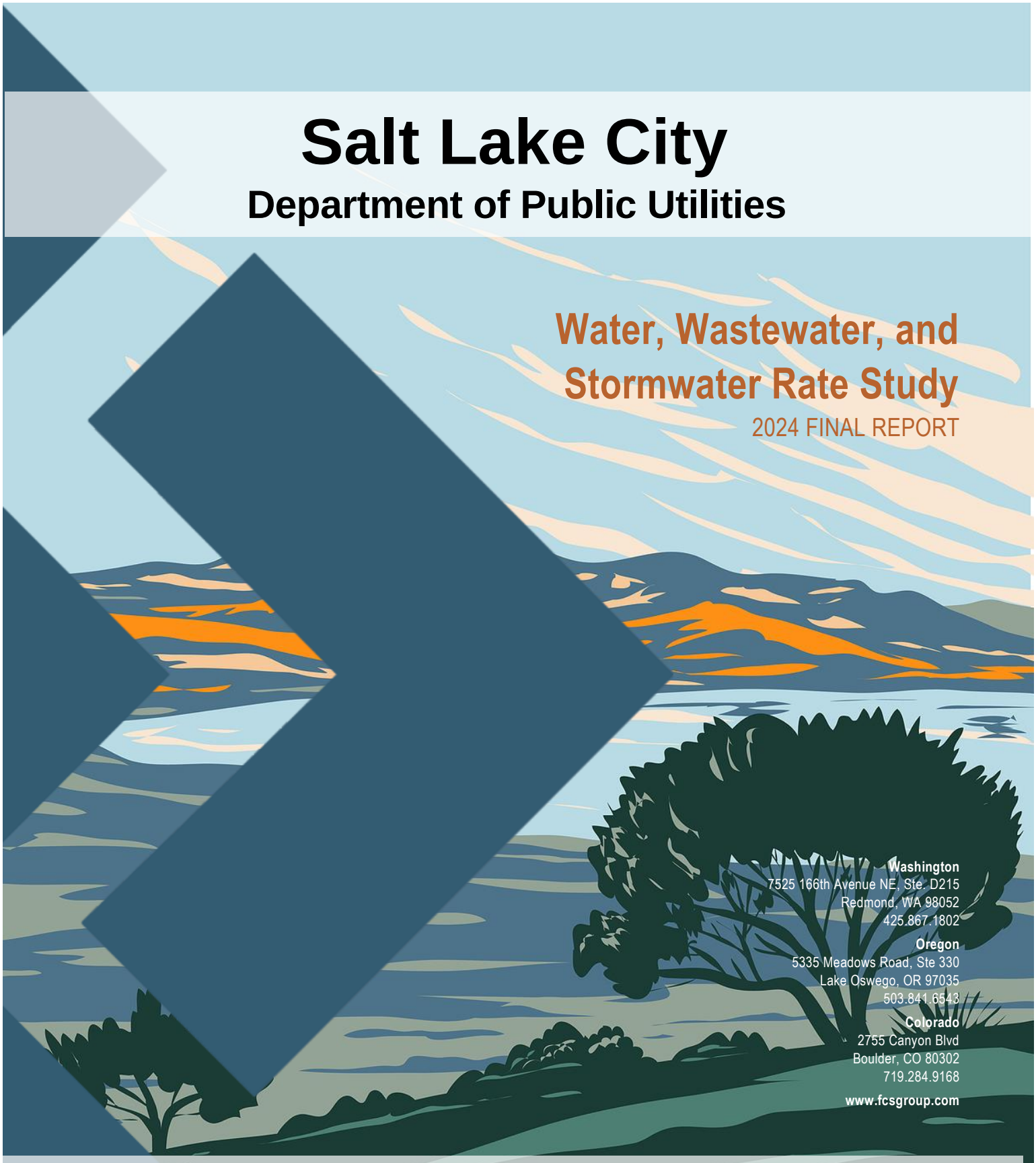
Salt Lake City

Department of Public Utilities

Water, Wastewater, and Stormwater Rate Study

2024 FINAL REPORT



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November 9, 2024

Laura Briefer
Salt Lake City Utilities
1530 S. West Temple
Salt Lake City, UT 84115

Subject: Final 2024 Utility Rate Study Report

Dear Ms. Briefer:

On behalf of FCS GROUP and our entire project team, I am pleased to submit this Final Report outlining the methods, procedures, findings, and recommendations for the Salt Lake City Department of Public Utilities (City) water, wastewater, and stormwater rates.

Our engagement was a comprehensive evaluation of the existing rates and charges for the City's utilities. It included determining the annual revenue requirements, conducting a cost-of-service analysis, and designing proposed rates for each of the three utilities. We received significant feedback from the Rate Advisory Committee (RAC), a group of volunteers from the community representing residential, commercial, and stakeholder interests. The City hosted seven workshops with the RAC, and the group's input into the rate study was essential in arriving at the recommendations in this Final Report. The findings and recommendations in this Report establish the utility rates for fiscal year 2026, starting July 1st, 2025.

I would like to thank you and the entire leadership team at Salt Lake City Utilities for our partnership over the nearly nine-month engagement period. Your commitment to our study contributed greatly to the high-quality outcomes I believe you will find in the pages of this Report.

Sincerely,

Jason Mumm
Principal

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Section I. EXECUTIVE SUMMARY

FCS GROUP recently completed a Water, Wastewater, and Stormwater Rate Study (Study) for Salt Lake City's Department of Public Utilities (City) to assist the City in establishing rates and charges for services for fiscal year 2026, including projected rate adjustments through fiscal year 2029. The Study involved three major phases for each of the three City utilities. Those phases included:

1. **Determining Revenue Requirements**: This is the total amount of money the utility needs to cover its operating costs, maintenance expenses, and investments in infrastructure.
2. **Allocating Costs to Customer Classes**: The utility's costs are then divided among different customer groups, such as residential, commercial, and industrial customers, based on how much each group uses the utility's services.
3. **Designing Rates**: The final step is to set rates that allow the utility to recover its costs from each customer group. Rates can take various forms, such as flat fees, tiered rates, or demand-based rates. The objective of the rate design effort is to reach the practical financial requirements for the rates while achieving as many community preferences as possible.

Revenue Requirements

We determined the annual revenue requirements for the three utilities as the sum of their annual cash needs. Cash needs include annual expenditures on operating and maintenance expenses (O&M), principal and interest payments on debt (Debt Service), cash expenditures for the direct funding of capital projects, and planned increases to cash reserves. Subtracting revenues earned from sources other than user charges – called non-rate revenues – results in the Annual User Charge Revenue Requirement, the amount the City must earn from its rates alone to cover its total cash expenditures for the year.

FCS GROUP prepared long-range financial forecasts for each of the utilities, resulting in a 10-year projection of annual revenue requirements and user charge revenue requirements. However, for this Study, we have included only the requirements from FY2025-2029 in our recommendations. Among other details, the forecasts provide the overall direction for utility revenues through FY2029. Table ES- 1 summarizes the necessary increases above and beyond the current (FY2025) revenues, which include a newly implemented Rate Stabilization Fee (RSF) for the Water and Wastewater utilities.

Please note: all references to the years used in the tables of this Report are shown as fiscal years ending June 30th of the year shown. For instance, 2024 (or FY2024) indicates the twelve months ending June 30, 2024.

Table ES- 1: Summary of Recommended Increases to Current Utility Revenues

Utility	2024	2025	2026	2027	2028	2029
Water Utility	0.0%	0.0%	7.0%	7.0%	5.5%	5.5%
Wastewater Utility	0.0%	0.0%	5.5%	5.5%	5.5%	4.0%
Stormwater Utility	0.0%	0.0%	7.0%	7.0%	7.0%	7.0%

The total revenue increases, when also considering the RSF, are much higher. The RSF accounts for the difference between Table ES- 2 and Table ES- 1.

Table ES- 2: Summary of Recommended Increases to Utility Revenues Including the RSF

Utility	2024	2025	2026	2027	2028	2029
Water Utility	5.4%	20.3%	16.0%	7.0%	5.5%	5.5%
Wastewater Utility	0.0%	13.6%	22.2%	5.5%	5.5%	4.0%
Stormwater Utility	0.0%	0.0%	7.0%	7.0%	7.0%	7.0%

Water Revenue Requirement

Factors driving the increases in water revenue requirements include a projected increase of 5.6% per year in O&M expenses. However, the largest portion of the increases come from an $800 million capital improvements plan. The costs of funding and financing the capital plan are the expected debt service and direct funding costs to the annual revenue requirements, reaching $50 million by 2029. After factoring in the expected increase in existing revenue sources, including the RSF, the additional revenue adjustments are shown in Table ES- 3.

Table ES- 3: Summary of Projected Water Revenue Requirements ($ million)

Component of Revenue Req.	2024	2025	2026	2027	2028	2029
Operating Expenses	$93.68	$100.72	$108.33	$114.53	$118.49	$123.29
Debt Service	$6.96	$12.60	$12.66	$12.73	$24.57	$24.63
Capital Improvements	$99.42	$80.73	$68.58	$91.89	$119.42	$110.28
Capital Funding Sources	($18.29)	($141.68)	($18.46)	($14.54)	($239.16)	($14.19)
Non-Rate Related Revenue	($8.21)	($8.41)	($7.61)	($7.81)	($8.01)	($8.22)
Cash Funded CIP	$1.69	$14.56	$27.30	$33.07	$28.13	$33.73
Increase (Decrease) in Cash	($77.20)	$63.27	($47.62)	($75.31)	$129.17	($106.23)
Total User Charge Requirement	$98.05	$121.85	$143.18	$154.55	$164.49	$175.01
User Charges at Current Rates	($98.05)	($121.85)	($133.82)	($134.99)	($136.18)	($137.34)
Additional Revenue Needed (cumulative value)	**$0.00**	**$0.00**	**$9.37**	**$19.56**	**$28.31**	**$37.67**
Annual Revenue Increase %	**0.0%**	**0.0%**	**7.0%**	**7.0%**	**5.5%**	**5.5%**

Wastewater Revenue Requirements

The major drivers of wastewater revenue requirements include a $1 billion capital improvements plan that will increase annual debt service more than double, from $12 million per year to over $29 million. Additionally, we project O&M costs to increase 5.5% annually on top of entirely new expenses the City expects to incur to operate the new water reclamation facility. The new O&M costs are expected to commence in FY2026 at $3.2 million, increasing to $14.4 million during the facility's start-up operations before leveling off at approximately $7.5 million per year. Table ES- 4 summarizes the individual elements of the wastewater revenue requirements. Our recommended rates commence in FY2026.

Table ES- 4: Summary of Projected Wastewater Revenue Requirements ($ million)

Component of Revenue Req.	2024	2025	2026	2027	2028	2029
Operating Expenses	$31.60	$33.96	$38.75	$51.71	$46.89	$48.75
Debt Service	$24.63	$33.74	$35.42	$35.40	$36.94	$53.10
Capital Improvements	$442.10	$258.36	$95.99	$28.91	$26.70	$46.50
Capital Funding Sources	($190.10)	($241.73)	($62.76)	($6.75)	($6.82)	($7.07)
Non-Rate Related Revenue	($4.56)	($1.82)	($1.55)	($1.61)	($1.69)	($1.72)
Cash Funded CIP	$24.64	$23.06	$36.43	$27.47	$43.69	$28.72
Increase (Decrease) in Cash	($252.00)	($15.85)	($31.66)	($17.89)	($21.46)	($38.82)
Total User Charge Requirement	$76.30	$89.72	$110.63	$117.23	$124.24	$129.47
User Charges at Current Rates	($76.30)	($89.72)	($104.86)	($105.33)	($105.81)	($106.02)
Additional Revenue Needed (cumulative value)	**$0.00**	**$0.00**	**$5.77**	**$11.90**	**$18.44**	**$23.45**
Annual Revenue Increase %	**0.00%**	**0.00%**	**5.50%**	**5.50%**	**5.50%**	**4.00%**

Stormwater Revenue Requirements

The stormwater revenue requirements are much lower than the water and wastewater needs. Yet, the total cost of services for stormwater is increasing by 57% from 2024 to 2029, driven by a combination of O&M and capital funding needs. We project O&M costs to increase by $4 million annually during that time and the direct funding of capital projects by $3 million. Table ES- 5 summarizes the individual elements of the stormwater revenue requirements.

Table ES- 5: Summary of Projected Stormwater Revenue Requirements ($ million)

Component of Revenue Req.	2024	2025	2026	2027	2028	2029
Operating Expenses	$11.29	$12.46	$13.40	$14.21	$15.07	$15.96
Debt Service	$1.55	$1.68	$1.68	$1.68	$1.09	$1.09
Capital Improvements	$7.85	$13.75	$12.60	$8.41	$8.28	$6.99
Capital Funding Sources	($1.69)	($6.99)	($3.51)	($3.44)	($3.42)	($3.42)
Non-Rate Related Revenue	($1.00)	($0.21)	($0.10)	($0.11)	($0.11)	($0.11)
Cash Funded CIP	$3.39	$2.42	$2.67	$3.20	$4.31	$4.89
Increase (Decrease) in Cash	($6.15)	($6.37)	($8.79)	($4.70)	($4.57)	($3.27)
Total User Charge Requirement	$15.23	$16.75	$17.95	$19.25	$20.64	$22.13
User Charges at Current Rates	($15.23)	($16.76)	($16.79)	($16.82)	($16.86)	($16.89)
Additional Revenue Needed (cumulative value)	**$0.00**	**($0.01)**	**$1.16**	**$2.43**	**$3.78**	**$5.24**
Annual Revenue Increase %	**0.00%**	**0.00%**	**7.00%**	**7.00%**	**7.00%**	**7.00%**

Cost-of-Service Allocation

The cost-of-service portion of our study focuses on allocating the total revenue requirements described above to individual classes of service, such as residential and commercial services.

The process includes *functionalizing* costs into the facilities and processes used to deliver services to individual customers. For instance, the water utility collects raw water from its watersheds and other sources, treats it in treatment facilities, and delivers it through transmission and distribution pipelines, including storage tanks, pumps, and individual service lines. Each of these is a step in delivering water and represents one or more system functions.

Once functionalized, we *allocate* the costs among different demand parameters that match measurable customer usage in one form or another. In a water system, customers use water at average and peak rates of use. Therefore, we allocate some functionalized costs to average rates of use and some to peak based on each function's design. In wastewater, we allocate costs to rates of sewer flows and the levels of pollutants. For stormwater, we allocate all costs to the square feet of impervious area. After allocating the costs in this fashion, we calculate unit costs for each parameter, which we multiply by a class's measurable demand, a process called *cost distribution*. If the unit cost for average-day demand in the water system is $2.18 per CCF, we distribute that cost by multiplying $2.18 by each class's measured average-day demand.

The cost-of-service analysis effectively assigns a portion of the total revenue requirement to an individual class. Comparing the class's cost of service to its revenue at the existing rates tells us whether that class's rates should be adjusted and by how much.

Water Cost-of-Service

Table ES- 6 summarizes the findings from the water cost-of-service study and indicates the changes necessary in the proposed rates to more closely align class revenues with their costs. Many customers in the table have been identified as "County" classes; those customers reside outside the City's limits and have historically been charged a premium of 35% above the corresponding inside-city class rate. As part of our analysis, we verified the 35% premium was cost-justified due to the levy of the Metropolitan Water District of Salt Lake and Sandy (MWDSLS) property taxes solely to residents inside the municipal boundaries of Salt Lake City. Residents outside the municipal boundaries by within the City's designated water service area are beneficiaries of the MWDSLS services but do not pay the property tax. In addition, Salt Lake City residents bear certain inherent risks in owning and operating the water system, and the 35% differential partially compensates residents for those risks.

A negative variance indicates the current rates (which include the RSF) are below the costs of service; a positive variance indicates current rates are higher than the cost of service.

Table ES- 6: Recommended Water Revenue Adjustments by Class for FY2026 ($ million)

Class	Revenue at Existing Rates	Costs of Service	Variance $	Variance %
Single Family (City)	$35.92	$37.94	-$2.02	-5.3%
Single Family (County)	$29.38	$34.20	-$4.82	-14.1%
Duplex (City)	$3.32	$3.56	-$0.24	-6.8%
Duplex (County)	$0.74	$0.84	-$0.09	-11.1%
Triplex (City)	$0.59	$0.49	$0.10	20.1%
Triplex (County)	$0.03	$0.03	$0.00	1.5%
Multi-Family (City)	$10.68	$9.46	$1.22	12.9%
Multi-Family (County)	$3.64	$4.10	-$0.46	-11.2%
Commercial (City)	$29.00	$25.00	$4.00	16.0%
Commercial (County)	$5.65	$5.25	$0.40	7.6%
Institutional (City)	$4.58	$4.39	$0.19	4.3%
Institutional (County)	$0.58	$0.62	-$0.03	-5.6%
Industrial (City)	$4.44	$4.84	-$0.40	-8.2%
Industrial (County)	$0.28	$0.26	$0.02	8.5%
Irrigation (City)	$12.97	$10.08	$2.90	28.8%
Irrigation (County)	$1.38	$1.88	-$0.50	-26.5%
Private Firelines	$0.00	$0.26	-$0.26	-100.0%
Total	**$143.18**	**$143.18**	**$0.00**	

Wastewater Cost-of-Service

As part of the wastewater cost-of-service study, we evaluated the City's current customer classifications. We recommend maintaining all single-family, duplex, and triplex classes as the residential class with sewer flows measured on average winter water usage. Multi-family customers, those multi-family buildings with more than three dwelling units, will remain a separate class with sewer flows measured as 70% of total water usage for a given month. The non-residential class will include the existing commercial, industrial, and institutional customers, with sewer flows measured as 70% of total monthly water usage. Table ES- 7 summarizes the key findings and indicates the changes necessary in the proposed rates to more closely align class revenues with their costs.

Our analysis of the wastewater costs focused on FY2028 rather than FY2026, which was the focus for both the water and stormwater utilities. The difference relates to the City's ongoing construction of its new wastewater treatment facility and expected additional costs. Using FY2028 as the focus allowed us to establish cost proportionality based on the costs of the new facility, which include important changes to the number, nature, and cost of the wastewater pollutants treated. While the recommended rates reflect the *proportionality* from our analysis of FY2028 costs, the actual *level* of the rates only reflects the expected costs for FY2026.

Table ES- 7: Recommended Wastewater Revenue Adjustments by Class for FY2028 ($ million)

Class	Revenue at Existing Rates	Costs of Service	Variance $	Variance %
Residential	$45.55	$23.74	$21.80	91.8%
Multi-Family	$18.12	$20.88	-$2.77	-13.2%
Non-Residential	$60.08	$79.12	-$19.04	-24.1%
Total	$123.74	$123.74	$0.00	

Stormwater Cost-of-Service

The stormwater cost-of-service study follows the same general procedures as water and wastewater, but all customers fit into a single customer classification. We allocate stormwater costs based on impervious surface areas, and there is no rational distinction between the impervious area in a residential neighborhood vs. any other type of property. However, like many stormwater utilities in the US, the City offers customers partial rate credits for installing on-site stormwater mitigation facilities such as detention ponds (the most typical on-site improvement). The credits reduce the total revenue recovered from the stormwater rates. Table ES- 8 summarizes the revenue adjustments necessary with and without the existing on-site credit program.

Table ES- 8: Recommended Stormwater Revenue Adjustments for FY2026 ($ million)

Class	Revenue at Existing Rates	Costs of Service	Variance $	Variance %
All Impervious Area Net of Credits	$16.76	$17.93	$1.17	7.0%
All Impervious Area Without Credits	$19.63	$17.93	-$1.70	-8.7%

Rate Design

The purpose of a rate design is to convey the findings from the cost-of-service study to individual customers. The cost-of-service findings help determine the total revenue the City should recover from each class of service. When rates produce revenues equal to each class's costs, it is said to have achieved *interclass equity,* where each class pays for its share of costs without subsidizing the costs of other classes. Rate designs should also aspire to achieve *intraclass equity,* where individual members of the class pay for their proportionate share of costs without subsidizing other members within the same class. In addition, rate designs may help achieve other objectives, a typical listing of which is included in Table ES- 9.

Table ES- 9: Typical Rate Design Objectives

Rate Design Objective	Typical Definition
Revenue Sufficiency	The rate design recovers the necessary revenues.
Fairness and Equity	The rate design achieves interclass and intraclass equity.
Economic Efficiency	The rate design promotes the efficient use of resources and water conservation.
Sustainability and Predictability	The rate design allows customers to budget and plan for their utility expenses.
Clarity	The rate design is transparent and easily understood by customers.
Cost Allocation	The rate design allocates costs to an individual level based on cost causation principles.
Affordability	Basic utility service should be reasonably affordable for those lacking the ability to pay.

Achieving all the objectives from the above table is an unattainable goal because they tend to conflict with each other. For instance, attaining revenue sufficiency may necessarily come with challenges to affordability objectives. Making the rate design simple to understand often means sacrificing some level of fairness and equity, and so on.

Following the cost-of-service methodology described thus far helps to ensure the City has the information necessary to address revenue sufficiency, interclass equity (fairness and equity), cost allocation, and some aspects of the economic efficiency objectives; these are *technical objectives* that the City can achieve through the proper rate setting analyses. The proposed rates described in this

Report also attempt to achieve a balance between the technical objectives and the more subjective ones: sustainability and predictability, clarity, and affordability.

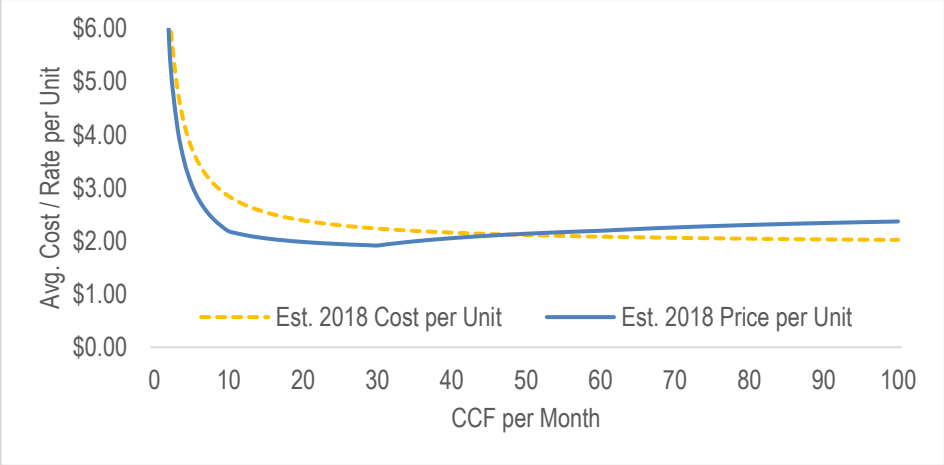
Rate Advisory Committee

To assist in achieving a workable balance between the technical and other rate design objectives, the City enlisted the assistance of a Rate Advisory Committee (RAC). The RAC consisted of community members representing residential, business, industrial, institutional, and regional interests. The City hosted seven workshops with the RAC, covering every aspect of the rate study, from determining the revenue requirements to the cost-of-service analysis to every part of the rate design. The feedback received during these workshops led to the proposed rates below.

Water Rate Design

One of the key challenges in the water rate design was the sudden decline in revenue the City experienced during the past three years. Since 2021, the summertime water demand declined by nearly 20 percent from previous norms. The current water rate design exacerbated the revenue losses due to its high reliance on revenue from high summertime usage, a characteristic we define as *rate tilt.* The current rate structure tilts because the effective price per unit is below the average cost per unit at the lower levels of usage. The City, therefore had to depend on high usage levels in the summertime to attempt to make up for the built-in subsidy (of lower usage customers). As summertime demand declined, so too did the ability to make up for those losses.

Figure 1: City's Residential Rate Tilt from Previous Rate Study



The proposed rates eliminate the rate tilting from the previous rate structure and, based on feedback received from the RAC, simplify non-residential rates.

Residential Water Rates

The proposed water rates retain the tiered structure of the current rate design[1]. However, there are a few important changes of note. First, the proposed tiered structure would remain in effect year-round; the uniform wintertime rate has been eliminated. Second, the volumes available in each block of usage have been decreased. Finally, the proposal eliminates the RSF from the monthly service charges, reducing them significantly. The proposed rates also eliminate the rate tilt from the previous structure. Residential customers include single-family, duplex, and triplex dwelling units. For duplex, and triplex customers, the allowances of water in each tier are multiplied by the number of dwelling units. For example, a duplex residential customer's monthly service charge for a 1" meter would be $28.57, and the allowance in Block 1 would be 10 CCF (2 x 5CCF); Block 2 would include 20 CCF (2 x 10 CCF), etc.

Table ES- 10: Proposed Inside-City Residential Water Rates for FY2026

Monthly Service Charges			Volumetric Rates			
Meter	Current	Proposed	Current Tiers	Current $/CCF	Proposed Tiers	Proposed $/CCF
3/4"	$25.65	$22.48	Block 1 (0-10CCF)	$2.24	Block 1 (0-5CCF)	$2.84
1"	$60.79	$28.57	Block 2 (11-30CCF)	$3.05	Block 2 (6-10CCF)	$3.49
1 ½"	$200.77	$43.66	Block 3 (31-60CCF)	$4.23	Block 3 (11-40CCF)	$4.46
2"	$214.78	$61.85	Block 4 (> 60CCF)	$4.52	Block 4 (> 40CCF)	$4.92
			Winter (All CCF)	$2.24	Winter (All CCF)	n/a

[1] In comparing rates in this Report, we have estimated the current rates for FY2026 starting July 1, 2025, which encompasses the City's proposed Rate Stabilization Fee.

Table ES- 11: Proposed Outside-City Residential Water Rates for FY2026

Monthly Service Charges			Volumetric Rates			
Meter	Current	Proposed	Current Tiers	Current $/CCF	Proposed Tiers	Proposed $/CCF
3/4"	$34.63	$30.35	Block 1 (0-10CCF)	$3.02	Block 1 (0-5CCF)	$3.83
1"	$82.07	$38.57	Block 2 (11-30CCF)	$4.12	Block 2 (6-10CCF)	$4.71
1 ½"	$271.04	$58.94	Block 3 (31-60CCF)	$5.71	Block 3 (11-40CCF)	$6.02
2"	$289.95	$83.50	Block 4 (> 60CCF)	$6.10	Block 4 (> 40CCF)	$6.64
			Winter (All CCF)	$3.02	Winter (All CCF)	n/a

Non-Residential and Multi-Family Water Rates

The proposed non-residential rates aim to simplify the rate structure from its current tiered structure based on each customer's average winter consumption (AWC) levels to a uniform seasonal rate. The current structure, similar to the residential rate structure, includes the same challenge of rate tilting; the proposed structure eliminates it. Non-residential customers include commercial, industrial, and institutional customers. Larger multi-family properties that were once included in the non-residential class are now classified separately as a new Multi-Family class due to their unique usage characteristics and have a slightly different volumetric rate.

Table ES- 12: Proposed Inside-City Non-Residential and Multi-Family Water Rates for FY2026

Monthly Service Charges			Volumetric Rates			
Meter	Current	Proposed	Current Tiers (as % of AWC)	Current $/CCF	Proposed Tiers	Proposed $/CCF
3/4"	$25.65	$22.48	Block 1 (0-100%)	$2.43	***Non-Residential***	
1"	$60.79	$28.57	Block 2 (100-300%)	$3.34	Summer (All CCF)	$3.53
1 ½"	$200.77	$43.66	Block 3 (300-600%)	$4.64	Winter (All CCF)	$2.18
2"	$214.78	$61.85	Block 4 (> 600%)	$4.93	***Multi-Family***	
3"	$604.67	$110.40	Winter (All CCF)	$2.43	Summer (All CCF)	$3.35
4"	$646.62	$164.95			Winter (All CCF)	$2.18

Table ES- 13: Proposed Outside-City Non-Residential and Multi-Family Water Rates for FY2026

Monthly Service Charges			Volumetric Rates			
Meter	Current	Proposed	Current Tiers (as % of AWC)	Current $/CCF	Proposed Tiers	Proposed $/CCF
3/4"	$34.63	$30.35	Block 1 (0-100%)	$3.28	***Non-Residential***	
1"	$82.07	$38.57	Block 2 (100-300%)	$4.51	Summer (All CCF)	$4.77
1 ½"	$271.04	$58.94	Block 3 (300-600%)	$6.26	Winter (All CCF)	$2.94
2"	$289.95	$83.50	Block 4 (> 600%)	$6.66	***Multi-Family***	$0.00
3"	$816.30	$149.04	Winter (All CCF)	$3.28	Summer (All CCF)	$4.52
4"	$872.94	$222.68			Winter (All CCF)	$2.94

Wastewater Rate Design

The proposed wastewater rates simplify the current rate structure, eliminating the current seven sewer classifications and establishing a single monthly service charge common to all wastewater customers, and a class-specific volumetric charge. Under the proposed structure, most customers would simply pay the applicable rates for their class, as shown in below.

Table ES- 14: Proposed Wastewater Rates for FY2026

Monthly Service Charges		Volumetric Rates			
Current Charges		Current Volumetric Rates ($/CCF)			
Meter Sz.	Monthly Charge	Classes	Flow	BOD	TSS
5/8"	$17.66	SC 1	$4.63	$1.64	$1.18
1"	$51.89	SC 2	$4.63	$2.66	$2.38
2"	$138.19	SC 3	$4.63	$4.37	$4.06
3"	$704.02	SC 4	$4.63	$6.26	$5.53
4"	$704.02	SC 5	$4.63	$7.84	$7.20
6"	$704.02	SC 6	$4.63	$9.66	$8.71

Proposed Charges		Proposed Volumetric Rates ($/CCF)	
Class	Monthly Charge*	Residential Per CCF Avg. Winter Consumption	$8.56
Residential	$3.70	Multi-Family per CCF 70% of Metered Water Use	$8.56
Commercial	$3.70	Non-Residential per CCF 70% of Metered Water Use	$9.54

* per equivalent dwelling unit

In addition to the standard rates presented in, a high-strength surcharge will apply to those customers discharging much higher concentrations of waste into the wastewater system. The City will identify and monitor such customers in order to assess the correct charges. The proposed rates feature new charges for ammonia (NH3) and phosphorus (TP) discharges in addition to biochemical oxygen demand (BOD) and total suspended solids (TSS). Treatment of the NH3 and TP discharges is a new regulatory requirement; the surcharges have been proposed to match the new requirements.

Table ES- 15: Proposed Wastewater Surcharges for FY2026

Current Surcharges		Proposed Surcharges	
Pollutant	**$ / LB.**	**Pollutant**	**$ / LB.**
BOD	$1.05	BOD	$0.53
TSS	$0.63	TSS	$0.55
		NH3	$2.88
		TP	$14.52

Stormwater Rate Design

The proposed stormwater rates maintain much of the existing rate structure but reduce the amount of credit customers can receive for on-site stormwater mitigation improvements over a three-year phase-in period. Currently, the City offers lower stormwater rates for customers who install on-site improvements ranging from zero to 75 percent of the applicable rate. The proposed rates reduce the maximum amount of credit to 25 percent for on-site mitigation with an additional 10 percent for the airport and customers with an NPDES stormwater permit. The reduced credit amount is phased in over three years, with each credited parcel moving toward the new maximum credit by one-third per year. For example, if a parcel currently receives a 55 percent credit, it will receive a 45 percent credit in FY2026, a 35 percent credit in FY2027, and a 25 percent credit in FY2028.

With this phase-in of the lower maximum credit, the rate per property remains relatively consistent over the phase-in period:

Table ES- 16: Proposed Stormwater Rates

Class	Current FY2025 Monthly Fee	Proposed FY2026 Monthly Fee	Proposed FY2027 Monthly Fee	Proposed FY2028 Monthly Fee
Single-Family & Duplex (< 0.25 acres)	$8.33	$8.75	$8.75	$8.85
Single Family & Duplex (>0.25 acres)	$11.63	$12.25	$12.25	$12.39
Triplex & Fourplex	$16.64	$17.50	$17.50	$17.70
All Other (per 2,500 SF Impervious Area)	$8.33	$8.75	$8.75	$8.85

Section I. INTRODUCTION

The Salt Lake City Department of Public Utilities (City) ensures the delivery of vital water, wastewater, and stormwater utilities to Salt Lake City, Utah's capital city, with a growing population of more than 200,000 residents. The City is also the water provider to a large portion of Salt Lake County outside of its municipal boundaries, serving approximately 365,000 residents across a sprawling 141-square-mile service area. The City's water service area is designated by City code and includes portions of the municipalities of Mill Creek, Holladay, Cottonwood Heights, Murray, Midvale, and South Salt Lake. Established in 1872, the City is one of the oldest retail water providers in the West.

Municipal utilities like the City's operate under a framework of federal and state regulations designed to safeguard public health and the environment. The federal Safe Drinking Water Act, the federal Clean Water Act, and state water quality statutes form the foundation for this framework, ensuring the City consistently delivers clean water and minimizes its environmental impact. Beyond these core regulations, the City adheres to additional statutes concerning water resources and flood control, promoting responsible water management and mitigating flood risks. The City takes an active role in water resource sustainability through its local ordinances. Salt Lake City's ordinances pertaining to water, wastewater, and stormwater are codified in Title 17, outlining clear requirements for water, sewer, and stormwater management, while various sections of the City's zoning ordinances in Title 21 establishes the Riparian Corridor Overlay Zone, groundwater source protection, and lowland areas protecting vital waterways and ecosystems.

An Overview of the City's Utility Systems

A Legacy of Service: The City's Water System

The City boasts one of the oldest water systems in the West, a testament to its long history of providing vital water resources. Encompassing over 1,300 miles of pipelines, groundwater wells, and pump stations, this intricate network distributes clean water throughout the City's Designated Water Service Area. The system incorporates both smaller distribution lines and larger transmission lines, ensuring water reaches even the farthest pressure zones. To meet the demands of its residents, the City utilizes a two-pronged approach. It relies on surface water and groundwater sources where it directly holds water rights that are some of the oldest and highest priority water rights in the state. It also purchases high-quality water from the Metropolitan Water District of Salt Lake and Sandy (Metro District) to supplement these native supplies, ensuring a reliable and sustainable source of clean water. The cornerstone of this system is a trio of water treatment facilities constructed back in the 1950s. These facilities have undergone regular maintenance and upgrades over the years, ensuring they continue to deliver safe, potable water to every household and business. The City has a capital asset plan to steward its critical infrastructure and is prioritizing substantial investment into

its aging infrastructure. This includes major water treatment facility rehabilitation projects, among others, with projected costs exceeding $900 million through the year 2029.

Modernizing Wastewater Treatment: The City's Wastewater System

Salt Lake City's existing water reclamation facility (WRF), built in 1965, has served the community well. However, stricter nutrient removal regulations implemented by the US Environmental Protection Agency and the Utah Department of Environmental Quality in 2015 necessitate a modern upgrade. To address these regulations and ensure continued environmental protection, the City is constructing a new WRF at a projected cost of over $800 million. This state-of-the-art facility will not only meet the latest environmental standards but will also boast a significantly expanded capability for treatment of nutrients like ammonia and phosphorus. The new WRF will be equipped to handle wastewater from over 654 miles of collection pipelines, including multiple lift stations that pump wastewater from lower elevations.

Safeguarding Our Waterways: The City's Stormwater System

Salt Lake City safeguards its waterways through a sophisticated network encompassing 350 miles of collection lines, 76 miles of canals and drainage ditches, and 32 miles of open channels, with each piece playing a vital role in preventing flooding and protecting water quality. The system also incorporates 27 lift stations, ensuring efficient stormwater flow throughout the City. Additionally, 63 strategically placed detention basins help regulate stormwater runoff, further mitigating flood risks. Through this comprehensive program, the City demonstrates its commitment to responsible stormwater management and environmental well-being while maintaining compliance with its Municipal Separate Storm Sewer System permit (MS4).

Financial Operations of Salt Lake's Utilities

The City operates its utilities under a streamlined structure. A single administrative and management team oversees three distinct enterprise funds, each dedicated to a specific utility: water, wastewater, and stormwater. These enterprise funds function as independent financial entities within the City's overall financial system. Each fund meticulously tracks its assets, liabilities, revenues, and expenses, ensuring transparency and accountability. The City publishes audited financial results for each enterprise fund in its Annual Comprehensive Financial Report. Unlike other municipal funds fueled by tax dollars, enterprise funds rely solely on service-generated revenue. Fees and rates charged for water, wastewater, and stormwater services constitute the lifeblood of these funds. This self-sufficient model ensures that utility operations are financially sustainable and independent of general tax revenue.

Setting appropriate rates and fees is critical for the financial health of Salt Lake City's water, wastewater, and stormwater utilities. These fees directly sustain the vital services these utilities provide. Recognizing this, the City commissioned FCS GROUP in January 2024 to conduct a comprehensive rate study. This follows a previous evaluation in 2018. Several factors necessitate this timely review. Since the last study, the City has experienced significant cost increases. Inflation and stricter regulations have played a role, as have the expenses associated with financing the new water treatment facilities and the WRF. Additionally, water demand has decreased compared to earlier projections, resulting in lower revenue than initially anticipated.

Overview of the Ratemaking Process

Utility ratemaking is the process of determining how much customers pay for the services they receive. It involves three main steps:

1. **Determining Revenue Requirements**: This is the total amount of money the utility needs to cover its operating costs, maintenance expenses, and investments in new infrastructure.

2. **Allocating Costs to Customer Classes**: The utility's costs are then divided among different customer groups, such as residential, commercial, institutional, and industrial customers, based on how much each group uses the utility's services.

3. **Designing Rates**: The final step is to set rates that allow the utility to recover its costs from each customer group. Rates can take various forms, such as flat fees, tiered rates, or demand-based rates. The objective of the rate design effort is to achieve the practical financial requirements for the rates while achieving as many community preferences as possible.

This Report is organized into sections that follow the key processes outlined above. In each section, we present the outcomes of our study for each of the three utility systems.

Limiting Conditions

We've written this Report as a public document for the City's general use. It describes the findings and recommendations of our rate study within the scope of work defined in our consulting agreement with the City. It is subject to the following additional limiting conditions:

- Forward-looking statements. A large part of our analysis includes projected values, which is crucial for setting rates that will come into effect in the year after our study. While we take great care in making these forecasts, we cannot guarantee that the City's actual results in the future will closely align with the values we predict in this Report.

- Working assumptions. Our analysis relies on working assumptions to project future values. We carefully reviewed these assumptions with the City, ensuring they reflect conservative yet realistic values. However, alterations in assumptions could result in varied outcomes, including some that may be material.

- Quality of inputs. We utilized data supplied by the City for our analyses, reviewing it with them and deeming it accurate to their knowledge. However, we have not independently verified the accuracy of the received data and information.

- Subsequent events. Our findings and recommendations are based on our analysis of the City's utility systems up to the publication date of this Report. Events or information that emerged after this date have not been incorporated into our analysis or findings.

Section II. Revenue Requirements

A utility's annual revenue requirement represents the total amount of money it needs to cover its operating costs and maintain its capital investments over a given year. In simpler terms, it's the total income the utility must generate annually from all sources to remain financially healthy. This revenue requirement can be further divided into two parts:

- **Total Revenue Requirement**: This encompasses all revenue streams, including those not directly derived from user charges (e.g., government grants, interest income).
- **Annual User Charge Revenue Requirement**: This represents the portion of the total revenue requirement that must be collected directly from users through rates and fees.

This rate study focuses on the user charge revenue requirement, which directly impacts the rates customers pay. There are two primary approaches employed in the utility industry for determining revenue requirements: the cash-needs approach and the utility approach. In the following sections, we'll delve into the specifics of each method and explore their key differences.

Cash Needs Approach

- Focuses on the actual cash flow requirements of the utility.
- Calculates revenue requirement based on the utility's expected cash outlays for a given period.
- Includes operating and maintenance expenses, debt service payments, and capital expenditures.
- Recognizes the full cost of capital projects in the year they are incurred.
- Revenue requirements can fluctuate significantly from year to year due to the timing of capital projects

Utility Approach

- Focuses on accounting-based measures of revenue and expenses.
- Calculates revenue requirement based on the utility's rate base (the value of its assets) and an allowed rate of return.
- Includes operating expenses, depreciation, taxes, and a return on investment.
- Spreads the cost of capital assets over their useful life through depreciation.
- Provides a more stable and predictable revenue requirement over time.

The main difference lies in how they treat capital expenditures. The utility approach spreads the cost over time through depreciation, while the cash-needs approach includes the full costs upfront, along with the implied task of matching those costs to internal funding sources or external financing. The need to meet potentially “bumpy” capital requirements can lead to more volatile revenue requirements under the cash-needs approach, but it ensures the utility has sufficient cash to cover its capital needs.

Choosing the Right Approach

Ultimately, the choice between the cash-needs and utility approaches depends on the utility's specific circumstances, regulatory environment, and capital investment needs. However, in a municipal setting, the cash-needs approach is often recommended for a few key reasons:

Transparent Cash Flow Tracking

The cash-needs approach more transparently reflects the cash expenditures necessary to meet the utility's needs from year to year. This level of transparency is crucial for municipal utilities, as it allows for better tracking and management of cash flow.

Aligns with Municipal Budgeting

Municipal budgeting practices are typically presented on a cash-needs basis, which tends to align seamlessly with the municipality's overall budgeting process.

Adapts to Fluctuating Capital Needs

Municipal utilities often face fluctuating capital investment needs due to infrastructure projects or large expenditures. The cash-needs approach can better accommodate these fluctuations, ensuring that the utility has the necessary funds when they are needed.

While the utility approach may provide a more stable and predictable revenue requirement over time, the cash-needs approach is generally better suited for municipal utilities due to its transparency, alignment with budgeting practices, and ability to adapt to changing capital needs.

Applying the Cash-Needs Approach to the City's Utilities

We adopted the cash-needs approach to calculate the City's recommended rates. The key components of a utility revenue requirement under the cash-needs approach include:

1. ***Operating and Maintenance (O&M) Expenses***: These are the day-to-day costs incurred by the utility to operate and maintain its infrastructure, such as labor, materials, supplies, and contracted services.

2. ***Debt Service***: This includes the principal and interest payments on any outstanding debt obligations, such as bonds or loans, used to finance capital projects.

3. ***Capital Expenditures***: These are the costs associated with acquiring, constructing, or improving the utility's infrastructure, such as treatment plants, pipelines, or other facilities. The cash-needs approach typically includes the portion of capital projects the utility expects to fund directly from its operating revenue in the year they are incurred rather than depreciating them over time.

4. ***Working Capital and Reserves***: The cash-needs approach may include provisions for maintaining adequate working capital and funding various reserve accounts, such as reserves for emergencies, rate stabilization, or future capital projects. The net change in cash reserves can either increase or decrease the revenue requirement; increases to the reserves represent an increase in the revenue requirement, while the use of reserves represents a decrease.

5. ***Other Revenue Requirements***: Depending on the specific utility, there may be additional revenue requirements, such as payments in lieu of taxes, franchise fees, or other regulatory obligations.

To determine the total revenue requirement using the cash-needs approach, the utility would sum up all these cash flow components for a given period, typically a fiscal year. The resulting revenue requirement would then be used to set rates or charges for the utility's customers, ensuring sufficient revenue is generated to meet the utility's cash needs.

WATER REVENUE REQUIREMENT

The water utility is navigating a complex financial landscape. Significant investments in capital improvement projects, totaling $800 million between Fiscal Years 2024 and 2029, are crucial for maintaining reliable water infrastructure. However, these necessary upgrades come alongside rising operational costs. The Water Fund anticipates additional expenses for maintenance, partly due to the capital improvement projects themselves and partly due to external factors like inflation driving up the cost of labor, materials, and supplies.

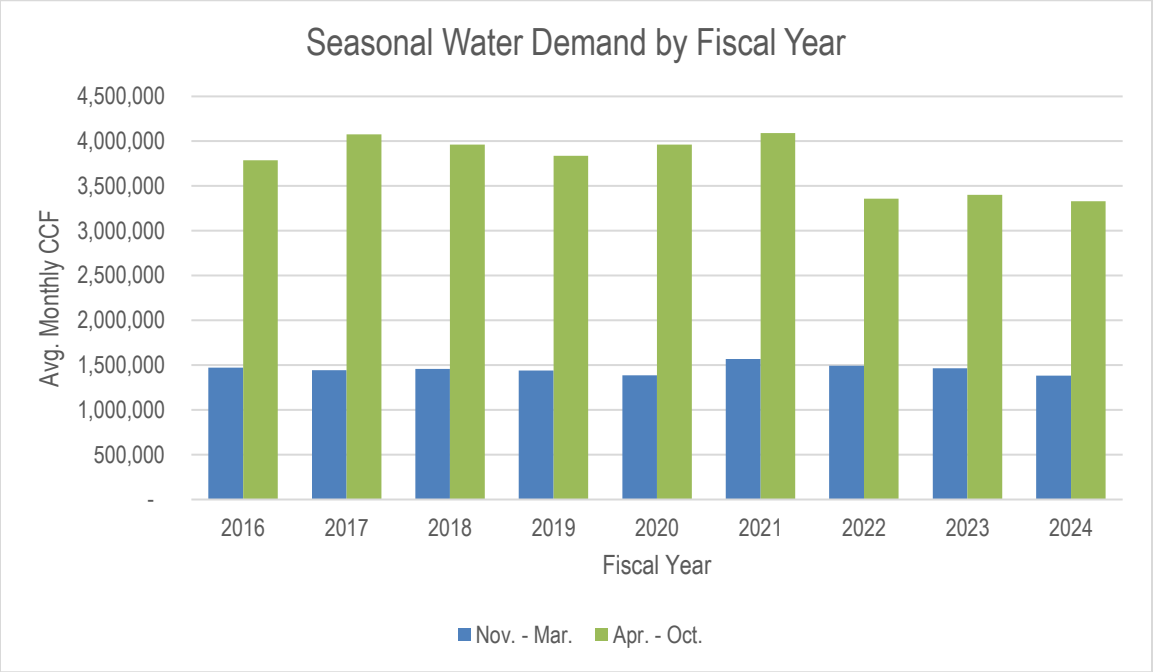
These cost pressures are further amplified by a declining water demand compared to previous years. It should be noted that the decline in water demand is not associated with negative growth, to the contrary, growth in the City's water service area is very high. Rather, the decrease in demand shows that the City's water conservation efforts have been working. With revenue potentially shrinking while expenses rise, the challenge becomes ensuring long-term financial stability without putting an undue burden on ratepayers through increased water rates.

Revenue

Until Fiscal Year 2021, Salt Lake City's water demand exhibited a predictable pattern. Off-peak months (November to March) saw minimal year-to-year fluctuations, while peak season (April to October) experienced modest variations. However, this trend shifted dramatically in FY2022, with average monthly peak-season demand falling by 18%.

The decline in peak season water use presents a challenge, as the City's tiered rate structure, implemented in the 2018 rate study, relies to some extent on revenue generated from upper tiers - primarily driven by peak-season irrigation. Consequently, revenue has fallen short of budgetary expectations in the past three fiscal years.

Figure 2: Historical Avg. Monthly Peak and Off-Peak Water Demand (FY2016-24)[2]

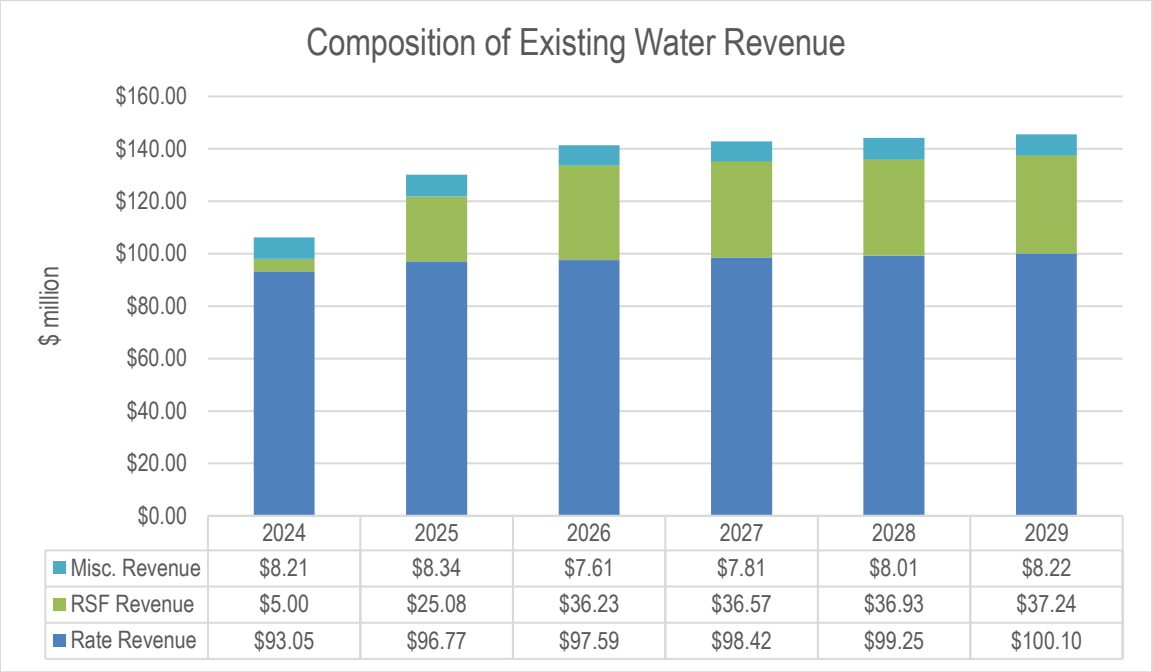


Due to decreasing demand, the City implemented a fixed Rate Stabilization Fee (RSF) in FY2025 to help augment revenues to compensate for losses. The RSF is a temporary measure pending the outcome of this rate study. However, the projected values help explain the shortfalls the City has recently experienced under the current rate structure.

The water utility collects revenue not only through its existing rate structure and recent RSFs but also from various non-rate sources. Interest earnings contribute a portion, but the most significant source is reimbursements – around $4 million annually – received from the City's other utilities for administrative services provided by the water utility. Additional revenue comes from various fees, including hydrant rentals, flat-rate sales, and ground rentals.

[2] FY2024 includes three estimated months of water demand (Apr.-Jun.)

Figure 3: Composition of Existing Water Revenues Before Recommended Increases ($ million)



	2024	2025	2026	2027	2028	2029
Misc. Revenue	$8.21	$8.34	$7.61	$7.81	$8.01	$8.22
RSF Revenue	$5.00	$25.08	$36.23	$36.57	$36.93	$37.24
Rate Revenue	$93.05	$96.77	$97.59	$98.42	$99.25	$100.10

Operating & Maintenance Expenses

The City's O&M expenses include personnel, operational materials and supplies, utilities, contractual services, fleet maintenance, purchased water, and miscellaneous expenses.

Personnel Costs. The personnel costs include all salaries and wages, overtime compensation, payroll taxes, and employee benefits for all full and part-time employees.

O&M Materials and Supplies. Operating supplies include everything from office supplies to chemicals used for water treatment.

Utilities. The City pays utility bills for electricity, gas, and telecommunications.

Services. The City retains the services of various professionals to support its management and operations. Examples of the City's contractual services include auditing and legal fees, public relations, computer maintenance contracts, consulting services, and others.

Fleet. Salt Lake City's general fund manages a fleet maintenance department with costs allocated across all departments, including the City's utilities. Fleet maintenance expenses include repairs, fuel, preventive maintenance, and related incidental expenses.

Purchased Water. The City purchases water from the Metro District. The annual charge is a fixed assessment and may include a volumetric portion if the City exceeds its annual water allocation.

Other (Misc.). Miscellaneous expenses, not categorized as any of the above categories, include janitorial services, rent/lease expenses, risk management and insurance costs, data processing, travel, several categories of incidental expenses, and aggregated additional budget adjustments.

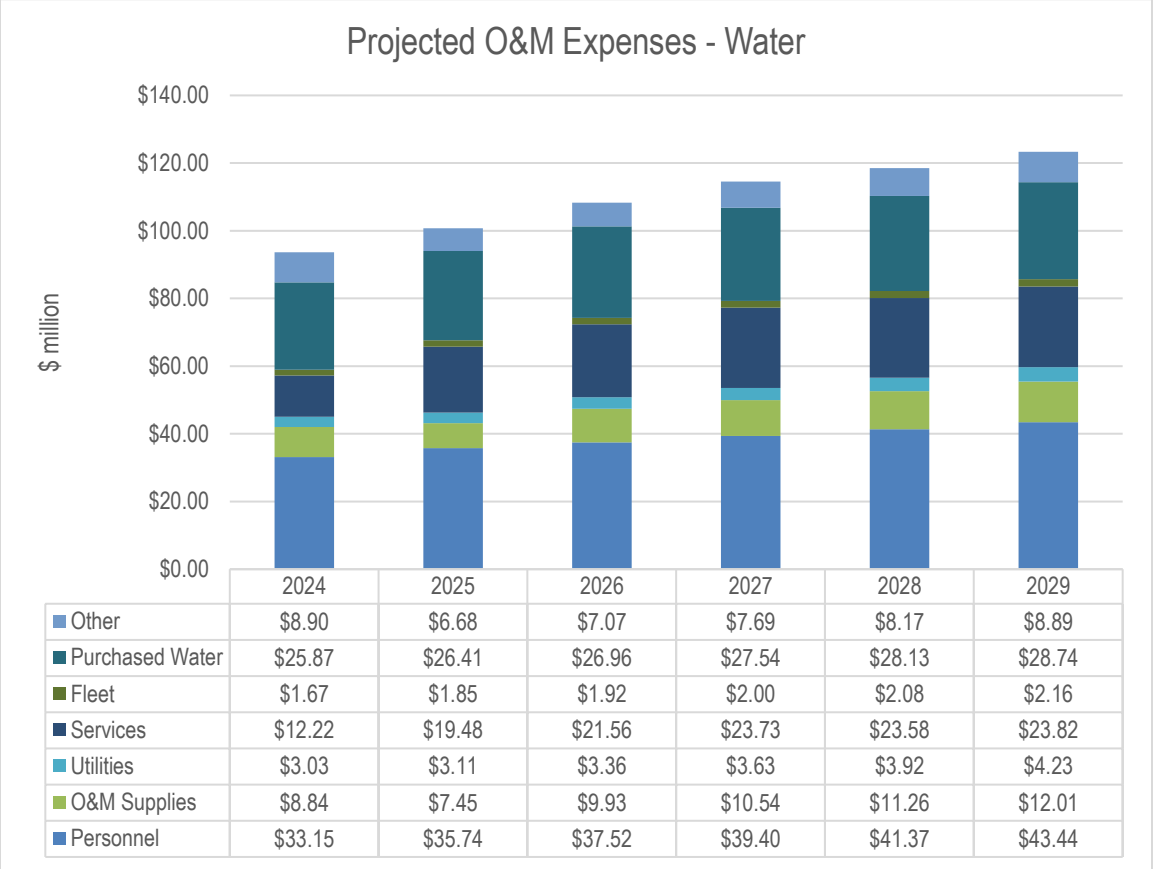
We projected the City's costs, recognizing real and inflationary cost increases. A listing of our operating assumptions for inflationary increases is provided in APPENDIX A. Among the more important real cost increases for the City are the following notable expenditures:

- Technical Service Contracts – the City expects to increase its annual spending on contracted technical services for engineering and related services to assist in executing the capital improvement plan and management of the City's Lead and Copper program. The annual expenses are expected to increase from $8 million to $15 million in FY2025.

- Increased Operating Expenses Related to CIP Completion – As the City completes major facilities from its CIP, it expects to incur additional O&M expenses. Additional expenses include increased staffing levels, materials and supplies, and other operational costs. The exact costs are currently unknown. However, our forecast includes an allowance for such expenses equal to 1% of the cumulative CIP expenditures. The City is not expecting additional O&M expenses until FY2026, at which point our forecast allows for $2.1 million in additional expenses, growing to $3.1 million by FY2029.

Our projections show the City's O&M expenses increasing from approximately $94 million in FY2024 to over $123 million by FY2029, an average annual increase of 5.6% and a total increase of 32% over the five years.

Figure 4: Projected Water O&M Expenses ($ million)



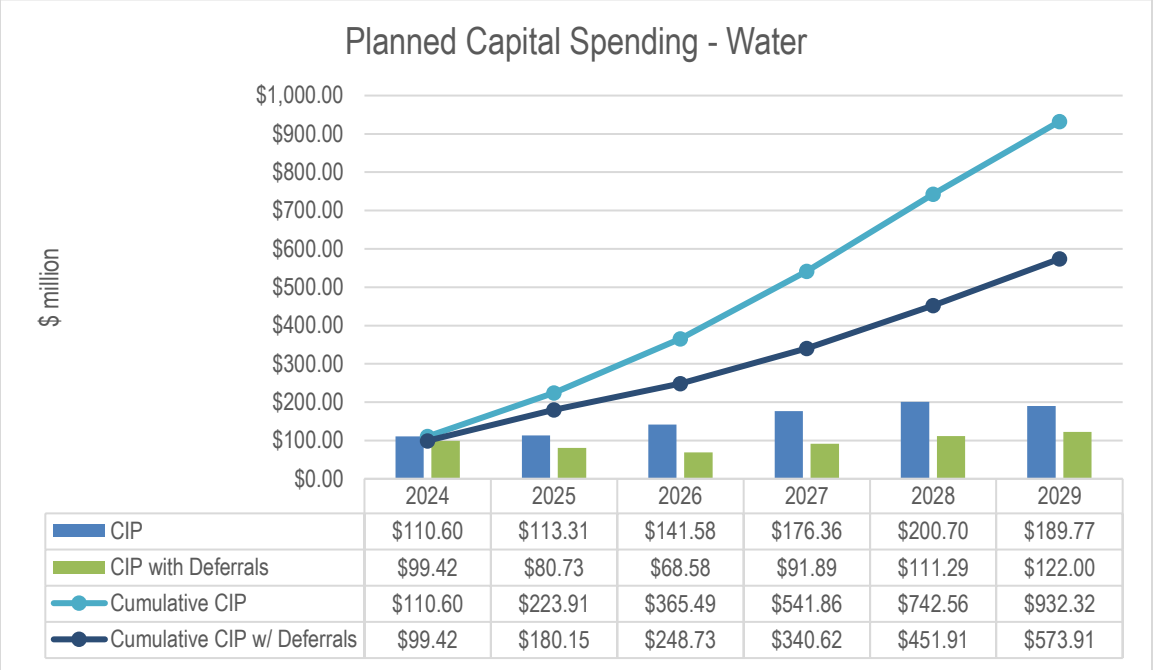
	2024	2025	2026	2027	2028	2029
Other	$8.90	$6.68	$7.07	$7.69	$8.17	$8.89
Purchased Water	$25.87	$26.41	$26.96	$27.54	$28.13	$28.74
Fleet	$1.67	$1.85	$1.92	$2.00	$2.08	$2.16
Services	$12.22	$19.48	$21.56	$23.73	$23.58	$23.82
Utilities	$3.03	$3.11	$3.36	$3.63	$3.92	$4.23
O&M Supplies	$8.84	$7.45	$9.93	$10.54	$11.26	$12.01
Personnel	$33.15	$35.74	$37.52	$39.40	$41.37	$43.44

Capital Expenditures

As of the end of FY2023, the City managed over $515 million in water utility infrastructure, land, and water rights. Between FY2024 and FY2029, the City's plans call for significant investments in its water infrastructure. Major investments include the City Creek WTP, Parley's WTP, Big Cottonwood WTP, and multiple smaller programs to repair, replace, and maintain water transmission and distribution infrastructure throughout the City's service area.

To adhere to its planned forecasts, the City must allocate approximately $800 million in current value ($932 million adjusted for inflation), effectively doubling its FY2023 capital assets. To mitigate the impact on ratepayers, the City and FCS GROUP explored alternative scenarios, deferring spending between 10% and 55% while prioritizing essential projects. Figure 5 summarizes the original and revised plan for the City's capital improvement spending.

Figure 5: Planned Capital Spending on Water Projects ($ million)



	2024	2025	2026	2027	2028	2029
CIP	$110.60	$113.31	$141.58	$176.36	$200.70	$189.77
CIP with Deferrals	$99.42	$80.73	$68.58	$91.89	$111.29	$122.00
Cumulative CIP	$110.60	$223.91	$365.49	$541.86	$742.56	$932.32
Cumulative CIP w/ Deferrals	$99.42	$180.15	$248.73	$340.62	$451.91	$573.91

The City has multiple funding sources for its capital projects, including grants, contributions from impact fees, cash reserves, and debt. An important source of the City's funding plan includes the cash flows generated from user charges and other operating revenues. The City deposits operating cash flows into its cash reserve accounts and uses the funds to pay for capital projects.

Table 1 summarizes the various sources and uses of capital for the City's water utility. The City's funding plan includes revenue bond proceeds of $100.6 million in FY2025 and $226.0 million in 2028. As shown in Table 1, the bond proceeds are not always expended in the year of issuance, leading to an increase in cash deposits. The City uses those deposits in subsequent years as a source of CIP funding. Additionally, the City expects to finance a smaller portion of its capital projects with proceeds from State Revolving Fund (SRF) loans. These debts and existing obligations will increase the annual debt service paid from the City's operating revenues. The City is also anticipating funding from federal and state grants related to specific capital projects.

Table 1: Sources and Uses of Water Utility Capital ($ million)

Funding Source (Use)	2024	2025	2026	2027	2028	2029
External and Grant Funding	$10.85	$34.78	$9.10	$4.56	$4.02	$3.68
Impact Fees and CIAC	$2.50	$2.50	$4.42	$4.61	$4.77	$4.94
Revenue Bond Proceeds	$0.00	$100.56	$0.00	$0.00	$226.00	$0.00
SRF Proceeds	$0.00	$3.42	$4.08	$4.74	$4.18	$3.83
Interest Earned	$4.94	$0.42	$0.86	$0.64	$0.20	$1.75
Cash from Operations	$1.69	$14.56	$27.30	$33.07	$28.13	$33.73
Use of Cash Reserves	$79.44	$0.00	$22.82	$44.28	$0.00	$74.08
CIP Project Costs	($99.42)	($80.73)	($68.58)	($91.89)	($111.29)	($122.00)
Deposits to Cash Reserves	$0.00	($75.51)	$0.00	$0.00	($156.00)	$0.00
Sum of Sources and Uses	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

Debt Service

Debt service includes principal and interest payments on the City's existing and projected debts. Additionally, debt obligations often come with real-time coverage requirements such that the utility's net revenue (gross revenue less operating expenses) must exceed annual debt service obligations by a certain percentage (typically 125% or higher). For planning purposes, we assumed a coverage factor of 150%.

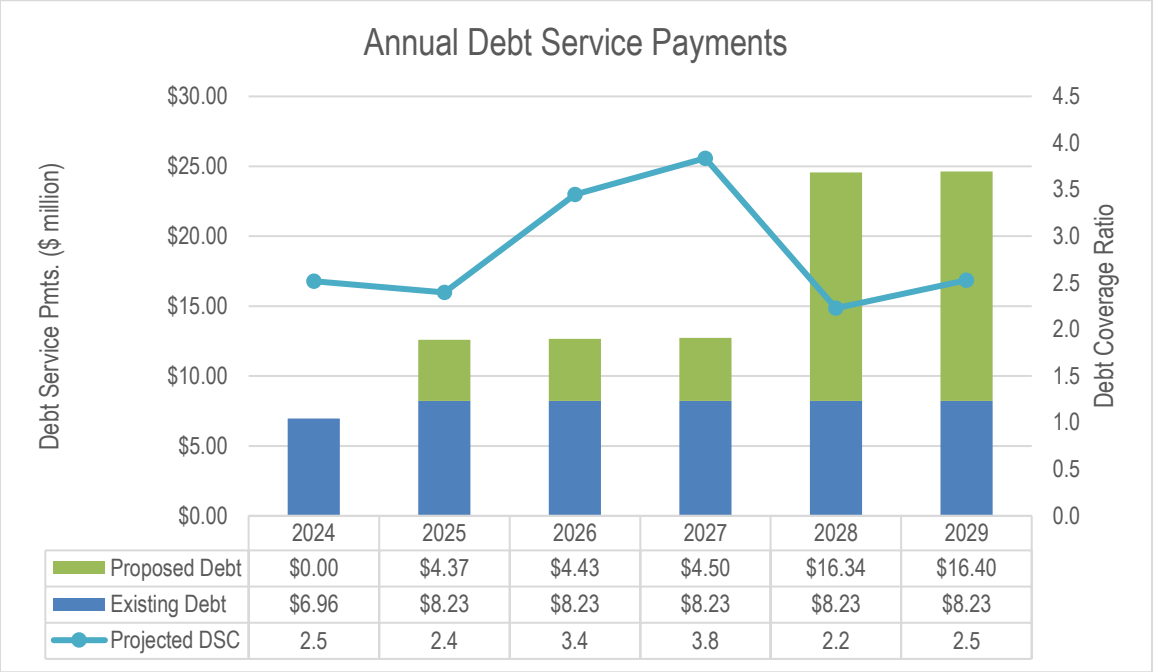
The forecast prepared for the City includes two main revenue bond issues, summarized as:

- Series 2025 - $100.6 million in construction proceeds with anticipated issuance costs of $1.0 million for a total issue size of $101.6 million. We assumed a term of 30 years and an average coupon rate of 4.25% with interest-only payments through FY2027.

- Series 2028 - $226.0 million in construction proceeds with anticipated issuance costs of $2.3 million for a total issue size of $228.3 million. The bond terms are assumed to be the same as the proposed Series 2025, with interest-only payments through FY2030.

Figure 6 summarizes the annual debt service for the existing and proposed bonds and the projected debt service coverage on all debts (1.5x is the minimum value for debt coverage).

Figure 6: Annual Debt Service Payments - Water ($ million)



	2024	2025	2026	2027	2028	2029
Proposed Debt	$0.00	$4.37	$4.43	$4.50	$16.34	$16.40
Existing Debt	$6.96	$8.23	$8.23	$8.23	$8.23	$8.23
Projected DSC	2.5	2.4	3.4	3.8	2.2	2.5

Water Revenue Requirements

The City's current user charge revenue at its existing schedule of rates and charges, including the newly imposed RSF, is too low to provide for the Water Fund's ongoing operations and capital financing requirements. Although it represents an increase to existing user charges, the City's newly implemented RSF, intended to offset the loss of revenues from unprecedented decreases in water demand, is included as an existing revenue in our analysis. We included the RSF because it had already been implemented before we began our study. While the City implemented the RSF as a fixed monthly charge on customers' bills starting in FY2024, this rate study examines potentially different ways to structure the rates to recover the same total revenue in the future.

Table 2 summarizes the major elements of the City's water revenue requirements based on the cash-needs approach described earlier. The table demonstrates the user charge revenue requirement each year and compares it to the expected revenue at the current rates. The additional revenue needs begin in FY2026 and grow through FY2029; the value shown is cumulative and assumes no rate increases. The final line of Table 2 shows the annual increase in revenue needed to eliminate the shortfalls.

The total revenue requirement for FY2026 is the basis for the recommended rates for this Report.

Table 2: Summary of Projected Water Revenue Requirements ($ million)

Component of Revenue Req.	2024	2025	2026	2027	2028	2029
Operating Expenses	$93.68	$100.72	$108.33	$114.53	$118.49	$123.29
Debt Service	$6.96	$12.60	$12.66	$12.73	$24.57	$24.63
Capital Improvements	$99.42	$80.73	$68.58	$91.89	$111.29	$122.00
Capital Funding Sources	($18.29)	($141.68)	($18.46)	($14.54)	($239.16)	($14.19)
Non-Rate Related Revenue	($8.21)	($8.34)	($7.61)	($7.81)	($8.01)	($8.22)
Cash Funded CIP	$1.69	$14.56	$27.30	$33.07	$28.13	$33.73
Increase (Decrease) in Cash	($77.20)	$63.27	($47.62)	($75.31)	$129.17	($106.23)
Total User Charge Requirement	$98.05	$121.85	$143.18	$154.55	$164.49	$175.01
User Charges at Current Rates	($98.05)	($121.85)	($133.82)	($134.99)	($136.18)	($137.34)
Additional Revenue Needed (cumulative value)	**$0.00**	**$0.00**	**$9.37**	**$19.56**	**$28.31**	**$37.67**
Annual Revenue Increase %	**0.0%**	**0.0%**	**7.0%**	**7.0%**	**5.5%**	**5.5%**

While this study focuses on FY2024-2029, FCS GROUP prepared a longer-range forecast for the City that extends for ten years. In the longer term, we estimate the City would require annual increases in the range of 5% per year to sustain its water utility operations.

The Rate Stabilization Fee

Starting in FY2024, the City imposed a temporary Rate Stabilization Fee (RSF) to address a significant and unexpected decline in revenue experienced in FY2022 and FY2023. This rate study will help determine a more permanent solution to the recent losses. Throughout this Report, we accounted for the RSF as an existing revenue source; the adjustments shown in Table 2 and elsewhere represent the increases necessary *after already accounting for the RSF*. However, the total increase customers will experience includes the RSF and additional adjustments outlined in this Report. Table 3 is a summary of the total increases customers can expect. Even though the RSF may not be continued in its current form, the total revenue required for the water utility reflects the total percentage changes shown in Table 3.

Table 3: Summary of Total Expected Water Revenue Increases by Source

Revenue Source	2024	2025	2026	2027	2028	2029
Increases to Base Rates	0.0%	0.0%	7.0%	7.0%	5.5%	5.5%
Rate Stabilization Fees	5.4%	20.3%	9.0%	0.0%	0.0%	0.0%
Total Customer Increases	**5.4%**	**20.3%**	**16.0%**	**7.0%**	**5.5%**	**5.5%**

WASTEWATER REVENUE REQUIREMENT

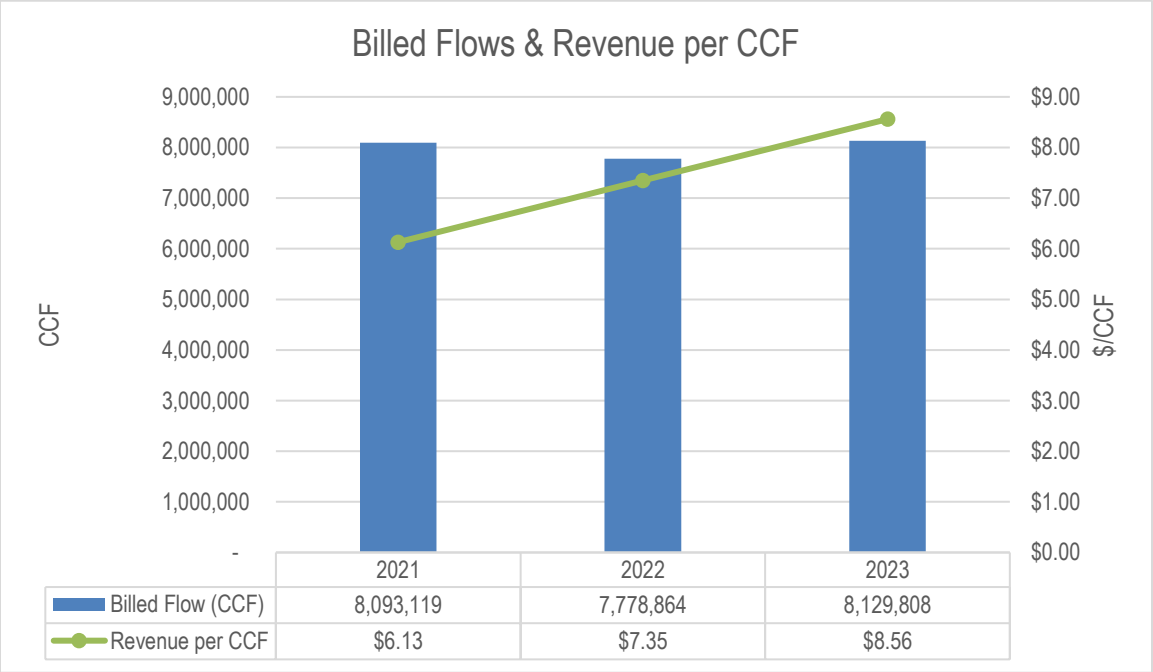
Like the Water Fund, the City's Wastewater Fund is poised to invest over a billion dollars in capital improvement projects between FY2024 and 2029. The investments are crucial for meeting the

requirements of the Clean Water Act and include a new wastewater reclamation facility (WRF) currently under construction. The financing for the reclamation facility and other capital projects has already presented a challenge for ratepayers; the City's Series 2022 revenue bonds, plus loans from the US EPA's Water Infrastructure Finance and Innovation Act (WIFIA), used in financing the WRF, increased annual debt service more than double, from approximately $12 million per year to over $29 million. Debt service may increase to as high as $44 million by 2029. As the new facilities come online, the City expects additional operating costs, too.

Revenue

The water demand patterns we identified as a challenge for the Water Fund revenues were less of a driver for the wastewater utility, yet still very relevant. Wastewater billing depends, for the most part, on average wintertime water usage as an estimate of wastewater flows contributed to the City's sewers. However, in FY2022, billed sewer flows did experience a decrease, according to data provided by the City, but recovered to FY2021 levels by FY2023. Despite the dip in billed flows, the City's billed revenue increased 15% in FY2022 and another 22% in FY2023.

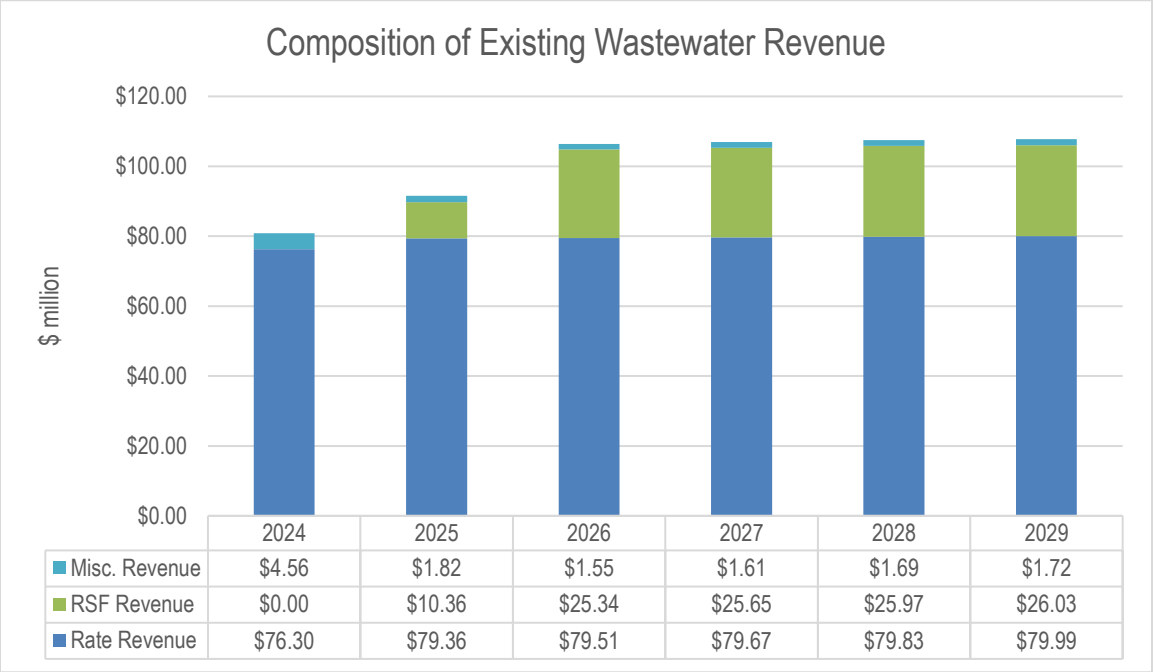
Figure 7: Historical Billed Flows and Average Revenue per CCF



The City implemented a new RSF on the wastewater rates for FY2025. As with the water utility, the RSFs are a temporary measure pending the outcome of this rate study. However, we have included the expected revenue from the RSFs as part of the existing rate-related revenue.

The wastewater utility recovers additional sums of revenue from miscellaneous and non-rate-related sources. The most significant of these additional sources are rental income from ground leases and income from sewer inspections.

Figure 8: Composition of Existing Wastewater Revenues Before Recommended Increases ($ million)



	2024	2025	2026	2027	2028	2029
Misc. Revenue	$4.56	$1.82	$1.55	$1.61	$1.69	$1.72
RSF Revenue	$0.00	$10.36	$25.34	$25.65	$25.97	$26.03
Rate Revenue	$76.30	$79.36	$79.51	$79.67	$79.83	$79.99

Operating & Maintenance Expenses

The City's O&M expenses include costs for personnel, operational materials and supplies, utilities, contractual services, fleet maintenance, and miscellaneous expenses.

Personnel Costs. The personnel costs include all salaries and wages, overtime compensation, payroll taxes, and employee benefits for all full and part-time employees.

O&M Materials and Supplies. Operating supplies include everything from office supplies to chemicals used for treatment. Chemical costs alone make up over 40% of the materials and supplies category.

Utilities. The City pays utility bills for electricity, gas, and telecommunications. Electrical costs make up over 70% of the total.

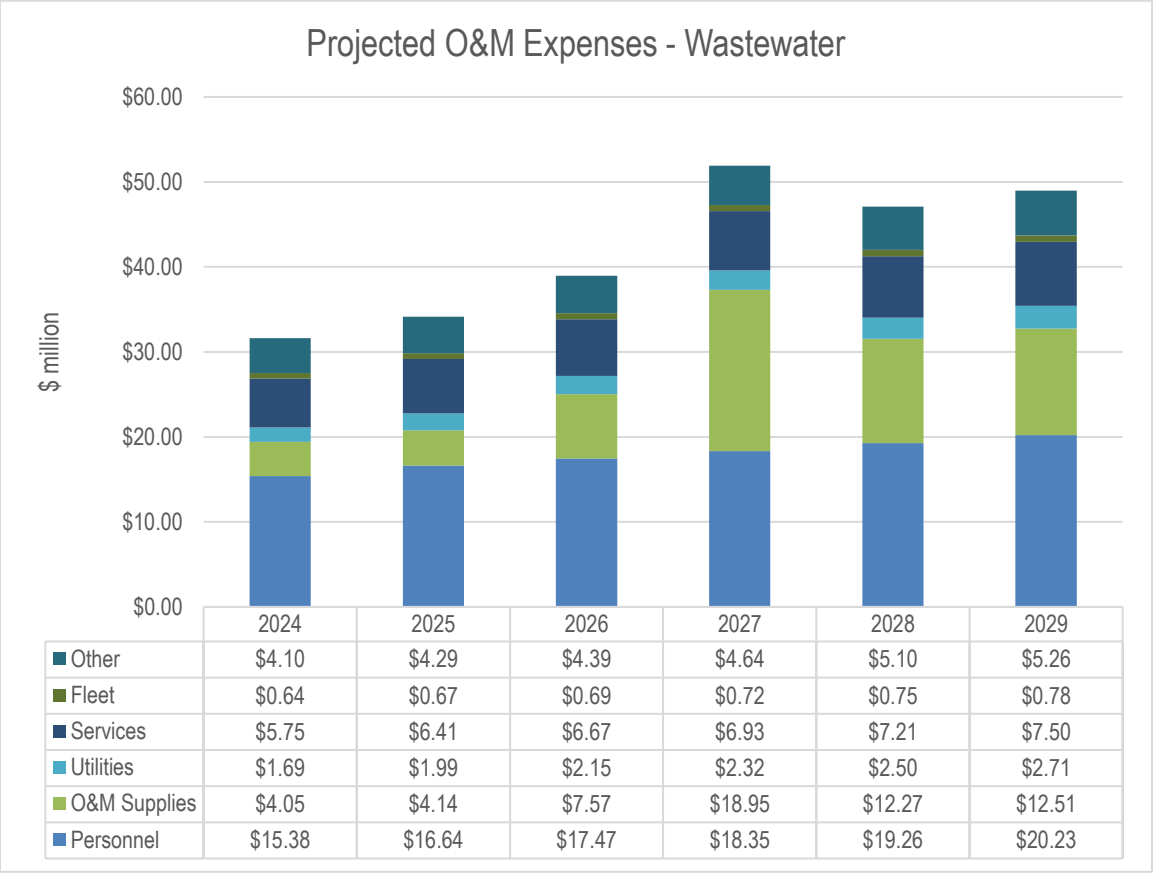
Services. The City retains the services of various professionals to support its management and operations. Examples of the City's contractual services include auditing and legal fees, public relations, computer maintenance contracts, consulting services, and others.

Fleet. Salt Lake City, via the general fund, manages a fleet maintenance department with costs allocated across all city departments, including the City's utilities. Fleet maintenance expenses include repairs, fuel, preventive maintenance, and related incidental expenses.

Other (Misc.). Miscellaneous expenses, not categorized as any of the above categories, include janitorial services, rent/lease expenses, risk management and insurance costs, data processing, travel, and several categories of incidental expenses.

Our forecast indicates an average escalation of O&M costs between FY2024 and FY2029 of around 5.5% before factoring in the anticipated costs of operating the new WRF. The City provided an estimate of its additional O&M costs related to the WRF, which will start in FY2026 at $3.2 million, rising to $14.4 million[3] in FY2027 before leveling out around $7.5 million. Figure 9 summarizes our projected O&M expenses by major category.

Figure 9: Projected Wastewater O&M Expenses ($ million)



	2024	2025	2026	2027	2028	2029
Other	$4.10	$4.29	$4.39	$4.64	$5.10	$5.26
Fleet	$0.64	$0.67	$0.69	$0.72	$0.75	$0.78
Services	$5.75	$6.41	$6.67	$6.93	$7.21	$7.50
Utilities	$1.69	$1.99	$2.15	$2.32	$2.50	$2.71
O&M Supplies	$4.05	$4.14	$7.57	$18.95	$12.27	$12.51
Personnel	$15.38	$16.64	$17.47	$18.35	$19.26	$20.23

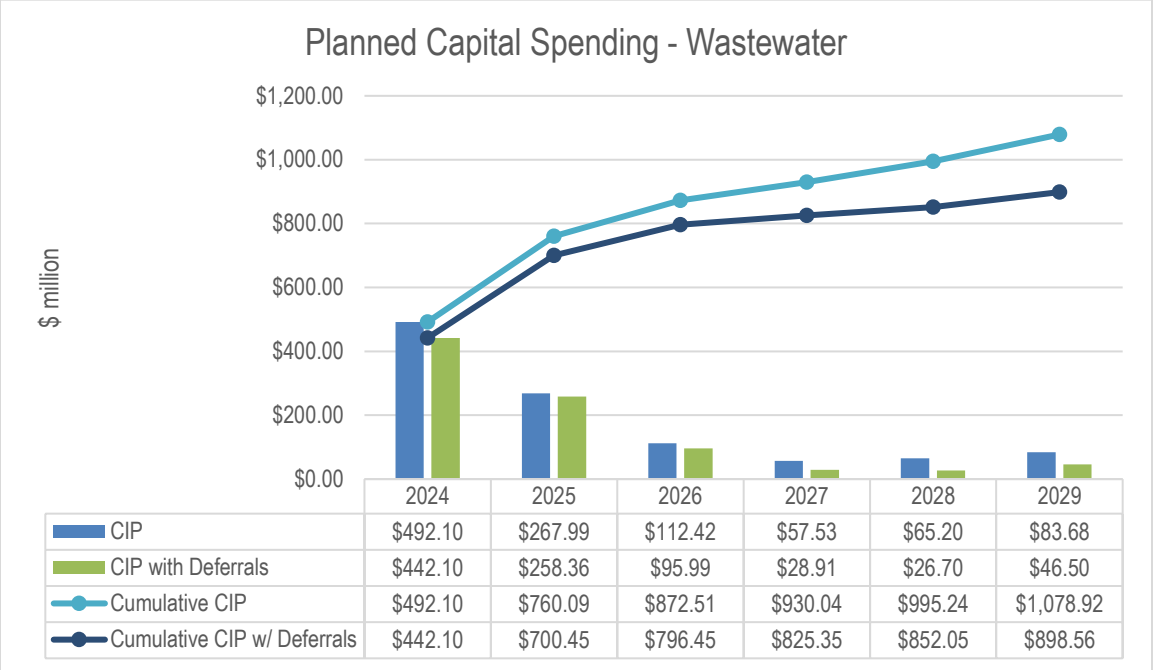
Capital Expenditures

As of FY2023, the City managed over $623 million in wastewater assets, including land, treatment facilities, pumping and pipeline infrastructure, buildings, and machinery. Between FY2024 and FY2029, the City's plans include the addition of over $1 billion (Approximately $1.1 billion after adjusting for future inflation) in capital improvements, $475 million of which relates to the new WRF.

[3] The City anticipates additional, one-time expenses, related to the startup of its new WRF.

As with the Water Fund, recognizing that the pace of capital investment may be too much for ratepayers to bear immediately, the City and FCS GROUP explored alternative scenarios for deferring portions of the CIP. Unlike the Water Fund, however, because many of the City's wastewater projects are necessary to meet regulatory requirements, the deferrals had less effect.

Figure 10: Planned Capital Spending on Wastewater Projects ($ million)



	2024	2025	2026	2027	2028	2029
CIP	$492.10	$267.99	$112.42	$57.53	$65.20	$83.68
CIP with Deferrals	$442.10	$258.36	$95.99	$28.91	$26.70	$46.50
Cumulative CIP	$492.10	$760.09	$872.51	$930.04	$995.24	$1,078.92
Cumulative CIP w/ Deferrals	$442.10	$700.45	$796.45	$825.35	$852.05	$898.56

The City plans to fund its capital improvements through a combination of contributions from grants, impact fees, cash reserves, and debt. An important component of the City's funding plan includes regular transfers of operating cash flows generated from user charges. Operating cash flows are available as capital funding sources after the City pays its operating expenses and debt service and after retaining sufficient working capital.

Table 4 summarizes the various sources and uses of capital for the City's wastewater utility. The City's funding plan includes proceeds from a Water Infrastructure Finance & Innovation Act (WIFIA) loan totaling over $335 million. Additionally, our forecast indicates the City would require revenue bond proceeds of $99.5 million in FY2025 and $34 million in FY2026. Table 4 summarizes our projection of the sources and uses of capital funding in the Wastewater Fund.

Table 4: Sources and Uses of Wastewater Utility Capital ($ million)

Funding Source (Use)	2024	2025	2026	2027	2028	2029
External and Grant Funding	$178.52	$140.46	$16.55	$0.00	$0.00	$0.00
Impact Fees and CIAC	$2.05	$2.05	$7.03	$7.04	$7.05	$7.07
Revenue Bond Proceeds	$0.00	$99.55	$34.00	$0.00	$0.00	$0.00
SRF Proceeds	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Interest Earned	$9.93	$0.09	$0.09	$0.07	$0.13	$0.37
Cash from Operations	$24.64	$22.82	$36.47	$27.50	$43.71	$28.84
Use of Cash Reserves	$226.96	$0.00	$1.86	$0.00	$0.00	$10.23
CIP Project Costs	($442.10)	($258.36)	($95.99)	($28.91)	($26.70)	($46.50)
Deposits to Cash Reserves	$0.00	($6.61)	$0.00	($5.70)	($24.19)	$0.00
Sum of Sources and Uses	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

Debt Service

Debt service includes principal and interest payments on the City's existing and projected debts. Additionally, debt obligations often come with real-time coverage requirements such that the utility's net revenue (gross revenue less operating expenses) must exceed annual debt service obligations by a certain percentage (typically 125% or higher). For planning purposes, we assumed a coverage factor of 150%.

The Wastewater Fund holds several existing debt obligations in the form of revenue bonds plus a WIFIA loan.

- Revenue bonds. The City has long-term revenue bond obligations from its Series 2009, 2010, 2012, 2017, 2020, and 2022 revenue bonds. The total combined annual debt service for all revenue bonds is approximately $29.5 million annually.

- WIFIA loan. The US Environmental Protection Agency awarded the City a WIFIA loan in 2020. The loan initially disburses proceeds to offset capital project costs. Repayment does not start until five years after completion of the project(s) financed by the loan. The expected annual debt service for the 2020 WIFIA loan is approximately $15.0 million per year starting in FY2029.

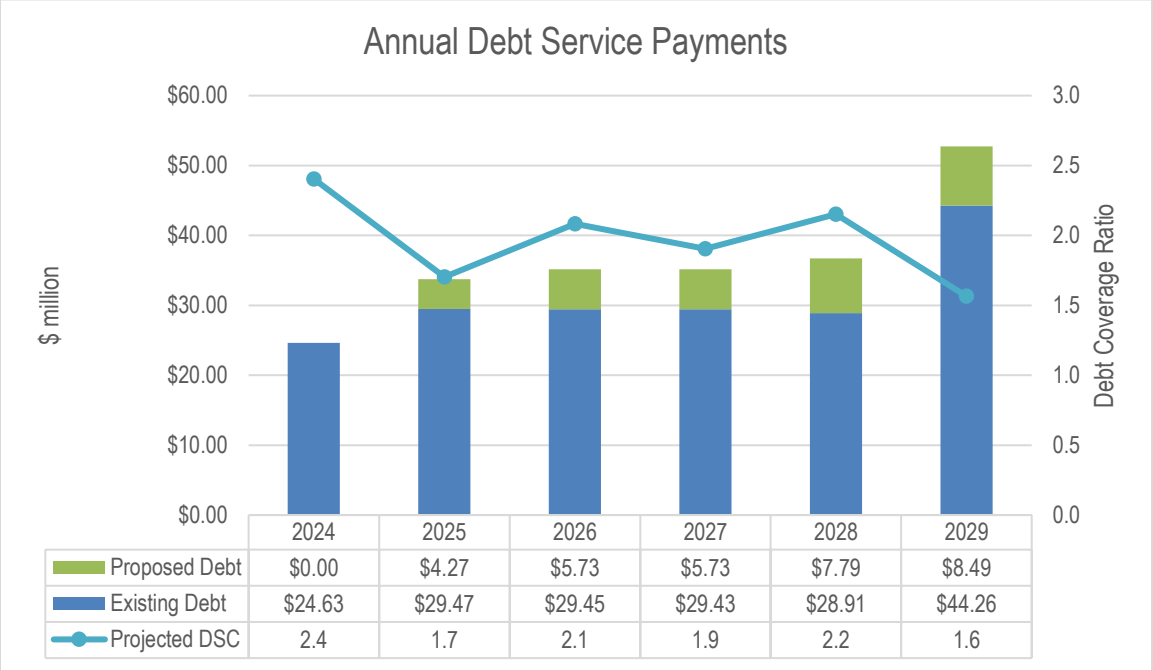
In addition to the existing loans and revenue bond obligations, our forecast includes additional financing from revenue bonds that will increase the annual debt service obligations:

- Series 2025 - $99.6 million in construction proceeds with anticipated issuance sots of $1 million for a total issue of $100.6 million. We assumed a term of 30 years and an average coupon rate of 4.25% with interest-only payments through FY2027.

- Series 2026 - $34.0 million in construction proceeds with anticipated issuance costs of $0.3 million for a total issue size of $34.3 million. We assumed a term of 30 years and an average coupon rate of 4.25% with interest-only payments through FY2028.

Figure 11 summarizes the annual debt service for the existing and proposed bonds and loans and the projected debt service coverage on all debts (1.5x is the minimum value for debt coverage).

Figure 11: Annual Debt Service Payments – Wastewater ($ million)



Wastewater Revenue Requirements

The City's current user charge revenue at its existing schedule of rates and charges, including the newly imposed RSF, is too low to provide for the Wastewater Fund's ongoing operations and capital financing requirements. Although it represents an increase in user charges, the City's newly implemented RSF is included as an existing revenue in our analysis. We included the RSF because it had already been implemented before we began our study. This rate study examines potentially different ways to structure the rates to capture the same total revenue.

Table 5 summarizes the major elements of the City's wastewater revenue requirements based on the cash-needs approach described earlier. The table demonstrates the user charge revenue requirement each year and compares it to the expected revenue at the current rates. The additional revenue needs begin in FY2026 continuing through FY2029; the value shown is cumulative and assumes no rate increases. The final line of Table 5 shows the annual increase in revenue needed to eliminate the shortfalls.

The total revenue requirement for FY2026 is the basis for the recommended rates for this Report.

Table 5: Summary of Projected Wastewater Revenue Requirements ($ million)

Component of Revenue Req.	2024	2025	2026	2027	2028	2029
Operating Expenses	$31.60	$34.14	$38.95	$51.91	$47.11	$48.98
Debt Service	$24.63	$33.74	$35.18	$35.16	$36.70	$52.75
Capital Improvements	$442.10	$258.36	$95.99	$28.91	$26.70	$46.50
Capital Funding Sources	($190.50)	($242.15)	($57.66)	($7.11)	($7.18)	($7.43)
Non-Rate Related Revenue	($4.56)	($1.82)	($1.55)	($1.61)	($1.69)	($1.72)
Cash Funded CIP	$24.64	$22.82	$36.47	$27.50	$43.71	$28.84
Increase (Decrease) in Cash	($251.60)	($15.38)	($36.75)	($17.54)	($21.10)	($38.46)
Total User Charge Requirement	$76.30	$89.72	$110.63	$117.23	$124.24	$129.47
User Charges at Current Rates	($76.30)	($89.72)	($104.86)	($105.33)	($105.81)	($106.02)
Additional Revenue Needed (cumulative value)	**$0.00**	**$0.00**	**$5.77**	**$11.90**	**$18.44**	**$23.45**
Annual Revenue Increase %	**0.00%**	**0.00%**	**5.50%**	**5.50%**	**5.50%**	**4.00%**

While this study focuses on FY2024-2029, FCS GROUP prepared a longer-range forecast for the City that extends for ten years. In the longer term, we estimate the City would require annual increases in the range of 4% per year to sustain its wastewater operations.

The Rate Stabilization Fee

Starting in FY2025, the City imposed a temporary Rate Stabilization Fee (RSF) to address a significant and unexpected decline in revenue experienced in FY2022 and FY2023. This rate study will help determine a more permanent solution to the recent losses. Throughout this Report, we accounted for the RSF as an existing revenue source; the adjustments shown in Table 5 and elsewhere represent the increases necessary *after already accounting for the RSF*. However, the total increase customers will experience includes the RSF and additional adjustments outlined in this Report. Table 6 is a summary of the total increases customers can expect. Although the RSF may not be implemented as planned, the total revenue required for the wastewater utility will still need to reflect the increases shown in Table 6.

Table 6: Summary of Total Expected Wastewater Revenue Increases by Source

Revenue Source	2024	2025	2026	2027	2028	2029
Increases to Base Rates	0.0%	0.0%	5.5%	5.5%	5.5%	4.0%
Rate Stabilization Fees	0.0%	13.6%	16.7%	0.0%	0.0%	0.0%
Total Customer Increases	**0.0%**	**13.6%**	**22.2%**	**5.5%**	**5.5%**	**4.0%**

STORMWATER REVENUE REQUIREMENT

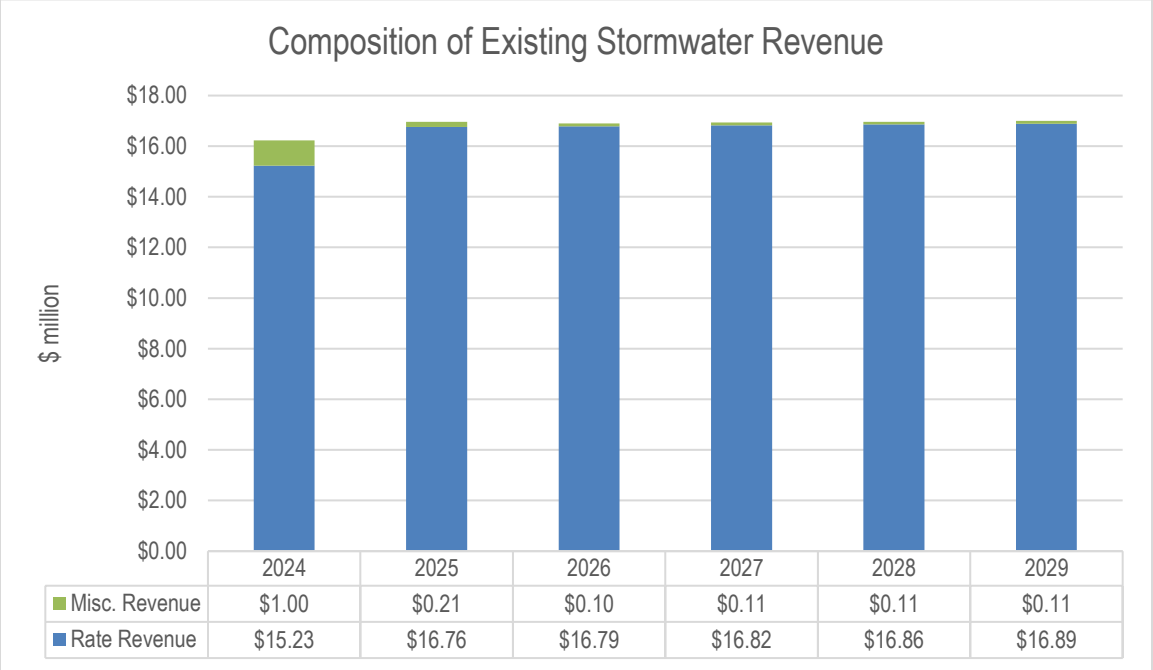
Of the three utilities included in this rate study, the Stormwater Fund has historically operated at the lowest cost with the least need for capital improvements. However, future operating and maintenance

costs will increase faster for the Stormwater Fund than the other utilities as the City increases its activities to comply with its MS4 Permit. Capital improvements are also increasing even if to a lesser extent than with the water and wastewater utilities. The City plans call for approximately $58.9 million in new stormwater infrastructure investments between FY2024 and FY2029.

Revenue

Revenue for the Stormwater Fund tends to be relatively stable compared to revenues in the Water and Wastewater Funds. Unlike the other utilities the City's stormwater charges are flat monthly fees not subject to changes in water demand or other variable factors. As a result, stormwater revenue is relatively reliable from year to year; there was no need for the kind of RSFs seen with the Water and Wastewater Fund. Nearly all revenue in the Stormwater Fund comes from user charges; miscellaneous revenue from fines, repairs, and inspection fees is minimal.

Figure 12: Composition of Existing Stormwater Revenues Before Recommended Increases ($ million)



Operating & Maintenance Expenses

The City's O&M expenses include costs for personnel, operational materials and supplies, utilities, contractual services, fleet maintenance, and miscellaneous expenses.

Personnel Costs. The personnel costs include all salaries and wages, overtime compensation, payroll taxes, and employee benefits for all full and part-time employees.

O&M Materials and Supplies. Operating materials and supplies include everything needed to maintain the City's storm sewer infrastructure, including supplies to maintain the grounds where the infrastructure is located, an important aspect of stormwater management.

Utilities. The City pays utility bills for electricity, gas, and telecommunications. Electrical costs make up over 80% of the total.

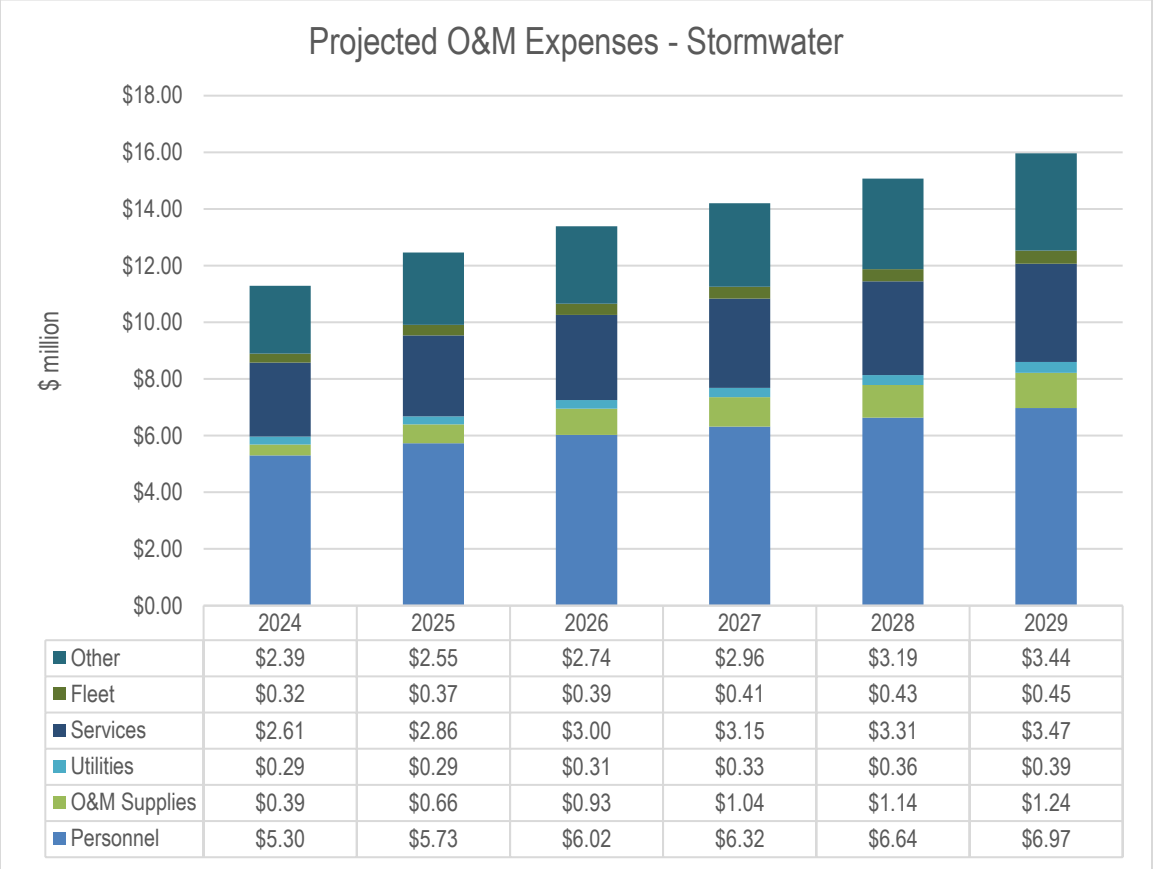
Services. The City retains the services of various professionals to support its management and operations. Examples of the City's contractual services include auditing and legal fees, public relations, computer maintenance contracts, consulting services, and others.

Fleet. Salt Lake City, via the general fund, manages a fleet maintenance department with costs allocated across all city departments, including the City's utilities. Fleet maintenance expenses include repairs, fuel, preventive maintenance, and related incidental expenses.

Other (Misc.). Miscellaneous expenses, not categorized as any of the above categories, include janitorial services, rent/lease expenses, risk management and insurance costs, data processing, travel, and several categories of incidental expenses.

Our forecast indicates an average escalation of O&M costs between FY2024 and FY2029 of around 7.2%, led by increases in O&M supplies and materials. Figure 13 summarizes our projected O&M expenses by major category.

Figure 13: Projected Stormwater O&M Expenses ($ million)



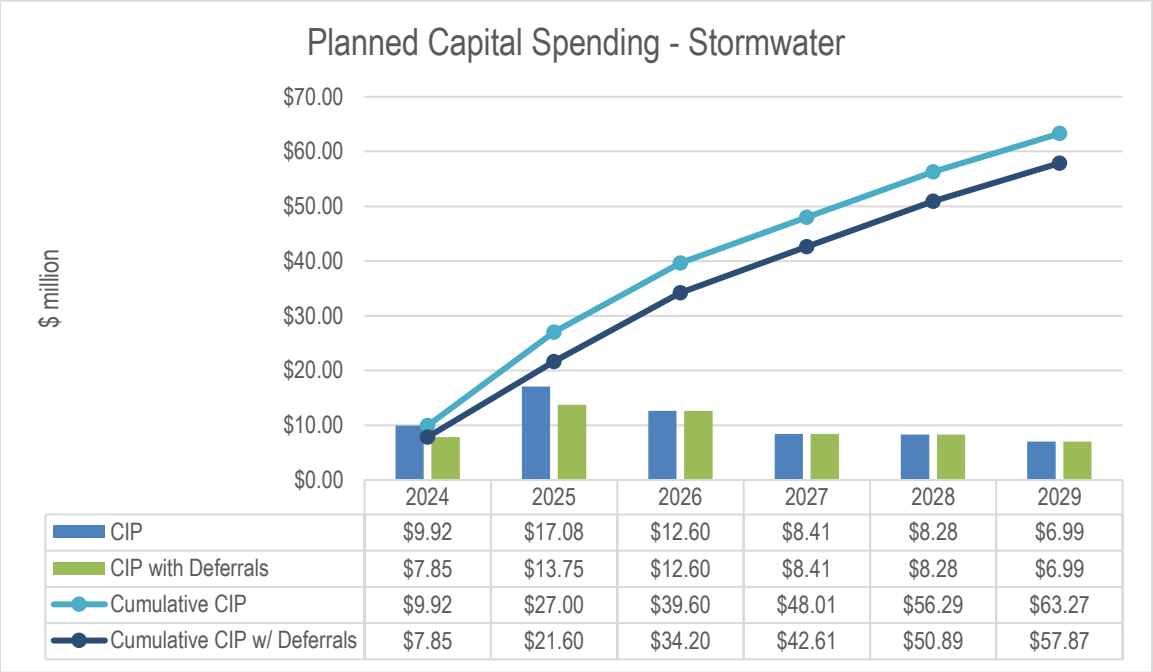
	2024	2025	2026	2027	2028	2029
Other	$2.39	$2.55	$2.74	$2.96	$3.19	$3.44
Fleet	$0.32	$0.37	$0.39	$0.41	$0.43	$0.45
Services	$2.61	$2.86	$3.00	$3.15	$3.31	$3.47
Utilities	$0.29	$0.29	$0.31	$0.33	$0.36	$0.39
O&M Supplies	$0.39	$0.66	$0.93	$1.04	$1.14	$1.24
Personnel	$5.30	$5.73	$6.02	$6.32	$6.64	$6.97

Capital Expenditures

The City managed approximately $121.0 million in stormwater infrastructure as of the end of FY2023. The capital improvements plan includes adding $58.9 million ($63.3 million after adjusting for future inflation). However, along with increases to the O&M expenses, the City elected to defer

several planned capital projects to ease the short-term financial burdens on its ratepayers. The deferrals reduced the total capital expenditures to $57.9 million between FY2024 and FY2029. Figure 14 summarizes the planned and revised capital spending plan.

Figure 14: Planned Capital Spending on Stormwater Projects ($ million)



	2024	2025	2026	2027	2028	2029
CIP	$9.92	$17.08	$12.60	$8.41	$8.28	$6.99
CIP with Deferrals	$7.85	$13.75	$12.60	$8.41	$8.28	$6.99
Cumulative CIP	$9.92	$27.00	$39.60	$48.01	$56.29	$63.27
Cumulative CIP w/ Deferrals	$7.85	$21.60	$34.20	$42.61	$50.89	$57.87

The Stormwater Fund receives most of its capital funding from impact fees and developer contributions. However, the cash flow generated from user charges is also a crucial funding source, as is the use of the fund's existing cash reserves. Table 7 summarizes the sources and uses of capital for the Stormwater Fund for FY2024 through FY2029.

Table 7: Sources and Uses of Stormwater Utility Capital ($ million)

Funding Source (Use)	2024	2025	2026	2027	2028	2029
External and Grant Funding	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Impact Fees and CIAC	$1.15	$1.15	$3.35	$3.35	$3.35	$3.35
Revenue Bond Proceeds	$0.00	$5.03	$0.00	$0.00	$0.00	$0.00
SRF Proceeds	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Interest Earned	$0.54	$0.82	$0.16	$0.10	$0.08	$0.07
Cash from Operations	$3.39	$2.42	$2.67	$3.20	$4.31	$4.89
Use of Cash Reserves	$13.31	$4.34	$6.42	$1.77	$0.54	$0.00
CIP Project Costs	($7.85)	($13.75)	($12.60)	($8.41)	($8.28)	($6.99)
Deposits to Cash Reserves	($10.54)	$0.00	$0.00	$0.00	$0.00	($1.33)
Sum of Sources and Uses	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**

Debt Service

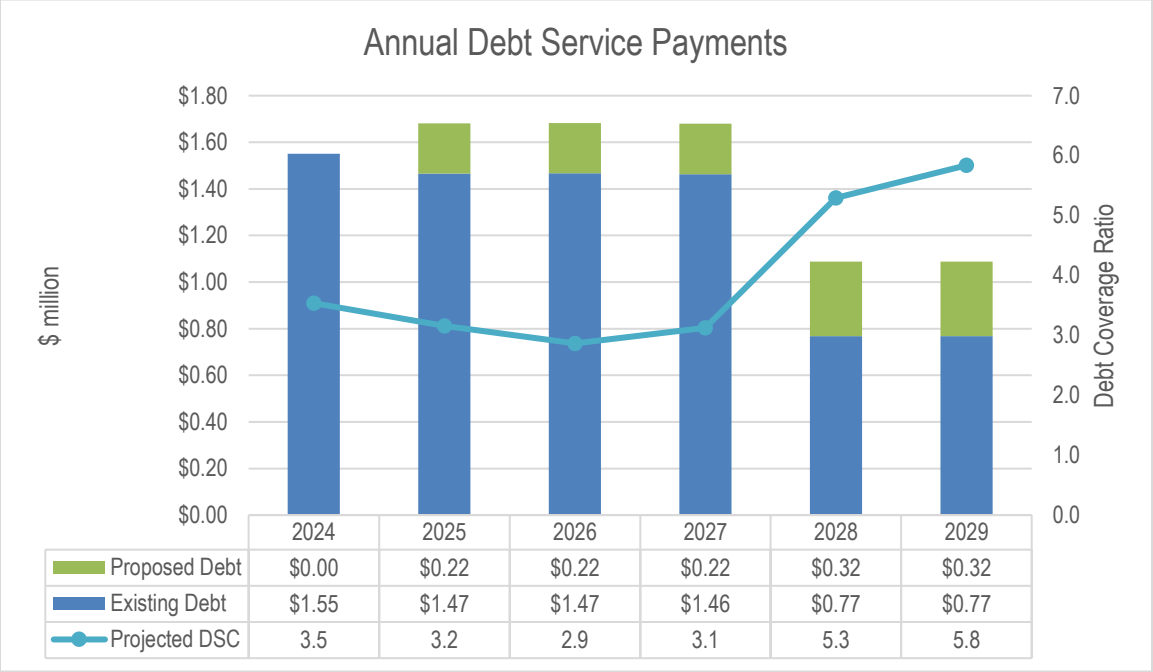
The Stormwater Fund's current debt obligations include Series 2011, 2012, and 2020 revenue bonds with an annual debt service of approximately $1.5 million. The Series 2011 and 2012 bonds will be retired in FY2027, freeing up approximately $0.7 million in cash flow the City may use to issue new bonds or as a funding source for ongoing capital projects.

The forecast prepared for the City includes one additional revenue bond:

- Series 2025 - $5.03 million in construction proceeds with anticipated issuance costs of $0.05 million for a total issue size of $5.08 million. We assumed a term of 30 years and an average coupon rate of 4.25% with interest-only payments through FY2027.

Figure 15 summarizes the annual debt service for the existing and proposed bonds and the projected debt service coverage on all debts (1.5x is the minimum value for debt coverage).

Figure 15: Annual Debt Service Payments - Stormwater ($ million)



	2024	2025	2026	2027	2028	2029
Proposed Debt	$0.00	$0.22	$0.22	$0.22	$0.32	$0.32
Existing Debt	$1.55	$1.47	$1.47	$1.46	$0.77	$0.77
Projected DSC	3.5	3.2	2.9	3.1	5.3	5.8

Stormwater Revenue Requirements

The City's current stormwater user charges at its existing schedule of approved rates and charges are too low to provide for the Stormwater Fund's ongoing operations and capital financing requirements. Table 8 summarizes the major elements of the City's stormwater revenue requirements based on the cash-needs approach described earlier. The table demonstrates the user charge revenue requirement each year and compares it to the expected revenue at the current rates. The additional revenue needs begin in FY2026 and grow through FY2029; the value shown is cumulative and assumes no rate increases. The final line of Table 8 shows the annual increase in revenue needed to eliminate the shortfalls.

The total revenue requirement for FY2026 is the basis for the recommended rates for this Report.

Table 8: Summary of Projected Stormwater Revenue Requirements ($ million)

Component of Revenue Req.	2024	2025	2026	2027	2028	2029
Operating Expenses	$11.29	$12.47	$13.41	$14.22	$15.08	$15.98
Debt Service	$1.55	$1.68	$1.68	$1.68	$1.09	$1.09
Capital Improvements	$7.85	$13.75	$12.60	$8.41	$8.28	$6.99
Capital Funding Sources	($1.69)	($6.99)	($3.51)	($3.44)	($3.42)	($3.42)
Non-Rate Related Revenue	($1.00)	($0.21)	($0.10)	($0.11)	($0.11)	($0.11)
Cash Funded CIP	$3.39	$2.42	$2.67	$3.20	$4.31	$4.89
Increase (Decrease) in Cash	($6.15)	($6.37)	($8.79)	($4.70)	($4.57)	($3.27)
Total User Charge Requirement	$15.23	$16.76	$17.97	$19.26	$20.65	$22.14
User Charges at Current Rates	($15.23)	($16.76)	($16.79)	($16.82)	($16.86)	($16.89)
Additional Revenue Needed (cumulative value)	**$0.00**	**$0.00**	**$1.18**	**$2.44**	**$3.79**	**$5.25**
Annual Revenue Increase %	**0.00%**	**0.00%**	**7.00%**	**7.00%**	**7.00%**	**7.00%**

While this study focuses on FY2024-2029, FCS GROUP prepared a longer-range forecast for the City that extends for ten years. In the longer term, we estimate the City would require an additional 7.0% annual increases in the longer term.

Section III. Cost-of-Service Study

Where the revenue requirements define the total amount of money the utilities need to recover from all user charges, the cost-of-service study defines how to share those requirements among the City's various service classes; if the revenue requirement were a pie, the cost-of-service would determine the size of each slice.

The process for determining the cost of serving a given service class includes:

- **Functionalization –** individual cost components within the revenue requirements are either assigned or allocated to key functions performed by the utility system in providing services to customers. Functions are steps in a process. For instance, a water utility collects untreated water from lakes, streams, reservoirs, and wells. It transports the water to treatment facilities before delivering it to customers through large transmission mains and, eventually, to smaller distribution lines to individual customers. Therefore, the steps in the water delivery process include the operating and capital costs incurred for providing the source of supply, treatment, transmission, distribution, and individual service lines and meters.

- **Allocation –** System functions perform crucial steps in the process of delivering service to customers, and engineers design the infrastructure within a function to meet different demand criteria. For example, engineers design water treatment plants to meet peak-day demand. Therefore, within a cost-of-service study, one would allocate the functionalized treatment costs based on the system's peak-day demands. Other system functions meet different types of demand criteria. Importantly, the criteria are directly related to customer demands placed on the utility system, providing a direct link between functionalized costs and customer demand.

- **Distribution –** Once the utility allocates the functionalized costs to demand components, it can determine an average unit cost for each. The unit cost is the total cost for a given demand component divided by the total system demand. For example, the treatment function with a total cost of $10 million and a peak-day system demand of 10 MGD would yield a unit cost of $1 per GPD (=$10 million / 10 million gallons per day). To distribute the treatment costs to individual service classes, multiply the unit cost by each class's demand. For example, if the Residential class has a peak-day demand of 2 MGD, the distributed treatment function cost would be $1 x 2 million gallons per day, or $2 million. The unit cost is the same for all classes.

Although the examples discussed above are related to water utilities, the cost-of-service process is identical regardless of the type of utility system. The following sections will delve further into the

differences involved, but all cost-of-service studies result in a direct relationship between the utility's costs and customer demand. It is an essential building block for proper rate design because it objectively measures the utility's cost of serving its various service classes. Moreover, the cost-of-service findings allow the utility to establish rates that meet the objectives for *interclass equity*, which exists when the revenue for the service classes closely matches their measurable service costs. When a class's revenue falls well short of costs, other classes must ultimately absorb the shortfall, resulting in interclass subsidization. Adhering to cost-of-service findings avoids such subsidization, ensuring each class's rates recover costs without substantial over or under-recovery.

Unlike the revenue requirements which involved projecting revenue needs for multiple years, the cost-of-service study focuses on a single year, called a "test year." The test year for this study is the City's fiscal year 2026, which will commence on July 1, 2025.

WATER COST-OF-SERVICE STUDY

The water cost-of-service study involved functionalizing, allocating, and distributing the projected FY2026 water system costs to 16 customer classes.

Functionalization of Water System Costs

We classified the SLC water system into ten functional components. The process included reviewing the City's O&M costs and assigning or allocating them to one or more functions. Additionally, we assigned or allocated the City's water system assets to the same functions to determine the correct allocation of capital costs, as described later in this section.

- ***Source of Supply.*** The costs related to the collection of raw, untreated water, including the costs of transporting and storing it before treatment. Source of supply includes purchased water.

- ***Treatment.*** The costs related to treating raw water to the required drinking water quality. Mostly, the treatment function consists of costs for the City's water treatment facilities.

- ***Transmission.*** The costs of transporting water from the treatment facilities to storage and smaller distribution pipelines. It includes the cost of pipelines 16 inches or larger.

- ***Storage.*** The costs of storing treated water to meet peak demand conditions and fire suppression requirements throughout the City.

- ***Distribution.*** The costs of transporting water from transmission and storage to customer service line connections. It includes the cost of pipelines smaller than 16 inches.

- ***Pumping.*** The cost of pumping water from lower elevations to higher ones within the water system.

- ***Meters.*** The cost of maintaining customers' meters and service lines.

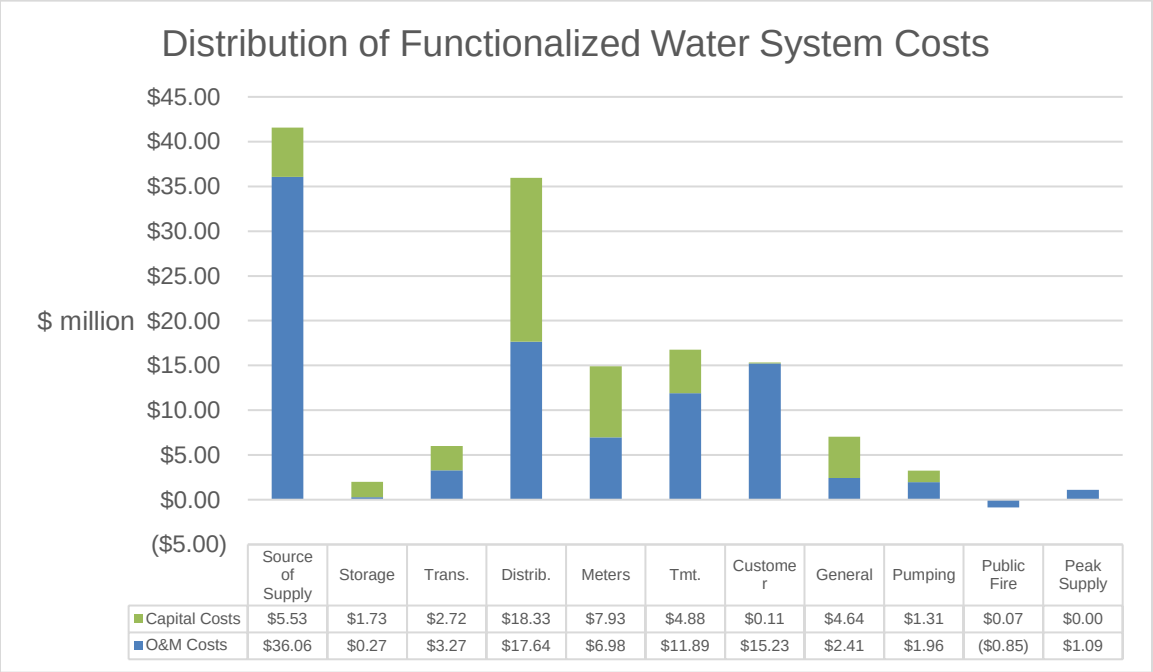
- ***Customer.*** Costs related to the City's customer service activities, billing and financial systems, and much of the system's administration.

- ***General.*** Overhead-type costs that cannot be easily classified into a single function or group of functions.

- ***Public Fire Protection.*** The direct costs of providing fire hydrants and related components for public firefighting. It does not include the indirect costs of oversizing other system elements to provide the firefighting capacity; we allocate those costs separately later in the cost-of-service study.

- ***Peak Supply.*** A portion of the City's source of supply includes wells used solely to meet peak-day demands. We separated these facilities and their related costs into a separate function called *peak supply* so we could easily allocate them later to the system's peak day requirements.

Figure 16: Functionalized Water System Costs ($ million)



	Source of Supply	Storage	Trans.	Distrib.	Meters	Tmt.	Customer	General	Pumping	Public Fire	Peak Supply
Capital Costs	$5.53	$1.73	$2.72	$18.33	$7.93	$4.88	$0.11	$4.64	$1.31	$0.07	$0.00
O&M Costs	$36.06	$0.27	$3.27	$17.64	$6.98	$11.89	$15.23	$2.41	$1.96	($0.85)	$1.09

Note: the O&M costs reported in this section of the Report are shown net of related non-rate revenue. Total O&M costs for the water system are $108.33 million vs. $12.39 million of non-rate revenue for a net O&M cost of $95.94 million.

Allocation of Functionalized Water System Costs

We allocated the water system costs using the Base Extra-Capacity (BEC) approach described by the American Water Works Association Manual M1[4]. The BEC approach prescribes the allocation of functionalized costs incrementally to peak demand components. A functional component designed for peak days, for example, meets both average and peak-day demand; the BEC approach allocates a portion of costs to both average and peak demand[5].

Example.

The water treatment function costs are $10 million. The treatment function meets peak-day demands of 10 MGD. Meanwhile, the system's average-day demand is 6 MGD. The BEC approach would result in an allocation of the functional treatment costs as follows:

Average Day	Peak-Day
6 MGD / 10 MGD = 60%	*(10 MGD – 6 MGD) / 10 MGD = 40%*
$6,000,000	*$4,000,000*

From the above example, the utility uses 60% of the treatment function to meet average-day demand and 40% to meet peak-day demand.

The allocation process involves reviewing each system function and selecting an allocation procedure based on how the function meets system demands. We developed eight allocation factors for the SLC water system, as outlined below in Table 9.

[4] American Water Works. *M1, Water Rates, Fees, and Charges*. 2017.

[5] Note that in the BEC approach, the term "Base" refers to the average daily demand.

Table 9: Water System Allocation Factors – Base Extra-Capacity Approach

Allocation Factor	Base (Avg. Day)	Max-Day	Max-Hour	Customer	Meter	Fire
Base	100%	-	-	-	-	-
Max Day	49%	51%	-	-	-	-
Max Hour	31%	32%	37%	-	-	-
Customer	-	-	-	100%	-	-
Meter	-	-	-	-	100%	-
Fire Prot.	-	-	-	-	-	100%
Storage	23%	24%	51%	-	-	2%
Distribution	30%	40%	35%	-	-	6%
Max Day Only	-	100%	-	-	-	-

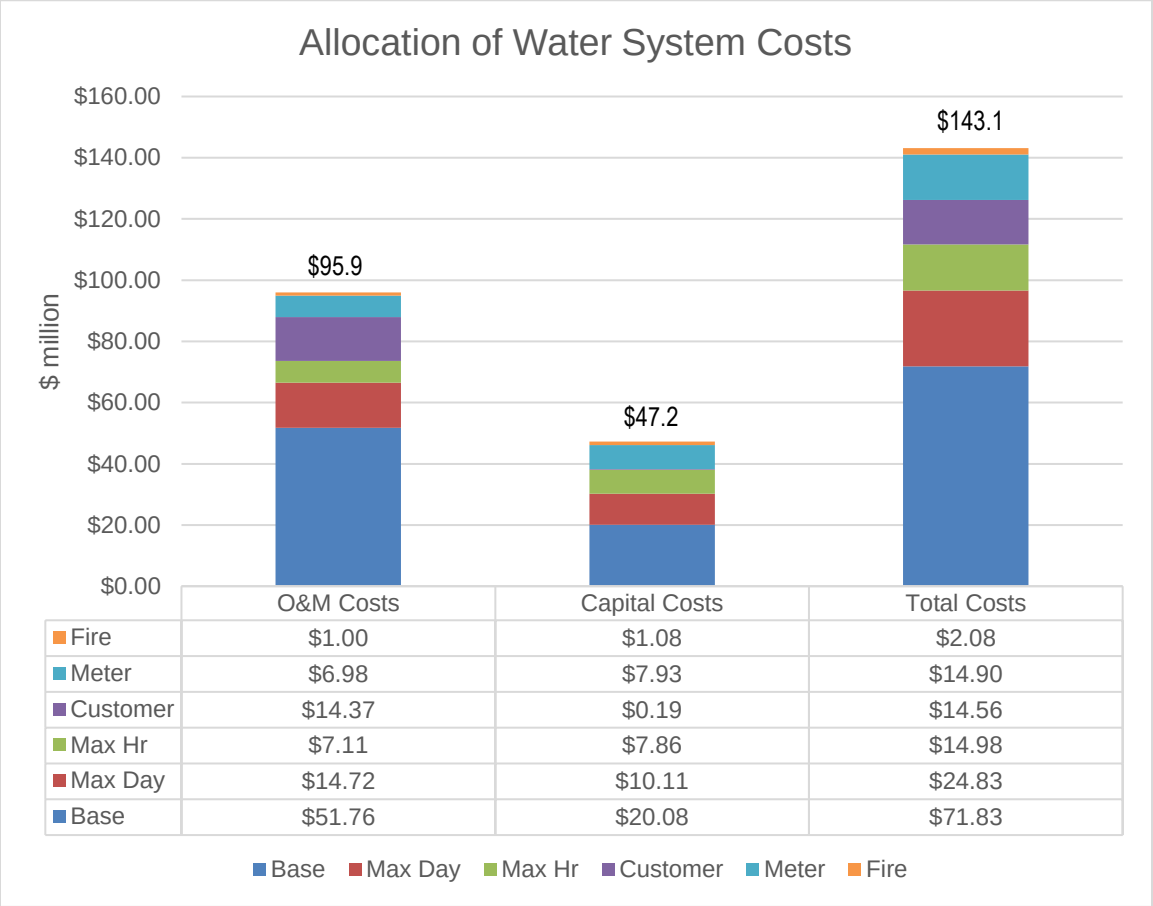
We allocated the system functions to the appropriate factors based on the typical design requirements for each. For example, the source of supply deals with acquiring and transporting raw water typically purchased to provide a given quantity per year without respect to daily or hourly peaks. Accordingly, the source of supply function is best allocated to the Base allocation factor, which results in 100% of the costs allocated to average-day, or "base," demands.

Table 10: Allocation Factors Applied to Water System Functions

System Function	Allocation Factor
Source of Supply	Base
Storage	Storage
Transmission	Max-Day
Distribution	Distribution
Meters	Meter
Treatment	Max-Day
Customer	Customer
General	Base
Pumping	Max-Hour
Peak Supply	Max Day Only

Progressing through each function, we allocated all O&M (net of non-rate revenues) and capital costs to the BEC demand components. Figure 17 is a summary of the results from the allocation process.

Figure 17: Summary Allocation of Water System Costs to BEC Demand Components



	O&M Costs	Capital Costs	Total Costs
Fire	$1.00	$1.08	$2.08
Meter	$6.98	$7.93	$14.90
Customer	$14.37	$0.19	$14.56
Max Hr	$7.11	$7.86	$14.98
Max Day	$14.72	$10.11	$24.83
Base	$51.76	$20.08	$71.83

Distribution of Water System Costs to Customer Classes

Distributing costs to a service class involves multiplying the average unit cost for each BEC demand component by the class's demand units. The average unit cost is the total cost for the categories listed above in Figure 17, divided by the systemwide demand applicable to that category. For example, the total base cost above is $71.83 million; the unit cost is the total cost divided by the annual water demand for the entire system, 32.99 million CCF, or $2.18 per CCF. Each unit cost relates to a different type of system demand:

- ***Base*** – base demands include the total water delivered in the water system up to the average-day capacity level. The unit costs developed for base demand involve dividing total base costs by the total system water deliveries. The system's average daily demand is 90,375.5 CCF per day, or 32.99 million CCF in total water deliveries per year.

- ***Max Day***—The max-day demand includes water delivered above the average daily demand to meet the max-day demand requirements. We estimated the max-day demand for individual classes based on billing records. The system max day, according to the City's master plan criteria, is 2x the average. The peaking factors for individual classes vary.

- ***Max Hour—The max-hour demand includes water delivered above the max-day level. We estimated the*** max-hour demand requirements for each class based on their max-day demand and applied a peaking factor determined by system design requirements. The City's max-hour, according to the master plan criteria, is 3.2x the average-day demand. The peaking factors for individual classes vary.

- ***Customer*** – costs that tend to vary based solely on the number of customers rather than any measurement of water usage fall into the customer demand component. The class demand value for the customer component is the number of customer accounts served. However, because we expect to recover customer costs from fixed monthly service charges, we multiplied the customer accounts by twelve to arrive at a monthly rather than annual number of customer units. The City provides 1.08 million water bills per year.

- ***Meter*** – the meter component includes the costs of reading, servicing, and caring for customers' water meters and services. Larger meters tend to cost more to care for than smaller ones, so the typical demand units used for determining meter-related unit costs is a size-weighted meter count or an *equivalent meter count.* The equivalent meter count for the City is the number of meters by size multiplied by the meter's capacity value relative to the capacity of a ¾-inch meter. All meter capacities come from AWWA standards (Manual M22). The City's equivalent meter count is 136,599.

- ***Fire*** – The fire demand component consists of the direct fire protection costs incurred by the City solely to provide firefighting capabilities. The City also incurs indirect fire protection costs related to oversizing various components (i.e., functions) to meet system design requirements for firefighting capacity. Still, the indirect costs are not part of the fire component in this case (we account for them indirectly in the functionalization process). Fire protection requirements differ for different properties but are typically expressed as some gallons per minute (GPM) for a set duration. For this study, we developed a demand unit value based on each class's GPM requirement and duration times the number of accounts in the class. For example, the single-family (inside city) class's fire protection requirement is 2,000 GPM for two hours with 42,948 total accounts, for a total count of 10.3 million weighted fire protection units. There are 34.1 million such units systemwide.

Table 11 below summarizes the distribution of system costs to individual classes. The top rows in the table illustrate the systemwide unit cost calculations. The class totals show the total units for each cost component, and the distributed costs are the system unit costs multiplied by the class's demand units.

Table 11: Distribution of Water System Costs to Classes

Description / Class	Base	Max Day	Peak Hour	Customer	Meter	Fire	Total
Total Cost ($M)	$71.83	$24.83	$14.98	$14.56	$14.90	$2.08	
System Units	32,987,050	94,218	110,756	1,087,489	136,599	39,080,167	
Unit Type	CCF	CCF/Day	CCF/Day	Bills	Eq. Meters	Weighed GPM	
Unit Cost ($/unit)	$2.18	$263.49	$135.23	$13.39	$109.11	$0.05	
Class Distributions:							
Single Family (Inside)							
Units	7,237,991	23,215	25,827	515,372	46,919	10,307,440	
Distributed Costs ($M)	$15.76	$6.12	$3.49	$6.90	$5.12	$0.55	$37.94
Single Family (Outside)							
Units	6,763,617	25,294	26,295	369,596	35,806	7,391,925	
Distributed Costs ($M)	$14.73	$6.66	$3.56	$4.95	$3.91	$0.39	$34.20
Duplex (Inside)							
Units	735,297	1,887	2,341	46,895	4,281	937,900	
Distributed Costs ($M)	$1.60	$0.50	$0.32	$0.63	$0.47	$0.05	$3.56
Duplex (Outside)							
Units	184,725	487	596	8,940	885	178,794	
Distributed Costs ($M)	$0.40	$0.13	$0.08	$0.12	$0.10	$0.01	$0.84
Triplex (Inside)							
Units	108,911	220	311	6,061	574	121,220	
Distributed Costs ($M)	$0.24	$0.06	$0.04	$0.08	$0.06	$0.01	$0.49
Triplex (Outside)							
Units	8,228	11	20	178	26	3,564	
Distributed Costs ($M)	$0.02	$0.00	$0.00	$0.00	$0.00	$0.00	$0.03
Multi-Family (Inside)							
Units	2,761,221	3,748	6,788	28,194	9,036	3,383,280	
Distributed Costs ($M)	$6.01	$0.99	$0.92	$0.38	$0.99	$0.18	$9.46
Multi-Family (Outside)							
Units	1,119,283	2,315	3,229	5,482	4,624	657,882	
Distributed Costs ($M)	$2.44	$0.61	$0.44	$0.07	$0.50	$0.04	$4.10
Commercial (Inside)							
Units	6,864,605	14,176	19,790	69,530	20,778	8,343,600	
Distributed Costs ($M)	$14.95	$3.74	$2.68	$0.93	$2.27	$0.44	$25.00

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Description / Class	Base	Max Day	Peak Hour	Customer	Meter	Fire	Total
Total Cost ($M)	$71.83	$24.83	$14.98	$14.56	$14.90	$2.08	
System Units	32,987,050	94,218	110,756	1,087,489	136,599	39,080,167	
Unit Type	CCF	CCF/Day	CCF/Day	Bills	Eq. Meters	Weighed GPM	
Unit Cost ($/unit)	$2.18	$263.49	$135.23	$13.39	$109.11	$0.05	
Class Distributions:							
Commercial (Outside)							
Units	1,394,200	3,354	4,304	12,843	4,507	1,541,106	
Distributed Costs ($M)	$3.04	$0.88	$0.58	$0.17	$0.49	$0.08	$5.25
Institutional (Inside)							
Units	1,195,803	3,094	3,822	6,464	2,963	775,680	
Distributed Costs ($M)	$2.60	$0.82	$0.52	$0.09	$0.32	$0.04	$4.39
Institutional (Outside)							
Units	143,022	595	592	1,166	409	139,968	
Distributed Costs ($M)	$0.31	$0.16	$0.08	$0.02	$0.04	$0.01	$0.62
Industrial (Inside)							
Units	1,672,833	1,708	3,774	2,659	1,661	319,080	
Distributed Costs ($M)	$3.64	$0.45	$0.51	$0.04	$0.18	$0.02	$4.84
Industrial (Outside)							
Units	55,497	330	289	113	82	13,608	
Distributed Costs ($M)	$0.12	$0.09	$0.04	$0.00	$0.01	$0.00	$0.26
Irrigation (Inside)							
Units	2,323,123	11,593	10,775	10,723	3,317	-	
Distributed Costs ($M)	$5.06	$3.05	$1.46	$0.14	$0.36	$0.00	$10.08
Irrigation (Outside)							
Units	418,694	2,191	2,003	3,272	730	-	
Distributed Costs ($M)	$0.91	$0.58	$0.27	$0.04	$0.08	$0.00	$1.88
Private Firelines							
Units	-	-	-	-	-	4,965,120	
Distributed Costs ($M)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.26	$0.26
Total Costs	**$71.83**	**$24.83**	**$14.98**	**$14.56**	**$14.90**	**$2.08**	**$143.18**

County Customers

The City serves customers located in the County, which we designated as "outside" customers per Table 11The City charges County customers 35% more than the comparable rates for inside-city customers, partly to compensate for the property tax assessment that inside-city customers bear to offset a portion of costs incurred from water purchased from the Metropolitan District of Salt Lake and Sandy. We prepared a separate analysis that confirmed the 35% cost differential.

Comparing Class Cost-of-Service to Existing Revenue

One key finding from a cost-of-service study is the adjustments required of the existing rates to match each class's service costs. A class's service cost changes over time due to its use, or demand, on the system relative to other classes. Thus, the cost-of-service findings from previous rate studies may not coincide with updated studies.

Table 12 summarizes the expected revenue for each class at the currently approved rates[6] compared to each class's distributed costs of service. A positive variance indicates the rates for the class are currently too high relative to costs; a negative variance indicates the rates are too low. The rate study adjusts for such variances during the rate design process, which will be discussed in subsequent sections of the Report.

Table 12: Comparison of Existing Water Rate Revenues with Cost-of-Service Findings by Class ($ million)

Class	Revenue at Existing Rates	Costs of Service	Variance $	Variance %
Single Family (Inside)	$35.92	$37.94	-$2.02	-5.3%
Single Family (Outside)	$29.38	$34.20	-$4.82	-14.1%
Duplex (Inside)	$3.32	$3.56	-$0.24	-6.8%
Duplex (Outside)	$0.74	$0.84	-$0.09	-11.1%
Triplex (Inside)	$0.59	$0.49	$0.10	20.1%
Triplex (Outside)	$0.03	$0.03	$0.00	1.5%
Multi-Family (Inside)	$10.68	$9.46	$1.22	12.9%
Multi-Family (Outside)	$3.64	$4.10	-$0.46	-11.2%
Commercial (Inside)	$29.00	$25.00	$4.00	16.0%
Commercial (Outside)	$5.65	$5.25	$0.40	7.6%
Institutional (Inside)	$4.58	$4.39	$0.19	4.3%
Institutional (Outside)	$0.58	$0.62	-$0.03	-5.6%
Industrial (Inside)	$4.44	$4.84	-$0.40	-8.2%
Industrial (Outside)	$0.28	$0.26	$0.02	8.5%
Irrigation (Inside)	$12.97	$10.08	$2.90	28.8%
Irrigation (Outside)	$1.38	$1.88	-$0.50	-26.5%
Private Firelines	$0.00	$0.26	-$0.26	-100.0%
Total	**$143.18**	**$143.18**	**$0.00**	

[6] The currently approved rates as projected for fiscal year 2026 include City-approved increases to the base rates, plus a Rate Stabilization Fee.

WASTEWATER COST-OF-SERVICE STUDY

The wastewater cost-of-service study follows all the same procedures described above regarding the water cost-of-service study. However, the names of system functions and cost components are different in wastewater. Additionally, there are only seven customer classifications because, unlike water service, the City does not provide outside-city sewer services.

Functionalization of the Wastewater System Costs

We classified the SLC wastewater system into eight functional components. The process included reviewing operating activities to assign O&M costs to one or more functions and evaluating the City's total asset investments to assign capital costs. Six functions relate to different aspects of the wastewater treatment process.

- ***Treatment – General.*** Costs that are broadly applicable to the entire treatment process and cannot be reasonably allocated to other treatment functions.

- ***Treatment – BOD.*** Costs applicable to the removal of organic pollutants from the wastewater. BOD is a measure of organic concentration.

- ***Treatment – TSS.*** Costs applicable to the removal of suspended solids from the wastewater. TSS is a measure of suspended solid matter in the wastewater.

- ***Treatment – Ammonia (NH3).*** Costs applicable to the removal of ammonia from the wastewater. Ammonia is a new system function for the City related to new USEPA requirements for treating nutrient pollutants (also referred to in the Report by its chemical structure, NH3).

- ***Treatment – Phosphorus (TP).*** Costs applicable to the removal of phosphorus from the wastewater. Like ammonia, phosphorus is a new system function related to newer USEPA nutrient regulations (also referred to as TP for total phosphorus).

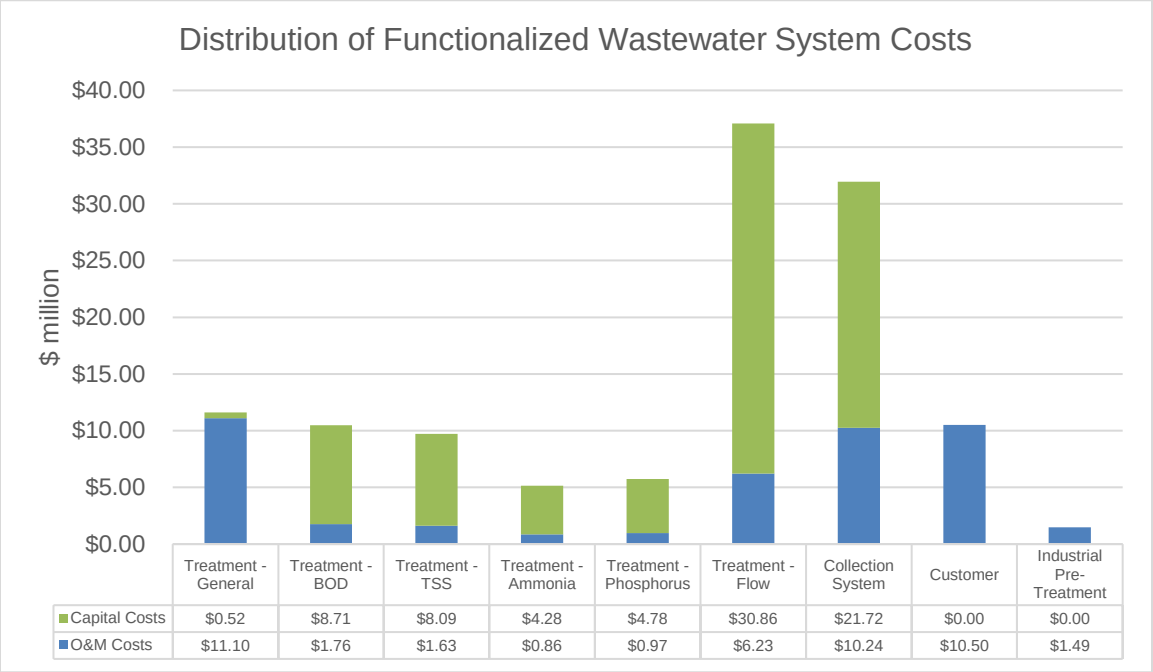
- ***Treatment – Flow.*** Costs related to the handling of hydraulic flows through the wastewater treatment process.

- ***Collection System.*** Costs related to the trunks, mains, lift stations, and collection lines that transport wastewater flows from customers to the wastewater treatment facility.

- ***Customer.*** Costs related to providing customer service, account maintenance, billing and financial systems, and much of the system's administration.

- ***Industrial Pretreatment.*** Costs specifically related to managing the City's industrial pretreatment program (IPP).

Figure 18: Functionalized Water System Costs ($ million)



Note: the O&M costs reported in this section of the Report are shown net of related non-rate revenue. Total O&M costs for the wastewater system are $47.11 million vs. $2.32 million of non-rate revenue for a net O&M cost of $44.79 million.

Allocation of Functionalized Wastewater System Costs

We allocated the wastewater system costs using approaches described by the Water Environment Federation (WEF) Manual of Practice 27. The approach calls for allocating costs between flow-related costs, constituent costs related to pollutant removal, and customer costs. Unlike the allocation approach for the water system, the wastewater approach is more straightforward. Costs related to flow, for example, are allocated directly to the flow cost component; costs related to the removal of BOD are allocated directly to the BOD component. In many ways, the allocation matches closely to the functionalization. In a few cases, we developed indirect allocations for certain costs outlined in the table below.

Table 13: Indirect Allocations Used for the Treatment-General Function

Allocation	Usage	Flow	BOD	TSS	NH3	TP	Cust.
Treatment Indirect	Allocating Treatment-General function for assets, O&M expenses, and non-rate revenue.	54.4%	15.4%	14.3%	7.5%	8.4%	0.0%
Treatment Depreciation	Allocating Treatment-General function for depreciation only.	0.0%	50.0%	45.0%	1.0%	4.0%	0.0%

Based on system design and operations, we allocated the system functions to the appropriate factors. For example, the Treatment-BOD function deals exclusively with removing BOD from the

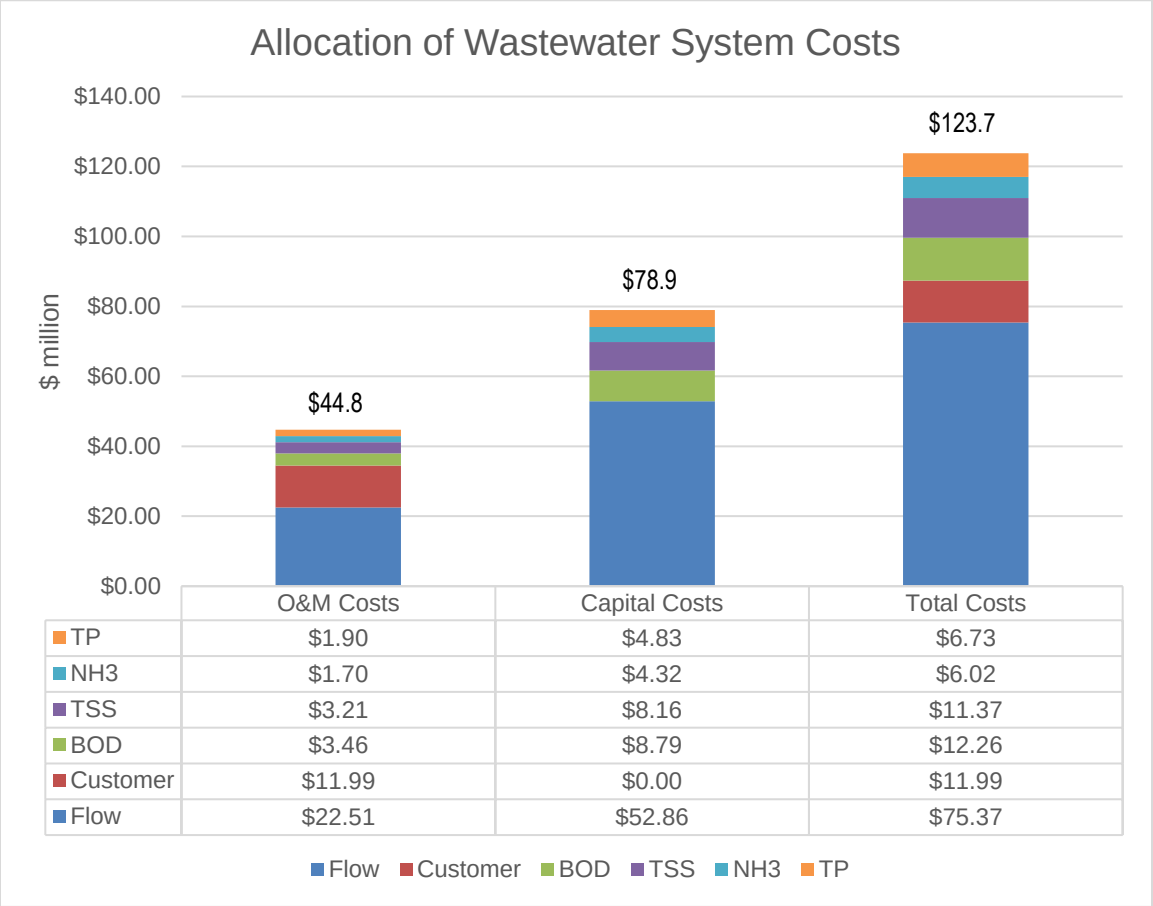
wastewater, and we allocated those costs directly to the BOD cost component. Except for the indirect allocations described above, all allocations were direct assignments, with 100 percent of the costs allocated to the cost component indicated in the table below.

Table 14: Allocation Factors Applied to Wastewater System Functions

System Function	Allocation Factor
Treatment-General	See Table 13
Treatment – BOD	BOD
Treatment – TSS	TSS
Treatment – Ammonia	NH3
Treatment – Phosphorus	TP
Treatment – Flow	Flow
Collection System	Flow
Customer	Customer
Industrial Pretreatment	Flow

After allocating each system function according to the above table, we allocated all O&M (net of non-rate revenues) and capital costs to the correct factors, resulting in a total cost for each cost component as summarized in Figure 19.

Figure 19: Summary Allocation of Wastewater System Costs



	O&M Costs	Capital Costs	Total Costs
TP	$1.90	$4.83	$6.73
NH3	$1.70	$4.32	$6.02
TSS	$3.21	$8.16	$11.37
BOD	$3.46	$8.79	$12.26
Customer	$11.99	$0.00	$11.99
Flow	$22.51	$52.86	$75.37

Customer Class Consolidation

The City's current customer classification system includes six sub-classifications based on a customer's BOD and TSS concentrations, leading to a potential for 36 unique combinations, each with its own service class. Each service class has its own rate. With this rate study, the City needs to add NH3 and TP as additional pollutant categories, potentially increasing the number of unique classes to 1,296. The current structure also includes a seventh classification reserved for customers the City monitors regularly for their flows and pollutant loadings.

For this rate study, FCS GROUP examined ways to simplify the classification system. We characterized sewer flows into three major classifications. A summary of the major characteristics of these classes is provided in Table 15:

- ***Residential*** – Residential sewer classes include all single-family, duplex, and triplex properties. Wastewater flows for these customers are of normal strength, meaning the concentration of waste is low relative to commercial and industrial use. We recommend measuring residential sewer flow as the average winter consumption (AWC) and the average water usage for December- February.

- ***Multi-Family*** – We propose a separate multi-family class for properties with more than three dwelling units. The multi-family class has similar wastewater strength characteristics as the residential class. However, sewer flows for this class are not as closely related to AWC. Instead, we recommend measuring multi-family sewer flows as 70% of the monthly water usage.

- ***Non-residential***— Customers not in the residential or non-residential classes would be classified as non-residential. That includes all commercial, industrial, and institutional users in the system. These customers combine for a higher average wastewater strength than the residential or multi-family classes, and we recommend measuring the class sewer flow as 70% of the monthly water usage.

Table 15: Characteristics of Recommended Sewer Classes (based on FY2023 records)

Billing Determinant	Residential Class	Multi-Family Class	Non-Residential Class
Flow Measurement	Avg. Winter Consumption	70% of Monthly Water Use	70% of Monthly Water Use
BOD mg/l	225	225	356
TSS mg/l	248	248	289
NH3 mg/l	21	21	32
TP mg/l	5	5	7

Non-residential customers who discharge unusually high concentrations of waste into the wastewater system will be identified as Surcharge Customers. The City will identify and monitor such customers who will pay charges in addition to the standard non-residential rates.

Distribution of Wastewater System Costs to Customer Classes

We developed unit costs for each of the above-cost components by dividing the total cost of each component by the total service units. The average unit cost is then multiplied by each class's service units to determine the proportion of total costs to allocate to the class. We distributed costs for each of the following components:

- **Flow**—Flow demand values are estimated contributions to the wastewater system by class. For residential customers, flows are estimated based on their average monthly water usage during the winter. For non-residential customers, we estimated the flow at 70% of their total monthly water usage. The total estimated customer flows were 10.95 million CCF.

- **BOD –** BOD demand is an estimate based on the customer's contributed flows and the observed or estimated concentration of BOD in the customer's wastewater effluent, measured in milligrams per liter (mg/l). Converting the flow and concentration values results in a unit of mass – measurable in pounds (or tons). The concentration levels vary based on the customer's assigned sewer classification (SC). The City assigns customers to varying SCs based on typical concentrations for similar, mostly non-residential (i.e., business) activities. In most cases, residential customers are assigned to SC1; other classes may be assigned to higher classes based on observed measurements or similarity to other customers in the same

SC. Based on the concentrations from Table 15, we determined that 20.95 million pounds of BOD were removed from wastewater flows systemwide.

- **TSS** – TSS demand is the mass from converting the concentrations of TSS and the customers' contributed flows. Based on the concentrations in Table 15, plus our estimate of contributed systemwide flows, we concluded there were 18.67 million pounds of TSS for the FY2026 test year systemwide.

- **Ammonia (NH3)** – Ammonia is a new addition to the SC table for this rate study. The current estimate for NH3 concentration is approximately 9 percent of the BOD concentration for each SC. Based on Table 15, we estimated that 1.88 million pounds of NH3 will be removed from wastewater flows in FY2026.

- **Phosphorus (TP)** – Phosphorus is another new addition, estimated with concentration levels at two percent of the BOD concentration levels. Based on Table 15, we estimated that 416,400 pounds of TP will be removed from wastewater flows in FY2026.

- **Customer** – Costs that vary solely on the number of customers served rather than their wastewater flow or pollutant levels fall into the customer demand component. For this rate study, we measured customer values as the equivalent number of accounts served, 242,975.

Table 16: Distribution of Wastewater System Costs to Classes

Description / Class	FLOW	SVC. Units	BOD	TSS	NH3	TP	Total
Distribution of Joint System Costs							
Total Costs	$75.37	$11.99	$12.26	$11.37	$6.02	$6.73	
System Units	10,947,871	242,975	20,949,375	18,667,673	1,878,310	416,373	
Unit Type	CCF	Service Units	LBS	LBS	LBS	LBS	
Unit Cost ($/unit)	$6.88	$49.36	$0.58	$0.61	$3.20	$16.16	
Residential							
Units	2,252,376	46,235	3,165,560	3,487,188	291,252	64,563	
Distributed Costs ($ M)	$15.51	$2.28	$1.85	$2.12	$0.93	$1.04	$23.74
Multi-Family							
Units	1,905,448	55,281	2,677,977	2,950,065	246,391	54,618	
Distributed Costs ($ M)	$13.12	$2.73	$1.57	$1.80	$0.79	$0.88	$20.88
Non-Residential							
Units	6,790,047	141,459	15,105,838	12,230,421	1,340,667	297,192	
Distributed Costs ($ M)	$46.75	$6.98	$8.84	$7.45	$4.30	$4.80	$79.12
Total Costs	**$75.37**	**$11.99**	**$12.26**	**$11.37**	**$6.02**	**$6.73**	**$123.74**

Comparing Class Cost-of-Service to Existing Revenue

As with the water cost-of-service study, a key finding for wastewater is the adjustment required of the existing rates to match each class's service costs more closely. Table 17 compares expected revenue in the FY2026 test year to the findings from the cost-of-service study. A positive variance indicates the rates for the class are currently too high relative to costs; a negative variance indicates

the rates are too low. The rate study adjusts for such variances during the rate design process, which will be discussed in subsequent sections of the Report.

Table 17: Comparison of Existing Wastewater Revenue with Cost-of-Service Findings by Class ($ million)

Class	Revenue at Existing Rates	Costs of Service	Variance $M	Variance %
Residential	$45.55	$23.74	$21.80	91.8%
Multi-Family	$18.12	$20.88	-$2.77	-13.2%
Non-Residential	$60.08	$79.12	-$19.04	-24.1%
Total	$123.74	$123.74	$0.00	

STORMWATER COST-OF-SERVICE STUDY

Although the stormwater cost-of-service follows the same functionalization process as water and wastewater, the allocation and distribution steps are not necessary. The key determining factor for stormwater costs is the impervious area attributable to individual customer classes. Impervious area is developed or paved surfaces that alter the natural flow of runoff from precipitation. The runoff from impervious areas becomes the stormwater flows the City must manage under its Municipal Separate Storm Sewer System Permit (MS4 Permit). Because of the MS4 Permit requirements, the City owns and operates an intricate storm drain system necessary for conveying stormwater flows to natural waterways at appropriate water quality levels.

Functionalization of the Stormwater System Costs

The reason for functionalizing system costs, as described already for the water and wastewater systems, is because doing so makes it easier to determine which cost components (e.g., base, use) apply to which costs. For the stormwater system, we functionalized costs into three functional components.[7]

- ***Base - All.*** Costs that are applicable to all customers, regardless of any onsite improvements. This includes all administrative or overhead costs, engineering project management, and operating and maintenance related to the public portion of the system.

- ***Base – Inspection/Monitoring.*** Costs related to inspections and monitoring stormwater quality.

[7] During the RAC process, only two functions were considered: Base and Use. The Base function was split into two separate functions after the RAC process to determine an additional credit amount for properties with NPDES permits.

- ***Use.*** Costs associated with stormwater flow management on private parcels throughout the City.

To do this, we developed an allocation factor from the proportionality of private impervious areas (sourced from the customer billing data) to the impervious area related to streets, sidewalks and other public paved areas. The public paved surfaces, while they contribute to stormwater flow, would not be impacted by any individual facilities on private parcels and are therefore considered a part of the utility Base costs. Table 18 summarizes the breakdown of O&M and capital costs between the three functions.

Table 18: Summary Functionalization of the Stormwater System Costs

Revenue Requirement	Base - All	Base – Inspection/Monitoring	Use	Total
Net O&M Costs	$8.71	$1.33	$3.10	$13.14
Capital Costs	$3.20	$0.49	$1.14	$4.82
Total	$11.91	$1.82	$4.24	$17.97
Percent of Total	66%	10%	24%	

As all stormwater parcels are billed on the same impervious square foot basis, the primary goal of a stormwater cost-of-service is to determine the maximum cost savings the utility would experience if all private parcels had full on-site stormwater mitigation.

Allocation of Stormwater Costs to Customer Units

The total impervious area is the only allocation factor that applies to stormwater costs. We characterized the impervious area into *equivalent service units* (ESUs) of 2,500 SF per ESU. We used the customer billing data to determine the number of ESUs billed per customer type. We adjusted the non-residential ESUs to reflect the City's current stormwater credit program – essentially a program that provides customers with a reduced ESU in exchange for installing and maintaining certain on-site stormwater facilities. The credit values vary, but the City's current stormwater credit policy reduces the total non-residential ESUs by 38 percent.

In the case of stormwater, the allocation process is simple. All costs are allocated to the ESU values. Based on Table 19 and the total cost of $17.97 million, the annual cost per ESU is $112.72 with the existing rate credit structure in place.

Table 19: Summary Service Units and Unit Cost per ESU - Stormwater

Rate Class	ESUs
Residential ESUs	**45,601**
Non-Residential	175,603
(Less) Credits	(61,826)
Net Non-Residential ESUs	**113,777**
Total ESUs	**159,379**
Total Costs	**$17.97M**
$ / ESU (per yr.)	**$112.72**

Section IV. Rate Advisory Committee

Salt Lake City periodically updates the structure of the water, sewer, and stormwater utility rate system to ensure they are current and reflect community values. The rate study aims to make improvements that will have a positive impact on the community for decades to come. This study comes amidst a time where there is potential to make real, meaningful change, particularly considering the changing climate, increasing periods of drought, lower water levels in the Great Salt Lake, and more. The Salt Lake City Department of Public Utilities Rate Advisory Committee (RAC) was formed to help develop this rate study. The RAC was assembled of a diversity of perspectives that represent the community to evaluate and advise on the water, sewer, and stormwater rate structures. The RAC was provided with information from the City regarding the utilities' financial responsibilities, necessary revenue to support their commitments, customer usage characteristics, and the nature of the costs of service and service structures. The RAC had two overarching purposes within the study:

- To provide input and recommendations regarding the rate structure to the Public Utilities Advisory Committee, Salt Lake City Mayor, and Council
- To represent and communicate the views of the community

Selection of RAC members

In planning and convening the RAC, the team put together a list of customer types as well as other interest groups that helped to round out a broad cross-section of perspectives from whom the study could glean strong input and feedback on rate design. The following were the groups that were invited to participate. Table 20 is a list of the individual members and their affiliated organization(s):

- One resident from each Council District in SLC
- SLC Mayor's Office
- Industrial customers
- Commercial customers
- SLC School District
- Low-income Advocacy Groups
- Senior Citizen Advocacy Groups
- Mayor's Office for Access and Belonging
- Public Utilities Advisory Board
- Metropolitan Water District of Salt Lake & Sandy
- Utah Rivers Council
- Western Resource Advocates
- Utah League of Women Voters
- SLC Chamber
- The Cities of Cottonwood Heights, and Holladay

Table 20: Organization and Business Participation in the RAC

Name	Affiliation	Name	Affiliation
Lindsey Nikola	SLC Mayor's Office	**Lissa Larsen**	University of Utah
Damian Choi	Mayor's Office of Equity	**Brad Shafer**	Marathon
Jorge Chamorro	SLC Public Services	**Baron Gajkowski**	SLC Global Logistics – Real Estate Developer
Kathryn Floor	SLC Public Utilities Advisory Committee	**Geoffrey Dzuida**	Sweets Candy
Kathryn Torres	City Council District 1	**Matt Tomczyk**	Horizon Organic Dairy
Jeri Fowles	City Council District 4	**Trevor Haskell**	Uinta Brewery
Tom Godfrey	City Council District 5 - SLC Public Utilities Advisory Committee	**Joseph Erickson**	Utah Community Action
Landon Clark	City Council District 6	**Gina Chamness**	Holladay
Ricky Martinez	SLC School District	**Matthew Shipp**	Cottonwood Heights
Todd Reeder	CDC Utah	**Annalee Munsey**	Metropolitan Water District of Salt Lake and Sandy
Yousef Abouzelof	City Creek	**Nick Halberg**	Utah Rivers Council
Norma Wills	Utah League of Women Voters	**Nick Schou**	Western Resource Advocates
Derek Miller	SLC Chamber		

RAC Meetings and Events

The City hosted seven workshops and two facility tours for RAC members. The workshop meetings were two hours each, covering all aspects of the rate study. During each workshop, FCS GROUP presented the findings from various stages of the study, and RAC members were encouraged to ask questions and provide feedback. Comments from RAC members factored into the direction of the rate study and influenced the final recommendations as outlined in this Report. In addition to the seven workshops, the City also hosted two tours so RAC members could learn more about the water and wastewater treatment facilities. A summary of the workshop dates and tour events is included in Table 21.

Table 21: Schedule of RAC Meetings and Tours

Meeting #1 Date: Wednesday, May 29, 2024 Time: 12:00 pm to 2:00 pm Location: Marmalade Library and Microsoft Teams Topics: Committee Purpose, Introduction to Rates	Meeting #2 Date: Wednesday, June 12, 2024 Time: 12:00 pm to 2:00 pm Location: Marmalade Library and Microsoft Teams Topics: Financial Forecasts, Trade-Offs to Consider, Principles and Values
Meeting #3 Date: Wednesday, June 25, 2024 Time: 12:00 pm to 2:00 pm Location: Marmalade Library and Microsoft Teams Topics: Existing Rate Structures, Key Elements for New Rate Structure, Equity in the Salt Lake Area	Meeting #4 Date: Wednesday, July 10, 2024 Time: 12:00 pm to 2:00 pm Location: Microsoft Teams Topics: Review of Current Rate Structures, Other Types of Rate Structures
Meeting #5 Date: Wednesday, August 7, 2024 Time: 12:00 pm to 2:00 pm Location: Marmalade Library and Microsoft Teams Topics: Water Cost-of-Service Study Results, Preliminary Rate Structure Suggestions	Meeting #6 Date: Wednesday, August 21, 2024 Time: 12:00 pm to 2:00 pm Location: Marmalade Library and Microsoft Teams Topics: Wastewater and Stormwater Cost-of-Service Study Results, Wastewater Rate Structure Alternatives, Evaluating Outcomes, Affordability Metrics
Meeting #7 Date: Wednesday, September 18, 2024 Time: 12:00 pm to 2:00 pm Location: Microsoft Teams Topics: Recommended Rate Designs, Affordability Metrics, Regional Bill Comparisons	Tour: New Water Reclamation Facility Date: Friday, August 2, 2024 Time: 8:00 am to 11:00 am Location: Water Reclamation Facility, 1365 West 1300 North, Salt Lake City
Tour: Parley's Water Treatment Plant Date: Wednesday, August 14, 2024 Time: 9:00 am to 11:00 am Location: Parley's Water Treatment Plant	

Feedback from RAC Members

From the first workshop, the RAC members provided their input on those things in the utility rates they hoped would be addressed in the rate study. That discussion included the following considerations:

- What will an increase in rates do to small businesses?
- What will an increase in rates do to retired/elderly individuals or others who live on fixed incomes?
- Unexpected costs versus costs that can't be anticipated.

- Overall equity assuming normal use.
- Volumetric and lower quintile fees.
- Subsidize lower-tier indoor cost with higher-volume outdoor costs.
- Increasing rates has a greater effect on lower income households than it does on higher income households.
- How you message the rates, and the costs are extremely important for people's behaviors.
- Has income determined rates?
- Having fees on each separate line item adds up and can have a greater impact than we may realize.

Feedback regarding the current rate structures for Stormwater, Wastewater, and Water are listed below.

Stormwater Rate Structure

Likes	Dislikes
• The idea of incentivizing developers to reduce their impact to the system is great, but we should consider how it is structured.	• There are some residential customers that don't have curb and gutter – we should match level of service to their charge – can we better balance impervious area with outdoor water use? This is an equity consideration.

Additional Thoughts

- What can we do to link this with conservation efforts to help educate what people can be doing to better conserve
- Consider including more developed alternatives on the credit system

Wastewater Rate Structure

Likes

- Based on good rationale and industry standards.
- Defensible.
- Generally easily understood by the public .
- Seems more equitable – in terms of who is paying and who benefits than a structured and monitored approach would be.
- We can design it to meet affordability goals, because there isn't a base rate.

Dislikes

- Current BOD classes and limits can make it difficult to conserve water for highest sewer classes. Water conservation is disincentivized to get down to a lower class (encourages using a lot of water to dilute byproduct to get to a lower BOD per CCF).
- Consider if a base rate would be more equitable. Would this help with maintenance and help customers when they experience leaks?
- Lack of information about why sewer class may have been changed and of testing results – data and calculations for what sewer class a customer is in is not shared with the customer.
- Doesn't capture flows well.
- Average winter consumption doesn't infrastructure leaks.

Additional Concerns, Considerations, Ideas

- Are there equity considerations between the quantity-quality approach and the surcharge application?
- Misapplication can be helped/decreased through factors outside of the actual rate established, such as better coordination between different city departments.
- How close are we to cost of service currently?
- Charging for phosphorous and ammonia.
- Cost will go up as regulations tighten.
- Is average winter consumption the right estimate?
- Potential for less reliable revenue.

Water Rate Structure

Likes

- Like the inclining block structure.
- The fourth tier is charged for excessive use.
- Considers beneficial uses.
- Supports Conservation.
- Makes sense for county users to pay more if they are not paying with their property tax.
- Like that non-discretionary uses dictate the first block – helps to make sure that the water necessary for life is affordable.
- Current structure is defensible – it is derived from cost-of-service analysis and data and it is not arbitrary.
- Outdoor irrigation structure considers beneficial uses – specifically common/city owned green spaces and urban agriculture.

Dislikes

- Outdoor water use is subsidized (residential and commercial).
- Doesn't serve the utilities purpose of revenue reliability, especially considering how much debt service public utilities has and how much is being deferred.
- This structure is working and encouraging businesses (or other customers in the higher blocks) to use less water, which is good, but that is further contributing to the revenue problem.
- Can it be made easier for urban farmers to understand and participate?

Additional Concerns, Considerations, Ideas

- State requirements (HB 121) will decrease water use, which will decrease revenue. How do we balance conservation need with revenue needs?
- The current rate structure may force lower tires to start needing to par more, which may raise issues or concerns with affordability.
- Outdoor water use is not solely irrigation water, this is also places like splash pads or other cooling centers. Areas such as these will become more and more needed as summers get hotter, and these may be some of the only places that kids can safely recreate outdoors during the hotter times of the year.
- Are there tiers that can be created or considered for indoor water use?
- Can we look at winter use tiering?
- Consider what behavior you'd like to see from accounts like University of Utah as they grow and change.
- Can we look at having below cost outdoor water use?

  How do we review/clean up service classes? How does SLCDPU want new development metered?

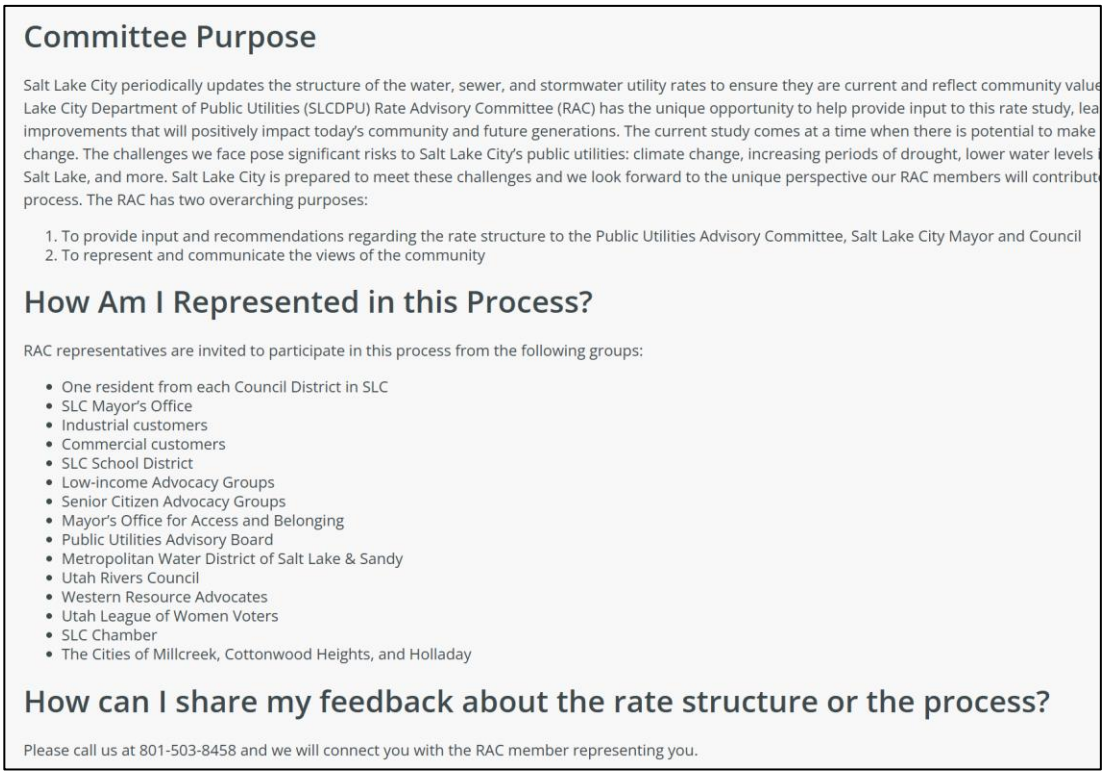
RAC members were encouraged to reach out anytime to ask questions or provide feedback – when that happened, we published all questions and answers for the benefit of all members on a shared document. These questions and the answers that the team prepared are shown at the end of this section.

Public Engagement

RAC members were asked to not just represent their own personal interests and opinions on the Committee. They were also asked to reach out to others in the group they represented (i.e. residents, commercial users, developers, low-income groups, etc.) and ask what concerns, questions or issues they have and then bring those to the broader committee in our meetings.

Additionally, information about the RAC was posted on the SLCDPU website – where members of the public could reach out and connect with the person representing them in the process and offer their feedback directly.

Figure 20: RAC Information from SLCDPU Website



Committee Purpose

Salt Lake City periodically updates the structure of the water, sewer, and stormwater utility rates to ensure they are current and reflect community value
Lake City Department of Public Utilities (SLCDPU) Rate Advisory Committee (RAC) has the unique opportunity to help provide input to this rate study, lea
improvements that will positively impact today's community and future generations. The current study comes at a time when there is potential to make
change. The challenges we face pose significant risks to Salt Lake City's public utilities: climate change, increasing periods of drought, lower water levels
Salt Lake, and more. Salt Lake City is prepared to meet these challenges and we look forward to the unique perspective our RAC members will contribut
process. The RAC has two overarching purposes:

1. To provide input and recommendations regarding the rate structure to the Public Utilities Advisory Committee, Salt Lake City Mayor and Council
2. To represent and communicate the views of the community

How Am I Represented in this Process?

RAC representatives are invited to participate in this process from the following groups:

- One resident from each Council District in SLC
- SLC Mayor's Office
- Industrial customers
- Commercial customers
- SLC School District
- Low-income Advocacy Groups
- Senior Citizen Advocacy Groups
- Mayor's Office for Access and Belonging
- Public Utilities Advisory Board
- Metropolitan Water District of Salt Lake & Sandy
- Utah Rivers Council
- Western Resource Advocates
- Utah League of Women Voters
- SLC Chamber
- The Cities of Millcreek, Cottonwood Heights, and Holladay

How can I share my feedback about the rate structure or the process?

Please call us at 801-503-8458 and we will connect you with the RAC member representing you.

RAC members were encouraged to continue to participate with the Rate Study process even after the conclusion of the above-mentioned meetings. RAC members were encouraged to continue to follow the process through the approval and public notification process, which includes a draft report of the rate study prepared submitted to the Mayor and City Council, hosting a work session with the City Council, and will henge on the budget process and fee schedule for the city.

Section V. RATE DESIGN

The purpose of a rate design is to convey the findings from the cost-of-service study to individual customers. The cost-of-service findings help determine the total revenue the City should recover from each class of service. When rates produce revenues equal to each class's costs, it is said to have achieved *interclass equity*, where each class pays for its share of costs without subsidizing the costs of other classes. Rate designs should also aspire to achieve *intraclass equity*, where individual class members pay for their proportionate share of costs without subsidizing other members within the same class. In addition, rate designs may help achieve other objectives, a typical listing of which is included in Table 22.

Achieving all objectives outlined below to their fullest extent is mostly unattainable. The objectives tend to conflict with one another. For instance, attaining revenue sufficiency may necessarily come with challenges to ideals around affordability; making the rate design simple to understand often means sacrificing some level of fairness and equity, and so on. Still, adhering to the analytical findings as outlined in Sections 2 and 3 of this Report serves to meet several of the objectives in Table 22 because doing so will address objectives such as revenue sufficiency, interclass equity, cost allocation, and certain aspects of economic efficiency. Moreover, those findings help provide a basis for judging the tradeoffs involved in prioritizing one set of objectives over others.

Table 22: Typical Rate Design Objectives

Rate Design Objective	Typical Definition
Revenue Sufficiency	The rate design recovers the necessary revenues.
Fairness and Equity	The rate design achieves interclass and intraclass equity.
Economic Efficiency	The rate design promotes the efficient use of resources and water conservation.
Sustainability and Predictability	The rate design allows customers to budget and plan for their utility expenses.
Clarity	The rate design is transparent and easily understood by customers.
Cost Allocation	The rate design allocates costs to an individual level based on cost causation principles.
Affordability	Basic utility service should be reasonably affordable for those lacking the ability to pay.

As we will see later in this Section, the recommended rates do not satisfy every objective. However, the recommendations do make important improvements in key areas and minimize tradeoffs with other objectives to the extent possible.

WATER RATE DESIGN

The City's current water rate structure is an *inclining block* design for residential and non-residential customers during summer periods, where the volumetric rate increases with the customer's water usage. The two summertime rates differ in that the residential rates increase at the same usage thresholds for all customers in the class, whereas the non-residential rates increase proportionally to each customer's AWC. The rates become *uniform* in winter, with a single volumetric rate applicable to all water usage. All customers are also charged a fixed monthly charge based on the meter size.

Inclining block rates are ubiquitous in western water utilities. Like others, the City chose the current rate structures in part to promote water conservation. The working concept with inclining block designs is that they increase the customer's *marginal cost* of water. In doing so, the structure works on the principle of *price elasticity of demand,* where expected demand decreases as the price (i.e., the rate) increases. Whether customers purchasing water services react to marginal price signals is a topic debated among economists. In a 1985 paper published in *The Review of Economics and Statistics,* Dr. Jeong-Shik Shin concluded that utility service customers could not reasonably react to marginal prices for lack of necessary information about their instantaneous usage and that their elasticity responses were, therefore, based more on the *average cost* of their bill rather than the marginal price signals.[8] Marginal cost pricing is further complicated with water providers because the short-run marginal cost roughly equals the (relatively small) variable production costs. Water utilities are natural monopolies that, by definition, operate at very high fixed costs, making multiple providers within the same market economically infeasible. Marginal cost pricing for a water utility would mean pricing below average cost, ultimately leading to insolvency. This is why utility regulatory commissions regulate rates based on average-cost pricing.

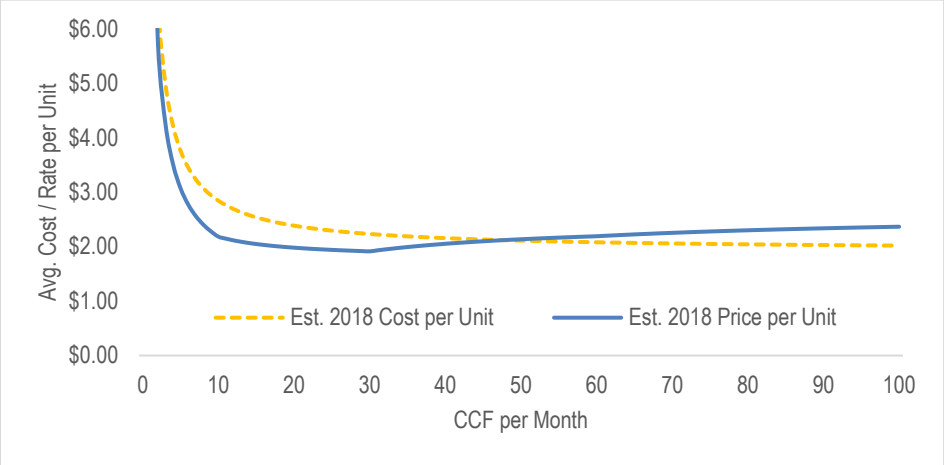
One of the key challenges in the current water rate design was the sudden decline in revenue the City experienced during the past three years. Since 2021, the summertime water demand declined by nearly 20 percent from previous norms. The current water rate design exacerbated the revenue losses due to its high reliance on revenue from high summertime usage, a characteristic we define as *rate tilt.* The current rate structure tilts because the effective price per unit is below the average cost per unit at the lower usage levels. Therefore, the City had to depend on high usage levels in the summertime to compensate for the built-in subsidy (of lower usage customers) and recover sufficient revenue to meet its annual costs. As summertime demand declined, so did the ability to make up for those losses.

Figure 21 illustrates the rate tilt calculated from the 2018 rate study. The cost-of-service analysis defines the average cost per unit, shown in the figure as the dashed gold line. The adopted rate structure defines the price paid per unit, shown in the solid blue line. The City's recent revenue losses from the decline in summertime demand can be traced to the tilt. The figure shows that all

[8] Shin, J.-S. (1985). Perception of Price When Price Information is Costly: Evidence from Residential Electricity Demand. *The Review of Economics and Statistics, 67*(4), 591–598.

usage below nearly 45 CCF per month (approximately 33,600 gallons) was priced below cost. The structure is only sustainable assuming a sizeable number of customers with usage above 45 CCF where prices exceed cost. Since 2021, the amount of water sold in the summertime has declined substantially, meaning fewer high-volume customers supported the subsidies.

Figure 21: City's Residential Rate Tilt from the Previous Rate Study



In the years following the 2018 rate study, the City made progress in minimizing the degree of tilt in the rate structure, but it still exists today. Reducing tilt to ensure more reliable revenue recovery was a major consideration for the proposed water rates.

Water Rate Design Objectives

Eliminating rate tilt was a major consideration for the water rate design, but not the only one. Members of the RAC and the City's water utility leadership shared the concern for revenue sufficiency and the challenges from known rate tilt but were also wary of reducing what they viewed as conservation incentives. Many of the commercial customers on the RAC were in favor of simplifying the non-residential rate because the current design was perceived as unfair in cases where the customer was using water not for discretionary reasons for which conservation efforts had been targeted, such as outdoor irrigation, but rather for legitimate business needs. Finally, there was strong consensus from both the RAC and the City that the rate structure should do more to promote affordability for basic services.

Based on the inputs received from the RAC and City leadership, together with our understanding of the current difficulties with the rate structure and the cost-of-service findings, we developed separate rate structures for the residential and non-residential classes. For the residential class, we recommended a structure that would retain the inclining block design while correcting for rate tilt. To promote affordability, we restructured the existing rate blocks, creating a 0-5 CCF on the front end of the structure for basic indoor usage (e.g., cooking, bathing, etc.) and reducing the top tier threshold from 60 CCF to 40 CCF.

We recommended a simplified rate structure for the non-residential rates that eliminates the inclining block based on AWC and replaces it with a seasonal uniform rate. The new rates feature a single volumetric rate that will apply in the winter and another higher rate that will apply in the summer.

The non-residential design addresses concerns about fairness and simplicity while preserving and enhancing revenue sufficiency. At the same time, the seasonal rates retain a measure of conservation incentives; the higher rates in the summer send a consistent price signal to non-residential customers to curb demand while the water system is operating at peak production for the year. The price signal applies to discretionary and nondiscretionary demand without preference, encouraging water efficiency in both cases without having the appearance of penalizing one over the other.

Proposed Water Rates

Residential Water Rates

The proposed water rates retain the tiered structure of the current rate design[9]. However, there are a few important changes of note. First, the proposed tiered structure would remain in effect year-round; the uniform wintertime rate has been eliminated. Second, the volumes available in each block of usage have been decreased. Finally, the proposal eliminates the RSF from the monthly service charges. The proposed rates also eliminate the rate tilt from the previous structure. Residential customers include single-family, duplex, and triplex dwelling units. For duplex, and triplex customers, the allowances of water in each tier are multiplied by the number of dwelling units. For example, a duplex residential customer's monthly service charge for a 1" meter would be $28.57, and the allowance in Block 1 would be 10 CCF (2 x 5CCF); Block 2 would include 20 CCF (2 x 10 CCF), etc.

The proposed rates also feature a different block structure. Whereas the old structure had a 0-10 CCF volume block in Block 1, the proposed structure splits the volumes into two blocks; Block 1 is now 0-5 CCF, and Block 2 is 6-10 CCF. Block 3 will include a volume allotment of 11 – 40 CCF. Block 4 is reserved for all usage above 40 CCF. The main result is to shift block thresholds down so the City can offer low-volume users the lowest rates without requiring subsidization from higher-volume users. The proposed residential rates should improve affordability outcomes for low-volume users. We estimate that all customers using 5 CCF or less, which accounts for nearly half of all residential water bills, will see a decrease in their bills compared to the current rate structure. Table 23 summarizes the proposed residential rates compared to the current ones.

[9] In comparing rates in this Report, we have estimated the current rates for FY2026 starting July 1, 2025, which encompasses the City's proposed Rate Stabilization Fee.

Table 23: Proposed Inside-City Residential Water Rates for FY2026

Monthly Service Charges			Volumetric Rates			
Meter	Current	Proposed	Current Tiers	Current $/CCF	Proposed Tiers	Proposed $/CCF
3/4"	$25.65	$22.48	Block 1 (0-10CCF)	$2.24	Block 1 (0-5CCF)	$2.84
1"	$60.79	$28.57	Block 2 (11-30CCF)	$3.05	Block 2 (6-10CCF)	$3.49
1 ½"	$200.77	$43.66	Block 3 (31-60CCF)	$4.23	Block 3 (11-40CCF)	$4.46
2"	$214.78	$61.85	Block 4 (> 60CCF)	$4.52	Block 4 (> 40CCF)	$4.92
			Winter (All CCF)	$2.24	Winter (All CCF)	n/a

Non-Residential and Multi-Family Water Rates

The proposed non-residential rates aim to simplify the rate structure from its current tiered structure based on each customer's AWC levels to a uniform seasonal rate. The current structure, similar to the residential rate structure, includes the same challenge of rate tilting; the proposed structure eliminates it. Non-residential customers include commercial, industrial, and institutional customers. Larger multi-family properties are now classified separately as a new Multi-Family class due to their unique usage characteristics and slightly different volumetric rates.

Table ES- 17: Proposed Inside-City Non-Residential and Multi-Family Water Rates for FY2026

Monthly Service Charges			Volumetric Rates			
Meter	Current	Proposed	Current Tiers (as % of AWC)	Current $/CCF	Proposed Tiers	Proposed $/CCF
3/4"	$25.65	$22.48	Block 1 (0-100%)	$2.43	***Non-Residential***	
1"	$60.79	$28.57	Block 2 (100-300%)	$3.34	Summer (All CCF)	$3.53
1 ½"	$200.77	$43.66	Block 3 (300-600%)	$4.64	Winter (All CCF)	$2.18
2"	$214.78	$61.85	Block 4 (> 600%)	$4.93	***Multi-Family***	
3"	$604.67	$110.40	Winter (All CCF)	$2.43	Summer (All CCF)	$3.35
4"	$646.62	$164.95			Winter (All CCF)	$2.18

WASTEWATER RATE DESIGN

The current wastewater rates are of a variety often referred to as a *quantity-quality* approach. Under that approach, the City assigns each customer a quantity of wastewater flow based on their average wintertime water usage. The City bills customers monthly for the flows at a common rate per hundred cubic feet (CCF). In addition, each customer is assigned to various levels of water quality. The City has six predefined water quality levels based on organic and solids concentrations in the wastewater flows.[10][11] Customers discharging more highly concentrated wastes are placed in higher classifications and pay a higher rate to account for the cost of treating the additional pollutants. In the City's case, customers may have a different classification for organic and solids based on their expected effluent strength. In addition to the six predefined classifications (see Table 24), the City has a seventh class where customers' flows are routinely monitored; they are billed based on their actual flows and waste discharges rather than the estimated levels inherent in classes 1-6[12].

Table 24: 2024 Sewer Rates for Class 1-6 Customers

Sewer Classification	Concentration Levels (mg/l)	Flow Rate per CCF	BOD Rate per CCF	TSS Rate per CCF
Class 1	< 300	$4.22	$1.49	$1.08
Class 2	300-600	$4.22	$2.42	$2.17
Class 3	600-900	$4.22	$3.98	$3.70
Class 4	900-1200	$4.22	$5.70	$5.04
Class 5	1200-1500	$4.22	$7.14	$6.56
Class 6	1500-1800	$4.22	$8.81	$7.94

The City's charge components are additive, meaning customers pay the flow rate, BOD rate, and TSS rate in determining the total bill. For example, a customer in Sewer Class 3 with 10 CCF of average wintertime flow would pay:

[Flow:10 CCF x $4.22] + [BOD: 10 CCF x $3.98] + [TSS: 10 CCF x $3.70] = $119.00

The quantity-quality method offers certain advantages from a rate design perspective. Notably, it offers the perception of a high level of fairness and equitability where those customers with more challenging waste streams pay proportionately more to account for increased use of treatment inputs.

[10] Organic concentrations are measured in milligrams per liter (mg/l) for biochemical oxygen demand, or BOD for short. Higher concentrations indicate greater levels of pollutants.
[11] Solids concentrations are measured in milligrams per liter (mg/l) for total suspended solids, or TSS for short. Higher concentrations indicate great levels of pollutants.
[12] The existing structure also includes a 7th classification for monitored customers charged per LB of TSS and BOD; the current rates are shown later in this section at Table 26.

In reality, the approach can be difficult to administer in the manner intended. The approach depends on having a reasonably accurate understanding of each customer's waste concentrations, which implies a regular sampling and testing process. Such tests are most often labor and time-intensive, so many utilities who use such an approach tend to depend on published resources, many of which are now much outdated, or rules of thumb to characterize concentration levels. Often, the intended fairness and equity with such a rate structure can become difficult to maintain.

The other typical approach used in the wastewater industry is a *surcharge approach,* which the City uses for its Class 7 customers. Under the surcharge approach, select customers are routinely monitored for flows and waste concentrations and are billed based on the results of such monitoring. Because of the costs involved, many wastewater providers limit the program to customers whose wastewater is likely to have a material impact on the treatment system. Customers with very high waste concentrations coupled with relatively large flow rates fall into a typical category of surcharge customers – those whom wastewater providers would monitor routinely.

The City has additional requirements for certain other customers posing higher risks to the wastewater system. Like other wastewater utility providers, the City must manage and monitor certain industrial or commercial customers through an industrial pretreatment program (IPP). Other customers, such as some restaurants, contribute substantial food, oils, and grease (FOG) into the wastewater system and receive additional monitoring in addition to requirements for on-site mitigation or removal facilities.

Wastewater Rate Design Objectives

Although we examined maintaining the current wastewater rate structure, the challenges in doing so proved very difficult. Under the current structure, unmonitored customers may have as many as 36 combinations of applicable rates, plus a rate for their wastewater flow, for a total of 37 potential configurations. The new rate structure must account for two new pollutant levels in the customers' wastewater flows: ammonia (NH3) and phosphorus (TP). With the addition of NH3 and TP, the possible combinations of user rates would jump to 1,297. To the extent that the City may have found it challenging to assign customers to the correct sewer classifications consistent with their individual waste concentrations, a system with over a thousand new classifications would introduce orders of magnitude greater difficulty.

During our meetings with the RAC, it also became clear that non-residential customers preferred a simpler rate structure. Some said the structure's complexity had made it difficult for them to budget their wastewater costs reasonably. Others felt they had not been assigned to the correct classification and were, therefore, charged higher rates.

The City's wastewater utility leadership also expressed interest in simplifying the rate structure while retaining as much of the fairness and equitability promoted by the current structure as possible. One of the key challenges for the City over the previous few years had been a decline in wastewater revenue. Reduced complexity, they reasoned, may help restore revenue streams, especially if coupled with a reset in the cost basis for the rates.

Given the input from the RAC and City leadership, together with the understanding of the balance of objectives as shown above in Table 22, we recommended that the City move from a largely quantity-quality approach to rate design to a surcharge approach. Under the surcharge approach, we would

propose a single class-based rate for most customers in a given class but would retain the high-strength surcharges for customers discharging unusually high concentrations of pollutants into the wastewater system. The design would also introduce a fixed monthly charge for all customers. The simplified rate structure would reduce the possible rate combinations from over a thousand to just one fixed monthly charge and one volumetric charge for all but a relative few. However, by retaining the high-strength surcharges, the City would be able to maintain a measure of fairness and equity by identifying and monitoring those customers whose high-strength discharges pose a higher burden or higher cost within the wastewater conveyance and treatment system.

Proposed Wastewater Rates

The proposed wastewater rates are shown below in Table 25. Apart from simplifying the sewer classes, the proposed rates include additional features worthy of note. First, the monthly fixed charges of $3.70 will be assessed per *equivalent dwelling unit (EDU).* For single-family, duplex, and triplex properties in the proposed residential class, the dwelling unit matches the type of property: one for single-family, two for duplex, and three for triplex. Multi-family accounts would pay $3.70 for each dwelling unit as well. For non-residential customers, one dwelling unit equals four CCF of wastewater flow; a commercial customer with 12 CCF of flow would be charged for three EDUs. The City's current and future RSF charges are eliminated.

Second, we recommend measuring billed sewer flows differently among the different classes. AWC is an acceptable and reasonably accurate way to measure sewer flow in the residential class. However, we recommend decreasing the months used to determine average winter water usage from six months to three, using only the months of December – February. For multi-family and non-residential classes, we recommend using 70% of the total monthly water usage; the 70% coefficient is a standardized allowance for water not returned to the City's sewers (e.g., consumptive water usage related to such things as irrigation, cooking, manufacturing processes, etc.).

Lastly, the volumetric rate for residential and multi-family sewer flows reflects the same typical domestic wastewater strength levels, resulting in identical rates. Non-residential volumetric rates are higher to account for elevated wastewater strength typical in the class, which includes all commercial, industrial, and institutional customers.

Table 25: Proposed Wastewater Rates for FY2026

Monthly Service Charges		Volumetric Rates			
Current Charges		Current Volumetric Rates ($/CCF)			
Meter Sz.	Monthly Charge	Classes	Flow	BOD	TSS
5/8"	$17.66	SC 1	$4.63	$1.64	$1.18
1"	$51.89	SC 2	$4.63	$2.66	$2.38
2"	$138.19	SC 3	$4.63	$4.37	$4.06
3"	$704.02	SC 4	$4.63	$6.26	$5.53
4"	$704.02	SC 5	$4.63	$7.84	$7.20
6"	$704.02	SC 6	$4.63	$9.66	$8.71

Proposed Charges		Proposed Volumetric Rates ($/CCF)	
Class	Monthly Charge*	Residential Per CCF Avg. Winter Consumption	$8.56
Residential	$3.70	Multi-Family per CCF 70% of Metered Water Use	$8.56
Commercial	$3.70	Non-Residential per CCF 70% of Metered Water Use	$9.54

* per equivalent dwelling unit

Non-residential customers discharging unusually high concentrations of waste will be identified and routinely monitored by the City for their actual wastewater flows and waste contributions. These so-called "surcharge customers" will pay the normal non-residential rate from Table 25, plus additional charges for waste concentrations exceeding the non-residential class's average level. Table 26 summarizes the proposed surcharge rates.

Table 26: Proposed High-Strength Surcharges

Current Surcharges		Proposed Surcharges	
Pollutant	**$ / LB.**	**Pollutant**	**$ / LB.**
BOD	$1.05	BOD (>360 mg/l)	$0.53
TSS	$0.63	TSS (> 290 mg/l)	$0.55
		NH3 (> 32 mg/l)	$2.88
		TP (> 7 mg/l)	$14.52

STORMWATER RATE DESIGN

The City's current stormwater rate structure is charged based on *impervious surface area*, resulting in a rate expressed as a dollar amount per *equivalent service unit* (ESU). An ESU represents the average impervious area for a single-family residential parcel within the service area. The City has defined one ESU to be equal to 2,500 impervious square feet (ISF). Impervious surface area is widely accepted as an appropriate measure of a property's contribution of runoff, providing a rational nexus to service received from a stormwater program.

The City's existing 2024 stormwater rate per ESU is $8.33.

The City has a slightly weighted ESU application for residential properties with four or fewer units.

- Single-family and Duplex (up to 0.25-acre lot): 1 ESU per month
- Single-family and Duplex (greater than 0.25 acres): 1.4 ESUs per month
- Triplex and Fourplex: 2 ESUs per month

Other developed properties are billed based on the total impervious area converted to ESUs. The monthly bill for these properties is calculated as *ESUs x Rate per ESU.* For example, a commercial property with 25,000 impervious square feet or 10 ESUs would pay:

25,000 ISF / 2,500 ISF = 10 ESUs x $8.33 = $83.30 per month

Stormwater On Parcel Mitigation Credit

The City currently offers a stormwater credit program – essentially a program that provides customers with a reduced rate per ESU in exchange for installing and maintaining on-site stormwater mitigation facilities. The credit values vary by parcel, as determined by City staff at the time of connection, with a maximum credit value of 75 percent reduction to the rate per ESU. The average existing credit per parcel is a 61 percent reduction to the rate per ESU. Currently, over half of the non-residential impervious area in the City is receiving a credit, reducing the overall billable ESUs in the system by 28 percent.

The credit is applied directly to the monthly rate for each individual credited parcel. For example, a commercial property with 25,000 impervious square feet and a 60 percent credit would pay:

25,000 ISF / 2,500 ISF = 10 ESUs x $8.33 x (1 - 60% credit) = $33.32 per month

However, the stormwater cost-of-service functionalization results show that only 24 percent of system costs would be eliminated if all parcels had comprehensive on-site facilities to mitigate stormwater. Therefore, we recommend a maximum credit for on-site mitigation of a 25 percent reduction in the rate.

There are a small number of properties in the City that have their own NPDES permit, and therefore, the City does not perform any inspections or monitoring of these properties or facilities. The parcels,

as determined by the City, are eligible for the additional 10 percent credit reflecting the Base - Inspection/Monitoring function.

Stormwater Rate Design Objectives

Several rate structures were discussed with City staff, but ultimately it was determined that the most appropriate structure for the City is an ESU-based rate similar to the existing rates. The key recommended structure change is the above adjustment to rate credits for onsite mitigation.

As with water and wastewater, City staff expressed a desire for a structure that focused on revenue predictability and cost-of-service-based equity. Additionally, the City's stormwater utility leadership expressed interest in increasing affordability for residential customers while retaining as much equity and fairness as possible. Recognizing that the overall revenue requirement need is increasing faster than inflation for the stormwater utility, we are able to mitigate that impact on typical residential customers through rate design.

One concern raised by City leadership was the potentially large rate impact on non-residential parcels currently receiving credits larger than 25 percent. The RAC also raised the concern that perhaps these properties made investments in onsite facilities because of this rate credit offering. To mitigate the impact of the change in policy and give property owners time to adjust, the proposed rates include a three-year phase-in to the new maximum credit amount. Each credited parcel would move toward the new maximum credit by one-third per year. For example, if a parcel currently receives a 55 percent credit, it will receive a 45 percent credit in FY2026, a 35 percent credit in FY2027, and a 25 percent credit in FY2028. Table 27 below shows the adjusted system total ESUs with the three-year phase-in of the new maximum credit amount.

Table 27: Billable ESUs with Three-Year Phase-In

Rate Class	2026 Existing ESUs	2026 Adj. ESUs	2027 Adj. ESUs	2028 Adj. ESUs
Residential ESUs	**45,601**	**45,601**	**45,692**	**45,784**
Non-Residential	175,603	175,603	175,603	175,603
(Less) Credits	(61,826)	(49,986)	(38,146)	(26,306)
Net Non-Residential ESUs	**113,777**	**125,618**	**137,458**	**149,298**
Total ESUs	**159,379**	**171,219**	**183,150**	**195,082**
Total Costs	**$17.97M**	**$17.97M**	**$19.23M**	**$20.65M**
$ / ESU (per yr.)	**$112.72**	**$104.93**	**$105.17**	**$105.86**

Proposed Stormwater Rates

The proposed stormwater rates are in Table 28. With the three-year phase-in, the reduction in credits offered each year roughly balances out the seven percent per year user rate revenue requirement need. Therefore, the resulting rates increase in fiscal year 2026 but remain relatively consistent throughout the forecast.

Table 28: Proposed Stormwater Rates

Class	Current FY2025 Monthly Fee	Proposed FY2026 Monthly Fee	Proposed FY2027 Monthly Fee	Proposed FY2028 Monthly Fee
Single-Family & Duplex (< 0.25 acres)	$8.33	$8.75	$8.75	$8.85
Single Family & Duplex (>0.25 acres)	$11.63	$12.25	$12.25	$12.39
Triplex & Fourplex	$16.64	$17.50	$17.50	$17.70
All Other (per 2,500 SF Impervious Area)	$8.33	$8.75	$8.75	$8.85
Max Credit for On-site Mitigation	*70%*	*55%*	*40%*	*25%*
Add. Credit for NPDES Permit	*5%*	*7%*	*8%*	*10%*

By phasing down the existing rate credits, the rate for non-credited customers (including all residential) remains more affordable throughout the forecast period. This is the result of decreasing the credit offered to the cost-of-service-based discount, reducing the rate burden on all other customers.

For implementation of the proposed rates above, it is essential that the City billing system can effectively adjust each parcel's credit on an annual basis. If the rate credits are not adjusted toward the new maximum each year, the utility will not collect enough revenue to meet the annual requirement as outlined in Section II of this Report.

Section VI. Customer Assistance

One of the largest issues among municipal utility providers in the United States right now is the affordability of services. Due to many factors beyond any utility's control, income levels have become increasingly inequitable by empirical measurements. Low-income households are, in many areas of the country, unable to afford the typical water, wastewater, and stormwater bill.

In Salt Lake City, the financial burden from utility bills is relatively low compared to some of the most economically challenged areas in the nation. Nevertheless, every community has a certain population of economically vulnerable ratepayers, and Salt Lake City is no exception.

This section of the Report discusses various considerations the City may wish to evaluate when it comes to providing financial assistance to customers in need based on current industry practices.

Affordability Measurements

While there are different ways to measure the affordability of utility bills for various populations and income levels, there are two that have become more common than others: the *residential indicator (RI)* used by USEPA in its financial capability assessments, and the *hours minimum wage (HM)* ratio that measures how many hours one would have to work at the minimum wage to pay an average residential utility bill.

The RI is the quotient from dividing the average residential utility bill by the median household income (MHI). More recently, USEPA has also measured the indicator using the lowest quintile of household income (LQI) to gain an enhanced understanding of the effect of utility bills on the most vulnerable members of a community. In both cases, USEPA defines utility bills as being one of a "low," "medium," or "high" burden depending on the outcome of the calculation. When the bills are less than one percent of household income, the financial burden is "low." When bills are between one and two percent, the financial burden is "medium," and when the bills exceed two percent, the burden is defined as "high." A combined utility bill higher than four percent would be considered a "high" burden as well.

We prepared the residential indicator calculations for each utility, as shown in Table 29. In every instance, we found the proposed FY2026 rates to present a "low" burden based on MHI and no more than a "medium" burden based on LQI. The combined bill is a "low" burden at MHI and "medium" burden at LQI as well.

Table 29: Residential Indicator for Proposed FY2026 Rates

Utility	Bill as % of MHI	Bill as % of LQI
Water	0.50%	1.10%
Wastewater	0.50%	1.20%
Stormwater	0.10%	0.30%
Combined	1.10%	2.60%

We also calculated the HM indicator based on the same average residential bills and Salt Lake City's aspirational minimum wage for FY2026 of $16.00 per hour[13]. Opinions vary about how many labor hours constitute an undue financial burden. However, research by Duke University indicates that hardship generally occurs when 1.0 to 1.5 days of labor are required to pay for water related utility bills. We estimate that the total number of hours for a typical Salt Lake City resident would have to work at a minimum wage to pay an average monthly utility bill would be approximately five hours for FY2026 (0.62 days), at the proposed rates. Table 30 summarizes the findings.

Table 30: Labor Hours Required at Min. Wage to Pay Avg. Residential Utility Bills

Utility	Avg. Monthly Bill	Hours at Min. Wage	Days at Min. Wage
Water	$33.85	2.1	0.26
Wastewater	$37.94	2.4	0.30
Stormwater	$8.75	0.5	0.06
Combined	$80.53	5.0	0.62

[13] Current minimum wage is $15.00/hr. per SLC Municipal Code 15.72.020. The aspirational wage of $16.00/hr. from FY2022 budget proposal.

Types of Assistance Programs

Utilities across the country deploy various approaches aimed at addressing financial need when it comes to payment of utility bills. Although there are often multiple sources of assistance sponsored by charitable organizations, non-governmental agencies, and unaffiliated governments, the types of programs discussed in this Report are those typically implemented and funded by utility organizations themselves, specifically for the benefit of ratepayers they serve. Those programs fall into one or more general categories:

- ***Bill Discounts*** – bill discounts are among the most common assistance programs. They generally provide a simple discount on a qualified customer's bill, either as a fixed amount or as a percentage of the total bill.

- ***Flexible Payment Terms*** – also common, flexible payment terms generally allow qualified customers additional time to pay their bills. In some cases, these types of programs also provide for "budget billing" where a customer's annual bills are averaged so they pay the same amount per month, thus avoiding the peak costs many customers experience in summer months.

- ***Rate Structures*** – these types of programs tend to offer a different, lower rate structure for qualified customers. In some examples, utilities have implemented income-based rate structures.

- ***Water Efficiency Enhancements-*** water efficiency programs are very common in the western United States as a means to produce water conservation. However, some communities further target similar enhancements toward low-income customers. Examples include rebates for replacing washing machines, irrigation systems, toilets, and other fixtures so customers use less water and therefore have lower bills.

- ***Temporary Assistance*** – temporary assistance generally involves bill forgiveness of one variety or another. Utilities using this type of program usually forgive all or a portion of customer's bill. The forgiveness usually involves customers needing to apply for it on a case-by-case basis.

Qualification and Participation

Most utilities look to target their assistance programs to customers who lack the ability to pay their bills. Usually, the ability to pay is characterized by some measure of income and the customer needs to provide some kind of income verification to demonstrate need. The verification requirements can often be an impediment in achieving maximum participation in assistance programs. In general, the greater the administrative burdens on the customer, the less likely they are to participate.

To address the issue of income qualification, some utilities rely on third parties who provide similar assistance and are already verifying income. For example, the federal Low Income Home Energy Assistance Program (LIHEAP) provides financial assistance to qualified customers to pay for their energy-related bills. To avoid conducting their own verification, some water and wastewater utilities will automatically enroll customers who can demonstrate they receive LIHEAP benefits.

The other limiting factor in maximizing assistance program benefits is the participation level among qualified customers. Where qualification describes the standards for program eligibility, participation describes the willingness of qualified customers to enroll in the assistance program. A utility may have thousands of customers whose income qualifies them for a program, but only a fraction may actually participate. Participation levels vary across the country. However, a participation rate greater than 30 percent of qualified customers is thought to be exceptional. Participation rates higher than that are relatively rare.

Funding Levels and Sources

One of the questions utilities have to answer when considering implementing an assistance program is "how much" relief to provide. A reasonable objective would be to provide enough assistance to reduce bills to a level that represents a low or medium financial burden. For example, if the RI for the LQI customers were greater than two percent, the utility's objective may be to reduce the bills for qualified customers enough to bring the individual RI to below two percent. Likewise, the objective may be to reduce bills such that it requires less than one day at the minimum wage to pay the typical utility bill. By understanding the intended goal, utilities can gain a reasonable understanding of the financial implications of the proposed assistance program.

Additionally, utilities should consider the funding source for the proposed benefits. The water and wastewater industry, through its NGO partners like the American Water Works Association, Water Environment Federation, and National Association of Clean Water Agencies, has advocated for greater levels of federal assistance thorough programs designed similar to LIHEAP. Their advocacy resulted in the creation of LIHWAP, the Low-Income Housing Water Assistance Program, in 2021. However, the funding for LIHWAP has been exhausted and is awaiting further action by Congress.

For most utilities in the country, external funding for assistance programs from state, federal, and local government sources has proven very difficult to obtain. As a result, many have chosen to self-fund their assistance programs directly from utility revenues. The funding estimates are a combination of the qualification requirements, expected participation levels, and the expected level of financial benefits the utility expects to provide. The following example provides a broad demonstration of how such considerations might work for Salt Lake City, given a few working assumptions.

Example – Salt Lake City Assistance Program
Assume the City would like to reduce the average monthly burden of the combined utility bill from $80.54 (see Table 29) such that it would require no more than four hours of labor at the minimum wage to pay it. The current bill requires five hours at the minimum wage (see Table 30*). Therefore, reducing it would imply an average benefit of $16.00 per month (one hour at the $16.00 aspirational minimum wage). The funding requirements for that benefit level would depend on the number of qualified customers and the expected participation rate. According to US Census data, there are 18,525 households in the lowest quintile of income (LQI); assume the City's program directs relief only to the LQI households.*

Table 31: Illustrative Assistance Program Funding for the Example

Description	20% Participation of 18,525 Households	30% Participation of 18,525 Households	40% Participation of 18,525 Households
Households	3,705	5,558	7,410
Avg. Monthly Benefit	$16.00	$16.00	$16.00
Monthly Funding Need	$59,280	$88,928	$118,560
Annual Funding Need	$711,360	$1,067,136	$1,422,720

Assuming the City were to implement the results from the above example, there would be an impact on the rates. Rates would need to increase slightly to recover the funds necessary for the targeted subsidies, and the City would need to decide exactly how it wished to do so. Assuming the City preferred to recover the funds as an additional volumetric charge and split the funding evenly between the Water and Wastewater utilities, the rate impacts could be characterized as shown below in Table 32.

Table 32: Illustrative Rate Impacts for the Example

Description	20% Participation	30% Participation	40% Participation
Water Funding	$355,680	$533,568	$711,360
Water Volume Sales (CCF)	32,987,050	32,987,050	32,987,050
Additional $/CCF Required	$0.011	$0.016	$0.022
Wastewater Funding	$355,680	$533,568	$711,360
Wastewater Volume (CCF)	10,947,871	10,947,871	10,947,871
Additional $/CCF Required	$0.033	$0.049	$0.065

Developing assistance programs is often more involved than the example may indicate. One of the issues that's difficult to navigate for most communities is how to provide relief to low-income customers pay their utility bills indirectly as part of their rent. In these cases, the customers themselves have no business relationship with the utilities. Meanwhile, the utilities cannot rely on the property owners to pass the benefits on to their tenants. The issue may be mitigated when considering the housing subsidies often provided to low-income tenants, but not always. A full evaluation of potential program configurations is recommended in order to identify and address these and other issues.

Section VII. IMPLEMENTATION

We calculated the rates in this Report for implementation in FY2026, starting July 1st, 2025. FCS GROUP is not responsible for the implementation itself, but the City should remain mindful of the following factors during the process.

- The rates herein must be billed to customers precisely as indicated in the recommended rate schedules, with no exceptions. We can confirm that the City will not receive the expected revenue from the recommended rates in any other way.

- Billing adjustments should be held to a minimum. Any such adjustments should be documented in the billing records and auditable. Billing records should always show the full bill at the prevailing rates and charges; any adjustments should be shown separately as adjustments to the full bill.

- Delaying the implementation of the recommended rates past July 1st, 2025, will reduce the City's expected revenue and should be avoided.

- We have assumed the City will amend its ordinances to implement the recommended rates.

- Based on the information provided to us during this study, we have assumed that the City is able to assign the correct billing determinants to each customer account. Such determinants include but are not limited to meter sizes, water usage, AWC, 70% of water usage, equivalent dwelling units, and surcharge factors where applicable (i.e., lbs. of TSS, BOD, NH3, and TP).

- We have assumed that the City's billing system is capable of implementing the recommended rates as outlined in this Report with no exceptions.

- Our analysis contains assumptions about the future. Changes in assumptions, including but not limited to changes in the City's budgets, may result in material differences between the outcomes discussed in this Report and actual outcomes achieved.

APPENDIX A

Salt Lake City

Utility Rate Study: Water Utility (FY 7/1 - 6/30)

Assumptions

Economic & Financial Factors	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Escalation Rates						
Personnel Costs	-	7.80%	5.00%	5.00%	5.00%	5.00%
Operating Expenses	-	4.00%	4.00%	4.00%	4.00%	4.00%
Utilities	-	8.00%	8.00%	8.00%	8.00%	8.00%
METRO WATER PURCHASE Rate Increases	-	3.00%	3.00%	3.00%	3.00%	3.00%
General Administrative	-	10.00%	10.00%	10.00%	10.00%	10.00%
Investment Interest	5.48%	4.00%	1.00%	1.00%	1.00%	1.00%

Adjustments to Operating or Capital Spending		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Operating Budget Realization Factor	(100% is default)	100%	100%	100%	100%	100%	100%
CIP Completion Factor	(100% is default)	70%	10%	10%	45%	45%	55%

Fund Balance & Financial Policy Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Beginning Enterprise Fund Balances						
Operating Reserve	$ 26,868,567					
Capital Reserve	90,033,223					
Total Beginning Enterprise Fund Balance	**$ 116,901,790**					
Total Operating and Capital Cash Test: Days of O&M	180 days	180 days	180 days	180 days	180 days	180 days
Operating Balance: Minimum Target						
Min. Fund Balance Target (days of O&M expense)	120 days	120 days	120 days	120 days	120 days	120 days
Min. Fund Balance Target ($)	$ 30,798,656	$ 33,113,638	$ 35,615,351	$ 37,652,269	$ 38,957,071	$ 40,534,287
Capital Balance: Minimum Target						
Min. Fund Balance Target (days of O&M expense)	60 days	60 days	60 days	60 days	60 days	60 days
Min. Fund Balance Target ($)	$ 15,399,328	$ 16,556,819	$ 17,807,676	$ 18,826,135	$ 19,478,536	$ 20,267,143

Capital Financing Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Impact Fees						
	Proj. Actual	*Prop. Budget*	Calculated			
Annual Impact Fee Revenue	$ 2,000,000	$ 2,000,000	$3,920,582	$4,112,008	$4,271,312	$4,436,788
Proposed Charge	$ 2,561	$ 2,689	$ 5,226	$5,435	$5,598	$5,766
Incremental Customer Base	781	744	750	757	763	769
Other Funding Sources (Uses)						
Capital Resources						
FEMA BRIC for City Creek WTP Upgrades	$ 10,850,000	$ 31,500,000	$ 5,180,000	$ -	$ -	$ -
Additional Outside Funding - Scenario Specific	-	3,283,000	3,920,000	4,557,000	4,018,000	3,675,000
	$ 10,850,000	**$ 34,783,000**	**$ 9,100,000**	**$ 4,557,000**	**$ 4,018,000**	**$ 3,675,000**
Other Capital Resources	*Proj. Actual*	*Prop. Budget*				
Annual Capital Contribution Amount	500,000	500,000	500,000	500,000	500,000	500,000
	$ 500,000	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**	**$ 500,000**
Total Other Funding Sources (Uses)	**$ 11,350,000**	**$ 35,283,000**	**$ 9,600,000**	**$ 5,057,000**	**$ 4,518,000**	**$ 4,175,000**
Revenue Bonds	*Level total payments*					
Term (years)	30 years	30 years	30 years	30 years	30 years	30 years
Interest Only Payments (years)	3 years	3 years	3 years	3 years	3 years	3 years
Interest Cost	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
Issuance Cost	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Debt Service Coverage Minimum (Legal or Policy)	**1.50**					
Include / Exclude Impact Fees in Coverage?	Exclude					
State Revolving Fund Loan Program	*Level total payments*					
Term (years)	20 years	20 years	20 years	20 years	20 years	20 years
Interest Only Payments (years)	0 years	5 years	4 years	3 years	2 years	1 years
Interest Cost	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Issuance Cost	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Salt Lake City

Utility Rate Study: Sewer Utility (FY 7/1 - 6/30)

Assumptions

Economic & Financial Factors	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Escalation Rates						
Personnel Costs	-	8.20%	5.00%	5.00%	5.00%	5.00%
Operating Expenses	-	4.00%	4.00%	4.00%	4.00%	4.00%
Utilities	-	8.00%	8.00%	8.00%	8.00%	8.00%
General Administrative	-	10.00%	10.00%	10.00%	10.00%	10.00%
Investment Interest	5.48%	4.00%	1.00%	1.00%	1.00%	1.00%

Adjustments to Operating or Capital Spending		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Operating Budget Realization Factor	(100% is default)	100%	100%	100%	100%	100%	100%
CIP Completion Factor	(100% is default)	70%	70%	70%	45%	40%	55%

Fund Balance & Financial Policy Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Beginning Enterprise Fund Balances						
Operating Reserve	$ 58,379,179					
Capital Reserve	181,173,055					
Total Beginning Enterprise Fund Balance	**$ 239,552,234**					
Total Operating and Capital Cash Test: Days of O&M	180 days	180 days	180 days	180 days	180 days	180 days
Operating Balance: Minimum Target						
Min. Fund Balance Target (days of O&M expense)	120 days	120 days	120 days	120 days	120 days	120 days
Min. Fund Balance Target ($)	$ 10,390,270	$ 11,223,259	$ 12,804,013	$ 17,067,597	$ 15,486,589	$ 16,101,613
Capital Balance: Minimum Target						
Min. Fund Balance Target (days of O&M expense)	60 days	60 days	60 days	60 days	60 days	60 days
Min. Fund Balance Target ($)	$ 5,195,135	$ 5,611,629	$ 6,402,006	$ 8,533,798	$ 7,743,295	$ 8,050,806

Capital Financing Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Impact Fees						
	Proj. Actual	*Prop. Budget*	*Calculated*			
Annual Impact Fee Revenue	$ 1,650,000	$ 1,650,000	$ 6,626,677	$ 6,639,930	$ 6,653,210	$ 6,666,516
Other Funding Sources (Uses)						
Capital Resources						
Additional Outside Funding - Scenario Specific	$ 178,517,000	$ 140,456,000	$ 16,549,801	$ -	$ -	$ -
	$ 178,517,000	**$ 140,456,000**	**$ 16,549,801**	**$ -**	**$ -**	**$ -**
Other Capital Resources	*Proj. Actual*	*Prop. Budget*				
Annual Contribution Amount	400,000	400,000	400,000	400,000	400,000	400,000
	$ 400,000	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**
Total Other Funding Sources (Uses)	**$ 178,917,000**	**$ 140,856,000**	**$ 16,949,801**	**$ 400,000**	**$ 400,000**	**$ 400,000**
Revenue Bonds	*Level total payments*					
Term (years)	30 years	30 years	30 years	30 years	30 years	30 years
Interest Only Payments (years)	3 years	3 years	3 years	3 years	3 years	3 years
Interest Cost	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
Issuance Cost	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Debt Service Coverage Minimum (Legal or Policy)	**1.50**					
Include / Exclude Impact Fees in Coverage?	Exclude					
WIFIA Loans	*Level total payments*					
Term (years)	30 years	30 years	30 years	30 years	30 years	30 years
Interest Only Payments (years)	5 years	5 years	5 years	5 years	5 years	5 years
Interest Cost	1.34%	1.34%	1.34%	1.34%	1.34%	1.34%
Issuance Cost	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Salt Lake City

Utility Rate Study: Stormwater Utility (FY 7/1 - 6/30)

Assumptions

Economic & Financial Factors	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Escalation Rates						
Personnel Costs	-	8.20%	5.00%	5.00%	5.00%	5.00%
Operating Expenses	-	5.00%	5.00%	5.00%	5.00%	5.00%
Utilities	-	8.00%	8.00%	8.00%	8.00%	8.00%
CITY DATA PROCESSING SERVICES	-	10.00%	10.00%	10.00%	10.00%	10.00%
Investment Interest	5.48%	4.00%	1.00%	1.00%	1.00%	1.00%

Adjustments to Operating or Capital Spending		FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Operating Budget Realization Factor	(100% is default)	100%	100%	100%	100%	100%	100%
CIP Completion Factor	(100% is default)	70%	70%	55%	35%	35%	40%

Fund Balance & Financial Policy Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Beginning Enterprise Fund Balances						
Operating Reserve	$ 17,017,902					
Capital Reserve	9,851,097					
Total Beginning Enterprise Fund Balance	**$ 26,868,999**					
Total Operating and Capital Cash Test: Days of O&M	180 days	180 days	180 days	180 days	180 days	180 days
Operating Balance: Minimum Target						
Min. Fund Balance Target (days of O&M expense)	120 days	120 days	120 days	120 days	120 days	120 days
Min. Fund Balance Target ($)	$ 3,711,196	$ 4,097,015	$ 4,403,977	$ 4,671,084	$ 4,954,105	$ 5,248,752
Capital Balance: Minimum Target						
Min. Fund Balance Target (days of O&M expense)	60 days	60 days	60 days	60 days	60 days	60 days
Min. Fund Balance Target ($)	$ 1,855,598	$ 2,048,508	$ 2,201,988	$ 2,335,542	$ 2,477,052	$ 2,624,376

Capital Financing Assumptions	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Impact Fees						
	Proj. Actual	*Prop. Budget*	*Calculated*			
Annual Impact Fee Revenue	$ 750,000	$ 750,000	$ 2,945,779	$ 2,945,779	$ 2,945,779	$ 2,945,779
Other Funding Sources (Uses)						
Other Capital Resources	*Proj. Actual*	*Prop. Budget*				
Annual Contribution Amount	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000	$ 400,000
	$ 400,000	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**
Total Other Funding Sources (Uses)	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**	**$ 400,000**
Revenue Bonds *Level total payments*						
Term (years)	30 years	30 years	30 years	30 years	30 years	30 years
Interest Only Payments (years)	3 years	3 years	3 years	3 years	3 years	3 years
Interest Cost	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%
Issuance Cost	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Debt Service Coverage Minimum (Legal or Policy)	**1.50**					
Include / Exclude Impact Fees in Coverage?	Exclude					

APPENDIX B

Salt Lake City

Utility Rate Study: Water Utility (FY 7/1 - 6/30)

Summary

Revenue Requirement	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenues						
Rate Revenues Under Existing Rates	$ 98,046,300	$ 121,851,453	$ 133,815,105	$ 134,991,308	$ 136,181,673	$ 137,337,391
Non-Rate Revenues	8,211,295	8,342,987	7,610,793	7,811,171	8,013,915	8,216,633
Total Revenues	**$ 106,257,595**	**$ 130,194,440**	**$ 141,425,898**	**$ 142,802,478**	**$ 144,195,588**	**$ 145,554,024**
Expenses						
Cash Operating Expenses	$ 93,679,246	$ 100,720,648	$ 108,330,027	$ 114,525,652	$ 118,494,425	$ 123,291,789
Existing Debt Service	6,955,101	8,230,091	8,230,284	8,230,385	8,230,090	8,230,091
New Debt Service	-	4,368,139	4,429,339	4,500,484	16,344,180	16,401,555
Total Expenses	**$ 100,634,347**	**$ 113,318,878**	**$ 120,989,649**	**$ 127,256,521**	**$ 143,068,695**	**$ 147,923,434**
Annual Rate Increase		**0.00%**	**7.00%**	**7.00%**	**5.50%**	**5.50%**
Cumulative Rate Increase		**0.00%**	**7.00%**	**14.49%**	**20.79%**	**27.43%**
Rate Revenues After Increases	$ 98,046,300	$ 121,851,453	$ 143,182,162	$ 154,551,548	$ 164,489,689	$ 175,009,356
Non-Rate Revenues	8,211,295	8,342,987	7,610,793	7,811,171	8,013,915	8,216,633
Total Operating Revenues After Rate Increases	**$ 106,257,595**	**$ 130,194,440**	**$ 150,792,955**	**$ 162,362,719**	**$ 172,503,604**	**$ 183,225,989**
Net Cash Flow After Rate Increase	**$ 5,623,248**	**$ 16,875,562**	**$ 29,803,306**	**$ 35,106,198**	**$ 29,434,909**	**$ 35,302,555**

Fund Balance	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Operating Reserve						
Beginning Balance	$ 26,868,567	$ 30,798,656	$ 33,113,638	$ 35,615,351	$ 37,652,269	$ 38,957,071
Net Cash Flow After Rate Increase	5,623,248	16,875,562	29,803,306	35,106,198	29,434,909	35,302,555
less: Transfer of Surplus to Capital Fund	(1,693,159)	(14,560,581)	(27,301,592)	(33,069,279)	(28,130,107)	(33,725,339)
Ending Balance	**$ 30,798,656**	**$ 33,113,638**	**$ 35,615,351**	**$ 37,652,269**	**$ 38,957,071**	**$ 40,534,287**
Actual Days of O&M	*120 days*	*120 days*	*120 days*	*120 days*	*120 days*	*120 days*
Minimum Target Balance	*$ 30,798,656*	*$ 33,113,638*	*$ 35,615,351*	*$ 37,652,269*	*$ 38,957,071*	*$ 40,534,287*
Capital Reserve						
Beginning Balance	$ 90,033,223	$ 10,593,742	$ 86,105,168	$ 63,289,799	$ 19,013,069	$ 175,012,282
plus: Transfers from Operating Fund	1,693,159	14,560,581	27,301,592	33,069,279	28,130,107	33,725,339
plus: Capital Resources	10,850,000	34,783,000	9,100,000	4,557,000	4,018,000	3,675,000
plus: Other Capital Resources	500,000	500,000	500,000	500,000	500,000	500,000
plus: Impact Fee Revenue	2,000,000	2,000,000	3,920,582	4,112,008	4,271,312	4,436,788
plus: Revenue Bond Proceeds	-	100,558,000	-	-	226,000,000	-
plus: State Revolving Fund Loan Program Proceeds	-	3,417,000	4,080,000	4,743,000	4,182,000	3,825,000
plus: Interest Earnings	4,935,330	423,750	861,052	632,898	190,131	1,750,123
Total Funding Sources	**$ 110,011,712**	**$ 166,836,073**	**$ 131,868,393**	**$ 110,903,985**	**$ 286,304,619**	**$ 222,924,532**
less: Capital Expenditures	(99,417,969)	(80,730,904)	(68,578,594)	(91,890,915)	(111,292,336)	(121,996,805)
Ending Capital Fund Balance	**$ 10,593,743**	**$ 86,105,169**	**$ 63,289,800**	**$ 19,013,069**	**$ 175,012,283**	**$ 100,927,727**
Minimum Target Balance	*$ 15,399,328*	*$ 16,556,818*	*$ 17,807,675*	*$ 18,826,134*	*$ 19,478,535*	*$ 20,267,143*
Combined Beginning Balance (Op., Cap.)	**$ 116,901,790**	**$ 41,392,398**	**$ 119,218,806**	**$ 98,905,150**	**$ 56,665,338**	**$ 213,969,353**
Combined Ending Balance (Op., Cap.)	**$ 41,392,399**	**$ 119,218,807**	**$ 98,905,151**	**$ 56,665,339**	**$ 213,969,354**	**$ 141,462,013**
Ending Total Days of Operating Expenditures (Op., Cap.)	*161 days*	*432 days*	*333 days*	*181 days*	*659 days*	*419 days*
Combined Minimum Target Balance (Op., Cap.)	*$46,197,984*	*$49,670,456*	*$53,423,026*	*$56,478,403*	*$58,435,606*	*$60,801,430*

Salt Lake City

Utility Rate Study: Sewer Utility (FY 7/1 - 6/30)

Summary

Revenue Requirement	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenues						
Rate Revenues Under Existing Rates	$ 76,303,000	$ 89,716,383	$ 104,858,420	$ 105,327,786	$ 105,806,779	$ 106,018,392
Non-Rate Revenues	4,562,698	1,815,113	1,550,175	1,605,960	1,690,173	1,717,602
Total Revenues	**$ 80,865,698**	**$ 91,531,496**	**$ 106,408,595**	**$ 106,933,746**	**$ 107,496,951**	**$ 107,735,994**
Expenses						
Cash Operating Expenses	$ 31,603,738	$ 34,137,412	$ 38,945,539	$ 51,913,940	$ 47,105,042	$ 48,975,738
Existing Debt Service	24,626,927	29,467,437	29,446,217	29,428,442	28,910,322	44,259,292
New Debt Service	-	4,273,740	5,733,336	5,733,336	7,791,504	8,494,423
Total Expenses	**$ 56,230,665**	**$ 67,878,589**	**$ 74,125,092**	**$ 87,075,718**	**$ 83,806,868**	**$ 101,729,453**
Annual Rate Increase		**0.00%**	**5.50%**	**5.50%**	**5.50%**	**4.00%**
Cumulative Rate Increase		**0.00%**	**5.50%**	**11.30%**	**17.42%**	**22.12%**
Rate Revenues After Increases	$ 76,303,000	$ 89,716,383	$ 110,625,633	$ 117,232,459	$ 124,242,697	$ 129,470,830
Non-Rate Revenues	4,562,698	1,815,113	1,550,175	1,605,960	1,690,173	1,717,602
Total Operating Revenues After Rate Increases	**$ 80,865,698**	**$ 91,531,496**	**$ 112,175,808**	**$ 118,838,419**	**$ 125,932,870**	**$ 131,188,432**
Net Cash Flow After Rate Increase	**$ 24,635,033**	**$ 23,652,907**	**$ 38,050,716**	**$ 31,762,701**	**$ 42,126,002**	**$ 29,458,979**

Fund Balance	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Operating Reserve						
Beginning Balance	$ 58,379,179	$ 10,390,270	$ 11,223,259	$ 12,804,013	$ 17,067,597	$ 15,486,589
Net Cash Flow After Rate Increase	24,635,033	23,652,907	38,050,716	31,762,701	42,126,002	29,458,979
less: Transfer of Surplus to Capital Fund	(72,623,942)	(22,819,918)	(36,469,962)	(27,499,117)	(43,707,010)	(28,843,955)
Ending Balance	**$ 10,390,270**	**$ 11,223,259**	**$ 12,804,013**	**$ 17,067,597**	**$ 15,486,589**	**$ 16,101,613**
Actual Days of O&M	*120 days*	*120 days*	*120 days*	*120 days*	*120 days*	*120 days*
Minimum Target Balance	*$ 10,390,270*	*$ 11,223,259*	*$ 12,804,013*	*$ 17,067,597*	*$ 15,486,589*	*$ 16,101,613*
Capital Reserve						
Beginning Balance	$ 181,173,055	$ 2,197,192	$ 8,808,061	$ 6,950,114	$ 12,650,430	$ 36,836,976
plus: Transfers from Operating Fund	72,623,942	22,819,918	36,469,962	27,499,117	43,707,010	28,843,955
plus: Capital Resources	178,517,000	140,456,000	16,549,801	-	-	-
plus: Other Capital Resources	400,000	400,000	400,000	400,000	400,000	400,000
plus: Impact Fee Revenue	1,650,000	1,650,000	6,626,677	6,639,930	6,653,210	6,666,516
plus: Revenue Bond Proceeds	-	99,553,000	34,000,000	-	-	-
plus: Interest Earnings	9,931,321	87,888	88,081	69,501	126,504	368,370
Total Funding Sources	**$ 444,295,318**	**$ 267,163,998**	**$ 102,942,582**	**$ 41,558,662**	**$ 63,537,154**	**$ 73,115,818**
less: Capital Expenditures	(442,098,125)	(258,355,937)	(95,992,467)	(28,908,232)	(26,700,178)	(46,504,984)
Ending Capital Fund Balance	**$ 2,197,192**	**$ 8,808,061**	**$ 6,950,114**	**$ 12,650,430**	**$ 36,836,976**	**$ 26,610,834**
Minimum Target Balance	*$ 5,195,135*	*$ 5,611,629*	*$ 6,402,006*	*$ 8,533,798*	*$ 7,743,294*	*$ 8,050,806*
Combined Beginning Balance (Op., Cap.)	**$ 239,552,234**	**$ 12,587,462**	**$ 20,031,320**	**$ 19,754,127**	**$ 29,718,027**	**$ 52,323,565**
Combined Ending Balance (Op., Cap.)	**$ 12,587,462**	**$ 20,031,319**	**$ 19,754,127**	**$ 29,718,027**	**$ 52,323,565**	**$ 42,712,446**
Ending Total Days of Operating Expenditures (Op., Cap.)	*145 days*	*214 days*	*185 days*	*209 days*	*405 days*	*318 days*
Combined Minimum Target Balance (Op., Cap.)	*$15,585,405*	*$16,834,888*	*$19,206,019*	*$25,601,395*	*$23,229,883*	*$24,152,419*

Salt Lake City

Utility Rate Study: Stormwater Utility (FY 7/1 - 6/30)

Summary

Revenue Requirement	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Revenues						
Rate Revenues Under Existing Rates	$ 13,553,906	$ 14,909,297	$ 14,939,116	$ 14,968,994	$ 14,998,932	$ 15,028,930
Non-Rate Revenues	995,866	211,448	103,970	107,040	109,711	112,541
Total Revenues	**$ 14,549,772**	**$ 15,120,745**	**$ 15,043,086**	**$ 15,076,034**	**$ 15,108,643**	**$ 15,141,471**
Expenses						
Cash Operating Expenses	$ 11,288,220	$ 12,461,755	$ 13,395,429	$ 14,207,882	$ 15,068,735	$ 15,964,954
Existing Debt Service	1,550,192	1,465,915	1,467,013	1,463,369	767,589	767,679
New Debt Service	-	215,848	215,848	215,848	319,798	319,798
Total Expenses	**$ 12,838,412**	**$ 14,143,518**	**$ 15,078,291**	**$ 15,887,099**	**$ 16,156,122**	**$ 17,052,430**
Annual Rate Increase		**0.00%**	**7.00%**	**10.00%**	**10.00%**	**10.00%**
Cumulative Rate Increase		**0.00%**	**7.00%**	**17.70%**	**29.47%**	**42.42%**
Rate Revenues After Increases	$ 13,553,906	$ 14,909,297	$ 15,984,854	$ 17,618,506	$ 19,419,117	$ 21,403,751
Non-Rate Revenues	995,866	211,448	103,970	107,040	109,711	112,541
Total Operating Revenues After Rate Increases	**$ 14,549,772**	**$ 15,120,745**	**$ 16,088,824**	**$ 17,725,545**	**$ 19,528,828**	**$ 21,516,292**
Net Cash Flow After Rate Increase	**$ 1,711,360**	**$ 977,226**	**$ 1,010,533**	**$ 1,838,446**	**$ 3,372,706**	**$ 4,463,861**

Fund Balance	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029
Operating Reserve						
Beginning Balance	$ 17,017,902	$ 3,711,196	$ 4,097,015	$ 4,403,977	$ 4,671,084	$ 4,954,105
Net Cash Flow After Rate Increase	1,711,360	977,226	1,010,533	1,838,446	3,372,706	4,463,861
less: Transfer of Surplus to Capital Fund	(15,018,067)	(591,407)	(703,572)	(1,571,339)	(3,089,686)	(4,169,214)
Ending Balance	**$ 3,711,196**	**$ 4,097,015**	**$ 4,403,977**	**$ 4,671,084**	**$ 4,954,105**	**$ 5,248,752**
Actual Days of O&M	*120 days*	*120 days*	*120 days*	*120 days*	*120 days*	*120 days*
Minimum Target Balance	*$ 3,711,196*	*$ 4,097,015*	*$ 4,403,977*	*$ 4,671,084*	*$ 4,954,105*	*$ 5,248,752*
Capital Reserve						
Beginning Balance	$ 9,851,097	$ 18,714,169	$ 12,477,498	$ 8,957,239	$ 8,248,369	$ 8,340,124
plus: Transfers from Operating Fund	15,018,067	591,407	703,572	1,571,339	3,089,686	4,169,214
plus: Other Capital Resources	400,000	400,000	400,000	400,000	400,000	400,000
plus: Impact Fee Revenue	750,000	750,000	2,945,779	2,945,779	2,945,779	2,945,779
plus: Revenue Bond Proceeds	-	5,028,000	-	-	-	-
plus: Interest Earnings	540,005	748,567	124,775	89,572	82,484	83,401
Total Funding Sources	**$ 26,559,169**	**$ 26,232,142**	**$ 16,651,624**	**$ 13,963,929**	**$ 14,766,317**	**$ 15,938,518**
less: Capital Expenditures	(7,845,000)	(13,754,644)	(7,694,384)	(5,715,560)	(6,426,192)	(7,555,636)
Ending Capital Fund Balance	**$ 18,714,169**	**$ 12,477,498**	**$ 8,957,240**	**$ 8,248,369**	**$ 8,340,125**	**$ 8,382,882**
Minimum Target Balance	*$ 1,855,597*	*$ 2,048,507*	*$ 2,201,988*	*$ 2,335,542*	*$ 2,477,052*	*$ 2,624,375*
Combined Beginning Balance (Op., Cap.)	**$ 26,868,999**	**$ 22,425,365**	**$ 16,574,513**	**$ 13,361,216**	**$ 12,919,453**	**$ 13,294,229**
Combined Ending Balance (Op., Cap.)	**$ 22,425,365**	**$ 16,574,514**	**$ 13,361,217**	**$ 12,919,454**	**$ 13,294,230**	**$ 13,631,634**
Ending Total Days of Operating Expenditures (Op., Cap.)	*725 days*	*485 days*	*364 days*	*332 days*	*322 days*	*312 days*
Combined Minimum Target Balance (Op., Cap.)	*$5,566,793*	*$6,145,522*	*$6,605,965*	*$7,006,626*	*$7,431,157*	*$7,873,127*

APPENDIX C

Salt Lake City

Water Cost-of-Service

Unit Cost Calculation

Distribution

Description / Class	Base	Max Day	Peak Hour	Customer	Meter	Fire	Total
Distribution of Joint System Costs							
Total Cost ($M)	$71.83	$24.83	$14.98	$14.56	$14.90	$2.08	
System Units	32,987,050	94,218	110,756	1,087,489	136,599	39,080,167	
Unit Type	CCF	CCF/Day	CCF/Day	Bills	Eq. Meters	Weighed GPM	
Unit Cost ($/unit)	$2.18	$263.49	$135.23	$13.39	$109.11	$0.05	
Class Distributions							
Commercial (Outside)							
Units	1,394,200	3,354	4,304	12,843	4,507	1,541,106	
Distributed Costs ($M)	$3.04	$0.88	$0.58	$0.17	$0.49	$0.08	$5.25
Institutional (Inside)							
Units	1,195,803	3,094	3,822	6,464	2,963	775,680	
Distributed Costs ($M)	$2.60	$0.82	$0.52	$0.09	$0.32	$0.04	$4.39
Institutional (Outside)							
Units	143,022	595	592	1,166	409	139,968	
Distributed Costs ($M)	$0.31	$0.16	$0.08	$0.02	$0.04	$0.01	$0.62
Industrial (Inside)							
Units	1,672,833	1,708	3,774	2,659	1,661	319,080	
Distributed Costs ($M)	$3.64	$0.45	$0.51	$0.04	$0.18	$0.02	$4.84
Industrial (Outside)							
Units	55,497	330	289	113	82	13,608	
Distributed Costs ($M)	$0.12	$0.09	$0.04	$0.00	$0.01	$0.00	$0.26
Irrigation (Inside)							
Units	2,323,123	11,593	10,775	10,723	3,317	-	
Distributed Costs ($M)	$5.06	$3.05	$1.46	$0.14	$0.36	$0.00	$10.08
Irrigation (Outside)							
Units	418,694	2,191	2,003	3,272	730	-	
Distributed Costs ($M)	$0.91	$0.58	$0.27	$0.04	$0.08	$0.00	$1.88
Private Firelines							
Units	-	-	-	-	-	4,965,120	
Distributed Costs ($M)	$0.00	$0.00	$0.00	$0.00	$0.00	$0.26	$0.26
Total Costs	**$71.83**	**$24.83**	**$14.98**	**$14.56**	**$14.90**	**$2.08**	**$143.18**

Salt Lake City
Sewer Cost-of-Service
Unit Cost Calculation

Distribution

Description / Class	FLOW	CUSTOMER	BOD	TSS	NH3	TP	Total
Distribution of Joint System Costs							
Total Costs	$75.37	$0.00	$12.26	$11.37	$6.02	$6.73	
System Units	10,947,871	48,727	20,949,375	18,667,673	1,878,310	416,373	
Unit Type	CCF	Accounts	LBS	LBS	LBS	LBS	
Unit Cost ($/unit)	$6.88	$0.00	$0.58	$0.61	$3.20	$16.16	
Class Distributions							
Residential							
Units	2,252,376	41,674	3,165,560	3,487,188	291,252	64,563	
Distributed Costs ($ M)	$15.51	$0.00	$1.85	$2.12	$0.93	$1.04	$23.74
Multi-Family							
Units	1,905,448	2,167	2,677,977	2,950,065	246,391	54,618	
Distributed Costs ($ M)	$13.12	$0.00	$1.57	$1.80	$0.79	$0.88	$20.88
Non-Residential							
Units	6,790,047	4,886	15,105,838	12,230,421	1,340,667	297,192	
Distributed Costs ($ M)	$46.75	$0.00	$8.84	$7.45	$4.30	$4.80	$79.12
Total Costs	**$75.37**	**$0.00**	**$12.26**	**$11.37**	**$6.02**	**$6.73**	**$123.74**

APPENDIX D

Salt Lake City

Water Cost-of-Service

Customer Units by Cost Sharing Group

JOINT		*Annual Use (ccf)*	*Max-Day Extra Capacity (ccf/day)*	*Max-Hour Extra Capacity (ccf/day)*	*Bills*	*Equivalent Meters & Services*	*Fire (1,000 gals / min)*
CUSTOMER CLASS	**% to Cost Sharing Group**	**Base**	**Max Day**	**Peak Hour**	**Customer**	**Meter**	**Fire**
Single Family (Inside)	100.00%	7,237,991	23,215	25,827	515,372	46,919	10,307,440
Single Family (Outside)	100.00%	6,763,617	25,294	26,295	369,596	35,806	7,391,925
Duplex (Inside)	100.00%	735,297	1,887	2,341	46,895	4,281	937,900
Duplex (Outside)	100.00%	184,725	487	596	8,940	885	178,794
Triplex (Inside)	100.00%	108,911	220	311	6,061	574	121,220
Triplex (Outside)	100.00%	8,228	11	20	178	26	3,564
Multi-Family (Inside)	100.00%	2,761,221	3,748	6,788	28,194	9,036	3,383,280
Multi-Family (Outside)	100.00%	1,119,283	2,315	3,229	5,482	4,624	657,882
Commercial (Inside)	100.00%	6,864,605	14,176	19,790	69,530	20,778	8,343,600
Commercial (Outside)	100.00%	1,394,200	3,354	4,304	12,843	4,507	1,541,106
Institutional (Inside)	100.00%	1,195,803	3,094	3,822	6,464	2,963	775,680
Institutional (Outside)	100.00%	143,022	595	592	1,166	409	139,968
Industrial (Inside)	100.00%	1,672,833	1,708	3,774	2,659	1,661	319,080
Industrial (Outside)	100.00%	55,497	330	289	113	82	13,608
Irrigation (Inside)	100.00%	2,323,123	11,593	10,775	10,723	3,317	-
Irrigation (Outside)	100.00%	418,694	2,191	2,003	3,272	730	-
Private Firelines	100.00%	-	-	-	-	-	4,965,120
Total		**32,987,050**	**94,218**	**110,756**	**1,087,489**	**136,599**	**39,080,167**
Single Family (Inside)		21.94%	24.64%	23.32%	47.39%	34.35%	26.38%
Single Family (Outside)		20.50%	26.85%	23.74%	33.99%	26.21%	18.91%
Duplex (Inside)		2.23%	2.00%	2.11%	4.31%	3.13%	2.40%
Duplex (Outside)		0.56%	0.52%	0.54%	0.82%	0.65%	0.46%
Triplex (Inside)		0.33%	0.23%	0.28%	0.56%	0.42%	0.31%
Triplex (Outside)		0.02%	0.01%	0.02%	0.02%	0.02%	0.01%
Multi-Family (Inside)		8.37%	3.98%	6.13%	2.59%	6.61%	8.66%
Multi-Family (Outside)		3.39%	2.46%	2.92%	0.50%	3.39%	1.68%
Commercial (Inside)		20.81%	15.05%	17.87%	6.39%	15.21%	21.35%
Commercial (Outside)		4.23%	3.56%	3.89%	1.18%	3.30%	3.94%
Institutional (Inside)		3.63%	3.28%	3.45%	0.59%	2.17%	1.98%
Institutional (Outside)		0.43%	0.63%	0.53%	0.11%	0.30%	0.36%
Industrial (Inside)		5.07%	1.81%	3.41%	0.24%	1.22%	0.82%
Industrial (Outside)		0.17%	0.35%	0.26%	0.01%	0.06%	0.03%
Irrigation (Inside)		7.04%	12.30%	9.73%	0.99%	2.43%	0.00%
Irrigation (Outside)		1.27%	2.33%	1.81%	0.30%	0.53%	0.00%
Private Firelines		0.00%	0.00%	0.00%	0.00%	0.00%	12.70%
Total		**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Salt Lake City

Sewer Cost-of-Service

Customer Units by Cost Sharing Group

JOINT

CUSTOMER CLASS	% to Cost Sharing Group	FLOW	CUSTOMER	BILLS	SERVICE UNITS	BOD	TSS	NH3	TP
Residential	100.00%	2,252,376	41,674	500,088	46,235	3,165,560	3,487,188	291,252	64,563
Multi-Family	100.00%	1,905,448	2,167	26,004	55,281	2,677,977	2,950,065	246,391	54,618
Non-Residential	100.00%	6,790,047	4,886	58,632	141,459	15,105,838	12,230,421	1,340,667	297,192
Total		**10,947,871**	**48,727**	**584,724**	**242,975**	**20,949,375**	**18,667,673**	**1,878,310**	**416,373**
Residential		20.57%	85.53%	85.53%	19.03%	15.11%	18.68%	15.51%	15.51%
Multi-Family		17.40%	4.45%	4.45%	22.75%	12.78%	15.80%	13.12%	13.12%
Non-Residential		62.02%	10.03%	10.03%	58.22%	72.11%	65.52%	71.38%	71.38%
Total		**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

APPENDIX E

Residential Inside City Water Rate Bill Impacts (2026 Only)

Single Family		*ccf usage* 1	4	11	27	59
Current Bills	Mtr.					
Current Monthly Charge	5/8"	$25.65	$25.65	$25.65	$25.65	$25.65
Block 1		$2.24	$8.96	$22.40	$22.40	$22.40
Block 2		$0.00	$0.00	$3.05	$51.85	$61.00
Block 3		$0.00	$0.00	$0.00	$0.00	$122.67
Block 4		$0.00	$0.00	$0.00	$0.00	$0.00
Total Existing Bill		$27.89	$34.61	$51.10	$99.90	$231.72
Proposed Bills	Mtr.					
Monthly Charges	5/8"	$22.48	$22.48	$22.48	$22.48	$22.48
Block 1		$2.84	$11.37	$14.21	$14.21	$14.21
Block 2		$0.00	$0.00	$17.45	$17.45	$17.45
Block 3		$0.00	$0.00	$4.46	$75.75	$133.68
Block 4		$0.00	$0.00	$0.00	$0.00	$93.52
Total Proposed Bill		$25.32	$33.85	$58.59	$129.89	$281.34
Increase (Decrease)		-$2.57	-$0.76	$7.49	$29.99	$49.62
% Increase (Decrease)		-9%	-2%	15%	30%	21%

Duplex		*ccf usage* 1	2	5	11	20
Current Bills	Mtr.					
Current Monthly Charge	1"	$60.79	$60.79	$60.79	$60.79	$60.79
Block 1		$2.24	$4.48	$11.20	$22.40	$22.40
Block 2		$0.00	$0.00	$0.00	$3.05	$30.50
Block 3		$0.00	$0.00	$0.00	$0.00	$0.00
Block 4		$0.00	$0.00	$0.00	$0.00	$0.00
Total Existing Bill		$63.03	$65.27	$71.99	$86.24	$113.69
Proposed Bills	Mtr.					
Monthly Charges	1"	$28.57	$28.57	$28.57	$28.57	$28.57
Block 1	DU	$2.84	$5.68	$14.21	$28.42	$28.42
Block 2	2	$0.00	$0.00	$0.00	$3.49	$34.90
Block 3		$0.00	$0.00	$0.00	$0.00	$0.00
Block 4		$0.00	$0.00	$0.00	$0.00	$0.00
Total Proposed Bill		$31.41	$34.25	$42.78	$60.48	$91.89
Increase (Decrease)		-$31.62	-$31.02	-$29.21	-$25.76	-$21.80
% Increase (Decrease)		-50%	-48%	-41%	-30%	-19%

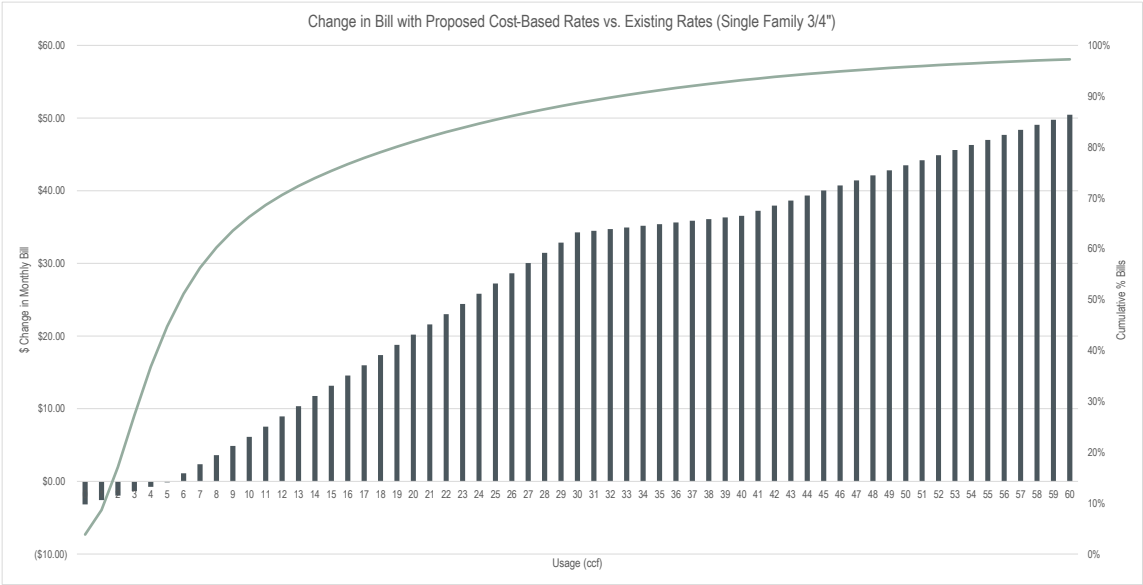
Triplex		*ccf usage* 1	2	4	8	17
Current Bills	Mtr.					
Current Monthly Charge	1"	$60.79	$60.79	$60.79	$60.79	$60.79
Block 1	DU	$2.24	$4.48	$8.96	$17.92	$22.40
Block 2	3	$0.00	$0.00	$0.00	$0.00	$21.35
Block 3		$0.00	$0.00	$0.00	$0.00	$0.00
Block 4		$0.00	$0.00	$0.00	$0.00	$0.00
Total Existing Bill		$63.03	$65.27	$69.75	$78.71	$104.54
Proposed Bills	Mtr.					
Monthly Charges	1"	$28.57	$28.57	$28.57	$28.57	$28.57
Block 1	DU	$2.84	$5.68	$11.37	$22.73	$42.63
Block 2	3	$0.00	$0.00	$0.00	$0.00	$6.98
Block 3		$0.00	$0.00	$0.00	$0.00	$0.00
Block 4		$0.00	$0.00	$0.00	$0.00	$0.00
Total Proposed Bill		$31.41	$34.25	$39.94	$51.30	$78.18
Increase (Decrease)		-$31.62	-$31.02	-$29.81	-$27.41	-$26.36
% Increase (Decrease)		-50%	-48%	-43%	-35%	-25%

Non-Residential Inside City Water Rate Bill Impacts (2026 Only)

Commercial		*ccf usage* 2	5	19	77	284
Current Bills	Mtr.					
Current Monthly Charge	1"	$60.79	$60.79	$60.79	$60.79	$60.79
Winter Usage		$4.86	$12.15	$46.17	$187.11	$690.12
Total Existing Bill		$65.65	$72.94	$106.96	$247.90	$750.91
Proposed Bills	Mtr.					
Monthly Charges	1"	$28.57	$28.57	$28.57	$28.57	$28.57
Winter Usage		$4.36	$10.90	$41.42	$167.86	$619.12
Total Proposed Bill		$32.93	$39.47	$69.99	$196.43	$647.69
Increase (Decrease)		-$32.72	-$33.47	-$36.97	-$51.47	-$103.22
% Increase (Decrease)		-50%	-46%	-35%	-21%	-14%

Industrial		*ccf usage* 3	10	54	332	1,625
Current Bills	Mtr.					
Current Monthly Charge	1"	$60.79	$60.79	$60.79	$60.79	$60.79
Winter Usage		$7.29	$24.30	$131.22	$806.76	$3,947.54
Total Existing Bill		$68.08	$85.09	$192.01	$867.55	$4,008.33
Proposed Bills	Mtr.					
Monthly Charges	1"	$28.57	$28.57	$28.57	$28.57	$28.57
Winter Usage		$6.54	$21.80	$117.72	$723.76	$3,541.41
Total Proposed Bill		$35.11	$50.37	$146.29	$752.33	$3,569.98
Increase (Decrease)		-$32.97	-$34.72	-$45.72	-$115.22	-$438.35
% Increase (Decrease)		-48%	-41%	-24%	-13%	-11%

Institutional		*ccf usage* 2	7	33	139	404
Current Bills	Mtr.					
Current Monthly Charge	1"	$60.79	$60.79	$60.79	$60.79	$60.79
Winter Usage		$4.86	$17.01	$80.19	$337.77	$980.99
Total Existing Bill		$65.65	$77.80	$140.98	$398.56	$1,041.78
Proposed Bills	Mtr.					
Monthly Charges	1"	$28.57	$28.57	$28.57	$28.57	$28.57
Winter Usage		$4.36	$15.26	$71.94	$303.02	$880.07
Total Proposed Bill		$32.93	$43.83	$100.51	$331.59	$908.64
Increase (Decrease)		-$32.72	-$33.97	-$40.47	-$66.97	-$133.15
% Increase (Decrease)		-50%	-44%	-29%	-17%	-13%



The above chart shows the change in residential bills from the proposed rates relative to the current rates. For example, customers with 1 CCF of usage would experience a decrease in their monthly bill relative to the current rate structure; customers with 20 CCF would incur an increase of approximately $20.

The curved line at the top of the chart indicates the cumulative percentage of bills at each usage level. For example, 70% (see right Y-axis) of residential bills are at 13 CCF or less; approximately 50% of residential bills are at 5 CCF or less.

Residential Inside City Sewer Rate Bill Impacts (2026 Only)

Single Family		ccf usage				
Current Bills	Mtr.	1	2	4	6	9
Current Monthly Charg	3/4"	$17.66	$17.66	$17.66	$17.66	$17.66
	SC					
Flow Charges	1	$4.63	$9.26	$18.53	$27.79	$41.68
BOD Charges	1	$1.64	$3.27	$6.54	$9.81	$14.72
TSS Charges	1	$1.18	$2.36	$4.73	$7.09	$10.63
Total Existing Bill		$25.11	$32.56	$47.45	$62.35	$84.69
Proposed Bills	EDU					
Monthly Charges	1	$3.70	$3.70	$3.70	$3.70	$3.70
Flow Charges		$8.56	$17.12	$34.24	$51.36	$77.04
Total Proposed Bill		$12.26	$20.82	$37.94	$55.06	$80.74
Increase (Decrease)		-$12.85	-$11.74	-$9.52	-$7.29	-$3.96
% Increase (Decrease)		-51%	-36%	-20%	-12%	-5%

Duplex		ccf usage				
Current Bills	Mtr.	3	4	6	9	14
Current Monthly Charg	3/4"	$17.66	$17.66	$17.66	$17.66	$17.66
	SC					
Flow Charges	1	$13.89	$18.53	$27.79	$41.68	$64.84
BOD Charges	1	$4.91	$6.54	$9.81	$14.72	$22.89
TSS Charges	1	$3.54	$4.73	$7.09	$10.63	$16.54
Total Existing Bill		$40.00	$47.45	$62.35	$84.69	$121.94
Proposed Bills	EDU					
Monthly Charges	2	$7.39	$7.39	$7.39	$7.39	$7.39
Flow Charges		$25.68	$34.24	$51.36	$77.04	$119.84
Total Proposed Bill		$33.07	$41.63	$58.75	$84.43	$127.23
Increase (Decrease)		-$6.93	-$5.82	-$3.60	-$0.26	$5.30
% Increase (Decrease)		-17%	-12%	-6%	0%	4%

Triplex		ccf usage				
Current Bills	Mtr.	4	6	8	12	18
Current Monthly Charg	3/4"	$17.66	$17.66	$17.66	$17.66	$17.66
	SC					
Flow Charges	1	$18.53	$27.79	$37.05	$55.58	$83.37
BOD Charges	1	$6.54	$9.81	$13.08	$19.62	$29.43
TSS Charges	1	$4.73	$7.09	$9.45	$14.18	$21.27
Total Existing Bill		$47.45	$62.35	$77.25	$107.04	$151.73
Proposed Bills	EDU					
Monthly Charges	3	$11.09	$11.09	$11.09	$11.09	$11.09
Flow Charges		$34.24	$51.36	$68.48	$102.72	$154.08
Total Proposed Bill		$45.33	$62.45	$79.57	$113.81	$165.17
Increase (Decrease)		-$2.12	$0.10	$2.32	$6.77	$13.44
% Increase (Decrease)		-4%	0%	3%	6%	9%

Multi-Family Inside City Sewer Rate Bill Impacts (2026 Only)

Multi-Family (Fourplex)	Water Use ccf	9	13	20	30	40
	AMWC	6	9	13	20	27
	Mtr.	3/4"	3/4"	3/4"	1"	2"
Current Bills						
Current Monthly Charge		$17.66	$17.66	$17.66	$51.89	$138.19
	SC					
Flow Charges	1	$29.08	$40.86	$62.16	$91.86	$124.92
BOD Charges	2	$16.69	$23.45	$35.68	$52.73	$71.71
TSS Charges	2	$14.97	$21.03	$32.00	$47.29	$64.31
Total Existing Bill		$78.39	$103.01	$147.51	$243.76	$399.13
Proposed Bills	EDU					
Monthly Charges	4	$14.78	$73.92	$73.92	$73.92	$73.92
Flow Charges		$56.43	$79.29	$120.64	$178.27	$242.43
Total Proposed Bill		$71.21	$153.21	$194.56	$252.18	$316.35
Increase (Decrease)		-$7.18	$50.20	$47.05	$8.42	-$82.78
% Increase (Decrease)		-9%	49%	32%	3%	-21%

Multi-Family (Larger)	Water Use ccf	16	29	60	150	400
	AMWC	10	19	40	100	267
	Mtr.	3/4"	3/4"	3/4"	1"	2"
Current Bills						
Current Monthly Charge		$17.66	$17.66	$17.66	$51.89	$138.19
	SC					
Flow Charges	1	$47.99	$90.25	$185.52	$463.76	$1,234.28
BOD Charges	2	$27.55	$51.81	$106.49	$266.21	$708.52
TSS Charges	2	$24.70	$46.46	$95.50	$238.75	$635.42
Total Existing Bill		$117.90	$206.18	$405.17	$1,020.61	$2,716.40
Proposed Bills	EDU	3	5	10	25	67
Monthly Charges		$9.57	$18.00	$37.01	$92.52	$246.23
Flow Charges		$93.13	$175.15	$360.03	$900.01	$2,395.36
Total Proposed Bill		$102.70	$193.15	$397.04	$992.53	$2,641.60
Increase (Decrease)		-$15.20	-$13.03	-$8.13	-$28.07	-$74.81
% Increase (Decrease)		-13%	-6%	-2%	-3%	-3%

Non-Residential Inside City Sewer Rate Bill Impacts (2026 Only)

Commercial	Water Use ccf	2	5	19	77	284
	AMWC	1	3	11	44	162
Current Bills	Mtr.	3/4"	3/4"	3/4"	1"	2"
Current Monthly Charge		$17.66	$17.66	$17.66	$51.89	$138.19
	SC					
Flow Charges	4	$5.29	$13.23	$50.28	$203.78	$751.62
BOD Charges	2	$3.04	$7.60	$28.86	$116.98	$431.45
TSS Charges	2	$2.72	$6.81	$25.89	$104.91	$386.94
Total Existing Bill		$28.72	$45.30	$122.70	$477.56	$1,708.20
		EDU (1 per 4 ccf)				
Proposed Bills		0.5	1.25	4.75	19.25	71
Monthly Charges		$1.85	$4.62	$17.56	$71.14	$262.40
Flow Charges		$13.36	$33.41	$126.94	$514.46	$1,897.49
Total Proposed Bill		$15.21	$38.03	$144.50	$585.61	$2,159.89
Increase (Decrease)		-$13.51	-$7.27	$21.80	$108.04	$451.70
% Increase (Decrease)		-47%	-16%	18%	23%	26%

Industrial	Water Use ccf	3	10	54	332	1,625
	AMWC	2	7	39	242	1,186
Current Bills	Mtr.	3/4"	3/4"	1"	2"	3"
Current Monthly Charge		$17.66	$17.66	$51.89	$138.19	$704.02
	SC					
Flow Charges	4	$10.14	$33.81	$182.55	$1,122.36	$5,491.81
BOD Charges	2	$5.82	$19.41	$104.79	$644.27	$3,152.47
TSS Charges	2	$5.22	$17.40	$93.98	$577.80	$2,827.22
Total Existing Bill		$38.84	$88.28	$433.21	$2,482.63	$12,175.53
		EDU (1 per 4 ccf)				
Proposed Bills		0.75	2.5	13.5	83	406.125
Monthly Charges		$2.77	$9.24	$49.89	$306.75	$1,500.95
Flow Charges		$20.04	$95.45	$515.42	$3,168.85	$15,505.42
Total Proposed Bill		$22.82	$104.69	$565.31	$3,475.60	$17,006.38
Increase (Decrease)		-$16.03	$16.41	$132.09	$992.97	$4,830.85
% Increase (Decrease)		-41%	19%	30%	40%	40%

Institutional	Water Use ccf	2	7	33	139	404
	AMWC	1	4	17	72	208
Current Bills	Mtr.	3/4"	3/4"	3/4"	1"	2"
Current Monthly Charge		$17.66	$17.66	$17.66	$51.89	$138.19
	SC					
Flow Charges	4	$4.77	$16.71	$78.78	$331.84	$963.77
BOD Charges	2	$2.74	$9.59	$45.22	$190.49	$553.23
TSS Charges	2	$2.46	$8.60	$40.56	$170.83	$496.16
Total Existing Bill		$27.63	$52.57	$182.22	$745.05	$2,151.35
		EDU (1 per 4 ccf)				
Proposed Bills		0.5	1.75	8.25	34.75	100.925
Monthly Charges		$1.85	$6.47	$30.49	$128.43	$373.00
Flow Charges		$13.36	$46.77	$220.48	$928.70	$2,697.25
Total Proposed Bill		$15.21	$53.24	$250.97	$1,057.13	$3,070.24
Increase (Decrease)		-$12.42	$0.67	$68.75	$312.08	$918.89
% Increase (Decrease)		-45%	1%	38%	42%	43%

Single Family & Duplex Inside City Stormwater Rate Bill Impacts (2026 Only)

		Lot Size (<0.25 acres)	Lot Size (>0.25 acres)
Single Family/Duplex	*ESU*	1	1.4
Current Bills			
Current Monthly Charge		$8.33	$8.33
Total Existing Bill		$8.33	$8.33
Proposed Bills			
Monthly Charges		$8.75	$8.75
Total Proposed Bill		$8.75	$8.75
Increase (Decrease)		$0.42	$0.42
% Increase (Decrease)		5%	5%

Triplex & Fourplex Inside City Stormwater Rate Bill Impacts (2026 Only)

Triplex/Fouplex	*ESU*	2
Current Bills		
Current Monthly Charge		$16.64
Total Existing Bill		$16.64
Proposed Bills		
Monthly Charges		$17.50
Total Proposed Bill		$17.50
Increase (Decrease)		$0.86
% Increase (Decrease)		5%

All Other (per 2,500 SF Impervious Area) Inside City Stormwater Rate Bill Impacts (2026 Only)

All Other - Non-credited	*Impervious Area*	5,461	9,198	20,841	67,721	203,906
	ESU	2	4	8	27	82
Current Bills						
Current Monthly Charge		$16.66	$33.32	$66.64	$224.91	$683.06
Total Existing Bill		$16.66	$33.32	$66.64	$224.91	$683.06
Proposed Bills						
Monthly Charges		$17.50	$35.00	$70.00	$236.25	$717.50
Total Proposed Bill		$17.50	$35.00	$70.00	$236.25	$717.50
Increase (Decrease)		$0.84	$1.68	$3.36	$11.34	$34.44
% Increase (Decrease)		5%	5%	5%	5%	5%

All Other - Credited	*Impervious Area*	5,461	9,198	20,841	67,721	203,906
	ESU	2	4	8	27	82
Current Bills						
Current Monthly Charge		$16.66	$33.32	$66.64	$224.91	$683.06
Credit - 70%		($11.66)	($23.32)	($46.65)	($157.44)	($478.14)
Total Existing Bill		$5.00	$10.00	$19.99	$67.47	$204.92
Proposed Bills						
Monthly Charges		$17.50	$35.00	$70.00	$236.25	$717.50
Credit - 55%		($9.63)	($19.25)	($38.50)	($129.94)	($394.63)
Total Proposed Bill		$7.88	$15.75	$31.50	$106.31	$322.88
Increase (Decrease)		$2.88	$5.75	$11.51	$38.84	$117.96
% Increase (Decrease)		58%	58%	58%	58%	58%