-\$31,854	-\$114,158	\$166,963	\$50,225	\$18,085
NET CASH FLOW (Contribution to Reserves)	\$230,515	\$171,967	\$73,498	\$321,635	\$195,610	\$993,225
Affordability assuming MHI of \$62857 for residential meters.	1.96%	1.97%	1.99%	2.02%	2.04%	
Are you putting enough money in reserves?	No	No	No	Yes	Yes	
Positive Annual Cash Flow?	Yes	Yes	Yes	Yes	Yes	

Average Customer Bills under Scenario 2

Average Bill Every M by Meter Size								
Meter Size	Count	Meter Size	Current	Year 1	Year 2	Year 3	Year 4	Year 5
0.750	845	¾"	\$59.10	\$101.84	\$102.05	\$103.53	\$104.81	\$105.87
1.000	118	1"	\$103.25	\$170.44	\$170.79	\$173.27	\$175.41	\$177.19
1.500	28	1.5"	\$144.00	\$300.39	\$300.87	\$304.29	\$307.22	\$309.66
2.000	34	2"	\$244.85	\$521.47	\$522.44	\$529.21	\$535.02	\$539.86

This scenario results in a substantial increase for all customers but would cover current and planned systems expenses. Additionally, by tightening up usage tiers and increasing usage rates, the system will

likely see reductions in demand for water from customers. Additionally, the shift towards more reliance on revenue from water sales compared to base rate gives customers more control over their bills, though puts the utility at a greater risk as the more reliable revenue from base rates may not be sufficient if customers significantly decrease water usage.

Alternative 3 – Phased increase of base rate and usage rate increases, existing tiers

In this scenario, we consider a smaller initial increase to base rates and usage rates, using existing usage tiers. This will be followed by annual increases over the five-year period to balance the budget. The initial base rate increases are listed in the table below. The annual growth rates of base and usage rates can be seen below the table.

Customer Class	Rate Structure	Base Rate	Usage Rates
¾" Meter	Tiered Block	\$38.50	0 – 20,000 - \$1.50/1,000 20,001-60,000 - \$1.80/1,000 60,001+ - \$2.10/1,000
1" Meter	Tiered Block	\$64.00	0 – 38,000 - \$1.50/1,000 38,001-115,000 - \$1.80/1,000 115,001+ - \$2.10/1,000
1.5" Meter	Tiered Block	\$128.50	0 – 56,000 - \$1.50/1,000 56,001-169,000 - \$1.80/1,000 169,001+ - \$2.10/1,000
2" Meter	Tiered Block	\$205.50	0 – 75,000 - \$1.50/1,000 75,001-224,000 - \$1.80/1,000 224,001+ - \$2.10/1,000
Hydrant Meter	Tiered Block	\$110.00	Any amount - \$5.00/1,000

Growth Factor of Rates		Year 2	Year 3	Year 4	Year 5
	Base	25.00%	20.00%	15.00%	10.00%
	Usage	10.00%	10.00%	7.50%	5.00%

This scenario, while resulting in a more modest increase in rates in the first year, ultimately results in higher rates for customers by the final year of the five-year period. To make up for the demand for existing reserves in the first two years, rates need to be increased substantially to cover this loss. The results of the new rates and average bills are below.

Please note that after a review and update of the rate model to account for the missing calculation of several planned future projects, alternative 3 will not bring in enough revenue to cover the revised expenses from future capital projects. The updated projection can be seen in the table below.

Growth Factor of Rates		Year 2	Year 3	Year 4	Year 5		
	Base	25.00%	20.00%	15.00%	10.00%		
	Usage	10.00%	10.00%	7.50%	5.00%		
Results of the new rates		2024	2025	2026	2027	2028	5 Years
	TOTAL EXPENSES	\$1,790,316	\$1,827,096	\$1,980,889	\$1,880,722	\$2,067,892	\$9,546,914
	TOTAL REVENUE	\$1,360,760	\$1,599,371	\$1,884,166	\$2,174,082	\$2,349,805	\$9,368,183
	NET LOSS OR GAIN: (Short/Over to Reserves)	-\$429,555	-\$227,725	-\$96,723	\$293,360	\$281,913	-\$178,731
	NET CASH FLOW (Contribution to Reserves)	-\$188,806	-\$34,052	\$91,853	\$438,238	\$414,508	\$721,741
	Affordability assuming MHI of \$62857 for residential meters.	1.46%	1.73%	2.02%	2.29%	2.49%	
	Are you putting enough money in reserves?	No	No	No	Yes	Yes	
	Positive Annual Cash Flow?	No	No	Yes	Yes	Yes	

Average Bill Every M by Meter Size								
Meter Size	Count	Meter Size	Current	Year 1	Year 2	Year 3	Year 4	Year 5
0.750	845	3/4"	\$59.10	\$75.88	\$89.46	\$104.95	\$118.75	\$129.41
1.000	118	1"	\$103.25	\$124.15	\$146.53	\$171.93	\$194.58	\$212.07
1.500	28	1.5"	\$144.00	\$207.26	\$247.73	\$292.22	\$331.97	\$362.64
2.000	34	2"	\$244.85	\$374.19	\$443.42	\$521.01	\$590.17	\$643.51

Alternative 3.1 – Phased increase of base rate and usage rate increases, existing tiers (JP Proposal 1)

In this scenario, we consider a smaller initial increase to base rates along with changes to usage tiers and rates, including to hydrant meters. This will be followed by annual increases over the five-year period to balance the budget. The initial base rate increases are listed in the table below. The annual growth rates of base and usage rates can be seen below the table.

Customer Class	Rate Structure	Base Rate	Usage Rates
3/4" Meter	Tiered Block	\$38.50	0 – 10,000 - \$1.75/1,000 10,001-30,000 - \$1.90/1,000 30,001+ - \$2.50/1,000
1" Meter	Tiered Block	\$64.00	0 – 10,000 - \$1.75/1,000 10,001-30,000 - \$1.90/1,000 30,001+ - \$2.50/1,000
1.5" Meter	Tiered Block	\$128.50	0 – 30,000 - \$2.50/1,000 30,001-80,000 - \$2.80/1,000 80,001+ - \$3.10/1,000
2" Meter	Tiered Block	\$205.50	0 – 35,000 - \$2.50/1,000 35,001 – 90,000 - \$2.80/1,000 90,001-200,000 - \$3.50/1,000 200,001+ - \$4.50/1,000
Hydrant Meter	Tiered Block	\$150.00	Any amount - \$10.00/1,000

Growth Factor of Rates		Year 2	Year 3	Year 4	Year 5
	Base	15.00%	5.00%	2.00%	2.00%
	Usage	10.00%	5.00%	2.00%	2.00%

This scenario combines a more modest first year base rate increase, along with adjustments to tiers and usage rates. After the initial increases, smaller increases are needed in years 2 and 3 to bring in enough revenue. A 2% annual increase is included in later years to help rates maintain pace with inflation. The results of the new rates and average bills are below.

Growth Factor of Rates		Year 2	Year 3	Year 4	Year 5
	Base	15.00%	5.00%	2.00%	2.00%
	Usage	10.00%	5.00%	2.00%	2.00%

Results of the new rates		2024	2025	2026	2027	2028	5 Years
	TOTAL EXPENSES	\$1,790,316	\$1,827,096	\$1,980,889	\$1,880,722	\$2,067,892	\$9,546,914
	TOTAL REVENUE	\$1,594,343	\$1,795,937	\$1,950,394	\$2,085,999	\$2,154,398	\$9,581,072
	NET LOSS OR GAIN: (Short/Over to Reserves)	-\$195,972	-\$31,158	-\$30,495	\$205,277	\$86,505	\$34,157
	NET CASH FLOW (Contribution to Reserves)	\$44,777	\$162,515	\$158,082	\$350,155	\$219,101	\$934,630
	Affordability assuming MHI of \$62857 for residential meters.	1.62%	1.83%	1.96%	2.03%	2.10%	
	Are you putting enough money in reserves?	No	No	No	Yes	Yes	
	Positive Annual Cash Flow?	Yes	Yes	Yes	Yes	Yes	

Average Bill Every M by Meter Size								
Meter Size	Count	Meter Size	Current	Year 1	Year 2	Year 3	Year 4	Year 5
0.750	845	3/4"	\$59.10	\$84.01	\$94.61	\$101.37	\$105.18	\$108.80
1.000	118	1"	\$103.25	\$141.69	\$159.52	\$170.91	\$177.31	\$183.40
1.500	28	1.5"	\$144.00	\$261.32	\$294.65	\$315.08	\$326.38	\$337.16
2.000	34	2"	\$244.85	\$537.12	\$603.11	\$648.01	\$673.89	\$698.38

Alternative 3.2 – Phased increase of base rate and usage rate increases, existing tiers (JP Proposal 2)

In this scenario, we consider a smaller initial increase to base rates along with changes to usage tiers and rates, including to hydrant meters. Please note, this scenario recommends including a \$200 deposit with the hydrant meters, however incorporation of these deposits is not possible in the rate model as part of the rates, assuming they are refundable. This could be calculated separately and added to the budget if desired. This will be followed by annual increases over the five-year period to balance the budget. The initial base rate increases are listed in the table below. The annual growth rates of base and usage rates can be seen below the table.

Customer Class	Rate Structure	Base Rate	Usage Rates
¾" Meter	Tiered Block	\$38.50	0 – 15,000 - \$1.50/1,000
			15,001-30,000 - \$1.85/1,000
			30,001-50,000 - \$2.00/1,000
			50,001+ - \$2.75/1,000
1" Meter	Tiered Block	\$64.00	0 – 10,000 - \$1.50/1,000
			10,001-45,000 - \$2.00/1,000

			45,001-100,000 - \$2.75/1,000 100,001+ - \$3.50/1,000
1.5" Meter	Tiered Block	\$128.50	0 – 35,000 - \$1.50/1,000 35,001-55,000 - \$2.00/1,000 55,001-125,000 - \$2.75/1,000 125,001+ - \$3.50/1,000
2" Meter	Tiered Block	\$205.50	0 – 55,000 - \$2.50/1,000 55,001-90,000 - \$2.80/1,000 90,001-200,000 - \$3.50/1,000 200,001+ - \$5.50/1,000
Hydrant Meter	Tiered Block	\$150.00+\$200.00 Deposit	Any amount - \$10.00/1,000

Growth Factor of Rates		Year 2	Year 3	Year 4	Year 5
	Base	18.00%	5.00%	2.00%	2.00%
	Usage	10.00%	5.00%	2.00%	2.00%

This scenario combines a more modest first year base rate increase, along with adjustments to tiers and usage rates, including larger usage tiers, additional usage tiers and a higher rate for the highest users. After the initial increases, smaller increases are needed in years 2 and 3 to bring in enough revenue. A 2% annual increase is included in later years to help rates maintain pace with inflation. The results of the new rates and average bills are below.

Growth Factor of Rates		Year 2	Year 3	Year 4	Year 5		
	Base	18.00%	5.00%	2.00%	2.00%		
	Usage	10.00%	5.00%	2.00%	2.00%		
Results of the new rates		2024	2025	2026	2027	2028	5 Years
TOTAL EXPENSES		\$1,790,316	\$1,827,096	\$1,980,889	\$1,880,722	\$2,067,892	\$9,546,914
TOTAL REVENUE		\$1,575,789	\$1,794,465	\$1,950,273	\$2,087,162	\$2,156,745	\$9,564,434
NET LOSS OR GAIN: (Short/Over to Reserves)		-\$214,527	-\$32,630	-\$30,616	\$206,440	\$88,853	\$17,520
NET CASH FLOW (Contribution to Reserves)		\$26,223	\$161,043	\$157,960	\$351,318	\$221,448	\$917,992
Affordability assuming MHI of \$62857 for residential meters.		1.56%	1.78%	1.91%	1.98%	2.05%	
Are you putting enough money in reserves?	No	No	No	Yes	Yes		
Positive Annual Cash Flow?	Yes	Yes	Yes	Yes	Yes		

Average Bill Every M by Meter Size								
Meter Size	Count	Meter Size	Current	Year 1	Year 2	Year 3	Year 4	Year 5
0.750	845	3/4"	\$59.10	\$80.71	\$92.13	\$98.74	\$102.47	\$106.02
1.000	118	1"	\$103.25	\$148.35	\$168.86	\$181.38	\$188.58	\$195.42
1.500	28	1.5"	\$144.00	\$233.81	\$268.21	\$287.09	\$297.64	\$307.71
2.000	34	2"	\$244.85	\$573.11	\$649.15	\$698.46	\$727.19	\$754.33

Alternative 3.3 – Utility Board Input from 3/7/24

A work session with RCAC and the Hildale Colorado City Utility Board was held on March 7, 2024. At this session, RCAC review progress on the rate analysis to date, including what items have been included and how suggestions have been formulated. Additionally, the above scenarios were reviewed, with a greater focus on alternatives 3.1 and 3.2 as they had already been reviewed and suggested by HCC utility staff. During the work session with the board, two modifications to alternative 3.2 were suggested, adjusting the initial usage tier of the 1” customer class from 10,000 to 20,000 gallons and reducing the 2nd year base rate increase from 18% to lessen the second year increase. Upon inputs of this information, RCAC is recommending the following scenario that is very similar to 3.2, with the most significant changes being that base rates would increase by 13% (rather than 18%) in year 2, followed by a 11% (rather than 5%) increase in year 3. The resulting impact can be seen below.

Customer Class	Rate Structure	Base Rate	Usage Rates
¾” Meter	Tiered Block	\$38.50	0 – 15,000 - \$1.50/1,000
			15,001-30,000 - \$1.85/1,000
			30,001-50,000 - \$2.00/1,000
			50,001+ - \$2.75/1,000
1” Meter	Tiered Block	\$64.00	0 – 20,000 - \$1.50/1,000
			20,001-45,000 - \$2.00/1,000
			45,001-100,000 - \$2.75/1,000
			100,001+ - \$3.50/1,000
1.5” Meter	Tiered Block	\$128.50	0 – 35,000 - \$1.50/1,000
			35,001-55,000 - \$2.00/1,000
			55,001-125,000 - \$2.75/1,000
			125,001+ - \$3.50/1,000
2” Meter	Tiered Block	\$205.50	0 – 55,000 - \$2.50/1,000
			55,001-90,000 - \$2.80/1,000
			90,001-200,000 - \$3.50/1,000
			200,001+ - \$5.50/1,000
Hydrant Meter	Tiered Block	\$150.00	Any amount - \$10.00/1,000

Growth Factor of Rates		Year 2	Year 3	Year 4	Year 5
	Base	13.00%	11.00%	2.00%	2.00%
	Usage	10.00%	5.00%	2.00%	2.00%

This scenario spreads out the necessary base rate increase more than previous alternatives. This results in a slight net loss over the 5-year period, but a very small loss. Overall, in this scenario it is projected that the HCC water system will put \$894,609 towards reserves over five years, just \$5,863 less than the overall goal. Results of the rates and impacts on customers’ average bill are below. There is a very slight change in the eventual average monthly bill after five years compared to 3.2, but it does lessen the impact of the rate increase in years 2 and 3 for many customers.

Growth Factor of Rates		Year 2	Year 3	Year 4	Year 5		
Base		13.00%	11.00%	2.00%	2.00%		
Usage		10.00%	5.00%	2.00%	2.00%		
Results of the new rates		2024	2025	2026	2027	2028	5 Years
TOTAL EXPENSES		\$1,790,316	\$1,827,096	\$1,980,889	\$1,880,722	\$2,067,892	\$9,546,914
TOTAL REVENUE		\$1,572,058	\$1,759,114	\$1,955,451	\$2,092,392	\$2,162,037	\$9,541,051
NET LOSS OR GAIN: (Short/Over to Reserves)		-\$218,257	-\$67,982	-\$25,438	\$211,670	\$94,145	-\$5,863
NET CASH FLOW (Contribution to Reserves)		\$22,492	\$125,691	\$163,138	\$356,548	\$226,740	\$894,609
Affordability assuming MHI of \$62857 for residential meters.		1.56%	1.74%	1.92%	1.99%	2.06%	
Are you putting enough money in reserves?		No	No	No	Yes	Yes	
Positive Annual Cash Flow?		Yes	Yes	Yes	Yes	Yes	

Average Bill Every M by Meter Size for the Water Rate 3/4" Class										
Meter Size	Count	Meter Size	Current	Year 1	Year 2	Year 3	Year 4	Year 5		
0.750	845	3/4"	\$59.10	\$80.71	\$90.20	\$99.33	\$103.07	\$106.63		
1.000	0	1"	\$103.25	\$145.71	\$162.75	\$179.26	\$186.38	\$193.14		
1.500	0	1.5"	\$144.00	\$233.81	\$261.79	\$289.05	\$299.64	\$309.75		
2.000	0	2"	\$244.85	\$573.11	\$638.87	\$701.60	\$730.40	\$757.60		

Overall Suggestions

- Ultimately, rates need to increase substantially for HCC to cover anticipated system costs. RCAC has reviewed system financials, usage, and assets extensively and has worked to identify any areas of potential cost savings, especially related to planned capital projects. That said, HCC Utility should strongly consider which, if any, of the planned projects can be delayed, reducing the short-term burden on customers.
- With the understanding that many of these projects cannot be delayed due to capacity and compliance concerns, HCC should ensure that the best possible funding packages are sought to reduce up-front system contributions and future debt service requirements.
- While the delay of rate increases may be appealing, it can ultimately result in higher rates for customers. It is important to balance the phased implementation of rates with the eventual rates customers must pay to cover system expenses.
- Lastly, these are initial scenarios and alternatives to consider. RCAC will work with HCC to fine tune rate suggestions based on feedback from the board.