DRAFT

WATER AND SEWER RATE STUDY

BLACK & VEATCH PROJECT NO. 410918

PREPARED FOR

City of Santa Clara, CA

28 MAY 2024

BLACK & VEATCH

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Legal Notice

Black & Veatch has prepared this report for the City, and it is based on information not within the control of Black & Veatch. The City has not requested Black & Veatch to make an independent analysis, verify the information provided to us, or render an independent judgment of the validity of the information provided by others. Because of this, Black & Veatch cannot, and does not, guarantee the accuracy thereof to the extent that such information, data, or opinions were based on information provided by others.

In conducting these analyses and in forming an opinion of the projection of future financial operations summarized in this report, Black & Veatch made certain assumptions on the conditions, events, and circumstances that may occur in the future. The methodology utilized in performing the analyses follows generally accepted practices for such projections. Such assumptions and methodologies are reasonable and appropriate for the purpose for which they are used. While we believe the assumptions are reasonable and the projection methodology valid, actual results may differ materially from those projected, as influenced by the conditions, events, and circumstances that occur. Such factors may include the utilities' ability to execute the capital improvement program as scheduled and within budget, regional climate and weather conditions affecting the demand for water, discharge of sewage flow, and adverse legislative, regulatory, or legal decisions (including environmental laws and regulations) affecting the utilities' ability to manage the system and meet water quality requirements.

1.0 Executive Summary

The City of Santa Clara (City) commissioned Black & Veatch Management Consulting, LLC (Black & Veatch) to perform an update of the Water and Sewer Rate Study (Study) for its Water, Recycled Water, and Sewer Utilities. The Study included the development of a three-year financial plan, a cost-of-service analysis, and the design of rates. In addition, a ten-year financial plan was developed to provide the City with a high-level view of each utility's operations. The specific objectives of the Study were to:

- Evaluate the adequacy of projected revenues under existing rates to meet projected revenue requirements.
- Develop sound financial plans for the utilities covering a three and ten-year period for both ongoing operations and planned capital improvements.
- Allocate the utilities' projected revenue requirements to the various customer classes in accordance with their respective service requirements.
- Develop a suitable rate schedule that produces revenues adequate to meet financial needs while recognizing customer costs of service and regulatory considerations such as Proposition 218 and applicable judicial decisions.

1.1 Water System

The Water Utility provides water services to over 26,415 residential, commercial, irrigation, schools, and agricultural customers. The City obtains potable water from three primary sources: local groundwater, surface water from the Santa Clara Valley Water District (Valley Water) and imported water from the Hetch Hetchy watershed through the San Francisco Public Utilities Commission (SFPUC). The water system infrastructure consists of 335 miles of transmission and distribution mains, 7 storage tanks totaling 28.8 million gallons of storage capacity, 21 wells, and 3 booster pump stations. The City has a target of obtaining 68% of the 5.8 billion gallons of water that flows to its customers each year from the City's wells.

1.2 Recycled Water System

The Recycled Water Utility, operating since 1989, provides recycled water services to over 361 commercial, irrigation, and industrial customers. The City obtains recycled water from South Bay Water Recycling. The recycled water comes from the San Jose-Santa Clara Regional Wastewater Facility (RWF), an advanced tertiary treatment facility located in San Jose, of which the City is a co-owner. The recycled water infrastructure within the City limit boundary mainly consists of 34 miles of recycled water pipelines. A portion of the recycled water from the RWF supplies the Valley Water's Silicon Valley Advanced Water Purification Center for advanced treatment (microfiltration, reverse osmosis, and advanced oxidation) to create a mix of high-quality recycled water that is blended back into the recycled water system.

1.3 Sewer System

The Sewer Utility provides sewer services to over 25,547 residential, commercial, industrial, and municipal customers. Services include the construction and maintenance of the sewer system and installing sewer lateral clean-outs at the property line. Sanitary sewer flows in the City are collected and transported through more than 288 miles of sewer main by way of six pumping stations to the San Jose-Santa Clara Regional Wastewater Facility. The RWF is a regional treatment facility that receives waste from seven agencies in Santa Clara County and can treat 167 million gallons a day (MGD) of liquid waste.

1.4 Financial Plan

The City operates the utilities as individual self-supporting enterprises. Therefore, the utilities must develop financial plans that provide sufficient revenues to meet all operation and maintenance expenses, water purchases, wastewater treatment, debt service requirements, capital improvements funded from current revenues, and other expenditures.

The Study develops financial plans that project operating revenue, expenses, and capital financing costs for the utilities over a ten-year planning period beginning July 1, 2024 and ending June 30, 2034. This report will focus on a three-year planning period for discussion, beginning July 1, 2024 and ending June 30, 2027. The full ten-year financial plans can be found in Appendix A.

The financial plans project future rate revenues under existing rates, operations, and maintenance (O&M) expenses, principal and interest expense on debt, transfers, and capital improvement program (CIP) requirements. In the projection of rate revenues, annual projections of customers and water consumption rely upon the City's historical data and estimates of growth. In addition, the Water Utility's forecast incorporates efforts to continue to encourage conservation measures of maintaining a 15% voluntary water use reduction and the City's Water Shortage Contingency Plan.

1.4.1 Water Utility

The Water Utility's revenue requirements are summarized below:

- Operation and Maintenance Expenses: The Water Utility anticipates O&M expenses to increase from $59.0M in FY 2025 to $68.5M in FY 2027. Water production and water purchases account for most of this increase, representing an average of 65% of O&M expenses.
- Debt Service: The Water Utility has no existing debt service, and no future debt is planned.
- Capital Improvements: The Water Utility plans to execute an average of $6.1M per year in capital projects from FY 2025 to FY 2027.
- Reserves: The Water Utility plans to continue funding the operating fund reserve, construction fund reserve, rate stabilization fund reserve, and pension stabilization reserve.
    - The operating fund reserve is to help cover fluctuations in day-to-day expenses. The scheduled target is 90 days of O&M expenses.
    - The infrastructure fund reserve is to help maintain enough funds on hand to help mitigate unexpected capital costs. The scheduled target is 12-months of the following year's CIP.
    - The rate stabilization fund reserve is to help mitigate future increases in drought-stricken years. The scheduled target is 10% of the prior year's rate revenues.
    - The pension fund reserve is to pay for the unfunded pension liabilities and the increase in the City's share of pension costs due to factors such as higher CalPERS rates and negotiated pay increases.

The Water Utility is proposing revenue adjustments to allow it to operate the enterprise on a revenue-neutral basis and meet reserve targets by FY 2027, as shown in Figure 1-1 and Figure 1-2.

Figure 1-1 Water Operating Cashflow

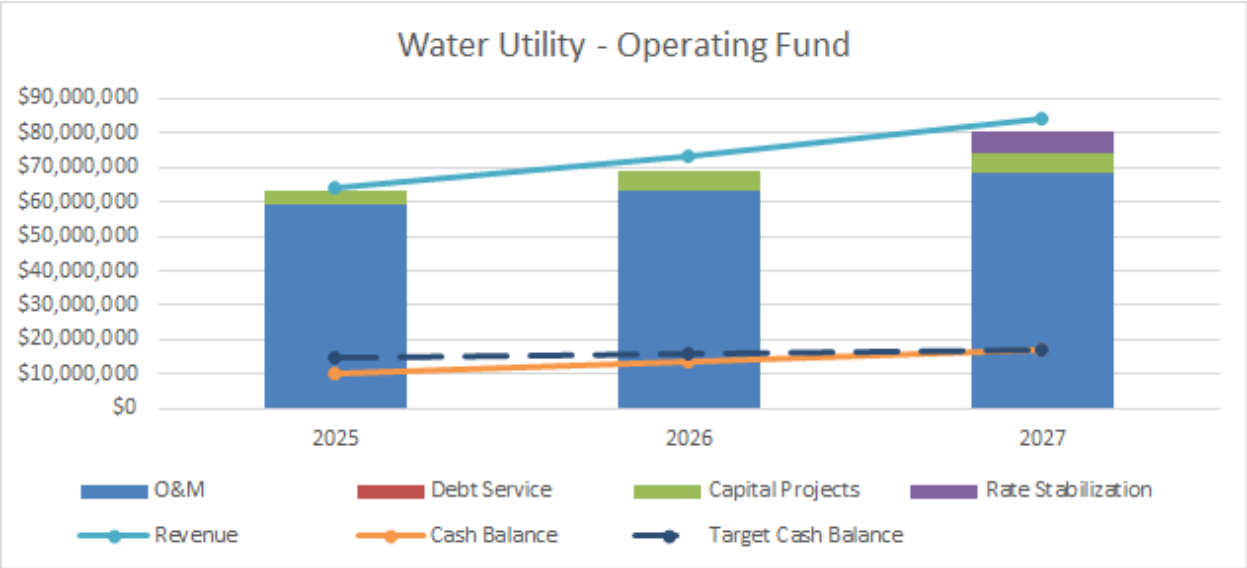
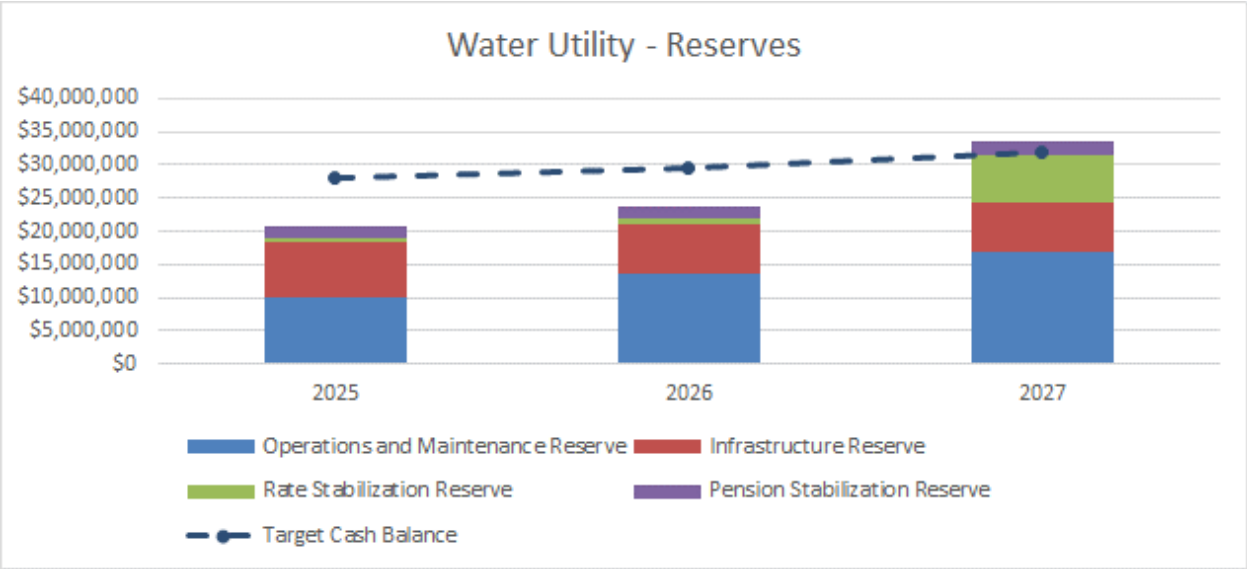


Figure 1-2 Water Reserves



1.4.2 Recycle Water Utility

The Recycled Water Utility's revenue requirements are summarized below:

- Operation and Maintenance Expenses: The Recycled Water Utility anticipates O&M expenses to increase from $9.2M in FY 2025 to $11.7M in FY 2027. Recycled water purchase costs constitute most of the increase, averaging 84% of O&M expenses.
- Debt Service: The Recycled Water Utility has no existing debt service, and no future debt is planned.
- Capital Improvements: The Recycled Water Utility plans to execute an average of $174.6k per year in capital projects from FY 2025 to FY 2027.

- Reserves: The City plans to continue funding the operating fund reserve, construction fund reserve, rate stabilization fund reserve, and pension stabilization reserve.
  - The operating fund reserve is to help cover fluctuations in day-to-day expenses. The scheduled target is 90 days of O&M expenses.
  - The infrastructure fund reserve is to help maintain enough funds on hand to help mitigate unexpected capital costs. The scheduled target is 12-months of the following year's CIP.
  - The rate stabilization fund reserve is to help mitigate future increases in drought-stricken years. The scheduled target is 10% of the prior year's rate revenues.
  - The pension fund reserve is to pay for the unfunded pension liabilities and the increase in the City's share of pension costs due to factors such as higher CalPERS rates and negotiated pay increases.

The Recycled Water Utility is proposing revenue adjustments and drawing down on reserves to allow it to operate the enterprise on a revenue-neutral basis and meet reserve targets, as shown in Figure 1-3 and Figure 1-4.

Figure 1-3 Recycled Water Operating Cash Flow

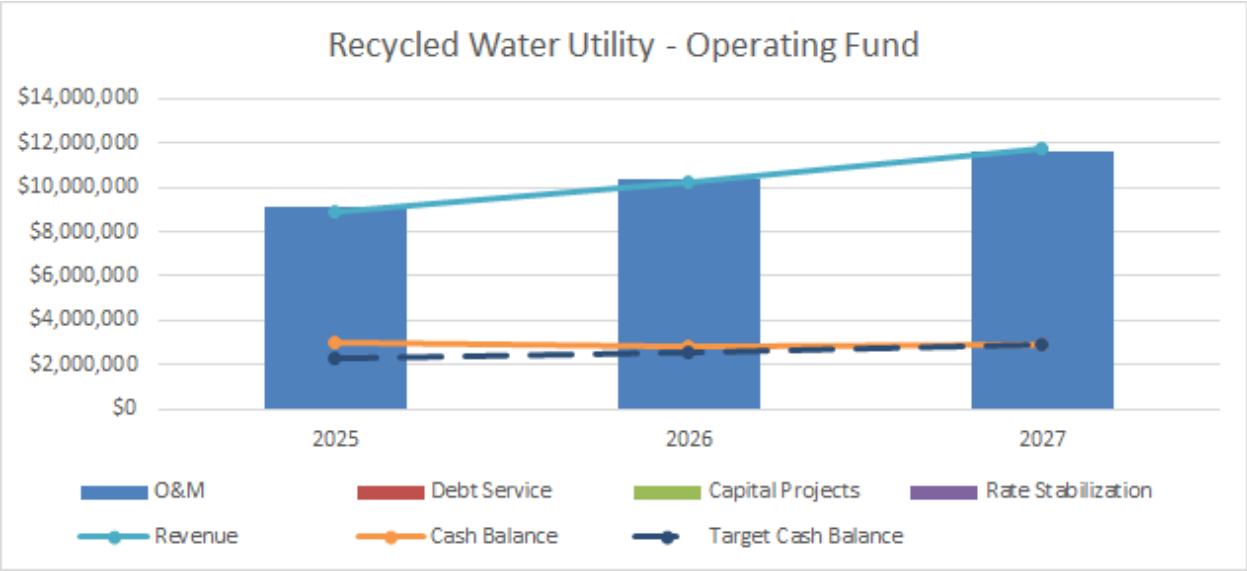
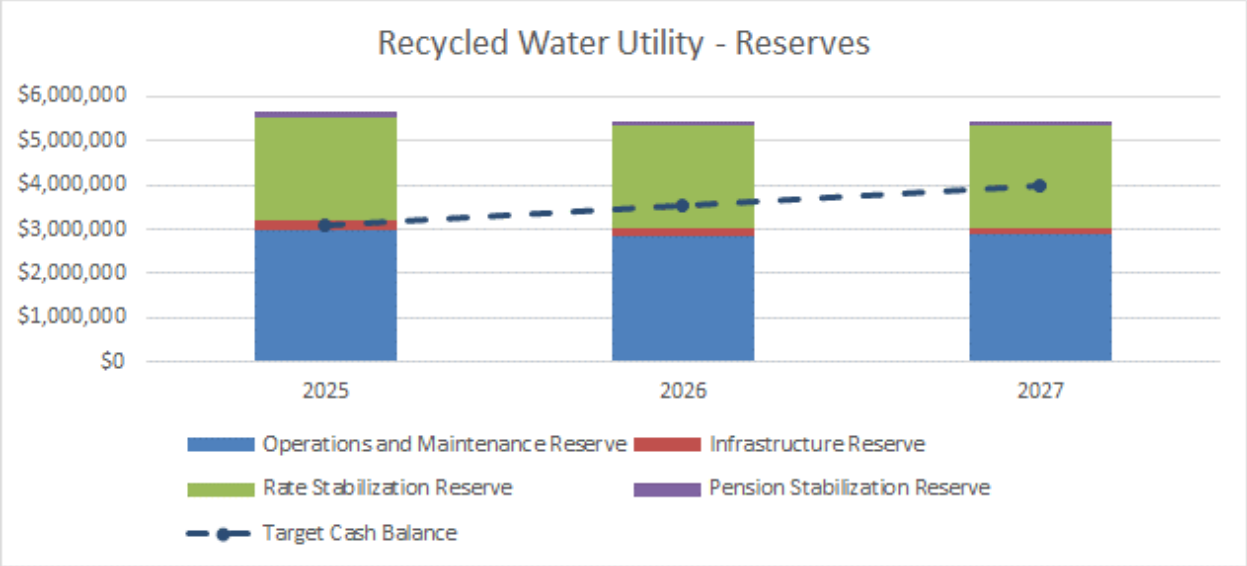


Figure 1-4 Recycled Water Reserves



1.4.3 Sewer Utility

The Sewer Utility's revenue requirements are summarized below:

- Operation and Maintenance Expenses: The Sewer Utility anticipates O&M expenses to increase from $30.1M in FY 2025 to $32.3M in FY 2027. RWF-related costs represent an average of 69% of O&M expenses.
- Debt Service: The Sewer Utility anticipates an average debt service payment of $3.6M per year from FY 2025 to FY 2027 associated with existing and proposed debt issuances. The City anticipates a new revenue bond for $18.0M to be issued in 2027.
- Capital Improvements: The Sewer Utility plans to execute an average of $13.9M per year in capital projects from FY 2025 to FY 2027.
- Reserves: The Sewer Utility plans to continue funding the operating fund reserve, construction fund reserve, rate stabilization fund reserve, and pension stabilization reserve.
  - The operating fund reserve is to help cover fluctuations in day-to-day expenses. The scheduled target is 90 days of O&M expenses.
  - The infrastructure fund reserve is to help maintain enough funds on hand to help mitigate unexpected capital costs. The scheduled target is 12-months of the following year's City CIP and 6-months of the following year's SJSCRWF CIP.
  - The rate stabilization fund reserve is to help mitigate future increases in drought-stricken years. The scheduled target is 10% of the prior year's rate revenues.
  - The pension fund reserve is to pay for the unfunded pension liabilities and the increase in the City's share of pension costs due to factors such as higher CalPERS rates and negotiated pay increases.

The Sewer Utility is proposing revenue adjustments and drawing down on reserves to allow it to operate the enterprise on a revenue-neutral basis and meet reserve targets, as shown in Figure 1-5 and Figure 1-6.

Figure 1-5 Sewer Operating Cash Flow

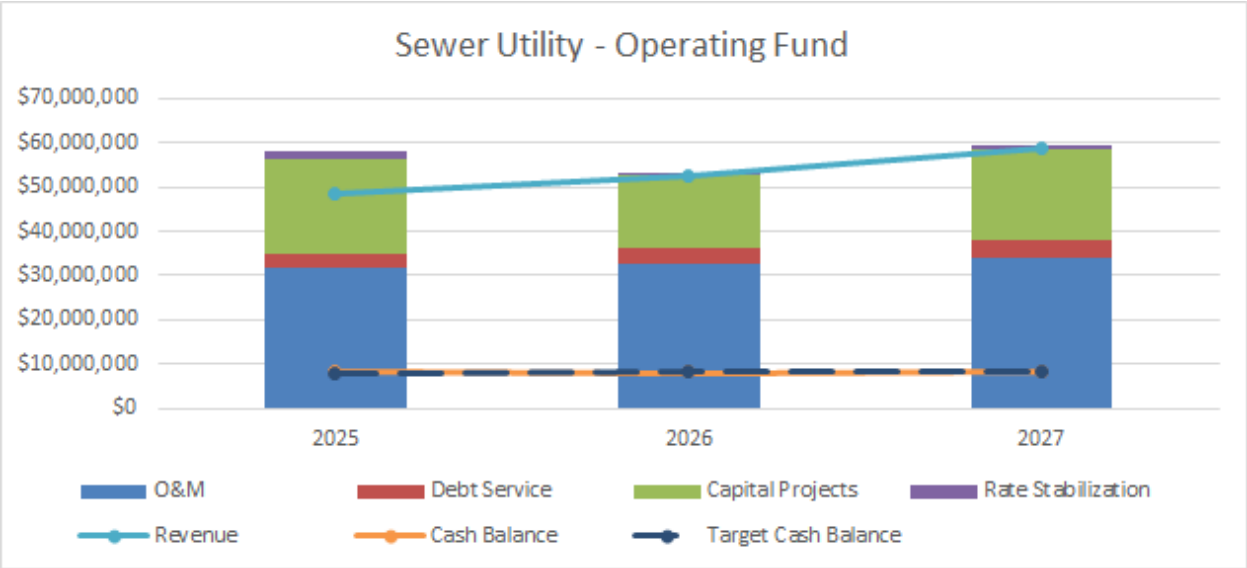
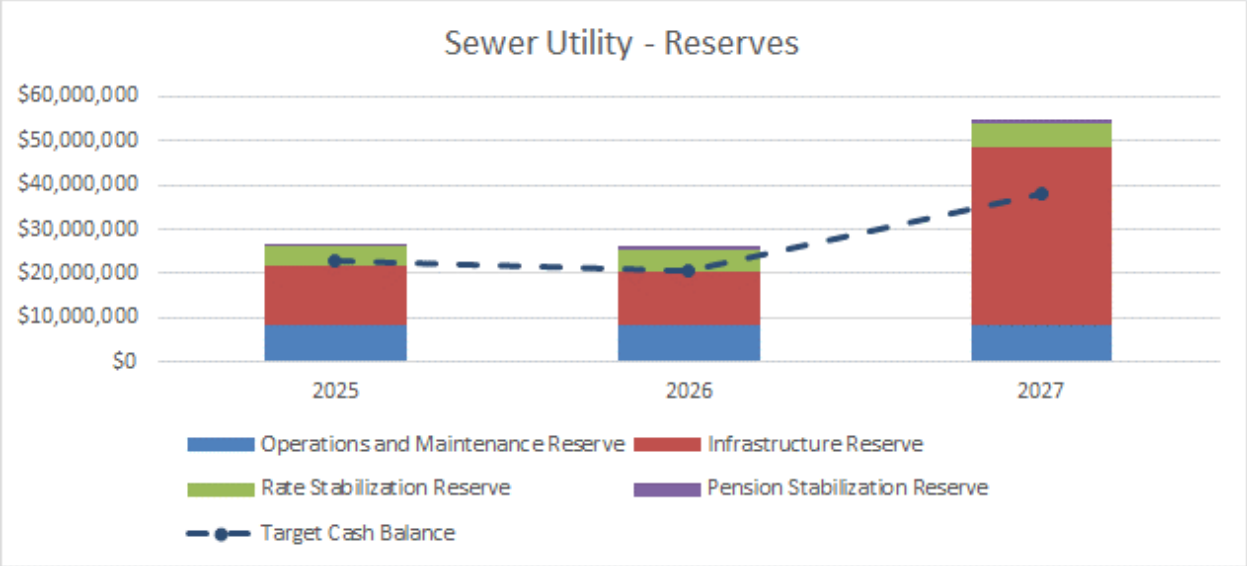


Figure 1-6 Sewer Reserves



1.5 Adequacy of Existing Rates to Meet Costs of Service

Based on the financial plans, Black & Veatch recommends the revenue adjustments shown in Table 1-1 to meet the projected revenue requirements for FY 2025 to FY 2027. These do not represent proposed rate increases to customers. Rather, these represent the overall revenue increases the utilities need to meet their overall obligations and maintain current service levels.

Table 1-1 Proposed Revenue Adjustments

Fiscal Year	Effective Month	Water Utility	Recycled Water	Sewer Utility
FY 2025	July	15.30%	15.00%	12.15%
FY 2026	July	15.30%	15.00%	12.15%
FY 2027	July	15.30%	15.00%	12.15%

1.6 Cost of Service Analysis

The cost-of-service analysis allocates the costs to the various customer classes of service in a fair and equitable manner. The methodologies used in the Study are specific to the respective utility operations. The following is a brief description of the methodologies.

The water and recycled water cost-of-service allocation performed in this Study uses the Base-Extra Capacity Method endorsed by the American Water Works Association (AWWA) Principles of Water Rates, Fees, and Charges, M1 (M1) manual. Under cost-of-service principles, costs are allocated to the different customer classes in proportion to their water system use. As recommended by AWWA, Black & Veatch distributed functional costs to the base (average load conditions), extra capacity (peaking), and customer-related parameters. This allocation methodology produces unit costs for allocation to individual customer classes based on the projected customer service requirements.

The sewer cost-of-service allocation performed in this Study follows the Functional Cost Allocation Method endorsed by the Water Environment Federation (WEF) Financing and Charges for Wastewater Systems, Manual of Practice 27 (MoP27) manual. Like the methodology used for water systems, the sewer cost of service analysis allocates costs to the different customer classes in proportion to their use of the sewer system. As recommended by WEF, Black & Veatch distributed functional costs to volume, strength, and customer-related parameters. This allocation methodology produces unit costs for allocation to individual customer classes based on the projected customer service requirements.

1.7 Rate Design

The Right to Vote on Taxes Act, also known as Proposition 218, was passed by California voters in 1996 and added Article XIIIC and Article XIIID to the California Constitution. These articles provide the regulatory framework that guides and informs the rate-setting process. The cost-of-service analyses provide the cost nexus for the proposed rate structures. The regulatory framework helps ensure cost recovery is proportionate to the cost of providing the service.

1.7.1 Water and Recycled Water Utilities

To minimize impacts, retain simplicity, and ensure the reasonable stability of revenue, Black & Veatch recommends the following rate structure.

- Monthly Service Charge: The Water and Recycled Water Utilities should retain the minimum monthly service charge based on meter sizes for all customer classes. The minimum monthly service charge includes a minimum consumption allowance and recovers portions of fixed cost elements such as operating and capital components, meter maintenance and services, meter reading, issuing bills, and maintenance and capacity costs associated with public fire protection. The minimum consumption allowance accommodates water considered essential for health and safety.
- Consumption Charge: The Water and Recycled Water Utilities should maintain the uniform consumption charge for all customer classes. The consumption charge recovers costs associated with the base and extra capacity demands.

- Fire Service Charge: The Water Utility should continue to utilize the fire service charge based on meter size for private fire service connections. The fire service charge will recover maintenance and capacity costs associated with private fire protection costs.
- Cross Connection Charge: The Water Utility should continue to utilize the cross-connection charge based on meter size for backflow connections. The cross-connection charge will recover the costs of maintenance associated with backflow devices.

Table 1-2 summarizes the recommended three-year rate schedules for all Water Utility components.

Table 1-2 Proposed Three-Year Water Rate Schedule

Customer Class	Proposed		
	FY 2025	FY 2026	FY 2027
Minimum Monthly Meter Rates ($/Month)	$/month	$/month	$/month
5/8" x 3/4"	23.42	26.89	30.90
1"	36.67	42.24	48.66
1-1/2"	69.78	80.61	93.06
2"	109.51	126.65	146.33
3"	215.46	249.43	288.41
4"	334.66	387.56	448.24
6"	665.77	771.26	892.22
8"	1,063.09	1,231.69	1,425.00
10"	1,592.86	1,845.60	2,135.37
12"	2,238.52	2,593.80	3,001.13
Fire Service ($/Month)	$/month	$/month	$/month
2"	3.15	3.55	3.95
4"	17.84	20.09	22.39
6"	52.48	59.09	65.86
8"	111.78	125.86	140.28
10"	201.00	226.31	252.23
12"	324.85	365.76	407.66
Cross Connection ($/Month)	$/month	$/month	$/month
1"	8.60	9.45	10.42
2"	13.76	15.11	16.68
3"	27.53	30.23	33.36
4"	43.01	47.23	52.12
6"	86.02	94.46	104.25
8"	137.63	151.14	166.79
10"	206.44	226.71	250.19
Consumption Charges ($/HCF)			
General Customer	8.90	10.27	11.87

Table 1-3 summarizes the recommended three-year rate schedules for all Recycled Water Utility components.

Table 1-3 Proposed Three-Year Recycled Water Rate Schedule

Customer Class	Proposed		
	FY 2025	FY 2026	FY 2027
Minimum Monthly Meter Rates ($/Month)	$/month	$/month	$/month
5/8" x 3/4"	17.44	20.06	23.11
1"	28.43	32.77	37.83
1-1/2"	55.91	64.57	74.63
2"	88.88	102.72	118.79
3"	176.80	204.47	236.55
4"	275.71	318.93	369.04
6"	550.46	636.89	737.05
8"	880.16	1,018.44	1,178.66
10"	1,319.76	1,527.17	1,767.47
12"	1,855.53	2,147.18	2,485.09
Consumption Charges ($/HCF)			
General Customers	5.06	5.82	6.69

1.7.2 Sewer Utility

To minimize impacts, retain simplicity, and ensure the reasonable stability of revenue, Black & Veatch recommends the following rate structure.

- Monthly Service Charge: The Sewer Utility should retain the monthly service charge based on equivalent dwelling units (EDUs) for all residential customer classes. In addition, the monthly service charge serves as the base amount, or minimum, for all non-residential customer classes.
- Consumption Charge: The Sewer Utility should retain its uniform consumption charges for each non-residential customer class. The recommended rate structure should be based on customer class.
- Major Commercial and Industrial Users: The Sewer Utility should retain the major commercial and industrial user charge for customers with high discharge quantities and/or high strength loadings.

Table 1-4 summarizes the recommended three-year rate schedules for all Sewer Utility components.

Table 1-4 Proposed Three-Year Sewer Rate Schedules

Line No.	Customer Class	Proposed FY 2025	Proposed FY 2026	Proposed FY 2027
	Monthly Service Charge ($/EDU)	$/month	$/month	$/month
1	Single Family	52.37	59.79	66.30
2	Multi-Family	49.31	56.09	62.30
	Minimum Commercial Bill Charge ($/Month)	$/month	$/month	$/month
3	All Customers	52.37	59.79	66.30
	Commodity Charge ($/HCF)	$/HCF	$/HCF	$/HCF
1	Amusement Parks	6.93	7.46	8.59
2	Auto Dealers & Service Station	7.80	8.70	9.81
3	Churches	6.12	6.54	7.56
4	Com/Ind/Misc	6.61	7.11	8.19
5	Electric & Electronic Equip.	6.18	6.48	7.59
6	Food and Kindred Products	15.74	18.89	20.38
7	Hospitals & Convalescent Homes	7.60	8.35	9.50
8	Industrial Chemical	11.58	13.53	14.83
9	Laundries	6.80	7.32	8.43
10	Machinery Manufacturers	9.33	10.73	11.88
11	Metal Plating	5.05	5.12	6.12
12	Motels & Hotels	8.09	8.96	10.14
13	Paper	4.44	6.67	6.67
14	Repair Shops & Car Washes	5.90	6.47	7.37
15	Restaurants	16.01	19.27	20.75
16	Schools & Colleges	7.31	8.05	9.16
	Major Commercial and Industrial Users			
	Operating and Maintenance Cost Recovery			
1	Volume ($/MG)	3,671.11	4,020.89	4,192.10
2	BOD ($/1,000 lbs)	561.28	773.87	807.45
3	SS ($/1,000 lbs)	651.81	898.69	937.67
4	NH3 ($/1,000 lbs)	4,980.00	6,866.22	7,164.09
	Annual Capital Cost Recovery			
5	Volume ($/MGD)	1,306,599	1,212,316	1,673,838
6	BOD ($/1,000 lbs/day)	124,262	144,032	144,561
7	SS ($/1,000 lbs/day)	114,880	131,162	131,597
8	NH3 ($/1,000 lbs/day)	538,093	585,442	586,786

Water and Recycled Water Utilities

2.0 Revenue and Revenue Requirements

To meet the costs associated with providing water services to its customers, the Water and Recycled Water Utilities derive revenue from a variety of sources, including water user charges (rates), developer contributions, solar water heating, interest earned from the investment of available funds, engineering fees, and other miscellaneous revenues. Both utilities are constantly looking for other sources of revenue, such as grants, to fund infrastructure investments. Black & Veatch has projected the level of future revenue generated in the Study through an analysis of historical and future system growth in terms of the number of bills and water consumption. This section also projects the expenses, or revenue requirements, necessary to operate and maintain the system, invest in capital improvements, make debt service payments, and cover other water and recycled water systems expenses.

2.1 Customer and Water Consumption

2.1.1 Customer Classes

The Water Utility's customer base includes both residential and non-residential accounts. The City has three distinct customer classes: General Customer, Fire Service, and Cross Connection.

The Recycled Water Utility's customers are mainly non-residential. The City has two distinct customer classes: General Customer and Industrial Process. The City is working on transitioning Industrial Process to General Customer.

2.1.2 Minimum Bills

The City provides potable water services to 26,804 customers and recycled water services to 272 customers. All customers connected to the water and recycled water systems do so through metered connections. The City bills customers based on water consumption, but several bills do not meet the consumption allowance identified by meter size. Therefore, the City refers to these bills as minimum monthly service bills. Since the City bills customers based on minimum bills generated, the analysis included a review of historical bill patterns for customers and anticipated growth within the City. The projected total number of bills is expected to remain constant each year for the Water Utility and increase by an average of 1.0% for the Recycled Water Utility.

Table 2-1 summarizes the projected number of minimum bills for the Water and Recycled Water Utilities.

Table 2-1 Minimum Bills

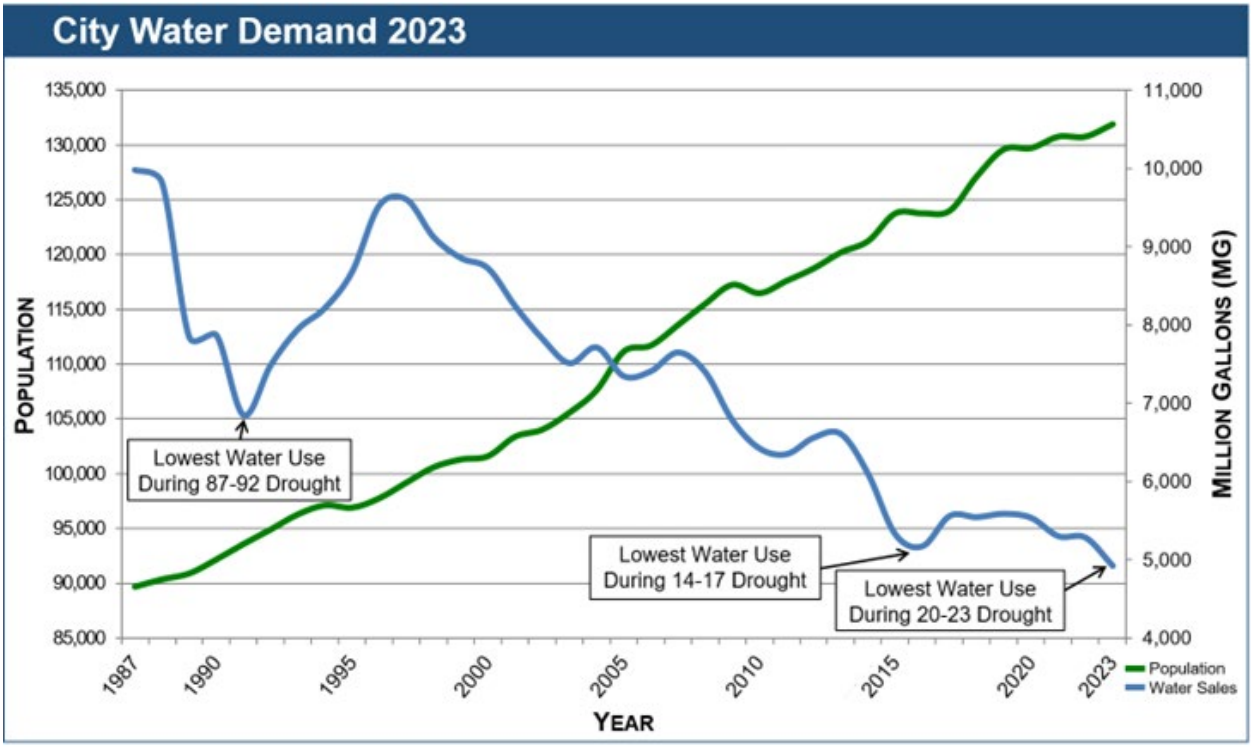
Line No.	Description	Fiscal Year Ending June 30,		
		FY 2025	FY 2026	FY 2027
		(Bills)	(Bills)	(Bills)
	Water Utility			
1	General Customers	54,607	54,607	54,607
2	Total	54,607	54,607	54,607
	Recycled Water Utility			
3	General Customers	904	913	922
4	Total	904	913	922

2.1.3 Water Consumption

Table 2-2 shows the projected water and recycled water consumption for the Study period. In determining the projected water and recycled water consumption, Black & Veatch analyzed historical water consumption patterns in conjunction with future water conservation requirements set by the City's Water Shortage Contingency Plan. In 2017, the State of California formally lifted the water restrictions as it declared the drought over. Unfortunately, in 2022 after another three year of dry weather, Governor Newsom called for local water suppliers to move to Level 2 of their Water Shortage Contingency Plans to drive water conservation. The City then moved to Level 2 in conjunction with Valley Water. In July 2023, after increased rainfall, the City rescinded Level 2 and have returned to normal. Despite this, the City and Valley Water work together to maintain a 15% voluntary water use reduction.

Figure 2-1 below represents the population growth and a decline in water consumption. Many factors have contributed to the City's steady decline in consumption despite the increase in population. The City's primary conservation goals can be found in the Water Shortage Contingency Plan, and Santa Clara's Council codified the continuing goal to conserve in July of 2017. The City offers a rain barrel rebate program and works with the Valley Water on other outreach and rebate programs for water conservation. Expanding the use of recycled water to existing and new customers has also been important for the City in supplementing the use of potable water. Overall, customers have done well to increase efficiency in the use of water resources.

Figure 2-1 Water Sales



Recognizing that the City's water conservation goals, the City anticipates flat consumption for the Water Utility and 1.0% per year for the Recycled Water Utility over the Study period. The City currently bills water consumption in hundred cubic feet (HCF) and only charges for consumption more than the allowance.

Table 2-2 Billed Water Consumption

Line No.	Description	Fiscal Year Ending June 30,		
		FY 2025	FY 2026	FY 2027
		(HCF)	(HCF)	(HCF)
	Water Utility			
1	General Customers	6,300,168	6,300,168	6,300,168
2	Total Usage (HCF)	6,300,168	6,300,168	6,300,168
3	Total Usage (AF)	14,463	14,463	14,463
	Recycled Water Utility			
4	General Customers	1,566,335	1,581,998	1,597,818
5	Total	1,566,335	1,581,998	1,597,818
6	Total Usage (AF)	3,596	3,632	3,668

2.2 Revenue under Existing Rates

Water and recycled water user rates serve as the primary source of revenue for the Water and Recycled Water Utilities. Therefore, the level of future rate revenue is important in developing a long-range financial plan. To determine rate revenue, the projected system growth in terms of the number of minimum bills and billed water consumption is multiplied by the applicable rates to determine water and recycled water rate revenue.

Table 2-3 shows the current Water and Recycled Water Utilities rate schedules. It is important to note that the minimum monthly service charge applies to customers that do not exceed the consumption allowance within the meter sizes. Therefore, the minimum monthly service charge serves as a baseline cost that the City needs to recover.

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Table 2-3 Existing Water and Recycled Water Rates

Description	All City FY 2024
Minimum Monthly Meter Rates	($/mo)
5/8" x 3/4"	21.48
1"	33.66
1-1/2"	64.10
2"	100.64
3"	198.07
4"	307.67
6"	612.14
8"	977.49
10"	1,464.63
12"	2,058.33
Fire Service Charges	($/mo)
2"	2.95
4"	16.71
6"	49.15
8"	104.68
10"	188.23
12"	304.21
Cross Connection Charges	($/mo)
1"	6.73
2"	10.78
3"	21.55
4"	33.67
6"	67.34
8"	107.75
10"	161.63

Description	All City FY 2024
Consumption Charges	
Water Utility	($/HCF)
General Customers	7.97
Recycled Water Utility	($/HCF)
General Customers	4.53

Table 2-4 summarizes projected water and recycled water rate revenue under existing rates. As shown, the revenue generated is projected to increase for recycled water over the Study period in conjunction with the increase in the number of minimum bills and water consumption. The projected Water Utility revenues will remain constant at $53.0M from FY 2025 to FY 2027, while the projected Recycled Water Utility revenue increases from $7.0M in FY 2025 to $7.1M in FY 2027, reflecting an overall increase of 2.0% over the three-year Study period.

Table 2-4 Projected Revenue under Existing Rates

Line No.	Description	Fiscal Year Ending June 30,		
		FY 2025	FY 2026	FY 2027
		($)	($)	($)
	Water Utility			
1	General Customers	50,893,400	50,893,400	50,893,400
2	Fire Service	1,000,700	1,001,600	1,002,600
3	Cross Connection	1,058,200	1,059,300	1,060,500
4	Total	$ 52,952,300	$ 52,954,300	$ 52,956,500
	Recycled Water Utility			
5	General Customers	6,990,300	7,060,200	7,130,700
6	Total	$ 6,990,300	$ 7,060,200	$ 7,130,700

2.3 Other Revenue

Other sources of operating revenue include charges for hydrant flow tests, meter tests, engineering plan review, water installation and relocation, interest on investments, and other miscellaneous revenues. In total, other operating revenues represent 3.5% of the Water Utility's total revenue and 8.4% of the Recycled Water Utility's total revenue. The City anticipates that these revenues will remain relatively constant for the duration of the Study period.

2.4 Operating and Maintenance Expenses

Table 2-5 summarizes the Water and Recycled Water Utilities' projected O&M expense for the Study period. These expenses include costs related to salaries and benefits, materials and supplies, contract and professional services, water supply costs, indirect and direct costs, and routine capital outlay. The City anticipates that all O&M expenditures, excluding water supply costs, will increase on average by 3.9% annually for the Water Utility and an average of 6.1% annually for the Recycled Water Utility from the FY 2025.

Water supply costs include water produced and water purchased costs. In the case of the Water Utility, the City has three main sources of water: 1) groundwater pumped from City-owned wells; 2) surface water from the Valley Water and 3) imported water from the Hetch Hetchy watershed from SFPUC. The City operates 26 groundwater wells that tap the underground aquifers, which make up a targeted amount of approximately 60% of the City's water supply. The City imports the remainder of its water supplies from the two wholesale water agencies. Based on estimates of groundwater and wholesale rates provided by Valley Water and SFPUC, the City expects water production and purchased water costs to increase by at least 21.0% over the Study period.

Recycled water is a reliable drought-proof source of water that helps offset the use of potable sources, especially in drought-prone years in California. In the case of the Recycled Water Utility, the City has one main source of recycled water: The San Jose-Santa Clara Regional Wastewater Facility. This facility produces highly treated water delivered through separate pipelines. Based on estimates from the facility, the City expects purchased recycled water costs to increase by at least 30.2% over the Study period.

Table 2-5 O&M Expenses

Line No.	Description	Fiscal Year Ending June 30,		
		FY 2025	FY 2026	FY 2027
		($)	($)	($)
	Water Utility			
1	Salaries	6,119,600	6,425,700	6,727,700
2	Benefits	3,519,800	3,674,100	3,674,100
3	Materials/Services/Supplies	3,768,300	3,843,600	3,920,400
4	Interfund Services	8,206,000	8,661,460	9,030,180
5	Resource & Production	37,359,400	40,910,200	45,187,500
6	Capital Outlay	0	0	0
7	Total	$ 58,973,100	$ 63,515,060	$ 68,539,880
	Recycled Water Utility			
8	Salaries	614,000	643,400	674,900
9	Benefits	353,300	368,300	368,300
10	Materials/Services/Supplies	39,100	39,900	40,700
11	Interfund Services	522,300	577,050	637,380
12	Resource & Production	7,636,200	8,716,200	9,942,800
13	Capital Outlay	0	0	0
14	Total	$ 9,164,900	$ 10,344,850	$ 11,664,080

As shown in Table 2-5, the Water Utility's O&M expenses increase from $59.0M in FY 2025 to $68.5M in FY 2027, while the Recycled Water Utility's O&M expenses increase from $9.2M in FY 2025 to $11.7M in FY 2027.

2.5 Capital Improvement Program

The Water and Recycled Water Utilities develop five-year Capital Improvement Plans annually to identify water and recycled water system needs, including assessments, inspections, maintenance, and rehabilitation and replacement requirements.

Table 2-6 summarizes the Water and Recycled Water Utilities CIP for FY 2025 through FY 2027. The Water Utility is projecting $18.4M in CIP, and the Recycled Water Utility is projecting $523.8k in CIP over the Study period, which includes both capital and replacement projects. The City has posted the CIP Budget on its website for complete details associated with each CIP project.

Table 2-6 Capital Improvement Projects

Line No.	Description	Fiscal Year Ending June 30, FY 2025	FY 2026	FY 2027
		($)	($)	($)
	Water Utility			
1	7005 Buildings and Grounds	1,088,100	2,416,100	55,600
2	7054 Distribution System Replacement/Restoration	3,419,600	3,221,400	3,338,200
3	7057 Asset Management Program	0	0	0
4	7058 SCADA Improvements	253,900	349,000	389,500
5	7059 New and Replacement Wells	1,243,500	644,300	2,002,900
6	Total	$ 6,005,100	$ 6,630,800	$ 5,786,200
	Recycled Water Utility			
7	7505 Recycled Water System Mains and Services	414,500	53,700	55,600
8	Total	$ 414,500	$ 53,700	$ 55,600

2.5.1 Capital Improvement Financing Plan

The City funds annual expenditures for the CIP from a combination of available funds on hand, connection charges, developer contributions, and revenues derived from user rates. As shown in Table 2-7 and Table 2-8, the average annual CIP expenditure is $6.1M for the Water Utility and $174.6k for the Recycled Water Utility. There is no planned annual CIP contribution from the Water Utility Operating Fund and Recycled Water Utility over the Study period. The CIP will be funded through funds on hand.

Table 2-7 Construction Fund Financing Plan (Water)

Line No.	Description	Fiscal Year Ending June 30, FY 2025	FY 2026	FY 2027
		($)	($)	($)
	Source of Funds			
1	Intra Transfer In - Debt Financing	0	0	0
2	Intra Transfer In - Customer Service Charge	4,550,000	5,750,000	5,750,000
3	Connection Charges	0	0	0
4	Developer Contributions	0	0	0
5	Total Sources	$ 4,550,000	$ 5,750,000	$ 5,750,000
	Use of Funds			
6	Improvements Projects	6,005,100	6,630,800	5,786,200
7	Total Uses	$ 6,005,100	$ 6,630,800	$ 5,786,200
8	Net Annual Cash Balance	(1,455,100)	(880,800)	(36,200)
9	Beginning Unrestricted Fund Balance	8,258,818	6,803,718	5,922,918
10	Net Cumulative Fund Balance	$ 6,803,718	$ 5,922,918	$ 5,886,718
11	Minimum Construction Reserves	$ 6,630,800	$ 5,786,200	$ 5,880,700

Table 2-8 Construction Fund Financing Plan (Recycled Water)

Line No.	Description	Fiscal Year Ending June 30, FY 2025 ($)	FY 2026 ($)	FY 2027 ($)
	Source of Funds			
1	Intra Transfer In - Debt Financing	0	0	0
2	Intra Transfer In - Customer Service Charge	0	0	0
3	Connection Charges	0	0	0
4	Developer Contributions	0	0	0
5	Total Sources	$ 0	$ 0	$ 0
	Use of Funds			
6	Improvements Projects	414,500	53,700	55,600
7	Total Uses	$ 414,500	$ 53,700	$ 55,600
8	Net Annual Cash Balance	(414,500)	(53,700)	(55,600)
9	Beginning Unrestricted Fund Balance	587,400	172,900	119,200
10	Net Cumulative Fund Balance	$ 172,900	$ 119,200	$ 63,600
11	Minimum Construction Reserves	$ 53,700	$ 55,600	$ 57,700

2.6 Transfers

The Water and Recycled Water Utilities will each conduct transfers from their respective Operating Funds and other funds over the Study period. Table 2-9, Lines 18 to 21 for the Water Utility and Table 2-10, Lines 13 to 15 for Recycled Water Utility summarize these associated amounts, respectively. The other funds consist of the Rate Stabilization Fund, Pension Stabilization Fund, and Construction Fund. See Section 2.7 for further explanation on Rate Stabilization and Pension Stabilization Funds. The Construction Fund transfers represent money to cover planned CIP project expenditures. These transfers do not represent direct operating expenses for either enterprise; therefore, Black & Veatch includes these costs as “below-the-line” cash flow items and does not include them as O&M expenses.

2.7 Reserves

A utility typically establishes reserves for several reasons, such as covering shortfalls in operating revenues, maintaining strong bond ratings, covering day-to-day operating costs, and easing the burden on ratepayers associated with large rate increases. Per the reserve level recommendations, the Water and Recycled Water Utilities will maintain the following four reserves:

- Operating Reserve represents working capital maintained by the Operating Fund to cover day-to-day expenses and maintain enough funds to cover accounts receivables if there are supplier issues, periods of lower-than-expected water sales, or unforeseen cost increases. The reserve will maintain a minimum balance of 90 days of operating expenses once fully funded.
- Construction Reserve represents funds used for unforeseen and unbudgeted capital costs. Once fully funded, this reserve will maintain a minimum balance of 12-months of the following year’s planned CIP.
- Rate Stabilization Reserve represents funds used to absorb revenue shortfall due to short-term decreases in water sales. This reserve stabilizes water and recycled water rate revenue and is an effort to avoid wide swings in rates charged to customers over time. The reserve will maintain a minimum balance of 10% of water and recycled water sales revenue when fully funded.

- Pension Stabilization Reserve represents funds used to pay for the unfunded pension liabilities and the increase in the City's share of pension costs due to factors such as higher CalPERS rates and negotiated pay increases. The reserve target is $3.0M for the Water Utility and $150,000 for the Recycled Water Utility by FY 2030.

Appropriate reserve levels help the Water and Recycled Water Utilities with liquidity, provide operational flexibility, and demonstrate fiscal responsibility to the rating agencies, which allows the City to access lower-cost funds.

2.8 Projected Operating Results

The revenue requirements of the Water and Recycled Water Utilities consist of O&M expenses, debt service, capital expenditures, and reserve requirements.

To fully understand the current condition of the Water and Recycled Water Utilities, it is important to examine the cash flow projections under the status quo scenario. As shown in Figure 2-2 and Figure 2-3, the status quo conditions would project that both utilities would operate from an annual deficit position, thus requiring the use of reserves to keep operating. In this scenario, the Water and Recycled Water Utilities would not impose any revenue increases over the Study Period and continue to incur O&M expenses, pay for the execution of the planned CIP, and transfer to reserves.

Figure 2-2 Status Quo Operating Cash Flow (Water)

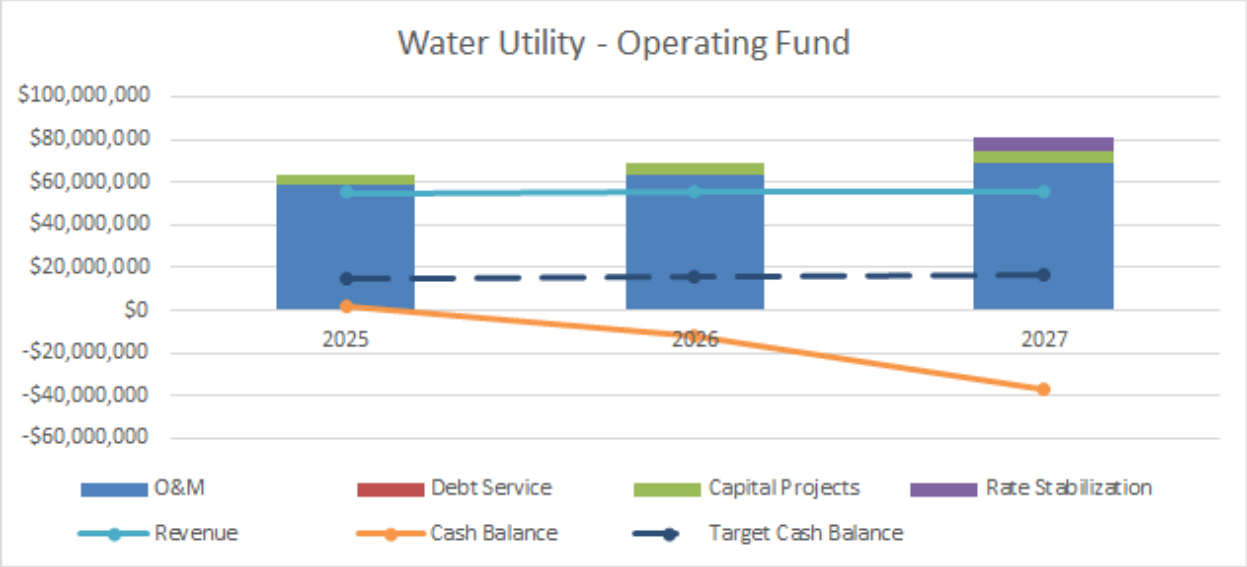
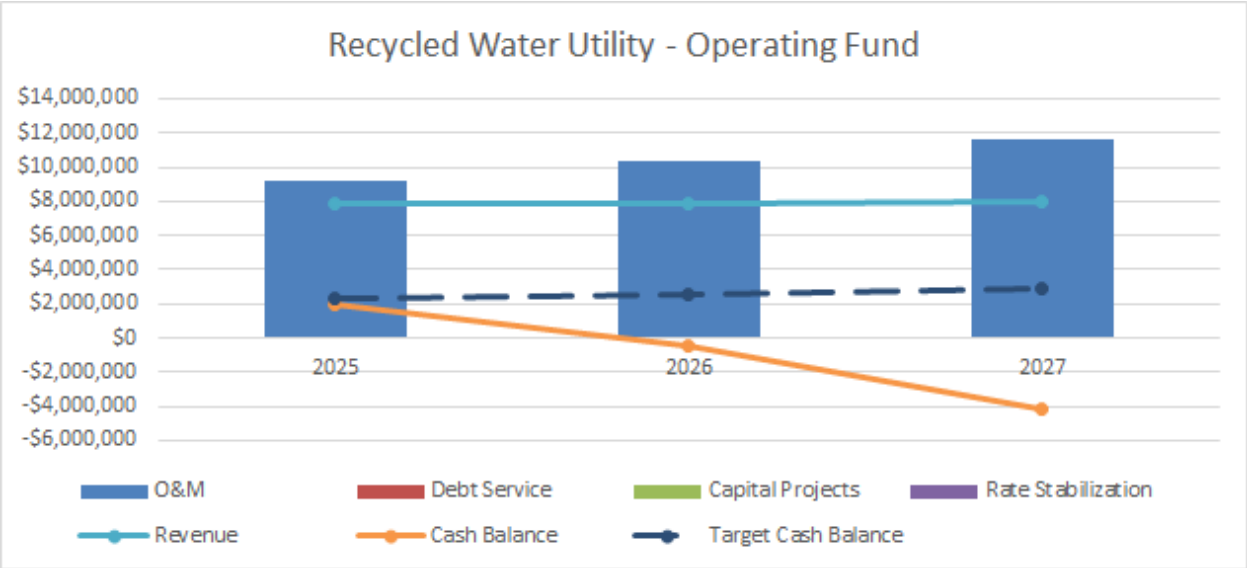


Figure 2-3 Status Quo Operating Cash Flow (Recycled Water)



The analyses performed for the Study indicate that the City should implement the proposed revenue increases shown in Table 2-9 and Table 2-10 if it wishes to keep the Water and Recycled Water Utilities in a balance financial condition. The revenue increases represent the overall total revenue adjustment needed to meet revenue requirements. The revenue adjustment does not represent adjustments to the individual rates but reflects the overall level of revenue needed to meet the Water and Recycled Water Utilities' obligations.

The suggested revenue increases help the Water and Recycled Water Utilities meet the following goals:

- Meet budgeted operating obligations in the three FYs.
- Meet planned capital investments in the three FYs.
- Maintain an operating reserve of 90 days of operating expenses.
- Maintain construction reserve of 12-months of next year's CIP.
- Continue transfers for the rate stabilization reserve to meet the goal of 10% of rate revenues.
- Continue transfers for the pension stabilization reserve to meet the FY 2030 goal.

Table 2-9 and Table 2-10 summarize proposed Operating Funds for the Study Period. The Operating Funds consist of 1) Revenue and 2) Revenue Requirements.

Revenue

- Line 1 is the revenue under existing rates.
- Lines 2 through 4 are the additional revenues generated from the required annual revenue increases. The additional revenue generated is a direct reflection of the number of months the increase is effective for, and therefore amount might calculate at less than that stated amount.
- Line 6 is the total revenue generated from user charges.
- Line 14 for the Water Utility and Line 9 for the Recycled Water Utility represent other operating revenues.

- Line 15 for the Water Utility and Line 10 for the Recycled Water Utility represent total revenues for the enterprises.

Revenue Requirements

- Line 17 for the Water Utility and Line 12 for the Recycled Water Utility represent O&M expenses. The O&M expenses include water production and water purchase.
- Line 22 for the Water Utility and Line 16 for the Recycled Water Utility represent transfers. The transfers include money to the Rate Stabilization Fund, Pension Fund, and Construction Fund.
- Line 23 for the Water Utility and Line 17 for the Recycled Water Utility represent total revenue requirements for the enterprises.

Line 26 for the Water Utility and Line 20 for the Recycled Water Utility represent the net cumulative cash balance within the Operating Funds. The net cumulative cash balance intends to match, to the extent possible, Line 27 for the Water Utility and Line 21 for the Recycled Water Utility. The cash balance reserve is required to ensure the Operation Fund can continue in the event of a supplier interruption, market price fluctuations of critical equipment or supplies, or an abrupt drop in account receivables. The reserve target minimum is 90 days of O&M expenses.

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Table 2-9 Operating Fund (Water)

Line No.	Description			Fiscal Year Ending June 30, FY 2025	FY 2026	FY 2027
				($)	($)	($)
	Revenue					
	Rate Revenue					
1	Revenue from Existing Rates			53,326,400	53,328,400	53,330,600
	Year	Months Effective	Rate Adj			
2	FY 2025	12	15.30%	8,158,900	8,159,200	8,159,600
3	FY 2026	12	15.30%		9,407,600	9,408,000
4	FY 2027	12	15.30%			10,847,400
5	Increased Revenue Due to Adjustments			8,158,900	17,566,800	28,415,000
6	Subtotal Rate Revenue			$ 61,485,300	$ 70,895,200	$ 81,745,600
	Other Operating Revenue					
7	Solar System Maintenance			85,000	85,000	85,000
8	Water System Maintenance			1,102,500	1,102,500	1,102,500
9	Water Construction			0	0	0
10	Water System Operations			0	0	0
11	Administration Design			1,396,200	1,403,200	1,410,300
12	Water Quality			0	0	0
13	Water Resources			0	0	0
14	Subtotal Other Operating Revenue			$ 2,583,700	$ 2,590,700	$ 2,597,800
15	**Total Revenue**			**$ 64,069,000**	**$ 73,485,900**	**$ 84,343,400**
	Revenue Requirements					
	Operating & Maintenance					
16	O&M Expenses			58,973,100	63,515,100	68,539,900
17	Subtotal O&M			$ 58,973,100	$ 63,515,100	$ 68,539,900
	Transfers					
18	Transfer to Other Funds			278,900	278,900	278,900
19	Transfer to Rate Stabilization Fund			0	0	6,350,000
20	Transfer to Pensiotn Stabilization Fund			199,400	199,400	199,400
21	Transfer to Water Construction Fund			4,550,000	5,750,000	5,750,000
22	Total Transfers			$ 5,028,300	$ 6,228,300	$ 12,578,300
23	**Total Revenue Requirements**			**$ 64,001,400**	**$ 69,743,400**	**$ 81,118,200**
24	Net Annual Cash Balance			67,600	3,742,500	3,225,200
25	Beginning Fund Balance			9,891,600	9,959,200	13,701,700
26	Net Cumulative Fund Balance			$ 9,959,200	$ 13,701,700	$ 16,926,900
27	Minimum Operating Reserves (90 Days)			$ 14,541,300	$ 15,661,300	$ 16,900,200

Table 2-10 Operating Fund (Recycled Water)

Line No.	Description			Fiscal Year Ending June 30, FY 2025	FY 2026	FY 2027
				($)	($)	($)
	Revenue					
	Rate Revenue					
1	Revenue from Existing Rates			6,990,300	7,060,200	7,130,700
	Year	Months Effective	Rate Adj			
2	FY 2025	12	15.00%	1,048,500	1,059,000	1,069,600
3	FY 2026	12	15.00%		1,217,900	1,230,000
4	FY 2027	12	15.00%			1,414,500
5	Increased Revenue Due to Adjustments			1,048,500	2,276,900	3,714,100
6	Subtotal Rate Revenue			$ 8,038,800	$ 9,337,100	$ 10,844,800
	Other Operating Revenue					
7	System Maintenance			97,600	99,600	101,600
8	South Bay Water Recycling System Maintenan			728,400	760,200	782,800
9	Subtotal Other Operating Revenue			$ 826,000	$ 859,800	$ 884,400
10	**Total Revenue**			**$ 8,864,800**	**$ 10,196,900**	**$ 11,729,200**
	Revenue Requirements					
	Operating & Maintenance					
11	O&M Expenses			9,164,900	10,344,900	11,664,100
12	Subtotal O&M			9,164,900	10,344,900	11,664,100
	Transfers					
13	Transfer to Rate Stabilization Fund			0	0	0
14	Transfer to Pensiotn Stabilization Fund			0	9,800	9,800
15	Transfer to Recycled Water Const Fund			0	0	0
16	Total Transfers			0	9,800	9,800
17	**Total Revenue Requirements**			**$ 9,164,900**	**$ 10,354,700**	**$ 11,673,900**
18	Net Annual Cash Balance			(300,100)	(157,800)	55,300
19	Beginning Fund Balance			3,295,300	2,995,200	2,837,400
20	Net Cumulative Fund Balance			$ 2,995,200	$ 2,837,400	$ 2,892,700
21	Minimum Operating Reserves (90 Days)			$ 2,259,800	$ 2,550,800	$ 2,876,100

Figure 2-4 presents the proposed Water Utility Operating Fund, and Figure 2-5 presents the Recycled Water Utility Operating Fund.

Figure 2-4 Water Operating Cash Flow

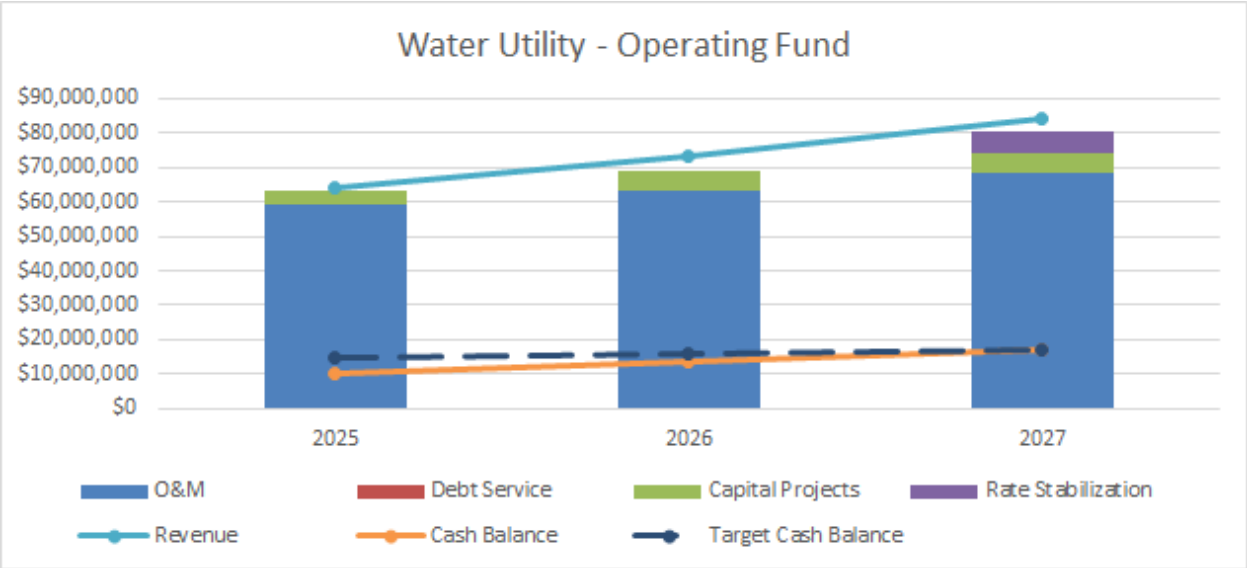
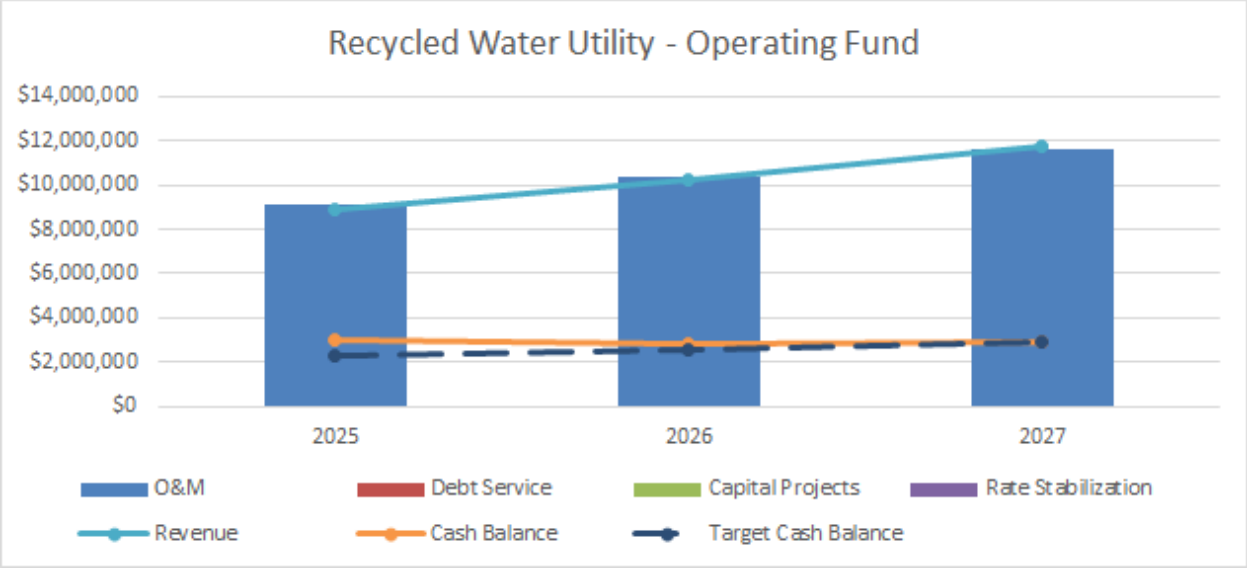


Figure 2-5 Recycled Water Operating Cash Flow



3.0 Cost of Service Analysis

The cost-of-service analysis requires recovery of the City's needed revenues from water and recycled water service rates, allocated to customer classes according to the service rendered. An equitable rate structure allocates the capture of revenue requirements to customer classes based on the quantity of water consumed, peak flows, the number of customer connections, and other relevant factors.

In analyzing the Water and Recycled Water Utilities' cost of service for allocation to its customer classes, Black & Veatch selected the annual revenue requirements for FY 2025 as the Test Year (TY) requirements to demonstrate the development of cost-of-service water and recycled water rates. Table 3-1 summarizes the total costs of service that need to be recovered from water user rates. Table 3-2 summarizes the total costs of service that need to be recovered from recycled water user rates. Both tables represent TY 2025.

Table 3-1 Cost of Service Revenue from Rates (Water)

Line No.	Description	Operating Expense	Capital Cost	Total Cost
		($)	($)	($)
	Revenue Requirements			
1	O&M Expenses	58,973,100	0	58,973,100
2	Debt Service	0	0	0
3	Transfers	478,300	4,550,000	5,028,300
4	Subtotal	59,451,400	4,550,000	64,001,400
	Less Revenue Requirements Met from Other Sources			
5	Solar System Maintenance	85,000	0	85,000
6	Water System Maintenance	1,102,500	0	1,102,500
7	Water Construction	0	0	0
8	Water System Operations	0	0	0
9	Administration Design	1,396,200	0	1,396,200
10	Water Quality	0	0	0
11	Water Resources	0	0	0
12	Subtotal	2,583,700	0	2,583,700
	Adjustments			
13	Adjustment for Annual Cash Balance	(67,600)	0	(67,600)
14	Subtotal	(67,600)	0	(67,600)
15	Cost of Service to be Recovered from Rates	$ 56,935,300	$ 4,550,000	$ 61,485,300

Table 3-2 Cost of Service Revenue from Rates (Recycled Water)

Line No.	Description	Operating Expense	Capital Cost	Total Cost
		($)	($)	($)
	Revenue Requirements			
1	O&M Expenses	9,164,900	0	9,164,900
2	Debt Service	0	0	0
3	Transfers	0	0	0
4	Subtotal	9,164,900	0	9,164,900
	Less Revenue Requirements Met from Other Sources			
5	System Maintenance	97,600	0	97,600
6	South Bay Water Recycling System Mainte	728,400	0	728,400
7	Subtotal	826,000	0	826,000
	Adjustments			
8	Adjustment for Annual Cash Balance	300,100	0	300,100
9	Subtotal	300,100	0	300,100
10	Cost of Service to be Recovered from Rates	$ 8,038,800	$ 0	$ 8,038,800

The total revenue requirement is shown in Line 4, which corresponds with Table 2-9, Line 23, and Table 2-10, Line 17. As shown in Line 12 for the Water Utility and Line 7 for the Recycled Water Utility, we deduct revenues from other sources to derive the net revenue requirement recovered through rates, which correspond with Table 2-9, Line 14 and Table 2-10, Line 9, respectively.

Line 13 for the Water Utility and Line 8 for the Recycled Water Utility represent the net annual cash balance during the TY. If the enterprise is drawing down funds already in the Operating Fund, this number is positive. The number will be negative if the enterprise is replacing funds. In the case of the Water Utility, the $67.6k figure indicates that the forecast is projecting a positive cash balance for the year. In the case of the Recycled Water Utility, the $300.1k figure indicates that the forecast is projecting a negative cash balance for the year.

3.1 Functional Cost Components

The first step in conducting a cost-of-service analysis involves analyzing the cost of providing water and recycled water service by system function to properly allocate the costs to the various customer classes and, subsequently, design rates. As a basis for allocating costs of service among customer classes, the study separates costs into the following four basic functional cost components: (1) Base; (2) Extra Capacity; (3) Customer; and (4) Direct Assignment, described as follows:

- Base costs represent operating and capital costs of the system associated with service to customers to the extent required under constant or average annual load conditions without the elements necessary to meet water consumption variations or peak demands.
- Extra Capacity costs represent those operating and capital costs incurred in meeting peaking demands. Peaking demands represent water consumption more than the average rate of use.
- Customer costs are those expenditures that tend to vary in proportion to the number of customers connected to the system. These include meter reading, billing, collecting, accounting, maintenance, and capital costs associated with meters and services.

- Directly assigned costs are specifically identified as those incurred to serve specific customers. These costs include fire protection and cross-connections for the Water Utility. The Recycled Water Utility has no direct assigned categories.

3.2 Allocation to Cost Components

The next step of the cost-of-service process involves allocating each cost element to functional cost components based on the parameter or parameters having the most significant influence on the magnitude of that cost element. O&M expenses are allocated directly to appropriate cost components. A detailed allocation of related capital investment is used as a proxy for allocating capital and replacement costs. The separation of costs into functional components provides a means for distributing such costs to the various classes of customers based on their respective responsibilities for each type of service.

3.2.1 System Base, Max Day, and Max Hour Allocations

The water and recycled water systems consist of various facilities designed and operated to fulfill a given function. For the systems to provide adequate service to its customers, it must be capable of meeting the annual volume requirements and the maximum demand rates placed on the system. Because not all customers and types of customers exert maximum demand at the same time, the capacities of the various facilities must meet the maximum coincidental demand of all classes of customers. Each water and recycled water service facility within the systems has an underlying average demand exerted by the customers for whom the base cost component applies. For those facilities designed solely to meet average day demand, 100% of the costs go to the base cost component. Extra capacity requirements associated with coincidental demands more than average use consist of maximum daily and maximum hourly demand subcomponents.

The first step in determining the allocation percentages for volume-related cost allocations is to assign system peaking factors. The base element is equal to the average daily demand (ADD) and assigned a value of 1.0. Based on the City's 2002 Water Master Plan, the Water Utility's maximum day (max day) demand is 1.5 times the ADD. The maximum hourly (max hour) demand is 1.8 times the ADD. Based on the City's 2014 Strategic and Master Planning Report, 2002 Water Master Plan, the Recycled Water Utility's max day demand is 1.7 times the ADD. The max hour demand is 2.38 times the ADD.

The costs associated with facilities required to meet maximum day demand are allocable to base and maximum day extra capacity as shown below for the Water Utility. Recycled Water Utility would use a similar allocation based on its respective max day and max hour ratios.

- Base = (1.0/1.5) x 100 = 66.7%
- Max Day = (1.5 – 1.0)/1.5 x 100 = 33.3%

These calculations indicate that the average or base use requires 66.7% of the capacity of facilities designed and generated to meet maximum day demand, and the remaining 33.3% meets maximum day extra capacity requirements.

The costs associated with facilities required to meet maximum hour demand are allocable to base, maximum day extra capacity and maximum hour extra capacity as follows:

- Base = (1.0/1.8) x 100 = 55.6%
- Max Day = (1.5 – 1.0)/1.8 x 100 = 27.7%
- Max Hour = (1.8 – 1.5)/1.8 x 100 = 16.7%

3.2.2 Allocation of Operating and Maintenance Expenses

In allocating O&M expenses for TY 2025, costs are directly allocated to the cost components to the extent possible. The Water and Recycled Water Utilities book operating costs by functional categories. Therefore, Black & Veatch used the factors noted in Section 3.1 to allocate the operating expenses to the cost components. The study based the allocation of Administration and Transfer cost elements on the average of all other costs. The direct assignment represents fire protection and cross-connections for the Water Utility. Table 3-3 and Table 3-4 represent the allocation of O&M to the cost components. Next, revenues are subtracted from other sources as shown in Table 3-1, Lines 12 and 14 and Table 3-2, Lines 7 and 9. The analysis deducts any drawdown of available cash balances and normalizes the rate adjustments for a full year to determine the net O&M costs for each utility.

Table 3-3 Allocation of O&M Expenditures (Water)

			Common to All Customers						
			Base	Extra Capacity		Customer		Fire	Cross
Line No.	Description	Total Costs	Base	Max. Day	Max. Hour	Meters	Cust/Bill.	Protection	Connection
		($)	($)	($)	($)	($)	($)	($)	($)
	Water Utility								
	Operating Expenses								
	1532 Solar System Maintenance	274,500	0	0	0	274,500	0	0	0
1	1422 Water System Maintenance								
2	Customer Service	470,900	0	0	0	0	470,900	0	0
3	Backflow Prevention	1,222,500	0	0	0	0	0	0	1,222,500
4	All Other	997,400	544,800	276,400	166,200	0	0	10,000	0
	1423 Water Construction	3,938,100	2,150,900	1,091,400	656,400	0	0	39,400	0
5	1424 Water System Operations								
6	Generation & Pumping	1,268,500	833,900	421,900	0	0	0	12,700	0
7	Customer Billing & Meter Reading	792,800	0	0	0	0	792,800	0	0
8	Meters	371,700	0	0	0	371,700	0	0	0
	Hydrants	1,424,300	0	0	0	0	0	1,424,300	0
9	All Other	7,100,800	3,878,400	1,967,900	1,183,500	0	0	71,000	0
10	1411 Administration Design	3,946,800	2,663,900	269,500	143,900	552,800	90,600	138,400	87,700
11	1412 Water Quality	579,600	463,700	0	0	110,100	0	5,800	0
12	1413 Water Resources								
	Water Purchase	36,090,900	28,872,700	0	0	6,857,300	0	360,900	0
13	All Other	494,300	395,500	0	0	93,900	0	4,900	0
14	Transfers	478,300	322,800	32,700	17,400	67,000	11,000	16,800	10,600
15	Total O&M Expenses	$ 59,451,400	$ 40,126,600	$ 4,059,800	$ 2,167,400	$ 8,327,300	$ 1,365,300	$ 2,084,200	$ 1,320,800
	Less Other Revenue								
16	Miscellaneous Revenues	2,583,700	1,743,900	176,400	94,200	361,900	59,300	90,600	57,400
17	Other Adjustments	(67,600)	(45,500)	(4,600)	(2,500)	(9,500)	(1,600)	(2,400)	(1,500)
18	Net Operating Expenses	$ 56,935,300	$ 38,428,200	$ 3,888,000	$ 2,075,700	$ 7,974,900	$ 1,307,600	$ 1,996,000	$ 1,264,900

Table 3-4 Allocation of O&M Expenditures (Recycled Water)

			Common to All Customers				
			Base	Extra Capacity		Customer	
Line No.	Description	Total Costs	Base	Max. Day	Max. Hour	Meters	Cust/Bill.
		($)	($)	($)	($)	($)	($)
	Recycled Water Utility						
	Operating Expenses						
1	1522 System Maintenance						
2	Water Purchase	7,636,200	7,636,200	0	0	0	0
3	Customer Billing & Meter Reading	3,600	0	0	0	0	3,600
4	Meters	533,600	0	0	0	533,600	0
5	All Other	283,100	118,900	83,300	80,900	0	0
6	1525 South Bay Water Recycling System	708,400	416,700	291,700	0	0	0
7	Transfers	0	0	0	0	0	0
8	Total O&M Expenses	$ 9,164,900	$ 8,171,800	$ 375,000	$ 80,900	$ 533,600	$ 3,600
	Less Other Revenue						
9	Miscellaneous Revenues	826,000	736,500	33,800	7,300	48,100	300
10	Other Adjustments	300,100	267,600	12,300	2,600	17,500	100
11	Net Operating Expenses	$ 8,038,800	$ 7,167,700	$ 328,900	$ 71,000	$ 468,000	$ 3,200

3.2.3 Allocation of Capital Investments

In allocating the capital investment for TY 2025, the existing fixed assets (which serve as a proxy for the current capital investments) are allocated directly to cost components to the extent possible. The allocation of costs in this manner provides a basis for annual investment in water and recycled water system facilities. Plan capital costs can be allocated using the distribution of total net system investment across the functional cost components. Table 3-5 and Table 3-6 show the total allocation of existing system investment serving water and recycled water customers. The total net system investment of $61.2M shown on Line 11 for the Water Utility and $1.1M on Line 9 for the Recycled Water Utility represents the Test Year original cost less accumulated depreciation of the system in service. The total net system investment reflects the Water and Recycled Water Utilities fixed asset listing ending June 30, 2023. This value represents the original cost (book value) of the assets.

Table 3-5 Allocation of Capital Costs (Water)

Line No.	Description	Total Costs	Common to All Customers					Fire Protection	Cross Connection
			Base	Extra Capacity		Customer			
			Base	Max. Day	Max. Hour	Meters	Cust/Bill.		
		($)	($)	($)	($)	($)	($)	($)	($)
	Water Utility								
	Plant Assets								
1	Water Production	19,000,900	15,200,700	0	0	3,610,200	0	190,000	0
2	Pumping	2,891,300	1,900,900	961,500	0	0	0	28,900	0
3	Treatment	1,790,700	1,177,300	595,500	0	0	0	17,900	0
4	Transmission & Distribution	28,759,500	15,708,400	7,970,200	4,793,300	0	0	287,600	0
5	Meters & Services	6,604,100	0	0	0	6,604,100	0	0	0
6	Fire Hydrants	589,900	0	0	0	0	0	589,900	0
7	General Plant	1,542,700	879,200	246,500	124,000	264,200	0	28,800	0
8	Total Plant Assets	$ 61,179,100	$ 34,866,500	$ 9,773,700	$ 4,917,300	$ 10,478,500	$ 0	$ 1,143,100	$ 0
	Less Other Revenue								
9	Miscellaneous Revenues	0	0	0	0	0	0	0	0
10	Other Adjustments	0	0	0	0	0	0	0	0
11	Net Capital Expenses	$ 61,179,100	$ 34,866,500	$ 9,773,700	$ 4,917,300	$ 10,478,500	$ 0	$ 1,143,100	$ 0

Table 3-6 Allocation of Capital Costs (Recycled Water)

Line No.	Description	Total Costs	Common to All Customers				
			Base	Extra Capacity		Customer	
			Base	Max. Day	Max. Hour	Meters	Cust/Bill.
		($)	($)	($)	($)	($)	($)
	Recycled Water Utility						
	Plant Assets						
1	Water Production	0	0	0	0	0	0
2	Pumping	0	0	0	0	0	0
3	Treatment	0	0	0	0	0	0
4	Transmission & Distribution	1,072,600	450,600	315,500	306,500	0	0
5	Meters	0	0	0	0	0	0
6	Total Plant Assets	$ 1,072,600	$ 450,600	$ 315,500	$ 306,500	$ 0	$ 0
	Less Other Revenue						
7	Miscellaneous Revenues	0	0	0	0	0	0
8	Other Adjustments	0	0	0	0	0	0
9	Net Capital Expenses	$ 1,072,600	$ 450,600	$ 315,500	$ 306,500	$ 0	$ 0

3.3 Units of Service

To properly recognize the cost of service, each customer class receives its share of base, maximum day, peak hour, and customer costs. Following the allocation of costs, the total cost responsibility for each customer class is developed using unit costs of service for each cost function and subsequently assigning those costs to the customer classes based on the respective service requirements of each. The number of units of service required by each customer class provides a means for the proportionate distribution of costs previously allocated to respective cost categories.

Table 3-7 summarizes the estimated TY 2025 units of service for the various customers. Base costs vary with the volume of water consumed and distributed to the customers on that basis. Extra Capacity costs are those associated with meeting peak demand rates of water use and distributed to the customers based on the respective class capacity requirements more than average rates of use. Black & Veatch followed the capacity factor methodology outlined in Appendix A of the AWWA M1 Manual to derive peak consumption information from the monthly consumption records in the City's Customer Information System which helps provide the basis for estimating maximum day and peak hour ratios. The number of bills for each customer serves as the basis for distributing customer billing requirements. Customer meter requirements are allocated on an equivalent meter's basis for each customer. The estimated number of equivalent meters for each customer relies on the total number of meters serving respective classes and the hydraulic capacity ratio of the meters to the 5/8 x 3/4-inch meter. The equivalent meter ratios adopted in this analysis are consistent with the AWWA M1 Manual. Private fire-protection costs allocations use equivalent fire hydrants.

3.4 Cost of Service Allocations

The Study applies the unit costs of service to each customer class's respective service requirements to determine the cost of service for each customer class. The total unit costs of service applied to the respective requirements for each customer class results in the total cost of service for each customer class.

3.4.1 Units Costs of Service

The TY 2025 unit cost of service for each functional cost component is simply the total cost divided by the applicable units of service, as shown in Table 3-8 and Table 3-10. On Line 4, the total costs represent the cost that rates need to recover, as demonstrated in Table 3-1, Line 16 for the Water Utility, and Table 3-2, Line 11 for the Recycled Water Utility. The net O&M cost includes O&M (including water purchase) less revenue from other sources and adjustments. The total capital cost includes debt service payments and transfers to the Construction Fund. Line 6 represents the unit costs for the entire water and recycled water systems regardless of customer classes. After that, the unit costs are used to allocate the costs to the specific customer classes.

3.4.2 Distribution of Costs of Service to Customer Classes

Applying the unit costs to the units for each customer class produces the customer class costs. This process is illustrated in Table 3-9 and Table 3-11, in which unit costs are applied to the customer class units of service for TY 2025. The costs attributable to each customer class reflect the functional cost components described in Section 3.1. Each customer class places a burden on the system in different ways, and thus the allocation of the units is representative of this burden.

An example of the application of unit costs is shown below for illustrative purposes.

	Base Component	
Unit Cost (Table 3-5, Line 6)	$ 6.45	per HCF
General Customer Consumption (Table 3-6, Line 2)	6,358,416	HCF
Total Allocated Cost	$ 41,021,300	

Please note that the numbers within the tables are rounded, yet the calculations are done based on non-rounded values; therefore, results might vary.

Table 3-7 Units of Service (Water and Recycled Water)

Line No.	Description	Consumption		Maximum Day			Maximum Day			Meters	Cust/Bills	Fire Protection	Cross Connection
		Annual	Avg. Day	Factor	Total	Extra	Factor	Total	Extra				
	Column Reference	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Units of Measure	(HCF)	(HCF/day)		(HCF/day)	(HCF/day)		(HCF/day)	(HCF/day)	(EMs)	(bills)	(EHs)	(EMs)
	Water Utility												
1	General Customer	6,358,416	17,420	166%	28,918	11,497	249%	43,377	14,459	45,352	316,985	0	0
2	Subtotal	6,358,416	17,420		28,918	11,497		43,377	14,459	45,352	316,985		
	Fire Service												
3	Public Fire	0	0		558	558		4,468	3,909	0	0	3,437	0
4	Private Fire	0	0		284	284		2,270	1,987	0	15,285	1,747	0
5	Subtotal	0	0		842	842		6,738	5,896	0	15,285	5,184	0
	Cross Connection												
6	Cross Connection										35,556	0	8,424
7	Subtotal	0	0		0	0		0	0	0	35,556	0	8,424
8	Total Water System	6,358,416	17,420		29,760	12,340		50,115	20,355	45,352	367,826	5,184	8,424
	Recycled Water Utility												
9	General Customer	1,566,335	4,291	130%	5,579	1,287	195%	8,368	2,789	2,366	3,341	0	0
10	Subtotal	1,566,335	4,291		5,579	1,287		8,368	2,789	2,366	3,341	0	0

Table 3-8 Units Cost of Service (Water)

Line No.	Description	Total Costs	Common to All Customers					Fire Protection	Cross Connection
			Base	Extra Capacity		Customer			
			Base	Max. Day	Max. Hour	Meters	Cust/Bill.		
		($)	($)	($)	($)	($)	($)	($)	
	Water Utility								
1	Net Operating Expense	56,935,300	38,428,200	3,888,000	2,075,700	7,974,900	1,307,600	1,996,000	1,264,900
2	Debt Service	0	0	0	0	0	0	0	0
3	Capital Costs	4,550,000	2,593,100	726,900	365,700	779,300	0	85,000	0
4	Total Cost of Service	$ 61,485,300	$ 41,021,300	$ 4,614,900	$ 2,441,400	$ 8,754,200	$ 1,307,600	$ 2,081,000	$ 1,264,900
5	Units of Service (Total)		6,358,416	12,340	20,355	45,352	367,826	5,184	8,424
			HCF	HCF/Day	HCF/Day	Eq. Meters	Bills	Eq. Hydrants	Eq. Meters
6	Cost per Unit		$ 6.45	$ 373.99	$ 119.94	$ 193.03	$ 3.55	$ 401.46	$ 150.15
			per HCF	per HCF/Day	per HCF/Day	per Eq. Meter	per Bill	per Eq. Hydrant	per Eq. Meter

Table 3-9 Distribution of Costs to Customer Classes (Water)

Line No.	Description	Total Costs	Common to All Customers					Fire Protection	Cross Connection
			Base	Extra Capacity		Customer			
			Base	Max. Day	Max. Hour	Meters	Cust/Bill.		
		($)	($)	($)	($)	($)	($)	($)	
	Water Utility								
	General Customer								
1	Units		6,358,416	11,497	14,459	45,352	316,985	0	0
2	Allocation of costs of service	56,936,500	41,021,300	4,299,900	1,734,200	8,754,200	1,126,900	0	0
	Public Fire								
3	Units		0	558	3,909	0	0	3,437	0
4	Allocation of costs of service	2,057,600	0	208,900	468,900	0	0	1,379,800	0
	Private Fire								
5	Units		0	284	1,987	0	15,285	1,747	0
6	Allocation of costs of service	1,099,900	0	106,100	238,300	0	54,300	701,200	0
	Cross Connection								
7	Units		0	0	0	0	35,556	0	8,424
8	Allocation of costs of service	1,391,300	0	0	0	0	126,400	0	1,264,900
7	TOTAL COSTS OF SERVICE	$ 61,485,300	$ 41,021,300	$ 4,614,900	$ 2,441,400	$ 8,754,200	$ 1,307,600	$ 2,081,000	$ 1,264,900

Table 3-10 Units Cost of Service (Recycled Water)

Line No.	Description	Total Costs	Common to All Customers				
			Base	Extra Capacity		Customer	
			Base	Max. Day	Max. Hour	Meters	Cust/Bill.
		($)	($)	($)	($)	($)	($)
	Recycled Water Utility						
1	Net Operating Expense	8,038,800	7,167,700	328,900	71,000	468,000	3,200
2	Debt Service	0	0	0	0	0	0
3	Capital Costs	0	0	0	0	0	0
4	Total Cost of Service	$ 8,038,800	$ 7,167,700	$ 328,900	$ 71,000	$ 468,000	$ 3,200
5	Units of Service (Total)		1,566,335	1,287	2,789	2,366	3,341
			HCF	HCF/Day	HCF/Day	Eq. Meters	Bills
6	Cost per Unit		$ 4.58	$ 255.48	$ 25.45	$ 197.82	$ 0.96
			per HCF	per HCF/Day	per HCF/Day	per Eq. Meter	per Bill

Table 3-11 Distribution of Costs to Customer Classes (Recycled Water)

Line No.	Description	Total Costs	Common to All Customers				
			Base	Extra Capacity		Customer	
			Base	Max. Day	Max. Hour	Meters	Cust/Bill.
		($)	($)	($)	($)	($)	($)
	Recycled Water Utility						
	General Customer						
1	Units		1,566,335	1,287	2,789	2,366	3,341
2	Allocation of costs of service	8,038,800	7,167,700	328,900	71,000	468,000	3,200
3	TOTAL COSTS OF SERVICE	$ 8,038,800	$ 7,167,700	$ 328,900	$ 71,000	$ 468,000	$ 3,200

4.0 Rate Design

The initial consideration in the derivation of rate schedules for water and recycled water service is establishing equitable charges to the customers commensurate with the cost of providing that service. While the cost-of-service allocations to customer classes should not be construed as literal or exact determinations, they offer a guide to the necessity for, and the extent of, rate adjustments. Practical considerations sometimes modify rate adjustments by considering additional factors such as the extent of bill impacts, existing contracts, and historical local policies and practices.

4.1 Existing Rates

The existing rates of the Water and Recycled Water Utilities consist of a fixed component in the form of a minimum monthly service charge and a variable component in the form of a consumption charge. The minimum monthly service charge is based on meter size and applied when consumption does not exceed the consumption allowance. The consumption charge is based on units of consumption (1 unit = 1 HCF = 748 gallons). The City has separate fixed charges for fire services and cross-connections. Table 2-3, presented earlier in this report, summarizes the existing water and recycled water rates.

4.2 Proposed Rates

The cost-of-service analysis described in the preceding sections of this report provides a basis for the design of water and recycled water rates.

4.2.1 Monthly Service Charge

Black & Veatch used meter ratios based on maximum operating capacities by meter size as shown in AWWA M1, Table B-1, which recognizes that as meter size increases, so does the capacity. For example, customers with a 4” meter expects to be able to use more water (at a higher flow capacity) than customers with a ¾” meter. Consequently, the City’s water system must maintain assets sized accordingly and capable of providing customers the level of service expected from their meter connection when the tap turns on. The minimum monthly service charge recovers a portion of the costs associated with wholesale water purchase, meter maintenance and services, meter reading, bill issuance, and maintenance and capacity costs associated with public fire protection regardless of the level of water consumed.

Table 4-1 demonstrates the water cost elements incorporated into the minimum monthly service charge for FY 2025. Table 4-2 shows the Water Utility three-year fixed service charge rate schedule.

Table 4-1 Costs within the Minimum Monthly Service Charge for FY 2025 (Water)

Meter Size	Meter & Public Fire Protection				Billing			Total Service Charge
	Mtr Unit Cost	FP Unit Cost	Meter Ratio	Adjusted Unit Cost	Unit Cost	Bill Ratio	Adjusted Unit Cost	
	per EM	per EM		$	per Bill		$	$/Month
5/8" x 3/4"	16.09	3.78	1.00	19.87	3.55	1.00	3.55	23.42
1"	16.09	3.78	1.67	33.11	3.55	1.00	3.55	36.67
1-1/2"	16.09	3.78	3.33	66.22	3.55	1.00	3.55	69.78
2"	16.09	3.78	5.33	105.95	3.55	1.00	3.55	109.51
3"	16.09	3.78	10.67	211.91	3.55	1.00	3.55	215.46
4"	16.09	3.78	16.67	331.11	3.55	1.00	3.55	334.66
6"	16.09	3.78	33.33	662.21	3.55	1.00	3.55	665.77
8"	16.09	3.78	53.33	1,059.54	3.55	1.00	3.55	1,063.09
10"	16.09	3.78	80.00	1,589.31	3.55	1.00	3.55	1,592.86
12"	16.09	3.78	112.50	2,234.96	3.55	1.00	3.55	2,238.52

Table 4-2 Proposed Minimum Monthly Service Charge (Water)

Customer Class	Proposed		
	FY 2025	FY 2026	FY 2027
Minimum Monthly Meter Rates ($/Month)	$/month	$/month	$/month
5/8" x 3/4"	23.42	26.89	30.90
1"	36.67	42.24	48.66
1-1/2"	69.78	80.61	93.06
2"	109.51	126.65	146.33
3"	215.46	249.43	288.41
4"	334.66	387.56	448.24
6"	665.77	771.26	892.22
8"	1,063.09	1,231.69	1,425.00
10"	1,592.86	1,845.60	2,135.37
12"	2,238.52	2,593.80	3,001.13

Table 4-3 demonstrates the recycled water cost elements incorporated into the minimum monthly service charge for FY 2025. Table 4-4 shows the Recycled Water Utility three-year fixed service charge rate schedule.

Table 4-3 Costs within the Minimum Monthly Service Charge for FY 2025 (Recycled Water)

Meter Size	Meter Services			Billing			Total Service Charge
	Mtr Unit Cost	Meter Ratio	Adjusted Unit Cost	Unit Cost	Bill Ratio	Adjusted Unit Cost	
	per EM		$	per Bill		$	$/Month
5/8" x 3/4"	16.49	1.00	16.49	0.96	1.00	0.96	17.44
1"	16.49	1.67	27.48	0.96	1.00	0.96	28.43
1-1/2"	16.49	3.33	54.95	0.96	1.00	0.96	55.91
2"	16.49	5.33	87.92	0.96	1.00	0.96	88.88
3"	16.49	10.67	175.84	0.96	1.00	0.96	176.80
4"	16.49	16.67	274.75	0.96	1.00	0.96	275.71
6"	16.49	33.33	549.50	0.96	1.00	0.96	550.46
8"	16.49	53.33	879.20	0.96	1.00	0.96	880.16
10"	16.49	80.00	1,318.81	0.96	1.00	0.96	1,319.76
12"	16.49	112.50	1,854.57	0.96	1.00	0.96	1,855.53

Table 4-4 Proposed Minimum Monthly Service Charge (Recycled Water)

Customer Class	Proposed		
	FY 2025	FY 2026	FY 2027
Minimum Monthly Meter Rates ($/Month)	$/month	$/month	$/month
5/8" x 3/4"	17.44	20.06	23.11
1"	28.43	32.77	37.83
1-1/2"	55.91	64.57	74.63
2"	88.88	102.72	118.79
3"	176.80	204.47	236.55
4"	275.71	318.93	369.04
6"	550.46	636.89	737.05
8"	880.16	1,018.44	1,178.66
10"	1,319.76	1,527.17	1,767.47
12"	1,855.53	2,147.18	2,485.09

4.2.2 Fire Service

The fire service charge includes costs of issuing bills and maintenance and capacity costs associated with private fire protection. The fire service charge increases as pipeline diameter size increases. The Water Utility provides fire service to approximately 1,274 private fire service accounts. These customers have a water line connection to the water system specifically for fire protection. The Water Utility must design, operate, and maintain a water system that can meet peak fire demand requirements to meet fire protection demands. The Water Utility charges these accounts a fire service charge based on the diameter of the line that connects their fire protection system to the water system. Table 4-5 demonstrates the costs incorporated into the fire service charge, and Table 4-6 shows the three-year rate schedule based on unit costs in future years.

Table 4-5 Costs within the Fire Service Charge for FY 2025

Meter Size	Private Fire Protection			Total Service Charge
	Unit Cost	Meter Ratio	Adjusted Unit Cost	
	per EH			$/Month
2"	52.48	0.06	3.15	3.15
4"	52.48	0.34	17.84	17.84
6"	52.48	1.00	52.48	52.48
8"	52.48	2.13	111.78	111.78
10"	52.48	3.83	201.00	201.00
12"	52.48	6.19	324.85	324.85

Table 4-6 Proposed Fire Service Charge

Customer Class	Proposed		
	FY 2025	FY 2026	FY 2027
Fire Service ($/Month)	$/month	$/month	$/month
2"	3.15	3.55	3.95
4"	17.84	20.09	22.39
6"	52.48	59.09	65.86
8"	111.78	125.86	140.28
10"	201.00	226.31	252.23
12"	324.85	365.76	407.66

4.2.3 Cross Connection

The cross-connection charge includes costs of issuing bills and maintenance and replacement costs associated with backflow devices. The cross-connection charge increases as pipeline diameter size increases. The Water Utility provides backflow services to approximately 2,963 accounts. These customers have a backflow device that prevents possible contaminated water from entering the water system. The Water Utility maintains and replaces the devices accordingly to ensure that the devices are working properly. The Water Utility charges the accounts a cross-connection charge based on the diameter of the line that connects their service to the water system. Table 4-7 demonstrates the costs incorporated into the cross-connection charge, and Table 4-8 shows the three-year rate schedule.

Table 4-7 Costs within the Cross-Connection Charge for FY 2025

Meter Size	Cross Connection			Total Service Charge
	Unit Cost	Meter Ratio	Adjusted Unit Cost	
	per EM			$/Month
1"	13.76	0.63	8.60	8.60
2"	13.76	1.00	13.76	13.76
3"	13.76	2.00	27.53	27.53
4"	13.76	3.13	43.01	43.01
6"	13.76	6.25	86.02	86.02
8"	13.76	10.00	137.63	137.63
10"	13.76	15.00	206.44	206.44

Table 4-8 Proposed Cross Connection Charge

Customer Class	Proposed		
	FY 2025	FY 2026	FY 2027
Cross Connection ($/Month)	$/month	$/month	$/month
1"	8.60	9.45	10.42
2"	13.76	15.11	16.68
3"	27.53	30.23	33.36
4"	43.01	47.23	52.12
6"	86.02	94.46	104.25
8"	137.63	151.14	166.79
10"	206.44	226.71	250.19

4.2.4 Consumption Charge

This consumption charge is designed to recover costs associated with the base and extra capacity demands. These costs include fixed and variable costs incurred by the water and recycled water system while providing the average annual usage and peaking demands. While most of the costs are fixed, such as personnel and direct and indirect charges, variable costs represent most of the costs through water production and water purchase. Table 4-9 shows the three-year rate schedule for both the Water and Recycled Water Utilities. For the Recycled Water Utility, the industrial process is part of general customers.

Table 4-9 Proposed Consumption Charges

Customer Class	Proposed		
	FY 2025	FY 2026	FY 2027
	$/HCF	$/HCF	$/HCF
Consumption Charges ($/HCF)			
Water Utility			
General Customer	8.90	10.27	11.87
Recycled Water Utility			
General Customers	5.06	5.82	6.69

4.3 Typical Monthly Costs under Proposed Charges

Table 4-10 and Table 4-11 compare typical monthly costs under existing rates and the proposed schedule of water and recycled water user rates derived in this study.

Table 4-10 Typical Monthly Bill (Water)

Customer Class	Typical Monthly Usage	FY 2024 Existing Rates	FY 2025 Proposed Rates
	(HCF)	($)	($)
Water Utility			
General Customer	0	$21.48	$23.42
	3	$21.48	$23.42
	5	$39.85	$44.48
	10	$79.70	$88.97
	12	$95.64	$106.76
	20	$159.40	$177.94
	30	$239.10	$266.91
	40	$318.80	$355.88
	50	$398.50	$444.85

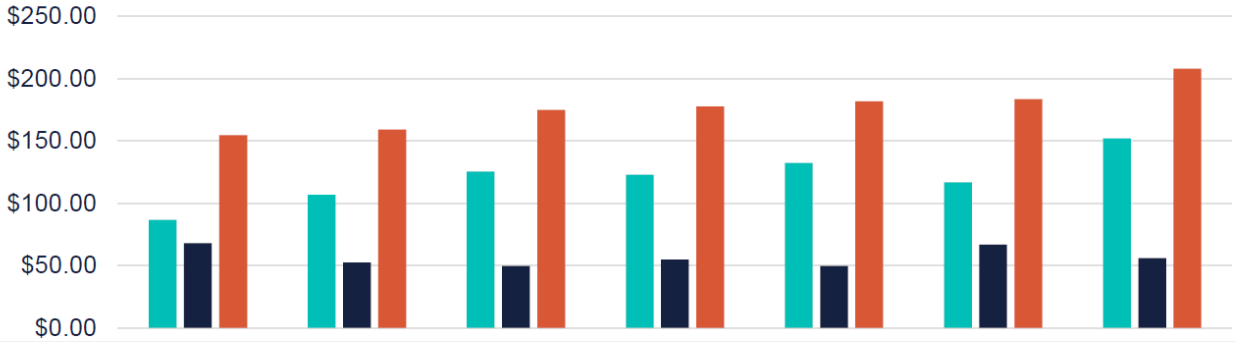
Table 4-11 Typical Monthly Bill (Recycled Water)

Customer Class	Typical Monthly Usage	FY 2024 Existing Rates	FY 2025 Proposed Rates
	(HCF)	($)	($)
Recycled Water Utility			
General Customer	0	$16.64	$17.44
	3	$16.64	$17.44
	5	$22.65	$25.31
	10	$45.30	$50.63
	12	$54.36	$60.75
	20	$90.60	$101.25
	30	$135.90	$151.88
	40	$181.20	$202.50
	50	$226.50	$253.13

4.4 Neighboring Water Utilities

Presented in Figure 4-1 are the proposed rates compared to rates of neighboring cities for a single-family residential customer with a 5/8" x ¾" meter consuming 12 units of water. Based on the comparison, the City is currently one of the lowest water providers in the area. With the proposed rate increases, the City remains the lowest water provider of the surveyed communities. All surveyed community rates are current as of April 2024.

Figure 4-1 Comparison to Neighboring Water Utilities



	Sunnyvale	**Santa Clara**	SJWC	Mountain View	San Jose (Muni)	Milpitas	Palo Alto
Water Rate 12 HCF	$86.50	$106.80	$125.44	$122.86	$132.25	$116.72	$152.19
Sewer Rate	$67.95	$52.37	$49.59	$54.60	$49.59	$66.79	$55.93
Combined	**$154.45**	**$159.17**	**$175.03**	**$177.46**	**$181.84**	**$183.51**	**$208.12**

*All rates are proposed for FY24-25

Sewer Utility

5.0 Revenue and Revenue Requirements

To meet the costs associated with providing sewer services to its customers, the Sewer Utility derives revenue from a variety of sources, including sewer user charges (rates), outlet charges, conveyance fees, connection charges, interest earned from the investment of available funds, engineering fees, and other miscellaneous revenues. The Sewer Utility is constantly looking for other sources of revenue, such as loans, bonds, and grants. Black & Veatch has projected the level of future revenue generated in the Study through an analysis of historical and future system growth in terms of the number of EDUs, bills, and contributed sewage flow. This section also projects the expenses, or revenue requirements, necessary to operate and maintain the system, invest in capital improvements, make debt service payments, and cover other sewer system expenses.

5.1 Customer and Water Consumption Projections

5.1.1 Customer Classes

The Sewer Utility's customers include both residential and non-residential customers. The City has the following customer classes:

- Residential: Single-family residential and multi-family residential.
- Non-Residential: Amusement Parks; Auto Dealers & Service Stations; Churches; Electric & Electronic Equipment; Food & Kindred Products; Hospitals & Convalescent Homes; Industrial Chemical; Industrial Water Treatment; Laundries; Machinery Manufacturers; Metal Plating; Motels & Hotels; Paper; Repair Shops & Car Washes; Restaurants; Schools & Colleges; and Commercial/Industrial/Miscellaneous (catch-all for remainder of non-residential customers).
- Major Users: Major Users customer class is composed of major commercial and industrial users who are identified based on the following:[1]
    - Have a sewage discharge of at least 25,000 gallons per day; or
    - Have a daily discharge that is intermittent or irregular in strength, amount, or nature.

5.1.2 Equivalent Dwelling Units

The City provides sewer services to over 25,547 customers. All customers generating sewage flow connect to the sewer system. Since the City bills residential customers based on EDUs, a review of historical EDUs patterns for customers, and anticipated growth within the City, the projected total number of EDUs is expected to grow at 0.2% annually over the Study period. An EDU represents a single-family residential customer equivalent with a flow of 245 gallons per day and strengths of 250 mg/L of Biological Oxygen Demand (BOD), 250 mg/L of Total Suspended Solids (TSS), and 35 mg/L of Ammonia (NH3).

Table 5-1 summarizes the projected number of EDUs for the Sewer Utility.

Table 5-1 EDUs

[1] City Website, Schedule S-16 Monthly Sewer Service Charges, <http://www.santaclaraca.gov/government/departments/water-sewer-utilities/water-sewer-and-recycled-water-rates/sewer-rates>

Line No.	Description	Fiscal Year Ending June 30,		
		FY 2025	FY 2026	FY 2027
		(EDUs)	(EDUs)	(EDUs)
1	Single Family	256,944	257,586	258,230
2	Multi Family	318,449	319,245	320,043
3	Total	575,393	576,831	578,273

5.1.3 Minimum Bills

The City bills non-residential customers primarily on contributed sewage flow and imposes a minimum bill on those whose flow charges do not exceed the included volume allowance within the monthly service charge. The City refers to these bills as minimum monthly service bills. Therefore, a review of historical minimum bills patterns for non-residential customers and anticipated growth within the City, the projected total number of minimum bills is expected to remain constant over the Study period.

Table 5-2 summarizes the projected number of minimum monthly service bills for the Sewer Utility.

Table 5-2 Minimum Monthly Service Bills

Line No.	Description	Fiscal Year Ending June 30,		
		FY 2025	FY 2026	FY 2027
		(Bills)	(Bills)	(Bills)
1	Amusement Parks	115	115	115
2	Auto Dealers & Service Station	386	386	386
3	Churches	268	268	268
4	Commercial/Industrial/Miscellaneous	10,262	10,262	10,262
5	Electric & Electronic Equip.	425	425	425
6	Food and Kindred Products	29	29	29
7	Hospitals & Convalescent Homes	316	316	316
8	Industrial Chemical	43	43	43
9	Laundries	138	138	138
10	Machinery Manufacturers	721	721	721
11	Metal Plating	93	93	93
12	Motels & Hotels	53	53	53
13	Paper	13	13	13
14	Repair Shops & Car Washes	469	469	469
15	Restaurants	264	264	264
16	Schools & Colleges	533	533	533
17	Total	14,128	14,128	14,128

5.1.4 Contributed Sewage Flow

The City charges all its non-residential customers based on contributed sewage flow, which is determined by multiplying water consumption by a return factor. In determining the projected sewage flow, Black & Veatch analyzed historical sewage flow patterns in conjunction with a projected estimate of future water consumption. In conjunction with water consumption, contributed sewage flow has fluctuated based on drought conditions in the state. In addition, the City's Water Shortage Contingency Plan remains in effect, and customers have made conservation a way of life. Therefore, the City projects that sewage flow will remain flat over the Study period.

Table 5-3 shows the projected sewage flow generated for the Study period. The City contributed sewage flow in units of HCF for non-residential customers.

Table 5-3 Contributed Sewage Flow

Line No.	Description	Fiscal Year Ending June 30,		
		FY 2025	FY 2026	FY 2027
		(HCF)	(HCF)	(HCF)
1	Amusement Parks	67,629	67,629	67,629
2	Auto Dealers & Service Station	27,029	27,029	27,029
3	Churches	14,991	14,991	14,991
4	Commercial/Industrial/Miscellaneous	1,273,399	1,273,399	1,273,399
5	Electric & Electronic Equip.	454,347	454,347	454,347
6	Food and Kindred Products	16,571	16,571	16,571
7	Hospitals & Convalescent Homes	90,459	90,459	90,459
8	Industrial Chemical	14,718	14,718	14,718
9	Laundries	24,247	24,247	24,247
10	Machinery Manufacturers	36,854	36,854	36,854
11	Metal Plating	6,441	6,441	6,441
12	Motels & Hotels	101,779	101,779	101,779
13	Paper	45	45	45
14	Repair Shops & Car Washes	11,076	11,076	11,076
15	Restaurants	72,265	72,265	72,265
16	Schools & Colleges	44,683	44,683	44,683
17	Total (HCF)	2,256,533	2,256,533	2,256,533
18	Total (AF)	5,180	5,180	5,180

5.1.5 Major Users

The City charges major commercial and industrial sewer customers based on contributed sewage flow and strength loadings. Major users are identified individually, as each customer places different burdens on the sewer system. In the 2023, the City's last major user customer left the City, therefore there are no major users for the duration of the Study period.

5.2 Revenue under Existing Rates

Sewer user rates serve as the primary source of revenue for the Sewer Utility. Therefore, the level of future rate revenue is important in developing a long-range financial plan. Rate revenue is determined by multiplying the projected system growth in terms of the number of EDUs, minimum monthly service bills, contributed sewage flow, and major user flow and loadings by the applicable rates to determine sewer rate revenue.

Table 5-4 shows the Sewer Utility's current schedule of charges. It is important to note that the minimum monthly service charge applies to non-residential customers that do not exceed the base amount. Therefore, the minimum monthly service charge serves as a baseline cost that the City needs to recover. The City maintains a separate schedule of rates based on the customer classes identified in Section 5.1.

Table 5-4 Existing Sewer Rates

Description	Existing FY 2024
Residential	($/EDU)
Single Family	48.28
Multi-Family	45.88
Non-Residential [1]	($/HCF)
Amusement Parks	6.15
Auto Dealers & Service Station	6.76
Churches	5.55
Com/Ind/Misc	5.87
Electric & Electronic Equip.	5.55
Food and Kindred Products	13.45
Hospitals & Convalescent Homes	6.72
Industrial Chemical	10.02
Laundries	6.02
Machinery Manufacturers	8.16
Metal Plating	4.50
Motels & Hotels	7.09
Paper	13.82
Repair Shops & Car Washes	5.15
Restaurants	13.70
Schools & Colleges	6.54

Description	Existing FY 2024
Major Commercial and Industrial Users	
Annual Capital Cost Recovery	
Volume (per MGD)	1,147,617
BOD [2] (per 1,000 lbs/day)	85,145
SS [3] (per 1,000 lbs/day)	77,042
NH3 [4] (per 1,000 lbs/day)	466,740
Operating and Maintenance Cost Recovery	
Volume (per MG)	3,315.00
BOD [2] (per 1,000 lbs)	502.00
SS [3] (per 1,000 lbs)	625.00
NH3 [4] (per 1,000 lbs)	5,125.00

1. In no case shall the minimum charge be less than $48.28 per month.

Table 5-5 summarizes projected sewer rate revenue under existing rates. As shown, the revenue generated stays relatively flat over the Study period in conjunction with the number of EDUs, minimum bills, billed sewage flow, and major user volume and loadings. The projected Sewer Utility revenues increase from $41.0M in FY 2025 to $41.1M in FY 2027.

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Table 5-5 Projected Revenue under Existing Rates

Line No.	Description	Fiscal Year Ending June 30,		
		FY 2025	FY 2026	FY 2027
		($)	($)	($)
1	Single Family	12,240,400	12,270,900	12,301,600
2	Multi-Family	14,262,000	14,297,700	14,333,400
3	Amusement Parks	411,400	411,400	411,400
4	Auto Dealers & Service Station	196,600	196,600	196,600
5	Churches	93,800	93,800	93,800
6	Com/Ind/Misc	7,780,000	7,780,000	7,780,000
7	Electric & Electronic Equip.	2,481,400	2,481,400	2,481,400
8	Food and Kindred Products	191,500	191,500	191,500
9	Hospitals & Convalescent Homes	608,300	608,300	608,300
10	Industrial Chemical	104,600	104,600	104,600
11	Laundries	149,000	149,000	149,000
12	Machinery Manufacturers	327,500	327,500	327,500
13	Metal Plating	32,700	32,700	32,700
14	Motels & Hotels	706,900	706,900	706,900
15	Paper	1,200	1,200	1,200
16	Repair Shops & Car Washes	77,800	77,800	77,800
17	Restaurants	978,800	978,800	978,800
18	Schools & Colleges	310,400	310,400	310,400
19	Major Users - Customer 1	0	0	0
20	Total	$ 40,954,300	$ 41,020,500	$ 41,086,900

5.3 Other Revenue

Other operating sources include charges for revenue from other agencies served by Santa Clara, sewer lateral video inspections, sewer clean-out installations, interest on investments, and other miscellaneous revenues. In total, other operating revenues represent 2.9% of the Sewer Utility's total revenue. The City anticipates that these revenues will remain relatively constant for the duration of the Study period.

5.4 Operating and Maintenance Expenses

Table 5-6 summarizes the Sewer Utility's projected O&M expenses for the Study Period. These expenses include costs related to salaries and benefits, materials and supplies, contract and professional services, RWF costs, indirect and direct costs, and routine capital outlay. The City anticipates that all O&M expenditures, excluding Water Pollution Control Plant costs, will increase on average by 5.1% annually from the FY 2025.

The Sewer Utility receives treatment services from the RWF operated and maintained by the City of San Jose. While the City has an ownership stake in the RWF, the City must still pay for O&M associated with operating the facility. Based on the City of San Jose estimates, the City expects RWF O&M costs to increase by approximately 3.0% annually over the Study period.

Table 5-6 O&M Expenses

Line No.	Description	Fiscal Year Ending June 30,		
		FY 2025	FY 2026	FY 2027
		($)	($)	($)
1	Salaries	3,129,800	3,292,700	3,467,300
2	Benefits	1,790,500	1,876,100	1,881,500
3	Materials/Services/Supplies	603,700	615,700	627,900
4	Interfund Services	3,525,965	3,817,140	4,017,030
5	Resource & Production	21,024,700	21,655,500	22,305,000
6	Capital Outlay	0	0	0
7	Total	$ 30,074,665	$ 31,257,140	$ 32,298,730

As shown in Table 5-6, the Sewer Utility's O&M expenses increase from $30.1M in FY 2025 to $32.3M in FY 2027.

5.5 Debt Service Requirements

Table 5-7 represents the Sewer Utility's existing and proposed debt service obligations. This table shows the combined principal and interest requirements on the existing debt over the Study period. It is common practice for utilities to debt finance large capital improvement projects, such as in the case of Trimble Road sewer trunk line replacement in Santa Clara. By financing the cost of the projects, the City can fund large projects immediately and spread the payment over a specified time frame, thereby helping to offset the impact on ratepayers.

Table 5-7 Long-Term Debt Service

Line No.	Description	Fiscal Year Ending June 30,		
		FY 2025	FY 2026	FY 2027
		($)	($)	($)
1	Existing Short and Long-Term Loan	3,298,500	3,296,800	3,298,300
2	Proposed Short-Term and Rev Bonds	0	0	972,300
3	Total	$ 3,298,500	$ 3,296,800	$ 4,270,600

5.6 Capital Improvement Program

The Sewer Utility annually develops a five-year Capital Improvement Plan to identify sewer system needs, including ongoing assessments, maintenance, and renewal and replacement requirements.

Table 5-8 summarizes the Sewer Utility's CIP for FY 2025 through FY 2027. The Sewer Utility is projecting $41.6M in CIP over the Study period, including capital and replacement projects. The City has posted the CIP Budget on its website for complete details associated with each CIP project.

Table 5-8 Capital Improvement Projects

Line No.	Description	Fiscal Year Ending June 30, FY 2025 ($)	FY 2026 ($)	FY 2027 ($)
1	1908 SJ-SC Regional Wastewater Facility	9,290,500	13,918,400	6,296,500
2	1909 Sanitary Sewer Capacity Improvements	0	0	0
3	1911 Sanitary Sewer System Condition Assessment	1,036,200	1,073,800	1,112,700
4	1912 Sanitary Sewer System Improvements	3,212,400	1,181,200	2,225,500
5	1919 Sanitary Sewer Hydraulic Modeling As Needed Support	127,600	322,100	137,000
6	Total	$ 14,183,200	$ 17,052,900	$ 10,365,200

5.6.1 Capital Improvement Financing Plan

The City funds annual expenditures for the CIP from a combination of available funds on hand, outlet charges, conveyance fees, debt financing, connection charges, developer contributions, and revenues derived from user rates. As shown in Table 5-9, the average annual CIP expenditure is $13.9M for the Sewer Utility. The planned average annual CIP contribution from the Sewer Utility Operating Fund is $17.4M per year over the Study period.

Table 5-9 Construction Fund Financing Plan

Line No.	Description	Fiscal Year Ending June 30, FY 2025	FY 2026	FY 2027
	Source of Funds			
1	Sanitary Outlet Charge	0	0	0
2	Sewer Conveyance Fee	0	0	0
3	Intra Transfer In - Debt Financing	0	0	18,000,000
4	Intra Transfer In - Customer Service Charge	16,250,000	16,000,000	20,000,000
5	Refund from San Jose/Cupertino	0	0	0
6	Total Sources	$ 16,250,000	$ 16,000,000	$ 38,000,000
	Use of Funds			
7	Improvements Projects	14,183,200	17,052,900	10,365,200
8	Total Uses	$ 14,183,200	$ 17,052,900	$ 10,365,200
9	Net Annual Cash Balance	2,066,800	(1,052,900)	27,634,800
10	Beginning Unrestricted Fund Balance	8,190,827	10,257,627	9,204,727
11	Net Cumulative Fund Balance	$ 10,257,627	$ 9,204,727	$ 36,839,527
12	Minimum Construction Reserves	$ 10,093,700	$ 7,216,950	$ 23,675,000

5.7 Transfers

The Sewer Utility will perform transfers over the Study period from the Operating Fund and other funds. The other funds consist of the Rate Stabilization Fund, Pension Stabilization Fund, and Construction Fund. See Section 5.8 for further explanation on Rate Stabilization and Pension Stabilization Funds. The

Construction Fund transfers represent money to cover planned CIP project expenditures. All these transfers do not represent direct operating expenses for the enterprise. Therefore Black & Veatch includes these costs as “below-the-line” cash flow items and not included as O&M expenses. Table 5-10, Lines 19 to 23 for the Sewer Utility reflect these associated amounts.

5.8 Reserves

A utility typically establishes reserves for several reasons, such as covering shortfalls in operating revenues, maintaining strong bond ratings, covering day-to-day operating costs, and easing the burden on ratepayers associated with large rate increases. Per the reserve policy, the Sewer Utility will maintain the following four reserves:

- Operating Reserve represents working capital maintained by the Operating Fund to cover day-to-day expenses and maintain enough funds to cover accounts receivables if there are supplier issues, periods of lower-than-expected sewer revenues, or unforeseen cost increases. The reserve will maintain a minimum balance of 90 days of operating expenses once fully funded.
- Infrastructure Reserve represents funds used for unforeseen and unbudgeted capital costs. Once fully funded, this reserve will maintain a minimum balance of 12-months of the following year’s planned City CIP and 6-months of the following year’s planned RWF CIP.
- Rate Stabilization Reserve represents funds used to absorb revenue shortfalls due to short-term decreases in sewer sales. This reserve is designed to stabilize sewer rate revenue and avoid wide swings in rates charged to customers over time. The reserve will maintain a minimum balance of 10% of sewer rate revenue when fully funded.
- Pension Stabilization Reserve represents funds used to pay for the unfunded pension liabilities and the increase in the City’s share of pension costs due to factors such as higher CalPERS rates and negotiated pay increases. The reserve target is $1.2M for the Sewer Utility by FY 2030.

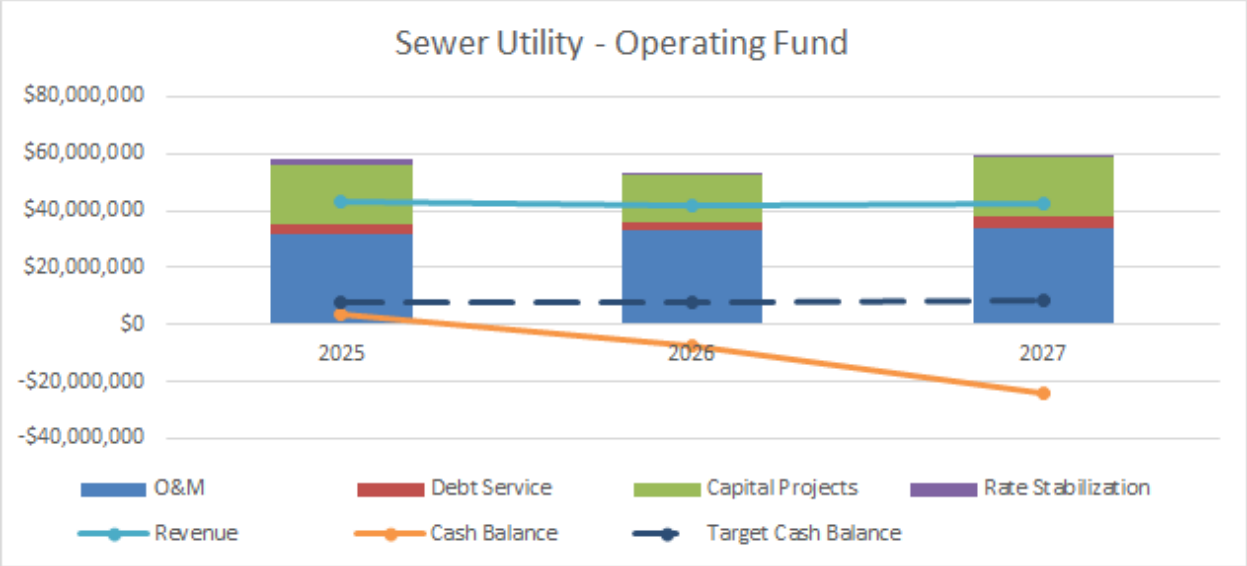
Appropriate reserve levels help the Sewer Utility maintain liquidity and demonstrate to the rating agencies that the City’s financial policies and practices are focused on maintaining a balanced financial position.

5.9 Projected Operating Results

The revenue requirements of the Sewer Utility consist of O&M expenses, debt service, capital expenditures, and reserve requirements.

It is important to examine the cash flow projections under the status quo scenario to fully understand the current condition of the Sewer Utility and the need for revenue adjustments. As shown in Figure 5-1, the status quo conditions would project that the Sewer Utility would operate from an annual deficit position, thus tapping into its reserves. In this scenario, the Sewer Utility would not impose any revenue increases over the Study Period and continue to incur O&M expenses, pay for the execution of the planned CIP, and transfer to reserves.

Figure 5-1 Status Quo Operating Cash Flow



The Sewer Utility will fall into a deficit position if the City does not implement the revenue increases, as shown in Figure 5-1. The revenue increases represent the overall total revenue adjustment needed to meet revenue requirements. The revenue adjustment does not represent adjustments to the individual rates but reflects the overall level of revenue needed to meet the Sewer Utility's obligations.

The suggested revenue increases help the Sewer Utility meet the following goals:

- Meet budgeted operating obligations in the three FYs.
- Meet planned capital investments in the three FYs.
- Maintain an operating reserve of 90 days of operating expenses.
- Maintain construction reserve of 12-months of next year's CIP for City projects and 6-months of next year's CIP for the RWF.
- Continue to fund the rate stabilization reserve to reach its goal of 10% of rate revenues.
- Continue transfers for the pension stabilization reserve to meet the FY 2030 goal.

Shown in Table 5-10 is a summary of the proposed Operating Fund for the Study Period. The Operating Fund consists of 1) Revenue and 2) Revenue Requirements.

Revenue

- Line 1 is the revenue under existing rates.
- Lines 2 through 4 are the additional revenue generated from the required annual revenue increases. The additional revenue generated is a direct reflection of the number of months the increase is effective for, and therefore amount might calculate at less than that stated amount.
- Line 6 is the total revenue generated from user charges.
- Line 12 represents other operating revenues.
- Line 13 represents total revenues for the enterprise.

Revenue Requirements

- Line 15 represents O&M expenses. The O&M expenses include RWF costs.
- Line 18 represents debt service payments.
- Line 24 represents transfers. The transfers include money to the Rate Stabilization Fund, Other Fund, Pension Fund, and Construction Fund.
- Line 25 represents total revenue requirements.

Line 28 represents the net cumulative cash balance within the Operating Funds. The net cumulative cash balance intends to match, to the extent possible, Line 29. The cash balance reserve is required to ensure the Operation Fund can continue in the event of a supplier interruption, market price fluctuations of critical equipment or supplies or an abrupt drop in account receivables. The reserve target minimum is 90 days of O&M expenses. Line 30 represents the debt service coverage. Currently, the City does not have debt coverage requirements for the short-term loans, but the operating cash flow is set up to achieve a debt service coverage of 1.25x requirement is met in all years. The requirement will come into effect when long-term debt is used to refinance the short-term loans. The lending financial institution sets the debt service coverage ratio via a rate covenant that will also obligate the City to increase revenues as needed to meet the minimum debt service coverage requirement.

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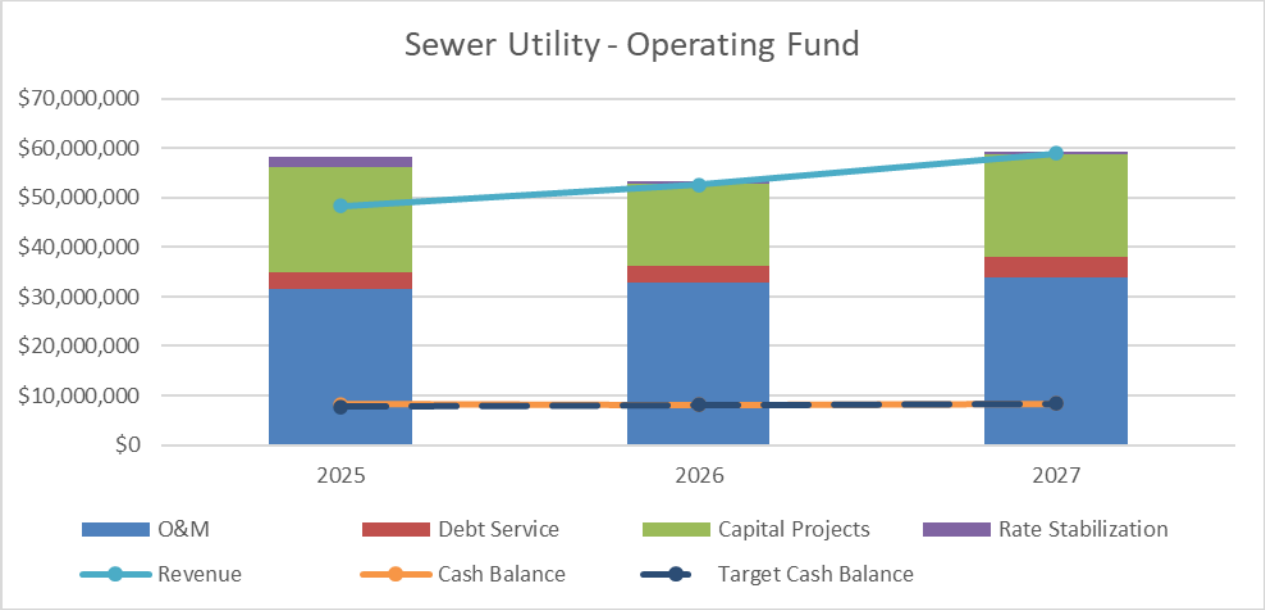
Table 5-10 Operating Fund (Sewer)

Line No.	Description				Fiscal Year Ending June 30, FY 2025	FY 2026	FY 2027
	Revenue						
	Rate Revenue						
1	Revenue from Existing Rates				40,954,300	41,020,500	41,086,900
		Year	Months Effective	Rate Adj			
2		2025	12	12.15%	4,975,900	4,984,000	4,992,100
3		2026	12	12.15%		5,589,500	5,598,600
4		2027	12	12.15%			6,278,800
5	Increased Revenue Due to Adjustments				4,975,900	10,573,500	16,869,500
6	Subtotal Rate Revenue				$ 45,930,200	$ 51,594,000	$ 57,956,400
	Other Operating Revenue						
7	System Administration (Interest Income)				636,700	648,500	660,600
8	System Maintenance				20,000	20,000	20,000
9	Operations				1,750,000	375,000	375,000
10	SJ SC Water Pollution Control Plant				0	0	0
11	Storm Pump Maintenance				0	0	0
12	Subtotal Other Operating Revenue				$ 2,406,700	$ 1,043,500	$ 1,055,600
13	**Total Revenue**				**$ 48,336,900**	**$ 52,637,500**	**$ 59,012,000**
	Revenue Requirements						
	Operating & Maintenance						
14	O&M Expenses				31,605,200	32,818,200	33,891,000
15	Subtotal O&M				$ 31,605,200	$ 32,818,200	$ 33,891,000
	Debt Service						
16	Existing Loans/Bonds				3,298,500	3,296,800	3,298,300
17	Proposed Loans/Bonds				0	0	972,300
18	Total Debt Service				$ 3,298,500	$ 3,296,800	$ 4,270,600
	Transfers						
19	Transfer to Other Fund				50,300	50,300	50,300
20	Transfer to Settlement Reserve				3,000,000	0	0
21	Transfer to Rate Stabilization Fund				2,000,000	500,000	500,000
22	Transfer to Pension Stabilization Fund				78,200	78,200	78,200
23	Transfer to Sewer Construction Fund				16,250,000	16,000,000	20,000,000
24	Total Transfers				$ 21,378,500	$ 16,628,500	$ 20,628,500
25	**Total Revenue Requirements**				**$ 56,282,200**	**$ 52,743,500**	**$ 58,790,100**
26	Net Annual Cash Balance				(7,945,300)	(106,000)	221,900
27	Beginning Fund Balance				16,233,478	8,288,178	8,182,178
28	Net Cumulative Fund Balance				$ 8,288,178	$ 8,182,178	$ 8,404,078
29	Minimum Operating Reserves (90 Days)				$ 7,793,100	$ 8,092,200	$ 8,356,700
30	Debt Service Coverage (Min 1.25)				5.07	6.01	5.88

Figure 5-2 presents the proposed Operating Fund.

Figure 5-2 Sewer Operating Cash Flow



6.0 Cost of Service Analysis

The cost-of-service analysis requires that the utility recover needed revenues from rates for sewer service, which are allocated to customer classes according to the service rendered. An equitable rate structure allocates the capture of revenue requirements to customer classes based on contributed sewage volume, strengths, number of customer connections, and other relevant factors.

In analyzing the Sewer Utility's cost of service for allocation to its customer classes, Black & Veatch selected the annual revenue requirements for FY 2025 as the Test Year requirements to demonstrate the development of cost-of-service sewer rates. Table 6-1 summarizes the total costs of service that need to be recovered from sewer user rates. The table represents TY 2025.

Table 6-1 Cost of Service Revenue from Rates

Line No.	Description	Operating Expense	Capital Cost	Total Cost
		($)	($)	($)
	Revenue Requirements			
1	O&M Expense	31,605,200	0	31,605,200
2	Debt Service Requirements	0	3,298,500	3,298,500
3	Transfers	5,128,500	16,250,000	21,378,500
4	Subtotal	$ 36,733,700	$ 19,548,500	$ 56,282,200
	Less Revenue Requirements Met from Other Sources			
5	System Administration	636,700	0	636,700
6	System Maintenance	20,000	0	20,000
7	Operations	1,750,000	0	1,750,000
8	SJ SC Water Pollution Control Plant	0	0	0
9	Storm Pump Maintenance	0	0	0
10	Subtotal	$ 2,406,700	$ 0	$ 2,406,700
	Adjustments			
11	Adjustment for Annual Cash Balance	7,945,300	0	7,945,300
12	Subtotal	$ 7,945,300	$ 0	$ 7,945,300
13	Cost of Service to be Recovered from Rates	$ 26,381,700	$ 19,548,500	$ 45,930,200

To derive the net revenue requirement recovered through rates, it is necessary to deduct revenues from other sources as shown in Line 10 which corresponds with Table 5-11, Line 12. Shown in Line 4 is the total revenue requirement that corresponds with Table 5-11, Line 25. Line 11 represents the net annual cash balance during the TY. If the enterprise is drawing down funds already in the Operating Fund, this number is positive. The number will be negative if the enterprise is replacing funds. In the case of the Sewer Utility, the $7.9M figure indicates that the forecast is projecting a negative cash balance for the year.

6.1 Functional Cost Components

The first step in conducting a cost-of-service analysis involves analyzing the cost of providing sewer service by system function to properly allocate the costs to the various customer classes and, subsequently, design rates. As a basis for allocating costs of service among customer classes, costs are separated into the following four basic functional cost components: (1) Base; (2) Strength; (3) Customer; and (4) Direct Assignment, described as follows:

- Base costs represent operating and capital costs of the system associated with collection. The collection costs vary directly with the quantity of sewage flow.
- Strength costs represent those operating and capital costs associated with treatment. The treatment costs are specifically related to strength parameters such as Biological Oxygen Demand, Total Suspended Solids, and Ammonia.
- Customer costs are those expenditures that tend to vary in proportion to the number of customers connected to the system. These include meter reading, billing, collecting, accounting, maintenance, and capital costs associated with meters and services.
- Directly assigned costs are specifically identified as those incurred to serve specific customers. The Sewer Utility has no directly assigned categories.

6.2 Allocation to Cost Components

The next step of the cost-of-service process involves allocating each cost element to functional cost components based on the parameter or parameters having the most significant influence on the magnitude of that element of cost. O&M expense items are allocated directly to appropriate cost components. A detailed allocation of related capital investment is used as a proxy for allocating capital and replacement costs. The separation of costs into functional components provides a means for distributing such costs to the various classes of customers based on their respective responsibilities for each type of service.

6.2.1 Volume and Strength Allocations

The sewer system consists of various facilities designed and operated to fulfill a given function. For the system to provide adequate service to its customers, it must be capable of meeting not only the annual volume requirements but also the strength loading demands placed on the system. Because not all customers and types of customers exert volume and strength loading demands similarly, the capacities of the various facilities must be designed to accommodate the demands of all classes of customers. Each sewer service facility within the system has an underlying volume demand exerted by all customers for whom the base cost component applies. For those facilities designed solely to meet volume demand, 100% of the costs go to the base cost component. For facilities designed to meet strength loading demands, the percentage of the costs is allocated to the different strength cost components based on their specific function.

6.2.2 Allocation of Operating and Maintenance Expenses

The Sewer Utility books operating costs by functional categories. Therefore, Black & Veatch used the factors noted in Section 5.1 to allocate the operating expenses to the cost components. In allocating O&M expenses for TY 2025, the costs are directly allocated to the cost components to the extent possible. The allocation of Administration and Transfer cost elements is based on the average of all other costs. Table 6-2 represents the allocation of O&M to the cost components. Revenues are subtracted from other sources as shown in Table 6-1, Lines 10, and any drawdown of the cash balance is deducted and normalized for partial rate adjustments as shown in Line 13 to determine the net O&M costs.

Table 6-2 Allocation of O&M Expenditures

Line No.	Description	Total Cost	Common to All Customers				
			Volume	BOD	TSS	NH3	Customer
		($)	($)	($)	($)	($)	($)
	Operation & Maintenance						
1	1511 System Administration	5,416,900	2,553,500	917,600	926,500	942,100	77,200
2	1512 System Maintenance	2,201,200	2,201,200	0	0	0	0
3	1514 Operations	1,737,400	1,737,400	0	0	0	0
4	1515 SJ SC Water Pollution Control Plant						
5	Treatment	20,482,100	7,011,900	4,436,200	4,479,400	4,554,600	0
6	Customer Billing & Meter Reading	373,000	0	0	0	0	373,000
7	All Other	1,206,700	1,206,700	0	0	0	0
8	1516 Storm Pump Maintenance	187,900	187,900	0	0	0	0
9	Transfers	2,078,200	979,700	352,000	355,500	361,400	29,600
10	Total O&M Expenses	$ 33,683,400	$ 15,878,300	$ 5,705,800	$ 5,761,400	$ 5,858,100	$ 479,800
	Less Other Revenue						
11	Miscellaneous Revenues	2,406,700	1,134,400	407,700	411,700	418,600	34,300
12	Other Adjustments	7,945,300	3,745,400	1,345,900	1,359,000	1,381,800	113,200
13	Net Operating Expenses	$ 23,331,400	$ 10,998,500	$ 3,952,200	$ 3,990,700	$ 4,057,700	$ 332,300

6.2.3 Allocation of Capital Investments

In allocating the capital investment for TY 2025, the existing fixed assets (which serve as a proxy for the current capital investments) are allocated directly to cost components to the extent possible. Plan capital costs can be allocated using the distribution of total net system investment across the functional cost components. The allocation of costs in this manner provides a basis for annual investment in sewer system facilities. Table 6-3 shows the total allocation of existing system investment serving sewer customers for the TY 2025. The total net system investment of $1.3M shown on Line 7 represents the Test Year original cost less accumulated depreciation of the system in service. The total net system investment reflects the Sewer Utility's fixed asset listing ending June 30, 2023. This value represents the original cost (book value) of the assets.

Table 6-3 Allocation of Capital Costs

Line No.	Description	Total Cost	Common to All Customers				
			Volume	BOD	TSS	NH3	Customer
		($)	($)	($)	($)	($)	($)
	Plant Assets						
1	Collection	956,600	956,600	0	0	0	0
2	Lift Station	275,800	275,800	0	0	0	0
3	General Plant	101,100	101,100	0	0	0	0
4	Total Plant Assets	$ 1,333,500	$ 1,333,500	$ 0	$ 0	$ 0	$ 0
	Less Other Revenue						
5	Miscellaneous Revenues	0	0	0	0	0	0
6	Other Adjustments	0	0	0	0	0	0
7	Net Operating Expenses	$ 1,333,500	$ 1,333,500	$ 0	$ 0	$ 0	$ 0

6.3 Units of Service

To properly recognize the cost of service, each customer class receives its share of base, strength, and customer costs. Following the allocation of costs, the total cost responsibility for each customer class is developed using unit costs of service for each cost function and subsequently assigning those costs to the customer classes based on the respective service requirements of each. The number of units of service required by each customer class provides a means for the proportionate distribution of costs previously allocated to respective cost categories.

Table 6-4 summarizes the estimated Test Year units of service for the various customer classes. Base costs vary with the volume of sewage flow produced and distributed to customer classes on that basis.

Black & Veatch derived sewage flow information from the monthly water consumption records in the City's CIS multiplied by a return factor. Strength costs are those associated with pollutant characteristics, and the Study allocated these costs to customer classes based on loadings. The pollutant loadings for each customer class come from recommendations of the State Water Resources Control Board, Revenue Program Guidelines, Appendix G, and the City of San Jose. The City's commercial and industrial class consists of 17 distinct types of businesses such as retail, offices, restaurants, and hospitals. Since sampling is not an immediate possibility, the City has relied on industry standards used by the State of California. The number of bills for each customer class serves as the basis for distributing customer billing requirements.

6.4 Cost of Service Allocations

Unit costs of service are applied to each customer class's respective service requirements to determine the cost of service for each customer class. The total unit costs of service applied to the respective requirements for each customer class results in the total cost of service for each customer class.

6.4.1 Units Costs of Service

The TY 2025 unit cost of service for each functional cost component is simply the total cost divided by the applicable units of service, as shown in Table 6-5. The capital costs on Line 3 and 4 are associated with City projects and RWF projects. These costs have been separated to determine the collection and treatment costs independently. On Line 5, the total costs represent the cost that rates need to recover, as demonstrated in Table 6-1, Line 14. The net O&M cost includes O&M (including the RWF) less revenue from other sources and adjustments. The total capital cost includes debt service payments and transfers to the Construction Fund. Line 6 represents the unit costs for the entire sewer system regardless of customer classes. After that, these unit costs are applied in allocating the costs to the specific customer classes.

6.4.2 Distribution of Costs of Service to Customer Classes

Applying the unit costs to the units for each customer class produces the customer class costs. This process is illustrated in Table 6-6, in which the study applies the unit costs to the customer class units of service. The costs attributable to each customer class are based on the functional cost components described in Section 6.1. Each customer class places a burden on the system in different ways, and thus the allocation of the units is representative of this burden.

An example of the application of unit costs is shown below for illustrative purposes.

	Vol Component		
Unit Cost (Table 6-5, Line 7)	$	5.36	per HCF
General Customer Consumption (Table 6-6, Line 5)		67,629	HCF
Total Allocated Cost	$	362,500	

Please note that the numbers within the tables are rounded, yet the calculations are done based on non-rounded values; therefore, results might vary.

Table 6-4 Units of Service

Line No.	Description	Contributed Units	Contributed Volume	BOD Loadings Factor	BOD Loadings Loading	TSS Loadings Factor	TSS Loadings Loading	NH3 Loadings Factor	NH3 Loadings Loading	Bills
	Units of Measure	(EDUs/M Bills)	(HCF)	(mg/L)	(lbs)	(mg/L)	(lbs)	(mg/L)	(lbs)	(bills)
1	Single Family	260,659	1,361,851	250	2,124,100	250	2,124,100	35	297,400	247,203
2	Multi-Family	318,461	1,618,390	250	2,524,200	250	2,524,200	35	353,400	27,543
3	Amusement Parks	115	67,629	130	54,800	80	33,800	11	4,600	271
4	Auto Dealers & Service Station	386	27,029	180	30,400	280	47,200	11	1,900	719
5	Churches	268	14,991	130	12,200	80	7,500	11	1,000	590
6	Com/Ind/Misc	10,262	1,273,399	130	1,032,800	80	635,600	11	87,400	21,038
7	Electric & Electronic Equip.	425	454,347	30	85,000	15	42,500	15	42,500	1,553
8	Food and Kindred Products	29	16,571	1,120	115,800	690	71,300	0	0	165
9	Hospitals & Convalescent Homes	316	90,459	230	129,800	85	48,000	15	8,500	787
10	Industrial Chemical	43	14,718	360	33,100	720	66,100	0	0	111
11	Laundries	138	24,247	150	22,700	110	16,600	5	800	353
12	Machinery Manufacturers	721	36,854	290	66,700	550	126,500	0	0	1,667
13	Metal Plating	93	6,441	10	400	60	2,400	1	0	194
14	Motels & Hotels	53	101,779	310	196,800	121	76,800	7	4,400	514
15	Paper	12	45	1,250	400	560	200	10	0	14
16	Repair Shops & Car Washes	469	11,076	180	12,400	280	19,300	0	0	659
17	Restaurants	264	72,265	1,250	563,600	560	252,500	10	4,500	2,050
18	Schools & Colleges	533	44,683	130	36,200	100	27,900	30	8,400	1,081
19	Major Users - Customer 1		0		0		0		0	0
20	Total		5,236,774		7,041,400		6,122,500		814,800	306,512

Table 6-5 Units Cost of Service

Line No.	Description	Total Cost	Common to All Customers				
			Volume	BOD	TSS	NH3	Customer
1	Net Operating Expense	26,381,700	14,048,800	3,952,200	3,990,700	4,057,700	332,300
2	Debt Service	3,298,500	1,129,200	714,400	721,400	733,500	0
3	Capital Costs (City)	5,605,700	5,605,700	0	0	0	0
4	Capital Costs (SJSC)	10,644,300	7,288,200	1,682,800	1,205,600	467,700	0
5	Total Cost of Service	$ 45,930,200	$ 28,071,900	$ 6,349,400	$ 5,917,700	$ 5,258,900	$ 332,300
6	Units of Service		5,236,774 HCF	7,041,400 lbs	6,122,500 lbs	814,800 lbs	306,541 bills
7	Cost per Unit		$ 5.36 per HCF	$ 0.90 per lbs	$ 0.97 per lbs	$ 6.45 per lbs	$ 1.08 per bill

Table 6-6 Distribution of Costs to Customer Classes

Line No.	Description	Total Cost	Common to All Customers				
			Volume	BOD	TSS	NH3	Customer
1	Cost per Unit		$ 5.36 per HCF	$ 0.90 per lbs	$ 0.97 per lbs	$ 6.45 per lbs	$ 1.08 per bill
	Single Family						
2	Units		1,361,851	2,124,100	2,124,100	297,400	247,203
3	Allocation of costs of service	13,456,100	7,300,300	1,915,500	2,053,000	1,919,400	267,900
	Multi-Family						
4	Units		1,618,390	2,524,200	2,524,200	353,400	27,543
5	Allocation of costs of service	15,702,100	8,675,400	2,276,100	2,439,800	2,280,900	29,900
	Amusement Parks						
6	Units		67,629	54,800	33,800	4,600	271
7	Allocation of costs of service	474,600	362,500	49,400	32,700	29,700	300
	Auto Dealers & Service Station						
8	Units		27,029	30,400	47,200	1,900	719
9	Allocation of costs of service	231,000	144,900	27,400	45,600	12,300	800
	Churches						
10	Units		14,991	12,200	7,500	1,000	590
11	Allocation of costs of service	105,700	80,400	11,000	7,200	6,500	600
	Com/Ind/Misc						
12	Units		1,273,399	1,032,800	635,600	87,400	21,038
13	Allocation of costs of service	8,958,600	6,826,100	931,300	614,300	564,100	22,800
	Electric & Electronic Equip.						
14	Units		454,347	85,000	42,500	42,500	1,553
15	Allocation of costs of service	2,829,200	2,435,500	76,600	41,100	274,300	1,700
	Food and Kindred Products						
16	Units		16,571	115,800	71,300	0	165
17	Allocation of costs of service	262,300	88,800	104,400	68,900	0	200
	Hospitals & Convalescent Homes						
18	Units		90,459	129,800	48,000	8,500	787
19	Allocation of costs of service	704,100	484,900	117,000	46,400	54,900	900

Table 6-6 Distribution of Costs to Customer Classes (Con't)

Line No.	Description	Total Cost	Common to All Customers				
			Volume	BOD	TSS	NH3	Customer
1	Cost per Unit		$ 5.36 per HCF	$ 0.90 per lbs	$ 0.97 per lbs	$ 6.45 per lbs	$ 1.08 per bill
	Industrial Chemical						
20	Units		14,718	33,100	66,100	0	111
21	Allocation of costs of service	172,700	78,900	29,800	63,900	0	100
	Laundries						
22	Units		24,247	22,700	16,600	800	353
23	Allocation of costs of service	172,100	130,000	20,500	16,000	5,200	400
	Machinery Manufacturers						
24	Units		36,854	66,700	126,500	0	1,667
25	Allocation of costs of service	381,800	197,600	60,100	122,300	0	1,800
	Metal Plating						
26	Units		6,441	400	2,400	0	194
27	Allocation of costs of service	37,400	34,500	400	2,300	0	200
	Motels & Hotels						
28	Units		101,779	196,800	76,800	4,400	514
29	Allocation of costs of service	826,300	545,600	177,500	74,200	28,400	600
	Repair Shops & Car Washes						
30	Units		11,076	12,400	19,300	0	659
31	Allocation of costs of service	90,000	59,400	11,200	18,700	0	700
	Restaurants						
32	Units		72,265	563,600	252,500	4,500	2,050
33	Allocation of costs of service	1,170,900	387,400	508,200	244,100	29,000	2,200
	Schools & Colleges						
34	Units		44,683	36,200	27,900	8,400	1,081
35	Allocation of costs of service	354,500	239,500	32,600	27,000	54,200	1,200
36	TOTAL COSTS OF SERVICE	$ 45,930,200	$ 28,071,900	$ 6,349,400	$ 5,917,700	$ 5,258,900	$ 332,300

7.0 Rate Design

The initial consideration in the derivation of rate schedules for sewer service is establishing equitable charges to the customers commensurate with the cost of providing that service. While the cost-of-service allocations to customer classes should not be construed as literal or exact determinations, they offer a guide to the necessity for, and the extent of, rate adjustments. Practical considerations sometimes modify rate adjustments by considering additional factors such as the extent of bill impacts, existing contracts, and historical local policies and practices.

7.1 Existing Rates

The Sewer Utility's existing rates consist of a fixed component in the form of a monthly service charge and a variable component in the form of a consumption charge. The monthly service charge is a flat fee based on EDUs and is applied to residential customers. The monthly service charge also is a minimum for non-residential customers and applies when the consumption charge is less than the monthly service charge. Non-residential customers also have a consumption charge based on units of water consumption (1 unit = 1 HCF = 748 gallons) multiplied by a return factor. The City has separate charges for major users consisting of O&M and capital components. Table 5 5, presented earlier in this report, summarizes the current sewer rates.

7.2 Proposed Rates

The costs of service analysis described in the preceding sections of this report provide a basis for designing sewer rates.

7.2.1 Monthly Service Charge

The monthly service charge is designed to recover residential costs associated with contributed sewage flow, strength loadings, billing, collecting, accounting, and maintenance and capital costs. The charge is a flat monthly fee based on EDUs. An EDU is defined in Section 5.1. In FY 2023, the multi-family rate was separated from single-family and became a stand-alone customer class.

The monthly service charge also serves as the minimum monthly service charge for non-residential customers. The minimum service charge will recover non-residential costs associated with volume, strength, meter reading, billing, collecting, accounting, and maintenance and capital costs. The minimum monthly service charge incorporates an allowance for sewage flow. Once a customer exceeds the allowance, the minimum monthly service charge goes away.

Table 7-1 shows the forecasted proposed three-year monthly service charge rate schedule.

Table 7-1 Proposed Monthly Service Charge

Line No.	Customer Class	Proposed		
		FY 2025	FY 2026	FY 2027
	Monthly Service Charge ($/EDU)	$/month	$/month	$/month
1	Single Family	52.37	59.79	66.30
2	Multi-Family	49.31	56.09	62.30
	Minimum Commercial Bill Charge ($/Month)	$/month	$/month	$/month
3	All Customers	52.37	59.79	66.30

7.2.2 Consumption Charge

The consumption charges are designed to recover the remainder of the cost component costs not recovered through the monthly service charge for non-residential customers. Table 7-2 shows the forecasted proposed three-year rate schedule for the Sewer Utility.

Table 7-2 Proposed Consumption Charges

Line No.	Customer Class	Proposed		
		FY 2025	FY 2026	FY 2027
	Commodity Charge ($/HCF)	$/HCF	$/HCF	$/HCF
1	Amusement Parks	6.93	7.46	8.59
2	Auto Dealers & Service Station	7.80	8.70	9.81
3	Churches	6.12	6.54	7.56
4	Com/Ind/Misc	6.61	7.11	8.19
5	Electric & Electronic Equip.	6.18	6.48	7.59
6	Food and Kindred Products	15.74	18.89	20.38
7	Hospitals & Convalescent Homes	7.60	8.35	9.50
8	Industrial Chemical	11.58	13.53	14.83
9	Laundries	6.80	7.32	8.43
10	Machinery Manufacturers	9.33	10.73	11.88
11	Metal Plating	5.05	5.12	6.12
12	Motels & Hotels	8.09	8.96	10.14
13	Paper	4.44	6.67	6.67
14	Repair Shops & Car Washes	5.90	6.47	7.37
15	Restaurants	16.01	19.27	20.75
16	Schools & Colleges	7.31	8.05	9.16

7.2.3 Major Users

The major commercial and industrial user charge is designed to recover the costs associated with O&M and capital for major users. Major users are classified based on requirements in Section 5.1. These customers are monitored monthly for volume and strength loadings. Major users are charged the unit charges identified in Table 6-5, Line 7. Note that the major user charges are specifically identified O&M and capital components. Charges for all other customers incorporate these charges, but the City has combined them into a single rate for simplicity. Table 7-3 shows the three-year rate schedule based on unit costs in future years. The City does not have any major users left within the City; therefore, these rates will be for any future customer.

Table 7-3 Proposed Major User Charges

Line No.	Customer Class	Proposed FY 2025	Proposed FY 2026	Proposed FY 2027
	Major Commercial and Industrial Users			
	Operating and Maintenance Cost Recovery			
1	Volume ($/MG)	3,671.11	4,020.89	4,192.10
2	BOD ($/1,000 lbs)	561.28	773.87	807.45
3	SS ($/1,000 lbs)	651.81	898.69	937.67
4	NH3 ($/1,000 lbs)	4,980.00	6,866.22	7,164.09
	Annual Capital Cost Recovery			
5	Volume ($/MGD)	1,306,599	1,212,316	1,673,838
6	BOD ($/1,000 lbs/day)	124,262	144,032	144,561
7	SS ($/1,000 lbs/day)	114,880	131,162	131,597
8	NH3 ($/1,000 lbs/day)	538,093	585,442	586,786

7.3 Typical Monthly Costs under Proposed Charges

Table 7-4 compares typical monthly costs under existing rates and the proposed schedule of sewer user rates derived in this study for residential and non-residential customers.

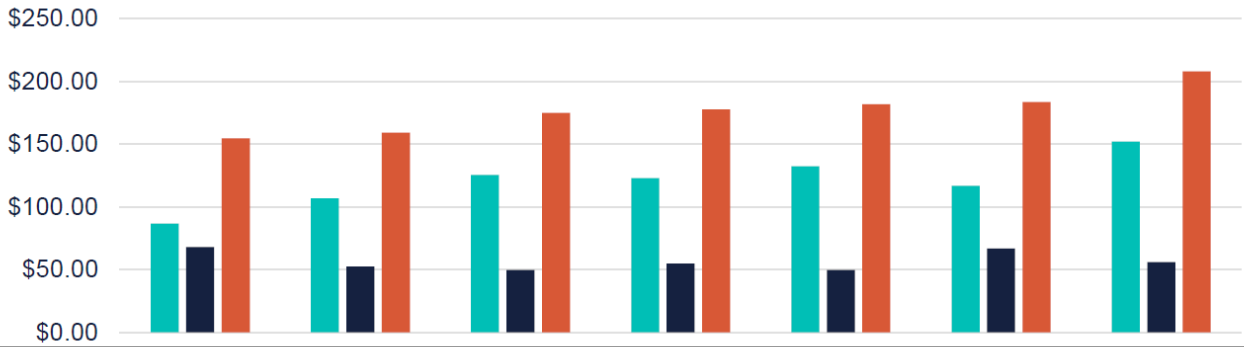
Table 7-4 Typical Monthly Bill

Customer Class	Typical Monthly Usage (HCF)	FY 2024 Existing Rates ($)	FY 2025 Proposed Rates ($)
Residential		$48.28	$52.37
Non-Residential	0	$48.28	$52.37
	10	$64.04	$74.33
	20	$128.09	$148.65
	30	$192.13	$222.98
	40	$256.18	$297.31
	50	$320.22	$371.63
	100	$640.45	$743.27
	250	$1,601.12	$1,858.17

7.4 Neighboring Sewer Utilities

Presented in Figure 7-1 is the proposed rates compared to rates of neighboring jurisdictions, for a single-family residential customer. Based on the comparison, the City is currently a higher cost sewer provider in the area. With the proposed rate increases, the City remains one of the higher sewer providers of the surveyed communities. All surveyed community rates are best estimates as of April 2024.

Figure 7-1 Comparison to Neighboring Sewer Utilities



	Sunnyvale	Santa Clara	SJWC	Mountain View	San Jose (Muni)	Milpitas	Palo Alto
Water Rate 12 HCF	$86.50	$106.80	$125.44	$122.86	$132.25	$116.72	$152.19
Sewer Rate	$67.95	$52.37	$49.59	$54.60	$49.59	$66.79	$55.93
Combined	**$154.45**	**$159.17**	**$175.03**	**$177.46**	**$181.84**	**$183.51**	**$208.12**

*All rates are proposed for FY24-25

Appendix A – Ten-Year Financial Plan

Water Utility

Line No.	Description	Fiscal Year Ending June 30,									
		FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034
		($)	($)	($)	($)	($)	($)	($)	($)	($)	($)
	Revenue										
	Rate Revenue										
1	Revenue from Existing Rates	53,326,400	53,328,400	53,330,600	53,460,600	53,591,100	53,721,600	53,852,800	53,984,300	54,115,900	54,247,900
2	Increased Revenue Due to Adjustments	8,158,900	17,566,800	28,415,000	32,171,800	35,683,900	39,350,600	43,178,600	47,174,700	51,345,900	55,700,000
3	Subtotal Rate Revenue	$ 61,485,300	$ 70,895,200	$ 81,745,600	$ 85,632,400	$ 89,275,000	$ 93,072,200	$ 97,031,400	$ 101,159,000	$ 105,461,800	$ 109,947,900
	Other Operating Revenue										
4	Solar System Maintenance	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000	85,000
5	Water System Maintenance	1,102,500	1,102,500	1,102,500	1,102,500	1,102,500	1,102,500	1,102,500	1,102,500	1,102,500	1,102,500
6	Water Construction	0	0	0	0	0	0	0	0	0	0
7	Water System Operations	0	0	0	0	0	0	0	0	0	0
8	Administration Design	1,396,200	1,403,200	1,410,300	1,417,600	1,425,000	1,432,600	1,440,300	1,448,200	1,456,200	1,464,400
9	Water Quality	0	0	0	0	0	0	0	0	0	0
10	Water Resources	0	0	0	0	0	0	0	0	0	0
11	Subtotal Other Operating Revenue	$ 2,583,700	$ 2,590,700	$ 2,597,800	$ 2,605,100	$ 2,612,500	$ 2,620,100	$ 2,627,800	$ 2,635,700	$ 2,643,700	$ 2,651,900
12	**Total Revenue**	**$ 64,069,000**	**$ 73,485,900**	**$ 84,343,400**	**$ 88,237,500**	**$ 91,887,500**	**$ 95,692,300**	**$ 99,659,200**	**$ 103,794,700**	**$ 108,105,500**	**$ 112,599,800**
	Revenue Requirements										
	Operating & Maintenance										
13	O&M Expenses	58,973,100	63,515,100	68,539,900	74,474,200	80,770,600	87,518,300	92,310,800	97,407,700	101,676,200	106,147,500
14	Subtotal O&M	$ 58,973,100	$ 63,515,100	$ 68,539,900	$ 74,474,200	$ 80,770,600	$ 87,518,300	$ 92,310,800	$ 97,407,700	$ 101,676,200	$ 106,147,500
	Debt Service										
15	Existing Loans/Bonds	0	0	0	0	0	0	0	0	0	0
16	Proposed Loans/Bonds	0	0	0	0	0	0	0	0	0	0
17	Total Debt Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Transfers										
18	Transfer to Rate Stabilization Fund	0	0	6,350,000	1,000,000	500,000	500,000	500,000	500,000	500,000	600,000
19	Transfer to Pensiotn Stabilization Fund	199,400	199,400	199,400	199,400	199,400	199,400	199,400	199,400	199,400	199,400
20	Transfer to Water Construction Fund	4,550,000	5,750,000	5,750,000	5,000,000	5,000,000	5,500,000	6,000,000	6,500,000	6,500,000	6,500,000
21	Total Transfers	$ 4,749,400	$ 5,949,400	$ 12,299,400	$ 6,199,400	$ 5,699,400	$ 6,199,400	$ 6,699,400	$ 7,199,400	$ 7,199,400	$ 7,299,400
22	**Total Revenue Requirements**	**$ 63,722,500**	**$ 69,464,500**	**$ 80,839,300**	**$ 80,673,600**	**$ 86,470,000**	**$ 93,717,700**	**$ 99,010,200**	**$ 104,607,100**	**$ 108,875,600**	**$ 113,446,900**
23	Net Annual Cash Balance	346,500	4,021,400	3,504,100	7,563,900	5,417,500	1,974,600	649,000	(812,400)	(770,100)	(847,100)
24	Beginning Fund Balance	9,891,600	9,959,200	13,701,700	16,926,900	24,211,900	29,350,500	31,046,200	31,416,300	30,325,000	29,276,000
25	Net Cumulative Fund Balance	$ 10,238,100	$ 13,980,600	$ 17,205,800	$ 24,490,800	$ 29,629,400	$ 31,325,100	$ 31,695,200	$ 30,603,900	$ 29,554,900	$ 28,428,900
26	Minimum Operating Reserves (90 Days)	$ 14,541,300	$ 15,661,300	$ 16,900,200	$ 18,363,500	$ 19,916,000	$ 21,579,900	$ 22,761,600	$ 24,018,300	$ 25,070,800	$ 26,173,400

Recycled Water Utility

Line No.	Description	Fiscal Year Ending June 30,									
		FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034
		($)	($)	($)	($)	($)	($)	($)	($)	($)	($)
	Revenue										
	Rate Revenue										
1	Revenue from Existing Rates	6,990,300	7,060,200	7,130,700	7,201,900	7,273,900	7,346,500	7,419,700	7,493,900	7,568,700	7,644,200
2	Increased Revenue Due to Adjustments	1,048,500	2,276,900	3,714,100	5,421,700	7,420,400	9,497,900	10,443,100	11,449,500	12,520,300	13,253,900
3	Subtotal Rate Revenue	$ 8,038,800	$ 9,337,100	$ 10,844,800	$ 12,623,600	$ 14,694,300	$ 16,844,400	$ 17,862,800	$ 18,943,400	$ 20,089,000	$ 20,898,100
	Other Operating Revenue										
4	System Maintenance	97,600	99,600	101,600	103,600	105,700	107,800	110,000	112,200	114,400	116,700
5	South Bay Water Recycling System Maintena	728,400	760,200	782,800	812,600	846,800	873,900	901,800	930,600	960,300	991,100
6	Subtotal Other Operating Revenue	$ 826,000	$ 859,800	$ 884,400	$ 916,200	$ 952,500	$ 981,700	$ 1,011,800	$ 1,042,800	$ 1,074,700	$ 1,107,800
	Transfers From										
7	RW Capital Fund	0	0	0	0	0	0	0	0	0	0
8	Subtotal Transfers From	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	**Total Revenue**	**$ 8,864,800**	**$ 10,196,900**	**$ 11,729,200**	**$ 13,539,800**	**$ 15,646,800**	**$ 17,826,100**	**$ 18,874,600**	**$ 19,986,200**	**$ 21,163,700**	**$ 22,005,900**
	Revenue Requirements										
	Operating & Maintenance										
10	O&M Expenses	9,164,900	10,344,900	11,664,100	13,167,600	14,877,700	16,748,500	18,041,300	19,435,500	20,582,900	21,798,400
11	Subtotal O&M	9,164,900	10,344,900	11,664,100	13,167,600	14,877,700	16,748,500	18,041,300	19,435,500	20,582,900	21,798,400
	Debt Service										
12	Existing Loans/Bonds	0	0	0	0	0	0	0	0	0	0
13	Proposed Loans/Bonds	0	0	0	0	0	0	0	0	0	0
14	Total Debt Service	0	0	0	0	0	0	0	0	0	0
	Transfers										
15	Transfer to Rate Stabilization Fund	0	0	0	0	0	0	0	0	0	0
16	Transfer to Pensiotn Stabilization Fund	0	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800	9,800
17	Transfer to Recycled Water Const Fund	0	0	0	100,000	200,000	200,000	200,000	200,000	200,000	200,000
18	Total Transfers	0	9,800	9,800	109,800	209,800	209,800	209,800	209,800	209,800	209,800
19	**Total Revenue Requirements**	**$ 9,164,900**	**$ 10,354,700**	**$ 11,673,900**	**$ 13,277,400**	**$ 15,087,500**	**$ 16,958,300**	**$ 18,251,100**	**$ 19,645,300**	**$ 20,792,700**	**$ 22,008,200**
20	Net Annual Cash Balance	(300,100)	(157,800)	55,300	262,400	559,300	867,800	623,500	340,900	371,000	(2,300)
21	Beginning Fund Balance	3,295,300	2,995,200	2,837,400	2,892,700	3,155,100	3,714,400	4,582,200	5,205,700	5,546,600	5,917,600
22	Net Cumulative Fund Balance	$ 2,995,200	$ 2,837,400	$ 2,892,700	$ 3,155,100	$ 3,714,400	$ 4,582,200	$ 5,205,700	$ 5,546,600	$ 5,917,600	$ 5,915,300
23	Minimum Operating Reserves (90 Days)	$ 2,259,800	$ 2,550,800	$ 2,876,100	$ 3,246,800	$ 3,668,500	$ 4,129,800	$ 4,448,500	$ 4,792,300	$ 5,075,200	$ 5,374,900

Sewer Utility

Line No.	Description	Fiscal Year Ending June 30, FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034
	Revenue										
	Rate Revenue										
1	Revenue from Existing Rates	40,954,300	41,020,500	41,086,900	41,189,500	41,292,500	41,395,900	41,499,100	41,602,800	41,706,700	41,810,900
2	Increased Revenue Due to Adjustments	4,975,900	10,573,500	16,869,500	19,235,600	19,283,700	19,332,000	19,380,200	19,428,700	19,477,200	19,525,800
3	Subtotal Rate Revenue	$ 45,930,200	$ 51,594,000	$ 57,956,400	$ 60,425,100	$ 60,576,200	$ 60,727,900	$ 60,879,300	$ 61,031,500	$ 61,183,900	$ 61,336,700
	Other Operating Revenue										
4	System Administration (Interest Income)	636,700	648,500	660,600	672,900	685,400	698,200	711,200	724,500	738,100	751,900
5	System Maintenance	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
6	Operations	1,750,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000
7	SJ SC Water Pollution Control Plant	0	0	0	0	0	0	0	0	0	0
8	Storm Pump Maintenance	0	0	0	0	0	0	0	0	0	0
9	Subtotal Other Operating Revenue	$ 2,406,700	$ 1,043,500	$ 1,055,600	$ 1,067,900	$ 1,080,400	$ 1,093,200	$ 1,106,200	$ 1,119,500	$ 1,133,100	$ 1,146,900
10	**Total Revenue**	**$ 48,336,900**	**$ 52,637,500**	**$ 59,012,000**	**$ 61,493,000**	**$ 61,656,600**	**$ 61,821,100**	**$ 61,985,500**	**$ 62,151,000**	**$ 62,317,000**	**$ 62,483,600**
	Revenue Requirements										
	Operating & Maintenance										
11	O&M Expenses	31,605,200	32,818,200	33,891,000	35,043,100	36,231,500	37,493,700	38,800,800	40,155,300	41,558,500	43,012,400
12	Subtotal O&M	$ 31,605,200	$ 32,818,200	$ 33,891,000	$ 35,043,100	$ 36,231,500	$ 37,493,700	$ 38,800,800	$ 40,155,300	$ 41,558,500	$ 43,012,400
	Debt Service										
13	Existing Loans/Bonds	3,298,500	3,296,800	3,298,300	3,297,800	3,300,300	3,300,500	3,298,500	2,361,800	2,360,100	2,360,800
14	Proposed Loans/Bonds	0	0	972,300	1,351,800	1,351,800	1,351,800	1,351,800	1,351,800	1,351,800	1,351,800
15	Total Debt Service	$ 3,298,500	$ 3,296,800	$ 4,270,600	$ 4,649,600	$ 4,652,100	$ 4,652,300	$ 4,650,300	$ 3,713,600	$ 3,711,900	$ 3,712,600
	Transfers										
16	Transfer to Rate Stabilization Fund	2,000,000	500,000	500,000	500,000	250,000	0	0	0	0	0
17	Transfer to Pension Stabilization Fund	78,200	78,200	78,200	78,200	78,200	78,200	78,200	78,200	78,200	78,200
18	Transfer to Sewer Construction Fund	16,250,000	16,000,000	20,000,000	20,000,000	20,000,000	12,500,000	10,000,000	10,000,000	10,000,000	10,000,000
19	Total Transfers	$ 18,328,200	$ 16,578,200	$ 20,578,200	$ 20,578,200	$ 20,328,200	$ 12,578,200	$ 10,078,200	$ 10,078,200	$ 10,078,200	$ 10,078,200
20	**Total Revenue Requirements**	**$ 53,231,900**	**$ 52,693,200**	**$ 58,739,800**	**$ 60,270,900**	**$ 61,211,800**	**$ 54,724,200**	**$ 53,529,300**	**$ 53,947,100**	**$ 55,348,600**	**$ 56,803,200**
21	Net Annual Cash Balance	(4,895,000)	(55,700)	272,200	1,222,100	444,800	7,096,900	8,456,200	8,203,900	6,968,400	5,680,400
22	Beginning Fund Balance	16,233,478	8,288,178	8,182,178	8,404,078	9,575,878	9,970,378	17,016,978	25,422,878	33,576,478	40,494,578
23	Net Cumulative Fund Balance	$ 11,338,478	$ 8,232,478	$ 8,454,378	$ 9,626,178	$ 10,020,678	$ 17,067,278	$ 25,473,178	$ 33,626,778	$ 40,544,878	$ 46,174,978
24	Minimum Operating Reserves (90 Days)	7,793,100	8,092,200	8,356,700	8,640,800	8,933,800	9,245,000	9,567,300	9,901,300	10,247,300	10,605,800
25	Debt Service Coverage (Min 1.25)	5.07	6.01	5.88	5.69	5.47	5.23	4.99	5.92	5.59	5.24