

October 20, 2020

2020 Water Rate Study:

# The City of Salida, CO



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## Executive Summary

### KEY FINDINGS

- The Utility's last rate increase was effective for January 2020.
- As of December 31, 2019, the Utility has a cash balance of \$3,322,284 with \$0 in funds designated as restricted and \$3,322,284 unrestricted.
- Presently, residential customers pay a monthly service (fixed) charge (which includes 2,000 gallons of usage) and a volumetric rate per 1,000 gallons on a tiered basis. Tier 1 is up to 13,333 gallons/month and Tier 2 is any usage over 13,333 gallons/month.
- Commercial customers pay a monthly service (fixed) charge based on meter size (which does not include 2,000 gallons of usage) and a volumetric rate per 1,000 gallons. on a tiered basis. Tier 1 is up to 13,333 gallons/month and Tier 2 is any usage over 13,333 gallons/month.
- Water usage is determined by the customer's water meter unless otherwise noted.
- As of 12/31/2019 the Water Utility had \$1,938,642 in debt outstanding.

Further description and analysis of these findings are found in this Executive Summary, the Study and its Sections.

### RECOMMENDATIONS

- We recommend the Utility continue to charge users a fixed and volumetric rate each billing period (monthly).
- To fund its Capital Improvement Plan ("CIP"), we recommend the Utility use debt and cash financing.
- Based on our projections,
  - if the City adopts the recommended rates, the Water rate revenue generated will adequately meet the Utility's revenue needs to fund all the Utility's known financial obligations as depicted in this study.
- The typical residential customer at average consumption will experience a 5.5% (\$1.57) increase to their total monthly bill at the recommended rates. This increase is depicted as phased-in over a five-year period.
- As part of the Long-Range Cash Flow Analysis, Section 3, additional inflationary increases are depicted to maintain with an assumed increase in O&M expense.

Based on historical performance and the results of the Study, we recommend the City adopt the proposed rate schedule as shown in Section 2 Tables 16 and 17. These rate adjustments' impact on the average residential user is a 5.5% monthly increase to their bill.



Further illustration of the impact on other customer classes is seen in Section 2, Table 20. We also recommend that these changes be adopted 1) congruent with the meter read cycle for ease of administration and 2) as soon as practical to expedite the recovery of the Utility's financial obligations.

Regarding future CIP needs as described in this Executive Summary, it is recommended the City use cash and debt to finance the projects. However, planned future projects can be altered or removed and market conditions can change; therefore, future recommendations of debt financing may need to be altered and revised. Other future capital improvements not listed within the study are outside the scope of the future recommended rate increases and debt instruments presented. Another rate study should be completed if additional future capital projects are added to the CIP. Lastly, the Utility should continue to monitor the need for future capital improvements and its ability to cash and debt finance their costs adjusting the rate structure as needed through benchmarked reserves.

It is recommended that the City continue to annually monitor the water rates and evaluate the need to adopt future rate increases shown in Section 3, the Long-Range Cash Flow Analysis, to maintain financial health. Due to changes in customer count, usage, and capital planning, the recommended schedule to follow for completing rate studies is every three to five years. It is also further recommended that the City monitor existing and targeted cash balances within the Water Fund to bring them to a minimum recommended threshold. The minimum recommended threshold for unrestricted cash balance is equal to 150 days of unrestricted cash available for budgeted operations expenses as recommended for government-owned utilities by the major rating agencies. This will allow the utility to have reserves available to meet expenses, cope with emergencies and navigate any business interruptions.

Further depiction of the calculation and derivation of these recommendations are found in Sections 2 and 3. The proceeding Sections reveal the results of the Study, Long-Range Cash Flow Analysis and financing of the CIP.

## **Introduction and Overview**

The City engaged Ehlers in 2020 to perform a Water Rate Study (the "Study"). The primary goal of the study is to make recommendations for self-sufficient user rates to meet all operating and capital expenses of the Utility.

Along with the Study, the City has engaged Ehlers to complete a long-range cash flow analysis for the Utility which develops recommendations for future rate increases required to support the Utility's CIP, and projected increases to the Water operating budget. Lastly, the study develops recommendations about how to pay for capital projects in each year through a combination of debt instruments and available cash. This Executive Summary



identifies the findings, recognizes the methodology used, and reviews the results of the Study completed for the City.

## RATE SETTING OBJECTIVES

When designing rates, we consider many generally accepted practices and industry standards. The subsequent guidelines were followed in completing the rate design portion of the Study.

- Rates should be fair and equitable to all customers
- Rates should be easy to administer and to understand
- Rates should be defensible

## KEY ASSUMPTIONS

- The study develops recommended user rates based on a 2020 test year.
- The recommended rates follow the City's Code of Ordinances Chapter 13 including
  - Section 3-30(b): Water charges for all water delivered by the City shall consist of a fixed service charge and a volume charge which is based on the actual quantity of water delivered as prescribed by separate resolution of the City Council, as may be amended from time to time. The service charge shall be billed to each customer regardless of whether any volume charge is made.
- The study was completed using the Utility-Basis to determine a revenue requirement, explained further in the "Study Methodology" Section.
- 2020 flow projections are based on historical averages. Customer counts and usage beyond 2020 were generated from furnished City projections.
- Operating expenses beyond the 2020 budget were projected at 3% increases per year.

## STUDY PURPOSE

Several goals were established for the Study, including:

1. Assess financial performance trends in recent past.
2. Develop user rates at a level where the Utility is self-sufficient, meaning it is generating adequate revenues from user rates to pay for all outstanding financial obligations.
3. Develop user rates at a level where the Utility is building adequate cash to maintain certain benchmarked levels and fund future CIP projects.
4. Incorporate the City's CIP for the Water utility.



5. Develop a rate structure that is fair and equitable for all customer classes.

## STUDY METHODOLOGY AND USER RATE PERFORMANCE

Rate development and planning require projections of future revenue needs. To establish those revenue needs, there are two generally accepted methodologies, the cash and utility-based methods. Under the utility-based method, a revenue requirement is established for a test year using several components. These components include: The Utility's budgeted operation and maintenance expenses, transfers, depreciation, and a "fair" return on rate base. Conversely, the cash-based method looks at the Utility's budgeted operation and maintenance expenses, transfers, debt service and cash funded capital. The components added together net of other revenues not generated through user rates serve as the requirement that should be recovered through user rates. This study was performed on a utility basis since the system has system development fees which are designed to have growth pay for growth looking at the utilities capital needs. For a utility with a large asset base relative to its customer base we recommend targeting a ROR that mimics the annual interest expense on debt plus a fair rate of return. Government-owned utilities use ROR to pay the annual interest cost of debt capital and provide a fair rate of return for the equity capital employed to finance facilities used to provide their service. In developing a target, it is general practice to capture a sufficient ROR to maintain its credit and to attract and hold capital which assures confidence in the financial integrity of the enterprise. Therefore, a ROR of 2.75% was used.

When financially evaluating a utility, there are several benchmarks to consider. According to rating agencies and underwriters, a utility's available cash is a high indicator of financial stability in that strong liquidity provides a cushion against a limited ability to raise rates quickly to address unanticipated disruptions or capital needs. Existing user rates revenue will be inadequate to maintain debt coverage as covenanted in the outstanding and projected revenue bonds for the utility and ultimately pay for future capital improvements expenditures. On a cash basis, the current revenues are adequate to fund only Operating and Maintenance expenses and Outstanding Debt but will need an increase as the debt burden increases. Table 2 in Section 1 of the Water Rate Study depicts how rates have been performing compared to the required revenues under both approaches. The rate recommendations developed were to recover the revenue requirements for the test year 2020.

## IMPLEMENTATION OF FUTURE PROJECTS

The City has identified a CIP that will provide for reinvestment and maintenance of the Utility infrastructure. The major projects in the CIP include:

- Water Treatment Facility Upgrade: \$3.0M in 2023
- Water Line Replacement (Street Reconstruction): \$2.8M 2020-2024



- Infrastructure Upgrades and Replacements: \$1.7M 2020-2024

We have only included future CIP costs that were known or estimated. We recommend updating the Study if the City intends to add or adjust projects. Several projects including the Water Treatment Facility Upgrade and Harrington Ditch are shown as attributable to growth. Any capital items allocated to growth are subject to revenue recovery through the System Development Fees. As these projects are shown in the future and timing may still be undecided, once the City commits to these projects the System Development Fees should be updated.

## PROJECTED FUTURE DEBT CONSIDERATIONS

To the extent debt instruments are depicted, it was assumed that the City would issue debt instruments for future years outside of cash to fund the CIP. Funding future projects with useful lives of 20+ years are shown as funded with Revenue Bonds. Consideration should be given to any debt issuance recommended after 2020, at the time planning to finance the projects, as other debt instruments may be more attractive to the Utility at that time.

## ALTERNATIVES & OTHER CONSIDERATIONS

Based on the Alternatives and Other Considerations in the 2020 Sewer Rate Study, if the sewer utility were to consider and adopt fixed rates by meter size the water utility should do the same where similar to the commercial class have other customer classes segregated by meter size.

Where capital items were attributable to growth in the future, the System Development Fees were not considered. At the time the projects are committed by the City it would be appropriate to update the System Development Fees to match the needs of the system.

Rates were shown to City Staff as an “one-off” approach for the depiction of the magnitude of the increase. For the purposes of this Study the ultimate rate increase needed is shown phased in over a five-year period.

## ACKNOWLEDGEMENTS

Utility rate studies are a cooperative effort. We would like to acknowledge the following City staff members for their contributions towards this study: Aimee Tihonovich, Finance Director; David Lady, Director of Public Works; Drew Nelson, City Administrator; and Renee Thornoff, Staff Accountant.



## 2020 Water Rate Study

### Section 1 — Historical Performance

City of Salida, CO

# Table 1

## Water Rate Performance

City of Salida, CO

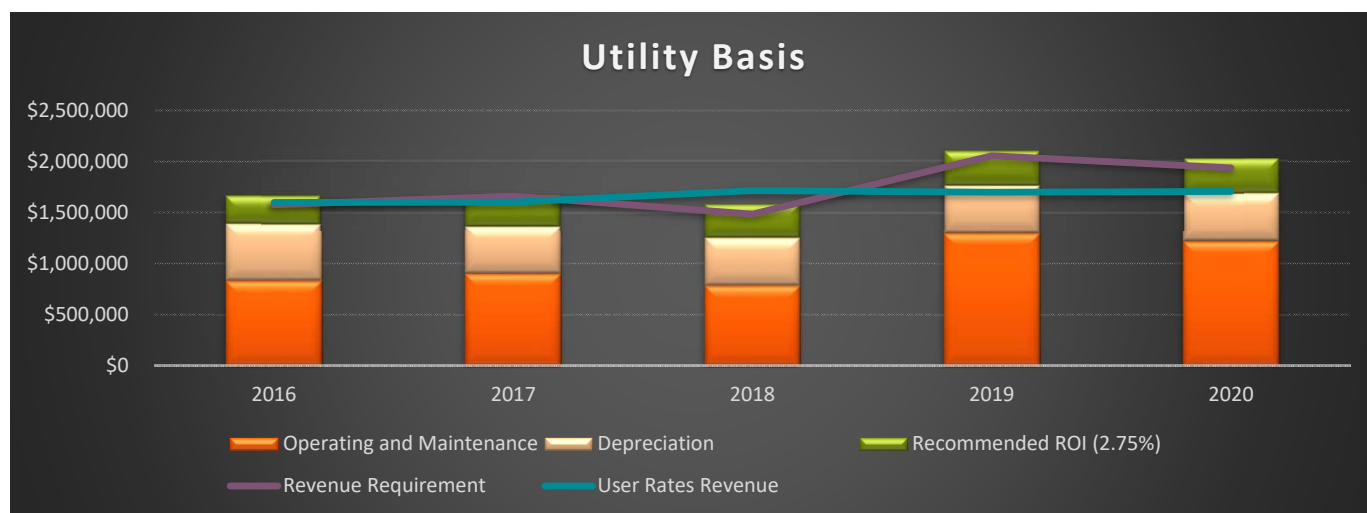
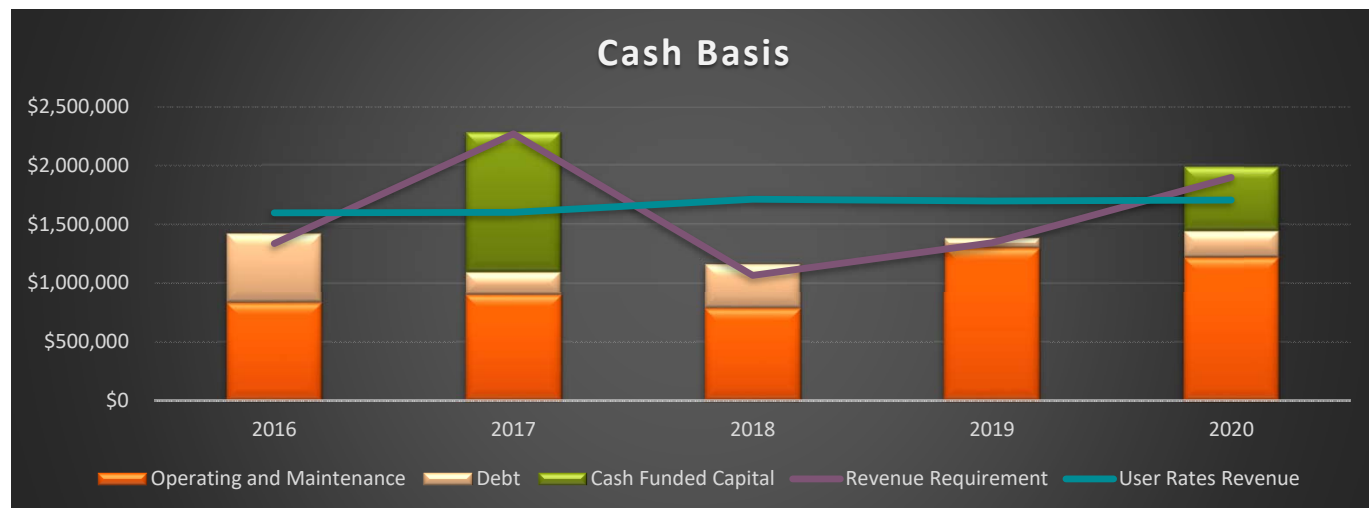
		Shown with no increase			Est	Budget
Revenue Requirement					2019	2020
Component	Description	2016	2017	2018		
<b>Cash Basis</b>						
1	Operating and Maintenance	\$833,834	\$902,029	\$782,787	\$1,300,224	\$1,218,100
2	Debt	\$589,128	\$194,108	\$379,408	\$81,135	\$224,522
3	Cash Funded Capital	\$0	\$1,181,870	\$0	\$0	\$544,000
Less:						
	Other Revenue	\$82,943	\$0	\$84,962	\$0	\$78,977
	Interest Income	\$2,909	\$6,151	\$12,159	\$37,866	\$8,000
	Revenue Requirement (Costs less Other Income)	\$1,337,110	\$2,271,856	\$1,065,074	\$1,343,493	\$1,899,645
	User Rates Revenue	\$1,598,292	\$1,602,453	\$1,713,659	\$1,698,961	\$1,707,700
	Rate Adequacy	\$261,182	(\$669,403)	\$648,585	\$355,468	(\$191,945)
<b>Utility Basis</b>						
1	Operating and Maintenance	\$833,834	\$902,029	\$782,787	\$1,300,224	\$1,218,100
2	Depreciation	\$557,235	\$467,470	\$466,198	\$462,568	\$470,000
	NIRB	\$9,858,210	\$10,844,599	\$12,082,442	\$12,032,004	\$12,220,202
3	Recommended ROI (2.75%)	\$271,101	\$298,226	\$332,267	\$330,880	\$336,056
Less:						
	Other Revenue	\$82,943	\$0	\$84,962	\$0	\$78,977
	Interest Income	\$2,909	\$6,151	\$12,159	\$37,866	\$8,000
	Revenue Requirement (Costs less Other Income)	\$1,576,318	\$1,661,574	\$1,484,131	\$2,055,806	\$1,937,179
	User Rates Revenue	\$1,598,292	\$1,602,453	\$1,713,659	\$1,698,961	\$1,707,700
	Rate Adequacy	\$21,974	(\$59,121)	\$229,528	(\$356,845)	(\$229,479)



## Table 2

### Water Utility Rate Performance Charts

*City of Salida, CO*



## Table 3

### Water Utility Cash Flow Analysis - Historical 2016-2020

City of Salida, CO

	2015	2016	Actual 2017	2018	2019	Est. 2020
<b>Revenues</b>						
Total Revenues from User Rates <sup>1</sup>	\$1,521,425	\$1,655,639	\$1,650,251	\$1,756,430	\$1,745,846	\$1,847,938
Other Revenues						
Interest Income	\$1,976	\$2,909	\$6,151	\$12,159	\$37,866	\$8,000
Other Income	\$324	\$3,538	\$21,552	\$489	\$452	\$500
Total Other Revenues	\$2,300	\$6,447	\$27,703	\$12,648	\$38,318	\$8,500
<b>Total Revenues</b>	<b>\$1,523,725</b>	<b>\$1,662,086</b>	<b>\$1,677,954</b>	<b>\$1,769,078</b>	<b>\$1,784,164</b>	<b>\$1,856,438</b>
<b>Expenses</b>						
Operating and Maintenance <sup>2</sup>	\$795,347	\$833,834	\$902,029	\$782,787	\$1,300,224	\$1,218,100
PILOT Payment/Other	\$0	\$460,213	\$16,041	\$0	\$0	\$0
Net Before Debt Service and Capital Expenditures	\$728,378	\$368,039	\$759,884	\$986,291	\$483,940	\$638,338
Debt Service						
Existing Debt P&I <sup>1</sup>	\$406,855	\$2,124,128	\$194,108	\$379,408	\$81,135	\$224,522
New (2020-2029) Debt Service P&I						\$0
Total Debt Service	\$406,855	\$2,124,128	\$194,108	\$379,408	\$81,135	\$224,522
Transfer In (Out)/Cap. Contrib	\$526,360	\$898,425	\$1,172,385	\$1,100,793	(\$137,608)	\$556,000
Capital Improvements/COI	(\$1,560,725)	(\$289,535)	(\$2,696,644)	(\$659,707)	(\$216,396)	(\$1,100,000)
Bond Proceeds	\$755,045	\$1,541,401	\$957,856	\$691,896	\$207,215	\$0
<b>Net Annual Cash Flow</b>	<b>\$23,746</b>	<b>\$770,930</b>	<b>(\$49,830)</b>	<b>\$1,779,472</b>	<b>(\$65,132)</b>	<b>(\$130,184)</b>
<u>Restricted and Unrestricted Cash Balance:</u>						
Balance at first of year		\$886,844	\$1,657,774	\$1,607,944	\$3,387,416	\$3,322,284
Net Annual Cash Flow Addition/(subtraction)		\$770,930	(\$49,830)	\$1,779,472	(\$65,132)	(\$130,184)
Balance at end of year	\$886,844	\$1,657,774	\$1,607,944	\$3,387,416	\$3,322,284	\$3,192,100
Debt Coverage	1.79	0.17	3.91	2.60	5.96	2.84

## Table 4

### Water Utility Financial Benchmarking Analysis

City of Salida, CO

	2016	2017	Actual 2018	2019	Est. 2020
<b>Target minimum cash balance</b>					
Target minimum working capital - Ehlers <sup>1</sup>	878,858	1,003,901	962,531	1,068,572	1,128,252
Actual Days Cash Available - Moody's <sup>2</sup>	726	651	1,579	933	957
Actual Days Cash Available - S&P <sup>3</sup>	726	651	1,579	933	957
Actual working capital-cash balance	1,657,774	1,607,944	3,387,416	3,322,284	3,192,100
Over (Under) Ehlers target	778,917	604,044	2,424,885	2,253,712	2,063,848
Over (Under) Moody's target (150 days)	576	501	1,429	783	807
Over (Under) S&P target (150 days)	576	501	1,429	783	807

**Notes:**

1) Target capital = 6 mos of following year's operating expenses, including depreciation + 100% of following year's debt.

2) Moody's Formula = [(Unrestricted Cash + Liquid Investments) \* 365 days] ÷ Total O&M Expenses less Depreciation

3) S&P Formula = [(Unrestricted Cash + Liquid Investments) \* 365 days] ÷ Total O&M Expenses less Depreciation;  
include designated reserve funds: ERFs, RSFs, etc

<b>Rate of Return</b>					
Average Utility Plant in Service	15,863,315	17,317,172	18,969,427	19,381,557	20,039,755
Less: Utility Plant Accumulated Depreciation	6,005,105	6,472,573	6,886,985	7,349,553	7,819,553
Average Net Investment Rate Base (NIRB)	9,858,210	10,844,599	12,082,442	12,032,004	12,220,202
Net Operating Income	268,108	302,304	507,934	(16,494)	160,338
ROR	2.72%	2.79%	4.20%	-0.14%	1.31%

<b>Cost Recovery</b>					
Operating Revenues	1,659,177	1,671,803	1,756,919	1,746,298	1,848,438
Operating Expenses incl. Depr & Amortization	1,391,069	1,369,499	1,248,985	1,762,792	1,688,100
Operating Expenses w/o Depr & Amortization	833,834	902,029	782,787	1,300,224	1,218,100
Cost Recovery incl. Depr	1.19	1.22	1.41	0.99	1.09
Cost Recovery w/o Depr	1.67	1.52	1.60	1.36	1.39

**Notes:**

This operating ratio indicates whether operating revenues (mostly charges to customers) were sufficient to cover operations and capital (in the form of depreciation) for the water and/or wastewater utility in the fiscal year.

A ratio of less than 1 could be a sign of financial concern. In general, this ratio should be higher than 1 to accommodate future capital investments.

<b>Leverage</b>					
Total Long-Term Debt	2,018,172	2,003,146	1,983,551	1,938,642	1,876,883
Total Net Assets	15,968,849	18,665,494	19,273,359	19,489,755	21,114,755
Debt-to Equity Ratio	0.13	0.11	0.10	0.10	0.09

**Notes:**

This indicator measures the existing level of leveraging of assets, and is used by funders and bond rating agencies to evaluate the risk of providing additional loans to the utility. The ratio indicates the amount of long-term debt that exists for every \$1 of assets (fund equity). A utility with a ratio greater than 1.0 has more long-term debt than equity in the system's assets. There are no natural benchmarks for this indicator, and funders and bond rating agencies will assess this ratio in various ways. In general, the higher this ratio, the more likely the utility will be considered to be over-leveraged and the more difficult it will be for the utility to obtain additional loans. For this ratio, Net Assets are equal to the Net Investment Rate Base of the utility.

<b>Condition of Assets:</b>					
Accumulated Depreciation Expense	6,005,105	6,472,573	6,886,985	7,349,553	7,819,553
Total Net Assets	15,968,849	18,665,494	19,273,359	19,489,755	21,114,755
Asset Depreciation	37.61%	34.68%	35.73%	37.71%	37.03%

**Notes:**

This indicator of infrastructure condition estimates the portion of the average expected life of the utility's physical assets that has already passed. As this ratio approaches 100%, the capital assets become fully depreciated, and infrastructure needs replacement or rehabilitation. The accuracy of this indicator relies heavily on the accuracy of the depreciation schedule, and historic pricing likely distorts this indicator (newer utilities may be slightly disadvantaged as a result).

**Table 5**  
**Water Utility Schedule of Revenue Debt Outstanding**

City of Salida, CO

NAME	W&S Rev Ref Bonds Series 2016			Drinking Water Rev. Fund Loan #D11F149			Drinking Water Rev. Fund Loan #D17F382			Existing Revenue Water Debt Summary					
DATED AMT MAT RATE	12/27/2016 \$1,535,000 12/1 2.16%			12/21/2011 \$545,000 5/1 0.00%			2/28/2017 \$660,841 5/1 1.00%								
YEAR	Principal	Rate	Interest	Principal	Rate	Interest	Principal	Rate	Interest	YEAR	TOTAL PRIN	TOTAL INT	TOTAL P & I	PRIN OUTSTND	PRIN %PAID
2019	135,000	2.160%	28,188	27,250	0.00%	0	30,891	1.00%	5,908	2019	193,141	34,096	227,237	2,070,534	8.53%
2020	135,000	2.160%	25,272	27,250	0.00%	0	31,401	1.00%	5,599	2020	193,651	30,871	224,522	1,876,883	17.09%
2021	135,000	2.160%	22,356	27,250	0.00%	0	31,513	1.00%	5,285	2021	193,763	27,641	221,405	1,683,120	25.65%
2022	140,000	2.160%	19,440	27,250	0.00%	0	31,829	1.00%	4,970	2022	199,079	24,410	223,489	1,484,041	34.44%
2023	150,000	2.160%	16,416	27,250	0.00%	0	32,148	1.00%	4,652	2023	209,398	21,068	230,466	1,274,642	43.69%
2024	150,000	2.160%	13,176	27,250	0.00%	0	32,471	1.00%	4,330	2024	209,721	17,506	227,227	1,064,922	52.96%
2025	150,000	2.160%	9,936	27,250	0.00%	0	16,439	1.00%	4,005	2025	193,689	13,941	207,630	871,232	61.51%
2026	155,000	2.160%	6,696	27,250	0.00%	0	33,125	1.00%	3,841	2026	215,375	10,537	225,912	655,857	71.03%
2027	155,000	2.160%	3,348	27,250	0.00%	0	33,457	1.00%	3,510	2027	215,707	6,858	222,565	440,150	80.56%
2028				27,250	0.00%	0	33,791	1.00%	3,175	2028	61,041	3,175	64,216	379,110	83.25%
2029				27,250	0.00%	0	34,131	1.00%	2,837	2029	61,381	2,837	64,219	317,729	85.96%
2030				27,250	0.00%	0	34,473	1.00%	2,496	2030	61,723	2,496	64,219	256,005	88.69%
2031				27,250	0.00%	0	34,819	1.00%	2,151	2031	62,069	2,151	64,220	193,936	91.43%
2032				13,625	0.00%	0	35,168	1.00%	1,803	2032	48,793	1,803	50,596	145,143	93.59%
2033							35,521	1.00%	1,451	2033	35,521	1,451	36,972	109,622	95.16%
2034							17,983	1.00%	1,096	2034	17,983	1,096	19,079	91,639	95.95%
2035							18,073	1.00%	916	2035	18,073	916	18,989	73,566	96.75%
2036							36,600	1.00%	736	2036	36,600	736	37,335	36,967	98.37%
2037							36,967	1.00%	370	2037	36,967	370	37,336	0	100.00%
2038										2038	0	0	0	0	100.00%
TOTALS	1,305,000		144,828	367,875		0	590,800		59,133		2,263,675	203,961	2,467,636		

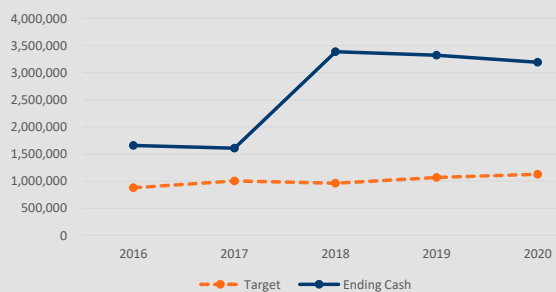
**Notes:**

## Table 6 Water Utility Financial Health Charts

City of Salida, CO

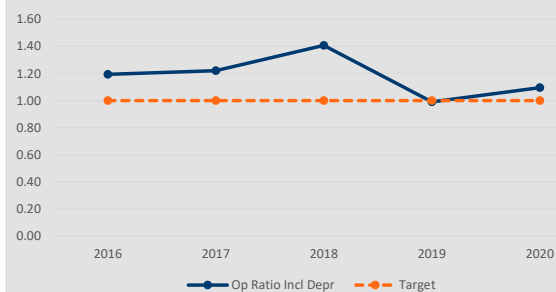
Can you pay for 6 mos. Of O&M and next year's debt?

Reserves - Actual vs. Target



Did you generate enough revenues to pay for O&M and capital?

Operating Ratio including Depreciation

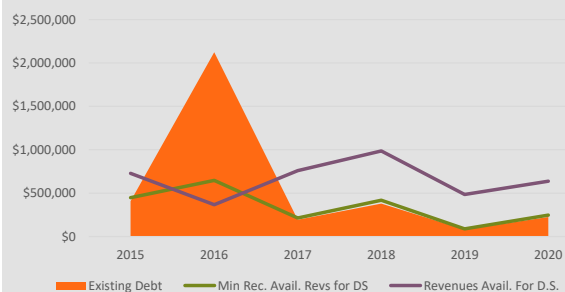


Rate of Return



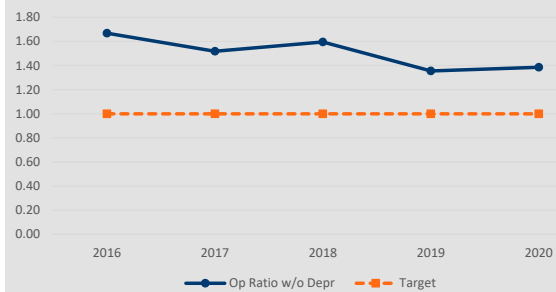
Do you generate revenues to pay for O&M and debt service?

"All-in" Debt Coverage



Did you generate revenues needed to pay for O&M?

Operating Ratio w/o Depreciation





## 2020 Water Rate Study

### Section 2 — Water Rate Model

City of Salida, CO

## Table 7 Projected Usage (Tiered Rate Structure)

*City of Salida, CO*

Consumption (Inside Customers)					
2017					
Class	<u>RES - SF</u>	<u>RES w/ ADU</u>	<u>MF</u>	<u>COMM</u>	<u>Total</u>
Block 1: 0-13,333 gal	45,636	2,835	2,300	8,249	59,020
Block 2: 2,000-13,333 gal	123,012	9,375	8,250	27,790	168,426
Block 3: Over 13,333 gal	48,845	2,643	3,450	76,503	131,442
Total	217,492	14,853	14,000	112,542	358,888
2018					
Class	<u>RES - SF</u>	<u>RES w/ ADU</u>	<u>MF</u>	<u>COMM</u>	<u>Total</u>
Block 1: 0-13,333 gal	46,517	2,955	2,324	8,489	60,285
Block 2: 2,000-13,333 gal	136,076	10,764	8,317	29,092	184,249
Block 3: Over 13,333 gal	66,309	2,859	3,849	88,372	161,390
Total	248,903	16,578	14,490	125,954	405,924
Test Year					
Class	<u>RES - SF</u>	<u>RES w/ ADU</u>	<u>MF</u>	<u>COMM</u>	<u>Total</u>
Block 1: 0-13,333 gal	40,000	2,750	2,000	8,500	53,250
Block 2: 2,000-13,333 gal	123,000	10,000	8,000	36,500	177,500
Block 3: Over 13,333 gal	58,000	2,500	3,000	115,000	178,500
Total	221,000	15,250	13,000	160,000	409,250

**Table 8****Projected Test Year 2020 Meter Counts & COMM Demand Accounts***City of Salida, CO*

Total Meters							
Meter Size	Inside Customers				Total	Comm Demand Accounts	
	RES - SF	RES w/ ADU	MF	COMM			
ADU		101			101	Block 1: </= 100,000gal	245
5/8" & 3/4"	2,400		156	295	2,851	Block 2: 100k<x<500k	131
1"				97	97	Block 3: 500k<x<1,000kgal	43
1 1/2"				23	23	Block 4: >1,000kgal	35
2"				28	28		
3"				7	7		
4"				9	9		
Maint. - ADU		101		0	101		
Maint. Other	2,400		156	0	2,556		
	4,800	202	312	459	5,773		454

Equivalent Meters <sup>2</sup>						
Meter Size	Equiv. Ratio <sup>1</sup>	Inside Customers				Total
		RES - SF	RES w/ ADU	MF	COMM	
ADU	0.5	-	50.5	-	-	50.5
5/8" & 3/4"	1.0	2,400.0	-	156.0	295.0	2,851.0
1"	1.3	-	-	-	129.0	129.0
1 1/2"	2.0	-	-	-	46.0	46.0
2"	2.7	-	-	-	74.5	74.5
3"	4.0	-	-	-	27.9	27.9
4"	5.3	-	-	-	47.9	47.9
Maint. - ADU	0.2	-	17.5	-	-	17.5
Maint. Other	0.3	832.6	-	54.1	-	886.7
		3,232.6	68.0	210.1	620.3	4,131.0

**Notes:**

- 1) Used Previous rate study Equiv. Ratio  
 2) COMM = only class charged by meter size.



## Table 9

### Recovery of Depreciation and ROI

*City of Salida, CO*

Return on Investment	
Inside Customers	
Assets <sup>1</sup>	\$20,039,755
Less: Accumulated Depreciation <sup>1</sup>	\$7,819,553
Estimated 2018 Net Investment Rate Base (NIRB)	\$12,220,202
Return on Investment (ROI) %	2.75%
ROI for test year	\$336,056
Depreciation Expense for test year	\$470,000
Total Capital Recovery	\$806,056

**Notes:**

1) Projected 2020

## Table 10

### Comparative Operating Income Statement

City of Salida, CO

OPERATING REVENUES	AUDITED				TEST YEAR
	2016	2017	2018	2019	
Fees for General Services					
Service and usage fees	\$ 1,313,168	\$ 1,312,224	\$ 1,418,260	\$ 1,397,458	\$ 1,404,800
Water line maintenance	188,753	193,856	199,541	206,066	200,900
Commercial demand charges	96,371	96,373	95,858	95,437	102,000
Other revenues	37,347	37,798	42,771	44,335	37,400
Water leases	20,000	10,000	0	2,550	5,000
<b>TOTAL GENERAL SALES</b>	<b>\$ 1,655,639</b>	<b>\$ 1,650,251</b>	<b>\$ 1,756,430</b>	<b>\$ 1,745,846</b>	<b>\$ 1,750,100</b>
Intergovernmental Revenue - State grants	6,401	840,455	3,706	38,750	0
Capital Revenue - System development fees	876,367	541,306	1,146,753	457,586	540,000
Capital Revenue - Sale of water meters	22,058	15,612	35,717	20,273	16,000
Other revenues - Interest Revenue	2,909	6,151	12,159	37,866	8,000
Other revenues - Misc. Revenue	3,538	21,552	489	452	500
<b>TOTAL OTHER REVENUE</b>	<b>\$ 911,273</b>	<b>\$ 1,425,076</b>	<b>\$ 1,198,824</b>	<b>\$ 554,927</b>	<b>\$ 564,500</b>
<b>TOTAL OPERATING REVENUES</b>	<b>\$ 2,566,912</b>	<b>\$ 3,075,327</b>	<b>\$ 2,955,254</b>	<b>\$ 2,300,773</b>	<b>\$ 2,314,600</b>

## Table 10

### Comparative Operating Income Statement

City of Salida, CO

OPERATING EXPENSES	TEST YEAR				
	2016	2017	2018	2019	
<b>ADMINISTRATION</b>					
Personnel services	\$ 61,473	\$ 81,787	\$ 78,866	\$ 94,926	\$ 108,331
Contracted services	57,106	59,648	74,612	51,125	49,000
Supplies and materials	1,944	1,840	1,486	2,410	2,000
Other operating costs	10,227	11,164	16,924	17,921	14,100
<b>PUBLIC WORKS</b>					
Personnel services	\$ 163,971	\$ 188,040	\$ 217,530	\$ 208,010	\$ 242,461
Contracted services	0	20,820	35,054	35,366	64,000
Supplies and materials	12,251	9,598	26,887	27,262	18,800
Utilities	0	0	0	0	0
Other operating costs	36,767	20,411	19,394	29,938	32,650
<b>WATER PLANT</b>					
Personnel services	\$ 241,164	\$ 253,114	\$ 270,061	\$ 276,755	\$ 292,408
Contracted services	14,222	9,950	35,694	45,591	138,800
Supplies and materials	32,291	30,762	42,169	34,536	46,650
Utilities	45,436	43,841	66,807	85,063	70,900
Other operating costs	156,982	87,023	88,254	97,425	138,000
<b>OTHER</b>					
Other costs	\$	\$	\$ 0	\$ 0	\$ 0
<b>TOTAL OPER. &amp; MAINT. EXPENSES</b>	\$ 833,834	\$ 817,998	\$ 973,738	\$ 1,006,328	\$ 1,218,100
<b>DEPRECIATION EXPENSE</b>	557,235	467,470	466,198	462,568	470,000
<b>TAXES AND TAX EQUIVALENT</b>	0	0	0	0	0
<b>TOTAL OPERATING EXPENSES</b>	\$ 1,391,069	\$ 1,285,468	\$ 1,439,936	\$ 1,468,896	\$ 1,688,100
<b>NET OPERATING INCOME</b>	\$ <u>1,175,843</u>	\$ <u>1,789,859</u>	\$ <u>1,515,318</u>	\$ <u>831,876</u>	\$ <u>626,500</u>

Table 11  
Allocation of Costs to Function

City of Salida, CO

		Allocation Percentages						2020 Budget						
		Extra-Capacity			Customer Costs		Direct Fire	Extra-Capacity			Customer Costs		Direct Fire	
		Commodity	Max Day	Max Hour	Meters	Bill & Collection	Protection	Total	Commodity	Max Day	Max Hour	Meters	Bill & Collection	Protection
Operating & Maintenance														
Acct #	Acct Description													
ADMINISTRATION														
	Personnel services	40%	23%	22%	11%	5%	0%	\$108,331	\$43,332	\$24,916	\$23,833	\$11,375	\$4,875	\$0
	Contracted services	40%	23%	22%	11%	5%	0%	\$49,000	\$19,600	\$11,270	\$10,780	\$5,145	\$2,205	\$0
	Supplies and materials	40%	23%	22%	11%	5%	0%	\$2,000	\$800	\$460	\$440	\$210	\$90	\$0
	Other operating costs	40%	23%	22%	11%	5%	0%	\$14,100	\$5,640	\$3,243	\$3,102	\$1,481	\$635	\$0
PUBLIC WORKS														
	Personnel services	36%	30%	24%	5%	2%	3%	\$242,461	\$87,286	\$72,738	\$58,191	\$12,729	\$4,243	\$7,274
	Contracted services	36%	30%	24%	5%	2%	3%	\$64,000	\$23,040	\$19,200	\$15,360	\$3,360	\$1,120	\$1,920
	Supplies and materials	36%	30%	24%	5%	2%	3%	\$18,800	\$6,768	\$5,640	\$4,512	\$987	\$329	\$564
	Utilities	36%	30%	24%	5%	2%	3%	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Other operating costs	36%	30%	24%	5%	2%	3%	\$32,650	\$11,754	\$9,795	\$7,836	\$1,714	\$571	\$980
WATER PLANT														
	Personnel services	67%	33%	0%	0%	0%	0%	\$292,408	\$195,913	\$96,495	\$0	\$0	\$0	\$0
	Contracted services	67%	33%	0%	0%	0%	0%	\$138,800	\$92,996	\$45,804	\$0	\$0	\$0	\$0
	Supplies and materials	67%	33%	0%	0%	0%	0%	\$46,650	\$31,256	\$15,395	\$0	\$0	\$0	\$0
	Utilities	67%	33%	0%	0%	0%	0%	\$70,900	\$47,503	\$23,397	\$0	\$0	\$0	\$0
	Other operating costs	67%	33%	0%	0%	0%	0%	\$138,000	\$92,460	\$45,540	\$0	\$0	\$0	\$0
Total O & M		54%	31%	10%	3%	1%	1%	\$1,218,100	\$658,348	\$373,893	\$124,053	\$37,001	\$14,068	\$10,737
Taxes & Transfers														
	PILOT and Other	36%	30%	24%	5%	3%	2%	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Costs														
	Return on Rate Base	36%	30%	24%	5%	3%	2%	\$336,056	\$120,980	\$100,817	\$80,653	\$17,643	\$9,242	\$6,721
	Depreciation	36%	30%	24%	5%	3%	2%	\$470,000	\$169,200	\$141,000	\$112,800	\$24,675	\$12,925	\$9,400
Total Capital Costs		36%	30%	24%	5%	3%	2%	\$806,056	\$290,180	\$241,817	\$193,453	\$42,318	\$22,167	\$16,121
Subtotal Revenue Requirements							100%	\$2,024,156	\$948,528	\$615,709	\$317,507	\$79,318	\$36,234	\$26,858
Other Income														
	Misc Service, Late Charges, & Other	54%	31%	10%	3%	1%	1%	(\$58,900)	(\$31,834)	(\$18,079)	(\$5,998)	(\$1,789)	(\$680)	(\$519)
	Investment Income	54%	31%	10%	3%	1%	1%	(\$8,000)	(\$4,324)	(\$2,456)	(\$815)	(\$243)	(\$92)	(\$71)
Total Other Income		54%	31%	10%	3%	1%	1%	(\$66,900)	(\$36,158)	(\$20,535)	(\$6,813)	(\$2,032)	(\$773)	(\$590)
Total Net Revenue Requirements								\$1,957,256	\$912,371	\$595,174	\$310,694	\$77,286	\$35,462	\$26,269
									46.6%	30.4%	15.9%	3.9%	1.8%	1.3%
Summary														
Allocation of Costs to Function and Classification for Inside Rates														
								Total	Commodity	Extra-Capacity		Customer Costs		Direct Fire
										Max Day	Max Hour	Meters	Bill & Collection	Protection
	O&M and Replacement	54%	31%	10%	3%	1%	1%	\$1,218,100	\$658,348	\$373,893	\$124,053	\$37,001	\$14,068	\$10,737
	Capital	36%	30%	24%	5%	3%	2%	\$806,056	\$290,180	\$241,817	\$193,453	\$42,318	\$22,167	\$16,121
	Other Revenues	54%	31%	10%	3%	1%	1%	(\$66,900)	(\$36,158)	(\$20,535)	(\$6,813)	(\$2,032)	(\$773)	(\$590)
	Total	47%	30%	16%	4%	2%	1%	\$1,957,256	\$912,371	\$595,174	\$310,694	\$77,286	\$35,462	\$26,269

## Table 12

### System Demand Ratios

City of Salida, CO

Maximum Day System Demand					
Total Annual Pumpage	422,326,068	Gallons			
Avg. Day Pumpage	1,157,058	Gallons			
Max Day Pumpage	2,458,340	Gallons			
Fire Flow:					
	Gal/min	3,500			
	Duration (hours)	3			
	Total Flow	630,000	Gallons		
Avg. Day + Fire Flow	1,787,058	Gallons			
RATIO:	BASE	=	$\frac{1,157,058}{2,458,340}$	=	47.07%
	MAX DAY	=	100-BASE	=	52.93%

Maximum Hour System Demand					
Avg. Hour on Max Day	102,431	Gallons			
Max Hour Pumpage	108,474	Gallons			
Avg. Hour + 1 hour fire flow	258,211	Gallons			
RATIO:	BASE	=	$\frac{1,157,058}{6,197,058}$	=	18.67% Use 18.67%
	MAX HOUR	=	100-BASE	=	81.33% Use 81.33%

## Table 13

### Units of Service for Customer Classes

*City of Salida, CO*

Customer Class	Commodity		Max Day Units		Max Hour Units		Customer Units	
	Annual Usage Gallons	Avg. Rate 1,000 Gal/day	Peaking Factor	Total Capacity (1,000 Gal)	Peaking Factor	Total Capacity (1,000 Gal)	Meters	Bills
<b>Inside Customers</b>								
RES - SF	221,000	605	250%	1,514	380%	2,301	3,233	23,695
RES w/ ADU	15,250	42	230%	96	350%	146	68	1,481
MF	13,000	36	230%	82	350%	125	210	1,167
COMM	160,000	438	230%	1,008	350%	1,534	620	4,417
Total Inside Customers	409,250	1,121		2,700		4,106	4,131	30,760
Fire Protection				630		26		
<b>Total System</b>	<b>409,250</b>	<b>1,121</b>		<b>3,330</b>		<b>4,132</b>	<b>4,131</b>	<b>30,760</b>

## Table 14

### Units Costs of Service

City of Salida, CO

Unit Cost Component	Rate of Return (%)	Total	Commodity	Capacity		Customer		Direct Fire Protection
				Max Day	Max Hour	Meters	Bill & Collection	
Units of Service								
1 Total System			409,250	3,330	4,132	4,131	30,760	
			1,000 gal	1,000 gal/day	1,000 gal/day	Equiv. meters	Bills	
O&M Expense								
2 Total		\$1,218,100	\$658,348	\$373,893	\$124,053	\$37,001	\$14,068	\$10,737
3 Unit Cost, \$/Unit			\$1.61	\$112.28	\$30.02	\$8.96	\$0.46	
Depreciation Expense								
4 Total		\$470,000	\$169,200	\$141,000	\$112,800	\$24,675	\$12,925	\$9,400
5 Unit Cost, \$/Unit			\$0.41	\$42.34	\$27.30	\$5.97	\$0.42	
Nonrate Revenue								
6 Total		(\$66,900)	(\$36,158)	(\$20,535)	(\$6,813)	(\$2,032)	(\$773)	(\$590)
7 Unit Cost, \$/Unit			(\$0.09)	(\$6.17)	(\$1.65)	(\$0.49)	(\$0.03)	
Rate Base								
8 Total		\$336,056	\$120,980	\$100,817	\$80,653	\$17,643	\$9,242	\$6,721
9 Unit Cost, \$/Unit			\$0.30	\$30.28	\$19.52	\$4.27	\$0.30	
Unit Return on Rate Base								
13 Inside Customers, \$/Unit Return on Rate Base	2.75%		\$0.30	\$30.28	\$19.52	\$4.27	\$0.30	
14 Inside Customers Unites of Service			409,250	2,700	4,106	4,131	30,760	
15 Inside Customers Return on Rate Base		\$336,056	\$120,980	\$100,817	\$80,653	\$17,643	\$9,242	\$6,721
16 Total System Return on Rate Base	100.00%	\$336,056	\$518,137	\$243,793	\$199,800	\$17,643	\$30,092	\$6,721
17 Inside Customers \$/Unit (Line 3 + 5 + 7 + 13)			\$2.23	\$178.73	\$75.19	\$18.71	\$1.15	\$26,269

## Table 15

### Cost Distribution to Customer Classes

City of Salida, CO

Item	Total Cost of Service	Total	Commodity	Capacity		Customer		Direct Fire Protection
				Max Day	Max Hour	Meters	Bill & Collection	
Inside Customers								
1	Unit Costs of Service \$/Unit		\$2.23	\$178.73	\$75.19	\$18.71	\$1.15	
		1,000 gal		1,000 gal/day	1,000 gal/day	per equiv. meter	per bill	
RES - SF								
2	Units of Service		221,000	1,514	2,301	3,233	23,695	
3	Allocated Costs of Service	\$1,024,032.24	\$492,691.32	\$270,550.54	\$172,994.79	\$60,478.77	\$27,316.84	
RES w/ ADU								
4	Units of Service		15,250	96	146	68	1,481	
5	Allocated Costs of Service	\$65,148.04	\$33,997.93	\$17,175.67	\$10,994.99	\$1,272.07	\$1,707.37	
MF								
6	Units of Service		13,000	82	125	210	1,167	
7	Allocated Costs of Service	\$58,272.68	\$28,981.84	\$14,641.56	\$9,372.78	\$3,931.12	\$1,345.38	
COMM								
8	Units of Service		160,000	1,008	1,534	620	4,417	
9	Allocated Costs of Service	\$668,957.28	\$356,699.59	\$180,203.80	\$115,357.32	\$11,604.41	\$5,092.15	
Fire Protection								
14	Units of Service			630	26			
15	Allocated Costs of Service	\$140,845.31		\$112,602.89	\$1,973.69			\$26,269
18	Total Inside Allocated Costs of Service	\$1,957,256	\$912,371	\$595,174	\$310,694	\$77,286	\$35,462	\$26,269
	Total System Allocated Costs of Service	\$1,957,256	\$912,371	\$595,174	\$310,694	\$77,286	\$35,462	\$26,269



**Table 16**  
**Fixed Rate Calculations**

City of Salida, CO

### Service Charge Calculation

Inside Customers		Meter Size	Existing	Equivalent	Proposed	Percent Change	Proposed Incremental <sup>1</sup>
Customer costs:	Total	ADU	\$ 9.32	\$ 9.93	\$ 9.93	6.6%	2.58%
Billing costs per customer	\$1.15	5/8" & 3/4"	\$ 18.65	\$19.86	\$ 19.86	6.5%	2.58%
		1"	\$ 24.80	\$ 26.41	\$ 26.41	6.5%	2.58%
Meter costs:		1 1/2"	\$ 37.30	\$ 39.72	\$ 39.72	6.5%	2.58%
Meter costs per eq meter	\$18.71	2"	\$ 49.60	\$ 52.82	\$ 52.82	6.5%	2.58%
		3"	\$ 74.41	\$ 79.25	\$ 79.25	6.5%	2.58%
Billing Frequency	12	4"	\$ 99.21	\$ 105.66	\$ 105.66	6.5%	2.58%
		Maint. - ADU	\$ 3.23	\$ 3.44	\$ 3.44	6.5%	2.58%
		Maint. Other	\$ 6.47	\$ 6.89	\$ 6.89	6.5%	2.58%
Commercial Demand Charge		Block 1	\$ 6.47	\$ 6.89	\$ 7.25	12.0%	2.58%
		Block 2	\$ 19.42	\$ 20.69	\$ 21.75	12.0%	2.58%
		Block 3	\$ 48.53	\$ 51.71	\$ 54.35	12.0%	2.58%
		Block 4	\$ 64.71	\$ 68.95	\$ 72.48	12.0%	2.58%

### Revenue by Class

Inside Customers					Commercial Demand Charge	
Meter Size	RES - SF	RES w/ ADU	MF	COMM		
ADU	-	12,036	-	-	Block 1	21,304
5/8" & 3/4"	572,022	-	37,181	70,311	Block 2	34,192
1"	-	-	-	30,743	Block 3	28,046
1 1/2"	-	-	-	10,964	Block 4	30,440
2"	-	-	-	17,749		
3"	-	-	-	6,657		
4"	-	-	-	11,411		
Maint. - ADU	-	4,169	-	-		
Maint. Other	198,444	-	12,899	-		
Total	770,466	16,205	50,080	147,834		113,982

**Notes:**

1) Shown as 5-year annual increase.

## Table 17

### Volumetric Rate Calculation

City of Salida, CO

#### Consumption

	RES - SF	RES w/ ADU	MF	COMM	
Block 1	40,000	2,750	2,000	8,500	
Block 2	123,000	10,000	8,000	36,500	
Block 3	58,000	2,500	3,000	115,000	
Total	221,000	15,250	13,000	160,000	409,250

#### Volume Rates

			Current Rates	New Rates	% +/-	Incremental Rate <sup>1</sup>
First	2,000	Mgal	\$1.71	\$1.88	10%	2.58%
Next	11,333	Mgal	\$1.71	\$1.88	10%	2.58%
Over	13,333	Mgal	\$2.28	\$2.70	18%	2.58%

#### Total Revenue

	Block 1	Block 2	Block 3	Total
Residential	\$ -	\$ 231,240	\$ 156,600	\$ 387,840
RES w/ ADU	\$ -	\$ 18,800	\$ 6,750	\$ 25,550
MF	\$ -	\$ 15,040	\$ 8,100	\$ 23,140
COMM	\$ 15,980	\$ 68,620	\$ 310,500	\$ 395,100
Total Revenue				\$ 831,630

#### Notes:

1) Shown as 5-year annual increase.

## Table 18

### Summary of Water Cost of Service Study - Utility Basis

*City of Salida, CO*

Description	Total	Customer Class				Fire Protection
		RES - SF	RES w/ ADU	MF	COMM	
Revenues at Present Rates	\$1,751,442	\$1,066,026	\$38,011	\$67,545	\$579,861	\$0
Less: Allocated Revenue Requirement	\$1,957,256	\$1,024,032	\$65,148	\$58,273	\$668,957	\$140,845
Balance/(Deficiency) of Funds	(\$205,813)	\$41,994	(\$27,137)	\$9,272	(\$89,096)	(\$140,845)
Cost of Service (& fire realloc.)	\$1,957,256	\$1,115,582	\$65,852	\$64,611	\$711,211	\$0
Balance/(Deficiency) of Funds	(\$205,813)	(\$49,556)	(\$27,842)	\$2,934	(\$131,350)	\$0
COS Change over Present Rates (%)	11.8%	4.6%	73.2%	-4.3%	22.7%	0.0%
Proposed Rates	\$1,930,197	\$1,158,306	\$41,755	\$73,220	\$656,916	\$0
Proposed Change over Present Rates (%)	10.2%	8.7%	9.9%	8.4%	13.3%	0.0%

## Table 19

### Water - Test Year Cash Flow Analysis

*City of Salida, CO*

	Test Year
<b><u>Cash Sources</u></b>	
Revenues from User Rates <sup>(1)</sup>	\$1,930,197
Other Income <sup>(2)</sup>	\$66,900
Total Cash Sources	\$1,997,097
<b><u>Cash Uses</u></b>	
O&M	\$1,218,100
Net Before Debt Service	\$778,997
<b><u>Debt Service</u></b>	
Debt Service P&I <sup>(3)</sup>	\$340,731
Total Debt Service	\$340,731
Cash Funded Capital	\$295,800
Development Fees/Grants	\$540,000
Transfer in/(out)	\$0
Net Cash Flow	\$682,466

**Notes:**

- 1) Full year of revenues from proposed user rates
- 2) Capital Revenue, Miscellaneous revenue and late fees.
- 3) Average of 10 year Long Range Plan

## Table 20

### Comparison of Existing and Proposed Bills

City of Salida, CO

Customer	Usage Level	Meter Size <sup>1</sup>	Total Monthly					Incremental Monthly <sup>3</sup>	
			Usage 1,000 Gal	Current Bill	Proposed Bill	Dollar Change	Percent Change	Dollar Change	Avg. Percent Change
Residential	Low User	5/8" & 3/4"	2.00	\$25.12	\$26.75	\$1.63	6.5%	\$0.33	1.30%
Residential	Avg. User <sup>2</sup>	5/8" & 3/4"	4.00	\$28.54	\$30.51	\$1.97	6.9%	\$0.39	1.38%
Residential	High User	5/8" & 3/4"	14.00	\$46.02	\$49.86	\$3.84	8.3%	\$0.77	1.67%
Commercial	Low User	1"	13.00	\$53.50	\$58.10	\$4.60	8.6%	\$0.92	1.72%
Commercial	Avg. User <sup>2</sup>	1"	21.00	\$71.36	\$79.42	\$8.06	11.3%	\$1.61	2.26%
Commercial	High User	1"	101.00	\$253.76	\$295.42	\$41.66	16.4%	\$8.33	3.28%
RES w/ ADU	Low User	ADU	9.75	\$25.80	\$27.94	\$2.14	8.3%	\$0.43	1.66%
RES w/ ADU	Avg. User <sup>2</sup>	ADU	13.00	\$31.36	\$34.05	\$2.69	8.6%	\$0.54	1.72%
RES w/ ADU	High User	ADU	16.25	\$36.92	\$40.16	\$3.24	8.8%	\$0.65	1.76%
MF	Low User	5/8" & 3/4"	2.00	\$25.12	\$26.75	\$1.63	6.5%	\$0.33	1.30%
MF	Avg. User <sup>2</sup>	5/8" & 3/4"	7.00	\$33.67	\$36.15	\$2.48	7.4%	\$0.50	1.47%
MF	High User	5/8" & 3/4"	10.00	\$38.80	\$41.79	\$2.99	7.7%	\$0.60	1.54%

**Notes:**

- 1) Meter sizes chosen based on highest number of users for each class or for demonstrative purposes.
- 2) Average user is defined as the total estimated test year flow for the class divided by the projected number of users in the class.
- 3) Shown as a phased-in 5-year increase.



## 2020 Water Rate Study

### Section 3 — Long-Range Cash Flow Analysis

City of Salida, CO

**Table 21**  
**Water Utility Capital Improvement Plan**

City of Salida, CO

Projects	Funding	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Totals
Vehicles and Rolling Stock	User Fees	120,000	40,000										160,000
Infrastructure Upgrades and Replacements	Revenue Debt		1,400,000	100,000	100,000	100,000							1,700,000
Machinery & Equipment Replacement	User Fees	150,000	14,000	15,000	15,000	15,000							209,000
Meter Replacement	User Fees	75,000	75,000	75,000	75,000	75,000							375,000
Hydrant and Valve Replacements	User Fees	50,000	50,000	50,000	50,000	50,000							250,000
Water Line Replc. (Street Reconstruction)	Grants/Aids	525,000	550,000	575,000	575,000	575,000							2,800,000
Office Building Improvement	User Fees	15,000											15,000
Machinery & Equipment Replacements	User Fees	10,000	10,000	75,000	10,000	10,000							115,000
Tenderfoot Tank	User Fees	30,000											30,000
Motors, Pumps & Computer Upgrade	User Fees	25,000	25,000	25,000	25,000	25,000							125,000
Harrington Ditch	Revenue Debt		15,000	1,000,000									1,015,000
Water Treatment Facility Upgrade	Revenue Debt				3,000,000								3,000,000
Source Water Diversion Hydraulic Control	User Fees												0
Bulk Water Site	User Fees	100,000			100,000								200,000
HISTORICAL (2015-2019) Average	Cash						750,000	750,000	750,000	750,000	750,000	750,000	4,500,000
<b>Actual CIP Costs</b>		<b>1,100,000</b>	<b>2,179,000</b>	<b>1,915,000</b>	<b>3,950,000</b>	<b>850,000</b>	<b>750,000</b>	<b>750,000</b>	<b>750,000</b>	<b>750,000</b>	<b>750,000</b>	<b>750,000</b>	<b>14,494,000</b>

Sources of Funding	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Totals
G.O. Debt	0	0	0	0	0	0	0	0	0	0	0	0
Revenue Debt	0	1,415,000	1,100,000	3,100,000	100,000	0	0	0	0	0	0	5,715,000
Grants/Aids/Dev. Fees	525,000	550,000	575,000	575,000	575,000	0	0	0	0	0	0	2,800,000
Special Assessment	0	0	0	0	0	0	0	0	0	0	0	0
User Fees	575,000	214,000	240,000	275,000	175,000	0	0	0	0	0	0	1,479,000
Tax Levy	0	0	0	0	0	0	0	0	0	0	0	0
Equipment Replacement Fund	0	0	0	0	0	0	0	0	0	0	0	0
Cash	0	0	0	0	0	750,000	750,000	750,000	750,000	750,000	750,000	4,500,000
<b>Total</b>	<b>1,100,000</b>	<b>2,179,000</b>	<b>1,915,000</b>	<b>3,950,000</b>	<b>850,000</b>	<b>750,000</b>	<b>750,000</b>	<b>750,000</b>	<b>750,000</b>	<b>750,000</b>	<b>750,000</b>	<b>14,494,000</b>

**Notes:**

1) Any capital items allocated to growth are subject to revenue recovery through the System Development Fees.

% Allocation		\$ Allocation	
Existing Sys.	Growth	Existing Sys.	Growth
100%	0%	\$ 160,000	\$ -
100%	0%	\$ 1,700,000	\$ -
100%	0%	\$ 209,000	\$ -
100%	0%	\$ 375,000	\$ -
100%	0%	\$ 250,000	\$ -
100%	0%	\$ 2,800,000	\$ -
100%	0%	\$ 15,000	\$ -
100%	0%	\$ 115,000	\$ -
100%	0%	\$ 30,000	\$ -
100%	0%	\$ 125,000	\$ -
0%	100%	\$ -	\$ 1,015,000
0%	100%	\$ -	\$ 3,000,000
100%	0%	\$ -	\$ -
100%	0%	\$ 200,000	\$ -
100%	0%	\$ 4,500,000	\$ -
<b>72%</b>	<b>28%</b>	<b>\$ 10,479,000</b>	<b>\$ 4,015,000</b>

**Table 22****Water Utility Projected Debt Service Payments (PROPOSED)***City of Salida, CO*

NAME	Water Rev Bonds Series 2021				Water Rev Bonds Series 2023				PROPOSED Water Utility Debt Service Summary				
AMT DATED MATURE RATE	\$1,828,000 6/1/2021 5/1 3.00%				\$1,796,000 6/1/2023 5/1 3.50%								
Year	Principal	Est. Rate	Interest	Total	Principal	Est. Rate	Interest	Total	Total Prin	Total Int	Total P&I	Prin Outstanding	Year
2020									0	0	0		2020
2021			22,850	22,850					0	22,850	22,850	1,828,000	2021
2022	5,000	3.00%	54,765	59,765					5,000	54,765	59,765	1,823,000	2022
2023	5,000	3.00%	54,615	59,615			26,192	26,192	5,000	80,807	85,807	3,614,000	2023
2024	5,000	3.00%	54,465	59,465	10,000	3.50%	62,685	72,685	15,000	117,150	132,150	3,599,000	2024
2025	25,000	3.00%	54,015	79,015	10,000	3.50%	62,335	72,335	35,000	116,350	151,350	3,564,000	2025
2026	25,000	3.00%	53,265	78,265	10,000	3.50%	61,985	71,985	35,000	115,250	150,250	3,529,000	2026
2027	25,000	3.00%	52,515	77,515	10,000	3.50%	61,635	71,635	35,000	114,150	149,150	3,494,000	2027
2028	105,000	3.00%	50,565	155,565	80,000	3.50%	60,060	140,060	185,000	110,625	295,625	3,309,000	2028
2029	110,000	3.00%	47,340	157,340	80,000	3.50%	57,260	137,260	190,000	104,600	294,600	3,119,000	2029
2030	115,000	3.00%	43,965	158,965	80,000	3.50%	54,460	134,460	195,000	98,425	293,425	2,924,000	2030
2031	120,000	3.00%	40,440	160,440	80,000	3.50%	51,660	131,660	200,000	92,100	292,100	2,724,000	2031
2032	125,000	3.00%	36,765	161,765	85,000	3.50%	48,773	133,773	210,000	85,538	295,538	2,514,000	2032
2033	130,000	3.00%	32,940	162,940	90,000	3.50%	45,710	135,710	220,000	78,650	298,650	2,294,000	2033
2034	135,000	3.00%	28,965	163,965	100,000	3.50%	42,385	142,385	235,000	71,350	306,350	2,059,000	2034
2035	140,000	3.00%	24,840	164,840	100,000	3.50%	38,885	138,885	240,000	63,725	303,725	1,819,000	2035
2036	140,000	3.00%	20,640	160,640	100,000	3.50%	35,385	135,385	240,000	56,025	296,025	1,579,000	2036
2037	145,000	3.00%	16,365	161,365	100,000	3.50%	31,885	131,885	245,000	48,250	293,250	1,334,000	2037
2038	147,000	3.00%	11,985	158,985	140,000	3.50%	27,685	167,685	287,000	39,670	326,670	1,047,000	2038
2039	148,000	3.00%	7,560	155,560	140,000	3.50%	22,785	162,785	288,000	30,345	318,345	759,000	2039
2040	178,000	3.00%	2,670	180,670	145,000	3.50%	17,798	162,798	323,000	20,468	343,468	436,000	2040
2041			0		145,000	3.50%	12,723	157,723	145,000	12,723	157,723	291,000	2041
2042			0		145,000	3.50%	7,648	152,648	145,000	7,648	152,648	146,000	2042
2043			0		146,000	3.50%	2,555	148,555	146,000	2,555	148,555	0	2043
TOTALS <sup>1</sup>	1,828,000		711,530	2,539,530	1,796,000		832,487	2,628,487	3,624,000	1,544,017	5,168,017		TOTALS

**Notes:**

1) Adds 2.5% Cost of Issuance to total project cost from CIP net of Cash Applied. In 2021: \$750k; 2023 \$1.5M



**Table 23**  
**Water Utility Cash Flow Analysis - Projected 2020-2030**

City of Salida, CO

	Est. 2020	Budget 2021	Projected								
	2022	2023	2024	2025	2026	2027	2028	2029	2030		
Revenues											
Total Revenues from User Rates <sup>1</sup>	\$1,847,938	\$1,975,876	\$2,089,467	\$2,207,151	\$2,329,076	\$2,455,394	\$2,522,347	\$2,666,398	\$2,762,126	\$2,944,290	\$3,045,575
Percent Increase to User Rates	0.00%	2.58%	2.58%	2.58%	2.58%	2.58%	0.00%	3.00%	0.00%	3.00%	0.00%
Cumulative Percent Rate Increase	0.00%	2.58%	5.22%	7.93%	10.71%	13.57%	13.57%	16.97%	16.97%	20.48%	20.48%
\$ Change from PY Rate Revenues		\$127,938	\$113,592	\$117,684	\$121,925	\$126,318	\$66,954	\$144,051	\$95,728	\$182,164	\$101,286
Other Revenues											
Interest Income	\$8,000	\$8,020	\$8,060	\$8,100	\$8,141	\$8,182	\$8,223	\$8,264	\$8,346	\$8,430	\$8,514
Other Income	\$500	\$510	\$515	\$520	\$525	\$531	\$536	\$541	\$552	\$563	\$575
Total Other Revenues	\$8,500	\$8,530	\$8,575	\$8,621	\$8,666	\$8,712	\$8,759	\$8,805	\$8,898	\$8,993	\$9,089
Total Revenues	\$1,856,438	\$1,984,406	\$2,098,042	\$2,215,772	\$2,337,742	\$2,464,106	\$2,531,106	\$2,675,203	\$2,771,025	\$2,953,283	\$3,054,664
Expenses											
Operating and Maintenance <sup>2</sup>	\$1,218,100	\$1,254,643	\$1,292,282	\$1,331,051	\$1,370,982	\$1,412,112	\$1,454,475	\$1,498,109	\$1,543,053	\$1,589,344	\$1,637,025
PILOT Payment/Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Before Debt Service and Capital Expenditures	\$638,338	\$729,763	\$805,760	\$884,721	\$966,760	\$1,051,994	\$1,076,631	\$1,177,094	\$1,227,972	\$1,363,938	\$1,417,639
Debt Service											
Existing Debt P&I <sup>1</sup>	\$224,522	\$221,405	\$223,489	\$230,466	\$227,227	\$207,630	\$225,912	\$222,565	\$64,216	\$64,219	\$64,219
New (2020-2029) Debt Service P&I	\$0	\$22,850	\$59,765	\$85,807	\$132,150	\$151,350	\$150,250	\$149,150	\$295,625	\$294,600	\$293,425
Total Debt Service	\$224,522	\$244,255	\$283,254	\$316,273	\$359,377	\$358,980	\$376,162	\$371,715	\$359,841	\$358,819	\$357,644
Transfer In (Out)/Cap. Contrib	\$556,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000
Capital Improvements/COI	(\$1,100,000)	(\$2,241,875)	(\$1,915,000)	(\$4,030,000)	(\$850,000)	(\$750,000)	(\$750,000)	(\$750,000)	(\$750,000)	(\$750,000)	(\$750,000)
Bond Proceeds	\$0	\$1,828,000	\$0	\$1,796,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Annual Cash Flow	(\$130,184)	\$571,633	(\$892,494)	(\$1,165,551)	\$257,383	\$443,014	\$450,469	\$555,379	\$618,131	\$755,120	\$809,995
Restricted and Unrestricted Cash Balance:											
Balance at first of year	\$3,322,284	\$3,192,100	\$3,763,733	\$2,871,239	\$1,705,688	\$1,963,071	\$2,406,085	\$2,856,553	\$3,411,932	\$4,030,063	\$4,785,183
Net Annual Cash Flow Addition/(subtraction)	(\$130,184)	\$571,633	(\$892,494)	(\$1,165,551)	\$257,383	\$443,014	\$450,469	\$555,379	\$618,131	\$755,120	\$809,995
Balance at end of year	\$3,192,100	\$3,763,733	\$2,871,239	\$1,705,688	\$1,963,071	\$2,406,085	\$2,856,553	\$3,411,932	\$4,030,063	\$4,785,183	\$5,595,178
Debt Coverage	2.84	2.99	2.84	2.80	2.69	2.93	2.86	3.17	3.41	3.80	3.96

**Notes:**

- 1) 2% revenue inflation per furnished customer growth assumption.  
2) 3% Inflationary factor 2021 and beyond

**Legend:**

- Inflationary Increase beyond COS Study  
COS Study Increase  
End of furnished CIP

# Table 24

## Water Utility Financial Benchmarking Analysis 2020 - 2030

City of Salida, CO

	Budget 2020	2021	2022	2023	2024	Projected 2025	2026	2027	2028	2029	2030
<b>Target minimum cash balance</b>											
Target minimum working capital - Ehlers <sup>1</sup>	1,128,252	1,217,123	1,308,037	1,414,419	1,447,643	1,499,928	1,531,220	1,555,739	1,591,785	1,628,373	1,660,885
Actual Days Cash Available - Moody's <sup>2</sup>	957	1,095	811	468	523	622	717	831	953	1,099	1,248
Actual Days Cash Available - S&P <sup>3</sup>	957	1,095	811	468	523	622	717	831	953	1,099	1,248
<b>Actual working capital-cash balance</b>	3,192,100	3,763,733	2,871,239	1,705,688	1,963,071	2,406,085	2,856,553	3,411,932	4,030,063	4,785,183	5,595,178
Over (Under) Ehlers target	2,063,848	2,546,611	1,563,203	291,269	515,428	906,157	1,325,333	1,856,193	2,438,279	3,156,810	3,934,293
Over (Under) Moody's target (150 days)	807	945	661	318	373	472	567	681	803	949	1,098
Over (Under) S&P target (150 days)	807	945	661	318	373	472	567	681	803	949	1,098

### Notes:

1) Target capital equals 6 mos of following year's operating expenses, including depreciation, plus 100% of following year's debt.

2) Moody's Formula = [(Unrestricted Cash + Liquid Investments) \* 365 days] ÷ Total O&M Expenses less Depreciation

3) S&P Formula = [(Unrestricted Cash + Liquid Investments) \* 365 days] ÷ Total O&M Expenses less Depreciation; include designated reserve funds: ERFs, RSFs, etc

<b>Rate of Return</b>											
Average Utility Plant in Service	20,039,755	21,679,255	23,726,255	26,658,755	29,058,755	29,858,755	30,608,755	31,358,755	32,108,755	32,858,755	33,608,755
Plus: Materials and Supplies	0	0	0	0	0	0	0	0	0	0	0
Less: Utility Plant Accumulated Depreciation	7,819,553	8,332,905	8,908,360	9,560,837	10,299,939	11,065,152	11,858,208	12,679,109	13,527,853	14,404,441	15,308,873
Less: Regulatory Liability	0	0	0	0	0	0	0	0	0	0	0
Average Net Investment Rate Base (NIRB)	12,220,202	13,346,350	14,817,895	17,097,918	18,758,817	18,793,603	18,750,547	18,679,646	18,580,902	18,454,314	18,299,882
Net Operating Income	160,338	208,390	222,245	224,144	219,517	278,599	275,352	347,930	370,881	478,921	504,694
ROR	1.31%	1.56%	1.50%	1.31%	1.17%	1.48%	1.47%	1.86%	2.00%	2.60%	2.76%

<b>Cost Recovery</b>											
Operating Revenues	1,848,438	1,976,386	2,089,982	2,207,672	2,329,601	2,455,924	2,522,883	2,666,939	2,762,678	2,944,853	3,046,150
Operating Expenses incl. Depr & Amortization	1,688,100	1,767,995	1,867,737	1,983,528	2,110,084	2,177,325	2,247,532	2,319,010	2,391,797	2,465,932	2,541,456
Operating Expenses w/o Depr & Amortization	1,218,100	1,254,643	1,292,282	1,331,051	1,370,982	1,412,112	1,454,475	1,498,109	1,543,053	1,589,344	1,637,025
Cost Recovery incl. Depr	1.09	1.12	1.12	1.11	1.10	1.13	1.12	1.15	1.16	1.19	1.20
Cost Recovery w/o Depr	1.39	1.41	1.45	1.49	1.54	1.54	1.55	1.55	1.55	1.55	1.55

### Notes:

This operating ratio indicates whether operating revenues (mostly charges to customers) were sufficient to cover operations and capital (in the form of depreciation) for the water and/or wastewater utility in the fiscal year. A ratio of less than 1 could be a sign of financial concern. In general, this ratio should be higher than 1 to accommodate future capital investments.

<b>Leverage</b>											
Total Long-Term Debt	1,876,883	3,511,120	3,307,041	4,888,642	4,663,922	4,435,232	4,184,857	3,934,150	3,688,110	3,436,729	3,180,005
Total Net Assets	21,114,755	23,843,755	26,333,755	30,858,755	32,283,755	33,033,755	33,783,755	34,533,755	35,283,755	36,033,755	36,783,755
Debt-to Equity Ratio	0.09	0.15	0.13	0.16	0.14	0.13	0.12	0.11	0.10	0.10	0.09

### Notes:

This indicator measures the existing level of leveraging of assets, and is used by funders and bond rating agencies to evaluate the risk of providing additional loans to the utility. The ratio indicates the amount of long-term debt that exists for every \$1 of assets (fund equity). A utility with a ratio greater than 1.0 has more long-term debt than equity in the system's assets. There are no natural benchmarks for this indicator, and funders and bond rating agencies will assess this ratio in various ways. In general, the higher this ratio, the more likely the utility will be considered to be over-leveraged and the more difficult it will be for the utility to obtain additional loans. For this ratio, Net Assets are equal to the Net Investment Rate Base of the utility.

<b>Condition of Assets:</b>											
Accumulated Depreciation Expense	7,819,553	8,332,905	8,908,360	9,560,837	10,299,939	11,065,152	11,858,208	12,679,109	13,527,853	14,404,441	15,308,873
Total Net Assets	21,114,755	23,843,755	26,333,755	30,858,755	32,283,755	33,033,755	33,783,755	34,533,755	35,283,755	36,033,755	36,783,755
Asset Depreciation	37.03%	34.95%	33.83%	30.98%	31.90%	33.50%	35.10%	36.72%	38.34%	39.97%	41.62%

### Notes:

This indicator of infrastructure condition estimates the portion of the average expected life of the utility's physical assets that has already passed.

As this ratio approaches 100%, the capital assets become fully depreciated, and infrastructure needs replacement or rehabilitation. The accuracy of this indicator relies heavily on the accuracy of the depreciation schedule, and historic pricing likely distorts this indicator (newer utilities may be slightly disadvantaged as a result).

# Table 25

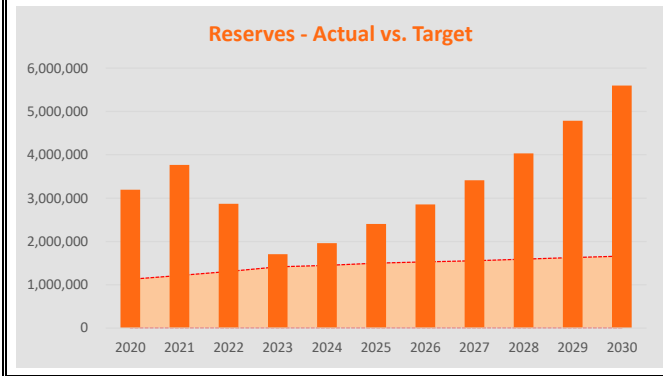
## Water Utility Statement of Projected Revenue Bond Coverage

City of Salida, CO

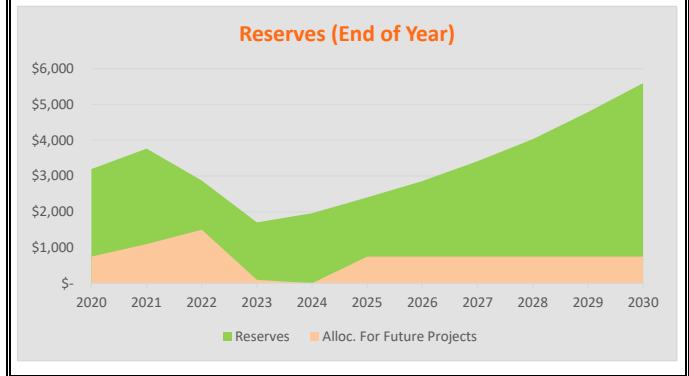
Year	Total Operating Revenues	Less:	Amount Available for Debt Service	Existing Rev Debt	Future Rev Debt (2020-2029)			Total Water Debt Service	Coverage	Debt Service Capacity @ 1.25x
		Total O&M Expense		Total	Total	2021 WRB	2023 WRB			
2020	1,856,438	(1,218,100)	638,338	224,522	-			224,522	2.84	286,149
2021	1,984,406	(1,254,643)	729,763	221,405	22,850	22,850		244,255	2.99	339,556
2022	2,098,042	(1,292,282)	805,760	223,489	59,765	59,765		283,254	2.84	361,354
2023	2,215,772	(1,331,051)	884,721	230,466	85,807	59,615	26,192	316,273	2.80	391,504
2024	2,337,742	(1,370,982)	966,760	227,227	132,150	59,465	72,685	359,377	2.69	414,031
2025	2,464,106	(1,412,112)	1,051,994	207,630	151,350	79,015	72,335	358,980	2.93	482,615
2026	2,531,106	(1,454,475)	1,076,631	225,912	150,250	78,265	71,985	376,162	2.86	485,143
2027	2,675,203	(1,498,109)	1,177,094	222,565	149,150	77,515	71,635	371,715	3.17	569,960
2028	2,771,025	(1,543,053)	1,227,972	64,216	295,625	155,565	140,060	359,841	3.41	622,537
2029	2,953,283	(1,589,344)	1,363,938	64,219	294,600	157,340	137,260	358,819	3.80	732,332
2030	3,054,664	(1,637,025)	1,417,639	64,219	293,425	158,965	134,460	357,644	3.96	776,467

**Table 26**  
**Water Utility Long-Range Planning Analysis**  
*City of Salida, CO*

Are rates set to maintain adequate reserves?



How much reserves are planned for future projects?



Are rates set to pay for financial obligations?

