CITY OF REDLANDS

MUNICIPAL UTILITIES/PUBLIC WORKS COMMISSION

SPECIAL MEETING AGENDA

WEDNESDAY, APRIL 15, 2026

STEVE STOCKTON
Chairperson

CHANDRASEKAR 'CV' VENKATRAMAN
Vice Chairperson

PAUL NORWOOD
Commissioner

THOMAS BREITKREUZ
Commissioner

DAVID GARCIA
Commissioner

4:00 PM Open Public Meeting
City of Redlands
Civic Campus
35 Cajon Street
Redlands, California 92373

MONICA HEREDIA
Municipal Utilities & Engineering Director

RAY CASEY
Senior Project Manager

GOUTAM K. DOBEY
City Engineer

JOSEPH HAMBURGER
Wastewater Utility Manager

PAUL MARISCAL
Water Utility Manager

WILFRESHA ADWEYA
Laboratory Manager

Anyone desiring to speak on an agenda item at this meeting may do so during the consideration of that item. Due to time constraints and the number of persons wishing to give oral testimony, public comments will be limited to three (3) minutes.

- *To provide comment, simply raise your hand to speak*

The following comprises the agenda for the regular meeting of the Municipal Utilities/Public Works Commission of the City of Redlands.

In compliance with the Americans with Disabilities Act, if special assistance is needed to participate in this meeting, contact Goutam Dobey of Municipal Utilities/Engineering Department at (909) 798-7584 x2. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting. (28 CFR 35.102-35.104 ADA Title II) NOTE: Any writings or documents distributed to a majority of the Municipal Utilities/Public Works Commission regarding an open session agenda item less than 72 hours before this meeting are available for public inspection at: www.cityofredlands.org/municipal-utilitiespublic-works-commission, the Municipal Utilities & Engineering Department at 35 Cajon Street, Suite 15A, or calling (909) 798-7698.

CITY OF REDLANDS

MUNICIPAL UTILITIES/PUBLIC WORKS COMMISSION

SPECIAL MEETING AGENDA

WEDNESDAY, APRIL 15, 2026

A. ATTENDANCE & CALL TO ORDER

B. PUBLIC COMMENT

(Any person wishing to provide public comment may do so at this time.)

C. APPROVAL OF MINUTES

- **a. APRIL 6, 2026 MUPWC Meeting**

D. COMMUNICATIONS

- **a. Proposed Water and Wastewater Rate Increases**

E. NEW BUSINESS

F. COMMISSIONER ANNOUNCEMENTS, REPORTS ON ACTIVITIES, AND/OR REQUEST FOR FUTURE AGENDA ITEMS

G. ADJOURNMENT – Next Meeting is July 6, 2026 @ 4:00 pm

ATTACHMENTS:

1. **Draft Minutes of April 6, 2026, Regular Meeting**
2. **Raftelis Rate Study & Presentation**

In compliance with the Americans with Disabilities Act, if special assistance is needed to participate in this meeting, contact Goutam Dobey of Municipal Utilities/Engineering Department at (909) 798-7584 x2. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting. (28 CFR 35.102-35.104 ADA Title II) NOTE: Any writings or documents distributed to a majority of the Municipal Utilities/Public Works Commission regarding an open session agenda item less than 72 hours before this meeting are available for public inspection at: www.cityofredlands.org/municipal-utilitiespublic-works-commission, the Municipal Utilities & Engineering Department at 35 Cajon Street, Suite 15A, or calling (909) 798-7698.

DRAFT
(for MUPWC review on 04/15)

MINUTES

The City of Redlands Municipal Utilities/Public Works Commission on April 6, 2026, at 4:00 PM in the City Council Chambers, 35 Cajon St., Redlands, CA 92373.

A. ATTENDANCE & CALL TO ORDER

Present:	Steve Stockton, Chairperson Chandrasekar 'CV' Venkatraman, Vice Chairperson David Garcia, Commissioner Thomas Breitkreuz, Commissioner Paul Norwood, Commissioner
Absent:	
City Council Liaison:	Mario Saucedo, Mayor
Staff:	Monica Heredia, MUED Director; Ray Casey, MUED Interim Director; Goutam Dobey, City Engineer; Wilfresha Adweya, Laboratory Manager; Charlie Duggan, City Manager.
Absent:	Sara White, Commission Liaison/Senior Administrative Assistant; Marina Viramontes, Senior Administrative Assistant; Paul Mariscal, Water Utility Manager
Guest Speakers:	None
Public:	One member present

Chairperson Steve Stockton called the meeting to order at 4:00 PM.

B. PUBLIC COMMENT

None.

C. APPROVAL OF MINUTES

The minutes of the February 2, 2026, meeting were unanimously approved

D. COMMUNICATIONS

a. Director's Report-

i. Ray Casey proceeds with the Director's Report

Upcoming City Council Meeting Agenda Items:
No further discussion of upcoming City Council items beyond what is reported in the director's report.

WWTP P2 Project Update:
Wilfresha Adweya speaks on the chain of custody regarding WWTP and Water sampling.

Sunset Reservoir Replacement Project Update:
Goutam Dobey and Ray Casey provide further details of the Reservoir project. The preliminary design report was presented at the February 2, 2026, meeting, and the design concept was unanimously approved, and staff were directed to move forward with the final design.

PMP Update:
No Discussion

Caltrans/SBCTA Projects:
No discussion

Q3 Capital Improvement Project Update:
Steve Stockton requests additional details regarding certain Capital Improvement projects. Goutam Dobey provides the requested details.

b. Proposed Water and Wastewater Rate Increases – Charlie Duggan, City Manager, discusses the UAC review and the recommendation for a rate increase. MUPWC requests additional time to review the provided rate study report.
c. Ray Casey provides an update on the Mutual Water Company and the cost share for the Tate Influent line by Crafton Water Company.

1. NEW BUSINESS
   a. Motion to retain Steve Stockton as Chairman by David Garcia and seconded by CV- All agreed
   b. Motion to retain Chandrasekar 'CV' Venkatraman as Vice Chair by David Garcia and seconded by Steve Stockton - All agreed

2. COMMISSIONER ANNOUNCEMENTS, REPORTS ON ACTIVITIES, AND/OR REQUESTS FOR FUTURE AGENDA ITEMS
   a. Request more time to review the Rate Study report and to call a Special Meeting to discuss it before the April 21, 2026, City Council meeting. Also, request consultation with the City Attorney regarding MUPWC's role in the rate study.

3. ADJOURNMENT – Next meeting is scheduled for July 6, 2026, at 4:00 PM at City Council Chambers, 35 Cajon St, Redlands, CA 92373.

There being no further business, the meeting was adjourned at 4:57 PM. The next regular meeting for the City of Redlands Municipal Utilities/Public Works Commission is scheduled for July 6, 2026.

CITY OF REDLANDS

Water, Wastewater, and Non-Potable Water Financial Plan and Rate Study

DRAFT FINAL REPORT / MARCH 26, 2026

RAFTELIS

RAFTELIS

March 26, 2026

Goutam K. Dobey, PE
City Engineer
City of Redlands
Municipal Utilities and Engineering
35 Cajon Street
Redlands, CA 92373

Subject: Water, Wastewater, and Non-Potable Water Financial Plan and Rate Study Report

Dear Mr. Dobey:

Raftelis is pleased to provide this Water, Wastewater, and Non-Potable Water Financial Plan Study Report (Report) for the City of Redlands (City). This report presents the analyses, rationales, and methodologies utilized in the study to determine utility rates that align with the requirements of Proposition 218. The study was developed with feedback and input from City staff.

The study involved a comprehensive review of the City's current water, wastewater, and non-potable water cost requirements to determine rates that meet the City's objectives. The main objectives that informed the study include:

- Adequately recovering all costs to ensure the financial sufficiency of the City's utilities
- Determining feasible capital financing plans for all three utilities
- Developing long-term financial plans for all three utilities
- Calculating cost of service-based rates for all three utilities
- Minimizing customer impacts from rate adjustments

We are confident that the proposed rates developed during this study are fair and equitable for the City's customers and are in alignment with the requirements of Proposition 218. We appreciate the input provided by City staff, which helped guide the final recommendations of the financial plan and resulting rates. It was a pleasure working with you and your team, and we wish to express our gratitude for the support you and other City staff provided during the study.

Sincerely,

Sudhir Pardiwala
Executive Vice President

Jeremy Tamargo
Manager

Contents

Tables

Figures

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1. Executive Summary

1.1. Study Background

In 2025, the City of Redlands (City) contracted Raftelis to conduct a Water, Wastewater, and Non-Potable Water Rate Study, which included developing long-term financial plans and cost-of-service rates.

This report presents the three financial plans and resulting rates for the water, wastewater, and non-potable water utilities for a three-year period to ensure fairness and equity for its customers and the financial stability of the three enterprises.

This Executive Summary outlines the proposed financial plans and resulting rates and contains a description of the rate study process, methodology, and recommendations for the City's rates. The main objectives that informed the Study include:

- Adequately recovering all costs to ensure the financial sufficiency of the City's utilities
- Determining feasible capital financing plans for all three utilities
- Developing long-term financial plans for all three utilities
- Calculating cost of service-based rates for the three utilities
- Minimizing customer impacts from changes to the rate structures

1.2. Current Rates

The City's current water rates were adopted on July 1, 2025, and include a bi-monthly service charge based on meter size for water service, fire protection service, and tiered water usage rates per hundred cubic feet (ccf) of water by customer class. **Table 1-1** shows current bi-monthly service charges and fire protection charges, and **Table 1-2** shows the water usage rates by customer class, each unit is one ccf.

Table 1-1: Current Bi-Monthly Water Service Charges ($/meter size)

	A	B	C
Line	Meter Size	Water Service Charge	Fire Protection Water Service Charge
1	5/8"	$33.60	
2	3/4"	$44.90	
3	1"	$66.81	
4	1 1/2"	$119.96	
5	2"	$177.10	$12.05
6	3"	$305.97	$21.63
7	4"	$472.05	$38.14
8	6"	$870.64	$97.39
9	8"	$1,282.51	$199.61
10	10"	$3,036.30	$353.35
11	12"	$3,992.91	$566.44

Table 1-2: Current Water Usage Rates ($/ccf of water)

	A	B
Line	Customer Class	Water Usage Rate
1	Building Water Usage	
2	Tier 1 first 16 units	$1.61
3	Tier 2 17-27 units	$1.90
4	Tier 3 over 27 units	$2.85
5		
6	Non-Building Water Usage	
7	Tier 1 first 27 units	$1.81
8	Tier 2 over 27 units	$2.85
9		
10	Other Water Usage	
11	B Contract	$100.46
12	Recycled	$110.00
13		
14	Fire Protection/Fire Hydrant Water Usage	
15	All Units	$2.85

The current wastewater rates were implemented on July 1, 2025, and include a bi-monthly service charge for residential customers and schools and non-residential wastewater usage rates per ccf of water usage. **Table 1-3** shows the current bi-monthly residential service charges, **Table 1-4** shows the non-residential wastewater usage rates for all non-residential customer classes, and **Table 1-5** shows the bi-monthly schools service charge by school type based on average daily attendance (ADA).

Table 1-3: Current Bi-Monthly Residential Wastewater Service Charges ($/dwelling unit)

	A	B
Line	Residential Customer Class	Wastewater Service Rate
1	Single Family	$72.65
2	Multiple Family	$57.64

Table 1-4: Current Non-Residential Wastewater Rates ($/ccf of water)

	A	B
Line	Non-Residential Customer Class	Wastewater Rate per ccf
1	Low Strength I	$3.11
2	Low Strength II	$3.76
3	Low Strength III	$4.39
4	Medium Strength I	$5.04
5	Medium Strength II	$5.68
6	Medium Strength III	$6.33
7	High Strength I	$6.98
8	High Strength II	$7.62
9	Large Volume User	$4.39
10	Minimum Charge ($)	$57.64
11		
12	Septage Charge ($/gal)	$0.11

Table 1-5: Current Bi-Monthly Schools Wastewater Service Charge ($/100 students)

	A	B
Line	Schools Customer Class	Wastewater Service Rate
1	Elementary	$157.43
2	Secondary & High	$262.38

The current non-potable water rates include a bi-monthly service charge and a usage rate per ccf of non-potable water usage.

Table 1-6 and **Table 1-7** show the bi-monthly non-potable water service charges and non-potable water usage rates, respectively.

Table 1-6: Current Bi-Monthly Non-Potable Water Service Charges ($/meter size)

	A	B
Line	Meter Size	Non-Potable Water Service Charge
1	3/4"	$13.81
2	1"	$20.65
3	1 1/2"	$37.29
4	2"	$55.16
5	3"	$95.50
6	4"	$147.45
7	6"	$272.16
8	8"	$401.04

Table 1-7: Current Non-Potable Water Usage Rates ($/ccf of water)

	A	B
Line	Non-Potable Customer Class	Non-Potable Water Usage Rate per ccf
1	Non-Potable Water	$0.99
2	Conversion Customer	$0.64

1.3. Process and Approach

The City's rate-setting process involves participation and feedback from City staff and the Utilities Advisory Committee (UAC). During the study, Raftelis met with City staff to discuss and understand the challenges the City's three utilities face and to provide guidance to finalize the rate recommendations, which are detailed in this report.

During meetings with staff and UAC, Raftelis presented the various assumptions, inputs, and scenario analyses that were utilized to determine the water, wastewater, and non-potable water financial plans. City staff discussed the upcoming capital project requirements, which are some of the main drivers for the revenue adjustments in the final recommendations presented in this report. Raftelis designed and presented the financial plan and rate models to analyze various scenarios, such as those related to debt issuances, revenue adjustments, and capital funding.

The proposed financial plans detailed in this report followed industry standard practices for long-term financial planning and utilized commonly accepted assumptions in the absence of specified assumptions from the City, such as general inflation based on the Consumer Price Index (CPI). Raftelis worked closely with City staff to project future revenues and expenses to reinforce sound fiscal management practices.

The cost-of-service analysis utilized to develop the water rates followed the guidelines for allocating costs outlined in the American Water Works Association's (AWWA) "Principles of Water Rates, Fees, and Charges: Manual of Water Supply Practices M1, 6th edition" (M1 Manual). Wastewater rates followed the guidelines for allocating costs outlined in the Water Environment Federation (WEF) *Manual of Practice No. 27,*

Financing and Charges for Wastewater (2018). The cost-of-service analysis and rate design process consists of seven major steps, as outlined below:

1. Determine the revenue requirement from rates to meet operation, capital expenditures, debt financing, and reserves.
2. Functionalize operations and maintenance (O&M) expenses and capital assets into functional categories such as supply, distribution, treatment, laboratory, collection, engineering, etc.
3. Allocate each functional category into cost components such as supply, base delivery, peaking, meter and customer service for water, and wastewater flow and strength, which includes biochemical oxygen demand (BOD) and total suspended solids (TSS) for wastewater.
4. Develop customer class characteristics and units of service by cost component.
5. Calculate the unit cost component rates by dividing the total cost in each component by the total units of service for that component. For example, wastewater service units include flow which is measured in ccf and BOD and TSS which are measured in pounds (lbs) per year.
6. Calculate the cost for each customer class by multiplying the unit cost by the units of service for each customer class.
7. Design rates to meet the City's objectives.

The financial plans for the three utilities include the three-year Study period from fiscal year (FY) 2027[1] to FY 2029. The proposed rates were developed for implementation on January 1, 2027 (middle of FY 2027) and in July of every year thereafter (July 1, 2027, through July 1, 2028).

1.4. Legal Framework

California Constitution Article XIII D, Section 6, commonly referred to as Proposition 218, was enacted in 1996 to ensure that rates and fees are reasonable and proportionate to the cost of providing service. The principal requirements for the fairness of the fees, as they relate to public water and wastewater service are as follows:

1. A property-related charge (such as water and wastewater rates) imposed by a public agency on a parcel shall not exceed the costs required to provide the property-related service.
2. Revenues derived by the charge shall not be used for any purpose other than that for which the charge was imposed.
3. The amount of the charge imposed upon any parcel shall not exceed the proportional cost of service attributable to the parcel.
4. No charge may be imposed for a service unless that service is actually used or immediately available to the owner of the property.
5. A written notice of the proposed charge shall be mailed to the record owner of each parcel at least 45 days prior to the public hearing, when the agency considers all written protests against the charge.

Proposition 218 requires that rates cannot be "arbitrary and capricious," meaning that the rate-setting methodology must be sound and there must be a nexus between the costs and the rates charged. Raftelis follows industry-standard rate-setting methodologies to perform cost-of-service analyses for the water utility based on the M1 Manual and for the wastewater utility based on WEF's Manual No. 27.

[1] FY 2027 is the period from July 1, 2026, to June 30, 2027.

1.5. Results and Recommendations

Raftelis worked closely with City staff to define the final results and recommendations of the water, wastewater, and non-potable water rate Study. The recommendations presented in this report will ensure the financial sufficiency and stability of the City's three utilities to fund all necessary operating costs, capital costs, and to maintain sufficient cash reserves. To minimize customer impacts due to changes in rate structure, which is a key objective that informed the Study approach, Raftelis recommends that the City maintain the same rate structure for the water, wastewater, and non-potable water systems.

1.5.1. Water Utility

- The water O&M expenses are expected to increase, on average, by approximately 2.8 percent each year of the Study based on the City's FY 2026 budget and inflationary assumptions.
- The City plans to spend approximately $51.5 million on capital projects from FY 2027 to FY 2029.
- Raftelis recommends 2.5 percent revenue adjustments per year in FY 2027 through FY 2029 to fund its capital project spending and to maintain sufficient cash reserves.

1.5.2. Wastewater Utility

- The wastewater O&M expenses are expected to increase, on average, by approximately 2.8 percent each year of the Study based on the City's FY 2026 budget and inflationary assumptions.
- The City plans to spend $55.1 million in capital projects from FY 2027 to FY 2029, the majority of which is to refurbish and modify the City's current wastewater treatment plant.
- The City has obtained an SRF loan of $45 million to fund most of the wastewater treatment plant project costs.
- Raftelis recommends 7 percent revenue adjustments per year in FY 2027 through FY 2029 to fund capital projects and debt service and to meet debt coverage requirements.

1.5.3. Non-Potable Water Utility

- The non-potable O&M expenses are expected to increase, on average, by approximately 3.1 percent each year of the Study based on the City's FY 2026 budget and inflationary assumptions.
- The City does not currently have planned capital projects for the non-potable water utility from FY 2027 to FY 2029.
- Raftelis recommends no revenue adjustments for FY 2027 through FY 2029 as the utility has sufficient cash reserves to fund capital project costs and operating expenses.

1.6. Proposed Rates

Table 1-8 and **Table 1-9** show the proposed bi-monthly water service charges and water usage rates for the City's water utility, respectively, based on the above recommendations. The proposed water rates for FY 2027 are determined by the cost-of-service analysis, and rates for the following years are increased from those rates based on the proposed revenue adjustments.

Table 1-8: Proposed Bi-Monthly Water Service Charges ($/meter size)

A	B	C	D	E
Bi-Monthly Water Service Charges	**Current Rates**	**January 2027**	**July 2027**	**July 2028**
Water Service				
5/8"	$33.60	$34.09	$34.95	$35.83
3/4"	$44.90	$45.54	$46.68	$47.85
1"	$66.81	$67.76	$69.46	$71.20
1 1/2"	$119.96	$121.64	$124.69	$127.81
2"	$177.10	$179.56	$184.05	$188.66
3"	$305.97	$310.22	$317.98	$325.93
4"	$472.05	$478.60	$490.57	$502.84
6"	$870.64	$882.70	$904.77	$927.39
8"	$1,282.51	$1,300.27	$1,332.78	$1,366.10
10"	$3,036.30	$3,078.32	$3,155.28	$3,234.17
12"	$3,992.91	$4,048.16	$4,149.37	$4,253.11
Fire Protection Service				
2"	$12.05	$12.05	$12.36	$12.67
3"	$21.63	$21.39	$21.93	$22.48
4"	$38.14	$37.51	$38.45	$39.42
6"	$97.39	$95.34	$97.73	$100.18
8"	$199.61	$195.09	$199.97	$204.97
10"	$353.35	$345.14	$353.77	$362.62
12"	$566.44	$553.09	$566.92	$581.10
Fire Hydrant Service				
All Meters	$305.97	$313.62	$321.47	$329.51

Table 1-9: Proposed Water Usage Rates ($/ccf of water)

A	B	C	D	E	F
Water Usage Rates	**Bi-Monthly Tiers**	**Current Rates**	**January 2027**	**July 2027**	**July 2028**
Building Water Usage					
Tier 1	16	$1.61	$1.59	$1.63	$1.68
Tier 2	27	$1.90	$1.95	$2.00	$2.05
Tier 3	Over 27	$2.85	$3.00	$3.08	$3.16
Non-Building Water Usage					
Tier 1	27	$1.81	$1.87	$1.92	$1.97
Tier 2	Over 27	$2.85	$2.66	$2.73	$2.80
Fire Protection Water Usage					
All Units		$2.85	$2.93	$3.01	$3.09

Table 1-10 and **Table 1-11** show the proposed bi-monthly residential and schools wastewater service charges and non-residential water usage rates for the wastewater utility, respectively. The proposed wastewater rates are based on the cost-of-service analysis.

Table 1-10: Proposed Bi-Monthly Residential and Schools Wastewater Service Charges

A	B	C	D	E
Bi-Monthly Wastewater Service Charges	**Current Rates**	**January 2027**	**July 2027**	**July 2028**
Residential ($/dwelling unit)				
Single Family	$72.65	$78.15	$83.63	$89.49
Multiple Family	$57.64	$62.01	$66.36	$71.01
Schools ($/100 students)				
Elementary	$157.43	$165.62	$177.22	$189.63
Secondary & High	$262.38	$276.04	$295.37	$316.05

Table 1-11: Proposed Non-Residential Wastewater Usage Rates ($/ccf of water)

A	B	C	D	E
Wastewater Usage Rates	**Current Rates**	**January 2027**	**July 2027**	**July 2028**
Non-Residential Usage ($/ccf)				
Low Strength I	$3.11	$3.31	$3.55	$3.80
Low Strength II	$3.76	$3.93	$4.21	$4.51
Low Strength III	$4.39	$4.56	$4.88	$5.23
Medium Strength I	$5.04	$5.18	$5.55	$5.94
Medium Strength II	$5.68	$5.81	$6.22	$6.66
Medium Strength III	$6.33	$6.43	$6.89	$7.38
High Strength I	$6.98	$7.06	$7.56	$8.09
High Strength II	$7.62	$7.69	$8.23	$8.81
Large Volume User	$4.39	$4.56	$4.88	$5.23
Minimum Charge ($)	$57.64	$62.01	$66.36	$71.01
Septage Charge ($/gal)	$0.11	$0.11	$0.12	$0.13

Table 1-12 and **Table 1-13** show the bi-monthly non-potable water service charges and non-potable water usage rates, respectively. Raftelis recommends no revenue adjustments for the study period. The proposed rates for FY 2027 are based on the cost of service analysis and remain the same through FY 2029.

Table 1-12: Proposed Bi-Monthly Non-Potable Water Service Charges ($/meter size)

	A	B	C	D	E
Line	Bi-Monthly Non-Potable Water Service Charges	Current Rates	January 2027	July 2027	July 2028
1	Non-Potable Water Service				
2	3/4"	$13.81	$13.81	$13.81	$13.81
3	1"	$20.65	$20.65	$20.65	$20.65
4	1 1/2"	$37.29	$37.29	$37.29	$37.29
5	2"	$55.16	$55.16	$55.16	$55.16
6	3"	$95.50	$95.50	$95.50	$95.50
7	4"	$147.45	$147.45	$147.45	$147.45
8	6"	$272.16	$272.16	$272.16	$272.16
9	8"	$401.04	$401.04	$401.04	$401.04

Table 1-13: Proposed Non-Potable Water Usage Rates ($/ccf of water)

	A	B	C	D	E
Line	Non-Potable Water Usage Rates	Current Rates	January 2027	July 2027	July 2028
1	**Non-Potable Water Usage**				
2	Non-Potable Water	$0.99	$0.99	$0.99	$0.99
3	Conversion Customer	$0.64	$0.64	$0.64	$0.64

1.7. Combined Customer Impacts

Table 1-14 outlines the proposed customer bi-monthly impacts for a Single Family customer with a ¾" meter using 40 ccf of water each billing period. The customer impacts show the water, wastewater, non-potable water, and combined bill impacts. A typical Single Family customer will have water and wastewater service, and the total impact for this typical customer is less than $8 per bi-monthly billing period in the first year (Column B, last row).

Table 1-14: Proposed Single Family Customer Bi-Monthly Impacts (3/4" meter, 40 ccf)

A	B	C	D
Bi-Monthly Impacts	**Proposed January 2027**	**Proposed July 2027**	**Proposed July 2028**
Current Water Bill	$128.61	$128.61	$128.61
Proposed Water Bill	$131.43	$134.80	$138.36
Difference ($)	*$2.82*	*$6.19*	*$9.75*
Current Wastewater Bill	$72.65	$72.65	$72.65
Proposed Wastewater Bill	$78.15	$83.63	$89.49
Difference ($)	*$5.50*	*$10.98*	*$16.84*
Current Non-Potable Water Bill	$53.41	$53.41	$53.41
Proposed Non-Potable Water Bill	$53.41	$53.41	$53.41
Difference ($)	*$0.00*	*$0.00*	*$0.00*
Current Water and Wastewater Bill	$201.26	$201.26	$201.26
Proposed Water and Wastewater Bill	$209.58	$218.43	$227.85
Difference ($)	*$8.32*	*$17.17*	*$26.59*
Current Combined Bill	$254.67	$254.67	$254.67
Proposed Combined Bill	$262.99	$271.84	$281.26
Difference ($)	*$8.32*	*$17.17*	*$26.59*

1.8. Regional Rate Survey

Figure 1-1 shows the bi-monthly sewer bill comparison for a Single Family Dwelling Unit customer. The graph shows the City's proposed wastewater charge to be implemented in January of 2027.

Figure 1-2 shows the bi-monthly water bill comparison for a Single Family Dwelling Unit customer using a 3/4" meter and 40 ccf of water use per bi-monthly billing period. The graph shows the City's proposed water rates to be implemented in January of 2027.

Figure 1-1: Regional Single Family Customer Bi-Monthly Sewer Bill Comparison

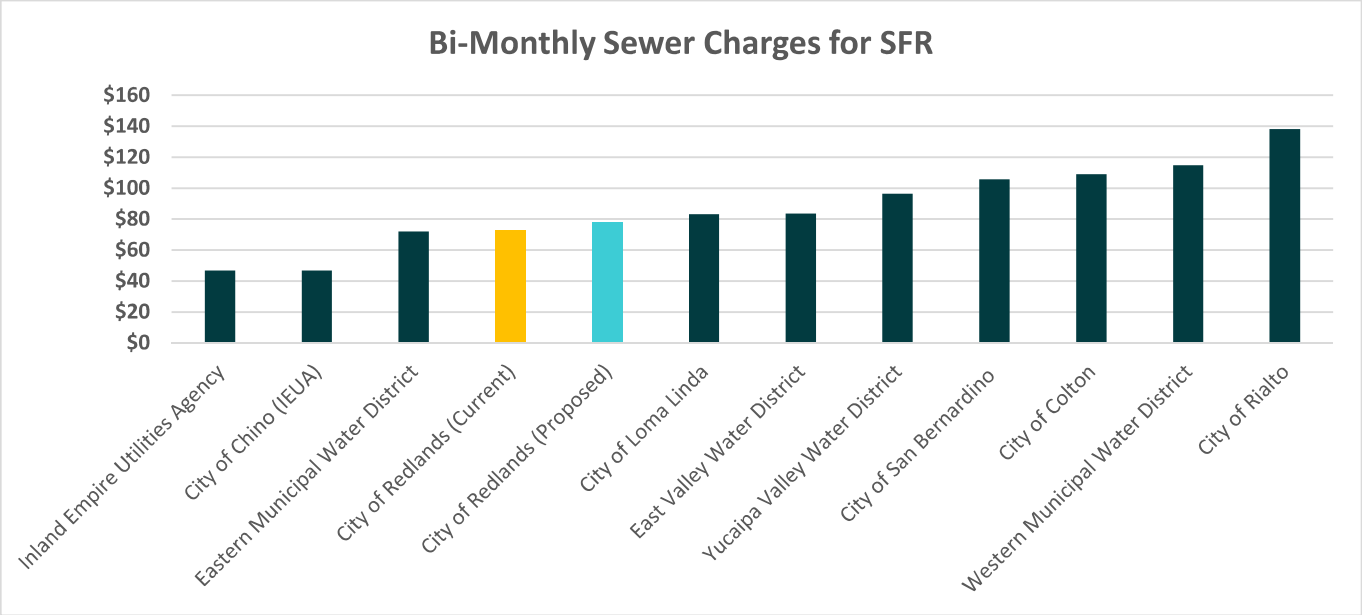
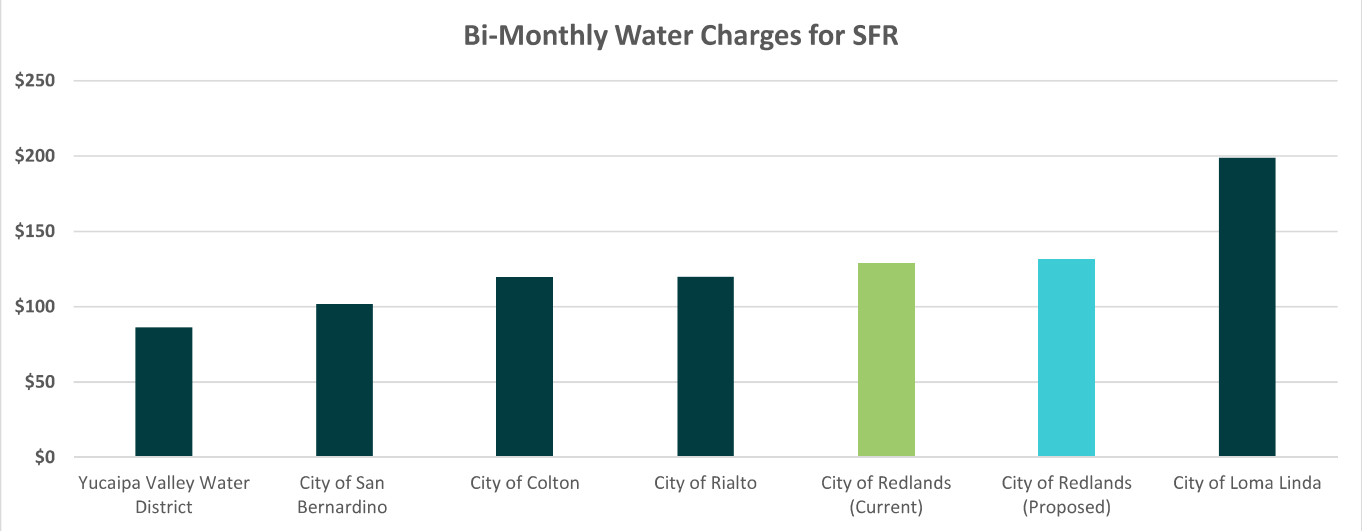


Figure 1-2: Regional Single Family Customer Bi-Monthly Water Bill Comparison



2. Key Assumptions

The key assumptions outlined in this section of the report represent the global assumptions utilized in the Study to project the number of customer accounts, revenues, and expenses for future years. City staff provided data on customer accounts, usage, and actual revenues and expenses for FY 2025 and budgeted revenues and expenses for FY 2026. The remaining years of the Study, from FY 2027 to FY 2029, were projected based on this information and the key assumptions shown in this section.

2.1. Customer Account Growth

Table 2-1 shows the customer account growth projections for each customer class based on input from City staff. The values from the 2020 Urban Water Management Plan (UWMP) were maintained for this rate study cycle. These conservative growth values were used as a prudent fiscal practice to ensure that adequate revenues are collected to fund the City's utilities.

Table 2-1: Customer Account Growth Projections

	A	B	C	D	E
Line	Customer Account Growth	FY 2026	FY 2027	FY 2028	FY 2029
1	Single Family	0.5%	0.5%	0.5%	0.5%
2	Multiple Family	0.5%	0.5%	0.5%	0.5%
3	Commercial	0.5%	0.5%	0.5%	0.5%
4	Municipal	0.5%	0.5%	0.5%	0.5%
5	Non-Building	0.6%	0.6%	0.5%	0.5%
6	Fire Service	0.5%	0.5%	0.5%	0.5%
7	School	0.5%	0.5%	0.5%	0.5%
8	Non-Potable	0.5%	0.5%	0.5%	0.5%

2.2. Revenue Inflation Factors

Table 2-2 shows the revenue inflation factors utilized to project future revenues and calculate investment income. Projections assume no increase in miscellaneous and non-rate revenues throughout the study period. The reserve interest rate is used to calculate the investment income based on projected fund balances and is based on conservative estimates.

Table 2-2: Revenue Inflation Factors

	A	B	C	D	E
Line	Revenue Inflation Factors	FY 2026	FY 2027	FY 2028	FY 2029
1	Non-Rate Revenues	0.0%	0.0%	0.0%	0.0%
2	Reserve Interest Rate	4.0%	3.5%	3.5%	3.5%

1

2.3. Expense Inflation Factors

Table 2-3 shows the expense inflation factors, which are used to project future operating and capital project expenses for the study period. These factors were determined with input from City staff and reference industry standard escalations and commonly used price indices. The general inflation factor is based on the long-term change in the CPI. Water supply, utilities, power, and chemical costs are based on industry averages. Capital was provided in already-inflated dollars.

Table 2-3: Expense Inflation Factors

	A	B	C	D	E
Line	Expense Inflation Factors	FY 2026	FY 2027	FY 2028	FY 2029
1	General	3.0%	3.0%	3.0%	3.0%
2	Salary/Benefits	3.0%	3.0%	3.0%	3.0%
3	Water Supply	5.0%	5.0%	5.0%	5.0%
4	Utilities/Power	5.0%	5.0%	5.0%	5.0%
5	Chemicals	4.0%	4.0%	4.0%	4.0%
6	Supplies/Materials	2.0%	2.0%	2.0%	2.0%
7	Capital	0%	0%	0%	0%

3. Water – Financial Plan

This section of the report details the water enterprise's long-term financial plan, based on the projected revenues, expenses, debt service, and capital project costs. Raftelis modeled the financial plan without revenue adjustments (status quo) and with proposed revenue adjustments to ensure the financial sustainability and solvency of the water utility. The results of the water financial plan are the proposed rates for three years based on the proposed revenue adjustments.

3.1. Projected Revenues

City staff provided the actual FY 2025 revenues and budgeted FY 2026 and FY 2027 revenues for the water utility, which were used to project revenues for the remainder of the study period. **Table 3-1** shows the projected water revenues for each of the water funds.

The water rate revenues (Lines 4, 6, 8-10) are calculated for future years based on the weighted customer account growth assumptions for each customer class (**Table 2-1**). The City expects modest increases in water rate revenues for all years of the study based on the growth assumptions. The investment income (Lines 13, 25) is calculated using the reserve interest rate (**Table 2-2** , Line 2). The remaining revenues are inflated using the non-rate revenue inflation factor (**Table 2-2**, Line 1).

Table 3-1: Projected Water Revenues

Line No.	A Projected Revenues	B FY 2026	C FY 2027	D FY 2028	E FY 2029
1	**Water Service (501)**				
2	Cost Recover/Reimb Expenditure	$15,000	$15,075	$15,150	$15,226
3	Plan Check	$0	$0	$0	$0
4	Water Usage	$28,231,718	$28,372,877	$28,514,741	$28,657,315
5	Fire Flow Testing	$1,500	$1,508	$1,515	$1,523
6	"B" Contract Water Usage	$60,000	$60,300	$60,602	$60,905
7	Water Meter Install	$30,000	$30,150	$30,301	$30,452
8	Irrigation Water Usage	$3,100,000	$3,115,500	$3,131,078	$3,146,733
9	Fire Hydrant Water Usage	$100,000	$100,500	$101,003	$101,508
10	Fire Protection Water Usage	$450,000	$452,250	$454,511	$456,784
11	Conservation Violation Penalty	$0	$0	$0	$0
12	Frontage Charge	$20,000	$20,100	$20,201	$20,302
13	Investment Income	$2,018,746	$486,443	$146,655	$256,691
14	Returned Check Charge	$0	$0	$0	$0
15	Rental Income	$100,000	$100,500	$101,003	$101,508
16	Miscellaneous Receipts	$250,000	$251,250	$252,506	$253,769
17	**Total - Water Service (501)**	**$34,376,964**	**$33,006,453**	**$32,829,264**	**$33,102,713**
18	**Source Acquisition (508)**				
19	Water Source Acq Residential	$70,000	$70,350	$70,702	$71,055
20	Water Source Acquisition Non-Resident	$10,000	$10,050	$10,100	$10,151
21	**Total - Source Acquisition (508)**	**$80,000**	**$80,400**	**$80,802**	**$81,206**
22	**Water CIP (509)**				
23	Capital Improv Chrg Non-Res	$400,000	$402,000	$404,010	$406,030
24	Capital Improv Chrg Resident	$250,000	$251,250	$252,506	$253,769
25	Investment Income	$0	$0	$0	$0
26	**Total - Water CIP (509)**	**$650,000**	**$653,250**	**$656,516**	**$659,799**
27	**Total - Revenues**	**$35,106,964**	**$33,740,103**	**$33,566,583**	**$33,843,718**

3.2. Projected O&M Expenses

City staff provided the actual FY 2025 and budgeted FY 2026 O&M expenses for the water utility. **Table 3-2** shows the projected O&M expenses for the study period, inflated for FY 2027 and beyond using the expense inflation factors (**Table 2-3**).

Table 3-2: Projected Water O&M Expenses

Line	A Projected O&M Expenses	B FY 2026	C FY 2027	D FY 2028	E FY 2029
1	**Water Service (501)**				
2	Salaries and Benefits	$9,697,424	$9,988,346	$10,287,997	$10,596,637
3	Services - Power	$2,568,963	$2,646,032	$2,725,413	$2,807,175
4	Services	$12,135,086	$12,476,754	$12,828,518	$13,190,677
5	Supplies - Purchased Water	$294,770	$300,665	$306,678	$312,812
6	Supplies - Treatment	$651,500	$664,530	$677,821	$691,377
7	Supplies	$3,073,733	$3,135,208	$3,197,912	$3,261,870
8	**Total - Water Service (501)**	**$28,421,475**	**$29,211,535**	**$30,024,338**	**$30,860,548**
9					
10	**Source Acquisition (508)**				
11	Services	$1,600	$1,648	$1,697	$1,748
12	**Total - O&M Expenses**	**$28,423,075**	**$29,213,183**	**$30,026,035**	**$30,862,296**

3.3. Debt Service

The City currently has two existing debt issues for the water utility. **Table 3-3** shows the annual principal and interest payments for the existing debts.

Table 3-3: Existing Water Debt Service

Line	A Existing Debt Service	B FY 2026	C FY 2027	D FY 2028	E FY 2029
1	**Safe Drinking Water (Tate)**				
2	Principal	$372,727	$189,641	$0	$0
3	Interest	$10,992	$2,219	$0	$0
4	**Total - Safe Drinking Water (Tate)**	**$383,719**	**$191,859**	**$0**	**$0**
5					
6	**Hinkley SRF Loan**				
7	Principal	$525,439	$538,666	$552,226	$566,127
8	Interest	$127,678	$114,450	$100,890	$86,989
9	**Total - Hinkley SRF Loan**	**$653,116**	**$653,116**	**$653,116**	**$653,116**
10					
11	**Total - Existing Debt Service**	**$1,036,835**	**$844,976**	**$653,116**	**$653,116**

The City plans to debt finance the Sunset Reservoir project with a $26 million bond. The projected debt service for that bond is $1,526,480 per year starting in FY 2029.

3.4. Capital Projects

City staff provided the capital improvement plan (CIP) for the water utility for the study period. **Error! Reference source not found.Error! Reference source not found.** Table 3-4 shows the CIP costs for the study period, which per the City are already inflated.

Table 3-4: Inflated Water Capital Projects

	A	B	C	D	E
Line	Capital Projects (Inflated)	FY 2026	FY 2027	FY 2028	FY 2029
1	**Replacement**				
2	Joint Utility Lab (Design, Bidding & Construction Support)	$200,000	$200,000	$200,000	$0
3	Joint Utility Lab Phases (Construction)	$1,800,000	$1,500,000	$1,500,000	$0
4	CIP Waterline Replacements (Construction)	$4,500,000	$4,500,000	$4,500,000	$4,500,000
5	Highline Replacement	$0	$0	$0	$0
6	AWIA Security Fencing (HWTP, TWTP, HAWC, Maguet 2, E.L. 6)	$0	$0	$0	$0
7	Fixed Generator - 5th Ave., Country Club, Texas St., Agate (Equipment)	$0	$0	$0	$0
8	Fixed Generator - 5th Ave., Country Club, Texas St., Agate (Construction)	$3,500,000	$0	$0	$0
9	Hinckley WTP Sludge Press (Equipment Purchase)	$0	$0	$0	$0
10	Hinckley WTP Sludge Press (Construction)	$0	$3,815,000	$0	$0
11	Hinckley WTP Parking Improvements (Design)	$225,000	$0	$0	$0
12	Hinckley WTP Parking Improvements (Construction)	$0	$750,000	$0	$0
13	Well 38 & 39 Wellhead Treatment System (Construction)	$0	$9,000,000	$0	$0
14	Drill New Well (Construction)	$0	$3,000,000	$0	$0
15	Sunset Reservoir (Design)	$1,305,910	$0	$0	$0
16	Sunset Reservoir (Construction)	$0	$0	$0	$10,000,000
17	Tate Transmission Line Replacement (Phase 1)	$0	$0	$0	$8,000,000
18	Tate Transmission Line Replacement (Phase 2)	$0	$0	$0	$0
19	Tate WTP Upgrades (Design)	$0	$0	$0	$0
20	Tate WTP Upgrades (Construction)	$0	$0	$0	$0
21	**Total - Replacement**	**$11,530,910**	**$22,765,000**	**$6,200,000**	**$22,500,000**

Table 3-5 shows the proposed capital financing plan for the water utility. The City plans to fully fund its water CIP for all years of the study (Line 1) through rates, reserves and debt. The inflated project costs (Line 3) are the total project costs (**Table 3-4**, Line 21).

Table 3-5: Proposed Water Capital Financing Plan

	A	B	C	D	E
Line	Capital Financing Plan	FY 2026	FY 2027	FY 2028	FY 2029
1	**CIP to Spend**	100%	100%	100%	100%
2					
3	**Inflated Project Costs**	$11,530,910	$22,765,000	$6,200,000	$22,500,000
4					
5	Bond Proceeds	$0	$0	$0	$26,000,000
6	Balance	$0	$0	$0	$26,000,000
7					
8	**Capital Financing**				
9	Rate Funded	$11,530,910	$22,765,000	$6,200,000	$12,500,000
10	Bond Funded	$0	$0	$0	$10,000,000
11					
12	**Total - Capital Financing**	**$11,530,910**	**$22,765,000**	**$6,200,000**	**$22,500,000**

3.5. Proposed Financial Plan

Table 3-6 shows the proposed revenue adjustments for the study period, which will allow the City to fund all necessary operating expenses with debt financing of major capital costs.

Table 3-6: Proposed Water Revenue Adjustments

	A	B	C
Line	Fiscal Year	Revenue Adjustment	Month Effective
1	FY 2027	2.5%	January
2	FY 2028	2.5%	July
3	FY 2029	2.5%	July

Table 3-7 shows the projected water financial plan with the proposed revenue adjustments from FY 2027 through FY 2029. The net cash flow (Line 24) is negative for all years as the water utility draws down cash reserves to fund capital projects. The ending cash balance (Line 31) is drawn down; however, it remains positive throughout the study period and exceeds the required target. It should be noted that revenue adjustments are required to ensure ability to meet expenses in future years based on the City's projected capital improvement program.

Table 3-7: Projected Water Financial Plan (Proposed Revenue Adjustments)

	A	B	C	D	E
Line	Water Financial Plan	FY 2026	FY 2027	FY 2028	FY 2029
1	**Revenues**				
2	Rate Revenues	$31,881,718	$32,041,127	$32,201,333	$32,362,339
3	Revenue Adjustments	$0	$400,514	$1,630,192	$2,488,360
4	Investment Income	$2,018,746	$1,477,396	$1,172,291	$1,318,224
5	Other Revenues	$1,763,500	$1,772,318	$1,781,179	$1,790,085
6	**Total - Revenues**	**$35,663,964**	**$35,691,354**	**$36,784,995**	**$37,959,009**
7					
8	**O&M Expenses**				
9	Salaries and Benefits	$9,697,424	$9,988,346	$10,287,997	$10,596,637
10	Services - Power	$2,568,963	$2,646,032	$2,725,413	$2,807,175
11	Services	$12,135,086	$12,476,754	$12,828,518	$13,190,677
12	Supplies - Purchased Water	$294,770	$300,665	$306,678	$312,812
13	Supplies - Treatment	$651,500	$664,530	$677,821	$691,377
14	Supplies	$3,073,733	$3,135,208	$3,197,912	$3,261,870
15	Fixed Assets	$0	$0	$0	$0
16	Debt Service	$0	$0	$0	$0
17	**Total - O&M Expenses**	**$28,421,475**	**$29,211,535**	**$30,024,338**	**$30,860,548**
18	**Debt and Capital**				
19	Existing Debt Service	$1,036,835	$844,976	$653,116	$653,116
20	Proposed Debt Service	$0	$0	$0	$1,526,480
21	Rate Funded Capital Projects	$11,530,910	$22,765,000	$6,200,000	$12,500,000
	DIF Funded Capital Projects	$0	$0	$0	$0
22	**Total - Debt and Capital**	**$12,567,745**	**$23,609,976**	**$6,853,116**	**$14,679,596**
23					
24	**Net Cash Flow**	**($5,325,255)**	**($17,130,156)**	**($92,459)**	**($7,581,135)**
25	Net Operating Revenue	$7,242,490	$6,479,820	$6,760,657	$7,098,461
27	**Calculated Debt Coverage**	**6.99**	**7.67**	**10.35**	**3.26**
28	Required Debt Coverage	1.25	1.25	1.25	1.25
29					
30	Beginning Balances	$56,297,272	$50,972,017	$33,841,861	$33,749,402
31	Ending Balances	$50,972,017	$33,841,861	$33,749,402	$42,517,427
	Reserve Target	$19,604,551	$19,195,884	$16,546,085	$16,755,137

Figure 3-1 shows the proposed water capital financing plan in graphical format, based on the capital financial plan shown in **Table 3-5**.

Figure 3-1: Proposed Water Capital Financing Plan

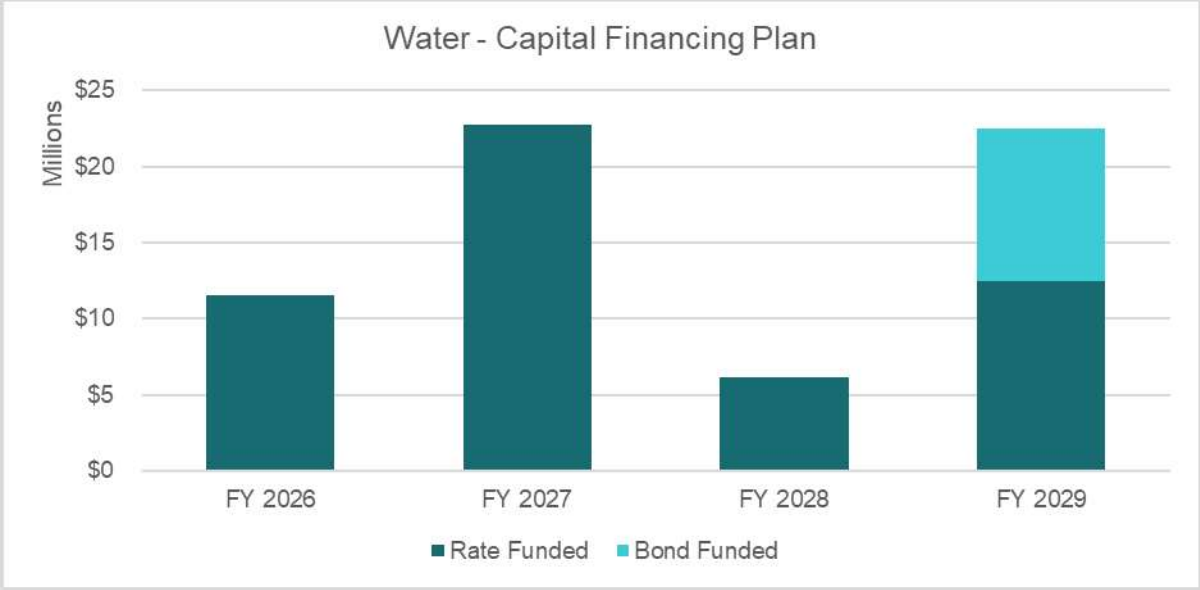
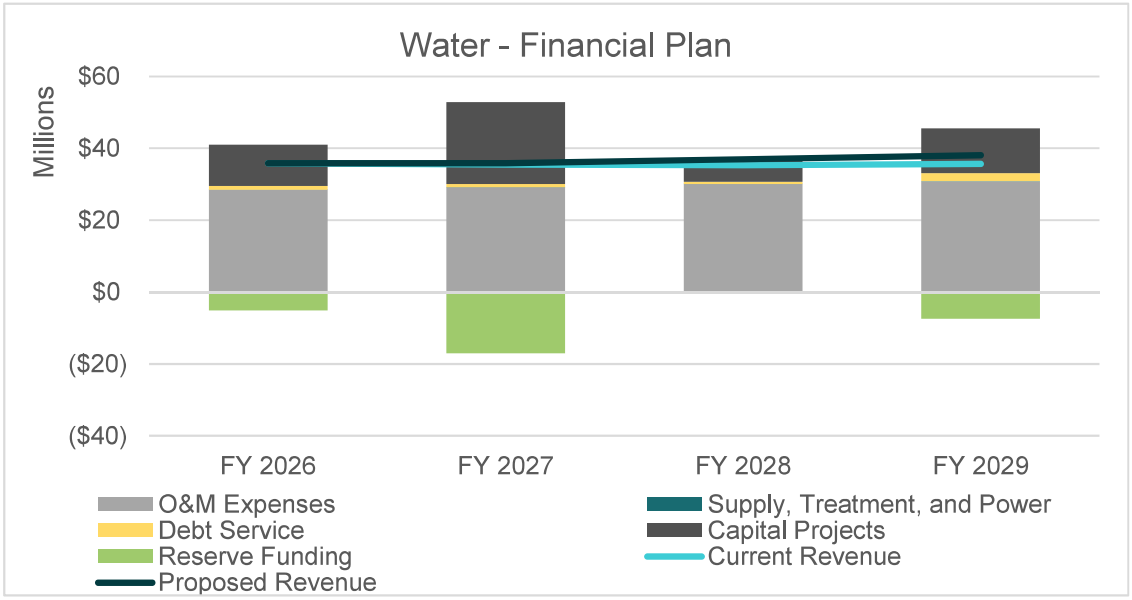


Figure 3-2 shows the proposed financial plan in graphical format with the revenue adjustments in **Table 3-6**. The proposed revenues shown as the dark teal line, along with the drawdown of the reserves (green bars), allow the City to fund its operating and capital costs for the study period.

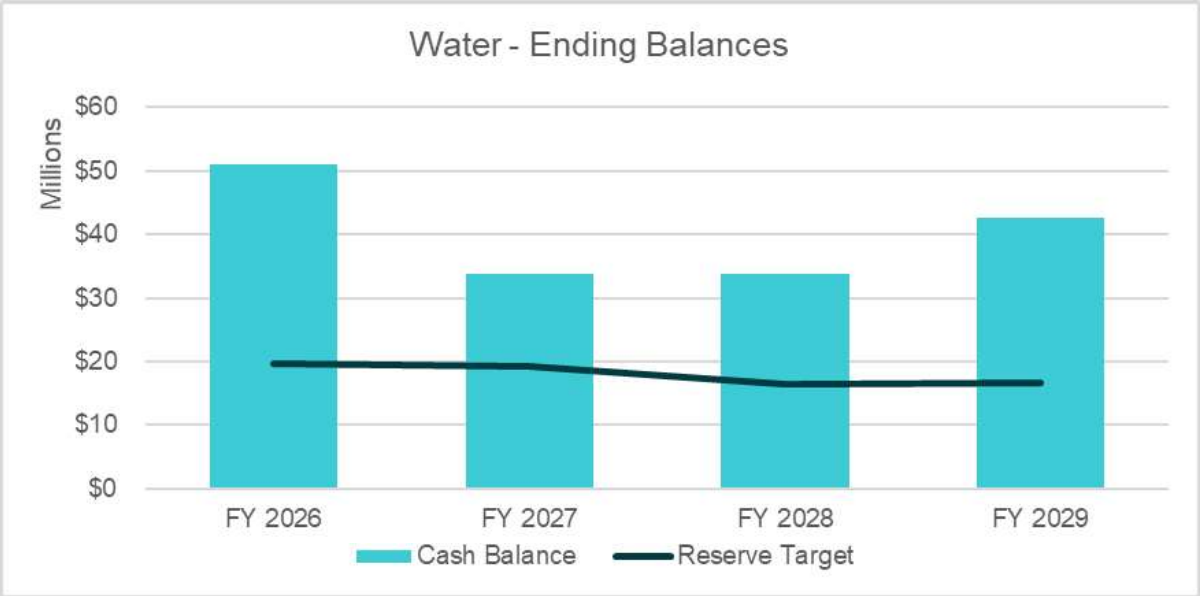
Figure 3-2: Projected Water Financial Plan (Proposed Revenue Adjustments)



The City's current policy is to target operating reserves at 25% of the operating expenses and the capital reserve at 100% of the 5-yr rolling average rate funded CIP. **Figure 3-3** shows the projected water fund balances with the proposed revenue adjustments in **Table 3-6**. The City's restricted reserves are for the source acquisition fund and are represented by the gray bars. The unrestricted reserves or cash balance is comprised of operating and capital reserves. The blue bars represent the unrestricted cash balance available to finance

operating expenses and capital projects. While the unrestricted reserves are being drawn down through the study period, the ending balance remains at or above target through FY 2029.

Figure 3-3: Projected Water Fund Balances (Proposed Revenue Adjustments)



4. Water – Cost-of-Service Analysis and Rates

This section of the report details the cost-of-service analysis and rate calculation process to determine the proposed water rates. The goal of this process is to determine the cost of providing water service to each of the City's water customer classes and to ensure equity and fairness among the various classes.

4.1. Process and Approach

The cost-of-service analysis utilized to develop the water rates followed the guidelines for allocating costs outlined in the AWWA M1 manual. The cost-of-service analysis and rate design process consists of seven major steps, as outlined below:

1. Determine the revenue requirement, equal to the revenue to be recovered from rates
2. Functionalize O&M expenses and capital assets into functional categories such as supply, pumping, transmission & distribution, customer service & billing, etc.
3. Allocate each functional category into cost components such as supply, meters, customer service, conservation, base delivery, etc.
4. Develop customer class characteristics and units of service by cost component
5. Calculate the cost component unit rates by dividing the total cost in each cost component by the total units of service for that component. For example, base delivery costs are divided by the annual water demand and customer billing costs are divided by the annual number of bills.
6. Calculate the cost for each customer class by multiplying the unit cost by the units of service for each customer class.
7. Design rates to meet the City's objectives.

4.2. Revenue Requirement

The first step of the cost-of-service analysis is to determine the revenue requirement for the test year, or rate-making year. The test year of this study is FY 2027. Table 4-1shows the revenue requirement calculations for the water utility. The revenue requirements (Lines 2-4) are equal to the O&M expense and debt and capital costs for FY 2027 (Table 3-7, Column C). The revenues from other sources (Lines 8-12), also known as non-rate revenues or revenue offsets, are equal to all non-rate revenues (**Table 3-7**, Column C). The adjustment for cash from/(to) reserves (Line 14) is equal to the negative value of net cash flow (Table 3-7, Column C), which excludes the source acquisition fund revenue. Line 15 reflects that revenue adjustments occur partway through the first year.

Table 4-1: Water Revenue Requirement Calculation

	A	B	C	D
Line	Revenue Requirement Calculation	Operating	Capital	Total
1	**Revenue Requirements**			
2	O&M Expenses	$29,211,535	$0	$29,211,535
3	Capital	$0	$22,765,000	$22,765,000
4	Debt		$844,976	$844,976
5	**Total - Revenue Requirements**	**$29,211,535**	**$23,609,976**	**$52,821,510**
6	**Revenue from Other Sources**			
7	Investment Income (501 & 506)	$486,443	$0	$486,443
8	Investment Income (503)	$0	$990,953	$990,953
9	Water Service (501)	$1,058,768	$0	$1,058,768
10	Water Capital Improvement (509)	$0	$653,250	$653,250
11	B Contract Water Revenue	$60,300	$0	$60,300
12	**Total - Revenue from Other Sources**	**$1,605,511**	**$1,644,203**	**$3,249,713**
13	**Less Adjustments**			
14	Cash from Reserves	$0	$17,130,156	$17,130,156
15	Midyear Increase	($400,514)	$0	($400,514)
16	**Subtotal - Adjustments**	**$0**	**$17,130,156**	**$16,729,642**
17	**Revenue to be Recovered from Rates**	**$28,006,538**	**$4,835,617**	**$32,842,155**

4.3. Allocation of Functionalized Net Revenue Requirements to Cost Components

After functionalizing the net revenue requirements, the next step is to allocate the functionalized net revenue requirements to the following cost components.

- Base–fixed costs associated with providing service under average demand conditions
- Peaking (Max Day and Peak Hour) – costs associated with meeting demand in excess of average use
- Customer Service– the costs associated with meter reading, billing, and customer service
- Equivalent Meters– costs associated with meter capacity, maintenance, and replacement

4.3.1. Peaking Factors

Water demand varies from parcel to parcel. Water systems have to be designed to meet the highest levels of demand placed on the system. Components of the water system are therefore oversized compared to the requirement for average demands. For example, reservoirs are designed to meet maximum day requirements, and distribution lines are designed to meet instantaneous peak demands or peak hour demands. Therefore, peaking plays a significant part in the costs of operating and constructing a water system. Demonstrating that rates are proportional to the demands and associated costs that customer classes place on the utility system is critical to ensure that rates align with the intent of Proposition 218. The capital and operating costs of the system must then be allocated to customer classes in proportion to the demands they place on the system. For costs recovered through a water utility's fixed meter charge, costs are allocated either over all accounts or by meter size, depending on the type of expense. Variable costs are allocated among customer classes based on the demands they place on the water system and the cost of water supplies.

One of the major factors in cost allocation is allocation of peaking costs. To do so, we must identify system-wide peaking factors. The maximum day demand is the maximum amount of water used in a single day in a year. The maximum hour demand is the maximum usage in an hour on the maximum usage day. Different facilities, such as distribution and storage facilities and infrastructure, and the capital and O&M costs associated with those facilities, are designed to meet the peak demands placed on the system by customers. Therefore, extra capacity costs include the O&M and capital costs associated with meeting peak customer demand in excess of average rate of use, or base use, requirements. This method is consistent with AWWA Manual M1 and is widely used in the water industry for cost-of-service analyses. Importantly, it ensures that average and below-average users pay rates that reflect the level of capital investment necessary to serve them.

The system-wide factors for maximum day and maximum hour were provided by the City's UWMP. Maximum day and maximum hour factors are shown in **Table 4-2** relative to the base factor. Base, or average daily demand, is represented by the factor of 1.00.

Table 4-2: System Peaking

	A	B
Line	Allocation Factor	System Peaking Factor
1	Base	1.00
2	Max Day	1.70
3	Max Hour	2.75

The system-wide peaking factors from Table 4-2 are used to derive the cost causation component allocation base, maximum day, and maximum hour percentages shown in Columns of **Table 4-3**. The numbers and calculations outlined in the following sections are rounded and may not be equal to the exact amounts shown.

Line 1 "Base" represents the average day demand throughout the year and is, therefore assigned a factor of 1.00.

- Base = 1.00 / 1.00 = 100%

Line 2 "Max Day" is the ratio of maximum day demand relative to base demand, or 1.7. The percentage allocated to maximum day is the incremental responsibility above base demand.

- Base = 1.00 / 1.70 = 59%
- Max Day = (1.70 – 1.00) / 1.70 = 41%

Similarly, Line 3, "Max Hour" is the ratio of maximum hour demand, on the maximum day, relative to base demand. The max hour factor is 2.75

- Base = 1.00 / 2.75 = 36%
- Max Day = (1.70 – 1.00) / 2.75 = 26%
- Max Hour = (2.75 – 1.70) / 2.75 = 38%

These peak factors indicate how much additional capacity is required to meet demand above average daily use. As demand, and therefore capacity, increases, so must the sizing of facilities and pipelines, which incur greater costs to construct, maintain, and replace. To understand the interpretation of the percentages shown in columns C through E, "Base" is the average daily demand during the year. These allocation bases are used to spread the functionalized costs for reservoir, transmission, treatment, and distribution functions to the cost causation components.

Table 4-3: Average and Peaking Cost Causation Factors

	A	B	C	D	E	F
Line	Allocation Factor	System Peaking Factor	Base	Max Day	Max Hour	Total
1	Base	1.00	100%	0%	0%	100%
2	Max Day	1.70	59%	41%	0%	100%
3	Max Hour	2.75	36%	26%	38%	100%
4	Average Max Day/Max Hour		48%	33%	19%	100%

4.4. Operating and Capital Cost Allocation

The next step in the cost-of-service analysis is to determine the operating and capital cost allocations by cost causation component. The cost causation components for water include Base, Max Day, Max Hour, Meters, Customer, Fire Protection, Conservation and General.

Table 4-4 shows the water operating cost allocation. The allocation basis for each function is listed in Column B. For the purpose of allocating operating costs, City staff provided the O&M expense budget estimates by function (Column A, Lines 14-25). This is representative of the distribution of operating costs shown in **Table 3-2**. Functions include General and Administration, Engineering, Production & Operations, Production Maintenance, Water Treatment, Water Quality, Water Distribution, Water Conservation Program, B Contract (Reimbursable and City), and South Mountain Water. The operating costs are allocated to each cost component based on the percentage allocation (Lines 1-12) for each component. The final O&M expense allocation (Line 27) is determined by multiplying each cost component's percentage allocation by total operating costs.

Table 4-5 shows the water capital cost allocation. To minimize fluctuations in the capital cost allocation as capital projects change from year-to-year, capital costs are allocated on the basis of capital assets. For the purpose of allocating capital costs, City staff provided the water capital assets listed by function (Column A, Lines 16-29). This is representative of the distribution of capital costs shown in **Table 3-5**. Functions include Source of Supply, Wells, Pumping, Treatment, Transmission, Distribution, Storage, Meters, Fire Protection, Customer Billing, Land, Building Improvements, Rolling Stock (Vehicles), and General Plant. The capital asset costs are allocated into each cost component based on the percentage allocation (Lines 1-14) for each component. The final capital expense allocation (Line 31) is determined by taking the weighted proportion of total capital asset costs by cost component.

Table 4-4: Water Operating Cost Allocation

	A	B	C	D	E	F	G	H
Line	O&M Allocation	Allocation Basis	Base	Max Day	Max Hour	Meters	Customer	Fire Protection
1	Water Admin & General	General	0%	0%	0%	0%	10%	0%
2	Water Engineering	Max Hour Fire	25%	18%	27%	15%	0%	15%
3	Water Production & Operations - General	Max Day	59%	41%	0%	0%	0%	0%
4	Water Production Maintenance	Max Day	59%	41%	0%	0%	0%	0%
5	Water Treatment - HTWTP	Max Day	59%	41%	0%	0%	0%	0%
6	Water Treatment - HHWTP	Max Day	59%	41%	0%	0%	0%	0%
7	Water Quality - General	Base	95%	0%	0%	5%	0%	0%
8	Water Distribution - General	Max Hour Fire	25%	18%	27%	15%	0%	15%
9	Water Conservation Program	Conservation	0%	0%	0%	0%	0%	0%
10	B' Contract (Reimbursable)	Base	95%	0%	0%	5%	0%	0%
11	B' Contract (City)	Base	95%	0%	0%	5%	0%	0%
12	South Mountain Water (Reimbursable)	Base	95%	0%	0%	5%	0%	0%
13								
14	Water Admin & General	General	$0	$0	$0	$0	$926,202	$0
15	Water Engineering	Max Hour Fire	$333,527	$234,370	$349,753	$196,639	$0	$196,639
16	Water Production & Operations - General	Max Day	$3,324,898	$2,336,415	$0	$0	$0	$0
17	Water Production Maintenance	Max Day	$2,047,073	$1,438,484	$0	$0	$0	$0
18	Water Treatment - HTWTP	Max Day	$543,659	$382,031	$0	$0	$0	$0
19	Water Treatment - HHWTP	Max Day	$750,848	$527,623	$0	$0	$0	$0
20	Water Quality - General	Base	$504,585	$0	$0	$26,557	$0	$0
21	Water Distribution - General	Max Hour Fire	$1,559,500	$1,095,865	$1,635,368	$919,443	$0	$919,443
22	Water Conservation Program	Conservation	$0	$0	$0	$0	$0	$0
23	B' Contract (Reimbursable)	Base	$103,121	$0	$0	$5,427	$0	$0
24	B' Contract (City)	Base	$13,667	$0	$0	$719	$0	$0
25	South Mountain Water (Reimbursable)	Base	$4,872	$0	$0	$256	$0	$0
26	**Total O&M Expenses**		**$9,185,751**	**$6,014,788**	**$1,985,121**	**$1,149,043**	**$926,202**	**$1,116,082**
27	*O&M Allocation*		*31%*	*21%*	*7%*	*4%*	*3%*	*4%*

Table 4-5: Water Asset Allocation

	A	B	C	D	E	F	G	H	I	J
Line	Assets Allocation	Allocation Basis	Base	Max Day	Max Hour	Meters	Customer	Fire Protection	General	Total
1	Source of Supply	Base	95%	0%	0%	5%	0%	0%	0%	100%
2	Wells	Max Day	59%	41%	0%	0%	0%	0%	0%	100%
3	Pumping	Max Day	59%	41%	0%	0%	0%	0%	0%	100%
4	Treatment	Max Day	59%	41%	0%	0%	0%	0%	0%	100%
5	Transmission	Max Day Fire	47%	33%	0%	5%	0%	15%	0%	100%
6	Distribution	Max Hour Fire	25%	18%	27%	15%	0%	15%	0%	100%
7	Storage	Max Day Fire	47%	33%	0%	5%	0%	15%	0%	100%
8	Meters	Meters	0%	0%	0%	100%	0%	0%	0%	100%
9	Fire Protection	Fire Service	0%	0%	0%	0%	0%	100%	0%	100%
10	Customer Billing	Billing & Customer Service	0%	0%	0%	0%	100%	0%	0%	100%
11	Land	Max Day Fire	47%	33%	0%	5%	0%	15%	0%	100%
12	Building and Improvements	General	0%	0%	0%	0%	11%	0%	89%	100%
13	Rolling Stock (Vehicles)	Base	95%	0%	0%	5%	0%	0%	0%	100%
14	General Plant	Max Day	59%	41%	0%	0%	0%	0%	0%	100%
15										
16	Source of Supply	Base	$9,387,387	$0	$0	$494,073	$0	$0	$0	$9,881,460
17	Wells	Max Day	$1,504,123	$1,056,951	$0	$0	$0	$0	$0	$2,561,074
18	Pumping	Max Day	$329,162	$231,303	$0	$0	$0	$0	$0	$560,466
19	Treatment	Max Day	$42,208	$29,660	$0	$0	$0	$0	$0	$71,867
20	Transmission	Max Day Fire	$29,223,535	$20,535,457	$0	$3,109,937	$0	$9,329,811	$0	$62,198,740
21	Distribution	Max Hour Fire	$2,240,016	$1,574,065	$2,348,990	$1,320,658	$0	$1,320,658	$0	$8,804,388
22	Storage	Max Day Fire	$2,815,532	$1,978,482	$0	$299,626	$0	$898,878	$0	$5,992,518
23	Meters	Meters	$0	$0	$0	$0	$0	$0	$0	$0
24	Fire Protection	Fire Service	$0	$0	$0	$0	$0	$0	$0	$0
25	Customer Billing	Billing & Customer Service	$0	$0	$0	$0	$0	$0	$0	$0
26	Land	Max Day Fire	$3,307,469	$2,324,167	$0	$351,977	$0	$1,055,932	$0	$7,039,545
27	Building and Improvements	General	$0	$0	$0	$0	$1,562,036	$0	$12,638,289	$14,200,325
28	Rolling Stock (Vehicles)	Base	$383,718	$0	$0	$20,196	$0	$0	$0	$403,913
29	General Plant	Max Day	$0	$0	$0	$0	$0	$0	$0	$0
30	**Total Assets**		**$49,233,150**	**$27,730,086**	**$2,348,990**	**$5,596,467**	**$1,562,036**	**$12,605,279**	**$12,638,289**	**$111,714,296**
31	*Asset Allocation*		*44%*	*25%*	*2%*	*5%*	*1%*	*11%*	*11%*	*100%*

4.5. Allocation of Fire Protection Costs – Public vs. Private

Water systems provide two types of fire protection: public fire protection for firefighting, which is generally visible as hydrants on a street, and private fire protection which provides fire flow to buildings and other structure sprinkler systems for fire suppression within private improvements. To determine the share of total fire costs attributable to each, Raftelis performed an analysis of the public hydrants and private fire lines.

Table 4-6 shows the basis for allocating costs between public and private fire service. Each fire connection size has a fire flow demand factor similar to a hydraulic capacity factor of a water meter. The diameter of the connection is raised to the 2.63 power to determine the fire flow demand factor[2]. The number of connections of a specific size is multiplied by the fire flow demand factor to derive total equivalent fire connections. Total fire costs are allocated based on the percentage share of total equivalent fire connections between public and private. The analysis estimates that 75 percent of fire costs relate to public fire and will be included and recovered on the monthly fixed charges. The remaining 25 percent is attributable to private fire service and will be recovered through private fire service charges.

Table 4-6: Fire Analysis

	A	B	C	D
Line	Fire Line/Hydrant Size	Fire Ratio	Number of Lines/Hydrants	Equivalent Demand
1	**Private Fire Line Size**			
2	2"	6.19	10	64
3	3"	17.98	0	0
4	4"	38.32	155	5,933
5	6"	111.31	153	17,002
6	8"	237.21	185	43,871
7	10"	426.58	129	54,961
8	12"	689.04	0	0
9	**Total Fire Lines**	**0.00**	**632**	**121,831**
10				25%
11	**Public Fire Hydrant Size**			
12	**6"**	**111.31**	**3,236**	**360,202**
13				75%

4.6. Final Cost Allocation of Revenue Requirement

The total revenue recoverable from each cost causation component through water rates is shown in Table 4- using the revenue requirement from **Error! Reference source not found.** the O&M and Capital allocations in Table 4- and **Table 4-5**, and the fire cost analysis in **Table 4-6**. Since public fire protection costs are a function of system capacity, they are reallocated to the Meter component. Interest earnings, shown separately, will be used to offset some rates. Five percent of Base costs and 31 percent of Peaking costs (Max Day plus Max Hour) are allocated to the meter charge to cover the fixed costs and preserve the utility's current fixed revenue recovery of 31 percent.

[2] Hazen-Williams equation via AWWA M1 Manual

Table 4-7: Revenue Requirement by Cost Component

	A	B	C	D	E	F	G	H	I	J	K
Line	Cost Allocation	Base	Max Day	Max Hour	Meters	Customer	Fire Protection	Conservation	General	Offset	Total
1	Operating Revenue Requirement	$9,185,751	$6,014,788	$1,985,121	$1,149,043	$926,202	$1,116,082	$498,725	$8,335,822	$0	$29,211,535
2	Capital Revenue Requirement	$2,131,085	$1,200,313	$101,677	$242,246	$61,467	$545,627	$0	$553,202	$0	$4,835,617
3	Revenue Offset	-$682,626	$0	$0	-$35,928	$0	$0	$0	$0	-$486,443	-$1,204,997
4	**Total Cost of Service**	**$10,634,210**	**$7,215,100**	**$2,086,798**	**$1,355,361**	**$987,669**	**$1,661,709**	**$498,725**	**$8,889,024**	**-$486,443**	**$32,842,155**
5	Allocation of General Cost	$4,030,707	$2,734,755	$790,963	$513,725	$0	$629,841	$189,033	-$8,889,024	$0	$0
6	Allocation to Public Fire	$0	$0	$0	$1,712,374	$0	-$1,712,374	$0	$0	$0	$0
7	Allocation of Base to Meter	-$733,246	$0	$0	$733,246	$0	$0	$0	$0	$0	$0
8	Allocation of Peak to Meter	$0	-$3,084,455	-$892,106	$3,976,561	$0	$0	$0	$0	$0	$0
9	**Total Adjusted Cost of Service**	**$13,931,671**	**$6,865,400**	**$1,985,656**	**$8,291,267**	**$987,669**	**$579,176**	**$687,758**	**$0**	**-$486,443**	**$32,842,155**

4.7. Unit Cost Components

Unit costs for each component must be calculated, which starts by assessing the total water demand (or equivalent service units) for each cost component. Projected water use (base units of service) for FY 2027 is shown in **Table 4-8**. Daily use is calculated as annual use is divided by 365 days. Demand is detailed by rate class. Values are rounded to the nearest ccf and may not be equal to the exact values shown.

Table 4-8: FY 2027 Projected Water Usage by Class

	A	B	C
Line	Customer Class	Annual Use (ccf)	Average Daily Use (ccf/day)
1	Building Water Usage		
2	Tier 1	3,250,414	8,905
3	Tier 2	285,707	783
4	Tier 3	4,716,622	12,922
5	Non-Building Water Usage		
6	Tier 1	77,000	211
7	Tier 2	1,131,591	3,100
8	**Total**	**9,461,335**	**25,921**

Table 4-9 shows the total equivalent meters and annual number of bills. **Table 4-10** shows the total equivalent fire line connections. These totals are used as the denominator in developing unit costs for the rate components of the monthly fixed service charges and private fire service charges.

Table 4-9: Derivation of Equivalent Meters

	A	B	C	D	E
Line	Meter Size	Meter Count	Hydraulic Capacity Factor	Equivalent Meters	Annual Bi-monthly Bills
1	5/8"	181	1.00	181	1,085
2	3/4"	8,375	1.43	11,935	50,251
3	1"	12,113	2.25	27,254	72,676
4	1 1/2"	787	4.25	3,343	4,720
5	2"	783	6.40	5,014	4,701
6	3"	79	11.25	888	474
7	4"	55	17.50	964	330
8	6"	28	32.50	912	168
9	8"	14	48.00	648	81
10	10"	0	114.00	0	0
11	12"	1	150.00	156	6
12	**Total**	**22,415**		**51,294**	**134,492**

Table 4-10: Derivation of Equivalent Fire Lines

	A	B	C	D	E
Line	Fire Line Size	Fire Line Count	Demand Factor	Equivalent Fire Lines	Annual Bi-monthly Bills
1	2"	10	6.19	64	62
2	3"	0	17.98	0	0
3	4"	155	38.32	5,933	929
4	6"	153	111.31	17,002	916
5	8"	185	237.21	43,871	1,110
6	10"	129	426.58	54,961	773
7	12"	0	689.04	0	0
8	**Total**	**632**		**121,831**	**3,790**

Table 4- shows the total and extra capacity calculation by class and tier for maximum day and maximum hour demand. The class and tier specific maximum day peaking factors were calculated by dividing the maximum billing period usage by the average billing period usage in FY 2025 for the City's customers. The class and tier specific maximum hour peaking factors were calculated by multiplying the maximum day peaking factors by the ratio of the system-wide maximum hour to maximum day peaking factors shown in **Table 4-3**.

Utilizing the final cost of service from Table 4- as the numerator and **Table 4-8**, **Table 4-9**, **Table 4-10**, and Table 4-, as the denominators allows us to derive the unit costs of service in **Table 4-12**. . The total cost of service is divided by the respective units of service to calculate the unit cost of each cost component.

Meter costs are divided by the total meter equivalencies from **Table 4-9** multiplied by 6 bi-monthly bills to determine a cost per equivalent meter and annual customer costs are divided by the estimated number of annual monthly bills, also from **Table 4-9**. Fire protection costs are divided by total fire line equivalencies from **Table 4-10** to determine a cost per equivalent inch of fire line. Base delivery costs are divided by total annual water demand from **Table 4-8** to determine a cost per unit of water usage. Similarly, Conservation costs are divided by annual Tier 3 water demand and Offset savings are divided by Building Tier 1 usage as those are the units from **Table 4-8** over which those costs and savings, respectively, are being recovered. The unit costs are used to distribute the cost components to the meter classes and commodity classes and tiers.

Table 4-11: Calculation of Peak Capacity

	A	B	C	D	E	F	G	H	I
				Max Day			Max Hour		
Line	Customer Class	Annual Use (ccf)	Average Daily Use (ccf/day)	Capacity Factor	Total Capacity (ccf/day)	Extra Capacity (ccf/day)	Capacity Factor	Total Capacity (ccf/day)	Extra Capacity (ccf/day)
1	**Building Water Usage**								
2	Tier 1	3,250,414	8,905	1.33	11,812	2,907	2.14	19,086	7,275
3	Tier 2	285,707	783	1.48	1,162	379	2.40	1,877	715
4	Tier 3	4,716,622	12,922	2.41	31,081	18,158	3.89	50,222	19,142
5	**Non-Building Water Usage**								
6	Tier 1	77,000	211	1.55	326	115	2.50	527	201
7	Tier 2	1,131,591	3,100	2.26	7,000	3,900	3.65	11,311	4,311

Table 4-12: Cost Causation Component Unit Cost Calculation

	A	B	C	D	E	F	G	H	I
Line	Cost of Service	Base	Max Day	Max Hour	Meters	Customer	Fire Protection	Conservation	Offset
1	Cost of Service	$13,931,671	$6,865,400	$1,985,656	$8,291,267	$987,669	$579,176	$687,758	($486,443)
2	Units of Service	9,461,335	25,458	31,643	307,767	138,283	730,987	4,716,622	3,250,414
3	Unit of Measure	ccf	ccf/day	ccf/day	equiv. meter/yr	bills/yr	equiv. line/yr	ccf	
4	**Unit Cost**	**$1.47**	**$269.67**	**$62.75**	**$26.94**	**$7.14**	**$0.79**	**$0.15**	**($0.15)**

4.8. Distribution of Cost Components to Customer Classes

The final step in a cost-of-service analysis is to distribute the cost components to the customer classes using the unit costs derived in **Table 4-12**. This is the end goal of a cost-of-service analysis and yields the cost to serve each class. Table 4-13 shows the derivation of the costs to serve each class. The supply, base, max day, max hour, conservation, and offset cost components are collected through the commodity charges ($/ccf). Fire protection, meters, and customer cost components are collected through the City's bi-monthly fixed service charge ($/2 months) and private fire service charge ($/2 months). The interest revenue, which is a non-rate revenue and over which the City Council has discretion, is applied as an offset to the Tier 1 rate for building usage to provide affordability for low-volume customers. All building users will benefit from the lower rate in Tier 1.

To derive the cost to serve each class, the unit costs from **Table 4-12** are multiplied by the respective units of service for each class (**Table 4-8**, **Table 4-9**, **Table 4-10**, and **Table** 4-11**).** ~~Table 4-11~~**~~Table 4-11~~** ~~**Table 4-11).**~~ With the cost to serve each user class calculated, we can proceed to derive rates to collect the cost to serve each commodity class, tier, and meter size.

Table 4-13: Derivation of Costs to Serve Each Class

	A	B	C	D	E	F	G	H	I
Line	Customer Class	Base	Max Day	Max Hour	Meters	Customer	Fire Protection	Conservation	Offset
1	Building Water Usage				$8,291,267	$960,596			
2	Tier 1	$4,786,185	$783,813	$456,485					($486,443)
3	Tier 2	$420,699	$102,140	$44,889					
4	Tier 3	$6,945,155	$4,896,793	$1,201,160				$687,758	
5	Non-Building Water Usage								
6	Tier 1	$113,382	$31,042	$12,602					
7	Tier 2	$1,666,251	$1,051,612	$270,520					
8	Fire Protection	$0	$0	$0		$27,073	$579,176		
9	**Total Cost of Service**	**$13,931,671**	**$6,865,400**	**$1,985,656**	**$8,291,267**	**$987,669**	**$579,176**	**$687,758**	**($486,443)**

4.9. Rate Calculation

4.9.1. Proposed Bi-Monthly Fixed Charges

Table 4-14 shows the bi-monthly service charge calculation, which consists of the Meter and Customer cost components. The Meter cost component is derived based on total equivalent meters. Therefore, the meter unit cost (**Table 4-12**, Column E, Line 4) is multiplied by the capacity ratio for each meter size (Column B) to appropriately reflect the share of cost by meter size (Column C). The Customer cost does not vary with meter size, and therefore the Customer unit cost (**Table 4-12**, Column F, Line 4) is applied uniformly across all meter sizes (Column D). These components added together determine the proposed bi-monthly service charge (Column E).

Table 4-14: Proposed Bi-Monthly Service Charge (FY 2027)

	A	B	C	D	E	F
Line	Bi-Monthly Service Charge	Capacity Ratio	Meter	Customer	Proposed Charge	Current Charge
1	5/8"	1.00	$26.94	$7.14	$34.09	$33.60
2	3/4"	1.43	$38.39	$7.14	$45.54	$44.90
3	1"	2.25	$60.62	$7.14	$67.76	$66.81
4	1 1/2"	4.25	$114.50	$7.14	$121.64	$119.96
5	2"	6.40	$172.42	$7.14	$179.56	$177.10
6	3"	11.25	$303.08	$7.14	$310.22	$305.97
7	4"	17.50	$471.45	$7.14	$478.60	$472.05
8	6"	32.50	$875.55	$7.14	$882.70	$870.64
9	8"	48.00	$1,293.12	$7.14	$1,300.27	$1,282.51
10	10"	114.00	$3,071.17	$7.14	$3,078.32	$3,036.30
11	12"	150.00	$4,041.01	$7.14	$4,048.16	$3,992.91

4.9.2. Proposed Bi-Monthly Fire Service Charges

Table 4-15 shows the bi-monthly service charge calculation, which consists of the Private Fire and Customer cost components. The Private Fire unit cost (**Table 4-12**, Column G, Line 4) is multiplied by the fire ratio for each fire line diameter (Column B) to appropriately reflect the share of cost by fire line (Column C). A connection's share of the Customer cost does not vary with fire line size, and therefore the Customer unit cost (**Table 4-12**, Column F, Line 4) is applied uniformly across all meter sizes (Column D). These components added together arrive at the proposed bi-monthly fire service charge (Column E).

Table 4-15: Proposed Bi-Monthly Fire Service Charge (FY 2027)

	A	B	C	D	E	F
Line	Bi-Monthly Fire Service Charge	Capacity Ratio	Fire	Customer	Proposed Charge	Current Charge
1	2"	6.19	$4.90	$7.14	$12.05	$12.05
2	3"	17.98	$14.25	$7.14	$21.39	$21.63
3	4"	38.32	$30.36	$7.14	$37.51	$38.14
4	6"	111.31	$88.19	$7.14	$95.34	$97.39
5	8"	237.21	$187.94	$7.14	$195.09	$199.61
6	10"	426.58	$337.99	$7.14	$345.14	$353.35
7	12"	689.04	$545.94	$7.14	$553.09	$566.44

4.9.3. Proposed Water Usage Rates

The City's water usage rates consist of five components: Base, Peaking, Supply, Conservation, and Offset. The following subsections will present the calculations for each of the components.

4.9.3.1. Base Component

The Base component is applied uniformly across all units of water and is equal to the Base unit cost (**Table 4-12**, Column B, Line 4).

4.9.3.2. Peaking Component

Table 4-16 shows the Peaking unit cost calculation for each customer class and tier. Peaking costs (Column C) are the sum of Max Day and Max Hour costs for each class and tier (**Table 4-13**, Columns C and D). Peaking costs are divided by annual use (Column B) to determine the Peaking unit cost for each class and tier (Column D).

Table 4-16: Peaking Unit Cost Calculation

	A	B	C	D
Line	Customer Class	Annual Use (ccf)	Peaking Costs	Unit Cost
1	**Building Water Usage**			
2	Tier 1	3,250,414	$1,240,298	$0.38
3	Tier 2	285,707	$147,029	$0.51
4	Tier 3	4,716,622	$6,097,952	$1.29
5	**Non-Building Water Usage**			
6	Tier 1	77,000	$43,644	$0.57
7	Tier 2	1,131,591	$1,322,132	$1.17

4.9.3.3. Supply Component

Table 4-17 shows the calculation of the unit cost for each source of water (Line 6). The percentage from each source (Line 2) is determined by the proportion of volume purchased from each source in Line 1. These proportions are used to determine the proportion of demand from each source (Line 3). The direct water purchase costs (provided by City staff) on Line 4 are divided by the estimated potable demand (Line 3) to

calculate the unit costs in Line 6. Table 4- shows the supply component unit cost calculation for each customer class and tier. The lowest cost water source is used for Tier 1, if that source does not meet the demand, then water from the next lowest source is used and so on. Once the Tier 1 demand is met then Tier 2 is allocated the remaining lowest cost water and so on. The uses for each class and tier from each source (Columns E through H) are multiplied by their respective unit costs (**Table 4-17**, Line 6) to calculate the total supply cost for each class and tier in Column J. The total costs (Column J) are divided by the total use (Column I) to calculate the supply unit cost for each class and tier (Column K).

Table 4-17: Potable Water Supply Cost

	A	B	C	D	E	F
Line	Potable Water Supply Cost	MC Surface	SAR Surface (BV)	Groundwater	SWP Water	Total
1	Volume (AF)	5,700	5,466	10,767	1,342	23,275
2	% from Source	24%	23%	46%	6%	100%
3	Estimated Potable Demand	2,317,185	2,221,738	4,376,777	545,634	9,461,335
4	Direct Water Purchase Costs	$148,209	$431,779	$1,453,551	$200,000	$2,233,539
5	% of Water Purchase Costs	7%	19%	65%	9%	100%
6	Unit Cost ($/ccf)	$0.06	$0.19	$0.33	$0.37	$0.24

The tiers were designed to provide low cost water from the lowest cost source, which is the Mill Creek (MC) surface water. While that source does not provide all the water used in Tier 1 anymore, the City has decided to retain that tier definition to provide indoor water use. The second tier basically provides water from the Santa Ana River (SAR)

Table 4-18: Supply Component Calculation

Line	A Customer Class	B Tier Definitions	C Annual Use (ccf)	D % of Annual Use	E MC Surface	F SAR Surface (BV)	G Groundwater	H SWP Water	I Total Use (ccf)	J Total Cost	K Supply Unit Cost
1	**Building Water Usage**										
2	Tier 1	16	3,250,414	34%	2,021,188	1,229,226	0	0	3,250,414	368,169	$0.11
3	Tier 2	27	285,707	3%	0	285,707	0	0	285,707	55,525	$0.19
4	Tier 3	Over 27	4,716,622	50%	0	423,000	3,817,688	475,935	4,716,622	1,524,533	$0.32
5	**Non-Building Water Usage**										
6	Tier 1	27	77,000	1%	77,000	0	0	0	77,000	4,925	$0.06
7	Tier 2	Over 27	1,131,591	12%	218,997	283,805	559,090	69,699	1,131,591	280,387	$0.25
8	**Total Potable Use**		**9,461,335**	**100%**	**2,317,185**	**2,221,738**	**4,376,777**	**545,634**	**9,461,335**	**2,233,539**	

4.9.3.4. Conservation Component

The Conservation component is applied to Building Tier 3 use and is equal to the Conservation unit cost (**Table 4-12**, Column H, Line 4) for that class and tier only.

4.9.3.5. Offset Component

The Offset component is applied to Building Tier 1 use and is equal to the Offset unit cost (**Table 4-12**, Column I, Line 4) for that class and tier only. The offset helps to provide affordability in Tier 1 and benefits all building customers.

4.9.3.6. Water Usage Rates

Table 4-19 shows the calculation of proposed water usage rates (Column H) for each customer class and tier based on the five rate components (Columns C through G) described previously.

Table 4-19: Proposed Water Usage Rates (FY 2027)

	A	B	C	D	E	F	G	H
Line	Customer Class	Bi-monthly Tiers, ccf	Supply	Base Delivery	Peaking	Conservation	Offset	Proposed Rate
1	**Building Water Usage**							
2	Tier 1	16	$0.11	$1.24	$0.38	$0.00	($0.15)	$1.59
3	Tier 2	27	$0.19	$1.24	$0.51	$0.00	$0.00	$1.95
4	Tier 3	Over 27	$0.32	$1.24	$1.29	$0.15	$0.00	$3.00
5	**Non-Building Water Usage**							
6	Tier 1	27	$0.06	$1.24	$0.57	$0.00	$0.00	$1.87
7	Tier 2	Over 27	$0.25	$1.24	$1.17	$0.00	$0.00	$2.66

4.9.3.7. Proposed Rate Schedule

Table 4-20 and **Table 4-21** show the proposed bi-monthly water service charges, private fire service charges, and water usage rates, respectively. The proposed water rates after the FY 2027 test year are increased across the board by the revenue adjustments in **Table 3-6**.

Table 4-20: Proposed Bi-Monthly Service Charges

	A	B	C	D	E
Line	Bi-Monthly Water Service Charges	Current Rates	January 2027	July 2027	July 2028
1	**Water Service**				
2	5/8"	$33.60	$34.09	$34.95	$35.83
3	3/4"	$44.90	$45.54	$46.68	$47.85
4	1"	$66.81	$67.76	$69.46	$71.20
5	1 1/2"	$119.96	$121.64	$124.69	$127.81
6	2"	$177.10	$179.56	$184.05	$188.66
7	3"	$305.97	$310.22	$317.98	$325.93
8	4"	$472.05	$478.60	$490.57	$502.84
9	6"	$870.64	$882.70	$904.77	$927.39
10	8"	$1,282.51	$1,300.27	$1,332.78	$1,366.10
11	10"	$3,036.30	$3,078.32	$3,155.28	$3,234.17
12	12"	$3,992.91	$4,048.16	$4,149.37	$4,253.11
13					
14	**Fire Protection Service**				
15	2"	$12.05	$12.05	$12.36	$12.67
16	3"	$21.63	$21.39	$21.93	$22.48
17	4"	$38.14	$37.51	$38.45	$39.42
18	6"	$97.39	$95.34	$97.73	$100.18
19	8"	$199.61	$195.09	$199.97	$204.97
20	10"	$353.35	$345.14	$353.77	$362.62
21	12"	$566.44	$553.09	$566.92	$581.10
22					
23	**Fire Hydrant Construction Service Charge**				
24	All Meters	$305.97	$313.62	$321.47	$329.51

Table 4-21: Proposed Water Usage Rates

	A	B	C	D	E	F

Line	Water Usage Rates	Bi-Monthly Tiers	Current Rates	January 2027	July 2027	July 2028
1	**Building Water Usage**					
2	Tier 1	16	$1.61	$1.59	$1.63	$1.68
3	Tier 2	27	$1.90	$1.95	$2.00	$2.05
4	Tier 3	Over 27	$2.85	$3.00	$3.08	$3.16
5						
6	**Non-Building Water Usage**					
7	Tier 1	27	$1.81	$1.87	$1.92	$1.97
8	Tier 2	Over 27	$2.85	$2.66	$2.73	$2.80
9						
10	**Fire Protection Water Usage**					
11	All Units		$2.85	$2.93	$3.01	$3.09

5. Wastewater – Financial Plan

This section of the report details the wastewater enterprise's long-term financial plan, based on the projected revenues, expenses, debt service, and capital project costs. Raftelis modeled the financial plan without revenue adjustments (status quo) and with proposed revenue adjustments to ensure the financial sustainability and solvency of the wastewater utility. The result of the wastewater financial plan is the total revenue requirement utilized as the basis for the cost-of-service analysis and resulting rates in the next section of the report.

5.1. Customer Accounts and Usage

Table 5-1 shows the projected wastewater customer accounts and water usage for the study period. City staff provided wastewater customer accounts and usage data for FY 2024, which are then projected based on the customer account growth rates from **Table 2-1**. Typical types of users that fall within the non-residential classes include:

- Low Strength I – Car Wash
- Low Strength II – Office Building
- Low Strength III – Hotel (rooms only, no restaurant)
- Medium Strength I – Laundromat (linen & general)
- Medium Strength II – Mini-Mall
- Medium Strength III – Hotel (with restaurant)
- High Strength I – Laundry (industrial)
- High Strength II - Bakery

5.2. Current Rates

The City's current wastewater rates include bi-monthly wastewater service charges for residential customers by type of dwelling unit, a non-residential wastewater usage rate based on ccf of water usage per customer class, and for schools by 100 students. **Table 5-2** shows the current wastewater rates effective July 1, 2025.

Table 5-1: Projected Wastewater Customer Accounts and Usage

	A	B	C	D	E
Line	Wastewater Customer Data	FY 2026	FY 2027	FY 2028	FY 2029
1	**Residential (dwelling units)**				
2	Single Family	16,844	16,937	17,030	17,123
3	Multiple Family	10,127	10,183	10,239	10,295
4	**Total - Residential**	**26,971**	**27,119**	**27,268**	**27,418**
5					
6	**Non-Residential (ccf)**				
7	Low Strength I	44,333	44,576	44,821	45,067
8	Low Strength II	415,541	417,821	420,114	422,419
9	Low Strength III	90,314	90,810	91,308	91,809
10	Medium Strength I	26,341	26,486	26,631	26,777
11	Medium Strength II	38,299	38,509	38,721	38,933
12	Medium Strength III	19,797	19,906	20,015	20,125
13	High Strength I	10,329	10,386	10,443	10,500
14	High Strength II	137,263	138,016	138,774	139,535
15	Large Volume User	33,481	33,664	33,849	34,035
16	**Total - Non-Residential**	**815,699**	**820,175**	**824,675**	**829,200**
17					
18	**Schools (students)**				
19	Elementary	4,875	4,901	4,928	4,955
20	Secondary & High	8,234	8,279	8,325	8,371
21	**Total - Schools**	**13,109**	**13,181**	**13,253**	**13,326**

Table 5-2: Current Bi-Monthly Wastewater Service Charges and Usage Rates

	A	B
Line	Current Wastewater Rates	FY 2026
1	**Bi-Monthly Residential Rate ($/dwelling unit)**	
2	Single Family	$72.65
3	Multiple Family	$57.64
4		
5	**Non-Residential Rate ($/ccf water)**	
6	Low Strength I	$3.11
7	Low Strength II	$3.76
8	Low Strength III	$4.39
9	Medium Strength I	$5.04
10	Medium Strength II	$5.68
11	Medium Strength III	$6.33
12	High Strength I	$6.98
13	High Strength II	$7.62
14	Large Volume User	$4.39
15		
16	**Bi-Monthly Schools Rate ($/100 students)**	
17	Elementary	$157.43
18	Secondary & High	$262.38

5.3. Calculated Rate Revenues at Current Rates

Table 5-3 shows the calculated wastewater rate revenues by customer class. To calculate rate revenues, the current wastewater rates (**Table 5-2**) are multiplied by the customer account and usage data (**Table 5-1**) for all years of the study.

Residential rate revenues (Lines 2-3) = Residential wastewater service charge x Residential dwelling units x 6 billing periods

Non-residential rate revenues (Lines 7-15) = Non-residential wastewater usage rate x Non-residential water usage in ccf

Schools rate revenues (Lines 19-20) = Schools wastewater service charge x (Number of students / 100 students) x 6 billing periods

Table 5-3: Calculated Wastewater Rate Revenues at Current Rates

	A	B	C	D	E
Line	Calculated Rate Revenues	FY 2026	FY 2027	FY 2028	FY 2029
1	**Residential (dwelling units)**				
2	Single Family	$7,342,382	$7,382,681	$7,423,200	$7,463,942
3	Multiple Family	$3,502,352	$3,521,567	$3,540,886	$3,560,312
4	**Total - Residential**	**$10,844,734**	**$10,904,247**	**$10,964,086**	**$11,024,254**
5					
6	**Non-Residential (ccf)**				
7	Low Strength I	$137,875	$138,632	$139,393	$140,158
8	Low Strength II	$1,562,435	$1,571,008	$1,579,628	$1,588,296
9	Low Strength III	$396,480	$398,655	$400,843	$403,042
10	Medium Strength I	$132,761	$133,490	$134,222	$134,958
11	Medium Strength II	$217,539	$218,732	$219,932	$221,139
12	Medium Strength III	$125,318	$126,005	$126,697	$127,392
13	High Strength I	$72,096	$72,492	$72,890	$73,290
14	High Strength II	$1,045,945	$1,051,684	$1,057,454	$1,063,257
15	Large Volume User	$146,980	$147,786	$148,597	$149,412
16	**Total - Non-Residential**	**$3,837,428**	**$3,858,484**	**$3,879,656**	**$3,900,944**
17					
18	**Schools (students)**				
19	Elementary	$46,044	$46,297	$46,551	$46,806
20	Secondary & High	$129,631	$130,342	$131,057	$131,776
21	**Total - Schools**	**$175,674**	**$176,638**	**$177,608**	**$178,582**
22					
23	**Total - Non-Residential and Schools**	**$4,013,103**	**$4,035,123**	**$4,057,263**	**$4,079,526**
24	**Total Revenue at Current Rates**	**$14,857,837**	**$14,939,370**	**$15,021,350**	**$15,103,780**

5.4. Projected Revenues at Current Rates

Table 5-4 shows the all projected wastewater revenues for the study period. City staff provided actual revenues for FY 2025 and budgeted revenues for FY 2026. The wastewater rate revenues (Lines 3-4) from FY 2027 and beyond are from the rate revenue calculations (**Table 5-3**, Lines 4 and 23). Investment income (Line 8) is calculated using the reserve interest rate (**Table 2-2**, Line 2). All other revenues are inflated for future years based on the non-rate revenue inflation factor (**Table 2-2**, Line 1).

Table 5-4: Projected Wastewater Revenues at Current Rates

	A	B	C	D	E
Line	Projected Revenues	FY 2026	FY 2027	FY 2028	FY 2029
1	**Wastewater Service (521)**				
2	Cost Recover/Reimb Expenditure	$1,500	$1,508	$1,515	$1,523
3	Sewer Residential	$10,844,734	$10,904,247	$10,964,086	$11,024,254
4	Sewer Non-Residential	$4,013,103	$4,035,123	$4,057,263	$4,079,526
5	Recycled Water Usage	$375,000	$376,875	$378,759	$380,653
6	Septage Charge	$55,000	$55,275	$55,551	$55,829
7	Frontage Charge	$30,000	$30,150	$30,301	$30,452
8	Investment Income	$565,512	$446,861	$355,289	$329,257
9	**Total - Wastewater Service (521)**	**$15,884,849**	**$15,850,038**	**$15,842,766**	**$15,901,494**

5.5. Projected O&M Expenses

Table 5-5 shows the projected wastewater O&M expenses for the study period. City staff provided the actual O&M expenses for FY 2025 and budgeted O&M expenses for FY 2026, which are escalated for future years of the study based on the expense inflation factors (**Table 2-3**).

Table 5-5: Projected Wastewater O&M Expenses

	A	B	C	D	E
Line	Projected O&M Expenses	FY 2026	FY 2027	FY 2028	FY 2029
1	**Wastewater Service (521)**				
2	Salaries and Benefits	$5,245,925	$5,352,199	$5,461,661	$5,574,407
3	Services - Power	$1,250,000	$1,287,500	$1,326,125	$1,365,909
4	Services	$6,467,494	$6,654,692	$6,847,506	$7,046,104
5	Supplies - Treatment	$1,252,500	$1,315,125	$1,380,881	$1,449,925
6	Supplies	$1,231,672	$1,268,622	$1,306,681	$1,345,881
7	**Total - Wastewater Service (521)**	**$15,447,591**	**$15,878,138**	**$16,322,854**	**$16,782,226**
8	**Total - O&M Expenses**	**$15,447,591**	**$15,878,138**	**$16,322,854**	**$16,782,226**

5.6. Debt Service

The City currently has no existing debt issue for the wastewater utility. To fund the wastewater capital program, the City has obtained an SRF loan of $ 45 million. The SRF loan is a 30-year term at 2.1% interest. The proposed loan proceeds would be used to fund most of the wastewater treatment plant rehabilitation capital costs. The proposed annual debt service is shown in
Table 5-6. Because the SRF loan payments start after completion of the project it is funding, repayment will start in FY 2029.

Table 5-6: Proposed Wastewater Debt Service

	A	B	C	D	E
Line	Proposed Debt Service	FY 2026	FY 2027	FY 2028	FY 2029
1	Proposed SRF Loan	$0	$45,000,000	$0	$0
2	Loan Proceeds	$0	$45,000,000	$0	$0
3					
4	**Annual Debt Service**				$1,927,962
5	**Total - Proposed Debt Service**	**$0**	**$0**	**$0**	**$1,927,962**

5.7. Capital Projects

City staff provided the CIP for the wastewater utility for the study period. **Error! Reference source not found.** shows the CIP costs for the study period, which were provided by the client in inflated dollars. The CIP provided consists of projects totaling $55.1 million for the three years FY 2027 through FY 2029. Projects are funded through a combination of wastewater rate revenues, cash reserves, DIF revenues, and debt proceeds.

Table 5-7: Inflated Wastewater Capital Projects

	A	B	C	D	E
Line	Capital Projects (Inflated)	FY 2026	FY 2027	FY 2028	FY 2029
1	**Replacement**				
2	CIP Sewerline Replacement	$1,000,000	$1,000,000	$1,000,000	$1,000,000
3	Citywide Sewer Manhole Rehabilitation	$500,000	$500,000	$500,000	$500,000
4	Alabama Septage Pond Remediation	$0	$650,000	$50,000	$50,000
5	WWTP Drying bed leachate remediation	$0	$0	$500,000	$0
6	Joint Utility Lab (Design, Bidding & Construction Support)	$200,000	$200,000	$200,000	$0
7	Joint Utility Lab Phases (Construction)	$1,800,000	$1,500,000	$1,500,000	$0
8	WWTP Rehabilitation - Phase 2 (Construction)	$1,000,000	$45,000,000	$0	$0
9	**Total - Replacement**	**$4,500,000**	**$48,850,000**	**$3,750,000**	**$1,550,000**
10					
11	**Expansion**				
12	Pipeline Upsizing - Cajon St (Cypress to Fern)	$0	$0	$0	$827,000
13	Pipeline Upsizing - Cajon St @ Citrus Avenue	$0	$0	$0	$141,000
14	**Total - Expansion**	**$0**	**$0**	**$0**	**$968,000**

Table 5-8 shows the proposed wastewater capital financing plan based on the CIP (Error! Reference source not found.). The City plans to fully fund its wastewater CIP for all years of the study (Line 1). The debt proceeds (Line 11) are from the proposed Debt issues (**Table 5-6**, Line 2).

Table 5-8: Proposed Wastewater Capital Financing Plan

	A	B	C	D	E
Line	Capital Financing Plan	FY 2026	FY 2027	FY 2028	FY 2029
1	**CIP to Spend**	100%	100%	100%	100%
2					
3	**Inflated Project Costs**	$4,500,000	$48,850,000	$3,750,000	$1,550,000
4					
5	**Capital Financing**				
6	Rate Funded	$4,500,000	$3,850,000	$3,750,000	$1,550,000
7	Bond Funded	$0	$0	$0	$0
8	Loan Funded	$0	$45,000,000	$0	$0

5.8. Proposed Financial Plan

Table 5-9 shows the proposed revenue adjustments necessary to maintain the financial sufficiency of the City's wastewater utility. The revenue adjustments will be effective starting January 2027 and in July each year thereafter.

Table 5-9: Proposed Wastewater Revenue Adjustments

	A	B	C
Line	Fiscal Year	Revenue Adjustment	Month Effective
1	FY 2027	7.0%	January 2027
2	FY 2028	7.0%	July 2027
3	FY 2029	7.0%	July 2028

Table 5-10 shows the projected wastewater financial plan with the proposed revenue adjustments (**Table 5-9**). The net cash flow (Line 27) is negative in some years of the study period but will reduce the wastewater cash balances significantly less than under the status quo scenario. With the proposed revenue adjustments and debt issuance, the wastewater utility will meet its debt coverage ratio requirements (Line 30) and have positive ending balances (Line 34).

Table 5-10: Projected Wastewater Financial Plan (Proposed Revenue Adjustments)

Line	A Wastewater Financial Plan	B FY 2026	C FY 2027	D FY 2028	E FY 2029
1	**Revenues**				
2	Rate Revenues	$14,912,837	$14,994,645	$15,076,901	$15,159,609
3	Revenue Adjustments	$0	$524,813	$2,184,643	$3,411,564
4	Investment Income	$416,893	$314,286	$220,760	$207,562
5	Sale of Surplus Property	$375,000	$375,000	$375,000	$375,000
6	Other Revenues	$1,261,500	$1,387,808	$1,274,147	$1,280,517
7	**Total - Revenues**	**$16,966,230**	**$17,596,551**	**$19,131,451**	**$20,434,252**
8					
9	**O&M Expenses**				
10	Salaries and Benefits	$5,245,925	$5,352,199	$5,461,661	$5,574,407
11	Services - Power	$1,250,000	$1,287,500	$1,326,125	$1,365,909
12	Services	$6,467,494	$6,654,692	$6,847,506	$7,046,104
14	Supplies - Treatment	$1,252,500	$1,315,125	$1,380,881	$1,449,925
15	Supplies	$1,231,672	$1,268,622	$1,306,681	$1,345,881
16	**Total - O&M Expenses**	**$15,447,591**	**$15,878,138**	**$16,322,854**	**$16,782,226**
17					
18	**Debt and Capital**				
19	Existing Debt Service	$0	$0	$0	$0
20	Proposed Debt Service	$0	$0	$0	$1,927,962
21	Rate Funded Capital Projects	$4,500,000	$3,850,000	$3,750,000	$1,550,000
22	DIF Funded Capital Projects	$0	$0	$0	$968,000
23	**Total - Debt and Capital**	**$4,500,000**	**$3,850,000**	**$3,750,000**	**$4,445,962**
24					
25	**Net Cash Flow**	**($2,981,361)**	**($2,251,587)**	**($941,403)**	**($793,936)**
26	Net Operating Revenue	$1,518,639	$1,598,413	$2,808,597	$3,652,026
27					
28	**Calculated Debt Coverage**	**#N/A**	**#N/A**	**#N/A**	**1.76**
29	Required Debt Coverage	1.25	1.25	1.25	1.25
30					
31	Beginning Balances	$15,844,918	$12,863,557	$10,611,971	$9,670,567
32	Ending Balances	$12,863,557	$10,611,971	$9,670,567	$8,876,631

Figure 5-1 shows the proposed wastewater capital financing plan in graphical format, based on the capital financial plan shown in **Table 5-8**. The dark teal bars represent the portion of replacement CIP funded by

rates and the turquoise bars represent the portion of replacement CIP funded by bond proceeds. Most of the capital projects in FY 2027 are funded from SRF Loan proceeds.

Figure 5-1: Proposed Wastewater Capital Financing Plan

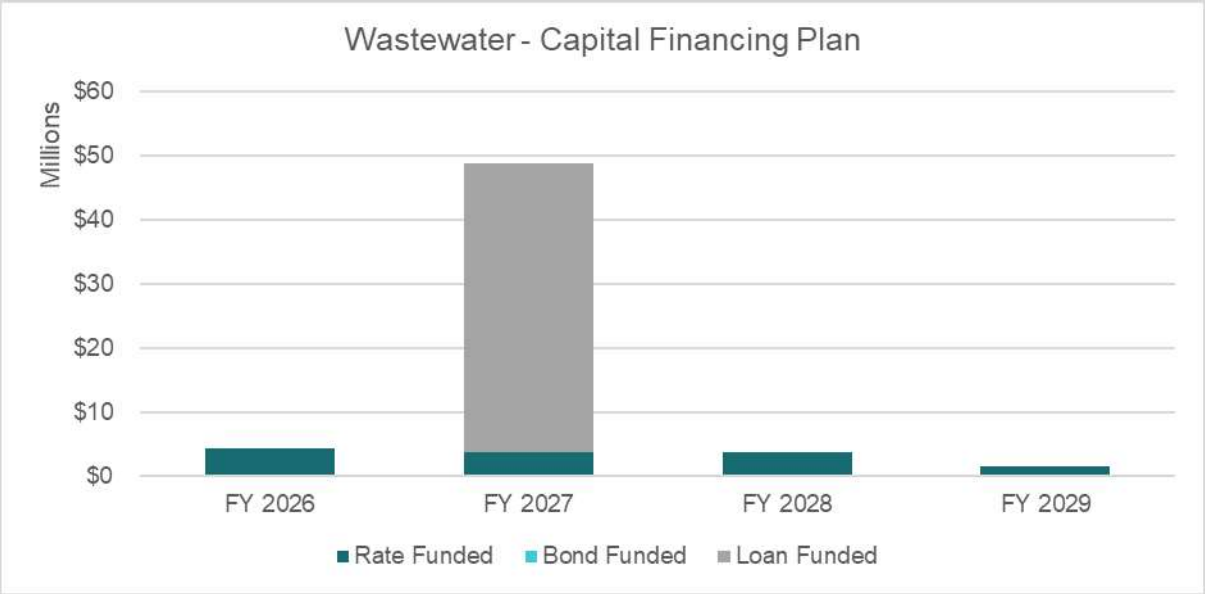


Figure 5-2 shows the projected wastewater financial plan with the proposed revenue adjustments. Although the net cash flow is still negative in some years of the study, shown by the green bars under the stacked grey, yellow, and teal bars, the additional revenue will allow the wastewater utility to meet its debt coverage requirements and fund its operating and capital costs for the Study period.

Figure 5-2: Projected Wastewater Financial Plan (Proposed Revenue Adjustments)

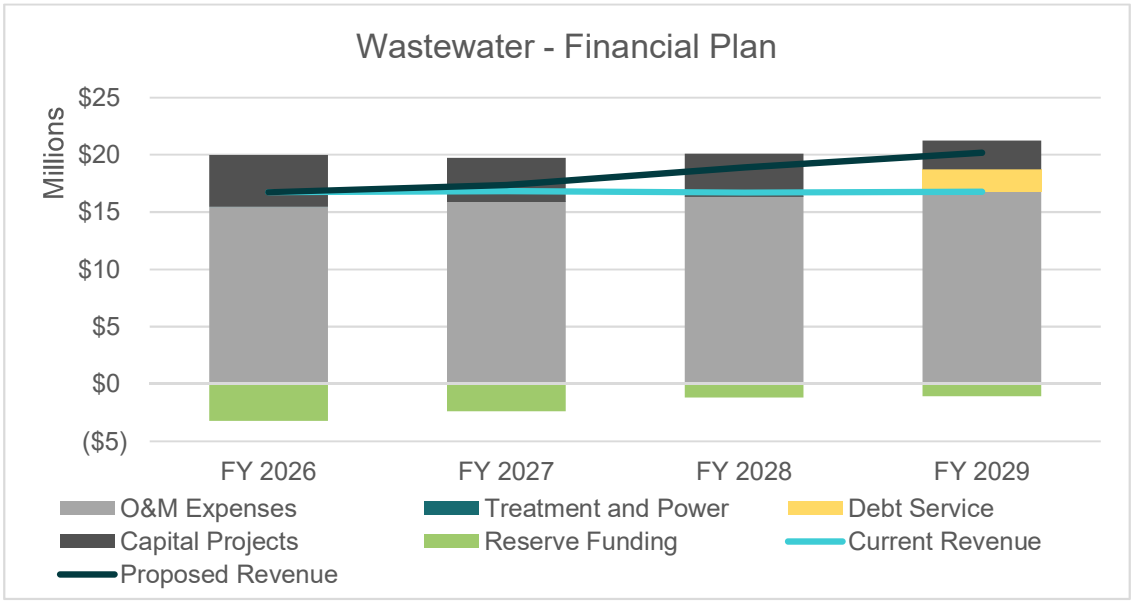
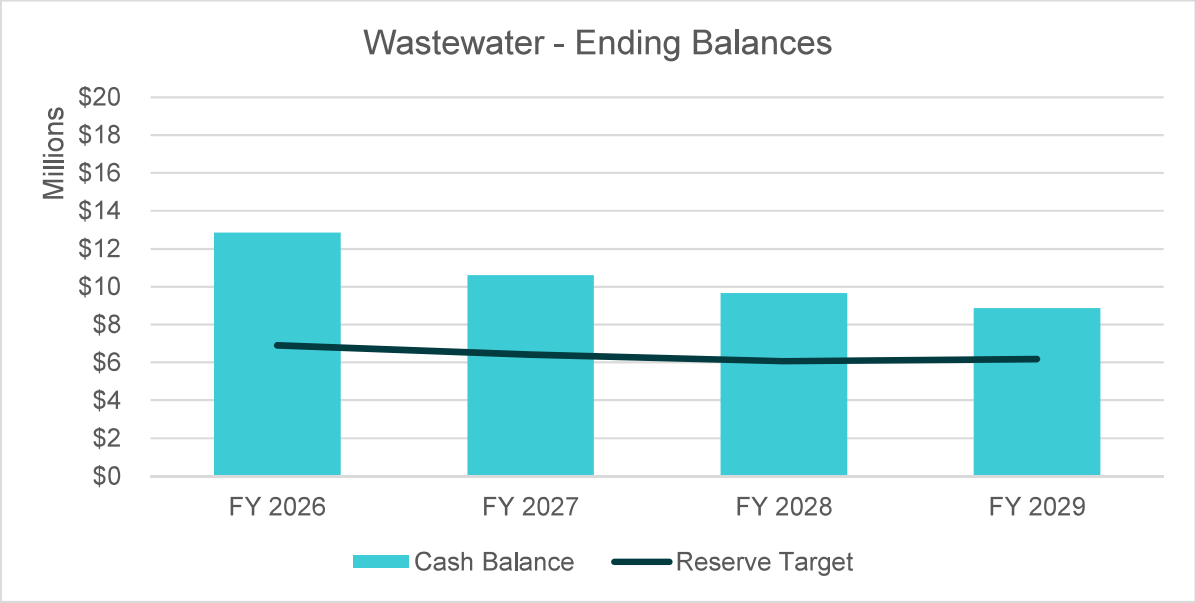


Figure 5-3 shows the projected wastewater fund balances with the proposed revenue adjustments. The cash balances are positive for all years of the Study. These balances are drawn down to fund the City's capital projects in FY 2027, FY 2028, and FY 2029.

Figure 5-3: Projected Wastewater Fund Balances (Proposed Revenue Adjustments)



6. Wastewater – Cost of Service Analysis and Rates

This section of the report details the cost-of-service analysis and rate calculation process to determine the proposed wastewater rates. The goal of this process is to determine the cost of providing wastewater service to each of the City's wastewater customer classes and to ensure equity and fairness among the various classes.

6.1. Process and Approach

The cost-of-service analysis utilized to develop the wastewater rates followed the guidelines for allocating costs outlined in the WEF Manual No. 27. The cost-of-service analysis and rate design process consists of eight major steps, as outlined below:

1. Determine the revenue requirement, equal to the revenue to be recovered from rates.
2. Conduct a treatment plant mass balance analysis to estimate the flows and strength characteristics of each customer class.
3. Functionalize O&M expenses and capital assets into functional categories such as treatment, laboratory, collection, engineering, etc.
4. Allocate each functional category into cost components such as wastewater flow and strength, which includes BOD and TSS.
5. Develop customer class characteristics and units of service by cost component.
6. Calculate the cost component unit rates by dividing the total cost in each cost component by the total units of service for that component. For example, wastewater flow is measured in ccf and BOD and TSS are measured in lbs per year.
7. Calculate the cost for each customer class by multiplying the unit cost by the units of service for each customer class.
8. Design rates to meet City's objectives.

6.2. Revenue Requirement

The first step of the cost-of-service analysis is to determine the revenue requirement for the test year, or rate-making year. The test year of this study is FY 2027. **Table 6-1** shows the revenue requirement calculation for the wastewater utility.

The revenue requirements (Lines 2-4) are equal to the O&M expenses and debt and capital costs for FY 2027 (**Table 5-10**, Column C, Lines 16 and 23). The revenues from other sources (Lines 7-11), also known as non-rate revenues or revenue offsets, are equal to all non-rate revenues (**Table 5-10**, Column C, Lines 4-6). The adjustment for cash from/(to) reserves (Line 15) is equal to the negative value of net cash flow (**Table 5-10**, Column C, Line 25).

The revenue to be recovered from rates (Line 19) is divided between operating (Column B) and capital (Column C) based on the function of each line item. For example, debt and capital costs (Line 3) are allocated to capital, while O&M expenses (Line 2) are allocated to operating. Note that the total revenue requirement (Column D, Line 19) is equal to rate revenues for a full year of the revenue adjustment for FY 2027.

Table 6-1: Wastewater Revenue Requirement Calculation

	A	B	C	D
Line	Revenue Requirement (FY 2027)	Operating	Capital	Total
1	**Revenue Requirements**			
2	O&M Expenses	$15,878,138	$0	$15,878,138
3	Debt and Capital	$0	$3,850,000	$3,850,000
4	**Total - Revenue Requirements**	**$15,878,138**	**$3,850,000**	**$19,728,138**
5				
6	**Revenue from Other Sources**			
7	Investment Income	$0	$314,286	$314,286
8	Recycled Water	$375,000	$0	$375,000
9	Wastewater Service (521)	$463,808	$0	$463,808
10	Transfer from (to) Capital Improvement Fund (529)	$0	$924,000	$924,000
11	**Total - Revenue from Other Sources**	**$838,808**	**$1,238,286**	**$2,077,094**
12				
13	**Less Adjustments**			
14	Cash from Reserves	$0	$2,251,587	$2,251,587
15	Midyear Increase	($524,813)	$0	($524,813)
16	**Subtotal - Less Adjustments**	**($524,813)**	**$2,251,587**	**$1,726,774**
17				
18	**Revenue to be Recovered from Rates**	**$15,564,143**	**$360,127**	**$15,924,270**

6.3. Plant Mass Balance

The second step of the cost-of-service analysis is to conduct a plant mass balance analysis. The plant mass balance analysis is used to estimate and validate the wastewater loadings (flow and strength) generated by each customer class. While wastewater discharged into sewers for most users is not metered when it enters the wastewater system, the total amount of flow and strength entering the treatment plant is a known quantity. The quantity entering into the wastewater treatment plant is called total plant influent.

From the total plant influent, a portion is subtracted for inflows and infiltration (I&I). Non-residential customer flows can be estimated based on their water usage and using City-accepted return factors. From there, residential customer loadings can be calculated by subtracting I&I and estimated non-residential loadings from total plant influent to determine the reasonableness of residential loadings.

Table 6-2 shows the wastewater flow estimates for elementary and secondary schools. The estimated wastewater flow per student (Line 1) in gallons per capita per day (gpcd) is based on industry standards, with some conservation factored in for secondary schools. This is multiplied by the projected number of students for FY 2025 (**Table 5-1**, Column C, Lines 19-20). The annual flow in gallons (Line 3) is converted to ccf (Line 4) to determine the total wastewater flow in ccf for elementary and secondary schools.

Table 6-2: Schools Wastewater Flow Estimate

	A	B	C
Line	Schools	Elementary	Secondary
1	Per Student Flow (gcpd)	5	8
2	Students	4,901	8,279
3	Annual Flow (gal)	8,050,355	22,665,011
4	Annual Flow (ccf)	10,763	30,301

Table 6-3 shows the plant balance analysis for all customer classes. There is no change to the customer classes, which are grouped by the strength of their wastewater flow. The left-most columns (Columns B to D) represent the same values as the right-most columns (Columns F to H) in converted units. Flow is measured in million gallons per day (MGD) and converted to ccf per year. BOD and TSS are measured in milligrams per liter (mg/L) and converted to lbs per year.

City staff provided total plant influent (Line 1) and estimated approximately 7 percent of total influent to be from I&I (Line 2). Customers are grouped based on their strength and estimated strength - BOD and TSS in mg/L (Columns C and D, Lines 2-17) - are based on industry standards. The non-residential return factors, which represent the wastewater generated from water use (Column E) are estimated for the City's characteristics. The wastewater flows for non-residential customers (Column F, Lines 6-14) are calculated by multiplying the non-residential water usage (**Table 5-1**, Column C, Lines 7-15) by the return factors. The estimated wastewater flows for schools (Column D, Lines 16-17) were calculated in **Table 6-2.** Septage loadings (Line 20) represent a small portion of total plant loadings; flow is derived from data provided by City staff, and strength is based on industry standards.

The net residential loadings (Line 22) are determined by subtracting non-residential loadings (Lines 6-17), septage (Line 20), and I&I (Line 2) from total plant influent (Line 1).

Table 6-3: Wastewater Plan Balance Calculation

	A	B	C	D	E	F	G	H
Line	Plant Balance	Flow (MGD)	BOD (mg/L)	TSS (mg/L)	Return Factor	Flow (ccf)	BOD (lbs/yr)	TSS (lbs/yr)
1	Total Plant Influent	5.86	309	312		2,859,492	5,515,643	5,569,193
2	Less: I&I	0.41	100	100		200,164	124,950	124,950
3	**Net Plant Influent**	**5.45**	**325**	**328**		**2,659,328**	**5,390,693**	**5,444,243**
4								
5	**Non-Residential**							
6	Low Strength I	0.08	50	50	84%	37,444	11,687	11,687
7	Low Strength II	0.72	150	150	84%	350,970	328,632	328,632
8	Low Strength III	0.16	250	250	84%	76,280	119,042	119,042
9	Medium Strength I	0.05	350	350	84%	22,248	48,609	48,609
10	Medium Strength II	0.07	450	450	84%	32,348	90,867	90,867
11	Medium Strength III	0.03	550	550	84%	16,721	57,408	57,408
12	High Strength I	0.02	650	650	84%	8,724	35,398	35,398
13	High Strength II	0.24	750	750	84%	115,934	542,775	542,775
14	Large Volume User	0.06	250	250	84%	28,278	44,130	44,130
15								
16	Elementary School	0.02	130	130	100%	10,763	8,734	8,734
17	Secondary & High School	0.06	130	130	100%	30,301	24,589	24,589
18	**Subtotal Non-Residential Flow**	**1.50**	**288**	**288**		**730,010**	**1,311,871**	**1,311,871**
19								
20	Septage	0.001	5,400	12,000		488	16,449	36,553
21								
22	**Net Residential Flow**	**3.95**	**337**	**340**		**1,928,829**	**4,062,373**	**4,095,819**

The plant mass balance analysis in **Table 6-3** results in total estimated residential loadings. **Table 6-4** shows the number of total single family and multiple family dwelling units. To allocate the total flow and strength between single and multiple family customers, the dwelling units (**Table 5-1**, Column D, Lines 2-3) are multiplied by the dwelling unit (DU) ratio (Column C) to determine the adjusted units (Column D). The dwelling unit ratio represents the amount of wastewater flow compared to the average flow from a single family customer. The ratio for multiple family dwelling units is lower than that of single family because multiple family units tend to have a smaller household size based on ACS housing density data. The proportion of adjusted units (Column E), or equivalent dwelling units (EDU), is used to allocate the estimated residential loadings between single and multiple families.

Table 6-4: Residential Proportion of Wastewater Flow

	A	B	C	D	E
Line	Residential Customer Classes	Dwelling Units	DU Ratio	Adjusted Units	Proportion of Total Units
1	Single Family	16,937	1.00	16,937	67.7%
2	Multiple Family	10,183	0.79	8,079	32.3%
3	**Total - Residential**	**27,119**		**25,016**	**100.0%**

Table 6-5 shows the estimated residential wastewater loadings, allocated using the EDU ratios (**Table 6-4**, Column E). The total residential flow (Line 3) is equal to that calculated in the plant mass balance analysis (Table 6-3, Columns F to H, Line 22). To validate the results of the plant mass balance analysis, the total estimated residential flow is divided by the total population estimate, equal to approximately 70,130 people, to determine that each resident in the City uses approximately 56 gpcd. The residential wastewater strength, in mg/l, shown in **Table 6-3**, Line 22, is also reasonable given the reduced wastewater flow. This is a reasonable estimate based on industry standard wastewater flow and strength estimates.

Table 6-5: Estimated Residential Wastewater Loadings

	A	B	C	D
Line	Residential Customer Classes	Flow (ccf)	BOD (lbs/yr)	TSS (lbs/yr)
1	Single Family	1,305,878	2,750,354	2,772,998
2	Multiple Family	622,951	1,312,019	1,322,821
3	**Total - Residential**	**1,928,829**	**4,062,373**	**4,095,819**

The estimated flow from a single family dwelling unit is approximately 158 gpd. The wastewater strength is higher because of lower wastewater flow due to conservation. This is now common for residential flow and strength. The estimated flow is calculated as follows:

1,305,878 ccf per year / 16,937 units x 748 gallons per ccf / 365 days per year = 158 gpd

6.4. Operating and Capital Cost Allocation

The next step in the cost-of-service analysis is to determine the operating and capital cost allocations by cost component. The cost components in this Study include flow, BOD, TSS, and general.

Table 6-6 shows the wastewater operating cost allocation. The flow cost component represents costs associated with wastewater flow, such as collection. The BOD and TSS cost components represent costs associated with wastewater strength, such as treatment and laboratory analyses. General costs, such as administration or engineering costs, do not have a specific function.

For the purpose of allocating operating costs, City staff provided the O&M expense budget estimates by function (Column F, Lines 13-21). This is representative of the distribution of operating costs shown in **Table 5-5**. Functions include administration, engineering, treatment and operations, treatment plant maintenance, quality control, industrial waste monitoring, collection, and laboratory. The operating costs are allocated to each cost component based on the percentage allocation (Lines 2-10) for each component. The final O&M expense allocation (Line 23) is determined by taking the weighted proportion of total operating costs by cost component based on the percentage allocations.

Table 6-6: Wastewater Operating Cost Allocation

	A	B	C	D	E	F
Line	**O&M Expense Allocation**	**Flow**	**BOD**	**TSS**	**General**	**Total**
1	**Percentage Allocation**					
2	Wastewater Admin & General				100%	100%
3	Wastewater Engineering				100%	100%
4	Wastewater Treatment and Operations	50%	25%	25%		100%
5	Wastewater Treatment Plant Maintenance	50%	25%	25%		100%
6	Wastewater Quality Control		50%	50%		100%
7	Wastewater Industrial Waste Monitoring	95%	2.5%	2.5%		100%
8	Wastewater Collection System - General	100%				100%
9	WW Joint Laboratory - Water		50%	50%		100%
10	WW Joint Laboratory - Solid Waste		50%	50%		100%
11						
12	**Dollar Allocation**					
13	Wastewater Admin & General	$0	$0	$0	$3,809,968	$3,809,968
14	Wastewater Engineering	$0	$0	$0	$831,036	$831,036
15	Wastewater Treatment and Operations	$2,686,067	$1,343,034	$1,343,034	$0	$5,372,135
16	Wastewater Treatment Plant Maintenance	$684,383	$342,192	$342,192	$0	$1,368,766
17	Wastewater Quality Control	$0	$408,646	$408,646	$0	$817,291
18	Wastewater Industrial Waste Monitoring	$1,000,947	$26,341	$26,341	$0	$1,053,628
19	Wastewater Collection System - General	$2,252,964	$0	$0	$0	$2,252,964
20	WW Joint Laboratory - Water	$0	$181,233	$181,233	$0	$362,465
21	WW Joint Laboratory - Solid Waste	$0	$4,942	$4,942	$0	$9,9885
22	**Total - O&M Expenses**	**$6,624,361**	**$2,306,386**	**$2,306,386**	**$4,641,004**	**$15,878,138**
23	*O&M Expense Allocation*	*41.7%*	*14.5%*	*14.5%*	*29.2%*	*100.0%*

Table 6-7 shows the wastewater capital cost allocation. To minimize fluctuations in the capital cost allocation as capital projects change from year to year, capital costs are allocated on the basis of capital assets. For the purpose of allocating capital costs, City staff provided the wastewater capital assets listed by function (Column F, Lines 10-15). Functions include land, wastewater facilities, construction in progress, machinery and equipment, collection system, and vehicles. The capital asset costs are allocated into each cost component based on the percentage allocation (Lines 2-7) for each component. The final capital expense allocation (Line 17) is determined by taking the weighted proportion of total capital asset costs by cost component.

Table 6-7: Wastewater Capital Allocation

	A	B	C	D	E	F
Line	Capital Expense Allocation	Flow	BOD	TSS	General	Total
1	**Percentage Allocation**					
2	Land (For WWTP and Perc Ponds)	30%	40%	30%		100%
3	Wastewater Facilities/Plant	45%	30%	25%		100%
4	Construction in Progress				100%	100%
5	Machinery and Equipment	45%	30%	25%		100%
6	Collection System	100%				100%
7	Vehicles	100%				100%
8						
9	**Dollar Allocation**					
10	Land (For WWTP and Perc Ponds)	$1,331,650	$1,775,533	$1,331,650	$0	$4,438,832
11	Wastewater Facilities/Plant	$4,776,426	$3,184,284	$2,653,570	$0	$10,614,280
12	Construction in Progress	$0	$0	$0	$0	$0
13	Machinery and Equipment	$74,556	$49,704	$41,420	$0	$165,680
14	Collection System	$18,220,858	$0	$0	$0	$18,220,858
15	Vehicles	$186,819	$0	$0	$0	$186,819
16	**Total - Capital Assets**	**$24,590,309**	**$5,009,521**	**$4,026,640**	**$0**	**$33,626,469**
17	*Capital Expense Allocation*	*73%*	*15%*	*12%*	*0%*	*100%*

6.5. Unit Cost Components

Table 6-8 shows the wastewater service units by cost component, which are from the plant mass balance analysis (**Table 6-3**).

Table 6-8: Wastewater Service Units by Cost Components

	A	B	C	D
Line	Customer Class	WW Flow (ccf)	BOD (lbs/yr)	TSS (lbs/yr)
1	**Residential**			
2	Single Family Residence	1,305,878	2,750,354	2,772,998
3	Multi-Family Residence	622,951	1,312,019	1,322,821
4	**Total - Residential**	**1,928,829**	**4,062,373**	**4,095,819**
5				
6	**Non-Residential**			
7	Low Strength I	37,444	11,687	11,687
8	Low Strength II	350,970	328,632	328,632
9	Low Strength III	76,280	119,042	119,042
10	Medium Strength I	22,248	48,609	48,609
11	Medium Strength II	32,348	90,867	90,867
12	Medium Strength III	16,721	57,408	57,408
13	High Strength I	8,724	35,398	35,398
14	High Strength II	115,934	542,775	542,775
15	Large Volume User	28,278	44,130	44,130
16	**Total - Non-Residential**	**688,947**	**1,278,548**	**1,278,548**
17				
18	**Schools**			
19	Elementary School	10,763	8,734	8,734
20	Secondary & High School	30,301	24,589	24,589
21	**Total - Schools**	**41,063**	**33,323**	**33,323**
22				
23	**Septage**	**488**	**16,449**	**36,553**
24				
25	**Total**	**2,659,328**	**5,390,693**	**5,444,243**

Table 6-9 shows the calculation of unit costs by cost component. The operating revenue requirement (**Table 6-1**, Column B, Line 19) is allocated based on the O&M expense allocation (**Table 6-6**, Line 23) for each cost component. Similarly, the capital revenue requirement (**Table 6-1**, Column C, Line 19) is allocated based on the capital asset allocation (**Table 6-7**, Line 17). Then, the general costs (Column E, Line 3) are reallocated to the flow, BOD, and TSS cost components proportionately to the remaining costs of service. The adjusted cost of service for each cost component (Line 5) is divided by the units of service (Line 7) derived from **Table 6-8**, resulting in the unit cost component.

Table 6-9: Wastewater Cost of Service and Unit Costs

	A	B	C	D	E	F
Line	Cost of Service Allocation	WW Flow	BOD	TSS	General	Total
1	Operating Cost	$6,493,363	$2,260,777	$2,260,777	$4,549,226	$15,564,143
2	Capital Cost	$263,353	$53,650	$43,124	$0	$360,127
3	**Total Cost of Service**	**$6,756,716**	**$2,314,427**	**$2,303,901**	**$4,549,226**	**$15,924,270**
4	Allocation of General Costs	$2,702,216	$925,610	$921,400	($4,549,226)	$0
5	**Adjusted Cost of Service**	**$9,458,932**	**$3,240,037**	**$3,225,301**	**$0**	**$15,924,270**
6						
7	Units of Service	2,659,328	5,390,693	5,444,243		
8		ccf	lbs/yr	lbs/yr		
9						
10	Unit Cost	$3.56	$0.60	$0.59		
11		ccf	lbs/yr	lbs/yr		

6.6. Revenue Requirement Allocation

The final step in the cost-of-service analysis is to allocate the revenue requirement to each customer class based on their share of burden in the wastewater system. **Table 6-10** shows the revenue requirement allocated to each customer class based on the cost components, which is calculated by multiplying the unit costs of each cost component (**Table 6-9**, Line 10) by the units of service for each customer class (**Table 6-8**). Note that the total cost of service (Column E, Line 25) is equal to the total revenue required from rates (**Table 6-1**, Column D, Line 19). The calculations in the table may not be equal to the precise number shown due to rounding within the tables.

Table 6-10: Allocation of Wastewater Revenue Requirement to Customer Classes

	A	B	C	D	E
Line	Customer Class	Flow	BOD	TSS	Total
1	**Residential**				
2	Single Family Residence	$4,644,863	$1,653,081	$1,642,791	$7,940,735
3	Multi-Family Residence	$2,215,768	$788,579	$783,671	$3,788,018
4	**Total - Residential**	**$6,860,632**	**$2,441,660**	**$2,426,462**	**$11,728,754**
5					
6	**Non-Residential**				
7	Low Strength I	$133,184	$7,024	$6,924	$147,132
8	Low Strength II	$1,248,361	$197,522	$194,690	$1,640,572
9	Low Strength III	$271,320	$71,549	$70,523	$413,393
10	Medium Strength I	$79,135	$29,216	$28,797	$137,147
11	Medium Strength II	$115,057	$54,615	$53,832	$223,504
12	Medium Strength III	$59,475	$34,505	$34,010	$127,990
13	High Strength I	$31,030	$21,276	$20,971	$73,276
14	High Strength II	$412,363	$326,231	$321,553	$1,060,147
15	Large Volume User	$100,582	$26,524	$26,144	$153,250
16	**Total - Non-Residential**	**$2,450,507**	**$768,462**	**$757,443**	**$3,976,412**
17					
18	**Schools**				
19	Elementary School	$38,281	$5,249	$5,174	$48,705
20	Secondary & High School	$107,777	$14,779	$14,567	$137,123
21	**Total - Schools**	**$146,058**	**$20,029**	**$19,741**	**$185,828**
22					
23	**Septage**	**$1,736**	**$9,886**	**$21,655**	**$33,277**
24					
25	**Total**	**$9,458,932**	**$3,240,037**	**$3,225,301**	**$15,924,270**

6.7. Rate Calculation

Table 6-11 shows the rate calculation for the City's proposed wastewater rates for the FY 2027 test year.

Bi-monthly residential service charge = Residential cost of service / dwelling units / 6 billing periods

Non-residential wastewater rate = Non-residential cost of service / ccf of water usage

Bi-monthly schools service charge = Schools cost of service / students x 100 students / 6 billing periods

The City's wastewater utility incurs additional costs (Line 22) to serve septage customers above and beyond the allocated cost of service. These additional costs are equal to the total burdened labor cost for administrative work related to collecting septage. Note that the revenues from septage charges were estimated in the projected wastewater revenues (**Table 5-4**, Line 5). The additional costs are calculated as follows:

$30 per hour x 0.25 hours x 2 for overhead costs = $15 per load

Table 6-11: Wastewater Bi-Monthly Rate Calculation

	A	B	C	D
Line	Customer Class	Cost of Service	FY 2027 Units	Proposed Bi-Monthly Rate
1	**Residential**		*dwelling units*	*per dwelling unit*
2	Single Family Residence	$7,940,735	16,937	$78.15
3	Multi-Family Residence	$3,788,018	10,183	$62.01
4				
5	**Non-Residential**		*ccf of water*	*per ccf*
6	Low Strength I	$147,132	44,576	$3.31
7	Low Strength II	$1,640,572	417,821	$3.93
8	Low Strength III	$413,393	90,810	$4.56
9	Medium Strength I	$137,147	26,486	$5.18
10	Medium Strength II	$223,504	38,509	$5.81
11	Medium Strength III	$127,990	19,906	$6.43
12	High Strength I	$73,276	10,386	$7.06
13	High Strength II	$1,060,147	138,016	$7.69
14	Large Volume User	$153,250	33,664	$4.56
15				
16	**Schools**		*students*	*per 100 students*
17	Elementary School	$48,705	4,901	$165.62
18	Secondary & High School	$137,123	8,279	$276.04
19				
20	**Septage**		*gallons*	*per gallon*
21	Cost of Service	$33,242	329,455	$0.11
22	Additional Costs	$2,471	329,455	$0.01
23	Total Septage	$35,713	329,455	$0.11

Table 6-12 shows the bi-monthly rate comparison between the proposed rates calculated in **Table 6-11** and the City's current wastewater rates.

Table 6-12: Wastewater Bi-Monthly Rate Comparison

	A	B	C	D
Line	Customer Class	Proposed Bi-Monthly Rate	Current Bi-Monthly Rate	Difference ($)
1	**Residential**	*per dwelling unit*		
2	Single Family Residence	$78.15	$72.65	$5.50
3	Multi-Family Residence	$62.01	$57.64	$4.37
4				
5	**Non-Residential**	*per ccf*		
6	Low Strength I	$3.31	$3.11	$0.20
7	Low Strength II	$3.93	$3.76	$0.17
8	Low Strength III	$4.56	$4.39	$0.17
9	Medium Strength I	$5.18	$5.04	$0.14
10	Medium Strength II	$5.81	$5.68	$0.13
11	Medium Strength III	$6.43	$6.33	$0.10
12	High Strength I	$7.06	$6.98	$0.08
13	High Strength II	$7.69	$7.62	$0.07
14	Large Volume User	$4.56	$4.39	$0.17
15				
16	**Schools**	*per 100 students*		
17	Elementary School	$165.62	$157.43	$8.19
18	Secondary & High School	$276.04	$262.38	$13.66
19				
20	**Septage**	*per gallon*		
21	Septage Charge *	$0.11	$0.11	$0.00

* minimum septage charge is $15

6.8. Proposed Rates

Table 6-13 and **Table 6-14** show the proposed bi-monthly wastewater service charges and the non-residential wastewater rates, respectively. The proposed wastewater rates for January 2027 are from **Table 6-11**. The proposed wastewater rates in the following years are increased across the board by the revenue adjustments in **Table 5-9**.

Table 6-13: Proposed Bi-Monthly Wastewater Service Charges

	A	B	C	D	E
Line	Bi-Monthly Wastewater Service Charges	Current Rates	January 2027	July 2027	July 2028
1	Residential ($/dwelling unit)				
2	Single Family	$72.65	$78.15	$83.63	$89.49
3	Multiple Family	$57.64	$62.01	$66.36	$71.01
4					
5	Schools ($/100 students)				
6	Elementary	$157.43	$165.62	$177.22	$189.63
7	Secondary & High	$262.38	$276.04	$295.37	$316.05

Table 6-14: Proposed Non-Residential Wastewater Rates

	A	B	C	D	E
Line	Wastewater Usage Rates	Current Rates	January 2027	July 2027	July 2028
1	Non-Residential Usage ($/ccf)				
2	Low Strength I	$3.11	$3.31	$3.55	$3.80
3	Low Strength II	$3.76	$3.93	$4.21	$4.51
4	Low Strength III	$4.39	$4.56	$4.88	$5.23
5	Medium Strength I	$5.04	$5.18	$5.55	$5.94
6	Medium Strength II	$5.68	$5.81	$6.22	$6.66
7	Medium Strength III	$6.33	$6.43	$6.89	$7.38
8	High Strength I	$6.98	$7.06	$7.56	$8.09
9	High Strength II	$7.62	$7.69	$8.23	$8.81
10	Large Volume User	$4.39	$4.56	$4.88	$5.23
11	Minimum Charge ($)	$57.64	$62.01	$66.36	$71.01
12					
13	Septage Charge ($/gal)	$0.11	$0.11	$0.12	$0.13
14	Minimum Septage Charge		$15.00	$16.50	$18.15

7. Non-Potable Water – Financial Plan

This section of the report details the non-potable enterprise's long-term financial plan, based on the projected revenues, expenses, debt service, and capital project costs. Raftelis modeled the financial plan without revenue adjustments (status quo) and with proposed revenue adjustments to ensure the financial sustainability and solvency of the non-potable water utility.

7.1. Projected Revenues

City staff provided the actual FY 2025 revenues and budgeted FY 2026 revenues for the non-potable water utility, which were used to project revenues for the remainder of the Study period. **Table 7-1** shows the projected water revenues for each of the non-potable water funds.

The non-potable water rate revenues (Lines 2-3) are inflated for future years based on the weighted customer account growth assumptions for each customer class (**Table 2-1**). The City expects modest increases in non-potable water rate revenues for all years of the Study. The investment incomes (Lines 4 and 9) are calculated using the reserve interest rate (**Table 2-2**, Line 2). The remaining revenues are inflated using the non-rate revenue inflation factor (**Table 2-2**, Line 1).

Table 7-1: Projected Non-Potable Water Revenues

	A	B	C	D	E
Line	Projected Revenues	FY 2026	FY 2027	FY 2028	FY 2029
1	**Non-Potable Water Service (531)**				
2	Non-Potable Water Usage	$325,000	$326,625	$328,258	$329,899
3	Non-Potable Water Service Chrg	$250,000	$251,250	$252,506	$253,769
4	Investment Income	$139,197	$149,953	$140,610	$149,282
5	**Total - Non-Potable Water Service (531)**	**$714,197**	**$727,828**	**$721,374**	**$732,951**
6					
7	**Non-Potable Capital Improvement (549)**				
8	Capital Improv Chrg Non-Res	$125,000	$128,750	$132,613	$136,591
9	Investment Income	$52,230	$37,549	$28,583	$18,995
10	**Total - Non-Potable Capital Improvement (549)**	**$125,000**	**$128,750**	**$132,613**	**$136,591**
11					
12	**Total - Revenues**	**$839,197**	**$856,578**	**$853,987**	**$869,541**

7.2. Projected O&M Expenses

City staff provided the non-potable water O&M actual expenses for FY 2025 and budgeted O&M expenses for FY 2026. **Table 7-2** shows the projected O&M expenses for the study period, inflated for FY 2027 and beyond using the expense inflation factors (**Table 2-3**).

Table 7-2: Projected Non-Potable Water O&M Expenses

	A	B	C	D	E
Line	**Projected O&M Expenses**	**FY 2026**	**FY 2027**	**FY 2028**	**FY 2029**
1	**Non-Potable Water Service (531)**				
2	Salaries and Benefits	$103,312	$106,411	$109,603	$112,891
3	Services - Power	$22,271	$23,384	$24,553	$25,781
4	Services	$265,180	$273,135	$281,329	$289,769
5	Supplies	$175,270	$180,529	$185,944	$191,523
6	**Total - Non-Potable Water Service (531)**	**$566,033**	**$583,459**	**$601,430**	**$619,964**
7					
8	**Non-Potable Projects (543)**				
9	Salaries and Benefits	$0	$0	$0	$0
10	Services - Power	$0	$0	$0	$0
11	Services	$0	$0	$0	$0
12	Supplies	$0	$0	$0	$0
13	**Total - Non-Potable Projects (543)**	**$0**	**$0**	**$0**	**$0**
14					
15	**Total - O&M Expenses**	**$566,033**	**$583,459**	**$601,430**	**$619,964**

7.3. Debt Service

The City does not have any existing debt for the non-potable water utility and does not plan to incur new debt to fund capital projects for the study period.

7.4. Capital Projects

The City currently does not have any capital improvement projects planned for the study period.

Proposed Financial Plan

Table 7-3 shows the proposed non-potable water revenue adjustments over the study period. Currently, Raftelis does not recommend any revenue adjustments.

Table 7-3: Proposed Non-Potable Water Revenue Adjustments

	A	B	C
Line	Fiscal Year	Revenue Adjustment	Month Effective
1	FY 2027	0.0%	January
2	FY 2028	0.0%	July
3	FY 2029	0.0%	July

7.5. Proposed Rates

Since there are no revenue adjustments proposed for the non-potable system, the current non-potable water rates will remain in effect as shown in **Table 7-4** and
Table 7-5.

Table 7-4: Proposed Bi-Monthly Non-Potable Water Service Charges ($/meter size)

	A	B	C	D	E
Line	Bi-Monthly Non-Potable Water Service Charges	Current Rates	January 2027	July 2027	July 2028
1	Non-Potable Water Service				
2	3/4"	$13.81	$13.81	$13.81	$13.81
3	1"	$20.65	$20.65	$20.65	$20.65
4	1 1/2"	$37.29	$37.29	$37.29	$37.29
5	2"	$55.16	$55.16	$55.16	$55.16
6	3"	$95.50	$95.50	$95.50	$95.50
7	4"	$147.45	$147.45	$147.45	$147.45
8	6"	$272.16	$272.16	$272.16	$272.16
9	8"	$401.04	$401.04	$401.04	$401.04

Table 7-5: Proposed Non-Potable Water Usage Rates ($/ccf of water)

	A	B	C	D	E
Line	Non-Potable Water Usage Rates	Current Rates	January 2027	July 2027	July 2028
1	**Non-Potable Water Usage**				
2	Non-Potable Water	$0.99	$0.99	$0.99	$0.99
3	Conversion Customer	$0.64	$0.64	$0.64	$0.64

8. Water Rates for Largest Users

Recent regulatory changes detailed in AB 755 passed in 2023 and codified in Water Code, §§ 390 & 390.1 require us to identify the costs to serve the largest 10 percent of the users in the City. Proposition 218 requires rates that allocate costs of service proportionately, not special rates for the top 10% of consumers regardless of other factors.

The City currently has approximately 22,415 accounts; the top 10% of users represent 2,241 accounts and 54.6% of total water use. These large users are primarily non-residential accounts. The City sells water from local sources and has adequate supplies from various sources so that it does not need to purchase water. The lowest cost water is shared in proportion by both classes of customers. The 10% largest users use most of their water in Tier 3 and pay for the more expensive water sources. Based on the preceding factors, it is our professional judgment that the rate tiers proposed in Table 4-21 are the most efficient and fairest way to allocate the City's costs among those who create those costs.

UTILITIES ADVISORY COMMITTEE (UAC)

WASTEWATER, POTABLE WATER

& NON-POTABLE WATER

RATE RECOMMENDATIONS

UTILITIES ADVISORY COMMITTEE

- Appointed by City Council January 20, 2026
- Series of meetings in March 2026
- Operational Status from Staff
- Financial and Rate Review from Consultant Raftelis

COMMITTEE MEMBERS

- John E. James - Chair
- Dan Jimenez - Vice Chair
- Richard Corneille
- Damion Northcutt
- Aholibama “Oly” Ojeda
- Edwina Thomas
- Paul Toor

MISSION STATEMENT/GOALS

- The Utilities Advisory Committee will recommend to the City Council rate adjustments for potable water, wastewater and non-potable water utilities.

- The Committee will:
  - Examine different approaches to establishing potable water, wastewater and non-potable water rates
  - Promote understanding and appreciation for different points of view, and
  - Build consensus that will ensure a balanced approach to divergent interests in the community concerning utility rates.

FINANCIAL ANALYSIS

- Reviewed Overall Financial Needs to Maintain Safe, Reliable Systems and Service to Residents
- All operations were analyzed in the following financial areas:
  - Operation and Maintenance (O&M) costs
  - Capital Improvement Projects (Capital Investment)
  - Revenue Projections at Current Rates
  - Reserve Balances
  - Reserve Balance Target
  - Required Revenue Adjustments to Maintain Reserves
  - Keep High Credit Rating - Currently AA+

WASTEWATER

- Wastewater Operations and Maintenance Costs
  - Collection System –
    - Primarily Gravity Flow Pipe System
    - Inspection And Periodic Clean Out
  - Treatment Plant – Continuous Flow From the City at Large Must be Treated and Discharged on a continuous Basis
    - Electricity
    - Chemicals
    - Replacement Parts

RECOMMENDED WASTEWATER RATES

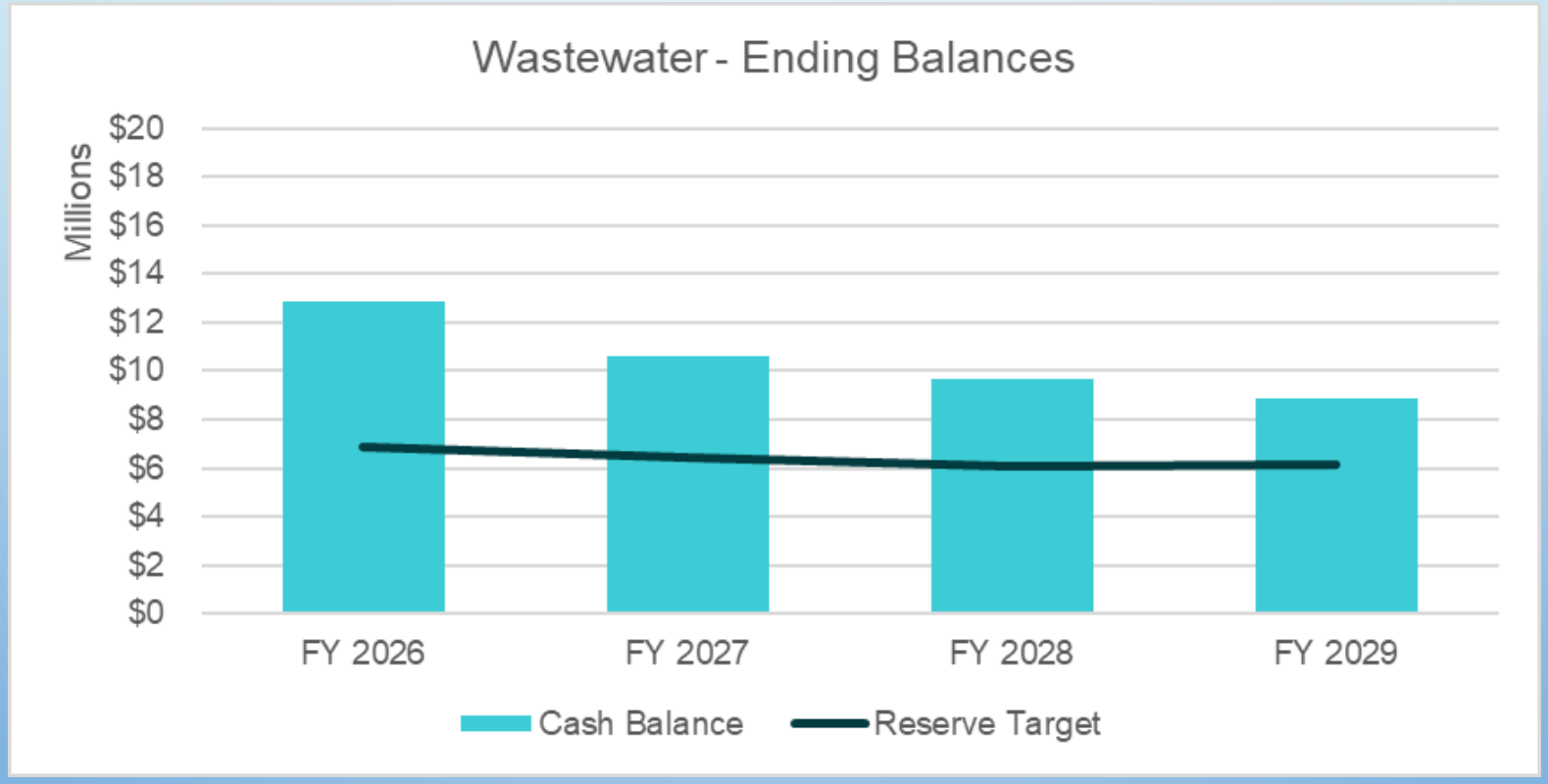
2.5 Year UAC Recommendations

Revenue Adjustments		7.0%	7.0%	7.0%
Bi-Monthly Rates	**Current**	**Jan 2027**	**July 2027**	**July 2028**
Residential ($/dwelling unit)				
Single Family	$72.65	$78.15	$83.63	$89.49
Multiple Family	$57.64	$62.01	$66.36	$71.01
Non-Residential ($/ccf)				
Low Strength I	$3.11	$3.31	$3.55	$3.80
Low Strength II	$3.76	$3.93	$4.21	$4.51
Low Strength III	$4.39	$4.56	$4.88	$5.23
Medium Strength I	$5.04	$5.18	$5.55	$5.94
Medium Strength II	$5.68	$5.81	$6.22	$6.66
Medium Strength III	$6.33	$6.43	$6.89	$7.38
High Strength I	$6.98	$7.06	$7.56	$8.09
High Strength II	$7.62	$7.69	$8.23	$8.81
Large Volume User	$4.39	$4.56	$4.88	$5.23
Minimum Charge ($)	$57.64	$62.01	$66.36	$71.01
Schools ($/100 ADA)				
Elementary	$157.43	$165.62	$177.22	$189.63
Secondary & High	$262.38	$276.04	$295.37	$316.05
Septage Charge ($/gal)	$0.11	$0.11	$0.12	$0.13

WASTEWATER – ENDING BALANCES

2.5 Year UAC Recommendations

Rate Model Forecast Looking Forward 4 Years



POTABLE WATER

- Water Operations and Maintenance Costs
  - Water Treatment
    - Surface Water - Chemicals
  - Water Wells
    - Electric Pumping Costs
    - Chemicals
  - Reservoirs
    - Maintenance and Chemicals
  - Pipe Delivery System
    - Leak Repair
- Capital Improvement Projects per Master Plan
  - Yearly Pipe Replacement
  - Wellhead Treatment
  - Sunset Reservoir Will need debt funding of $26M
  - Other Infrastructure Investments and Betterments

PROPOSED POTABLE WATER RATES

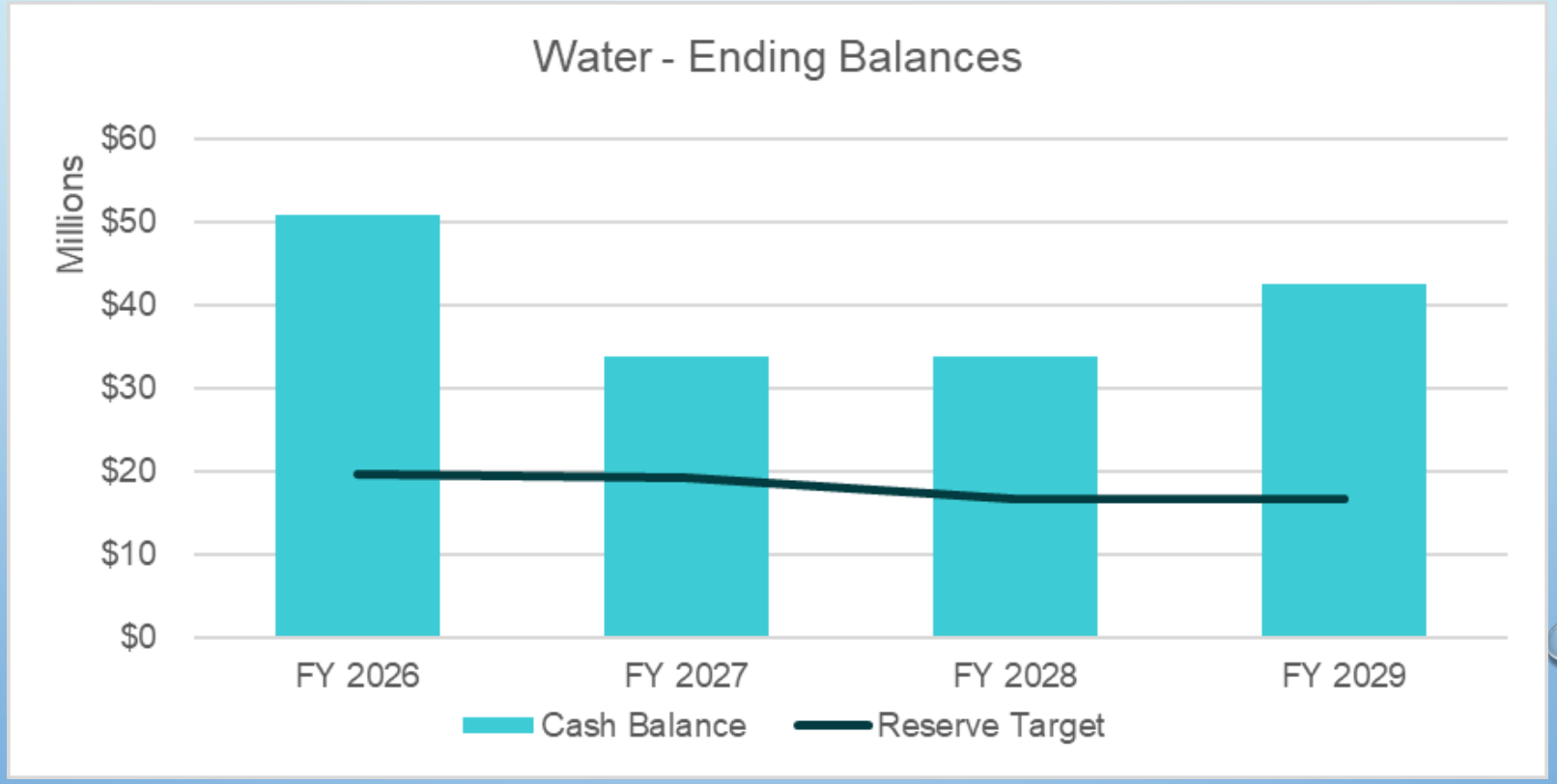
2.5 Year UAC Recommendations

Revenue Adjustments		2.5%	2.5%	2.5%
Bi-Monthly Rates	**Current**	**Jan 2027**	**July 2027**	**July 2028**
Water Service Charge				
5/8"	$33.60	$34.09	$34.95	$35.83
3/4"	$44.90	$45.54	$46.68	$47.85
1"	$66.81	$67.76	$69.46	$71.20
1 1/2"	$119.96	$121.64	$124.69	$127.81
2"	$177.10	$179.56	$184.05	$188.66
3"	$305.97	$310.22	$317.98	$325.93
4"	$472.05	$478.60	$490.57	$502.84
6"	$870.64	$882.70	$904.77	$927.39
8"	$1,282.51	$1,300.27	$1,332.78	$1,366.10
10"	$3,036.30	$3,078.32	$3,155.28	$3,234.17
12"	$3,992.91	$4,048.16	$4,149.37	$4,253.11
Water Usage Rate ($/ccf)				
Building Water Usage				
Tier 1	$1.61	$1.59	$1.63	$1.68
Tier 2	$1.90	$1.95	$2.00	$2.05
Tier 3	$2.85	$3.00	$3.08	$3.16

POTABLE WATER – ENDING BALANCES

2.5 Year UAC Recommendations

Rate Model Forecast Looking Forward 4 Years



RECOMMENDED NON-POTABLE WATER RATES*

2.5 Year UAC Recommendations

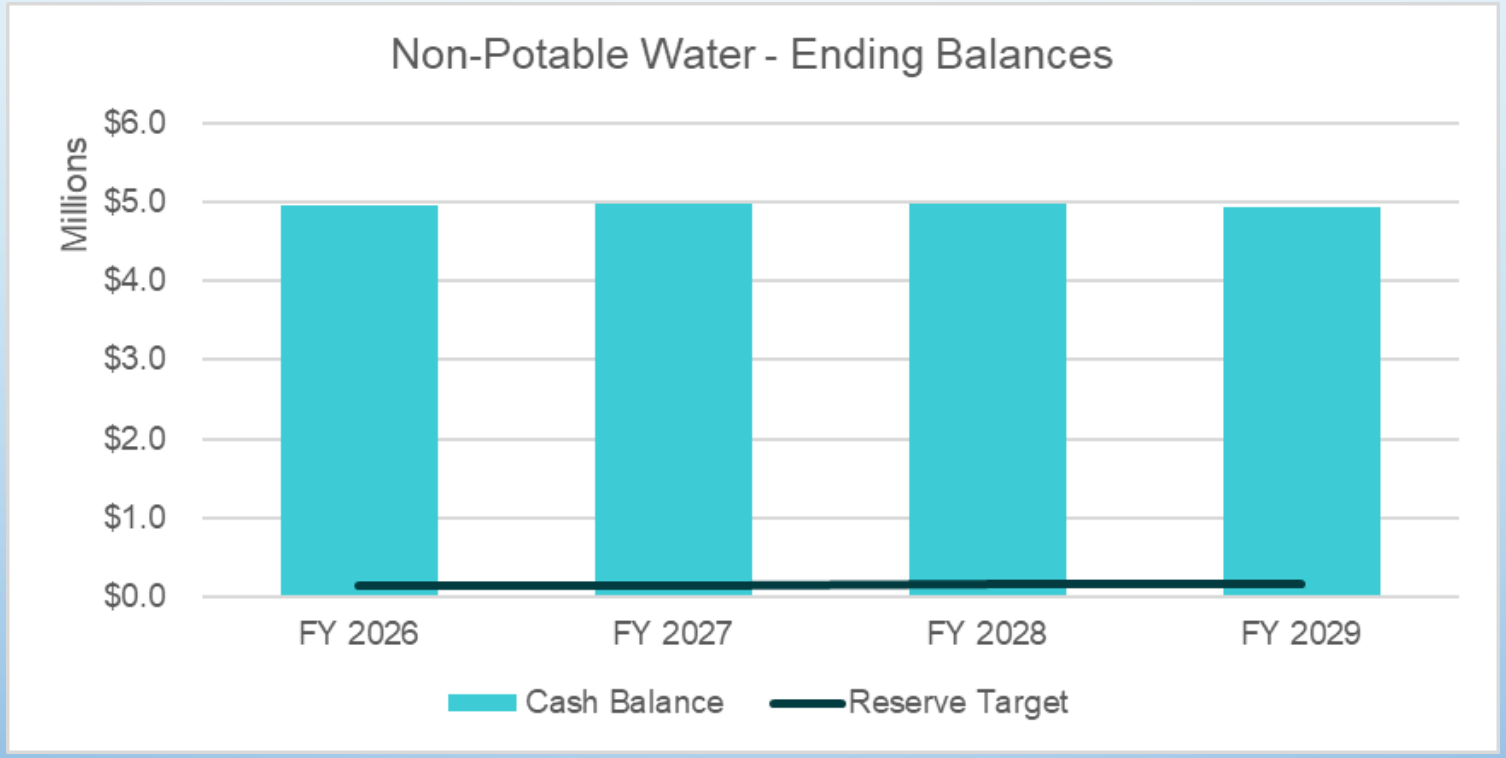
Revenue Adjustments		0.0%	0.0%	0.0%
Bi-Monthly Rates	**Current**	**Jan 2027**	**July 2027**	**July 2028**
Non-Potable Water Service Charge ($/meter size)				
3/4"	$13.81	$13.81	$13.81	$13.81
1"	$20.65	$20.65	$20.65	$20.65
1 1/2"	$37.29	$37.29	$37.29	$37.29
2"	$55.16	$55.16	$55.16	$55.16
3"	$95.50	$95.50	$95.50	$95.50
4"	$147.45	$147.45	$147.45	$147.45
6"	$272.16	$272.16	$272.16	$272.16
8"	$401.04	$401.04	$401.04	$401.04
Non-Potable Water Usage Rate ($/ccf)				
Non-Potable Water	$0.99	$0.99	$0.99	$0.99
Conversion Customer	$0.64	$0.64	$0.64	$0.64

*Only applies to non-potable water customers

NON-POTABLE WATER – ENDING BALANCES

2.5 Year UAC Recommendations

Rate Model Forecast Looking Forward 4 Years



RATE ADJUSTMENT RECOMMENDATIONS SUMMARY

- Wastewater
  - 7% a year for each of next 2.5 years
  - Issuance of $45MM in debt to fund WWTP Improvements
  - Will retain reserve balances at recommended target level
- Potable Water
  - 2.5% a year for each of next 2.5 years
  - Issue $26MM in debt for Sunset Reservoir
  - Will retain Capital Investment needed for continued reliable water delivery service
  - Will retain reserve balances at recommended target level
- Non-Potable Water
  - 0% a year for each of next 2.5 years
  - Retains reserve balances to allow for future expansion of non-potable system

The End

Thank you

Questions ?