

# TRIUNFO WATER & SANITATION DISTRICT

## Wastewater Rate Study

Report / April 23, 2020

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April 23, 2020

Mr. Mark Norris  
General Manager  
1001 Partridge Drive, Suite 150  
Ventura, CA 93003

**Subject: Wastewater Rate Study Report**

Dear Mr. Norris,

Raftelis is pleased to provide this Wastewater Rate Study Report to the Triunfo Water & Sanitation District (District). The study involved a comprehensive review of the District's current wastewater rate structures, long-term financial plan, and revenue requirements to determine proposed wastewater rates that are in line with the District's policy objectives. This report presents the analyses, rationales, and methodologies utilized in the study.

The main objectives that informed the study include:

- » Developing a long-term financial plan for wastewater
- » Ensuring financial sufficiency to fully fund operating and capital costs and meet reserve requirements
- » Determining wastewater rates that meet revenue requirements
- » Minimizing customer impacts to the extent possible
- » Maintaining the District's current rate structure

It has been a pleasure working with you and we thank you and other District staff for the support provided during this study.

Sincerely,

A blue ink signature of Sudhir Pardiwala, written in a cursive style.

**Sudhir Pardiwala**  
*Executive Vice President*

A blue ink signature of Nancy Phan, written in a cursive style.

**Nancy Phan**  
*Senior Consultant*

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# 1. Executive Summary

## Study Background

Triunfo Water & Sanitation District (District) engaged Raftelis in 2019 to complete a Wastewater Rate Study. The study consists of a long-range financial plan and rate derivation. It encompasses a six-year planning horizon for the financial plan and five years of proposed rates. The first year of proposed rates are for adoption beginning July 2020 and July of every year thereafter.

The objectives of the Wastewater Rate Study include:

- » Developing a long-term financial plan for wastewater
- » Ensuring financial sufficiency to fully fund operating and capital costs and meet reserve requirements
- » Determining wastewater rates that meet revenue requirements
- » Minimizing customer impacts to the extent possible
- » Maintaining the District's current rate structure

The study period is from fiscal year (FY) 2020 through FY 2025. For the purposes of this study, FY 2020 is the year starting in July 1, 2019 and ending in June 30, 2020.

## Current Rates

Currently, the District charges the majority of customers a flat rate based on the number of customer units or Equivalent residential units (ERUs). Single family customers including condominiums are assigned one ERU; apartment units are assigned 0.8 ERU. Most commercial customers are also assigned one ERU, except shopping centers, restaurants, markets and mortuaries. The number of ERUs for shopping centers, restaurants, and markets, according to the District, are calculated using different methods. A total of six customers are billed on their water usage, with their ERUs calculated individually. The ERU assignment for these six customers is a mix of residential and commercial rate ERUs, based on the characteristics of their wastewater flow. **Table 1-1** shows the current wastewater rates for each customer class.

**Table 1-1: Current Wastewater Rates**

A	B	C
Line	Wastewater Rates	FY 2020
1	<b>Monthly Charge per ERU</b>	
2	Residential	\$59.98
3	Multiple Residential	\$59.98
4	Apartment	\$47.97
5	Mobile Dwelling Unit	\$47.97
6	Commercial	\$59.98
7	Shopping Center	\$106.51
8	Restaurants	\$137.98
9	Water Flow - Low	\$55.03
10	Water Flow - High	\$126.59

## Legal Framework<sup>1</sup>

The rate-making process, especially for water agencies in California, begins with a review of the legal requirements and framework currently in place. The major legal requirements include Proposition 218 and Article X, Section 2 of the California Constitution, which are outlined in the following sections.

### California Constitution – Article XIII D, Section 6 (Proposition 218)

Proposition 218 was enacted by voters in 1996 to ensure, in part, that fees and charges imposed for ongoing delivery of a service to a property (“property-related fees and charges”) are proportional to, and do not exceed, the cost of providing service. Water service fees and charges are property-related and subject to the provisions of Proposition 218. The principal requirements, as they relate to public water service fees and charges, are as follows:

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

Proposition 218 requires that wastewater rates cannot be “arbitrary and capricious,” meaning that the rate-setting methodology must establish a clear nexus between costs and the rates charged.

## Results and Recommendations

After a comprehensive review of the District’s long-range financial plan for the wastewater enterprise, Raftelis identified that the District’s wastewater capital improvement plan (CIP) is the main financial driver for the study. The District plans to spend approximately \$29.8 million on capital projects from FY 2021 through FY 2025; this figure is adjusted for future years’ dollars. The vast majority of these capital costs are from the Joint Powers Agreement (JPA) plant projects and Pure Water Project, which makes up approximately \$29.2 million of the capital spending in five years.

While the District’s existing wastewater rate revenues are sufficient to fund all operations and maintenance (O&M) costs, the District must adopt revenue adjustments and/or issue debt over the study period to fund capital project costs and maintain adequate reserve balances. Raftelis worked closely with District staff to determine the balance of revenue adjustments and proposed debt to cover capital costs and recommends the following adjustments:

- » Revenue adjustments – 15 percent per year from FY 2021 through FY 2024 and 7 percent in FY 2025
- » Proposed State Revolving Fund (SRF) loans – \$3.0 million in both FY 2024 and FY 2025, resulting in \$6.0 million of debt proceeds over the study period.

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<sup>1</sup> Raftelis does not practice law nor does it provide legal advice. The above discussion provides a general overview of Raftelis’ understanding as rate practitioners and is labeled “legal framework” for literary convenience only. The District should consult with its legal counsel for clarification and/or specific guidance.



## Proposed Rates

Based on the results and recommendations in the previous section, Raffelis calculated proposed wastewater rates for the five-year planning horizon. The proposed wastewater rates, shown in **Table 1-2**, are based on the current rates in **Table 1-1** increased each year by the proposed revenue adjustments.

**Table 1-2: Proposed Wastewater Rates**

A	B	C	D	E	F	G
Line	Wastewater Rates	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	<b>Monthly Charge per ERU</b>					
2	Residential	\$68.98	\$79.32	\$91.22	\$104.91	\$112.25
3	Multiple Residential	\$68.98	\$79.32	\$91.22	\$104.91	\$112.25
4	Apartment	\$55.17	\$63.44	\$72.96	\$83.90	\$89.78
5	Mobile Dwelling Unit	\$55.17	\$63.44	\$72.96	\$83.90	\$89.78
6	Commercial	\$68.98	\$79.32	\$91.22	\$104.91	\$112.25
7	Shopping Center	\$122.49	\$140.86	\$161.99	\$186.29	\$199.33
8	Restaurants	\$158.68	\$182.48	\$209.85	\$241.33	\$258.22
9	Water Flow - Low	\$63.28	\$72.78	\$83.70	\$96.25	\$102.99
10	Water Flow - High	\$145.58	\$167.42	\$192.53	\$221.41	\$236.91

## 2. Financial Plan

This report section discusses O&M expenses, CIP, reserve funding, projected revenue under existing rates, and revenue adjustments needed to ensure the District's fiscal sustainability and solvency. The study period covers FY 2020 through FY 2025. The budget year, which for this study is FY 2020, is the year from which revenues and expenses are projected for the study period. Numbers shown in the tables of this section are rounded. Therefore, hand calculations based on the displayed numbers, such as summing or multiplying, may not equal the exact results shown in this report.

### Current Rates

Currently, the District charges the majority of customers a flat rate based on the number of customer units or Equivalent residential units (ERUs). Single family customers including condominiums are assigned one ERU; apartment units are assigned 0.8 ERU. Most commercial customers are also assigned one ERU, except shopping centers, restaurants, markets and mortuaries. The number of ERUs for shopping centers, restaurants, and markets, according to the District, are calculated using different methods. A total of six customers are billed on their water usage, with their ERUs calculated individually. The ERU assignment for these six customers is a mix of residential and commercial rate ERUs, based on the characteristics of their wastewater flow. The flat rate for one ERU is currently \$59.98. **Table 2-1** shows the current wastewater rates for each customer class.

**Table 2-1: Current Wastewater Rates**

A	B	C
Line	Wastewater Rates	FY 2020
1	<b>Monthly Charge per ERU</b>	
2	Residential	\$59.98
3	Multiple Residential	\$59.98
4	Apartment	\$47.97
5	Mobile Dwelling Unit	\$47.97
6	Commercial	\$59.98
7	Shopping Center	\$106.51
8	Restaurants	\$137.98
9	Water Flow - Low	\$55.03
10	Water Flow - High	\$126.59

### Customer Data

**Table 2-2** shows the number of wastewater ERUs by customer class for the study period. District staff provided estimated customer account data for FY 2020 and FY 2021. Additional growth is not expected for the remainder of the study, which is reflected in the projections for FY 2022 and beyond.

**Table 2-2: Wastewater Accounts**

A	B	C	D	E	F	G	H
Line	Wastewater ERUs	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	Residential	8,174	8,174	8,174	8,174	8,174	8,174
2	Multiple Residential	2,425	2,425	2,425	2,425	2,425	2,425
3	Apartment	1,217	1,216	1,216	1,216	1,216	1,216
4	Mobile Dwelling Unit	0	0	0	0	0	0
5	Commercial	933	933	933	933	933	933
6	Shopping Center	102	102	102	102	102	102
7	Restaurants	215	215	215	215	215	215
8	Water Flow - Low - Commercial	481	481	481	481	481	481
9	Water Flow - High - Rest.	9	8	8	8	8	8
10	<b>Total - Wastewater ERUs</b>	<b>13,557</b>	<b>13,554</b>	<b>13,554</b>	<b>13,554</b>	<b>13,554</b>	<b>13,554</b>

## Revenues

**Table 2-3** shows the calculated wastewater rate revenues for the study period at the current rates. The current rates in **Table 2-1** for each customer class are multiplied by the number of ERUs for that class in **Table 2-2** by 12 months in a year.

**Table 2-3: Calculated Wastewater Rate Revenues, Status Quo**

A	B	C	D	E	F	G	H
Line	Wastewater Rate Revenues	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	<b>Monthly Charge per ERU</b>						
2	Residential	\$5,883,318	\$5,883,318	\$5,883,318	\$5,883,318	\$5,883,318	\$5,883,318
3	Multiple Residential	\$1,745,418	\$1,745,418	\$1,745,418	\$1,745,418	\$1,745,418	\$1,745,418
4	Apartment	\$699,978	\$699,978	\$699,978	\$699,978	\$699,978	\$699,978
5	Mobile Dwelling Unit	\$0	\$0	\$0	\$0	\$0	\$0
6	Commercial	\$671,536	\$671,536	\$671,536	\$671,536	\$671,536	\$671,536
7	Shopping Center	\$130,368	\$130,368	\$130,368	\$130,368	\$130,368	\$130,368
8	Restaurants	\$355,988	\$355,988	\$355,988	\$355,988	\$355,988	\$355,988
9	Water Flow - Low	\$317,633	\$317,633	\$317,633	\$317,633	\$317,633	\$317,633
10	Water Flow - High	\$12,153	\$12,153	\$12,153	\$12,153	\$12,153	\$12,153
11	<b>Total - Monthly Charge/ERU</b>	<b>\$9,816,393</b>	<b>\$9,816,393</b>	<b>\$9,816,393</b>	<b>\$9,816,393</b>	<b>\$9,816,393</b>	<b>\$9,816,393</b>

To project non-rate revenues, such as miscellaneous revenues and interest earnings, Raftelis uses the revenue escalation factors in **Table 2-4**. Miscellaneous revenues are not inflated for future years, and the reserve interest rate is used to calculate the interest earnings based on the wastewater fund balances.

**Table 2-4: Revenue Escalation Factors**

A	B	C	D	E	F	G
Line	Revenue Escalation Factors	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	Miscellaneous Revenue	0.0%	0.0%	0.0%	0.0%	0.0%
2	Reserve Interest Rate	1.0%	1.0%	1.0%	1.0%	1.0%

**Table 2-5** shows the projected wastewater revenues for the study period. The wastewater charge revenue (Line 1) is based on the rate revenue calculation (**Table 2-3**, Line 11). Interest earnings (Line 4) are calculated based on the reserve interest rate (**Table 2-4**, Line 2) and the wastewater fund balance, which is shown in a later section of this report.

**Table 2-5: Projected Wastewater Revenues, Status Quo**

A	B	C	D	E	F	G	H
Line	Wastewater Revenues	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	Wastewater Charge	\$9,818,732	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393
2	Penalty	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
3	Other	\$86,000	\$86,000	\$86,000	\$86,000	\$86,000	\$86,000
4	Interest Earnings	\$285,780	\$49,797	\$47,138	\$57,647	\$68,265	\$98,429
5	<b>Total - Wastewater Revenues</b>	<b>\$10,202,512</b>	<b>\$9,964,190</b>	<b>\$9,961,531</b>	<b>\$9,972,040</b>	<b>\$9,982,658</b>	<b>\$10,012,822</b>

## O&M Expenses

Similarly to projecting revenues, Raftelis uses the expense escalation factors in **Table 2-6** to inflate O&M expenses for future years.

**Table 2-6: Expense Escalation Factors**

A	B	C	D	E	F	G
Line	Expense Escalation Factors	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	General	3.0%	3.0%	3.0%	3.0%	3.0%
2	Salaries	3.0%	3.0%	3.0%	3.0%	3.0%
3	Benefits	3.0%	3.0%	3.0%	3.0%	3.0%
4	Wastewater Treatment	5.0%	5.0%	5.0%	5.0%	5.0%
5	Capital	4.0%	4.0%	4.0%	4.0%	4.0%

**Table 2-7** shows the projected wastewater O&M expenses for the study period based on the FY 2020 budget. The main expense for the wastewater enterprise is for treatment (Line 1), which is inflated by the wastewater treatment expense escalation factor (**Table 2-6**, Line 4). All other expenses are inflated by the appropriate expense escalation factor (**Table 2-6**, Line 1).

**Table 2-7: Projected Wastewater Expenses**

A	B	C	D	E	F	G	H
Line	Wastewater Expenses	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	Wastewater Treatment	\$4,824,819	\$5,066,060	\$5,319,363	\$5,585,331	\$5,864,598	\$6,157,828
2	VRSD Contract-Operations	\$1,794,915	\$1,848,762	\$1,904,225	\$1,961,352	\$2,020,193	\$2,080,798
3	VRSD Contract-Admin	\$105,932	\$109,110	\$112,383	\$115,755	\$119,227	\$122,804
4	Operating Materials and Supplies	\$0	\$0	\$0	\$0	\$0	\$0
5	Contract Services	\$0	\$0	\$0	\$0	\$0	\$0
6	Professional Services	\$67,461	\$69,485	\$71,569	\$73,716	\$75,928	\$78,206
7	Insurance	\$0	\$0	\$0	\$0	\$0	\$0
8	Board Member Fees and Expenses	\$12,798	\$13,182	\$13,577	\$13,985	\$14,404	\$14,836
9	Membership and Dues	\$13,498	\$13,903	\$14,320	\$14,750	\$15,192	\$15,648
10	Conference and Seminars	\$28,193	\$29,039	\$29,910	\$30,807	\$31,731	\$32,683
11	Management and Admin	\$25,000	\$25,750	\$26,523	\$27,318	\$28,138	\$28,982
12	Utilities	\$46,200	\$47,586	\$49,014	\$50,484	\$51,999	\$53,558
13	Bank Service Charges	\$0	\$0	\$0	\$0	\$0	\$0
14	Permits, Licenses, Fees	\$209,252	\$215,530	\$221,995	\$228,655	\$235,515	\$242,580
15	Overhead Allocation	\$698,899	\$719,866	\$741,462	\$763,706	\$786,617	\$810,215
16	<b>Total - Wastewater Expenses</b>	<b>\$7,826,967</b>	<b>\$8,158,272</b>	<b>\$8,504,342</b>	<b>\$8,865,859</b>	<b>\$9,243,542</b>	<b>\$9,638,140</b>

## Debt Service

The District does not currently have any existing debt for the wastewater enterprise.

To pay for the capital project costs, primarily associated with the JPA Plant and Pure Water Project, the District plans to issue low-cost State Revolving Fund (SRF) loans to offset rate impacts to customers. **Table 2-8** shows the proposed debt terms for the SRF loans.

**Table 2-8: Proposed Debt Terms**

A	B	C
Line	Proposed SRF Loan	Terms
1	Interest Rate	3.0%
2	Term (years)	20
3	Issuance Costs	0.0%

**Table 2-9** shows the proposed debt proceeds from the SRF and timing for the study period. The District does not plan to issue revenue bonds for this period.

**Table 2-9: Proposed Wastewater Debt Proceeds**

A	B	C	D	E	F	G	H
Line	Wastewater Debt Proceeds	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	Revenue Bonds	\$0	\$0	\$0	\$0	\$0	\$0
2	SRF Loans	\$0	\$0	\$0	\$0	\$3,000,000	\$3,000,000
3	<b>Total - Wastewater Debt Proceeds</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,000,000</b>	<b>\$3,000,000</b>

**Table 2-10** shows the proposed annual debt service for the SRF loans issued (**Table 2-9**, Line 2). Debt service payments for SRF loans are assumed to be paid the year following the issuance but could be further postponed based on the completion of the projects financed.

**Table 2-10: Proposed Wastewater Debt Service**

A	B	C	D	E	F	G	H
Line	Wastewater Debt Service	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	Revenue Bonds	\$0	\$0	\$0	\$0	\$0	\$0
2	SRF Loans	\$0	\$0	\$0	\$0	\$0	\$90,000
3	<b>Total - Wastewater Debt Service</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$90,000</b>

## Capital Projects

**Table 2-11** shows the wastewater CIP for all years of the study. District staff provided capital costs for the study period; these costs are inflated for future years' dollars using the capital expense escalation factor (**Table 2-6**, Line 5). The majority of costs are associated with the JPA Plant and Pure Water Project (Line 1).

**Table 2-11: Wastewater Capital Projects**

A	B	C	D	E	F	G	H
Line	Wastewater Capital Projects	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	JPA Tapia Plant and Pure Water Project	\$2,953,092	\$3,436,107	\$3,459,626	\$5,040,532	\$7,863,515	\$9,357,196
2	North Ranch Lift Station Improvements	\$0	\$0	\$0	\$0	\$0	\$63,266
3	Lakeside Lift System Improvements	\$312,000	\$0	\$0	\$0	\$0	\$0
4	Pipeline Rehabilitation	\$0	\$108,160	\$112,486	\$116,986	\$121,665	\$126,532
5	<b>Total - Wastewater Capital Projects</b>	<b>\$3,265,092</b>	<b>\$3,544,267</b>	<b>\$3,572,112</b>	<b>\$5,157,518</b>	<b>\$7,985,180</b>	<b>\$9,546,994</b>

**Table 2-12** shows the proposed capital financing plan. The total project costs (Line 1) are from the CIP (**Table 2-11**, Line 5), and the amount of debt funding is from the SRF loan proceeds (**Table 2-9**, Line 2). The remainder of capital costs are funded by rates (Line 4).

**Table 2-12: Proposed Wastewater Capital Financing Plan**

A	B	C	D	E	F	G	H
Line	Wastewater Capital Financing Plan	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	Total Project Costs	\$3,265,092	\$3,544,267	\$3,572,112	\$5,157,518	\$7,985,180	\$9,546,994
2							
3	Debt Funded	\$0	\$0	\$0	\$0	\$3,000,000	\$3,000,000
4	Rate Funded	\$3,265,092	\$3,544,267	\$3,572,112	\$5,157,518	\$4,985,180	\$6,546,994
5	<b>Total - Capital Projects</b>	<b>\$3,265,092</b>	<b>\$3,544,267</b>	<b>\$3,572,112</b>	<b>\$5,157,518</b>	<b>\$7,985,180</b>	<b>\$9,546,994</b>

## Reserve Policy

The District's existing reserve policy is robust and ensures financial resilience in the face of unexpected events, such as natural disasters, asset failures, or reduced revenues. The reserve policy for the District's wastewater funds includes the following components:

- » Operating reserve – 3 (minimum) to 6 (maximum) months of annual O&M expenses
- » Capital reserve – 5-year average rate-funded CIP costs
- » Debt service – 1 year of annual debt service
- » Rate stabilization reserve – 3 (minimum) to 6 (maximum) months of operating revenues

## Status Quo Financial Plan

**Table 2-13** shows the wastewater financial plan under the status quo or “do nothing” scenario. This scenario shows no additional revenue adjustments and no proposed SRF loan proceeds. Net cash flow (Line 31) is equal to revenues (Line 17) less O&M expenses (Line 23) and debt and capital costs (Line 29). Net revenue (Line 32) is equal to revenues less O&M expenses. Net revenue, which is positive for all years of the study, shows that the District's existing wastewater rate revenues are sufficient to fund all O&M expenses. However, net cash flow is negative for all years of the study, which shows that existing rate revenues are not sufficient to recover all costs associated with capital projects.

Rate and miscellaneous revenues (Lines 12-17) are from **Table 2-5**. Note that the interest earnings shown in the status quo scenario are lower, due to lower wastewater fund balances. O&M expenses (Lines 19-23) are from **Table 2-7**. Debt service (Lines 26-27) is equal to zero because the District does not currently have debt associated with the

wastewater enterprise and the status quo scenario assumes no SRF loan proceeds. Since there are no SRF loan proceeds, rate funded capital projects (Line 28) is equal to the total project costs in **Table 2-12**.

**Table 2-13: Wastewater Financial Plan, Status Quo**

A	B	C	D	E	F	G	H
Line	Wastewater Financial Plan	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	<b>Rate Revenues</b>	\$9,818,732	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393
2							
3	<b>Revenue Adjustments</b>						
4	FY 2020 - 0.0%	\$0	\$0	\$0	\$0	\$0	\$0
5	FY 2021 - 0.0%		\$0	\$0	\$0	\$0	\$0
6	FY 2022 - 0.0%			\$0	\$0	\$0	\$0
7	FY 2023 - 0.0%				\$0	\$0	\$0
8	FY 2024 - 0.0%					\$0	\$0
9	FY 2025 - 0.0%						\$0
10	<b>Total - Revenue Adjustments</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
11							
12	<b>Revenues</b>						
13	Rate Revenues	\$9,818,732	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393
14	Revenue Adjustments	\$0	\$0	\$0	\$0	\$0	\$0
15	Other Revenues	\$98,000	\$98,000	\$98,000	\$98,000	\$98,000	\$98,000
16	Interest Earnings	\$285,780	\$49,797	\$32,414	\$11,117	(\$29,862)	(\$103,303)
17	<b>Total - Revenues</b>	<b>\$10,202,512</b>	<b>\$9,964,190</b>	<b>\$9,946,807</b>	<b>\$9,925,510</b>	<b>\$9,884,531</b>	<b>\$9,811,090</b>
18							
19	<b>O&amp;M Expenses</b>						
20	Wastewater Treatment	\$4,824,819	\$5,066,060	\$5,319,363	\$5,585,331	\$5,864,598	\$6,157,828
21	VRSD Contract-Operations	\$1,794,915	\$1,848,762	\$1,904,225	\$1,961,352	\$2,020,193	\$2,080,798
22	Other Expenses	\$1,207,233	\$1,243,450	\$1,280,753	\$1,319,176	\$1,358,751	\$1,399,514
23	<b>Total - O&amp;M Expenses</b>	<b>\$7,826,967</b>	<b>\$8,158,272</b>	<b>\$8,504,342</b>	<b>\$8,865,859</b>	<b>\$9,243,542</b>	<b>\$9,638,140</b>
24							
25	<b>Debt and Capital</b>						
26	Existing Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
27	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
28	Rate Funded Capital Projects	\$3,265,092	\$3,544,267	\$3,572,112	\$5,157,518	\$7,985,180	\$9,546,994
29	<b>Total - Debt and Capital</b>	<b>\$3,265,092</b>	<b>\$3,544,267</b>	<b>\$3,572,112</b>	<b>\$5,157,518</b>	<b>\$7,985,180</b>	<b>\$9,546,994</b>
30							
31	<b>Net Cash Flow</b>	<b>(\$889,547)</b>	<b>(\$1,738,349)</b>	<b>(\$2,129,648)</b>	<b>(\$4,097,867)</b>	<b>(\$7,344,190)</b>	<b>(\$9,374,044)</b>
32	Net Revenue	\$2,375,545	\$1,805,918	\$1,442,465	\$1,059,651	\$640,990	\$172,950
33							
34	<b>Calculated Debt Coverage</b>	N/A	N/A	N/A	N/A	N/A	N/A
35	Required Debt Coverage	N/A	N/A	N/A	N/A	N/A	N/A

**Table 2-14** shows the projected wastewater fund balances under the status quo scenario. The wastewater ending balance (Line 17) is below minimum reserve target levels (Line 18) for all years of the study. Without revenue adjustments or debt proceeds, the District's wastewater fund will be negative by the end of FY 2023.

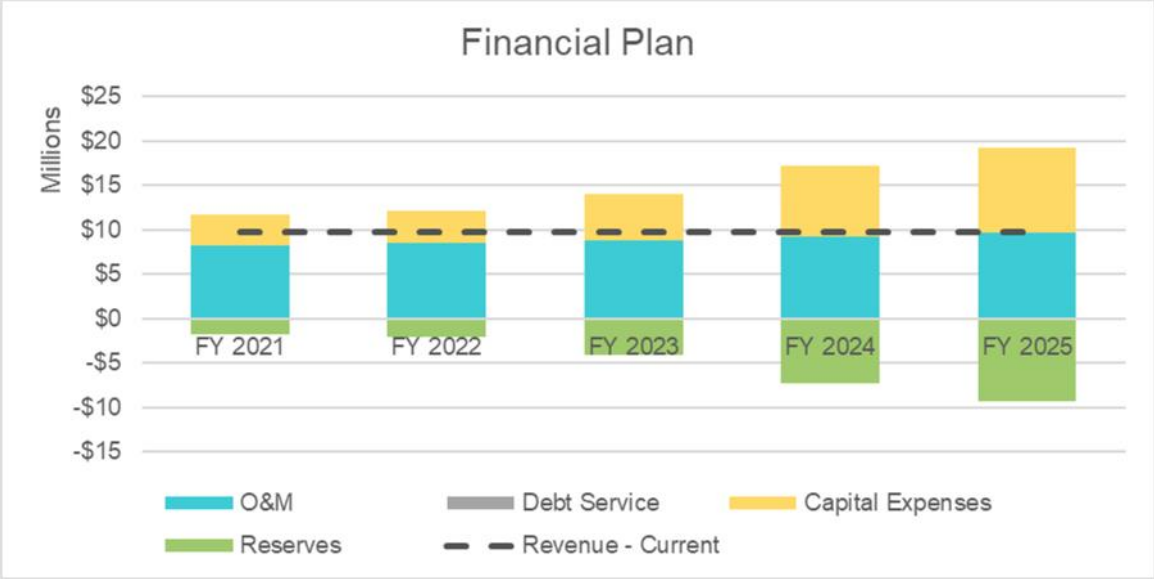
**Table 2-14: Wastewater Fund Balances, Status Quo**

A	B	C	D	E	F	G	H
Line	Wastewater Fund Balances	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	<b>Beginning Balance</b>	<b>\$5,869,259</b>	<b>\$4,979,712</b>	<b>\$3,241,362</b>	<b>\$1,111,715</b>	<b>(\$2,986,152)</b>	<b>(\$10,330,343)</b>
2							
3	<b>Sources of Funds</b>						
4	Rate Revenues	\$9,818,732	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393
5	Revenue Adjustments	\$0	\$0	\$0	\$0	\$0	\$0
6	Other Revenues	\$98,000	\$98,000	\$98,000	\$98,000	\$98,000	\$98,000
7	Debt Proceeds	\$0	\$0	\$0	\$0	\$0	\$0
8	Interest Earnings	\$285,780	\$49,797	\$32,414	\$11,117	(\$29,862)	(\$103,303)
9	<b>Total - Sources of Funds</b>	<b>\$10,202,512</b>	<b>\$9,964,190</b>	<b>\$9,946,807</b>	<b>\$9,925,510</b>	<b>\$9,884,531</b>	<b>\$9,811,090</b>
10							
11	<b>Uses of Funds</b>						
12	O&M Expenses	\$7,826,967	\$8,158,272	\$8,504,342	\$8,865,859	\$9,243,542	\$9,638,140
13	Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
14	Capital Projects	\$3,265,092	\$3,544,267	\$3,572,112	\$5,157,518	\$7,985,180	\$9,546,994
15	<b>Total - Uses of Funds</b>	<b>\$11,092,059</b>	<b>\$11,702,539</b>	<b>\$12,076,454</b>	<b>\$14,023,377</b>	<b>\$17,228,722</b>	<b>\$19,185,134</b>
16							
17	<b>Ending Balance</b>	<b>\$4,979,712</b>	<b>\$3,241,362</b>	<b>\$1,111,715</b>	<b>(\$2,986,152)</b>	<b>(\$10,330,343)</b>	<b>(\$19,704,387)</b>
18	Minimum Reserve Target	\$9,140,759	\$10,479,381	\$12,672,758	\$15,150,684	\$16,761,450	\$16,306,147
19	Maximum Reserve Target	\$13,576,684	\$14,997,547	\$17,277,442	\$19,845,747	\$21,550,934	\$21,194,280
20							
21	<b>Reserve Target</b>						
22	Operating						
23	Minimum	\$1,956,742	\$2,039,568	\$2,126,085	\$2,216,465	\$2,310,885	\$2,409,535
24	Maximum	\$3,913,484	\$4,079,136	\$4,252,171	\$4,432,930	\$4,621,771	\$4,819,070
25	Capital Improvement	\$4,704,834	\$5,961,214	\$8,068,075	\$10,455,621	\$11,971,967	\$11,418,014
26	Debt Service Reserve	\$0	\$0	\$0	\$0	\$0	\$0
27	Rate Stabilization						
28	Minimum	\$2,479,183	\$2,478,598	\$2,478,598	\$2,478,598	\$2,478,598	\$2,478,598
29	Maximum	\$4,958,366	\$4,957,197	\$4,957,197	\$4,957,197	\$4,957,197	\$4,957,197



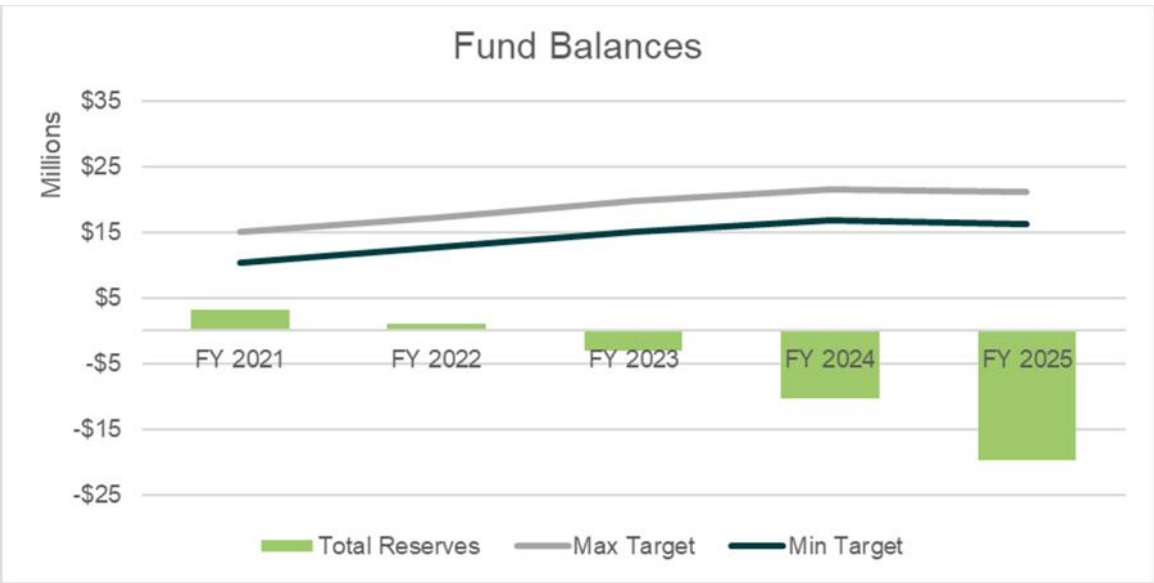
**Figure 2-1** shows the wastewater financial plan under the status quo scenario in a graphical format. Current revenues are represented as the dotted line; O&M expenses and capital expenses are represented as the turquoise and yellow stacked bars, respectively. Since the current revenues are not sufficient to fund both O&M and capital expenses, the District will draw from its wastewater reserves to fund these costs. The drawdown on reserves is shown as the green bars.

**Figure 2-1: Wastewater Financial Plan, Status Quo**



**Figure 2-2** shows the wastewater fund balances under the status quo scenario in a graphical format. The fund balances are represented as the green bars; the minimum and maximum reserve targets are represented as the navy and grey lines, respectively. The District's wastewater funds are below minimum target levels for all years of the study and will become negative in FY 2023.

**Figure 2-2: Wastewater Fund Balances, Status Quo**



## Proposed Financial Plan

**Table 2-15** shows the proposed adjustments to the wastewater financial plan, which includes revenue adjustments for each year (Column C) and proposed debt proceeds (Column D).

**Table 2-15: Proposed Wastewater Financial Plan Adjustments**

A	B	C	D
Line	Proposed Wastewater Financial Plan	Revenue Adjustments	SRF Loan Proceeds
1	FY 2021	15.0%	\$0
2	FY 2022	15.0%	\$0
3	FY 2023	15.0%	\$0
4	FY 2024	15.0%	\$3,000,000
5	FY 2025	7.0%	\$3,000,000

**Table 2-16** shows the wastewater financial plan with proposed adjustments. Rate revenues (Line 1) are increased each year by the revenue adjustment percentage (Lines 3-10). Rate funding needed for capital project costs (Line 28) are reduced by the proposed debt proceeds to reduce the impact to the District's wastewater reserves.

Net cash flow (Line 31) is negative for the first two years of the study and positive for the final four years. The District will be drawing down its reserves for the first two years and rebuild its reserve balances in the remaining years. Net revenue (Line 32) is positive for all years of the study, meaning that the District's revenues are sufficient to fund O&M expenses. Debt coverage calculations begin in FY 2024, which is the first year that the District issues debt. Debt coverage is calculated by dividing net revenue (Line 32) by annual debt service (Lines 26-27); the District's debt coverage ratio is well above the required ratio of 1.25 for each relevant year of the study.

**Table 2-16: Wastewater Financial Plan, Proposed Adjustments**

A	B	C	D	E	F	G	H
Line	Wastewater Financial Plan	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	<b>Rate Revenues</b>	\$9,818,732	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393
2							
3	<b>Revenue Adjustments</b>						
4	FY 2020 - 0.0%	\$0	\$0	\$0	\$0	\$0	\$0
5	FY 2021 - 15.0%		\$1,472,459	\$1,472,459	\$1,472,459	\$1,472,459	\$1,472,459
6	FY 2022 - 15.0%			\$1,693,328	\$1,693,328	\$1,693,328	\$1,693,328
7	FY 2023 - 15.0%				\$1,947,327	\$1,947,327	\$1,947,327
8	FY 2024 - 15.0%					\$2,239,426	\$2,239,426
9	FY 2025 - 7.0%						\$1,201,825
10	<b>Total - Revenue Adjustments</b>	<b>\$0</b>	<b>\$1,472,459</b>	<b>\$3,165,787</b>	<b>\$5,113,114</b>	<b>\$7,352,540</b>	<b>\$8,554,365</b>
11							
12	<b>Revenues</b>						
13	Rate Revenues	\$9,818,732	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393
14	Revenue Adjustments	\$0	\$1,472,459	\$3,165,787	\$5,113,114	\$7,352,540	\$8,554,365
15	Other Revenues	\$98,000	\$98,000	\$98,000	\$98,000	\$98,000	\$98,000
16	Interest Earnings	\$285,780	\$49,797	\$47,138	\$57,647	\$68,265	\$99,329
17	<b>Total - Revenues</b>	<b>\$10,202,512</b>	<b>\$11,436,649</b>	<b>\$13,127,318</b>	<b>\$15,085,154</b>	<b>\$17,335,197</b>	<b>\$18,568,087</b>
18							
19	<b>O&amp;M Expenses</b>						
20	Wastewater Treatment	\$4,824,819	\$5,066,060	\$5,319,363	\$5,585,331	\$5,864,598	\$6,157,828
21	VRSD Contract-Operations	\$1,794,915	\$1,848,762	\$1,904,225	\$1,961,352	\$2,020,193	\$2,080,798
22	Other Expenses	\$1,207,233	\$1,243,450	\$1,280,753	\$1,319,176	\$1,358,751	\$1,399,514
23	<b>Total - O&amp;M Expenses</b>	<b>\$7,826,967</b>	<b>\$8,158,272</b>	<b>\$8,504,342</b>	<b>\$8,865,859</b>	<b>\$9,243,542</b>	<b>\$9,638,140</b>
24							
25	<b>Debt and Capital</b>						
26	Existing Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
27	Proposed Debt Service	\$0	\$0	\$0	\$0	\$0	\$90,000
28	Rate Funded Capital Projects	\$3,265,092	\$3,544,267	\$3,572,112	\$5,157,518	\$4,985,180	\$6,546,994
29	<b>Total - Debt and Capital</b>	<b>\$3,265,092</b>	<b>\$3,544,267</b>	<b>\$3,572,112</b>	<b>\$5,157,518</b>	<b>\$4,985,180</b>	<b>\$6,636,994</b>
30							
31	<b>Net Cash Flow</b>	<b>(\$889,547)</b>	<b>(\$265,890)</b>	<b>\$1,050,864</b>	<b>\$1,061,776</b>	<b>\$3,106,476</b>	<b>\$2,292,954</b>
32	<b>Net Revenue</b>	<b>\$2,375,545</b>	<b>\$3,278,377</b>	<b>\$4,622,976</b>	<b>\$6,219,294</b>	<b>\$8,091,656</b>	<b>\$8,929,947</b>
33							
34	<b>Calculated Debt Coverage</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>99.22</b>
35	<b>Required Debt Coverage</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>99.22</b>

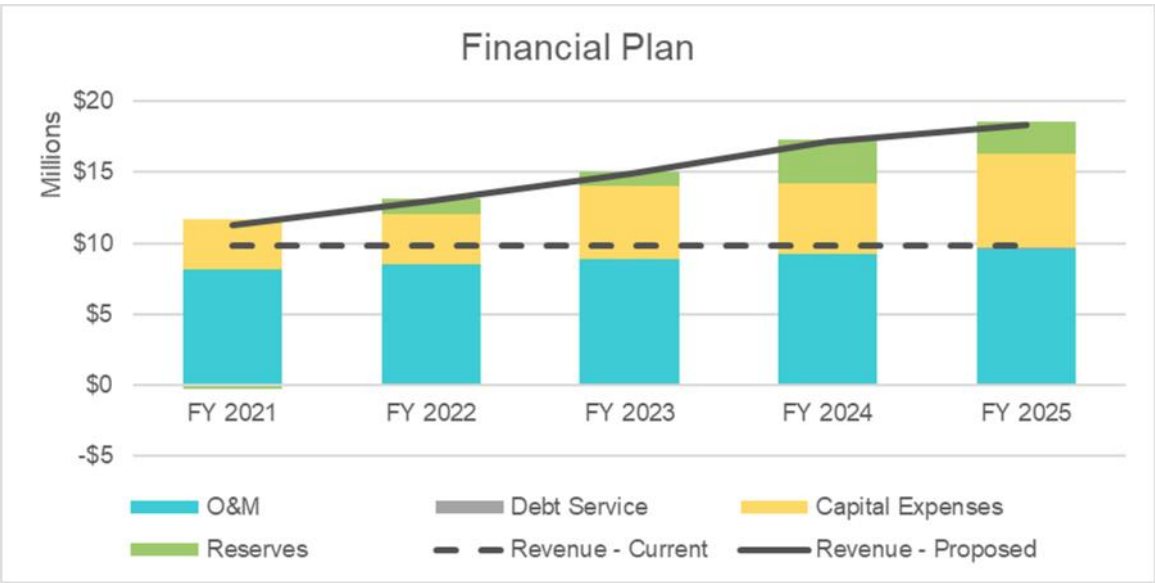
**Table 2-17** shows the projected fund balances with the proposed adjustments. The District's projected ending balances (Line 17) are lower than the minimum reserve target (Line 18) for all years of the study. However, the fund balances are positive for all years of the study and trends upward in each year. District staff opted for lower revenue adjustments and debt proceeds to minimize customer impacts. Capital project costs expect to normalize after the study period, which will allow the District to rebuild its reserve balances over time.

**Table 2-17: Wastewater Fund Balances, Proposed Adjustments**

A	B	C	D	E	F	G	H
Line	Wastewater Fund Balances	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	<b>Beginning Balance</b>	<b>\$5,869,259</b>	<b>\$4,979,712</b>	<b>\$4,713,821</b>	<b>\$5,764,685</b>	<b>\$6,826,461</b>	<b>\$9,842,937</b>
2							
3	<b>Sources of Funds</b>						
4	Rate Revenues	\$9,818,732	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393	\$9,816,393
5	Revenue Adjustments	\$0	\$1,472,459	\$3,165,787	\$5,113,114	\$7,352,540	\$8,554,365
6	Other Revenues	\$98,000	\$98,000	\$98,000	\$98,000	\$98,000	\$98,000
7	Debt Proceeds	\$0	\$0	\$0	\$0	\$3,000,000	\$3,000,000
8	Interest Earnings	\$285,780	\$49,797	\$47,138	\$57,647	\$68,265	\$98,429
9	<b>Total - Sources of Funds</b>	<b>\$10,202,512</b>	<b>\$11,436,649</b>	<b>\$13,127,318</b>	<b>\$15,085,154</b>	<b>\$20,335,197</b>	<b>\$21,567,187</b>
10							
11	<b>Uses of Funds</b>						
12	O&M Expenses	\$7,826,967	\$8,158,272	\$8,504,342	\$8,865,859	\$9,243,542	\$9,638,140
13	Debt Service	\$0	\$0	\$0	\$0	\$90,000	\$296,092
14	Capital Projects	\$3,265,092	\$3,544,267	\$3,572,112	\$5,157,518	\$7,985,180	\$9,546,994
15	<b>Total - Uses of Funds</b>	<b>\$11,092,059</b>	<b>\$11,702,539</b>	<b>\$12,076,454</b>	<b>\$14,023,377</b>	<b>\$17,318,722</b>	<b>\$19,481,226</b>
16							
17	<b>Ending Balance</b>	<b>\$4,979,712</b>	<b>\$4,713,821</b>	<b>\$5,764,685</b>	<b>\$6,826,461</b>	<b>\$9,842,937</b>	<b>\$11,928,898</b>
18	Minimum Reserve Target	\$8,540,759	\$9,647,495	\$11,064,205	\$12,828,962	\$14,399,585	\$14,934,738
19	Maximum Reserve Target	\$12,976,684	\$14,533,776	\$16,460,335	\$18,802,304	\$21,027,204	\$21,961,463
20							
21	<b>Reserve Target</b>						
22	Operating						
23	Minimum	\$1,956,742	\$2,039,568	\$2,126,085	\$2,216,465	\$2,310,885	\$2,409,535
24	Maximum	\$3,913,484	\$4,079,136	\$4,252,171	\$4,432,930	\$4,621,771	\$4,819,070
25	Capital	\$4,104,834	\$4,761,214	\$5,668,075	\$6,855,621	\$7,771,967	\$7,818,014
26	Debt Service	\$0	\$0	\$0	\$0	\$90,000	\$296,092
27	Rate Stabilization						
28	Minimum	\$2,479,183	\$2,846,713	\$3,270,045	\$3,756,877	\$4,316,733	\$4,617,189
29	Maximum	\$4,958,366	\$5,693,426	\$6,540,090	\$7,513,753	\$8,633,466	\$9,234,379

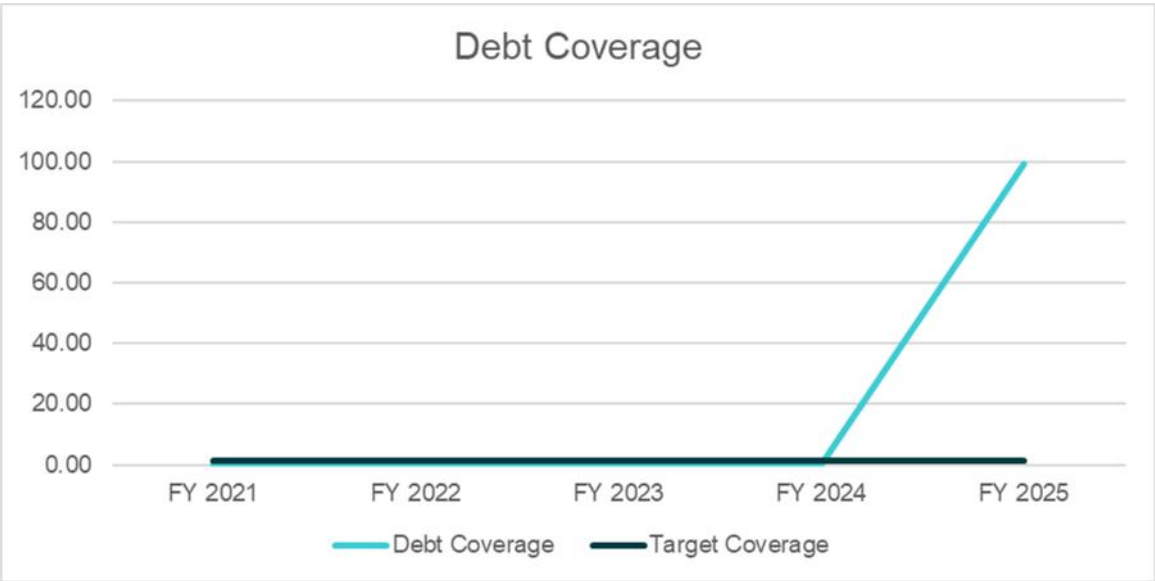
**Figure 2-3** shows the wastewater financial plan with proposed adjustments in a graphical format. The dotted and solid lines represent the current and proposed revenues, respectively. The stacked bars represent operating, debt, and capital expenses. The green bar shows the annual reserve funding to build wastewater balances over time.

**Figure 2-3: Wastewater Financial Plan, Proposed Adjustments**



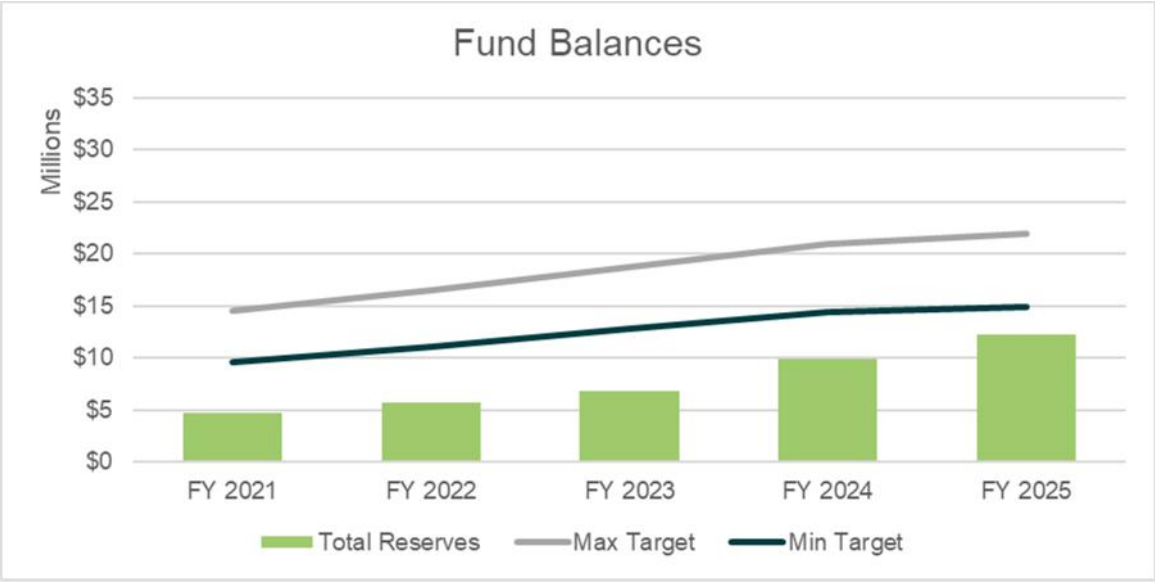
**Figure 2-4** shows the wastewater debt coverage under the proposed scenario in a graphical format. Debt coverage calculations do not begin until FY 2025, which is the first year that the District will have debt service payments for the wastewater enterprise. Debt coverage is well above the required ratio of 1.25.

**Figure 2-4: Wastewater Debt Coverage, Proposed Adjustments**



**Figure 2-5** shows the wastewater fund balances with the proposed adjustments. Although the green bars, which represent wastewater reserves, are below the navy line, which represents the minimum target, the District is adding to its reserves each year to meet the target levels over time.

**Figure 2-5: Wastewater Fund Balances, Proposed Adjustments**



# 3. Rate Derivation

This section of the report details the calculation of the proposed wastewater rates that were developed in the study. Numbers shown in the tables of this section are rounded. Therefore, hand calculations based on the displayed numbers, such as summing or multiplying, may not equal the exact results shown in this report.

## Proposed Adjustments

**Table 3-1** shows the proposed revenue adjustments from the financial plan. These revenue adjustment percentages are used to derive the proposed rates for this study.

**Table 3-1: Proposed Revenue Adjustments**

A	B	C
Line	Proposed Revenue Adjustments	Wastewater
1	FY 2021	15.0%
2	FY 2022	15.0%
3	FY 2023	15.0%
4	FY 2024	15.0%
5	FY 2025	7.0%

## Wastewater Rates

**Table 3-2** shows the proposed wastewater rates based on the proposed revenue adjustments (Line 1). Current rates (Column C) are multiplied by the proposed revenue adjustments in FY 2021 (Column D, Line 1) to determine the proposed rates for that year. For every year thereafter, the previous year's rates are multiplied by the revenue adjustments for that year. Each Residential customer will see an increase of \$9 per month in their wastewater bill.

**Table 3-2: Proposed Wastewater Rates**

A	B	C	D	E	F	G	H
Line	Wastewater Rates	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
1	<b>Proposed Revenue Adjustments</b>		15.0%	15.0%	15.0%	15.0%	7.0%
2							
3	<b>Monthly Charge per ERU</b>						
4	Residential	\$59.98	\$68.98	\$79.32	\$91.22	\$104.91	\$112.25
5	Multiple Residential	\$59.98	\$68.98	\$79.32	\$91.22	\$104.91	\$112.25
6	Apartment	\$47.97	\$55.17	\$63.44	\$72.96	\$83.90	\$89.78
7	Mobile Dwelling Unit	\$47.97	\$55.17	\$63.44	\$72.96	\$83.90	\$89.78
8	Commercial	\$59.98	\$68.98	\$79.32	\$91.22	\$104.91	\$112.25
9	Shopping Center	\$106.51	\$122.49	\$140.86	\$161.99	\$186.29	\$199.33
10	Restaurants	\$137.98	\$158.68	\$182.48	\$209.85	\$241.33	\$258.22
11	Water Flow - Low	\$55.03	\$63.28	\$72.78	\$83.70	\$96.25	\$102.99
12	Water Flow - High	\$126.59	\$145.58	\$167.42	\$192.53	\$221.41	\$236.91