

MEMORANDUM

TO: Chuck Heshion, Chairman, Rockland Board of Sewer Commissioners

FROM: Frank E. Occhipinti, PE, Weston & Sampson

DATE: May 5, 2023

SUBJECT: Sewer Rate Study Summary Memo

In September 2021, The Town of Rockland retained Weston & Sampson to perform and complete a Sewer Rate Study. Weston & Sampson is pleased to present this memorandum, which summarizes the result of the analysis. This study was performed to provide the Town with estimated sewer rate increase options that will generate sufficient revenue to fund the operational costs, indirect costs, debt service costs, and capital improvements.

Background

The Town of Rockland consists of primary residential and urban commercial with a population of approximately 17,800, according to the 2020 U.S Census. The Sewer Department, managed by the elected Board of Sewer Commissioners, provides services to approximately 5,830 commercial, residential, industrial, and institutional accounts. The water system is managed separately under the Abington-Rockland Joint Water Works.

Sewer Utility

The Town's sewer system consists of approximately 340,000 linear feet (lf) of sanitary sewers. The Town owns a Wastewater Treatment Plant (WWTP) which services the Town of Rockland and some sewer users from the Town of Abington. The WWTP receives and treats an average daily flow of approximately 2.5 million gallons per day (MGD).

Existing Rate Structure and Charges

Sewer Enterprise Revenue relies solely on user fees and charges. The Town's sewer rates are billed quarterly (every three months) based on usage (per 100 cubic feet, or 1 ccf) and a basic charge with a \$55 combined minimum. Table 1 on the next page show examples of current sewer charges.

Table 1 - Example of Sewer User Bills (Effective January 1, 2023)

User Type	Usage	Current Bill
Low-End User	500	\$55.00
Small User	1,000	\$84.10
Average Residential User	2,075	\$163.76
Large User #1	5,000	\$380.50
Large User #2	10,000	\$751.00
Very Large User	100,000	\$7,420.00

Existing Rate Structure and Charges

The Town's current sewer rates are lower than most neighboring communities' and communities with similar populations. Weston & Sampson compared the Town's sewer rates to rates in neighboring communities (Abington, Braintree, Weymouth, Holbrook, and Hingham), and communities with similar populations (Amesbury, Bellingham, Concord, Foxborough, Millbury, and Westborough). It should be noted that some of the communities are MWRA-served communities. Table 4 below contains a comparison of typically average residential user sewer bills, assuming usages of 2,075 cubic feet or 20.75 ccf per quarter. Figure 1 on the next page shows the comparison in graphical format.

Table 2 - Average Sewer Bill (Based on average usage of 2,075 cubic feet)

Community	Sewer Rate (per ccf)	Service/Basic Charge (per bill)	Sewer Bill (per quarter)
Rockland	\$7.41	\$10.00	\$163.76
Abington	\$5.00	\$35.00	\$138.75
Braintree	\$8.00	\$21.25	\$187.25
Holbrook	\$6.60 for 1-2,000 cubic feet \$10.04 for over 2,000 cubic feet	\$50.00	\$189.53
Hingham	\$14.06	-	\$291.75
Weymouth	\$8.97	\$7.50	\$186.13
Amesbury	\$7.25	-	\$150.44
Bellingham ⁽¹⁾	\$6.92	\$42.60	\$186.17
Concord	\$12.36	-	\$256.47
Foxborough	\$10.44 (for usage over 750 gallons)	\$97.94 (minimum charge)	\$236.27
Millbury	\$9.95	-	\$206.43
Westborough	\$8.96	-	\$148.00

Note:

(1) Assume 3/4" meter size

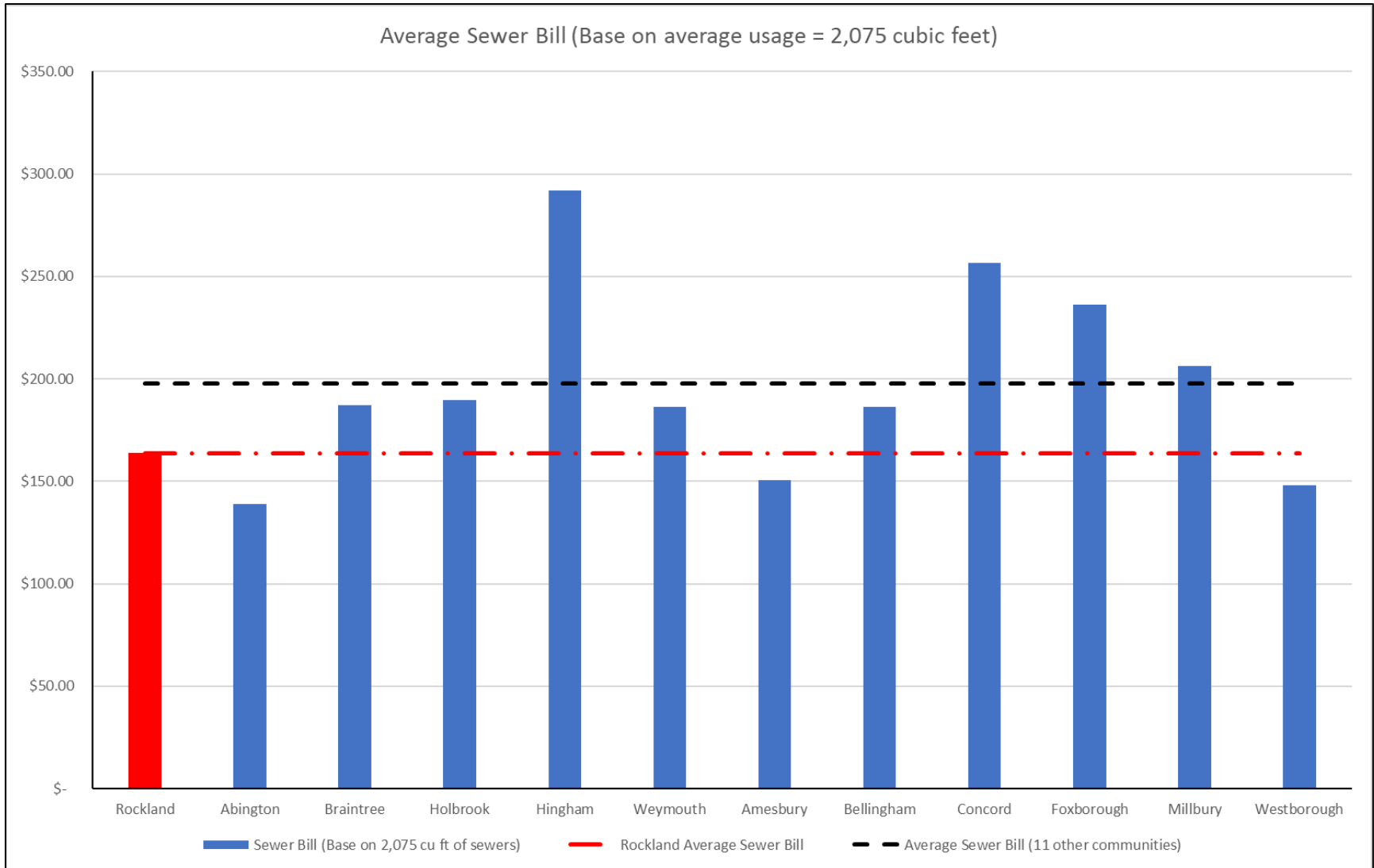


Figure 1 - Average Sewer Bill for Rockland and 11 Communities

Existing Expenses and Revenues

The Town's FY 2023 sewer budget was provided by the Town for this study. The voted budget for the Town's Sewer Department is \$3,006,470 with an additional \$552,553 for capital outlay totaling \$3,505,333 for FY 2023. The single largest expense for the Sewer Enterprise Fund is the contract between the Town and Veolia (formerly Suez Water Environment Services) to operate and maintain the Town's Wastewater Treatment Facility (WWTF) with \$2,100,000 budgeted for FY2023, approximately 60% of the total fiscal year budget.

Without any changes in revenue, as presented in the baseline financial analysis, total projected sewer revenues for FY 2023 are \$3,325,604 and projected expenditures are \$3,505,333, leaving a deficit of \$233,420 for FY 2023. However, since the Town has maintained strong retained earnings, the deficit does not negatively impact the Town's overall finances for this fiscal year.

The Sewer Department plans to begin a multi-year WWTF improvement/upgrade project, which is mandated as part of the Town's consent decree with the Environmental Protection Agency (EPA). The project is estimated at approximately \$80 million dollars, with design phase starting in FY 2024 and construction ending in FY 2033. The Sewer Enterprise is expecting to experience budgetary shortfalls because current projected revenue recovered from rates will not be sufficient to cover future expenditures. The Town should strongly consider rate action for FY 2023 and beyond to ensure sufficient revenue is realized from rates.

Capital Improvement Plan and Funding Sources

A Capital Improvement Plan (CIP) is a long-term planning document that outlines the Town's sewer infrastructure spending needs and priorities. The purpose of a CIP is to identify and prioritize capital projects, such as constructing new facilities, upgrading existing infrastructure, or purchasing new equipment, over a multi-year period.

The CIP typically covers a period of 3 to 5 years and serves as a roadmap for capital spending decisions. It helps the Town to allocate resources in an efficient and effective way, and to align their capital investments with their strategic goals and objectives. The CIP typically includes information about the estimated cost of each project, the timeline for completion, and the source of funding for each project.

For Rockland, the single most important and costly capital improvement project on the CIP is the WWTF upgrade as mentioned earlier. The cost for the upgrade, including design and construction, is estimated at approximately \$80 million dollars over 10 years. The last upgrade to the WWTF was done in 1977 and the planned upgrade is necessary for the Town to meet federal and state requirements. Another crucial capital improvement project on the CIP is Infiltration and Inflow (I/I) Remediation Projects, which include investigating, locating, and removing I/I from the Town's collection system.

The majority of the projects on the CIP will be funded by the Sewer Enterprise Fund. The State Revolving Fund (SRF) loan program is planned to be utilized to provide the Town with a low interest rate loan option, currently providing at 2% or lower for 20 years. Funding from the American Rescue Plan Act (ARPA) will also support some of projects on the CIP.

A draft CIP is provided below summarizing the Town's infrastructure spending needs, estimated costs, and funding sources. A more detailed CIP with cost breakdown is provided in Appendix A.

Table 3 - Town of Rockland Capital Improvement Plan

Project	Estimated Total Cost	Funding Source	Project Start Year	Project End Year
Inflow & Infiltration Remediation System	\$2,200,000	Sewer Enterprise Fund	Ongoing	
Inflow & Infiltration Annual Control Plan (I&I Investigation)	\$2,241,000	Sewer Enterprise Fund	FY2023	FY 2037
Inflow & Infiltration Reoperation	\$330,000	ARPA	FY 2023	FY 2023
Digester Building Gas Lines	\$350,000	Sewer Enterprise Fund ARPA	FY2023	FY 2024
Digester Recirculation Pumps	\$50,000	Sewer Enterprise Fund	FY 2025	FY 2025
New Heating System (WWTF Office Building)	\$150,000	Sewer Enterprise Fund Grant (up to \$50,000)	FY 2025	FY 2025
Generator	\$500,000	ARPA	FY 2024	FY 2024
Spruce Street Ejector Station	\$100,000	Sewer Enterprise Fund	FY 2024	FY 2024
Inflow & Infiltration Rehabilitation (I&I Removal, Every 4 Years)	\$6,000,000	SRF Loan	FY 2028	FY 2038
Pump Station Upgrade	\$200,000	SRF Loan	FY 2025	FY 2028
WWTF Upgrade Design & Bidding	\$2,500,000	Conventional Loan (\$1.5M) ARPA (\$1M)	FY 2023	FY 2024
Phosphorus/Tertiary Treatment Upgrade	\$12,500,000	SRF Loan	FY 2025	FY 2025
WWTP Upgrades	\$65,000,000	SRF Loan	FY 2026	FY 2033

Recommended Option for Rate Change

Upon reviewing the Town's CIP, the projections of this rate study expanded from a 5-year to a 15-year outlook to take into consideration future debt accumulated from the WWTF upgrade project. The recommended option for updated rates included in this report was designed to address the urgency to build up reserve in the Sewer Enterprise Fund to fund the WWTF upgrade project and repay future debt. In addition, the recommended rate change would ensure that retained earnings are not depleted by FY2038, the end of the study period. While Industry standards for retained earnings balance is between 10% and 25%, the recommended option targeted a retained earnings balance of 15% of total expenditures by the end of the 15-year period.

Since the analysis was a 15-year look-ahead, rates are presented for the next fifteen fiscal years, starting FY 2024. The recommended option aims to help the Town to achieve its goals of covering actual costs of services, maintaining healthy retained earnings, and ensuing long-term fiscal stability.

Baseline (“Do Nothing”) Option

A baseline “do nothing” option is provided as a hypothetical scenario where no action or rate change is taken, and the Sewer Department continues to operate as it currently does and performs the capital improvement work as planned. It is used as a comparison point for evaluating the effectiveness of the recommended rate change.

Figure 2 on the next page shows the projected retained earnings in the baseline “do nothing” scenario. As shown in Figure 2, under the baseline “do nothing” scenario, retained earnings remains healthy, reaching nearly 50% of total expenditures in FY 2024. However, as some of the CIP projects begin to take place, such as the WWTF upgrade project, retained earnings are exhausted by the end of FY 2025. Table 4 below presents the projected Sewer Enterprise Fund and Retained Earnings from FY 2023 to FY 2027 under this baseline scenario.

Table 4 - Projected Sewer Enterprise Fund and Retained Earnings (FY 2023 to FY 2027)

Baseline Scenario	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027
Surplus/Deficit	\$(233,420)	\$345,518	\$76,483	\$(630,704)	\$(1,503,091)
Projected Retained Earnings	\$1,276,547	\$1,622,065	\$1,067,844	\$(435,247)	\$(2,573,739)
Retained Earnings as % of Budget	35.9%	48.4%	29.5%	-10.1%	-49.5%
Target Retained Earnings as % of Budget	15.0%	15.0%	15.0%	15.0%	15.0%

As shown above, by FY 2026, both the Sewer Enterprise Fund and Retained Earnings are in deficit and would be unable to cover costs of services. The baseline “do nothing” option appears to be unacceptable.

Rate Change Option

Through careful evaluation and analysis, the recommended 15-year rate increase plan is as follows: the first 8-year period, a 10% increase per year is recommended, followed by a slower 7-year period increase. Increases to rates are presented in Table 5 below. This recommended plan is tailored to meet the Town’s needs. The higher increases during the first 8-year period is designed to build up reserve in order to fund the upcoming CIP projects. The slower rate increases during the latter 7-year period is expected to keep projected retained earnings from depleting and to show retained earnings trending towards the targeted balance of 15% of total expenditures by the end of FY 2038. Figure 3 on page 8 presents the projected retained earnings in the recommended rate increases scenario.

Table 5 - Recommended Rate Increases

Fiscal Year	FY 2024 – FY 2031	FY 2032 – FY 2033	FY 2034	FY 2035 – FY 2038
Recommended Rate Increase	10%	7%	5%	2%

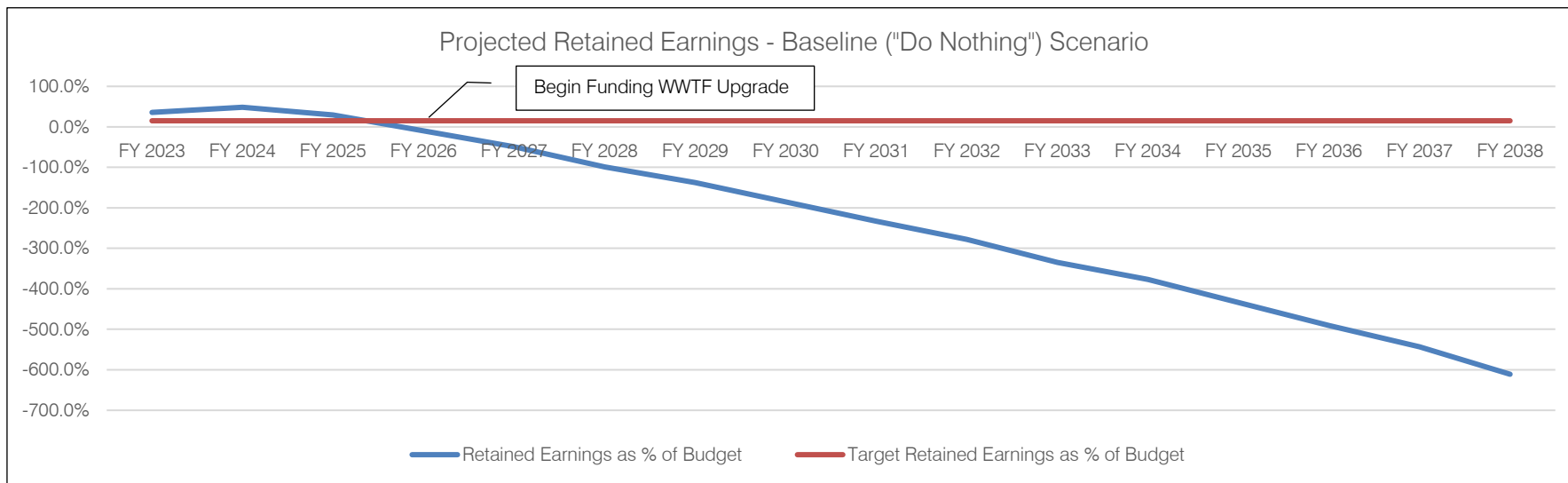


Figure 2 - Projected Retained Earnings (Baseline "Do Nothing" Scenario)

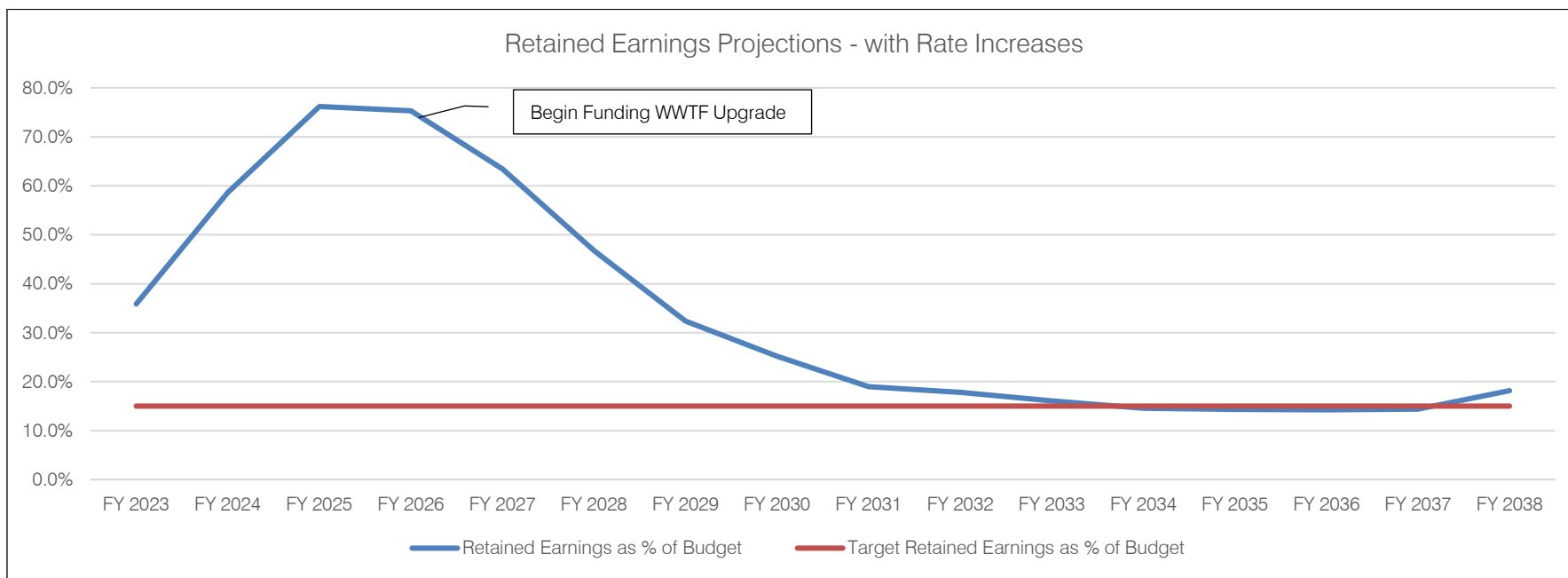


Figure 3 - Projected Retained Earnings (with Recommended Rate Increases)

Table 6 below presents the quarterly and annual sewer bill impact for average users after recommended rate increases from FY 2024 to FY 2028.

Table 6 - Bill Impacts for Average Customers (quarterly and annually)

User Impact (per bill) – Sewer Bills Only			Bill Increase Compared to Previous Year				
Bill Type	Usage (cubic feet)	Current Bill	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Average Residential User Quarterly Bill	2,075	\$163.76	+ \$15.38	+ \$16.91	+ \$18.60	+ \$20.47	+ \$22.51
Average Residential User Annual Bill	8,300	\$655.03	+ 61.52	+ \$67.64	+ \$74.40	+ \$81.88	\$ 90.04

Summary

The results of this rate study can be summarized in a chart and is provided in Appendix B. The chart, which presents the actual and projected sewer cash flow with recommended rate changes from FY 2020 to FY 2038, includes several financial parameters, such as targeted retained earnings, operating expenses, sewer enterprise funded capital, debt, and revenue.

It should be noted that revenues and expenses are likely to change over time. Currently, the Town is unable to accept additional sewer flows due to capacity limitations in the collection system. However, as the Town implements and performs I/I reduction projects to address capacity issues, new connections and developments may be accepted by the Town in the future, which would lead to increase in revenue.

It is important for the Town to continue to fund the projects on its Capital Improvement Plan (CIP). The Town will undoubtedly benefit from continued capital investment, including the wastewater treatment facility upgrade and I/I reduction projects. The projects provided in this study are based on many assumptions. We recommend that the sewer analyses conducted for the Town are reviewed and updated each year. Assumptions, for example, planned expenditures and consumption trends, change year-to-year and it is important to capture the changes to ensure the rate plans presented are based on the most accurate information available at the time.

APPENDIX A

**TOWN OF ROCKLAND
SANITARY SEWER SYSTEM
CAPITAL IMPROVEMENT PLAN (CIP)**

Capital Improvement Plan - Sanitary Sewer System (Rate Study, FY 2023 - FY 2038)
Town of Rockland, Massachusetts



Item	Description	Funding Source	Estimated Cost	Project Start Year	Project End Year	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	FY 2036	FY 2037	FY 2038
Collection System Items																					
1	Inflow & Infiltration Remediation System	Sewer Enterprise Fund	\$ 2,200,000.00	Ongoing		\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00					
2	Inflow & Infiltration Annual Control Plan (I&I Investigation)	Sewer Enterprise Fund	\$ 2,241,000.00	FY 2023	FY 2037	\$ 150,000.00		\$ 155,000.00	\$ 160,000.00	\$ 200,000.00		\$ 170,000.00	\$ 175,000.00	\$ 180,000.00	\$ 220,000.00		\$ 191,000.00	\$ 197,000.00	\$ 203,000.00	\$ 240,000.00	
3	Inflow & Infiltration Reoperation	ARPA	\$ 330,000.00	FY 2023	FY 2023	\$ 330,000.00															
4	Inflow & Infiltration Rehabilitation (I&I Removal, Every 4 Years)	SRF Loan	\$ 6,000,000.00	FY 2028	FY 2038						\$ 2,000,000.00				\$ 2,000,000.00					\$ 2,000,000.00	
Sewer Pump Station Items																					
1	Spruce Street Ejector Station	Sewer Enterprise Fund	\$ 100,000.00	FY 2024	FY 2024		\$ 100,000.00														
2	Pump Station Upgrade - Phase 2	SRF Loan	\$ 50,000.00	FY 2025	FY 2025			\$ 50,000.00													
3	Pump Station Upgrade - Phase 3	SRF Loan	\$ 50,000.00	FY 2026	FY 2026				\$ 50,000.00												
4	Pump Station Upgrade - Phase 4	SRF Loan	\$ 50,000.00	FY 2027	FY 2027					\$ 50,000.00											
5	Pump Station Upgrade - Phase 5	SRF Loan	\$ 50,000.00	FY 2028	FY 2028						\$ 50,000.00										
Wastewater Treatment Plant Item																					
1	Digester Building Gas Lines	Sewer Enterprise Fund + ARPA	\$ 350,000.00	FY2023	FY 2024	\$ 330,000.00	\$ 20,000.00														
2	Digester Recirculation Pumps	Sewer Enterprise Fund	\$ 50,000.00	FY 2025	FY 2025			\$ 50,000.00													
3	New Heating System (WWTF Office Building)	Sewer Enterprise Fund + Grant (up to \$50,000)	\$ 150,000.00	FY 2025	FY 2025			\$ 150,000.00													
4	Generator	ARPA	\$ 500,000.00	FY 2024	FY 2024			\$ 500,000.00													
5	WWTF Upgrade Design & Bidding	SRF Loan	\$ 1,500,000.00	FY 2023	FY 2024	\$ 1,500,000.00															
6	Phosphorus/Tertiary Treatment Upgrade	SRF Loan	\$ 12,500,000.00	FY 2025	FY 2025			\$ 12,500,000.00													
7	WWTP Upgrades	SRF Loan	\$ 65,000,000.00	FY 2026	FY 2033				\$ 12,000,000.00	\$ 12,000,000.00	\$ 11,000,000.00	\$ 7,000,000.00	\$ 7,000,000.00	\$ 6,000,000.00	\$ 5,000,000.00	\$ 5,000,000.00					
Total =			\$ 91,121,000.00			\$ 1,010,000.00	\$ 1,820,000.00	\$ 13,605,000.00	\$ 12,410,000.00	\$ 12,450,000.00	\$ 13,250,000.00	\$ 7,370,000.00	\$ 7,375,000.00	\$ 6,380,000.00	\$ 5,420,000.00	\$ 7,200,000.00	\$ 191,000.00	\$ 197,000.00	\$ 203,000.00	\$ 240,000.00	\$ 2,000,000.00
			Updated 5/4/2023																		

APPENDIX B

ACTUAL AND PROJECTED SEWER CASH FLOW WITH RECOMMENDED RATE CHANGES FY 2020 TO FY 2038

Actual and Projected Sewer Cash Flow with Recommended Rate Changes - FY 2020 to FY 2038

