

STAFF REPORT

To: Honorable Mayor and Members of Town Council

From: Mark Marlowe, P.E., Director of Castle Rock Water

Date: September 20, 2022

Title: 2022 Rates and Fees Study Discussion / Direction

Executive Summary

A primary goal of the annual rates and fees study is to evaluate the long-term financial plan for Castle Rock Water (CRW) to ensure that future rates and fees will cover future costs of service.

Table 1 summarizes the recommended 2023 residential rates from this year's study (2022 Study) compared to the 2022 adopted rates and projected 2023 rates from last year's study (2021 Study) for a typical single-family equivalent (SFE).

Table 1: Summary of Recommended Residential Rates

	2022 Adopted Rates	"2022 Study" Proposed 2023 Rates	\$ Change	% Change	"2021 Study" Proposed 2023 Rates
Water, Fixed	\$9.54	\$9.97	\$0.43	4.5%	\$9.83
Water, Tier 1, Volumetric	\$2.82	\$2.95	\$0.13	4.5%	\$2.90
Water, Tier 2, Volumetric	\$5.74	\$6.00	\$0.26	4.5%	\$5.91
Water, Tier 3, Volumetric	\$8.56	\$8.95	\$0.39	4.5%	\$8.82
Water, Surcharge, Volumetric	\$8.56	\$8.95	\$0.39	4.5%	\$8.82
Water Resources, Fixed	\$26.93	\$28.95	\$2.02	7.5%	\$27.74
Wastewater, Fixed	\$8.57	\$8.57	\$0.00	0.0%	\$8.57
Wastewater, Volumetric	\$6.07	\$6.07	\$0.00	0.0%	\$6.07
Stormwater, Fixed	\$7.30	\$7.63	\$0.33	4.5%	\$7.33

Key assumptions for growth projections, customer characteristics, capital improvement plans, fund balances, and revenue and expenditures forecasts were reviewed and updated by staff to determine the impact they each have on the recommended rates. The water supply and demand model was also evaluated taking the growth projections in Chart 1 below in mind to make sure that the capital plan was keeping pace with growth and that the timing of capital projects continues to be appropriately scheduled.

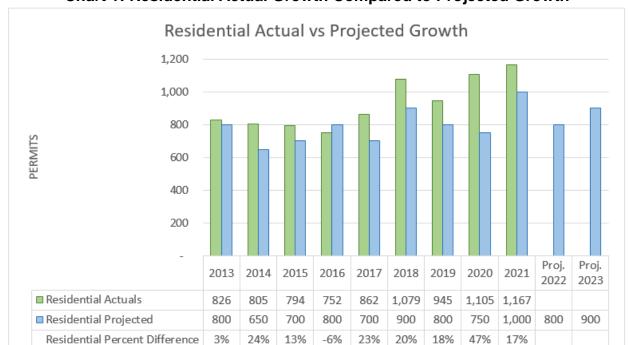


Chart 1: Residential Actual Growth Compared to Projected Growth

Note: Actual Annual Average 2013 to 2021: 926 Residential Permits

There were no major changes to customer characteristics affecting this year's recommendations. With respect to capital plans, there were some significant changes to the five-year capital plans, but there were also several major changes to the long term (>5 years out) capital plan which were made for this study year. Additional requirements for desalination related to Water Infrastructure Supply Efficiency (WISE) as well as increases in Plum Creek Water Purification Facility (PCWPF) expansion were incorporated into the capital plan and account for a large increase in near term spending. Long term planning was impacted by upcoming proposed changes to turf restrictions on new homes and non-residential development which will reduce the future capacity needs as consumption and peak demands in new development will be significantly less than current areas of Town. Significant changes to the five-year capital plan by enterprise are summarized in Table 2 and in more detail below.

Table 2: 5 Year CIP and Long Term CIP Differences

Fund	2022 Study CIP 2023-2027	2021 Study CIP 2022-2026	Variance	2022 Study CIP thru 2065*	2021 Study CIP thru 2060
Water	\$54,464,630	\$45,895,546	\$8,569,084	\$395,956,625	\$302,853,812
Water					
Resources	\$194,430,446	\$96,907,949	\$97,522,497	\$428,033,838	\$525,619,757
Stormwater	\$22,857,056	\$14,409,255	\$8,447,801	\$149,087,566	\$135,107,884
Wastewater	\$22,712,590	\$24,932,187	(\$2,219,597)	\$163,584,621	\$186,916,719
Total All Funds	\$294,464,722	\$182,144,937	\$112,319,785	\$1,136,662,650	\$1,150,498,172

Note: CIP timeframe was extended through 2065 during the 2022 study

Water Fund:

- Added \$10.3M in Well Redrills
- Added \$3.9M in New Wells and Waterlines

Water Resources Fund:

- Added \$41.2M for WISE Infrastructure Desalination Facilities
- Added \$6.3M for WISE Infrastructure Pipeline
- Added \$12.1M for Castle Rock Reservoir No. 2 Construction
- Added \$58.8M for PCWPF expansion
- Added \$13.4M to Plum Creek Pipeline to PCWPF
- Added \$8.0M to Plum Creek to Rueter Hess Reservoir Pipeline and Pump Station
- Added \$1.3M for East Cherry Creek Valley North-South Pipeline capacity

Stormwater Fund:

• Added \$8.5M in funding for Stream Stabilization

Wastewater Fund:

- Added \$0.5M in funding for the Castle Oaks Lift Station Upgrade
- Moved \$2.2M for Kinner Street Bottleneck beyond 2027

The primary factors affecting revenue and expenditure forecasts in the rate models are as follows:

- Included in the staffing plan for 2023 are five new full time equivalents (FTEs) which include a Stormwater Inspector, Water Efficiency Technician, a Collections System Operator, an Office Assistant, and a Supervisory Control and Data Acquisition (SCADA) Instrumentation Technician. There are 13 total FTEs added through 2027.
- Changed timing of many capital projects consistent with water supply and demand model as well as availability of capital reserves.
- 3) Updated capital plan costs consistent with current capital project cost estimates and changes to the Engineering News Record Construction Cost Index.
- 4) Added new long term capital projects to meet needs of growth, provide for improvements to the system where necessary to meet upcoming regulatory changes, and make sure rehabilitation and replacement of existing infrastructure was covered.
- 5) Removed and / or reduced the scope of projects consistent with the expected reduction in total water supply needs and peak demand infrastructure based on the proposed changes to the landscape and irrigation criteria (no/limited turf for new development).
- 6) Incorporated debt issuances of up to \$40 million to cover shortages of capital reserves into the models for the Water Resources Enterprise in the 2026 to 2030 timeframe.

Table 3 provides context for the recommended rate action by providing the history of rate action over the last five years as well as a comparison to the Consumer Price Index (CPI) and the Engineering News Record (ENR) Construction Cost Index (CCI).

Table 3: 5 Year Rate Increase History, CPI and ENR CCI

Rate Increase History							
Fund	2018	2019	2020	2021	2022		
Water	0%	3%	0%	0%	0%		
Water Resources	0%	0%	0%	0%	3%		
Stormwater	0%	0%	0%	0%	3%		
Wastewater	0%	0%	(3%)	0%	(5%)		
	Cons	umer Price Ir	ndex (CPI) His	story			
	2017	2018	2019	2020	2021		
CCI	3.4%	2.7%	1.6%	1.6%	4.7%		
Engineering News Record Construction Cost Index (ENR CCI) History							
	2017	2018	2019	2020	2021		
ENR	3.3%	3.2%	2.8%	3.0%	5.8%		

Table 4 summarizes the proposed system development fees (SDFs) for 2023 per SFE.

Table 4: Summary of Recommended System Development Fees (SDFs)

	2022	"2022 Study"	\$	%	"2021 Study"
	Adopted	Proposed	Change	Change	Proposed
	SDFs	2023 SDFs			2023 SDFs
Water	\$5,700	\$6,270	\$570	10.0%	\$5,700
Water Resources	\$26,458	\$30,383	\$3,925	15.0%	\$26,458
Wastewater	\$4,909	\$5,400	\$491	10.0%	\$4,909
Stormwater, Plum Creek	\$2,128	\$2,339	\$211	10.0%	\$2,128
TOTAL Plum Creek	\$39,195	\$44,392	\$5,197	13.3%	\$39,195
Stormwater, Cherry Creek	\$1,116	\$1,228	\$112	10.0%	\$1,116
TOTAL Cherry Creek	\$38,183	\$43,281	\$5,098	13.4%	\$38,183

For SDFs related to new development, Castle Rock Water recommends an increase of \$5,197 per SFE in the Plum Creek Basin and an increase of \$5,098 per SFE in the Cherry Creek Basin, about a 13.3% increase for each basin. This recommendation is consistent with Town Council's policy on SDFs that growth pays for growth.

Several factors are driving the recommended increases in SDFs identified in the SDF model and financial model. First, Castle Rock continues to see strong growth in both residential and non-residential customers from existing entitlements in Town. While growth has slowed in the current year due to external economic factors, projections still indicate continued strong growth in the coming years. To keep pace with this

population increase, additional projects have been added to the long term plan over the last several years and the infrastructure and capital costs for these projects are now better defined. Additional infrastructure and the costs for that infrastructure have also been identified to meet the increased peak demands from a larger customer base. Next, the pace of growth has exceeded projections as show in Chart 1. This drives the need to build projects to meet annual water supply needs sooner creating the need to generate more revenue sooner. It also requires building peak demand capacity sooner than expected. For example, recent growth has driven the need for additional water SDFs for new wells to help fill the supply needs until longer term renewable water projects can be completed. If growth was occurring more slowly, these wells might not have been needed.

Project costs continue to rise year over year as shown in the ENR CCI. In fact, just through the first 8 months of this year, the ENR CCI is up an additional 6% over last year. Another huge driver of the increased SDFs is that the cost and challenge of new renewable water projects has gone up significantly over the course of the last year in response to water scarcity across the western United States. The crisis in the Colorado River has driven increases in competition for limited renewable water supplies in Colorado. Changing weather patterns impacting the future of the Colorado River will impact these costs for many years to come. Permitting and infrastructure associated with renewable water projects will also become more difficult and costly as a result. Further, the State is pushing to limit total volumetric withdrawals from nonrenewable wells for which Castle Rock has large investments in place. If successful, the State's action will mean that Castle Rock needs to get to 100% renewable water sooner than previously anticipated which again impacts the needs for financial resources.

Finally, the details and needs of some of our longer term projects are becoming more defined as implementation occurs and estimated costs are higher than previously estimated.

The proposed SDF changes keep Castle Rock competitive with other surrounding South Metro water providers who also need to fund investments in long-term renewable water supply as shown in Table 5 below:

Table 5: Comparison of System Development Fees (SDFs) - Plum Creek Basin

Denver Water City of Loveland Colorado Springs Utilities Inverness Water and Sanitation District Centennial Water and Sanitation District (5 units/acre) City of Fort Lupton City of Greeley Meridian Service Metropolitan District City of Fountain (Fountain Creek Basin area) Centennial Water and Sanitation District (3 units/acre) City of Fort Collins City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$8,150 \$10,447 \$12,098 \$13,900 \$14,901 \$17,864 \$18,402 \$19,000 \$19,449 \$19,709 \$19,815 \$23,314 \$24,943 \$27,510
Colorado Springs Utilities Inverness Water and Sanitation District Centennial Water and Sanitation District (5 units/acre) City of Fort Lupton City of Greeley Meridian Service Metropolitan District City of Fountain (Fountain Creek Basin area) Centennial Water and Sanitation District (3 units/acre) City of Fort Collins City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$12,098 \$13,900 \$14,901 \$17,864 \$18,402 \$19,000 \$19,449 \$19,709 \$19,815 \$23,314 \$24,943
Inverness Water and Sanitation District Centennial Water and Sanitation District (5 units/acre) City of Fort Lupton City of Greeley Meridian Service Metropolitan District City of Fountain (Fountain Creek Basin area) Centennial Water and Sanitation District (3 units/acre) City of Fort Collins City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$13,900 \$14,901 \$17,864 \$18,402 \$19,000 \$19,449 \$19,709 \$19,815 \$23,314 \$24,943
Centennial Water and Sanitation District (5 units/acre) City of Fort Lupton City of Greeley Meridian Service Metropolitan District City of Fountain (Fountain Creek Basin area) Centennial Water and Sanitation District (3 units/acre) City of Fort Collins City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$14,901 \$17,864 \$18,402 \$19,000 \$19,449 \$19,709 \$19,815 \$23,314 \$24,943
City of Fort Lupton City of Greeley Meridian Service Metropolitan District City of Fountain (Fountain Creek Basin area) Centennial Water and Sanitation District (3 units/acre) City of Fort Collins City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$17,864 \$18,402 \$19,000 \$19,449 \$19,709 \$19,815 \$23,314 \$24,943
City of Greeley Meridian Service Metropolitan District City of Fountain (Fountain Creek Basin area) Centennial Water and Sanitation District (3 units/acre) City of Fort Collins City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$18,402 \$19,000 \$19,449 \$19,709 \$19,815 \$23,314 \$24,943
Meridian Service Metropolitan District City of Fountain (Fountain Creek Basin area) Centennial Water and Sanitation District (3 units/acre) City of Fort Collins City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$19,000 \$19,449 \$19,709 \$19,815 \$23,314 \$24,943
City of Fountain (Fountain Creek Basin area) Centennial Water and Sanitation District (3 units/acre) City of Fort Collins City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$19,449 \$19,709 \$19,815 \$23,314 \$24,943
Centennial Water and Sanitation District (3 units/acre) City of Fort Collins City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$19,709 \$19,815 \$23,314 \$24,943
City of Fort Collins City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$19,815 \$23,314 \$24,943
City of Fountain (Jimmy Camp Creek Basin area) Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$23,314 \$24,943
Evans Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$24,943
Cottonwood Water and Sanitation District East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	
East Larimer County Water District Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$27,510
Thornton Water Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	
Stonegate Village Metropolitan District East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$27,909
East Cherry Creek Valley Water and Sanitation District (West Toll Gate Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$32,439
Creek Storm Drainage Basin) Arapahoe County Water and Wastewater Authority East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$36,053
East Cherry Creek Valley Water and Sanitation District (Piney Creek Storm Drainage Basin)	\$38,650
Storm Drainage Basin)	\$38,747
	\$39,120
East Cherry Creek Valley Water and Sanitation District (No Name Creek Storm Drainage Basin)	\$40,775
Parker Water and Sanitation District	\$41,000
Castle Rock Water (Plum Creek Basin Area)	\$44,392
Pinery Water and Sanitation District	\$44,842
Sterling Ranch CAB	\$45,370
Castle Pines North Metropolitan District	\$51,242
City of Brighton (South Beebe Draw Metro District area)	\$51,338
Roxborough Water and Sanitation District	\$52,393
City of Brighton (Metro Wastewater Reclamation District area)	Ψ02,000

Staff recommends moving forward with these proposed rates and fees, finalizing the "2022 Study" report and all of the associated data, bringing the appropriate ordinances to Town Council for approval on September 20, 2022, and October 4, 2022 and incorporating the proposed rates and fees into the 2023 proposed budget. Concurrent with the preparation of the proposed rates and fees for 2023, staff has updated the Financial Management Plan (FMP), to ensure the study is consistent with the goals of the FMP, which are:

- To minimize debt carrying costs at or below industry standards. CRW continues
 to stay in the top 25% in the industry with the lowest debt. This is positive, but
 the current financial models do indicate that we will need to take out significant
 additional debt towards the end of this decade to keep pace with our needs for
 renewable water supplies and infrastructure. This debt could move us into the
 median category.
- To minimize risk by keeping fixed versus variable revenues and expenses equal
 to or matching where possible. CRW focuses on keeping these matched to the
 extent possible while still sending a conservation oriented message with a

variable rate. CRW's success with balancing the revenues and expenses for fixed and variable components is shown in Chart 7 below.

- To keep costs at or under budget for capital and operational budgets each year by fund and to continuously strive towards more efficient operations. As shown in Table 6 below, CRW is keeping costs under budget.
- To keep our rates and fees competitive with surrounding communities. CRW
 rates and fees compare somewhere in the middle of the benchmarking as seen
 in the rates comparisons in Charts 2-3 and the system development fees in Chart
 5.
- To keep adequate reserves and maintain fund balances between minimums and maximums. CRW continues to maintain adequate reserve balances in all funds for operating, catastrophic event, rate revenue stabilization and capital reserve.
- To keep rates and fees affordable within various national affordability indices. Last year CRW had Stantec's help in looking at two affordability methods created by Teodoro. The first of these shown below in Figure 1 is the Affordability at the 20th Income Percentile (AR20). This method measures the affordability of the average water and wastewater bill to the 20th percentile income. This indicates that of the monthly disposable income for this group, 4.29% is spent on essential water and wastewater usage for CRW assuming the recommended 2023 rates are approved. The average for large cities is 12.4%, which puts CRW well below average, a positive result.

The second method, shown in Figure 2 below is the Basic Household Water and Sewer Cost Expressed in Terms of Hours of Labor at Minimum Wage (HM). This metric shows the number of hours required for one to work at minimum wage to pay the monthly water bill. For CRW, the proposed 2023 rates result in an HM value of 8.29 hours. The average for large cities is at 10.1, which puts CRW slightly below average, again a positive result.

Figure 1: Affordability at the 20th Income Percentile (AR20)

	Affo	rdability	At The 20th Income Percentile (AR ₂₀)
			Source
eople Per Household		4	Journal AWWA January 2018 (values from Teodoro article)
ssential Water Volume*		50	Journal AWWA January 2018 (values from Teodoro article)
pical Monthly Household Essential Volume		6,000	
/ater Monthly Consumption			
Tier 1		4,300	
Tier 2		1,700	
/ater 3/4" Residential Base Charge	\$	9.97	
/astewater Monthly Consumption			
Tier 1		4,300	
/astewater 3/4" Residential Base Charge	\$	8.57	
onthly Household Cost Of Essential Water Services	\$	32.84	FY 2023 CRW Proposed Water Rates
onthly Household Cost Of Essential Wastewater Services**	\$	34.67	FY 2023 CRW Proposed Wastewater Rates
onthly Household Cost Of Essential Renewable Water Services	\$	28.95	FY 2023 CRW Proposed Renewable Water Rates
onthly Household Cost Of Essential Stormwater Services	\$	7.63	FY 2023 CRW Proposed Stormwater Rates
otal Cost of Essential Water and Sewer Services	\$	104.09	
nnual Household Income (20th Percentile)***	\$	55,898	B19080: HOUSEHOLD INCOME QUINTILE Census Bureau Table
nnual Essential Household Expenses****	\$	26,815	Consumer Expenditure Survey - Table 3134 West Region
nnual Disposable Income	\$	29,083	
and the Dianas abla basessa	\$	2,424	
onthly Disposable Income			

Figure 2: Basic Household Water and Sewer Cost Expressed in Terms of Hours of Labor at Minimum Wage (HM)

**** Does not include water and sewer services. Reflects expenses at an income level between \$50,000 and \$69,999 in the western region.

			Source
People Per Household		4	Journal AWWA January 2018 (values from Teodoro article)
Essential Water Volume*		50	Journal AWWA January 2018 (values from Teodoro article)
Typical Monthly Household Essential Volume		6,000	
Monthly Household Cost Of Essential Water Services	\$	32.84	FY 2023 CRW Proposed Water Rates
Monthly Household Cost Of Essential Wastewater Services**	\$	34.67	FY 2023 CRW Proposed Wastewater Rates
Monthly Household Cost Of Essential Renewable Water Services	\$	28.95	FY 2023 CRW Proposed Renewable Water Rates
Monthly Household Cost Of Essential Stormwater Services	\$	7.63	FY 2023 CRW Proposed Stormwater Rates
Total Cost of Essential Water and Sewer Services	\$	104.09	
Minimum Wage	\$	12.56	Minimum Wage Department of Labor & Employment (colorado.gov)
Н	М	8.29	Teodoro Study average of 10.1 for 25 largest US cities.

- To develop regional partnerships to provide economies of scale to reduce total costs of infrastructure to our customers. CRW has formed many partnerships with individual water providers like Dominion and Parker and regional organizations such as South Metro Water Supply Authority, WISE Authority, Plum Creek Water Reclamation Authority (PCWRA), and Cherry Creek Project Water Authority, just to name a few.
- To be an industry leader in the application of financial management benchmarking ourselves against others locally and nationally. Castle Rock Water has thirty different key performance objectives and indicators (KPIs) with measurable outcomes. Many of which are benchmarked against other water providers nationally, regionally and locally. More information and results for these KPIs are available in our strategic plan.

History of Past Town Council, Boards & Commissions, or Other Discussions

Castle Rock Water (CRW) Commission reviewed at least one aspect or component of the annual rates and fees study process and the 2022 rates and fees studies at each of their meetings from October 2021 to August 2022 to provide staff with input. For a complete list of topics, please see the CRW Commission agendas.

On May 25, 2022, CRW Commission reviewed the Customer Characteristics Analysis for the 2022 rates and fees study with staff.

On August 31, 2022, the results of the 2022 annual rates and fees study were presented to CRW Commission by staff for discussion and direction. CRW Commission was supportive of staff recommendations at this time.

Notification and Outreach Efforts

The proposed SDFs have been sent to the Economic Development Council (EDC) for distribution to the home builders, developers and other interested parties among the development community.

Discussion

For common understanding, "rates" refers to the collective monthly fixed charges and volumetric rates billed to existing customers. "System Development Fees" is a general term used for Water, Water Resources and Wastewater System Development Fees (SDFs) and Stormwater Development Impact Fees (DIFs). Water, Water Resources and Wastewater SDFs are calculated and assessed at the time of permitting for the right to access existing system capacity or for payment of a proportionate share of the capital cost required for new capacity to meet the potential demand the new customer is expected to place on the system. SDFs ensure that growth pays for the cost of growth. Also paid at the time of permitting, Stormwater DIFs are a proportionate share of the cost to add stormwater capital facilities to manage the runoff created by the impervious surfaces of new construction in the Plum Creek or Cherry Creek Basin.

For the sixth year in a row, Castle Rock Water has engaged Stantec Consulting Services, Inc. to assist with preparation of the Study. To reduce costs, Castle Rock Water staff continued to prepare the Customer Characteristics Analysis in-house for the 2022 Study. However, Stantec prepared the System Development Fees Models, Financial Rate Models, and the Cost of Service Models for the 2022 Study.

The "2022 Study"

The steps for completing this year's study, as in previous studies, are grounded in industry standards for cost-of-service ratemaking as summarized in the American Water Works Association's AWWA Manual M1. As in prior years, work products include the following:

- 1. Growth Forecast
- 2. Customer Characteristics Analysis
- 3. Capital Improvement Projects Forecast Updates
- 4. Revenue and Expenditures Forecast Updates (in conjunction with budgeting)
- 5. Rates & Fees Modeling
- 6. Cost of Service Modeling
- 7. Community Engagement

Growth Forecast

The growth forecast for customers in Town continues to be developed in conjunction with Development Services based on both historical performance, discussions with developers and home builders, and anticipated changes to economic conditions in the coming year. Customers that may be served through extraterritorial agreements are evaluated by Castle Rock Water and added to the totals within the Town boundaries as appropriate. Growth forecasts include all customer classes converted to single family equivalents. For the 2022 rates and fees study, the growth forecast for the next five years was estimated as follows:

- 2022 942 single family equivalents
- 2023 940 single family equivalents
- 2024 716 single family equivalents
- 2025 873 single family equivalents
- 2026 866 single family equivalents

For years beyond the five-year window, Castle Rock Water used an average value of 721 single family equivalents for future growth of the customer base in the financial models. Based on these growth projections build-out in the community and service to extraterritorial areas could occur by 2042, assuming current maximum estimated build-out of 125,000 people is reached.

New customers provide revenues through SDFs to fund growth-related capital projects and the monthly revenues to fund the remaining costs as an existing rate customer. Actual growth in 2021 was strong, however growth has slowed in 2022. So far this year, 544 single family home permits have been issued through July, down from the 752 issued through July in 2021. Budgets have been adjusted to reflect a lower growth figure, however, if growth falls short of this forecast, revenues are at risk with the severity and service delivery impacts dependent upon the depth of the shortfall. Growth in 2023 and beyond is difficult to predict. As a result, Castle Rock Water uses a conservative approach to estimating future growth. If growth falls short of current forecasts, revenues in 2023 and beyond could fall short of requirements for the current capital plans requiring a delay on some of these projects. Similarly, if growth significantly exceeds current forecasts, capital projects will need to be moved forward. Castle Rock Water uses our water supply and demand model to evaluate the pace of

growth as it relates to our capital improvement plans to ensure that we have the ability to react to changes in actual growth relative to the projected growth.

Customer Characteristics Analysis

The Customer Characteristics Analysis was reviewed with the CRW Commission in May of this year. The topics discussed included growth projections and how they are considered in long-range planning, residential consumption trends, and the various ways that CRW is continuing to promote conservation in the Town. In general, we have seen some favorable trends in regards to average residential consumption in recent years and will likely see additional improvements beginning in 2023 as the proposed changes to Castle Rock's landscape and irrigation criteria manual (i.e. new limits on turf grass for new development) are implemented. A complete copy of the report is available from Castle Rock Water. There were no major changes to customer characteristics affecting this year's rates and fees recommendations as noted in the Executive Summary.

Capital Improvement Projects Forecast Updates

A complete discussion of the capital improvement project forecast updates was provided in the Executive Summary. As noted in this summary, significant additions were made to the long term capital plan. Costs for renewal and rehabilitation of existing infrastructure, improvements to existing infrastructure to meet upcoming regulatory requirements, infrastructure additions driven by the renewable water program, capital investment adjustments and revenue forecast changes based on the proposed changes to Castle Rock's landscape and irrigation criteria manual (i.e. new limits on turf grass for new development), and an updated growth forecast are incorporated into the study. Capital costs are escalated by 3.00% per year in future years past 2023 consistent with the latest ENRCCI in the financial model.

Revenues and Expenditures Forecast Updates

As in previous years, complete revenue and expenditure forecast updates were prepared along with the budgeting process. Table 6 outlines the comparison of the 2022 Budget and 2022 YE Estimates to the 2023 Proposed Budget.

Table 6: 2022-2023 Budget Comparison

Account Type	Category	2022 Budget	2022 YE Estimates	2023 Budget	2022 YE Estimates to 2023 Budget % Change
Revenues	Charges for Service	\$45,732,600	\$44,651,273	\$47,832,133	7.1%
	Contributions & Donations	\$426,925	\$919,848	\$2,843,954	170.1%
	Fines & Forfeitures	\$500,950	\$530,965	\$516,000	(2.8%)
	Intergovernmental Revenue	\$150,000	\$300,700	\$300,700	0.0%
	Investment Earnings	\$1,097,112	(\$213,412)	\$706,820	*
	Licenses & Permits	\$8,000	\$5,460	\$7,000	28.2%
	Other Revenue	\$31,117,369	\$31,085,474	\$643,878	(97.9%)**
	System Development Fees	\$32,109,340	\$55,627,749	\$29,293,506	(47.3%)
	Transfers In	\$148,763	\$17,664	\$168,045	851.3%
Total Revenues		\$111,291,059	\$132,925,357	\$81,952,036	(38.3%)**
Expenses	Capital	\$101,650,128	\$51,862,659	\$78,859,312	52.1%
	Debt & Financing	\$9,004,901	\$8,754,289	\$8,840,070	1.0%
	Personnel	\$11,638,629	\$10,314,389	\$12,488,340	21.1%
	Services & Other	\$22,848,241	\$20,097,737	\$23,673,605	17.8%
	Supplies	\$3,429,745	\$2,796,703	\$3,331,584	19.1%
	Transfers Out	\$679,321	\$679,506	\$814,455	19.9%
Total Expenses		\$149,250,321	\$94,505,283	\$128,007,366	35.4%

^{*} Calculation for 2022 YE Estimate to 2023 Budget % change for Investment Earnings is -431.2% due to 2022 YE Estimates being negative. However, dollar variance is +\$920K.

Assuming the recommended rates are approved, the combined 2023 revenue budget for the department is \$82 million and represents a 26% decrease from the 2022 budget, and a 38% decrease from the 2022 year-end estimates. These decreases are largely driven by the \$30 million bond in Water Resources. When comparing 2023 to 2022 without the \$30 million in bond revenue, the 2023 budget is up 1% to the 2022 budget and down 20% to the 2022 year-end estimates. These revenue numbers are also being impacted by the reduced revenues projected for SDFs as a result of the proposed changes to the landscape and irrigation criteria (i.e. the 47% reduction in SDF revenue).

The combined 2023 expenditure budget associated with the major functions for the various Castle Rock Water enterprises is approximately \$128 million, a decrease of 14% from the 2022 amended budget and an increase of 35% over the 2022 year-end estimate. These changes are due to large changes in proposed capital spending in 2023 relative to 2022 primarily driven by the fact that many of the projects originally planned for 2022 are carrying over to 2023. Capital budgeting is variable based on long-term project planning and opportunity.

With respect to the operational budgets, the total combined budget for 2023 is approximately \$49.1 million. This is a 3% increase to the 2022 Amended Budget and a 15% increase over the 2022 year-end estimate. The increase over the 2022 year-end estimate is due to increases in debt costs as the new water resources loan begins to be paid back, increases in personnel costs, increases in the amount of WISE water that will be taken as WISE ramps up towards full deliveries, increases in energy costs (i.e. CORE is going up 6% across the board for energy), and increased costs for supplies partly as a response to supply chain deficiencies and also cost impacts to suppliers. The department is requesting five new positions, a Stormwater Inspector, a Water Efficiency Technician, a Collection System Operator, an Office Assistant, and a SCADA Instrumentation Technician.

The 2023 capital budget across the Castle Rock Water Enterprises is approximately \$78.9 million, a 22% decrease over the 2022 Amended Budget and a 52% increase

^{**} Note: 2022 Budget and YE Estimates include \$30 million in bond proceeds in Other Revenue

over the 2022 year-end estimates. Revenue and expense forecasts were completed through 2027 and then escalated in the models for years past 2027.

Fund Balances

Based on the revenue and expense forecasts, fund balances are reviewed through 2027 closely and more generally through the entire modeling period out to 2065. Savings in actual costs and the timing of spending on capital costs verses budgets each year have helped to keep fund balances stable throughout the years and projections through 2027 continue this trend except that in 2026 to 2030 timeframe a significant debt issuance is predicted in the Water Resources Enterprise to keep fund balances above minimum levels. Fund balances need to be built up with capital reserves ahead of large capital projects to ensure the money is available to proceed on the projects when the projects are needed to meet growth and other service goals. Fund balances are then drawn down significantly as capital reserves are spent on these projects. Keeping close tabs on the fund balances ensures that there are no negative impacts on the long term financial plan when large projects must be funded.

Fund balance for the Water Fund is projected to dip below average values of \$17M through 2026 and then recover in 2027 to above average levels. In the Water Resources Fund, values have increased, partially due to the \$30M debt issuance in 2022. Fund balances will remain high and funding is maintained for critical near-term projects. Current modeling indicates that debt issuance may be needed near the end of the five-year planning window to meet full capital needs. Stormwater Fund balance hit a value at the end of 2021 of around \$13M and then is projected to fall to \$3.4M by year-end 2027. Wastewater Fund balance increased to around \$22M at year-end 2021. The balance will continue to grow in the near-term ahead of large capital requirements in the 2030's.

Rate Revenue

While fixed revenues in the four enterprise fund models are set to generally trend up with the projected growth, variable revenues can be difficult to predict. These variable revenues are subject to two primary drivers, 1) weather and 2) national, state and local pressure to conserve water or at least use it more efficiently. For the 5-year planning period, CRW is forecasting annual increases of about 7% per year through 2027. For new houses and new development, rate revenue is projected to be less than previous estimates due to the proposed changes to landscape and irrigation criteria. As always, Castle Rock Water is aware of the need to be cautious when projecting rate revenues due to the unpredictability of weather, conservation efforts and sustainable growth.

Non-Rate Revenues

Non-rate revenues are generated through charges and fees for miscellaneous or ancillary services not accessed or used by the broader customer base. These special charges should recover the actual cost of service delivery consistent with cost-of-service principles and Town financial policies. Recovering costs directly from customers that access those services also enhances equity. These charges can also help manage demand for those services as well as address customer behavior patterns. In these cases, Caste Rock Water may set a special charge above the cost of service. Two examples of this include the Residential Landscape and Irrigation Inspection Fee and

Meter Set Inspection Fees. Castle Rock Water was having issues with home builders failing these inspections multiple times which created resource issues for the department. As such, these fees were set to escalate after each failed inspection starting in 2022. Other special charges include late charges, disconnection charges, service transfer charges and administrative related fees, just to name a few. Key charges proposed for changes in 2023 include Bulk Water Read Fees and Meter Set Re-inspections. The full list of proposed special charges for 2023 are shown in Table 7 below.

Table 7: Special Charges/Fees

		. Special Clie			
Special Charge (Fee)	Cost of	Adopted 2022	Proposed 2023	Benchmark	Benchmark
	Service	Fee Amounts	Fee Amounts	Range	Average
Returned Payment Charge	\$28.84	\$30.00	\$30.00	\$15.00-\$75.00	\$29.37
Water Service Transfer Fee	\$39.97	\$40.00	\$40.00	\$12.00-\$100.00	\$38.00
Administrative Lien & Recording Fee	\$71.48	\$69.00	\$72.00	\$13.00-\$90.00	\$51.60
Bulk Water Read Fee – Via Phone	\$13.31	\$13.00	\$14.00	\$50.00	\$50.00
Bulk Water Read Fee – Via On Site	\$74.78	\$71.00	\$75.00	\$25.00-\$250.00	\$90.00
Bulk Hydrant Meter & Backflow Inspection	\$91.97	\$90.00	\$92.00	\$25.00-\$75.00	\$49.60
Bulk Hydrant Inspection No Show Trip	\$52.89	\$50.00	\$53.00	Not Available	Not
Charge					Available
Bulk Hydrant Meter Calibration	\$197.85	\$150.00	\$150.00	\$75.00-\$350.00	\$212.50
Customer Requested Meter Bench Test	\$47.00	\$47.00	\$47.00	\$0-\$165.00	\$82.33
(Passing Meter)					
Delinquency Disconnection/Reconnection	\$46.63	\$45.00	\$47.00	\$15.00-\$300.00	\$81.18
Customer Requested Service	\$90.00	\$84.00	\$90.00	\$20.00-\$100.00	\$60.16
Disconnection/Reconnection					
Canyons South Meter Lockout	\$100.78	\$98.00	\$101.00	Not Available	Not
					Available
Meter Set Re-inspection (1st inspection	\$52.21	\$50.00	\$53.00	\$20.00-\$1,500.00	\$209.18
included in meter set fees)(1)					
Irrigation Permit	\$670.00	\$610.00	\$670.00	Not Available	Not
					Available
Landscape Contractor Registration	\$70.85	\$65.00	\$71.00	Not Available	Not
					Available
Residential Landscape & Irrigation	\$45.00	\$45.00	\$45.00	Not Available	Not
Inspection ⁽²⁾					Available
Irrigation Permit Re-inspection	\$111.54	\$110.00	\$112.00	Not Available	Not
					Available
Irrigation Disconnection/Reconnection	\$90.00	\$84.00	\$90.00	Not Available	Not
(due to non-compliance					Available
Temporary Sod Exemption	\$9.36	\$9.00	\$10.00	Not Available	Not
					Available

⁽¹⁾ The proposed fee doubles after each failed inspection for the reinspection, e.g. after the second failed inspection, the reinspection fee will go to \$106, after the third it will go to \$212, and so on.

Personnel

The 2023 budget includes five new full time equivalents (FTEs). These include a Stormwater Inspector, a Water Efficiency Technician, a Collection System Operator, an Office Assistant, and a SCADA Instrumentation Technician. From 2024 to 2027, Castle Rock Water is projecting to add eight FTEs, including a Customer Service Representative, a Plant Mechanic, and a Field Services Operator in 2024; a Lab Supervisor and a Plant Mechanic in 2025; a Field Services Operator in 2026; a Water Quality Technician and Field Service Operator in 2027. The Study reflects updated personnel cost allocations across the four enterprises to capture cost-of-service impacts on personnel resources, as well as Town-wide changes to the pay and benefits plans.

⁽²⁾ The proposed fee doubles after each failed inspection for the reinspection, e.g. the second inspection will cost \$90, the third inspection \$180, and so on.

After 2027, costs for personnel are escalated by 1.55% which is consistent with the long-term historical average CPI.

Electricity

The third largest operating cost, electricity, reflects full operation of the Plum Creek Water Purification Facility and other treatment plants, alluvial and groundwater well operations and pumping associated with water and wastewater service. Castle Rock Water has implemented an energy management and system optimization plan to maximize the efficiency of electrical usage. CORE, Castle Rock Water's electricity provider, increased rates in August 2022 by 6%. Electricity costs in 2023 have been adjusted to account for this mid-year increase and rates for the remainder of the five-year period assume an annual increase of 3%. After 2027, electricity costs are escalated by 1.55% consistent with the long-term historical average CPI.

Operations & Maintenance

Cost projections include operating and maintenance costs for CRW. Items impacting operating costs during the five-year planning period include:

- Meter costs under supplies are going up significantly as we transition to advanced metering infrastructure
- Operating costs for WISE will continue to increase as the full quota of Castle Rock's WISE water is delivered with that occurring in 2026
- Personnel costs have risen significantly in response to staffing shortages and competition for labor across the region with Castle Rock Water and the Town as a whole taking action on this issue in 2022
- CORE has increased rates for electricity by 6% across the board
- Stormwater is adding significant operational costs associated with a program for the inspection of aging corrugated metal stormwater pipes

This results in increases of 37% over the five-year period. To ensure only costs needed are included in the budget, line item details are reviewed. After 2027, operations and maintenance costs in the model are increased by 1.55% consistent with the long-term historical average CPI.

Rates and Fees and Cost of Service Modeling

Once the first four steps are completed, the capital plan is put into the system development fee models along with the projected new single family equivalents that this capital will support. Proposed system development fees from these models are then put into time based financial models otherwise known as the rates and fees models, one for each enterprise. These models look at financial data through 2065. For purposes of this year's models, additional debt of approximately \$40M was included towards the end of the decade. Castle Rock Water then works to ensure that over the modeling period (out to 2065):

- there are no large rate increases forecasted (greater than 7.5%) to be needed
- fund balances are maintained within reasonable limits according to upcoming capital needs through 2065
- Minimum reserves are maintained for all enterprises throughout the study period

Debt needed is reasonable with respect to Castle Rock Water's borrowing capacity

If these conditions are not met, adjustments are made to the capital plan and operating expenses where changes can be made without impacting levels of service to balance these items. Revenue requirements for each enterprise are then determined from the models based on the change in revenue needs for each enterprise according to the forecast capital and operational expenses. Once the total revenue requirements are identified in each enterprise, cost of service models are used to spread those revenue requirements over the different customer classes. The end results are the rates and fees recommendations.

Proposed Rates and Fees for 2023 through 2027

Based on impacts of the revised capital plan and projected system growth by fund as well as the other key changes, the "2022 Study" has resulted in projected required rate revenue increases as shown in Table 8 below.

Table 8: Rate Required Revenue Increases by Enterprise – "2022 Study"

	2023	2024	2025	2026	2027
Water Fund	4.5%	3% to 4.5%	3% to 4.5%	3% to 4.5%	3% to 4.5%
Water Resources	7.5%	3% to 7.5%	3% to 7.5%	3% to 7.5%	3% to 7.5%
Stormwater	4.5%	4.5%	4.5%	4.5%	4.5%
Wastewater	0.0%	0.0%	0.0%	0.0%	0.0%

After careful planning and review of operating costs and capital plans in this year's study, the overall impact will be a 4.5% increase in Water, a 7.5% increase in Water Resources, a 4.5% increase in Stormwater, and no increase in Wastewater.

For the "2022 Study", there is an increase in the average annual bill for the typical residential customer due to the rate changes being recommended in 2023. Other customer classes will also see varying increases to their annual bill depending on customer usage patterns. Table 9 summarizes these impacts to typical annual utility bills for various customer classes.

Table 9: 2023 Rate Adjustment Recommendations and Total Typical Annual Utility Bills

Customer Class	2022 Actual Typical Annual Bill	"2022 Study" Proposed 2023 Typical Annual Bill	\$ Change	% Change	"2021 Study" Proposed 2023 Typical Annual Bill
Residential ¾" Meter	\$1,275.93	\$1,325.31	\$49.37	3.9%	\$1,302.87
Commercial Indoor ¾" Meter	\$2,124.44	\$2,208.72	\$84.28	4.0%	\$2,178.51
Commercial Indoor 1½ " Meter	\$8,947.88	\$9,278.26	\$330.39	3.7%	\$9,130.61
Commercial w/Irrigation ³ / ₄ " Meter	\$2,674.11	\$2,783.13	\$109.01	4.1%	\$2,746.64
Commercial w/Irrigation 2" Meter	\$16,187.73	\$16,849.86	\$662.14	4.1%	\$16,560.54
Multi-family Indoor 3/4" Meter	\$1,016.67	\$1,054.38	\$37.71	3.7%	\$1,035.79
Multi-family w/Irrigation 1½" Meter	\$10,443.87	\$10,808.80	\$364.93	3.5%	\$10,646.42
Irrigation 3/4" Meter	\$2,382.91	\$2,499.84	\$116.93	4.9%	\$2,454.45
Irrigation 2" Meter	\$17,191.17	\$17,495.86	\$304.69	1.8%	\$17,316.79

As a part of the presentation of the proposed rates and fees for 2023, Castle Rock Water compared the 2023 proposed rates and fees with other similar water providers in the South Metro area. Many of the water providers do not provide stormwater services, so we show these separately for accurate comparison purposes. The benchmarking comparisons include all fees related to water, water resources, and wastewater services. These fees have different names across the various water providers including for example water and sewer service fixed and volumetric fees, water resource fees, renewable water fees, capital improvement fees, sewer system replacement fund fees, and groundwater protection fees.

Staff compared rates to other South Metro water providers for a typical winter usage of 5,000 gallons and a typical summer usage of 15,000 gallons. While we did compare the proposed rates and fees to other providers in Colorado, these comparisons are less relevant due to the local challenges faced by South Metro water providers. In summary, the South Metro water providers are generally currently operating on deep groundwater and are in the midst of building renewable surface water systems. A number of the systems have implemented monthly fees similar to Castle Rock's water resources fee including Castle Pines Metro, Meridian, Pinery, Stonegate, East Cherry Creek and Roxborough. Others have incorporated these fees into their standard water rates or utilized tax mill levies.

The comparison results to other South Metro water providers are shown in Charts 2 and 3 below. As indicated above, it is important to note that a number of the South Metro water providers have their revenues supplemented by tax mill levies to help with renewable water investments. The charts below show the approximate impact this has on the cost of service for a typical residential customer based on the average median

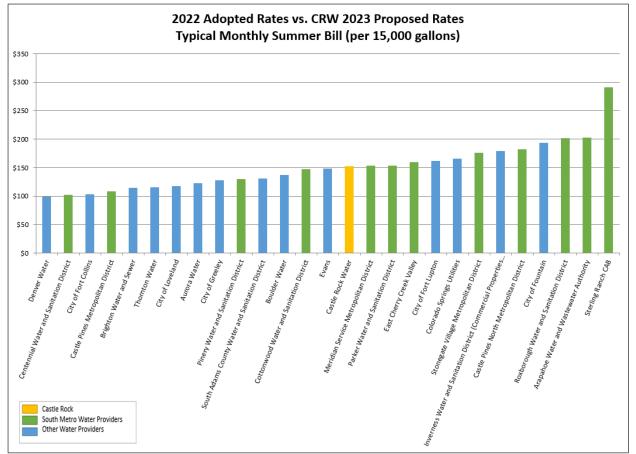
price of a home in Douglas County of \$743,000

http://www.douglas.co.us/documents/douglas-county-demographics-summary.pdf). This mill levy was distributed across twelve equal payments for comparison sake even though this will typically be paid in fewer installments. The results of this comparison of proposed 2023 rates and fees for Castle Rock to 2022 current rates and fees for other providers indicate that Castle Rock's rates and fees are comparable to other area providers even before those providers make changes for 2023. Once 2023 rates and fees are available for the other area providers, CRW will update these charts and ensure they are available on our website.

Chart 2: Typical Monthly Winter Bill (per 5,000 gallons)

*Includes tax mill levy based on median home price distributed equally over 12 months.

Chart 3: Typical Monthly Summer Bill (15,000 gallons)



*Includes tax mill levy based on median home price distributed equally over 12 months.

Similar comparisons for stormwater fees are in Chart 4 below. While this is not a comprehensive list of all providers, it shows some of the key stormwater providers in our area. The data indicates that Castle Rock's proposed fees are consistent with many of the other local providers. It is important to note that some jurisdictions handle stormwater through general taxes instead of having a stormwater utility. The results of the comparisons are as follows:

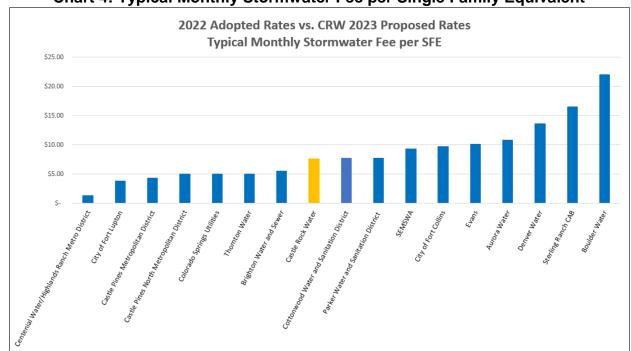


Chart 4: Typical Monthly Stormwater Fee per Single Family Equivalent

Note: SEMSWA, stands for Southeast Metro Stormwater Authority and includes East Cherry Creek Valley Water and Sanitation District, Arapahoe County Water and Wastewater Authority, and Inverness. The rate shown for Parker Water and Sanitation District is through the Town of Parker and is the 2022 rate.

Table 10 summarizes proposed fixed charges for 2023 from this year's study.

Table 10: Single Family Residential Fixed Charges

	2022 Actual Typical Bill	"2022 Study" Proposed 2023 Typical Bill	\$ Change	% Change	"2021 Study" Proposed 2023 Typical Bill
Water	\$9.54	\$9.97	\$0.43	4.5%	\$9.83
Water	\$26.93	\$28.95	\$2.02	7.5%	\$26.93
Resources					
Wastewater	\$8.57	\$8.57	\$0.0	0.0%	\$9.02
Stormwater	\$7.30	\$7.63	\$0.33	4.5%	\$7.33
TOTAL	\$52.34	\$55.12	\$2.78	5.3%	\$53.11

System Development Fees

System development fees (SDFs) are a function of year-end 2021 fixed assets, 2022 year-end estimates of capital improvement project costs, 2023 through 2065 capital improvement project plans, and system capacity for water, water resources, and wastewater and developable acres for stormwater.

Growth forecasts and increases to the capital plans in the "2022 Study" indicate that total SDFs for a typical SFE will need to increase from the 2022 adopted fees. The "2022 Study" indicates fees will need to increase in 2023. The recommended increase this year is approximately 13.3% as shown in Table 11.

Table 11: Single Family Equivalent System Development Fee Comparison

PLUM CREEK BASIN

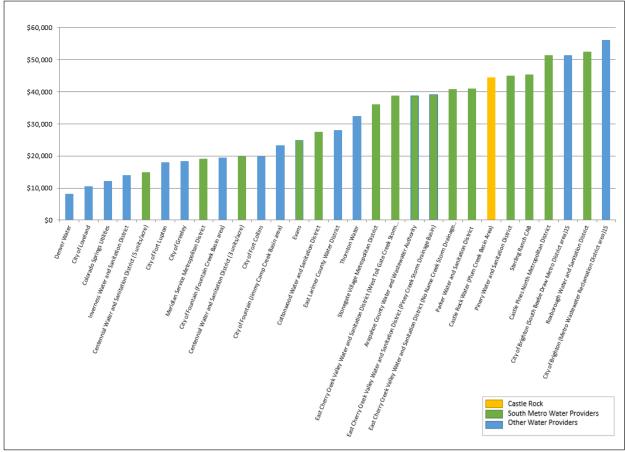
	2022 Actual Fees	"2022 Study" Proposed 2023 Fees	\$ Increase (Decrease)	% Change	"2021 Study" Proposed 2023 Fees
Water	\$5,700	\$6,270	\$570	10.0%	\$5,700
Water Resources	\$26,458	\$30,383	\$3,925	15.0%	\$26,458
Wastewater	\$4,909	\$5,400	\$491	10.0%	\$4,909
Stormwater	\$2,128	\$2,339	\$211	10.0%	\$2,128
TOTAL	\$39,195	\$44,392	\$5,197	13.3%	\$39,195

CHERRY CREEK BASIN

	2022 Actual Fees	"2022 Study" Proposed 2023 Fees	\$ Increase (Decrease)	% Change	"2021 Study" Proposed 2023 Fees
Water	\$5,700	\$6,270	\$570	10.0%	\$5,700
Water	\$26,458	\$30,383	\$3,925	15.0%	\$26,458
Resources					
Wastewater	\$4,909	\$5,400	\$491	10.0%	\$4,909
Stormwater	\$1,116	\$1,228	\$112	10.0%	\$1,116
TOTAL	\$38,183	\$42,281	\$5,098	13.4%	\$38,183

As part of the review of proposed fees, Castle Rock Water reviewed system development fees compared to other providers in our area and Colorado. Stormwater development impact fees were not included in the evaluation since many providers do not provide this service. System development fees include water and sewer tap fees, water development fees, outfall development fees (for reservoirs), metro sewer charges, construction water charges, renewable water fees, and water resource fees. See results of the benchmarking comparisons for SDFs in the following chart.

Chart 5: SDF Rate Comparison with Surrounding Communities 2022 Adopted System Development Fees w/ Castle Rock 2023 Proposed Fees



*The Parker Water SDF includes a \$5,000 Water Resource's Toll, for a ¾" meter, in the above calculation, which may not apply to all customers.

Utilization of Rates and Fees

Chart 6 summarizes how revenues are used by Castle Rock Water.

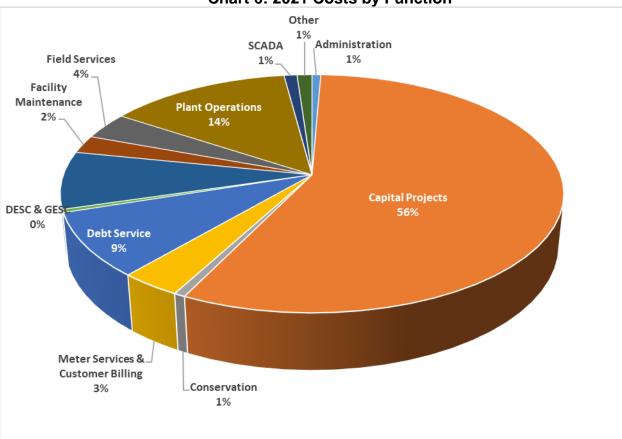


Chart 6: 2021 Costs by Function

From this chart, it is clear that the Capital Project Plan is a very significant portion of the rates and fees needed for operation of the funds. The infrastructure intensive nature of the business results in significant fixed costs. Castle Rock Water wants to continue to implement a strategy, to the extent possible within our cost-of-service model, which matches fixed revenues with fixed costs to ensure revenue stability thereby minimizing the potential for future rate shocks. This strategy also takes into account the need to incentivize water conservation and efficiency through variable rates for water use.

Chart 7 shows the breakdown between fixed and variable revenues and expenses for the fiscal year ending 2021. Variable revenues account for 36% of total revenue, with metered water sales being the largest components. The majority of expenditures for CRW are fixed in nature with the largest operational cost being personnel costs.

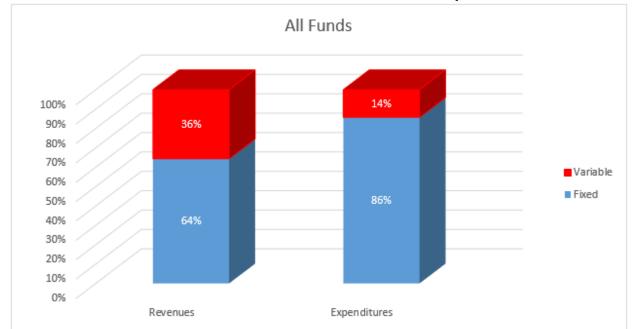


Chart 7: Fixed Versus Variable Revenues & Expenditures

Bulk Water Program

Castle Rock Water provides customers with two options for bulk water. These customers include not only typical customers that live within Castle Rock Water's service area, but also customers from Douglas County. For the larger users typically (5,000+ gallons a day) a bulk water hydrant meter and permit are an option. These are typically development projects needing bulk water for dust control, grading, etc. The second option is access to the bulk water station. This is for the smaller users, typically less than 5,000 gallons a day, however there is not a minimum requirement.

Monthly consumption averages for bulk hydrant customers put a similar demand and usage on the system as a 1.5-inch meter. Therefore, the monthly service charges for water and water resources are the same for this customer class as other 1.5-inch meter customers. Table 12 shows changes to the bulk hydrant rates for 2023 that are in line with increases applicable to all customers.

Table 12: Bulk Hydrant Meter Rate Comparison

rable 12: Balk frydrait meter Kate Companison						
	Adopted 2022 Rates	Proposed 2023 Rates	\$ Change	Benchmark Range	Benchmark Average	
Monthly Water Fixed Service Charge	\$18.78	\$19.63	\$0.85	Not Available	Not Available	
Water Volumetric Rate (per 1,000 gallons)	\$7.86	\$8.21	\$0.35	Not Available	Not Available	
Monthly Renewable Water Fixed Service Charge	\$193.13	\$207.61	\$14.48	Not Available	Not Available	
Monthly Permit Fee	\$300.00	\$300.00	\$0.00	\$0-\$325.00	\$170.88	
Refundable Deposit- Hydrant Meters	\$2,600.00	\$5,000.00	\$2,400.00	\$0-\$6,000	\$1,801.41	

Monthly consumption averages for bulk station customers put a similar demand and usage on the system as a ¾" meter. Therefore, the monthly service charges for water and water resources are the same for this customer class as other ¾" customers. Even though bulk station applicants are asked where the water will be used, there is no guarantee that they are not taking the water out of Castle Rock and the basin. To account for this, bulk station customers are charged 125% of the maximum outdoor Tier 2 irrigation rate. The 125% is in line with what CRW is allowed to charge for extraterritorial agreements according to municipal code.

Table 13: Bulk Station Rate Comparison

	Adopted 2022 Rates	Proposed 2023 Rates	\$ Change	Benchmark Range	Benchmark Average
Monthly Water Fixed Service Charge	\$9.54	\$9.97	\$0.43	Not Available	Not Available
Water Volumetric Rate (per 1,000 gallons)	\$9.82	\$9.97	\$0.43	Not Available	Not Available
Monthly Renewable Water Fixed Service Charge	\$26.93	\$28.95	\$2.02	Not Available	Not Available
Bulk Station Refundable Deposit	\$255.00	\$255.00	\$0.00	Not Available	Not Available

<u>Schedule</u>

The current schedule for the 2022 Rates and Fees Study targets the following milestones.

- Town Council 1st Reading 9/20/2022
- Town Council 2nd Reading 10/4/2022
- Implementation 1/01/2023

Staff Recommendation

Based on the "2022 Study" staff recommends the following changes to the 2023 rates and system development fees for a single-family equivalent (SFE).

Water Fund

- 1. Fixed Monthly Charge 4.5% Increase
- 2. Volumetric Rates 4.5% Increase
- 3. System Development Fee 10% Increase

Water Resources Fund

- 1. Fixed Monthly Charge 7.5% Increase
- 2. System Development Fee 15% Increase

Stormwater Fund

- 1. Fixed Monthly Charge 4.5% Increase
- 2. Development Impact Fee 10% Increase Plum Creek Basin and 10% Increase Cherry Creek Basin

Wastewater Fund

- 1. Fixed Monthly Charge No Change
- 2. Volumetric Rate No Change

3. System Development Fee – 10% Increase

Staff recommends moving forward with these recommended rates and fees, finalizing the "2022 Study" report and all of the associated data, and bringing the appropriate ordinances to Town Council for approval in accordance with the proposed schedule.