

Preliminary Rate Study Summary



City of Rapid City
Comprehensive Water and
Water Reclamation Rate Study
December 2023



Summary of the City's Study

The results of the water and water reclamation rate study show that the rate adjustments are necessary to support existing and future operating and maintenance (O&M) expenses as well as necessary capital improvements to provide service to the City's water and water reclamation customers. There are two primary drivers in the necessary rate adjustments to support the utilities. The first is the impact of recent inflationary increases to existing O&M expenses, as well as projected future inflationary impacts to annual O&M expenses. Secondly, and a larger driver, is the significant capital investment necessary to meet State and Federal requirements for water and wastewater treatment, renewal and replacement of aging infrastructure, improvements to the systems, and expansion to meet the demands placed on the systems by existing and future customers.

Overview of O&M Expenses

Inflationary factors over the past several years have been significant. The City's utilities are not immune to these increases in costs, and not alone in these impacts. Nationally, utilities have been impacted by increasing costs to chemicals, electricity, materials and supplies, and other necessary costs to support utility operations which in many cases have been greater than typical inflationary indices.

The starting point for the City's water and water reclamation rate studies was the 2023 adopted and 2024 initial budgets. The 2024 budgeted expenses are then projected over the rate setting period through 2028 by expected inflationary factors which are based on current, and expected, inflation assumptions. As a point of reference, the studies developed for the City were projected over a ten year period. However, for rate setting purposes the focus of the study was on 2024 – 2028. Provided below in Table 1 is a summary of the inflationary factors used for the City's study. As a point of reference, the inflationary factor assumptions are the same for the projection of water and water reclamation O&M expenses except where noted.

Table 1
Projected Annual Inflationary Factors

	2025	2026	2027	2028
Labor (Water)	17.0%	4.0%	4.0%	8.5%
Labor (Water Reclamation)	13.5%	4.0%	4.0%	3.5%
Professional Services (Water)	17.0%	4.0%	4.0%	8.5%
Professional Services (Water Reclamation)	13.5%	4.0%	4.0%	3.5%
Benefits – Medical (Water)	12.5%	8.0%	8.0%	7.0%
Benefits – Medical (Water Reclamation)	12.5%	12.5%	8.0%	8.0%
Benefits – Other (Water)	17.0%	4.0%	4.0%	8.5%
Benefits – Other (Water Reclamation)	13.5%	4.0%	4.0%	3.5%
Materials & Supplies	4.5%	3.5%	3.5%	3.0%
Equipment	4.0%	4.0%	4.0%	4.0%
Miscellaneous	3.0%	3.0%	3.0%	3.0%
Utilities	4.0%	4.0%	4.0%	4.0%
Insurance	3.5%	3.5%	3.5%	3.5%

As noted in Table 1, and in Exhibit 2 of the rate study technical analysis for each utility, there are different inflationary factors for the different types of costs incurred by the City. Specifically, adjustments were made for salaries and benefits to reflect the specific cost of each utility and changes in personal and staffing. This increase in staffing and staffing related costs, reflects the growth on the City’s system and having sufficient training to maintain and operate the systems. Provided in Table 2 is a summary of the projection of O&M expenses over the projected rate setting period and the annual change from year to year.

Table 2
Projection of Annual O&M Expenses

	2024	2025	2026	2027	2028
Water Annual O&M	\$11,694,091	\$13,081,688	\$13,608,055	\$14,156,018	\$14,948,293
Annual %Change		11.9%	4.0%	4.0%	5.6%
Water Reclamation O&M	\$8,377,938	\$8,601,168	\$8,972,659	\$9,336,373	\$9,677,668
Annual % Change		2.7%	4.3%	4.1%	3.7%

As can be seen above in Table 2, and in Exhibit 3 of the rate study technical analysis for each utility, the increase in annual O&M expenses is approximately 4.0% annually over the projected time period, with the exception being in water with the increased expected costs in 2025. As shown above in Table 2, the annual change can vary from year to year. In part this is the result of expected changes in historical costs, increasing or decreasing, based on known changes at this

time and identified by City staff. As a result, rates will need to be set at a sufficient level to support the annual increases in O&M expenses. For example, to maintain rates sufficient to fund the impact of inflation, rates would need to be adjusted on average by a minimum of approximately 4% annually.

Summary of the Water Capital Improvement Plan

As noted, a key driver in the development of the rate study, and subsequent rate adjustments is the need to fund necessary capital improvements for the water system. These improvements are based on the recent master planning processes completed by the City for the water utility, along with known system deficiencies and required improvements. Provided below in Table 3 is a summary of the water capital improvement plan. As a point of reference, the rate study has included inflationary increases of approximately 6.5%, annually. This reflects recent inflationary increases in capital projects as well as future expected increases in capital related costs.

Table 3 Summary of the Water Capital Improvement Plan					
	2024	2025	2026	2027	2028
Water Replacement	\$15,993,444	\$10,535,728	\$12,442,874	\$8,203,550	\$3,216,621
Water Expansion	15,093,180	2,240,094	3,104,431	620,720	1,198,826
Debt Financed	532,500	9,669,268	66,125,176	62,704,514	68,972,446
Deferred CIP	<u>(4,900,000)</u>	<u>(1,490,000)</u>	<u>(3,918,400)</u>	<u>(1,761,136)</u>	<u>(3,787,581)</u>
Total CIP	\$26,719,124	\$20,955,090	\$77,754,080	\$69,767,648	\$69,600,312

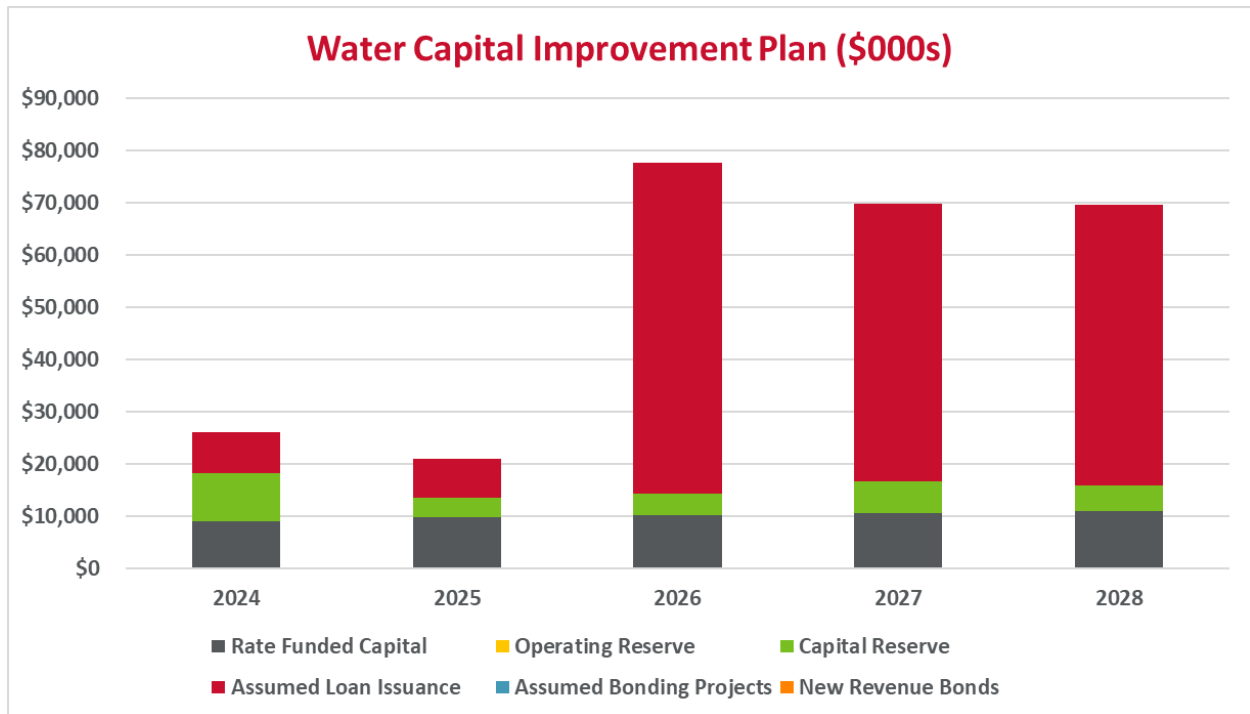
In general, the projects within the City provided water CIP are related to system replacement, expansion, and projects funded with long-term borrowing. Provided below is a summary of the capital improvements.

- Replacement projects – As the name implies, are the improvements to existing infrastructure due to age, or deficiencies in operations (e.g., failing). In general, these projects include reconstruction and replacement of existing pipelines, SCADA, reservoirs, wells, and other existing infrastructure providing water services to the City’s customers.
- Expansion projects – Are those projects that provides additional capacity or infrastructure to meet current and future water system demands. This can be an increase in current customer or future (e.g., new customer) demands. In general, these projects include new water mains, fire hydrants, groundwater supply, reservoirs, booster pump stations, and other infrastructure necessary to meet water system demands.
- Debt financed projects – Are projects that will be funded through long-term borrowing. These are generally projects that are unable to be funded through annual rate levels or with available reserves. These are typically “once in a generation” projects. For this study these projects include the Elk Vale reservoir, Palo Verde reservoir, Pinelawn reservoir,

Seledor Ranch reservoir, East side Water Treatment Facility, and Mt. View Treatment Facility.

- Deferred CIP – As part of the review of the CIP and rate impacts, the City reduced the overall level of the CIP to provide some smoothing of the water rate impacts. No specific projects were identified, only a total annual deferred amount.

These identified improvements to maintain and improve the water utility are funded through a mix of funding sources. These include, annual rate revenues, available reserves (while maintaining target minimum reserve levels), and long-term borrowing. Provided in the chart below is a summary of the funding approach for the water capital improvements.



As can be seen in the chart above, the water capital improvement projects are being funded by a mix of rates, reserves, and long-term borrowing. This includes approximately 19.1% funded through annual rate revenues, 70.0% funded through long-term borrowing, 0.2% funded with grants, and the remaining 10.7% funded through available reserves. As a point of reference, the City has a set of financial policies for minimum target reserve levels which are maintained as part of this analysis. The details of the water capital improvement funding plan are provided in Exhibit 4 of water rate study technical analysis.

The funding of capital projects also has an impact on the overall rate adjustments. When issuing long-term debt to fund capital improvements, it results in annual debt service payments based on the terms of the borrowing to repay the borrowed funds. For the water utility, annual debt service increases by approximately \$8.8 million in year five of the study which is 33% of current annual rate revenues. In other words, in order to fund the projects, and subsequent debt service,

annual rates need to be increased to fund annual debt service payments over the five-year period. Provided below in Table 4 is a summary of the existing and planned future annual debt service payments to fund a portion of the water capital improvement plan.

Table 4					
Summary of Annual Water Utility Debt Service Payments					
	2024	2025	2026	2027	2028
Existing Debt Service	\$3,909,272	\$3,907,272	\$3,906,022	\$3,904,522	\$3,908,272
Future Debt Service	<u>0</u>	<u>521,989</u>	<u>1,023,760</u>	<u>5,283,386</u>	<u>8,851,114</u>
Total Annual Debt Service	\$3,909,272	\$4,429,260	\$4,929,782	\$9,187,908	\$12,759,386

It should be noted that the future debt service is an estimate based on current State SRF loan assumptions and will vary at the time the City finalizes the borrowing terms and conditions given market conditions at that time. However, the City’s use of the State SRF program should provide savings when compared to outside borrowing (e.g., municipal revenue bond) given the lower interest cost generally provided through the SRF program.

Summary of the Water Reclamation Capital Improvement Plan

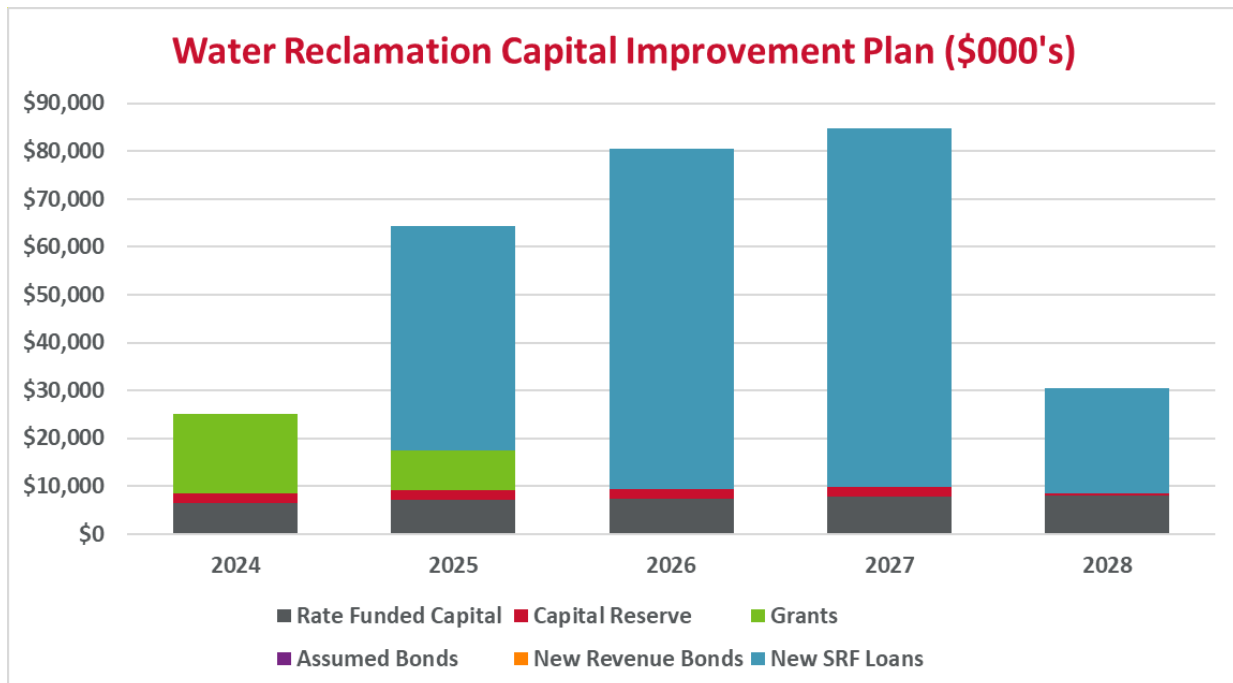
The city also recently completed the master planning processes for the water reclamation utility. The water reclamation master plan helped to identify system deficiencies and required improvements which provided the basis for the water reclamation capital plan. Provided below in Table 5 is a summary of the water reclamation capital improvement plan. As noted in the water capital summary, water reclamation capital projects have been increased annually by 6.5% to reflect inflationary impacts to future projects. As a point of reference, the ongoing wastewater treatment plant project was increased at approximately 3% annually to reflect the current loan documents.

Table 5					
Summary of the Water Reclamation Capital Improvement Plan					
	2024	2025	2026	2027	2028
Sewer Replacement	\$9,738,360	\$4,149,449	\$6,033,104	\$2,300,395	\$3,677,313
Expansion	1,682,700	170,134	1,151,176	398,805	1,164,574
Debt Financed	16,621,001	64,409,381	77,464,033	86,401,771	26,129,099
Deferred CIP	<u>(3,042,061)</u>	<u>(4,328,964)</u>	<u>(4,212,313)</u>	<u>(4,367,531)</u>	<u>(428,207)</u>
Total CIP	\$25,000,000	\$64,400,000	\$80,436,000	\$84,733,440	\$30,542,778

Similar to the water utility, the water reclamation projects identified by the City are related to system replacement, expansion, and projects funded with long-term borrowing. Provided below is a summary of the capital improvements.

- Sewer replacement projects – As the name implies, are the improvements to existing infrastructure due to age, or deficiencies in operations (e.g., failing). In general, these projects include reconstruction and replacement of existing pipelines, manholes, lift station, and other water existing infrastructure providing water services to the City’s customers.
- Expansion projects – Are those projects that provides additional capacity or infrastructure to meet current and future system demands. This can be an increase in current customer or future (e.g., new customer) demands. In general these projects include new sewer mains, system oversizing, and other infrastructure improvements necessary to meet system demands.
- Debt financed projects – Are projects that will be funded through long-term borrowing. These are generally projects that are unable to be funded through annual rate levels or with available reserves. These projects reflect improvements for the Water Reclamation Facility (WRF) South plant improvements phases 1 – 3, and major sanitary sewer extensions.
- Deferred CIP – As part of the review of the CIP and rate impacts, the City reduced the overall level of the CIP to provide some smoothing of the rate impacts. No specific projects were identified, only a total annual deferred amount.

These identified capital improvements are funded through a mix of funding sources, including annual rate revenues, available reserves (while maintaining target minimum reserve levels), and long-term borrowing. Provided in the chart below is a summary of the funding approach for the water capital improvements.



As can be seen in the chart above, the water reclamation capital improvement projects are being funded by a mix of rates, reserves, grants (principal forgiveness) and long-term borrowing. This includes approximately 12.9% funded through annual rate revenues, 75.4% funded through long-term borrowing, 8.7% through grants, and the remaining 3.0% funded through available reserves. In addition, as part of the low interest loan program the City has received a grant, or loan forgiveness of approximately \$45 million. Similar to the water utility, the water reclamation study maintains the City’s financial policies of minimum target reserves. The details of the water reclamation capital improvement funding plan are provided in Exhibit 4 of rate study technical analysis.

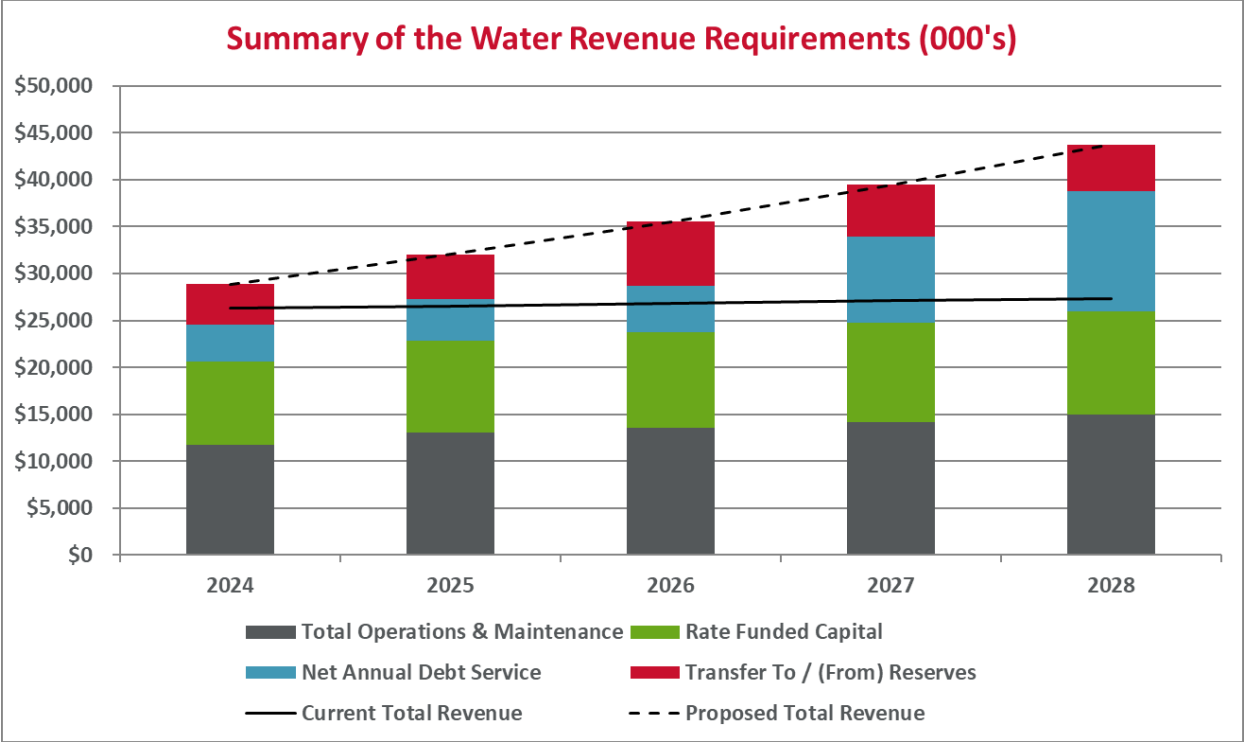
The funding of capital projects also has an impact on the overall rate adjustments. When issuing long-term debt to fund capital improvements, it results in annual debt service payments based on the terms of the borrowing to repay the borrowed funds. For the water utility, annual debt service increases by approximately \$13 million in year five of the study, which is for the WRF improvements, which is 85% of current annual rate revenues. In other words, in order to fund the WRF improvements, and subsequent debt service, annual rates need to be increased to fund annual debt service payments over the five-year period. Provided below in Table 6 is a summary of the existing and planned future annual debt service payments to fund a portion of the water capital improvement plan.

Table 6 Summary of the Annual Water Reclamation Annual Debt Service					
	2024	2025	2026	2027	2028
Existing Debt Service	\$844,633	\$843,983	\$843,033	\$845,533	\$842,833
Future Debt Service	<u>0</u>	<u>0</u>	<u>3,159,138</u>	<u>7,931,453</u>	<u>12,972,632</u>
Total Annual Debt Service	\$844,633	\$843,983	\$4,002,172	\$8,776,987	\$13,815,465

It should be noted that the future debt service is an estimate based on current State SRF loan assumptions and will vary at the time the City finalizes the borrowing terms and conditions given market conditions at that time. However, the City’s use of the State SRF program should provide savings when compared to outside borrowing (e.g., municipal revenue bond) given the lower interest cost generally provided through the SRF program and the level of principal forgiveness provided through the program for the WRF improvements.

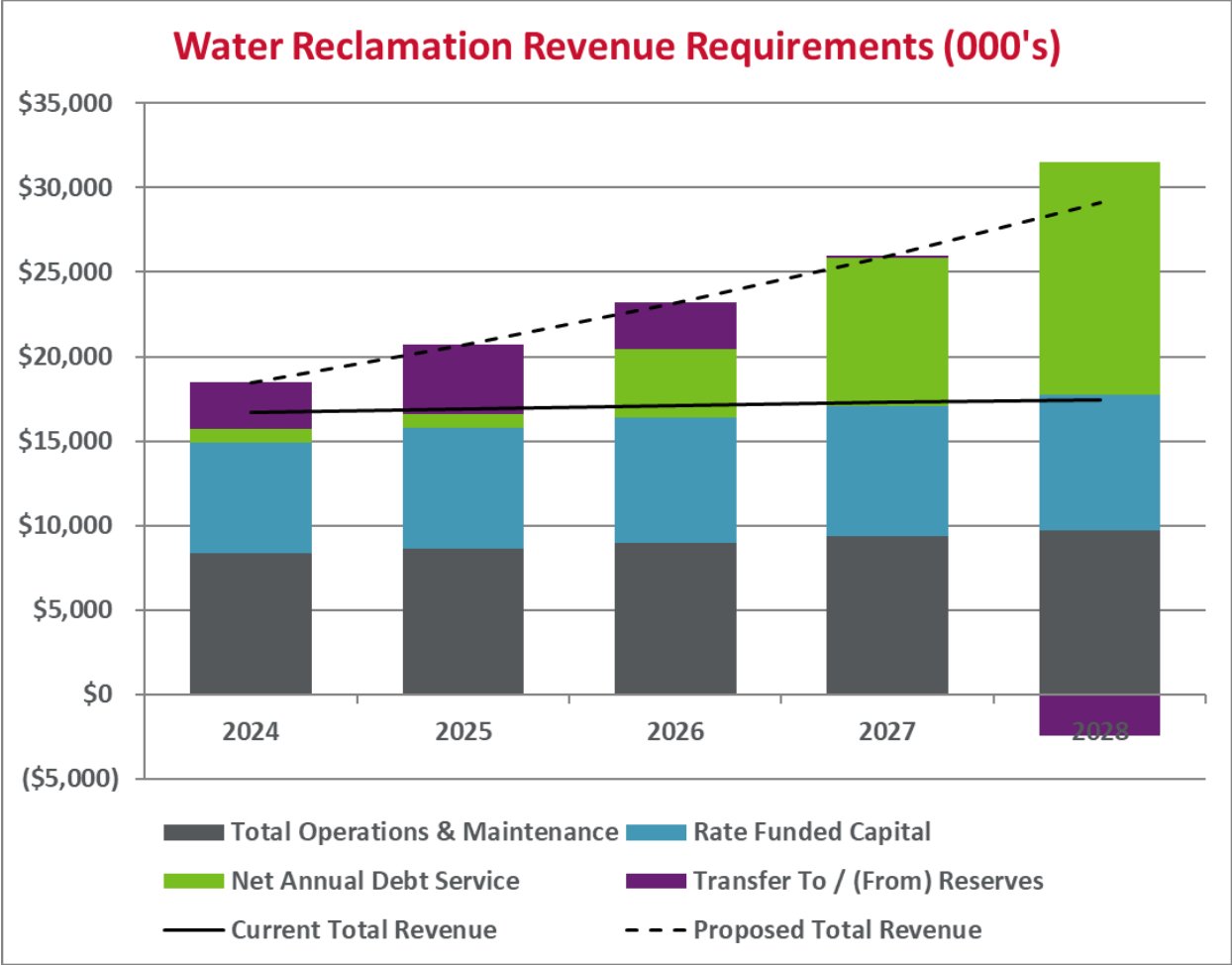
Summary of the Proposed Rate Adjustments

As the study has noted, the sum of the operating and capital needs provides the basis for the proposed rates. This includes annual O&M expenses, rate funded capital, existing and future long-term borrowing, and reserve funding. Provided in the chart below is a summary of the water revenue requirement.



As can be seen, the current and projected water expenses (O&M, debt, rate funded capital) are greater than the current revenues received. As a point of reference, the current revenues include both rate revenues and other miscellaneous revenues (e.g., interest income, late fees). The transfer to reserves is also necessary for future capital project funding and ongoing debt service.

The same approach is developed for the water reclamation utility. The sum of the annual expenses is compared to the current revenues in the chart below.



For the water reclamation utility, the current and projected water expenses (O&M, debt, rate funded capital) are greater than the current revenues received. A key driver being the repayment of the long-term borrowing for the WRF, and having sufficient reserves to fund ongoing and future capital and long-term debt service payments. Similar to the water utility, the current water reclamation revenues include both rate revenues and other miscellaneous revenues (e.g., interest income, late fees).

As shown in the prior charts, the annual expenses are greater than total revenues for both utilities. For each utility, the resulting deficiency of funds is divided through by the annual rate revenues to determine the annual percentage increase necessary to support the operating and capital cost of each utility. A detailed summary of the water and water reclamation revenue requirement is provided in Exhibit 3 of the rate study technical analyses.

Summary of the City’s Rate Study

This completes the summary and basis of the development of the proposed rate revenue adjustments, and subsequent proposed rates, for the City’s water and water reclamation utilities. As noted, the primary drivers for the necessary rate adjustments to support the utilities for the

impact of recent, and future, inflationary increases to existing O&M expenses, and the significant capital investment necessary to meet State and Federal requirements for water and wastewater treatment, renewal and replacement of aging infrastructure, improvements to the systems, and expansion to meet the demands placed on the systems by existing and future customers.