NewGen Strategies & Solutions

Town of Perryville

Water and Sewer Rate Study

Draft Report

March 2023

NewGen ◆ 911-A Commerce Road ◆ Annapolis, MD 21401 ◆ 410.266.9101 ◆ newgenstrategies.net

This page intentionally left blank

NewGen Strategies & Solutions

911-A Commerce Road
Annapolis, MD 21401
Phone: (410) 266-9101

March 3, 2023

Mr. George Patchell
Town Administrator
Town of Perryville
515 Broad Street
Perryville, MD 21903

Subject: Water and Sewer Rate Study

Dear Mr. Patchell:

NewGen Strategies and Solutions is pleased to submit to the Town of Perryville this report summarizing the water and sewer rate study. This document represents the results of our analysis of the forecasted costs of providing water and sewer service to the Town's customers and our recommendations for recovering these costs over the next five years. The study provides several recommendations that will enhance the financial health and stability of the Town's operations while equitably charging its customers for the services provided.

It has been a distinct pleasure to work with the Town. The assistance provided by management and staff was essential to completing this study. The dedication of everyone who assisted in the study process should be acknowledged, as they were vital to the study's success. Thank you for the opportunity to work with the Town on this important project.

Very truly yours,

Michael Maker
Partner
NewGen Strategies and Solutions, LLC

This page intentionally left blank

TABLE OF CONTENTS

TABLE OF EXHIBITS

1. BASIS FOR THE STUDY

1.1 Objective and Scope

The objective and scope of services set forth between the Town of Perryville and NewGen can be grouped into three major tasks:

1. **Revenue Requirements** - Determine the true cost of providing water and sewer service by developing comprehensive revenue requirements for the water and sewer systems.
2. **Financial Plan** - Develop a financial plan for the Town to ensure that water and sewer rates and charges provide adequate revenues over the projection period.
3. **Charge and Rate Design** - Create a water and sewer rate design that appropriately allocates costs among the Town's customers based on the Town's goals and objectives, specifically addressing customer impacts and revenue stability.

The water and sewer rate study has been completed based on these three tasks and documented in this report.

1.2 Guiding Principles

The following principles were used to guide the rate study and were developed with the assistance of Town staff:

- The water and sewer systems must each be financially self-supporting. It is assumed that the cost of operating and maintaining the systems must be supported by the water and sewer rates and charges collected from customers with no support from one fund to the other. If, at any time, water (or sewer) resources must be used to support the sewer (or water) system, repayment shall be made in an appropriate amount of time.
- The Town should maintain reserves to provide for contingencies and unplanned expenses and ensure funds are generated to allow for appropriate future system replacement.
- Water and sewer rates and charges shall be kept as low as possible over time. It is possible to keep rates low for a period of time by not investing sufficiently in the maintenance of the water and sewer systems, but eventually the systems will deteriorate and require substantial investments leading to the need for significant and immediate rate increases. The assumption that the Town will continually reinvest in the water and sewer systems to replace assets as they reach the end of their useful lives is built into the analysis and allows for timely and predictable rate increases.

1.3 Assumptions

The following high-level assumptions were used to guide the rate study and were developed with the assistance of Town staff:

- Operating and maintenance expenses: 5% to 10% per year
- Water and sewer customer changes: 0% growth per year (no growth)
- Water usage and sewage generation changes: 0% growth per year (no growth)
- Miscellaneous revenues: 0% growth per year (no growth)
- Target operating cash balance: 90 days of operating expenses

Depending on availability, actual Fiscal Year (FY) 2022 or budgeted FY 2023 data was used as the base upon which forecasted figures were developed. All years within this report refer to the Town's fiscal year (July 1 to June 30). The charts and tables within this report provide data for a five-year planning period in which rates and charges have been calculated (FY 2024 – FY 2028).

2. REVENUE REQUIREMENTS

This section of the report outlines the historical and future costs of operating and maintaining the Town's systems. These costs constitute the water and sewer systems' revenue requirements (i.e., the amount of revenue required to be collected from customers). Our detailed cost analysis is broken into two main categories of costs: (1) operating costs and (2) capital costs (including debt and cash funding). This section describes each category of costs incurred by the Town as it provides water and sewer service. The costs are based on official documents and data provided by the Town.

2.1 Operating Costs

The day-to-day operating and maintenance (O&M) expenses of the water and sewer systems can be grouped into several categories:

- Labor
- Benefits
- Healthcare
- Electric
- Services
- Supplies
- Equip./Maint.
- Other

Budgeted FY 2023 water expenses total approximately $1.13 million. Exhibit 2.1.1 provides a breakdown by category sorted in descending order by percent of total.

Exhibit 2.1.1 FY 2022 Water Operating Expenses (% of Total)

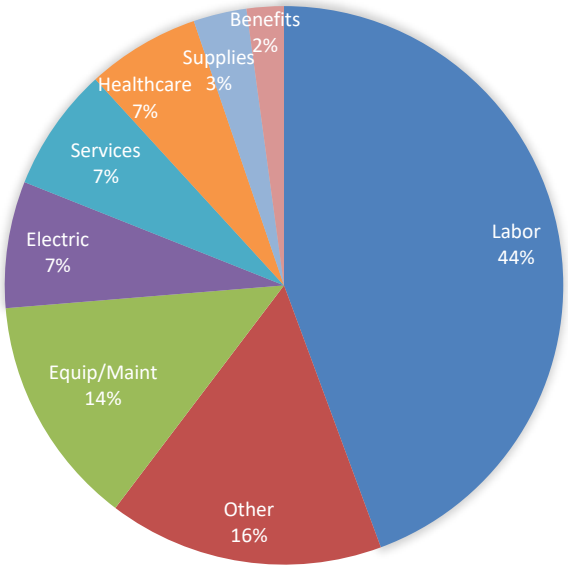
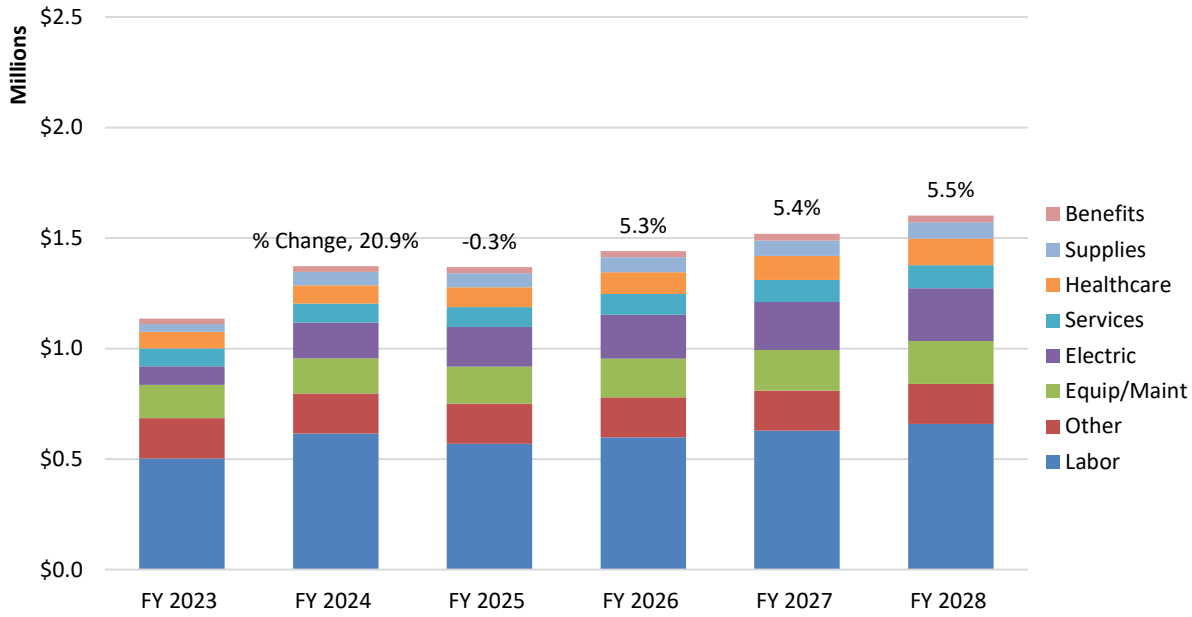


Exhibit 2.1.2 shows water O&M estimated expenses for the base year and five-year planning period. The changes in operating expenses in FY 2024 are predominantly due to anticipated increases in salaries, electricity, and chemicals as a result of a large water usage customer starting operations that year.

Exhibit 2.1.2 Projected Water Operating Expenses



Estimated FY 2024 sewer expenses total approximately $1.55 million. Exhibit 2.1.3 provides a breakdown by category sorted in descending order by percent of total.

Exhibit 2.1.3 FY 2022 Sewer Operating Expenses (% of Total)

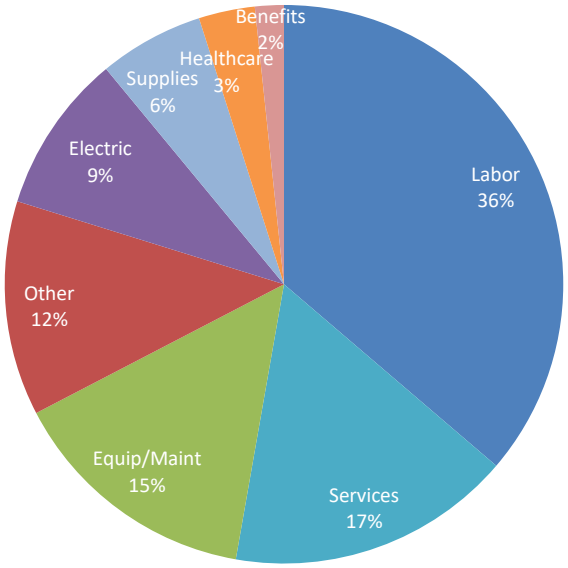
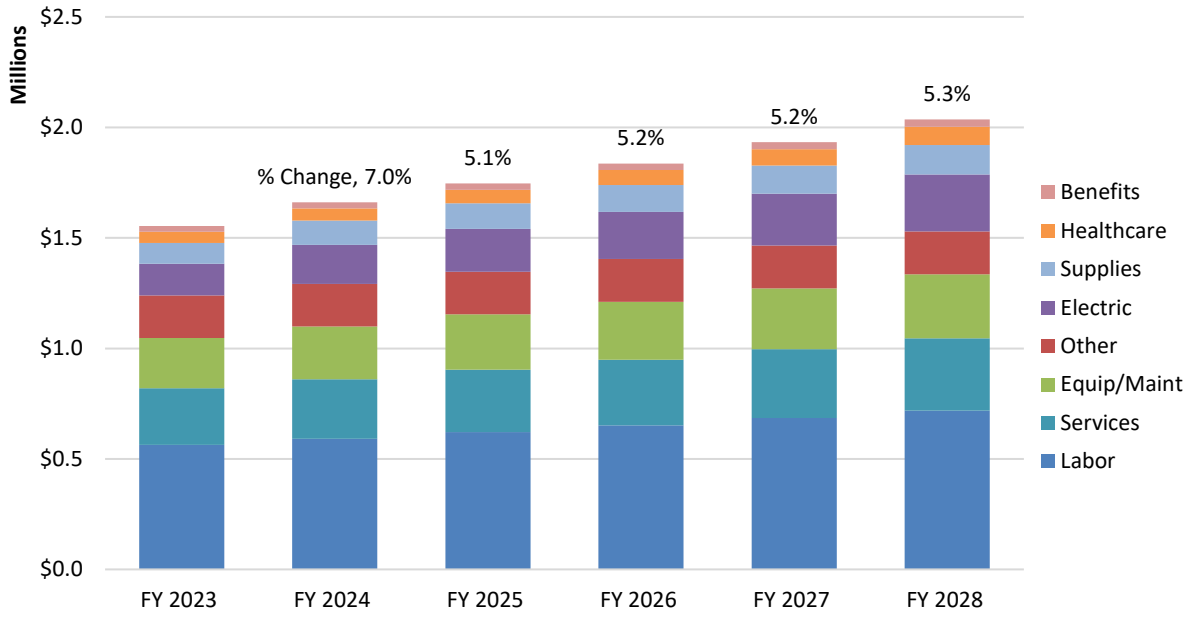


Exhibit 2.1.4 shows sewer O&M estimated expenses for the base year and the five-year planning period. The changes in operating expenses in FY 2024 are predominantly due to anticipated increases in electricity and chemicals as a result of a large water usage (and associated sewage generation) customer starting operations that year.

Exhibit 2.1.4 Projected Sewer Operating Expenses



2.2 Capital Costs

The annualized capital costs related to providing water and sewer service are generally comprised of current debt service and any anticipated capital projects, which may be funded via the issuance of debt (typically bonds, loans, or similar financial instruments) or funded from cash (either reserves on hand or cash derived from operations).

2.2.1 Current Debt Service

The Town takes out loans and issues bonds to fund capital projects to mitigate the financial burden on customers by spreading the costs of long-lived assets over several years. As of FY 2024, the Town is paying principal and/or interest payments on one water loan, one sewer loan, and one sewer bond.

Exhibit 2.2.1 and Exhibit 2.2.2 provide a breakdown of the Town's current principal and interest payments for the base year and five-year planning period for water and sewer, respectively.

Exhibit 2.2.1 Current Water Debt Service Payments

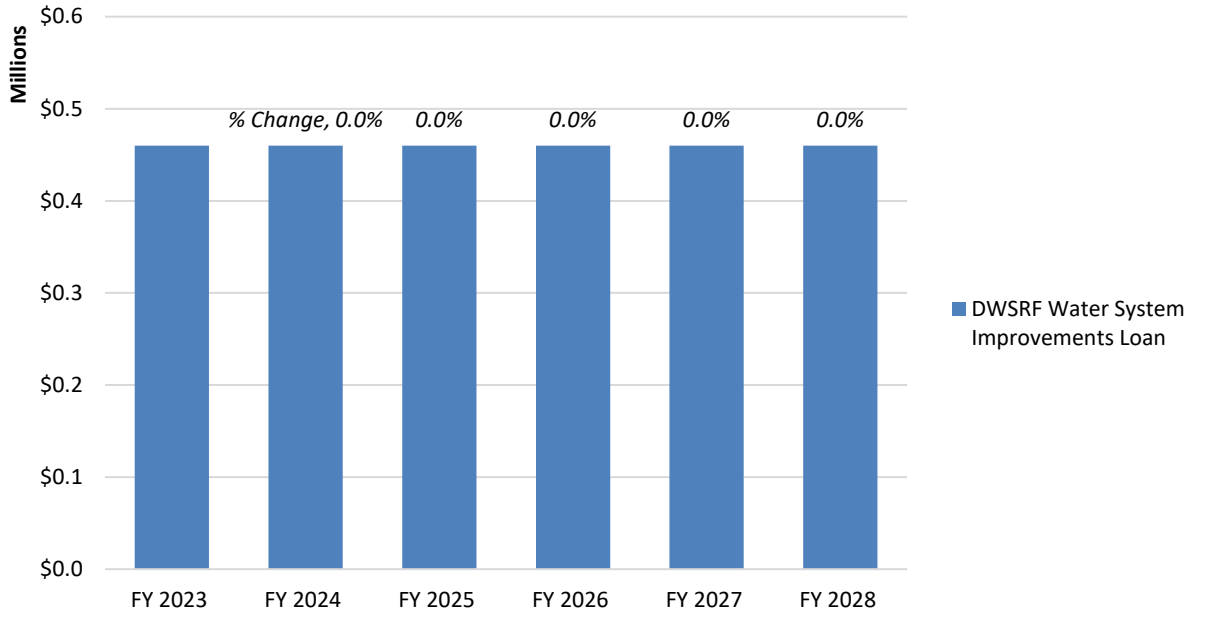
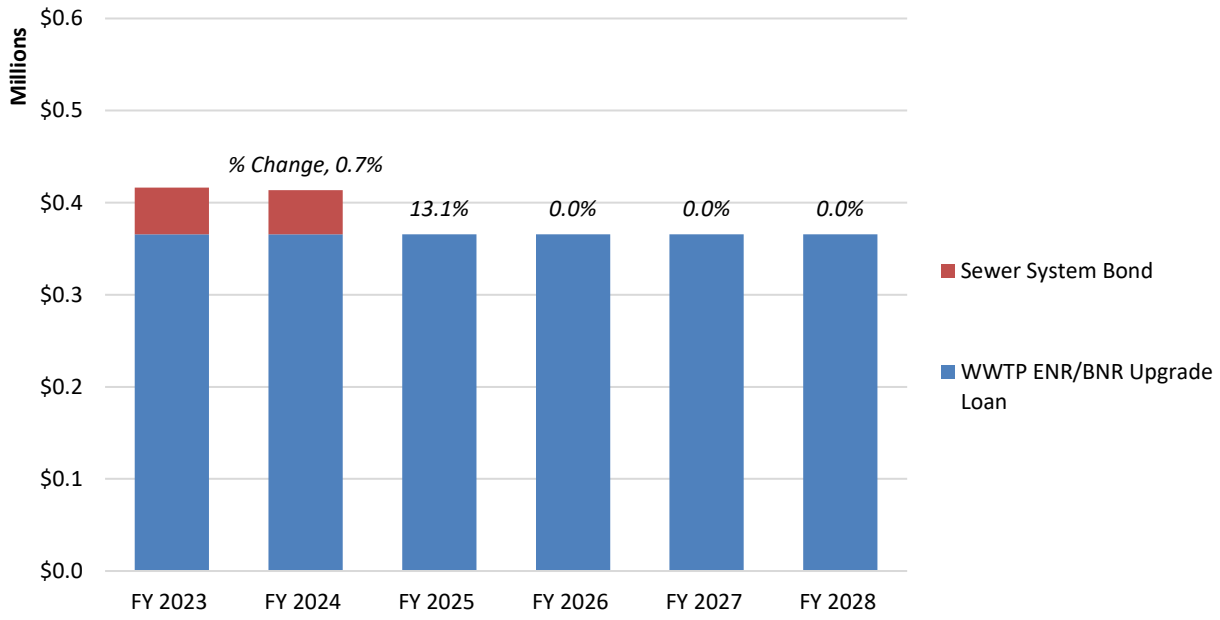


Exhibit 2.2.2 Current Sewer Debt Service Payments



2.2.2 Planned Capital Improvement Projects

The Town anticipates spending $5.16 million on a water plant expansion project, with $4.30 million being funded from ARPA grants and the remaining $0.86 million being debt funded. The Town anticipates spending $7.97 million on a sewer plant denitrification project, with $7.67 million being funded from an MDE grant and the remaining $0.30 million being funded from rates.

2.2.3 New Debt Service

For the $0.86 million of the water plant expansion project anticipated to be debt funded, we have calculated the annual principal and interest payments. The interest rate for the debt has been assumed to be 5%, with a maturity of 20 years and a 1.5% issuance cost. Payments are assumed to start the year after issuance.

2.2.4 Capital Reserve

We typically recommend that a municipal utility establish a capital reserve for the water and sewer systems to provide funds to pay for unexpected major repairs and planned replacement or rehabilitation of system assets. These reserves can be used to pay for capital costs in order to avoid or minimize the amount that would otherwise be recovered through user fees (and possibly result in a significant rate increase). Typically, the annual reserve balance is calculated based either on the estimated useful life of each asset or as a percentage of total assets. We recommend a balance equal to 2% of the original cost of system assets. Given the adverse impact of establishing these water and sewer reserves in one year, we recommend starting in FY 2024 at 0.2% ($37,000 for water and $70,000 for sewer) and gradually increasing the reserve balances by 0.2% each year until reaching the recommended 2.0% balances in FY 2033.

2.3 Revenue Requirements

The total annual cost of operating the Town's water and sewer systems (the gross revenue requirements) includes operating and maintenance expenses and current and future capital costs. The sum of these costs, less miscellaneous revenues (such as sewer revenue from the Veterans Administration medical center, BNR/ENR grant proceeds from MDE, antenna rent, facilities fees, and other miscellaneous fees), is the amount that needs to be recovered from rates (referred to as the net revenue requirement).

Exhibit 2.3.1 and Exhibit 2.3.2 show the revenue requirements for the base year and five-year planning period for water and sewer, respectively.

Exhibit 2.3.1 Water Revenue Requirements

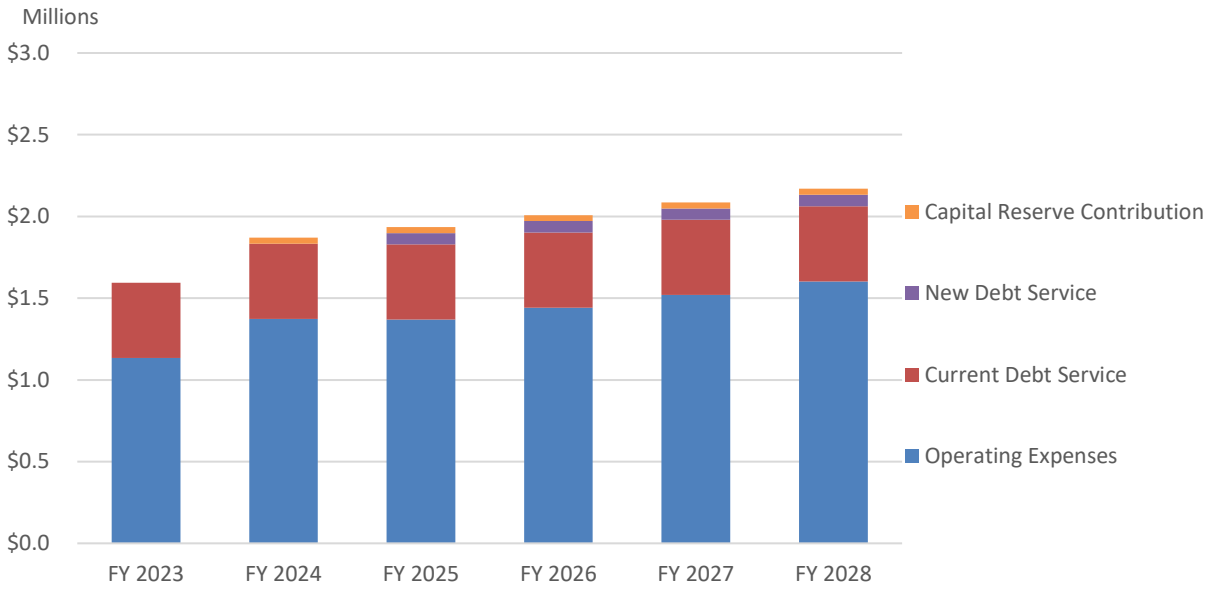
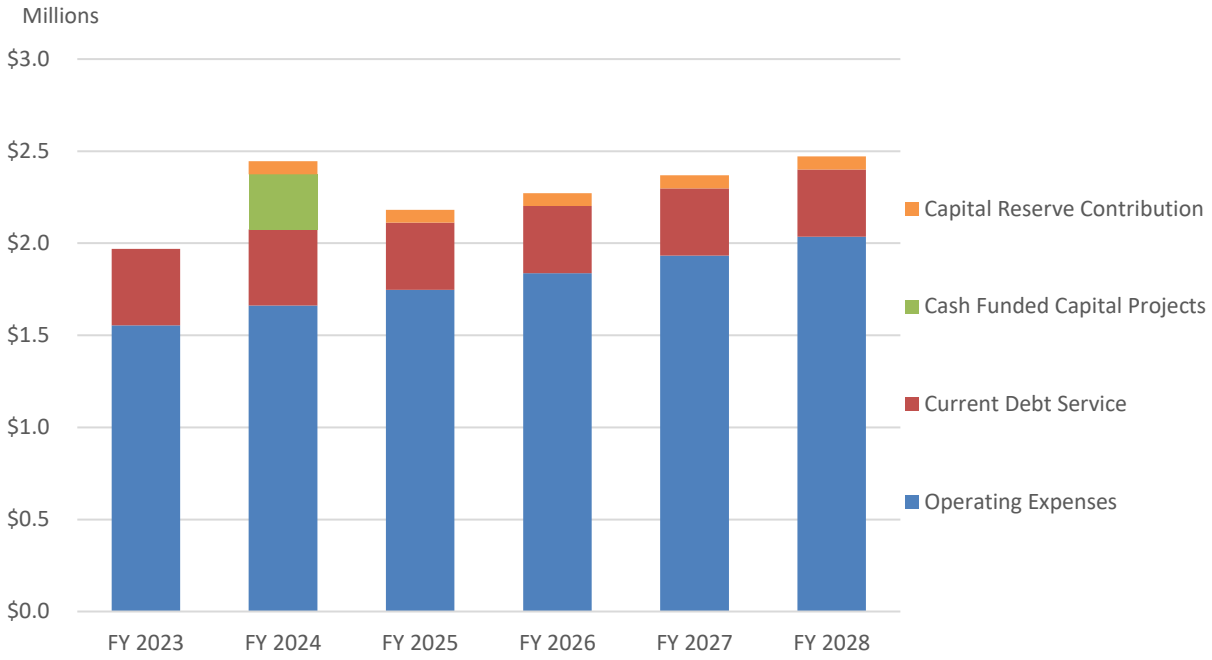


Exhibit 2.3.2 Sewer Revenue Requirements



3. CUSTOMERS AND USAGE

This section provides a summary of water and sewer customer accounts and water usage/sewage generation.

3.1 Customer Account Summary

The Town's customer base includes 1,500 water and sewer customers. The Town also has five Out of Town water customers and ten Out of Town sewer customers. As the Town is relatively built out, the customer base is not expected to grow throughout the planning period.

3.2 Usage Summary

Total metered water usage is estimated to be 78.02 million gallons, while sewage generation is estimated to be 77.71 million gallons. Similar to the customer base, water usage (and, therefore, sewage generation) is expected to stay flat throughout the planning period. However, a large water usage (and therefore sewage generation) customer is anticipated to begin operations in FY 2024. This will result in a significant increase in water usage.

4. FINANCIAL PLAN AND PROPOSED RATES

4.1 Current Revenue

In Section 2, the projected costs (revenue requirements) of the water and sewer systems were presented, and in Section 3, projected water usage and sewage generation were presented. In this section, those projections are used to determine an appropriate financial plan and set water and sewer rates for the next five years.

The adequacy of revenues from current rates was evaluated to determine if existing rates are sufficient to recover the revenue requirements. Exhibit 4.1.1 compares the revenue requirements with total current revenue projections for the base year and the five-year planning period.

Exhibit 4.1.1 Water Revenue Requirements and Current Revenue

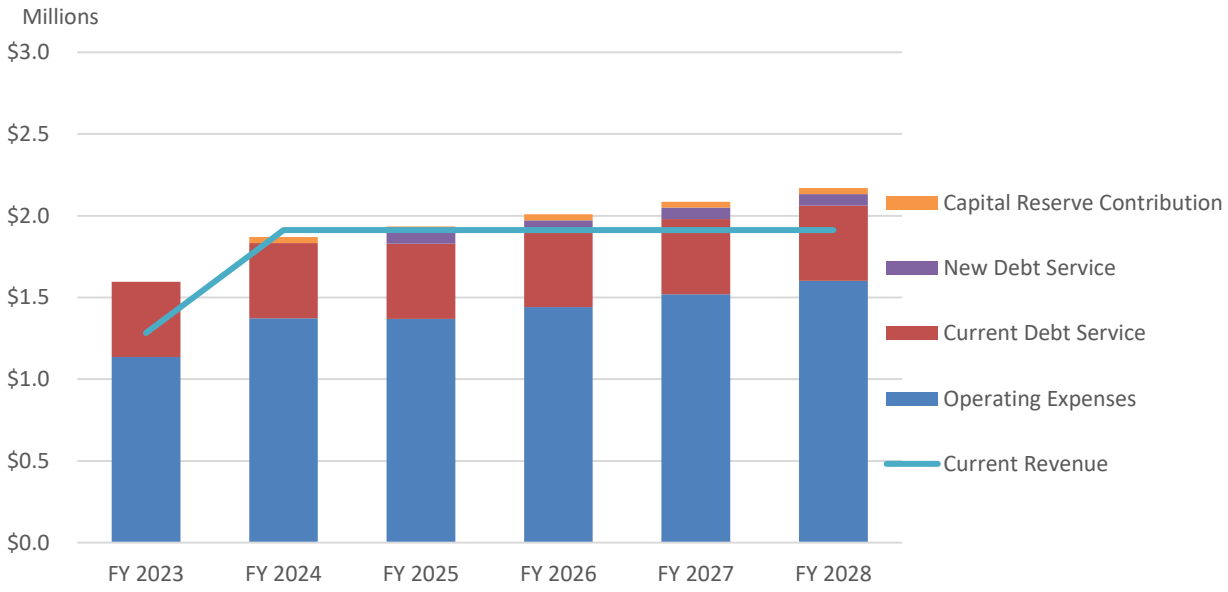


Exhibit 4.1.2 Sewer Revenue Requirements and Current Revenue

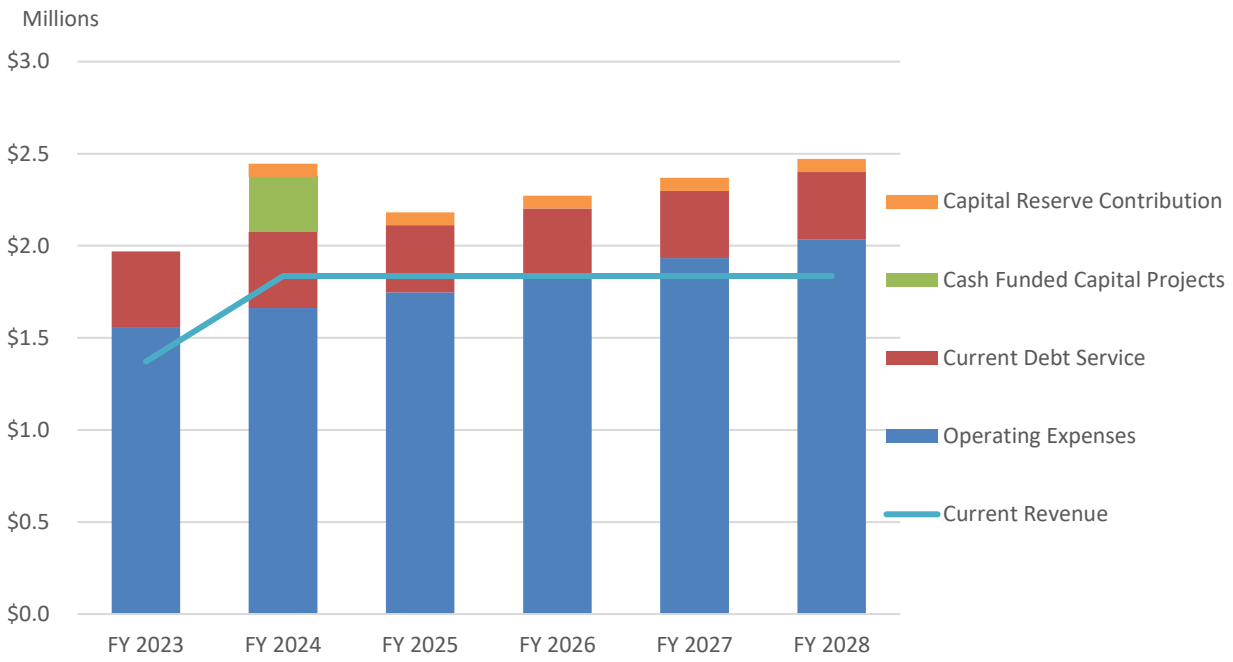


Exhibit 4.1.1 demonstrates that revenue collected at current rates is sufficient to cover the revenue requirements for FY 2024 but not for the years from FY 2025 through FY 2028. Exhibit 4.1.2 demonstrates that revenue collected at current rates is insufficient to cover the revenue requirements each year from FY 2024 through FY 2028. Current water and sewer rates, if left in place, would not generate sufficient revenue to fund the revenue requirements.

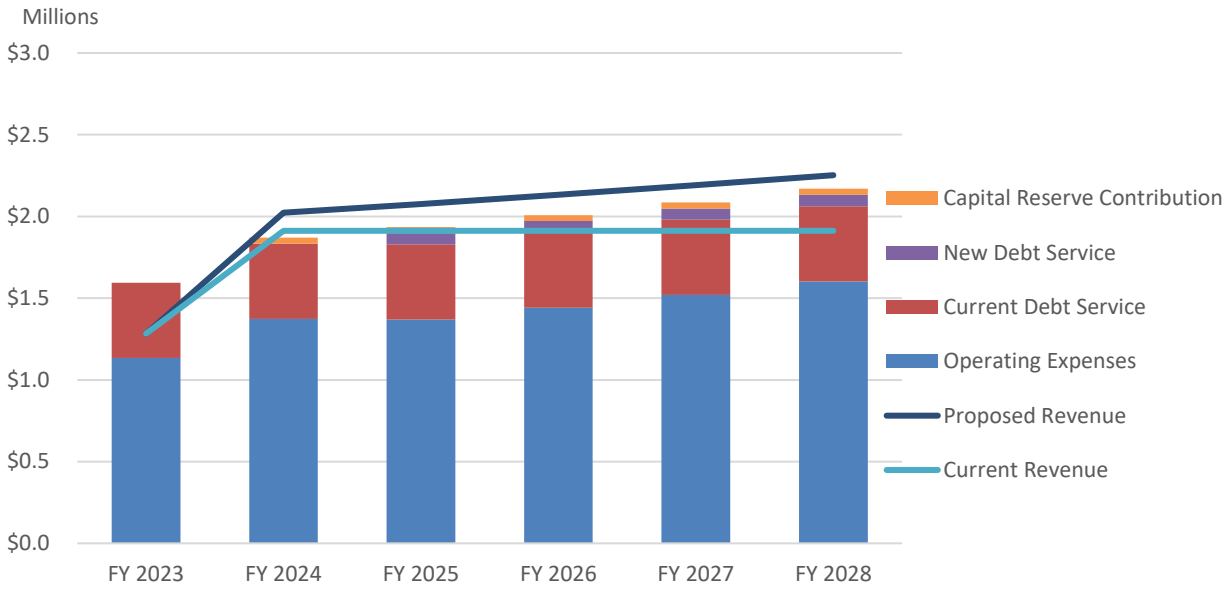
4.2 Proposed Revenue

To maintain the financial health of the Town's water and sewer operations over the five-year planning period, revenue needs to be increased. In addition to covering the revenue requirements, revenue must also be sufficient to satisfy an operating cash balance equal to or greater than 90 days (i.e., 25%) of operating expenses for each water and sewer.

To address these shortfalls, we propose using multi-year rate adjustments. A multi-year approach will help mitigate rate increases over the planning period and alleviate some of the financial burden on the Town's customers. Additionally, this approach will allow for proper planning and adjustment by customers and the Town.

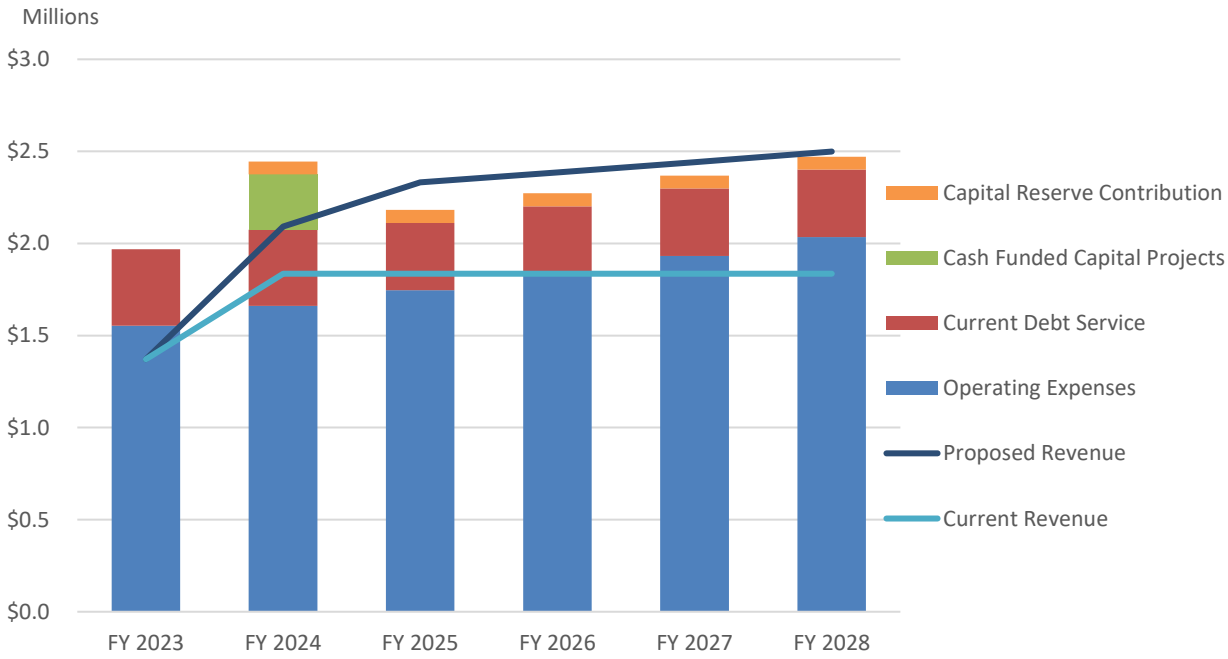
Exhibit 4.2.1 and Exhibit 4.2.2 compare the revenue requirements with total current revenue projections and total proposed revenue projections for the base year and five-year planning period for water and sewer, respectively.

Exhibit 4.2.1 Water Revenue Requirements, Current Revenue, and Proposed Revenue



The line for Proposed Revenue in the exhibit above represents a 3.0% increase in water revenue each year from FY 2024 to FY 2028. The sharp incline in FY 2024 for both the Current and Proposed Revenue lines is due to the increase in water usage from the large water usage customer beginning operations.

Exhibit 4.2.2 Sewer Revenue Requirements, Current Revenue, and Proposed Revenue



The line for Proposed Revenue in the exhibit above represents a 15.5% increase in sewer revenue in FY 2024 and FY 2025 and a 3.0% increase each year from FY 2026 to FY 2028. The sharp incline in FY 2024 for

both the Current and Proposed Revenue lines is due to the increase in sewage generation from the large water usage customer beginning operations.

4.3 Water and Sewer Cash Balances

Exhibit 4.3.1 and Exhibit 4.3.2 show the operating balance and target operating cash on hand (equal to 90 days of operating expenses) for the base year and five-year planning period for water and sewer, respectively. The rate increases discussed in the previous section were set so that the cash balances below at the end of FY 2028 either equaled the current cash balance or exceeded the 90-day cash on hand target.

Exhibit 4.3.1 Water Cash Balance

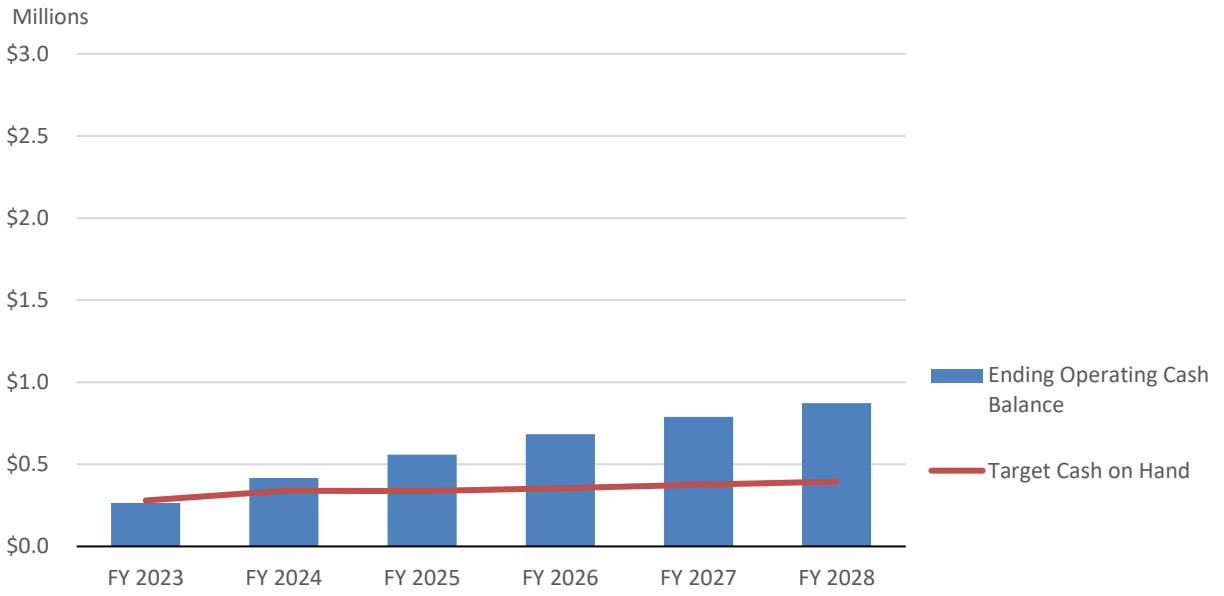
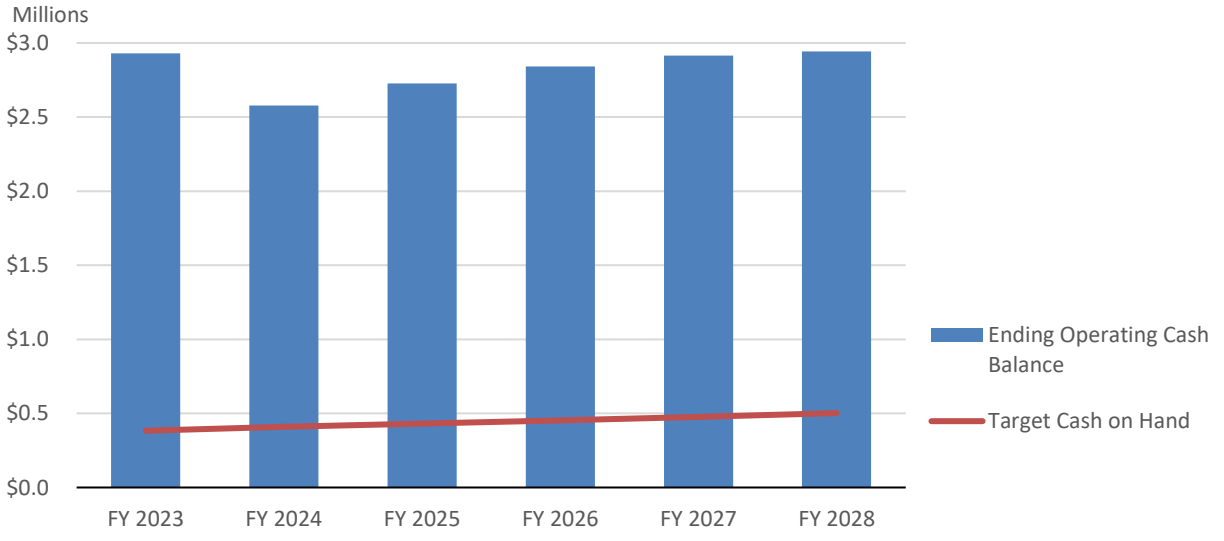


Exhibit 4.3.2 Sewer Cash Balance



4.4 Current Rates

The Town's current water rate design consists of a quarterly base service charge, a quarterly O&M service charge, and a usage rate per 1,000 gallons. The two service charges vary by meter size and include a minimum usage that also varies by meter size. Any usage over the respective minimum for each meter size is charged the usage rate per 1,000 gallons. The Town also has Out of Town charges, which are double those paid by In Town customers.

Exhibit 4.4.1 shows the current water base service charges (including minimum usage) by meter size.

Exhibit 4.4.1 Current Water In Town Quarterly Base Service Charges

Meter Size	Minimum Usage	Charge
5/8	3,000	$19.62
3/4	4,500	$29.44
1	6,000	$39.29
1 1/2	15,000	$98.19
2	21,000	$137.43
4	30,000	$196.33
6	75,000	$490.82

Exhibit 4.4.2 shows the current water O&M service charges (including minimum usage) by meter size.

Exhibit 4.4.2 Current Water In Town Quarterly O&M Service Charges

Meter Size	Minimum Usage	Charge
5/8	3,000	$35.44
3/4	4,500	$53.15
1	6,000	$70.88
1 1/2	15,000	$177.16
2	21,000	$248.02
4	30,000	$354.30
6	75,000	$885.74

Exhibit 4.4.3 shows the current usage rate (per 1,000 gallons) for usage over the minimum for the respective meter size.

Exhibit 4.4.3 Current Water In Town Overage Rate (per 1,000 gallons)

	Rate
Overage Rate	$11.81

Like the water rate design, the Town's current sewer rate design consists of a quarterly base service charge, a quarterly O&M service charge, and a usage rate per 1,000 gallons.

Exhibit 4.4.1 shows the current sewer base service charges (including minimum usage) by meter size.

Exhibit 4.4.4 Current Sewer In Town Quarterly Base Service Charges

Meter Size	Minimum Usage	Charge
5/8	3,000	$18.41
3/4	4,500	$27.64
1	6,000	$36.85

Meter Size	Minimum Usage	Charge
1 1/2	15,000	$92.12
2	21,000	$128.96
4	30,000	$184.22
6	75,000	$460.54

Exhibit 4.4.2 shows the current sewer O&M service charges (including minimum usage) by meter size.

Exhibit 4.4.5 Current Sewer In Town Quarterly O&M Service Charges

Meter Size	Minimum Usage	Charge
5/8	3,000	$26.15
3/4	4,500	$39.22
1	6,000	$52.30
1 1/2	15,000	$130.74
2	21,000	$183.03
4	30,000	$261.46
6	75,000	$653.60

Exhibit 4.4.3 shows the current usage rate (per 1,000 gallons) for usage over the minimum for the respective meter size.

Exhibit 4.4.6 Current Sewer In Town Overage Rate (per 1,000 gallons)

	Rate
Overage Rate	$8.72

4.5 Projected Rates

In addition to projecting rates under the current design, an alternative rate design was developed to meet the goals and objectives of the Town.

Each rate design is described in further detail below.

4.5.1 Current Rate Design

As stated in Section 4.4, the Town's current water and sewer rate designs consist of quarterly fixed charges (which vary by meter size and minimum usage) and a usage rate charged per 1,000 gallons for any usage over the minimum.

For the five-year planning period, Exhibit 4.5.1, Exhibit 4.5.2, and Exhibit 4.5.3 and show the projected water rates under the current rate design, while Exhibit 4.5.4, Exhibit 4.5.5, and Exhibit 4.5.6 show the projected sewer rates under the current rate design.

Exhibit 4.5.1 Projected Water In Town Quarterly Base Service Charges – Current Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$19.62	$20.20	$20.80	$21.40	$22.05	$22.70
3/4	4,500	$29.44	$30.30	$31.20	$32.10	$33.10	$34.05
1	6,000	$39.29	$40.40	$41.60	$42.80	$44.10	$45.40
1 1/2	15,000	$98.19	$101.00	$104.00	$107.00	$110.25	$113.50
2	21,000	$137.43	$141.40	$145.60	$149.80	$154.35	$158.90
4	30,000	$196.33	$202.00	$208.00	$214.00	$220.50	$227.00
6	75,000	$490.82	$505.00	$520.00	$535.00	$551.25	$567.50

Exhibit 4.5.2 Projected Water In Town Quarterly O&M Service Charges – Current Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$35.44	$36.48	$37.56	$38.70	$39.87	$41.07
3/4	4,500	$53.15	$54.72	$56.34	$58.05	$59.81	$61.61
1	6,000	$70.88	$72.96	$75.12	$77.40	$79.74	$82.14
1 1/2	15,000	$177.16	$182.40	$187.80	$193.50	$199.35	$205.35
2	21,000	$248.02	$255.36	$262.92	$270.90	$279.09	$287.49
4	30,000	$354.30	$364.80	$375.60	$387.00	$398.70	$410.70
6	75,000	$885.74	$912.00	$939.00	$967.50	$996.75	$1,026.75

Exhibit 4.5.3 Projected Water In Town Overage Rate (per 1,000 gallons) – Current Design

	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Over Minimum Usage	$11.81	$12.16	$12.52	$12.90	$13.29	$13.69

Exhibit 4.5.4 Projected Sewer In Town Quarterly Base Service Charges – Current Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$18.41	$21.25	$24.55	$25.30	$26.05	$26.85
3/4	4,500	$27.64	$31.90	$36.85	$37.95	$39.10	$40.30
1	6,000	$36.85	$42.50	$49.10	$50.60	$52.10	$53.70
1 1/2	15,000	$92.12	$106.25	$122.75	$126.50	$130.25	$134.25
2	21,000	$128.96	$148.75	$171.85	$177.10	$182.35	$187.95
4	30,000	$184.22	$212.50	$245.50	$253.00	$260.50	$268.50
6	75,000	$460.54	$531.25	$613.75	$632.50	$651.25	$671.25

Exhibit 4.5.5 Projected Sewer In Town Quarterly O&M Service Charges – Current Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$26.15	$30.21	$34.89	$35.94	$37.02	$38.13
3/4	4,500	$39.22	$45.32	$52.34	$53.91	$55.53	$57.20
1	6,000	$52.30	$60.42	$69.78	$71.88	$74.04	$76.26
1 1/2	15,000	$130.74	$151.05	$174.45	$179.70	$185.10	$190.65
2	21,000	$183.03	$211.47	$244.23	$251.58	$259.14	$266.91
4	30,000	$261.46	$302.10	$348.90	$359.40	$370.20	$381.30
6	75,000	$653.60	$755.25	$872.25	$898.50	$925.50	$953.25

Exhibit 4.5.6 Projected Sewer In Town Overage Rate (per 1,000 gallons) – Current Design

	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Over Minimum Usage	$8.72	$10.07	$11.63	$11.98	$12.34	$12.71

4.5.2 Alternative Rate Design

After discussion with the Town, an alternative rate design was developed that consisted of two changes:

- Revised the meter size equivalents (and associated minimum usages) on which the quarterly service charges are based.
- Added service charges (and associated minimum usages) for 3 inch, 8 inch, 10 inch, and 12 inch meter sizes.

The Town's current rate design includes a quarterly service charge that is charged to customers based on meter size. The service charges have been designed this way because the cost of repairing and replacing larger meter sizes is higher than those of smaller meter sizes and since the size of a customer's meter represents the potential demand that they can place on the water system (e.g., a 4 inch meter can demand significantly more water than a 5/8 inch meter), it costs more to maintain the water supply and treatment facilities for a larger metered customer. While we agree with charging customers with larger meter sizes a larger service charge, we recommend changing the current meter size equivalents so they match the characteristics of the meters actually in use by the Town.

Exhibit 4.5.7 provides the total number of current accounts by meter size as well as a comparison of the Town's current meter equivalents and usage minimums with those of the alternative rate design.

Exhibit 4.5.7 Service Charge Equivalents and Usage Minimums

	Accounts		Equivalents		Usage Minimums	
Meter Size	Water	Sewer	Current	Alternative	Current	Alternative
5/8	1,435	1,434	1.0	1.0	3,000	3,000
3/4	26	25	1.5	1.4	4,500	4,200
1	4	4	2.0	2.2	6,000	6,600
1 1/2	21	21	5.0	5.0	15,000	15,000
2	17	17	7.0	6.4	21,000	19,200
3	-	-	-	20.0	-	60,000
4	3	3	10.0	50.0	30,000	150,000
6	-	-	25.0	80.0	75,000	240,000
8	-	-	-	160.0	-	480,000
10	-	-	-	260.0	-	780,000
12	-	-	-	320.0	-	960,000

Exhibit 4.5.7 shows that about 95% of all customers have a 5/8 inch meter and would continue to be charged a service charge equivalency factor of 1, while those with larger meters would be charged larger base service fee equivalencies than they currently are (or lower equivalencies for 3/4 inch and 2 inch meter sizes).

For the five-year planning period, Exhibit 4.5.8, Exhibit 4.5.9, and Exhibit 4.5.10 and show the projected water rates under the alternative rate design, while Exhibit 4.5.11, Exhibit 4.5.12, and Exhibit 4.5.13 show the projected sewer rates under the alternative rate design.

Exhibit 4.5.8 Projected Water In Town Quarterly Base Service Charges – Alt Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$19.62	$20.20	$20.80	$21.40	$22.05	$22.70
3/4	4,200	$29.44	$28.30	$29.15	$30.00	$30.90	$31.80
1	6,600	$39.29	$44.45	$45.80	$47.10	$48.55	$49.95
1 1/2	15,000	$98.19	$101.00	$104.00	$107.00	$110.25	$113.50

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
2	19,200	$137.43	$129.30	$133.15	$137.00	$141.15	$145.30
3	60,000	-	$404.00	$416.00	$428.00	$441.00	$454.00
4	150,000	$196.33	$1,010.00	$1,040.00	$1,070.00	$1,102.50	$1,135.00
6	240,000	$490.82	$1,616.00	$1,664.00	$1,712.00	$1,764.00	$1,816.00
8	480,000	-	$3,232.00	$3,328.00	$3,424.00	$3,528.00	$3,632.00
10	780,000	-	$5,252.00	$5,408.00	$5,564.00	$5,733.00	$5,902.00
12	960,000	-	$6,464.00	$6,656.00	$6,848.00	$7,056.00	$7,264.00

Exhibit 4.5.9 Projected Water In Town Quarterly O&M Service Charges – Alt Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$35.44	$36.48	$37.56	$38.70	$39.87	$41.07
3/4	4,200	$53.15	$51.08	$52.59	$54.18	$55.82	$57.50
1	6,600	$70.88	$80.26	$82.64	$85.14	$87.72	$90.36
1 1/2	15,000	$177.16	$182.40	$187.80	$193.50	$199.35	$205.35
2	19,200	$248.02	$233.48	$240.39	$247.68	$255.17	$262.85
3	60,000	-	$729.60	$751.20	$774.00	$797.40	$821.40
4	150,000	$354.30	$1,824.00	$1,878.00	$1,935.00	$1,993.50	$2,053.50
6	240,000	$885.74	$2,918.40	$3,004.80	$3,096.00	$3,189.60	$3,285.60
8	480,000	-	$5,836.80	$6,009.60	$6,192.00	$6,379.20	$6,571.20
10	780,000	-	$9,484.80	$9,765.60	$10,062.00	$10,366.20	$10,678.20
12	960,000	-	$11,673.60	$12,019.20	$12,384.00	$12,758.40	$13,142.40

Exhibit 4.5.10 Projected Water In Town Overage Rate (per 1,000 gallons) – Alt Design

	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Over Minimum Usage	$11.81	$12.16	$12.52	$12.90	$13.29	$13.69

Exhibit 4.5.11 Projected Sewer In Town Quarterly Base Service Charges – Alt Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$18.41	$21.25	$24.55	$25.30	$26.05	$26.85
3/4	4,200	$27.64	$29.75	$34.40	$35.45	$36.50	$37.60
1	6,600	$36.85	$46.75	$54.05	$55.70	$57.35	$59.10
1 1/2	15,000	$92.12	$106.25	$122.75	$126.50	$130.25	$134.25
2	19,200	$128.96	$136.00	$157.15	$161.95	$166.75	$171.85
3	60,000	-	$425.00	$491.00	$506.00	$521.00	$537.00
4	150,000	$184.22	$1,062.50	$1,227.50	$1,265.00	$1,302.50	$1,342.50
6	240,000	$460.54	$1,700.00	$1,964.00	$2,024.00	$2,084.00	$2,148.00
8	480,000	-	$3,400.00	$3,928.00	$4,048.00	$4,168.00	$4,296.00
10	780,000	-	$5,525.00	$6,383.00	$6,578.00	$6,773.00	$6,981.00
12	960,000	-	$6,800.00	$7,856.00	$8,096.00	$8,336.00	$8,592.00

Exhibit 4.5.12 Projected Sewer In Town Quarterly O&M Service Charges – Alt Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$26.15	$30.21	$34.89	$35.94	$37.02	$38.13
3/4	4,200	$39.22	$42.30	$48.85	$50.32	$51.83	$53.39
1	6,600	$52.30	$66.47	$76.76	$79.07	$81.45	$83.89
1 1/2	15,000	$130.74	$151.05	$174.45	$179.70	$185.10	$190.65
2	19,200	$183.03	$193.35	$223.30	$230.02	$236.93	$244.04
3	60,000	-	$604.20	$697.80	$718.80	$740.40	$762.60
4	150,000	$261.46	$1,510.50	$1,744.50	$1,797.00	$1,851.00	$1,906.50

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
6	240,000	$653.60	$2,416.80	$2,791.20	$2,875.20	$2,961.60	$3,050.40
8	480,000	-	$4,833.60	$5,582.40	$5,750.40	$5,923.20	$6,100.80
10	780,000	-	$7,854.60	$9,071.40	$9,344.40	$9,625.20	$9,913.80
12	960,000	-	$9,667.20	$11,164.80	$11,500.80	$11,846.40	$12,201.60

Exhibit 4.5.13 Projected Sewer In Town Overage Rate (per 1,000 gallons) – Alt Design

	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Over Minimum Usage	$8.72	$10.07	$11.63	$11.98	$12.34	$12.71

5. CUSTOMER BILL IMPACTS

5.1 Sample Quarterly Bills

Exhibit 5.1.1 demonstrates the FY 2024 quarterly bill impact of the recommended water and sewer rates for an In Town customers with a 5/8 inch meter.

Exhibit 5.1.1 Quarterly Bill Impact

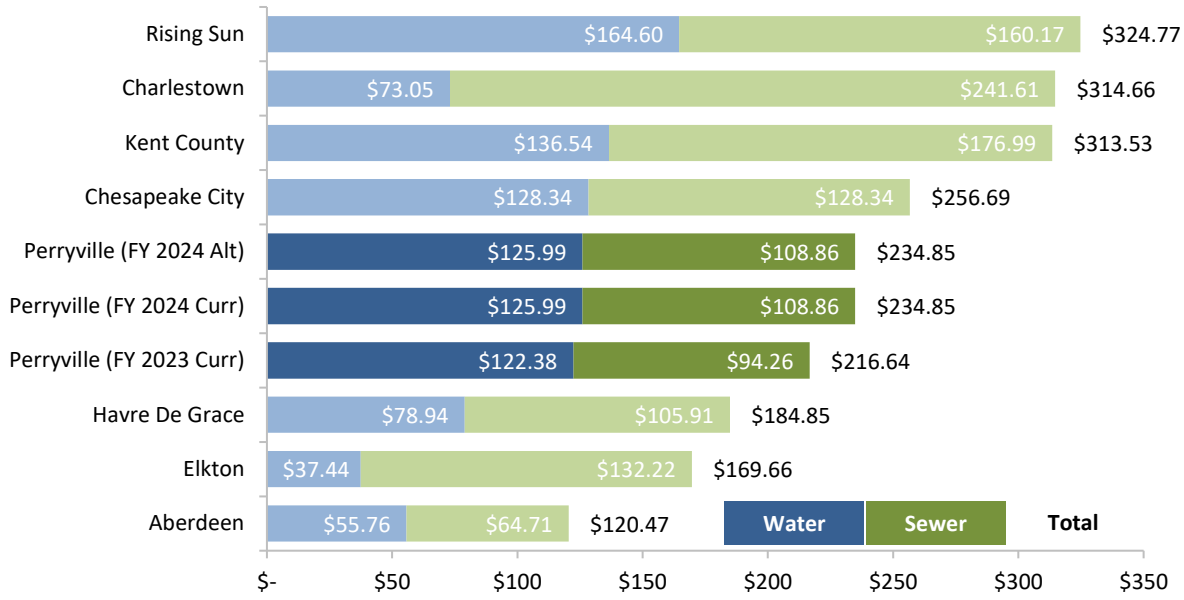
User (Percentile)	Quarterly Usage (gallons)	Current Bill	FY 2024 Bill Current Design	FY 2024 Bill Alt Design	FY 2024 Bill Increase Current Design	FY 2024 Bill Increase Alt Design
Small User (25th)						
Water Bill	5,500	$84.59	$87.08	$87.08	$2.50	$2.50
Sewer Bill		$66.36	$76.64	$76.64	$10.28	$10.28
Combined Bill		**$150.95**	**$163.72**	**$163.72**	**$12.77**	**$12.77**
Median User (50th)						
Water Bill	8,700	$122.38	$125.99	$125.99	$3.61	$3.61
Sewer Bill		$94.26	$108.86	$108.86	$14.60	$14.60
Combined Bill		**$216.64**	**$234.85**	**$234.85**	**$18.21**	**$18.21**
Large User (75th)						
Water Bill	13,200	$175.52	$180.71	$180.71	$5.19	$5.19
Sewer Bill		$133.50	$154.17	$154.17	$20.67	$20.67
Combined Bill		**$309.03**	**$334.89**	**$334.89**	**$25.86**	**$25.86**

Note that the FY 2024 bill for both the current rate design and alternative rate design are the same for an In Town customer with a 5/8 inch meter. This is because the service charges and rates are the same for a 5/8 inch customer regardless of rate design. However, this would not be the case for other meter sizes.

5.2 Quarterly Bill Comparison

It can be helpful to the Town to compare sample bills of various utilities to a bill calculated using the Town's current and recommended rates. Exhibit 5.2.1 compares an FY 2024 quarterly combined water and sewer bill for an In Town customer with a 5/8 inch meter and usage of 8,700 gallons (the median usage amount in Exhibit 5.1.1). It is important to note that the sample bills for the other utilities are calculated using current rates and do not reflect potential increases that may not be currently available at this time.

Exhibit 5.2.1 FY 2024 Quarterly In Town Water and Sewer Bill Comparison (5/8" meter; 8,700 gals)



6. FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The following findings, conclusions, and recommendations were developed during the study.

6.1 Findings

The following findings were developed during the study:

- Revenue collected at current rates is insufficient to cover the revenue requirements for most of the years from FY 2024 through FY 2028. Current water and sewer rates, if left in place, would not generate sufficient revenue to fund the revenue requirements.

Exhibit 6.1.1 Water Revenue Requirements and Current Revenue

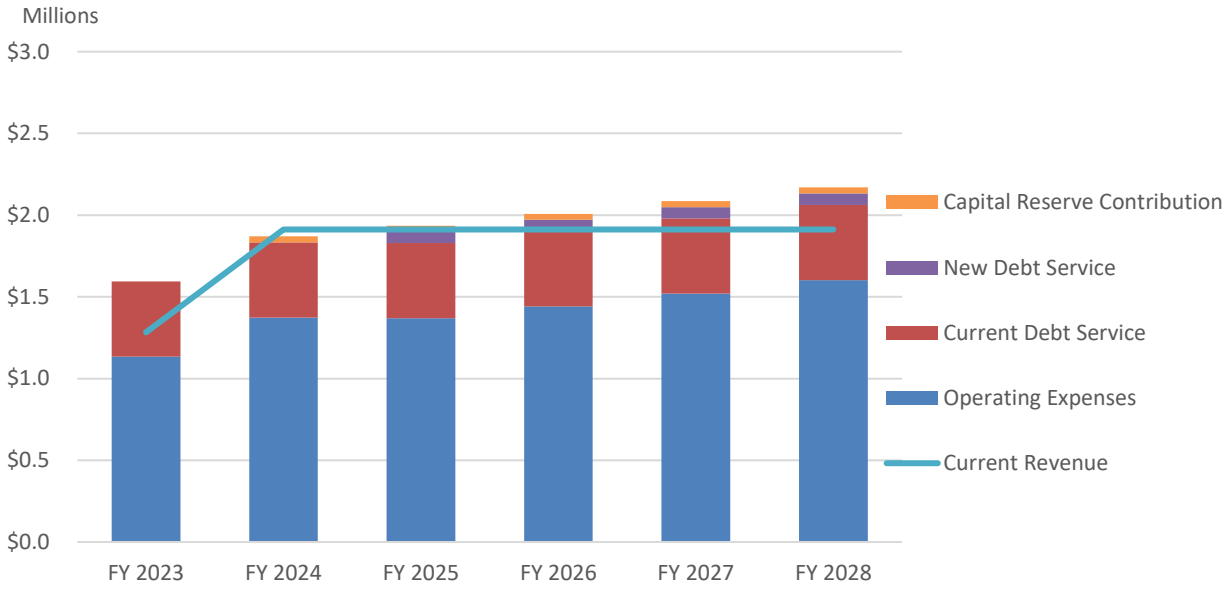
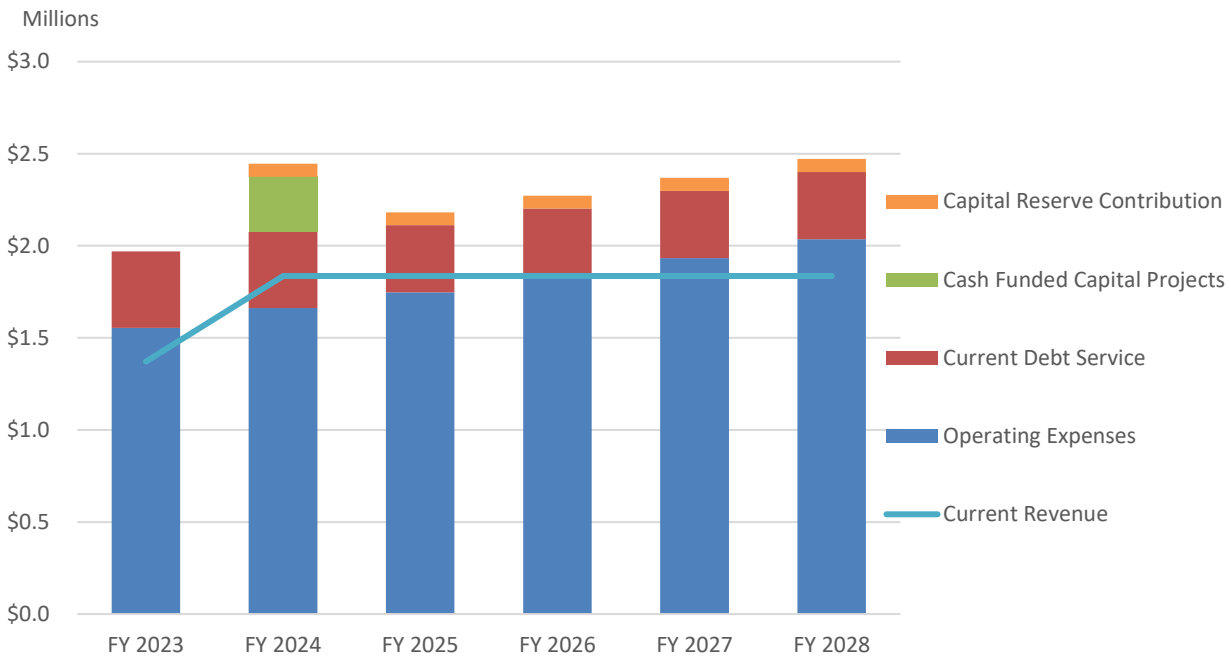


Exhibit 6.1.2 Sewer Revenue Requirements and Current Revenue



6.2 Conclusions

Based on our findings, the following conclusions were drawn:

- The Town of Perryville needs to increase water and sewer rates to keep revenues in line with expenses and to fund the required operating and capital costs identified.
- The Town should address the shortfalls in revenue by using multi-year rate adjustments. This will allow the Town to smooth rate increases over the planning period (as shown by proposed revenue in the exhibits below) and mitigate customer rate shock while meeting cash target requirements.

Exhibit 6.2.1 Water Revenue Requirements, Current Revenue, and Proposed Revenue

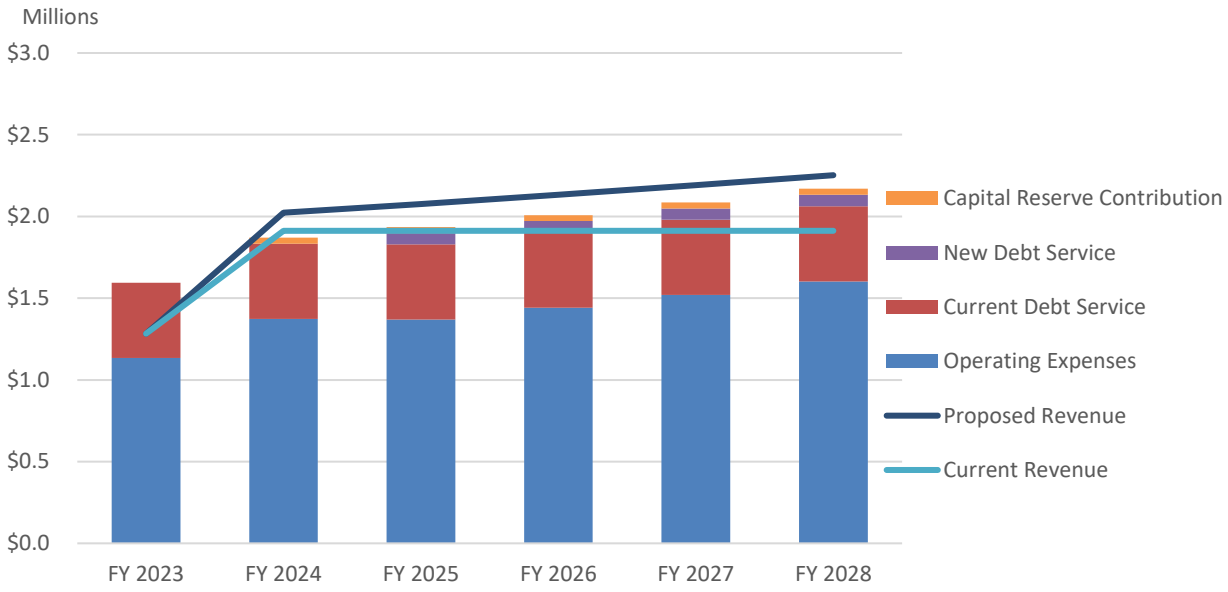
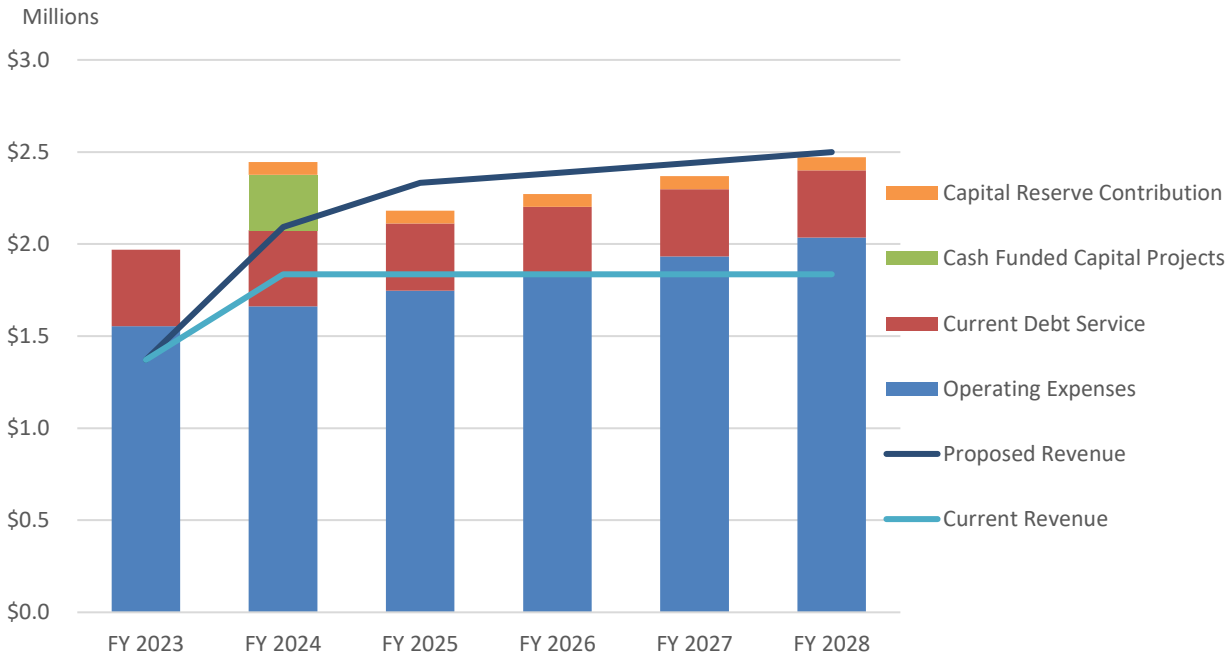


Exhibit 6.2.2 Sewer Revenue Requirements, Current Revenue, and Proposed Revenue



6.3 Recommendations

Based on our conclusions, the following recommendations were made:

- Adopt the alternative rate design and following recommended charges and rates for the next five years.

Exhibit 6.3.1 Projected Water Quarterly Base Service Charges – Alt Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$19.62	$20.20	$20.80	$21.40	$22.05	$22.70
3/4	4,200	$29.44	$28.30	$29.15	$30.00	$30.90	$31.80
1	6,600	$39.29	$44.45	$45.80	$47.10	$48.55	$49.95
1 1/2	15,000	$98.19	$101.00	$104.00	$107.00	$110.25	$113.50
2	19,200	$137.43	$129.30	$133.15	$137.00	$141.15	$145.30
3	60,000	-	$404.00	$416.00	$428.00	$441.00	$454.00
4	150,000	$196.33	$1,010.00	$1,040.00	$1,070.00	$1,102.50	$1,135.00
6	240,000	$490.82	$1,616.00	$1,664.00	$1,712.00	$1,764.00	$1,816.00
8	480,000	-	$3,232.00	$3,328.00	$3,424.00	$3,528.00	$3,632.00
10	780,000	-	$5,252.00	$5,408.00	$5,564.00	$5,733.00	$5,902.00
12	960,000	-	$6,464.00	$6,656.00	$6,848.00	$7,056.00	$7,264.00

Exhibit 6.3.2 Projected Water Quarterly O&M Service Charges – Alt Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$35.44	$36.48	$37.56	$38.70	$39.87	$41.07
3/4	4,200	$53.15	$51.08	$52.59	$54.18	$55.82	$57.50
1	6,600	$70.88	$80.26	$82.64	$85.14	$87.72	$90.36
1 1/2	15,000	$177.16	$182.40	$187.80	$193.50	$199.35	$205.35
2	19,200	$248.02	$233.48	$240.39	$247.68	$255.17	$262.85
3	60,000	-	$729.60	$751.20	$774.00	$797.40	$821.40
4	150,000	$354.30	$1,824.00	$1,878.00	$1,935.00	$1,993.50	$2,053.50
6	240,000	$885.74	$2,918.40	$3,004.80	$3,096.00	$3,189.60	$3,285.60
8	480,000	-	$5,836.80	$6,009.60	$6,192.00	$6,379.20	$6,571.20
10	780,000	-	$9,484.80	$9,765.60	$10,062.00	$10,366.20	$10,678.20
12	960,000	-	$11,673.60	$12,019.20	$12,384.00	$12,758.40	$13,142.40

Exhibit 6.3.3 Projected Water Overage Rate (per 1,000 gallons) – Alt Design

	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Over Minimum Usage	$11.81	$12.16	$12.52	$12.90	$13.29	$13.69

Exhibit 6.3.4 Projected Sewer Quarterly Base Service Charges – Alt Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$18.41	$21.25	$24.55	$25.30	$26.05	$26.85
3/4	4,200	$27.64	$29.75	$34.40	$35.45	$36.50	$37.60
1	6,600	$36.85	$46.75	$54.05	$55.70	$57.35	$59.10
1 1/2	15,000	$92.12	$106.25	$122.75	$126.50	$130.25	$134.25
2	19,200	$128.96	$136.00	$157.15	$161.95	$166.75	$171.85
3	60,000	-	$425.00	$491.00	$506.00	$521.00	$537.00
4	150,000	$184.22	$1,062.50	$1,227.50	$1,265.00	$1,302.50	$1,342.50
6	240,000	$460.54	$1,700.00	$1,964.00	$2,024.00	$2,084.00	$2,148.00
8	480,000	-	$3,400.00	$3,928.00	$4,048.00	$4,168.00	$4,296.00

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
10	780,000	-	$5,525.00	$6,383.00	$6,578.00	$6,773.00	$6,981.00
12	960,000	-	$6,800.00	$7,856.00	$8,096.00	$8,336.00	$8,592.00

Exhibit 6.3.5 Projected Sewer Quarterly O&M Service Charges – Alt Design

Meter Size	Min Usage	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
5/8	3,000	$26.15	$30.21	$34.89	$35.94	$37.02	$38.13
3/4	4,200	$39.22	$42.30	$48.85	$50.32	$51.83	$53.39
1	6,600	$52.30	$66.47	$76.76	$79.07	$81.45	$83.89
1 1/2	15,000	$130.74	$151.05	$174.45	$179.70	$185.10	$190.65
2	19,200	$183.03	$193.35	$223.30	$230.02	$236.93	$244.04
3	60,000	-	$604.20	$697.80	$718.80	$740.40	$762.60
4	150,000	$261.46	$1,510.50	$1,744.50	$1,797.00	$1,851.00	$1,906.50
6	240,000	$653.60	$2,416.80	$2,791.20	$2,875.20	$2,961.60	$3,050.40
8	480,000	-	$4,833.60	$5,582.40	$5,750.40	$5,923.20	$6,100.80
10	780,000	-	$7,854.60	$9,071.40	$9,344.40	$9,625.20	$9,913.80
12	960,000	-	$9,667.20	$11,164.80	$11,500.80	$11,846.40	$12,201.60

Exhibit 6.3.6 Projected Sewer Overage Rate (per 1,000 gallons) – Alt Design

	Current	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Over Minimum Usage	$8.72	$10.07	$11.63	$11.98	$12.34	$12.71

- Review rates and charges on an annual basis and revise as needed. Consider a full cost of service study for all rates and charges every four to five years. While it is recommended that rates and charges be adopted for five years so they do not have to be revisited and voted on every year by the Mayor and Board of Commissioners, it is financially prudent to review expenses and revenues annually to ensure actual values are relatively in line with those projected.

NewGen ◆ 911-A Commerce Road ◆ Annapolis, MD 21401 ◆ 410.266.9101 ◆ newgenstrategies.net