

Utility Rate Study

TOWN OF COLLBRAN



October 2020

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UTILITY RATE STUDY

TOWN OF COLLBRAN

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1.0 Water Service Rate Study

SGM recommends revenue and Water Fund reserve targets to maintain operations, fund necessary capital improvement projects, fund debt payments with a secure source of revenue, and maintain an adequate emergency reserve balance based on input from the Town Trustees. The following section includes a summary of current and future expenditures and sources of revenue associated with the Town's water system operations. SGM assessed the current water service rates and presents revenue alternatives to meet Town goals in this section of the report. The Town has budgeted for a Water Fund balance of \$519,685 at the end of 2020.

1.1 Existing Water Service Rate Summary

The Town's water service rate structure utilizes an increasing block model with a per unit flat fee, three tiers of rates, and an additional surcharge for customers outside of corporate limits. The rates are summarized in Table 1-1.

Table 1-1. Existing Water Service Rate Structure

Fee Component	Rate	Notes
Flat Fee	\$10.61 per unit	
Tier 1	\$5.84/1,000 gallons	For water use up to 6,000 gallons
Tier 2	\$6.62/1,000 gallons	For water use between 6,000 gallons and 12,000 gallons
Tier 3	\$7.58/1,000 gallons	For water use exceeding 12,000 gallons
Outside Corporate Limits	150%	150% of in-Town rates
Bulk Water Sales	\$15.91/1,000 gallons	

The Town adopted this rate structure in 2019, using the prior rate structure the Town collected the following revenue during the past three years:

- 2017: \$216,991
- 2018: \$234,793
- 2019: \$215,392

The Town has budgeted for \$215,392 in revenue collected from water service fees in 2020. Based on previous billing data, the estimated distribution of water service fees by fee component is shown in Table 1-2.

Table 1-2. Estimated Revenue by Fee Component for 2020

Fee Component	Rate	Percentage of Total Revenue
Flat Fee	\$10.61 per unit	11%
Tier 1	\$5.84/1,000 gallons	24%
Tier 2	\$6.62/1,000 gallons	8%
Tier 3	\$7.58/1,000 gallons	38%
Outside Corporate Limits	150%	4%
Bulk Water Sales	\$15.91/1,000 gallons	15%

1.2 Expenditures

Table 1-3. 2020 Water Expenditures Summary

Expense Category	Annual Expense 2020
Operations and Maintenance	\$ 41,417
Combined Utility Expenses	\$ 91,114
Water Capital Projects	\$360,000
Total Expenses 2020	\$492,531

1.2.1 Operations and Maintenance (O&M)

O&M expenditures include supplies (including chemicals), repairs, and purchased services. 2020 O&M expenditures are based on the Town's 2020 budget. For the purposes of this study, an annual O&M costs of \$41,417 was used with a 2% annual increase in expenses.

1.2.2 Combined Utility Expenses

The combined utility expenses include employee expenses, administrative costs, and other costs that are shared between the water and wastewater systems. For the purposes of this study, annual combined utility expenses for the water system of \$91,114 was used for this study with a 2% annual increase.

1.2.3 Water Capital Outlay

The Town has budgeted for \$360,000 in water capital expenses for 2020. With \$150,000 in grant funding, the Town will be responsible for \$210,000 in water capital outlay. The water capital outlay for future years has been determined based on the CIP, expected grant funding, and project prioritization with input from the Town.

1.2.4 Debt Service

The Town typically seeks both grant and loan funding for larger capital projects. Typically, the anticipated capital costs are sought to be covered by 50% grant funding, 25% loans, and 25% capital outlay by the Town. Debt service to those loans are modeled in this study with 15-year payback periods and 3.2% interest rates.

1.3 Revenues

The revenues modeled into the utility rate study include those generated by water services fees, grant funding, and loans. Tap fees were considered an unreliable source of revenue given the Town's low growth rate and were, therefore, not included in this study. Table 1-4 details the budgeted revenues for 2020.

Table 1-4. 2020 Water Revenues Summary

Revenue Category	Annual Revenue 2020
Water Sales	\$ 215,392
Grant Funding	\$ 150,000
Total Revenues 2020	\$ 362,392

1.3.1 Water Service Rates

As detailed in Section 1.1, the current water service rate structure is expected to generate \$215,392 in revenues for 2020. Adjustments to this rate structure were modeled for this utility rate study to maintain a proper Water Fund balance for O&M, emergency funds, and the planned capital projects.

1.4 Water Cash Flow Model (CFM)

The CFM is the critical component of this utility rate study, incorporating historic and expected expenses, revenues, and rate structures to determine how changes in the rate structure will benefit the Town. The CFM is built as a tool that can be easily modified and updated year-by-year to provide real-time budgeting feedback, determining how modifications to the water rate structure, capital projects, increased operating costs, etc. will impact the Town's Water Fund. All of the alternatives evaluated in this section assume a 2% annual increase in operating costs.

1.4.1 Alternative 1 – No Change in Water Service Rate Structure

Figures 1-1.A and 1-1.B show projections of the water revenues, expenses, and Water Fund reserves if the current water service rate structure remains unchanged indefinitely. This projection includes the capital projects planned for 2020 through 2023 and assumes \$100,000 in capital outlay for water projects for 2024-2034.

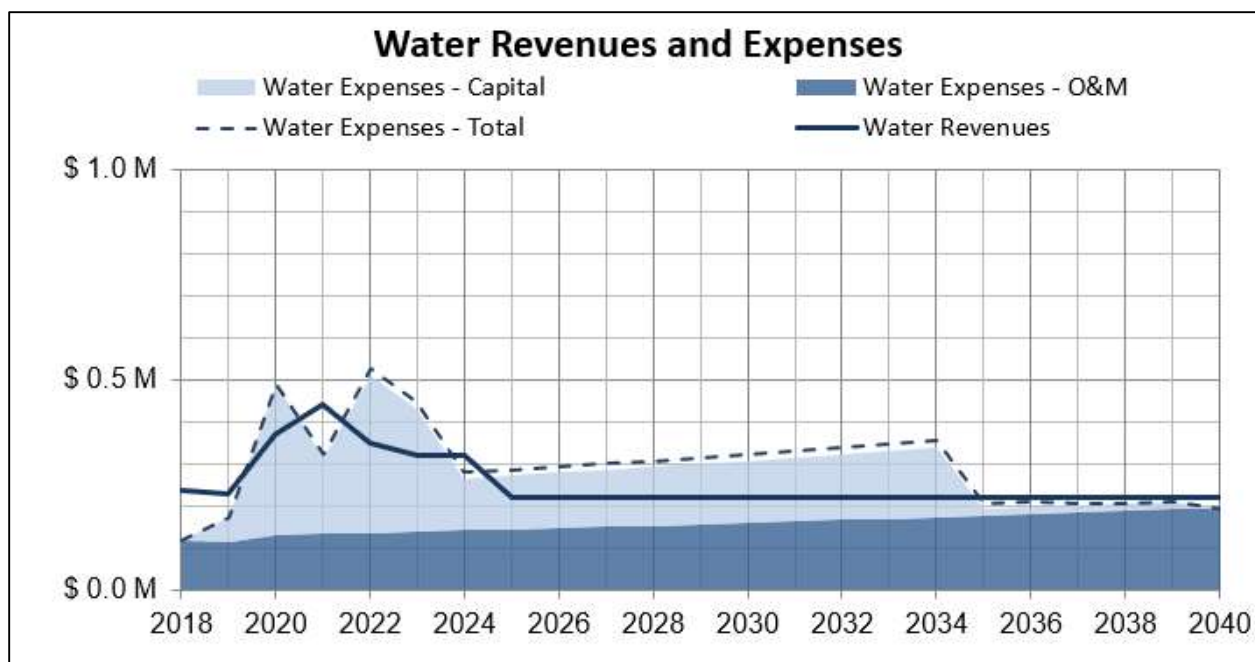


Figure 1-1.A. Water Revenues and Expenses – No Change in Water Service Rate Structure

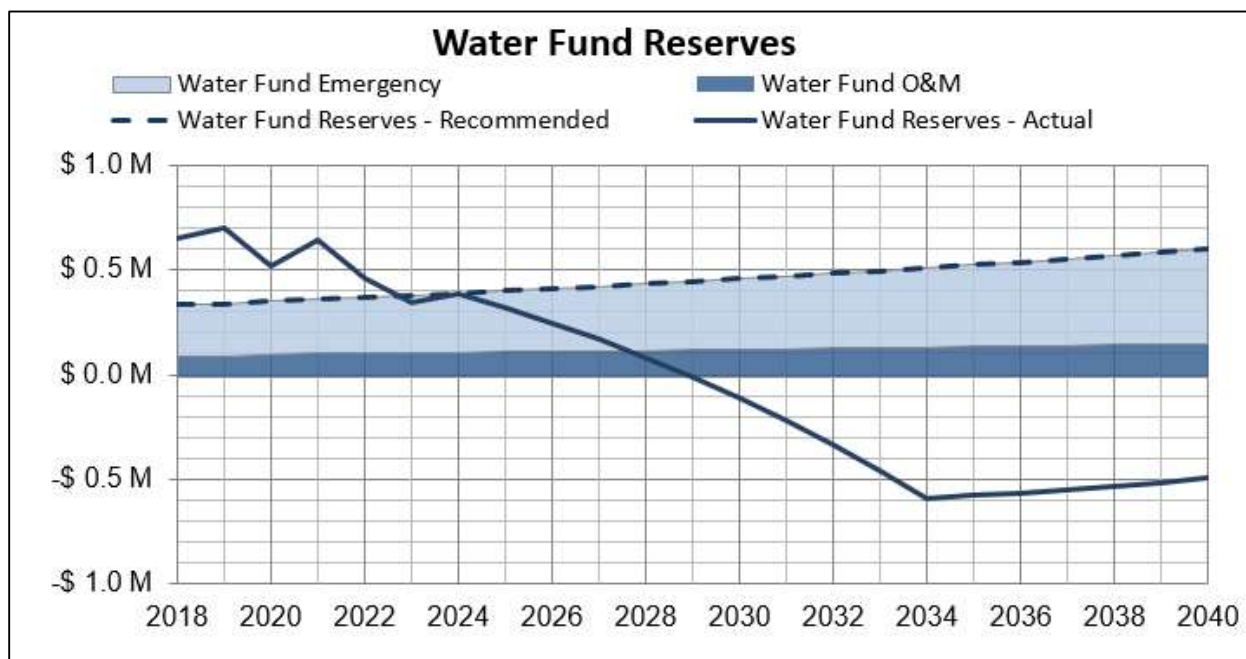


Figure 1-1.B. Water Fund Reserves – No Change in Water Service Rate Structure

As shown in Figure 1-1.B, without changes to the rate structure the Water Fund will drop below the recommended reserve amount in 2022 and eventually drop below zero in 2029. This is an expected outcome as operating costs rise and capital projects are implemented.

1.4.2 Alternative 2 – Constant Inflation-Based Rate Increase

Figures 1-2.A and 1-2.B show projections of the water revenues, expenses, and Water Fund reserves if the water service rate structure increases with inflation, assumed at 2% annually.

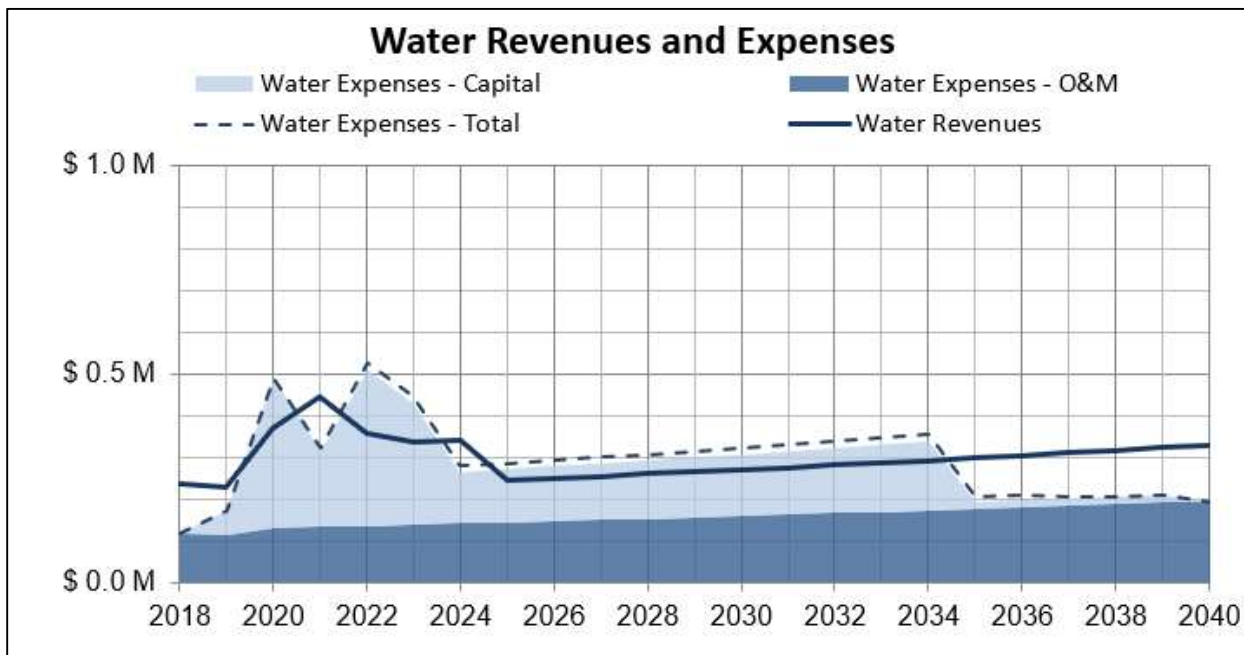


Figure 1-2.A. Water Revenues and Expenses – Inflation-Based Rate Increases

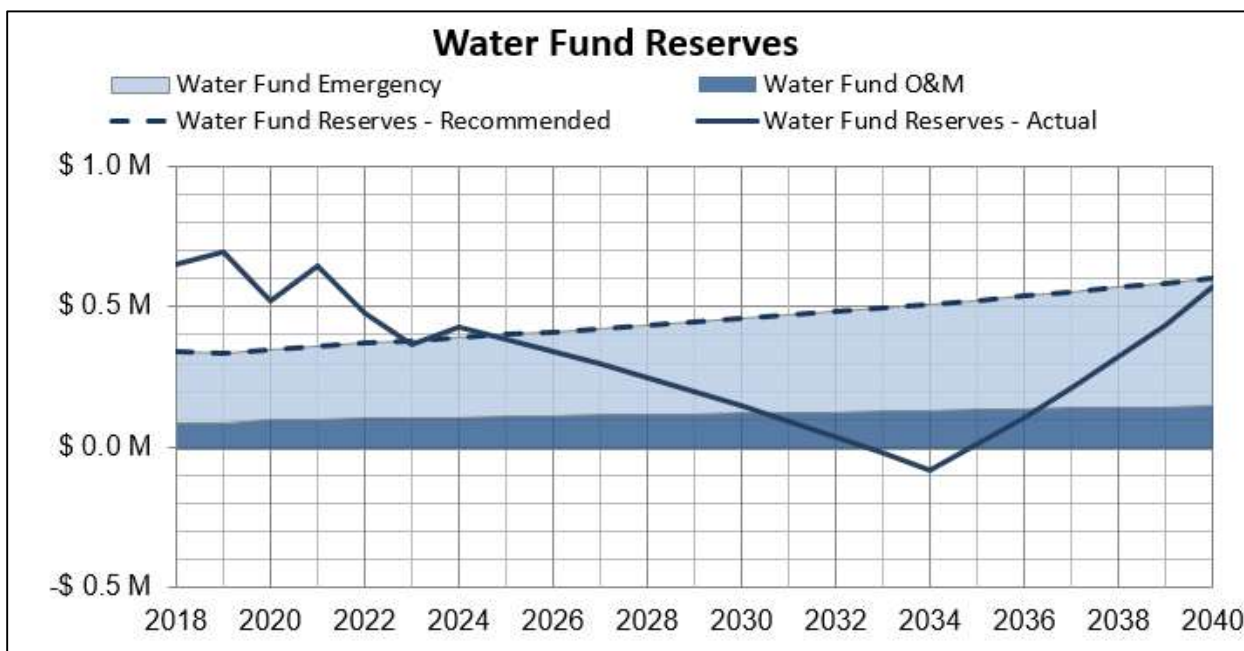


Figure 1-2.B. Water Fund Reserves – Inflation-Based Rate Increases

As shown in Figure 1-2.B, the Water Fund will also continually drop in Alternative 2, but at a slower rate than Alternative 1. Alternative 2 would see the Water Fund

drop below the recommended reserve amount in 2023 and drop below zero in 2032.

1.4.3 Alternative 3 – Moderate Short-Term Rate Increase

Alternative 3 includes moderate short-term rate increases, 5% annually for 2021-2025, and inflation based rate increases for 2026+. Figures 1-3.A and 1-3.B show projections of the water revenues, expenses, and Water Fund reserves for Alternative 3.

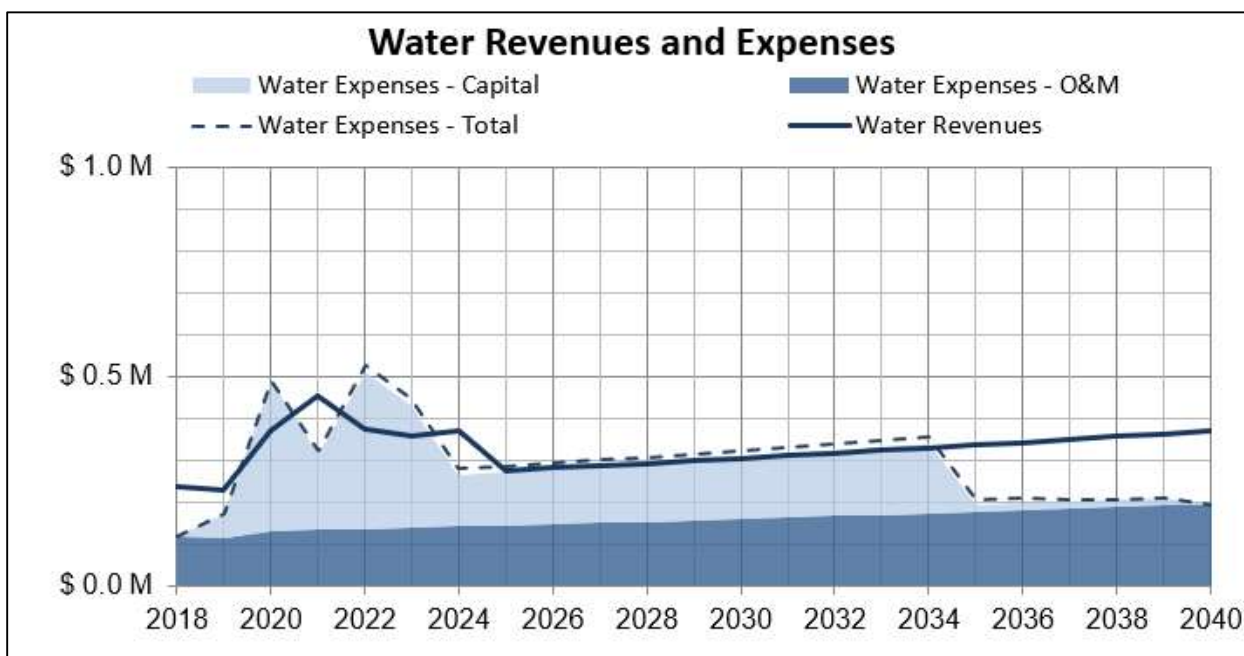


Figure 1-3.A. Water Revenues and Expenses – Moderate Short-Term Rate Increases

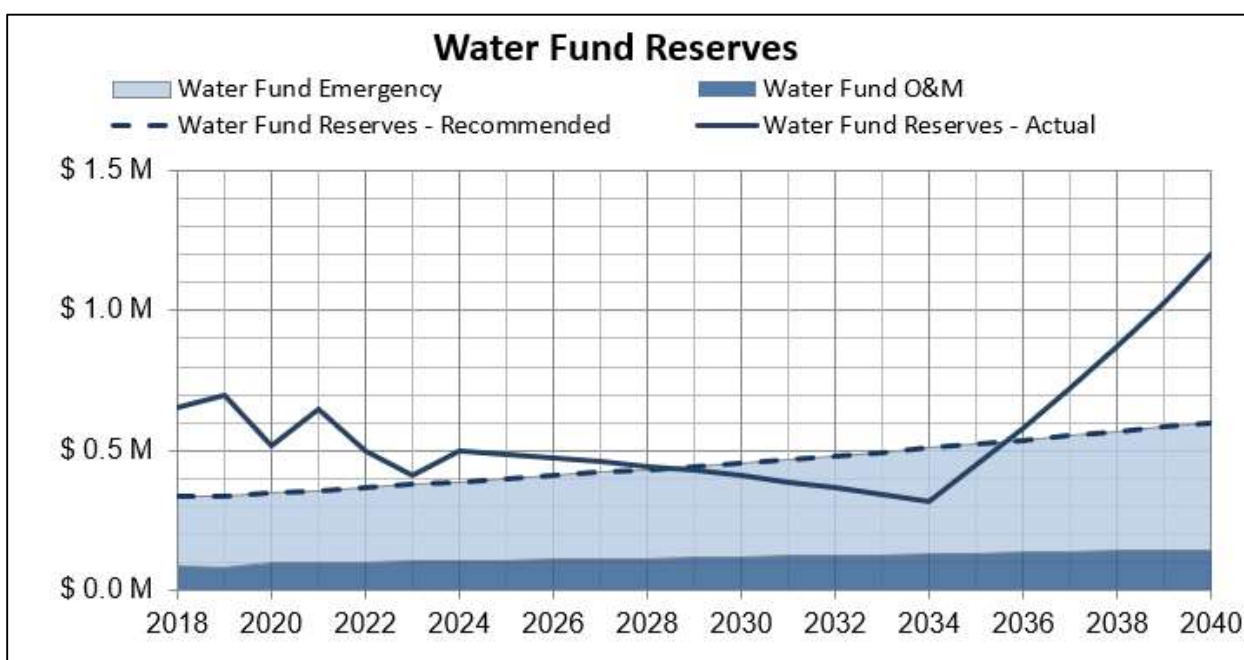


Figure 1-3.B. Water Fund Reserves – Moderate Short-Term Rate Increases

As shown in Figure 1-3.B, the Water Fund will slowly decrease over time with the Alternative 3 rate increases, though not nearly as quickly as projected in Alternatives 1 and 2. The rise in Water Fund reserves shown in years 2034+ is due to no capital project expenses being entered into the CFM for those years. While that is unlikely, it does show how revenue building years (those with fewer or no capital projects) can add reserves to the Water Fund effectively. A combination of the Alternative 3 rate increases (moderate short-term increases and inflation based rate increases) with strategic revenue building years could possibly allow the Town to maintain adequate Water Fund reserves.

1.4.4 Alternative 4 – High Short-Term Rate Increase

Alternative 4 includes high short-term rate increases, 10% annually for 2021-2024, and inflation based rate increases for 2025+. Figures 1-4.A and 1-4.B show projections of the water revenues, expenses, and Water Fund reserves for Alternative 4.

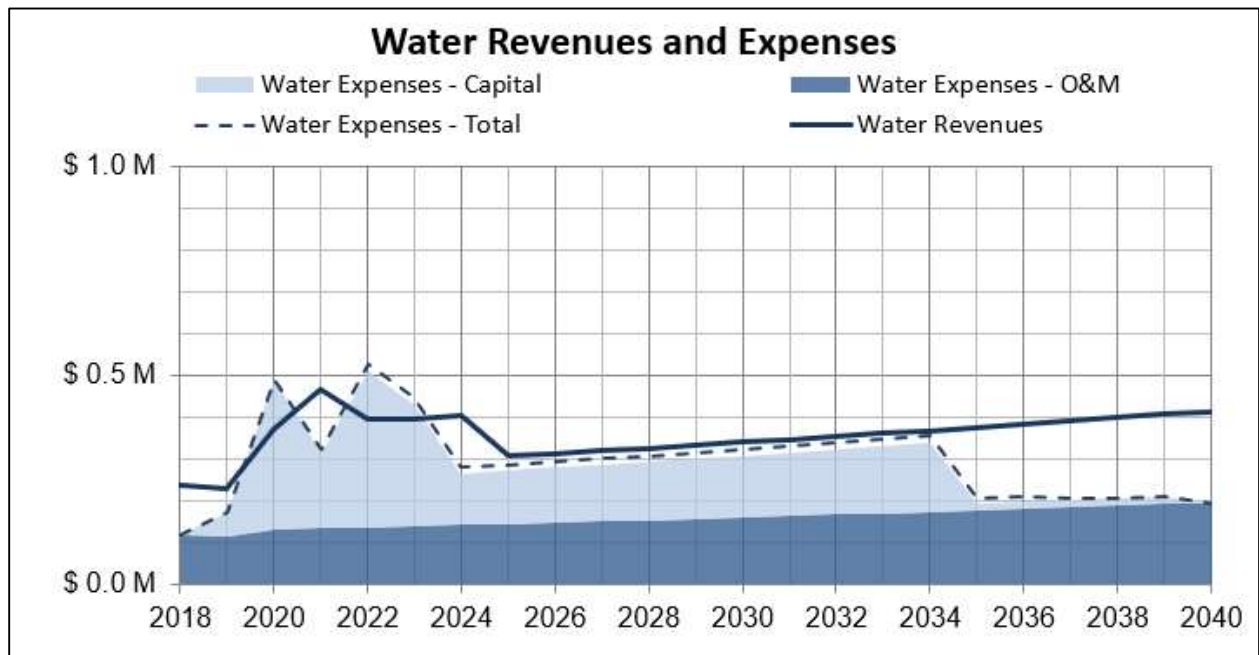


Figure 1-4.A. Water Revenues and Expenses – High Short-Term Rate Increases

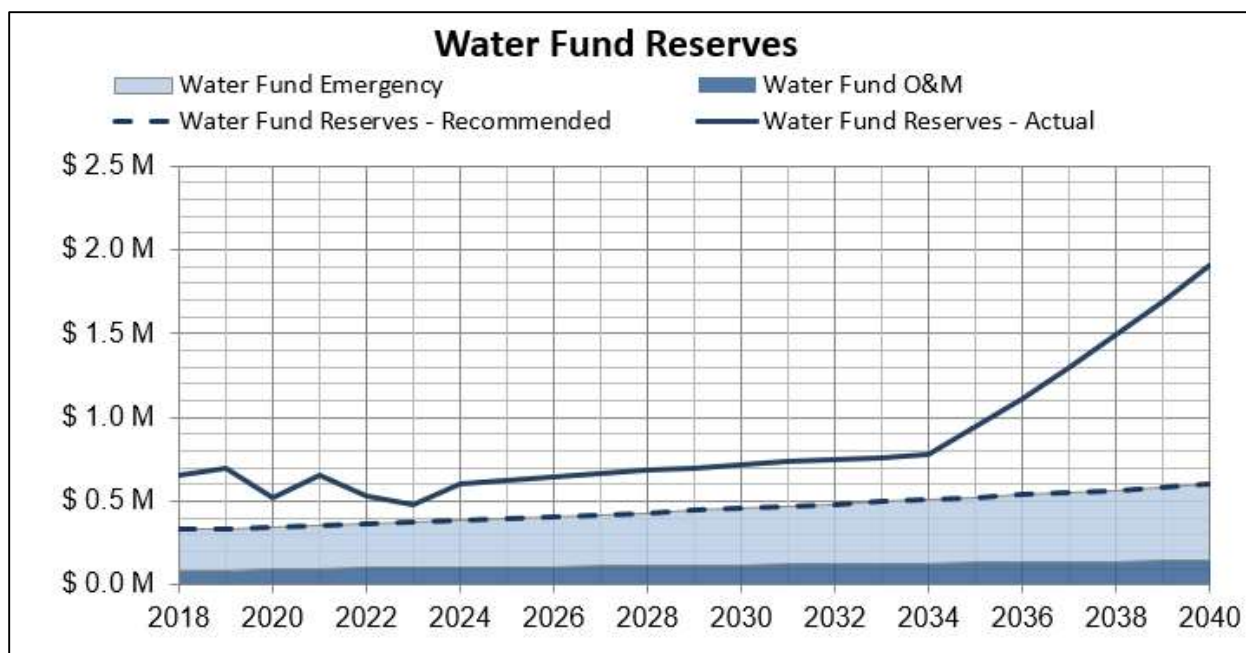


Figure 1-4.B. Water Fund Reserves – High Short-Term Rate Increases

As shown in Figure 1-4.B, the Town would be projected to maintain adequate Water Fund reserves indefinitely, without the need for revenue building years, if the Alternative 4 rate increases were implemented.

1.5 Discussion

Section 1.4 details multiple alternatives for water service rate increases, each to varying effectiveness. Without a program to increase rates, it is likely the Town's Water Fund reserves would fully deplete within 3-5 years if the planned capital projects were completed. As such, it is prudent for the Town to incorporate a program for raising rates in order to maintain adequate Water Fund reserves. Alternative 3, moderate short-term rate increases (5% annually for 2021-2025) and inflation-based rate increases (~2% annually for 2026+), combined with strategic revenue building years or years with fewer capital projects provides a program that would likely maintain adequate Water Fund reserves while avoiding steep increases in water service rates.

The CFM is meant to be a tool that is continually updated with actual data, updated budgets, and proposed capital improvement projects to provide real-time feedback to the Town on the current and forecasted states of the Water Fund. Once a utility rate program is selected, the Town can update and review the CFM to determine if any changes to the program would be beneficial on a year-to-year basis.

2.0 Sewer Service Rate Study

SGM recommends revenue and Sewer Fund reserve targets to maintain operations, fund necessary capital improvement projects, fund debt payments with a secure source of revenue, and maintain an adequate emergency reserve balance based on input from the Town Trustees. The following section includes a summary of current and future expenditures and sources of revenue associated with the Town's water system operations. SGM assessed the current water service rates and presents revenue alternatives to meet Town goals in this section of the report. The Town has budgeted for a Sewer Fund balance of \$119,233 at the end of 2020.

2.1 Existing Sewer Service Rate Summary

The Town's sewer service rate structure utilizes an increasing block model with a per unit flat fee and two rate tiers. The rates are summarized in Table 2-1.

Table 2-1. Existing Sewer Service Rate Structure

Fee Component	Rate	Notes
Flat Fee	\$10.00 per unit	
Tier 1	\$18.39/unit	For water use up to 10,000 gallons of monthly water use
Tier 2	\$5.41/1,000 gallons	For water use/month over 10,000 gallons per unit

The Town adopted this rate structure in 2019, using the prior rate structure the Town collected the following revenue during the past three years:

- 2017: \$126,498
- 2018: \$134,331
- 2019: \$134,928

The Town has budgeted for \$135,029 in revenue collected from sewer service fees in 2020.

2.2 Expenditures

Table 2-2. 2020 Sewer Expenditures Summary

Expense Category	Annual Expense 2020
Operations and Maintenance	\$ 35,977
Combined Utility Expenses	\$ 91,114
Sewer Capital Projects	\$158,000
Total Expenses 2020	\$285,091

2.2.1 Operations and Maintenance (O&M)

O&M expenditures include supplies (including chemicals), repairs, and purchased services. 2020 O&M expenditures are based on the Town's 2020 budget. For the purposes of this study, an annual O&M costs of \$35,977 was used with a 2% annual increase in expenses.

2.2.2 Combined Utility Expenses

The combined utility expenses include employee expenses, administrative costs, and other costs that are shared between the water and wastewater systems. For the purposes of this study, annual combined utility expenses for the sewer system of \$91,114 was used for this study with a 2% annual increase.

2.2.3 Sewer Capital Outlay

The Town has budgeted for \$158,000 in sewer capital expenses for 2020. With \$100,000 in grant funding, the Town will be responsible for \$58,000 in sewer capital outlay. The sewer capital outlay for future years has been determined based on the CIP, expected grant funding, and project prioritization with input from the Town.

2.2.4 Debt Service

The Town typically seeks both grant and loan funding for larger capital projects. Typically, the anticipated capital costs are sought to be covered by 50% grant funding, 25% loans, and 25% capital outlay by the Town. Debt service to those loans are modeled in this study with 15-year payback periods and 3.2% interest rates.

2.3 Revenues

The revenues modeled into the utility rate study include those generated by sewer services fees, grant funding, and loans. Tap fees were considered an unreliable source of revenue given the Town's low growth rate and were, therefore, not included in this study. Table 2-3 details the budgeted revenues for 2020.

Table 2-3. 2020 Sewer Revenues Summary

Revenue Category	Annual Revenue 2020
Sewer Service Fees	\$135,029
Grant Funding	\$100,000
Total Revenues 2020	\$235,029

2.3.1 Sewer Service Rates

As detailed in Section 2.1, the current sewer service rate structure is expected to generate \$135,029 in revenues for 2020. Adjustments to this rate structure were modeled for this utility rate study to maintain a proper Sewer Fund balance for O&M, emergency funds, and the planned capital projects.

2.4 Sewer Cash Flow Model (CFM)

As described in Section 1.4, the CFM is the critical component of this utility rate study. The Sewer CFM can also be easily modified and updated year-by-year to provide real-time budgeting feedback, determining how modifications to the sewer rate structure, capital projects, increased operating costs, etc. will impact the Town's Sewer Fund. All of the alternatives evaluated in this section assume a 2% annual increase in operating costs.

These projections includes the capital projects planned for 2020 through 2022 (sludge removal at the WWTP, repair of sewer services on High Street) and assumes \$50,000 in capital outlay for sewer projects for 2023-2034.

2.4.1 Alternative 1 – No Change in Sewer Service Rate Structure

Figures 2-1.A and 2-1.B show projections of the sewer revenues, expenses, and Sewer Fund reserves if the current sewer service rate structure remains unchanged indefinitely.

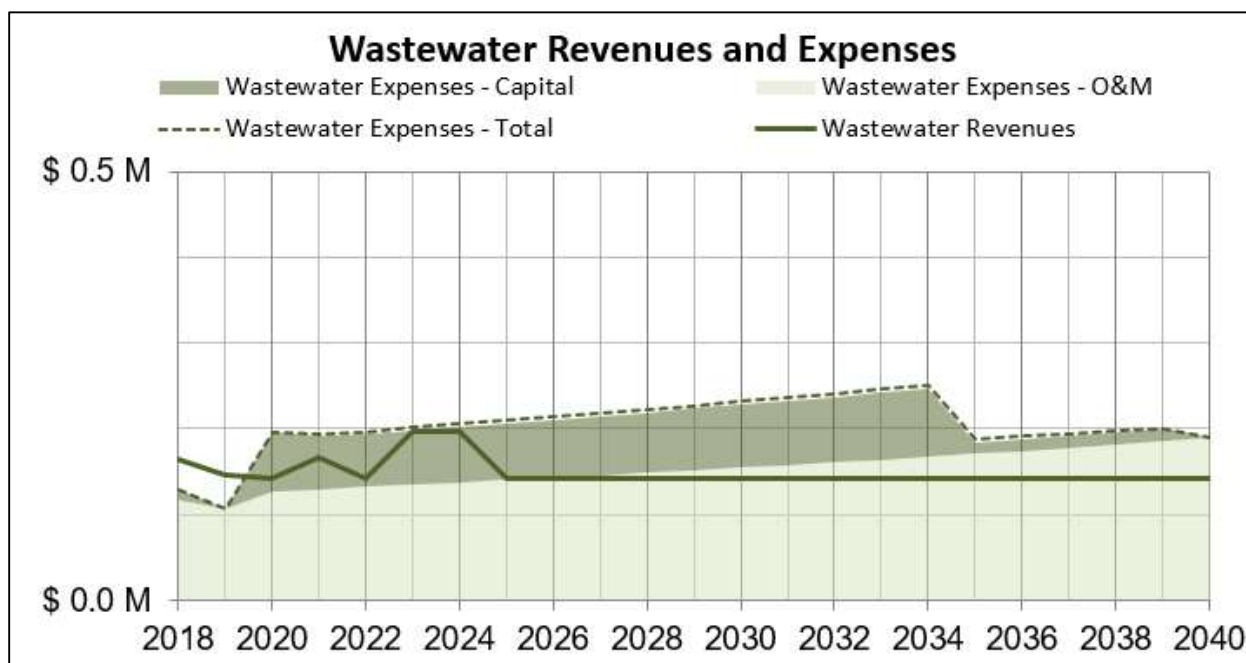


Figure 2-1.A. Sewer Revenues and Expenses – No Change in Sewer Service Rate Structure

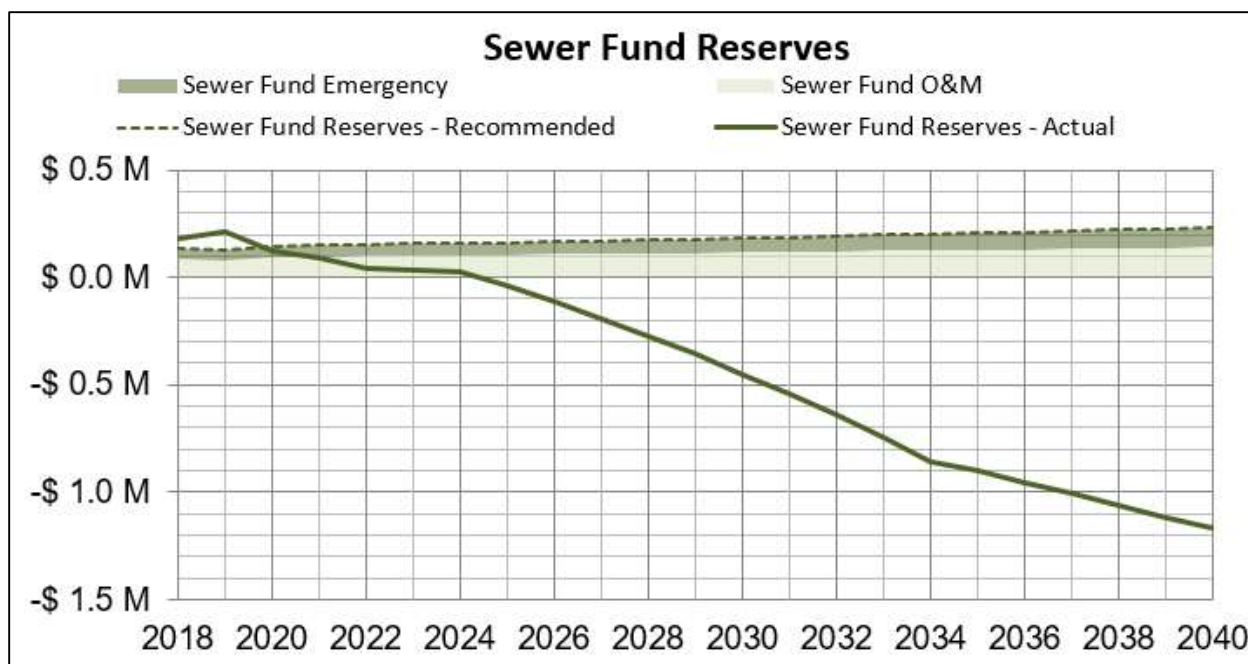


Figure 2-1.B. Sewer Fund Reserves – No Change in Sewer Service Rate Structure

As shown in Figure 2-1.B, without changes to the rate structure the Sewer Fund will immediately drop below the recommended reserve amount in 2020-2021 and drop below zero in 2021. This steep decrease is an indicator that the current sewer service rates are inadequate for maintaining recommended Sewer Fund reserves while allowing for the necessary capital improvements projects.

2.4.2 Alternative 2 – Constant Inflation-Based Rate Increase

Figures 2-2.A and 2-2.B show projections of the sewer revenues, expenses, and Sewer Fund reserves if the sewer service rate structure increases with inflation, assumed at 2% annually.

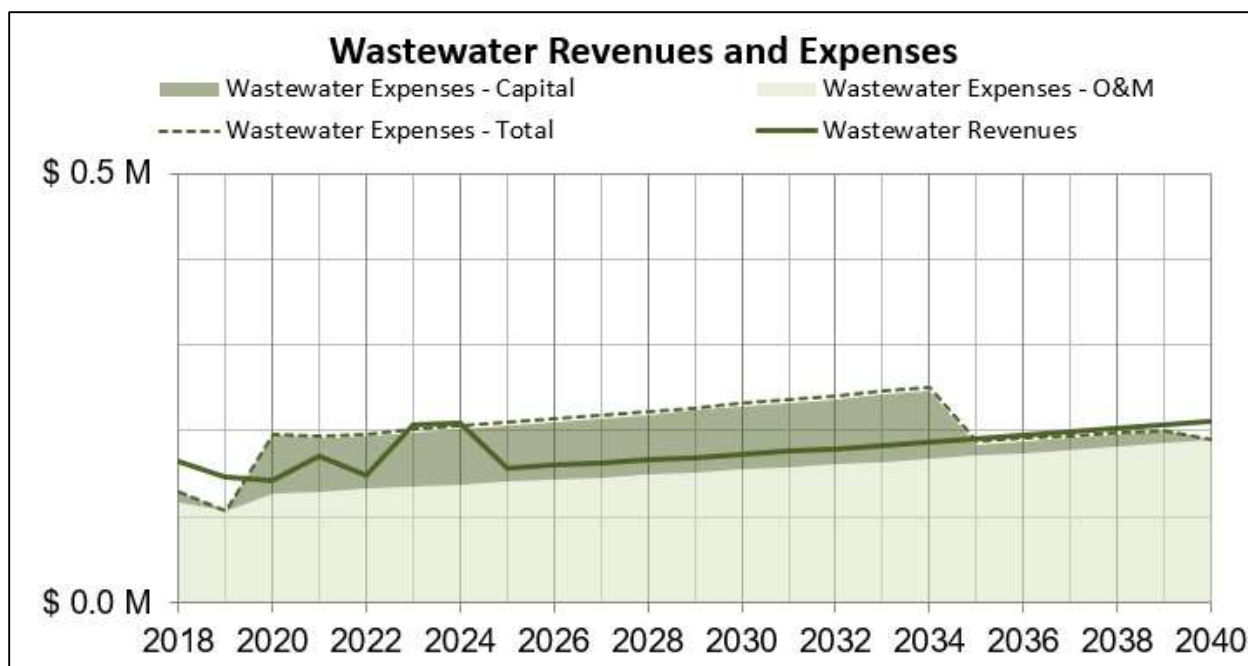


Figure 2-2.A. Sewer Revenues and Expenses – Inflation-Base Rate Increases

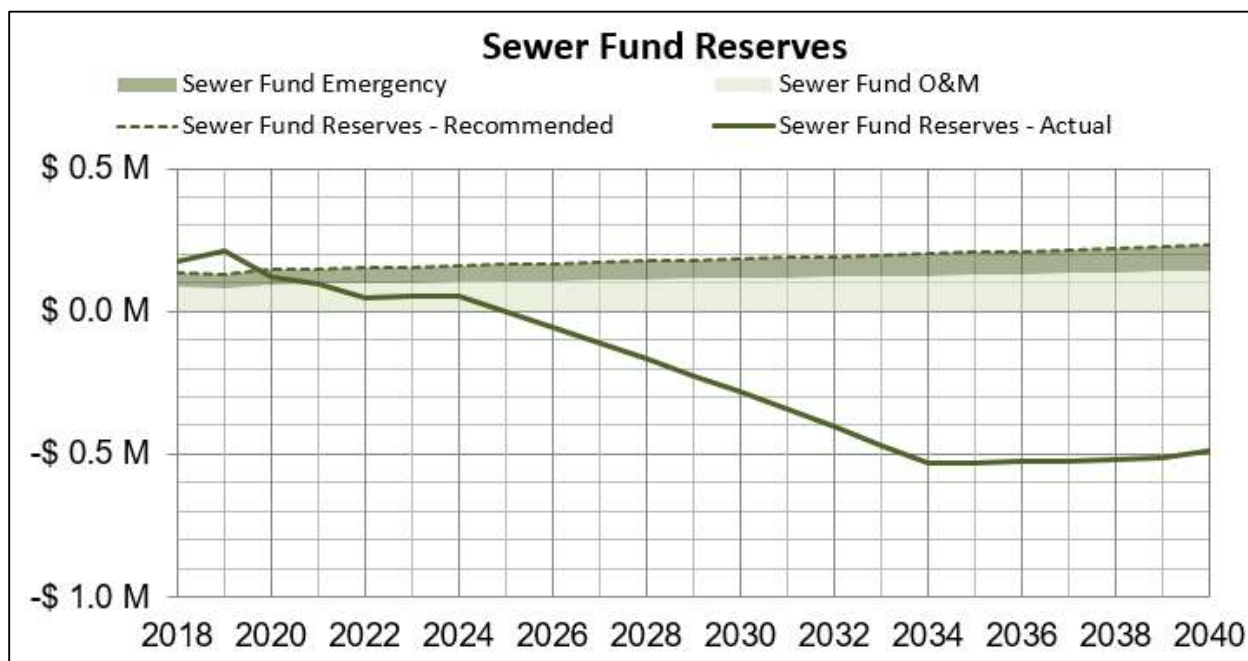


Figure 2-2.B. Sewer Fund Reserves – Inflation-Base Rate Increases

As shown in Figure 2-2.B, the Sewer Fund will also drop quickly in Alternative 2, Alternative 2 would see the Sewer Fund drop below the recommended reserve amount in 2020 and drop below zero in 2024.

2.4.3 Alternative 3 – Moderate Short-Term Rate Increase

Alternative 3 includes moderate short-term rate increases, 5% annually for 2021-2025, and inflation based rate increases for 2026+. Figures 2-3.A and 2-3.B

show projections of the sewer revenues, expenses, and Sewer Fund reserves for Alternative 3.

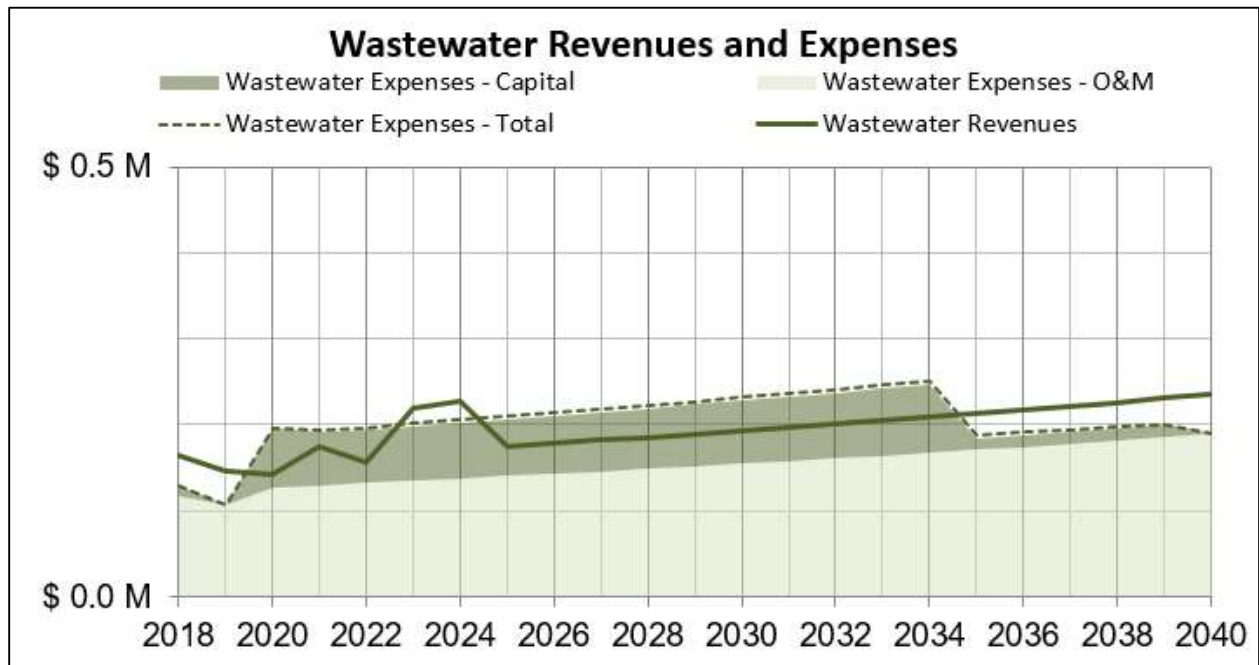


Figure 2-3.A. Sewer Revenues and Expenses – Moderate Short-Term Rate Increases

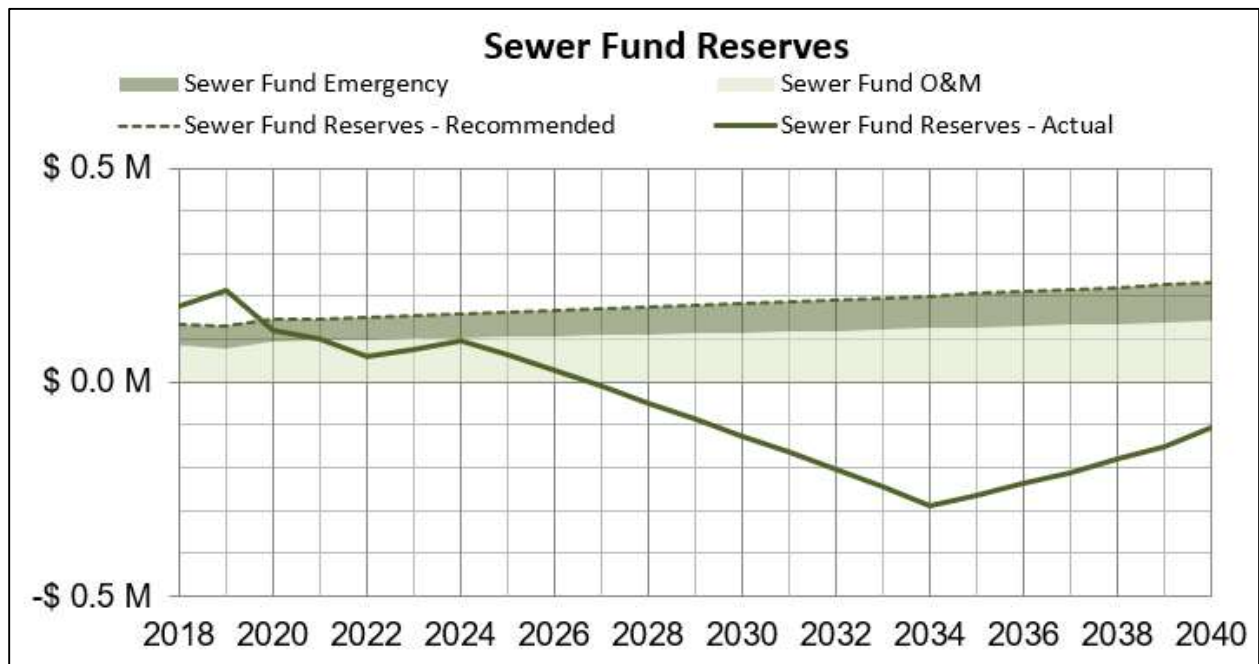


Figure 2-3.B. Sewer Fund Reserves – Moderate Short-Term Rate Increases

As shown in Figure 2-3.B, the Sewer Fund would follow a similar trajectory to Alternatives 1 and 2, dropping below zero in 2025.

2.4.4 Alternative 4 – High Short-Term Rate Increase

Alternative 4 includes high short-term rate increases, 10% annually for 2021-2024, and inflation based rate increases for 2025+. Figures 2-4.A and 2-4.B show projections of the sewer revenues, expenses, and Sewer Fund reserves for Alternative 4.

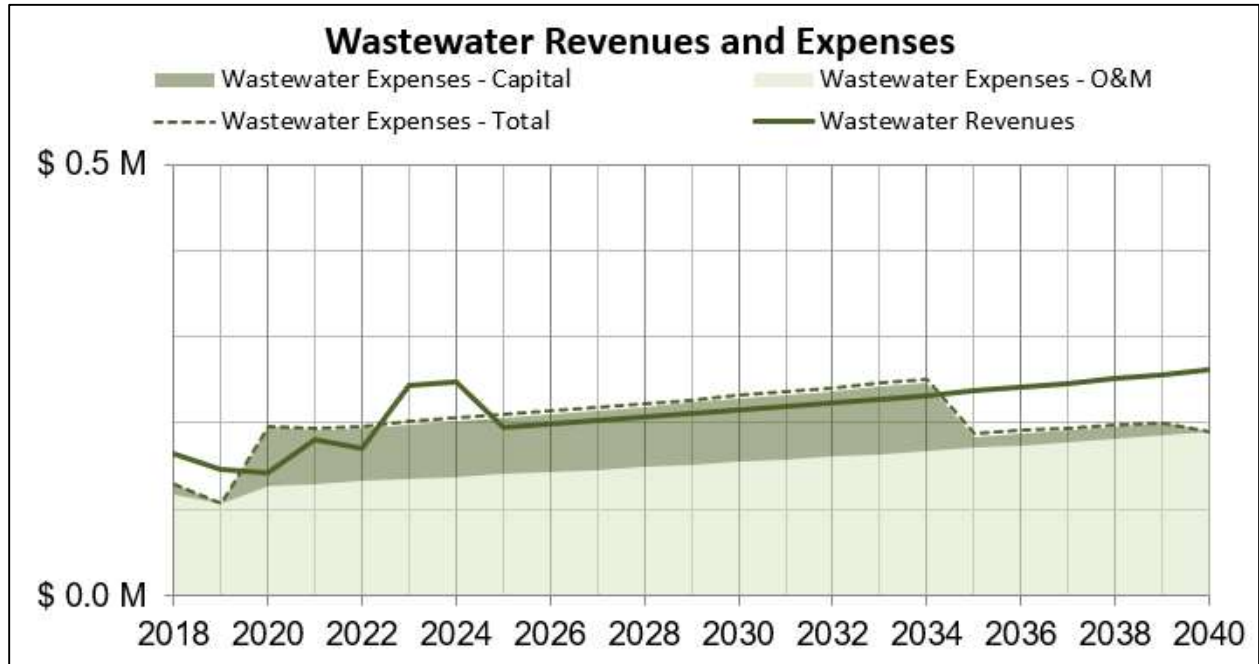


Figure 2-4.A. Sewer Revenues and Expenses – High Short-Term Rate Increases

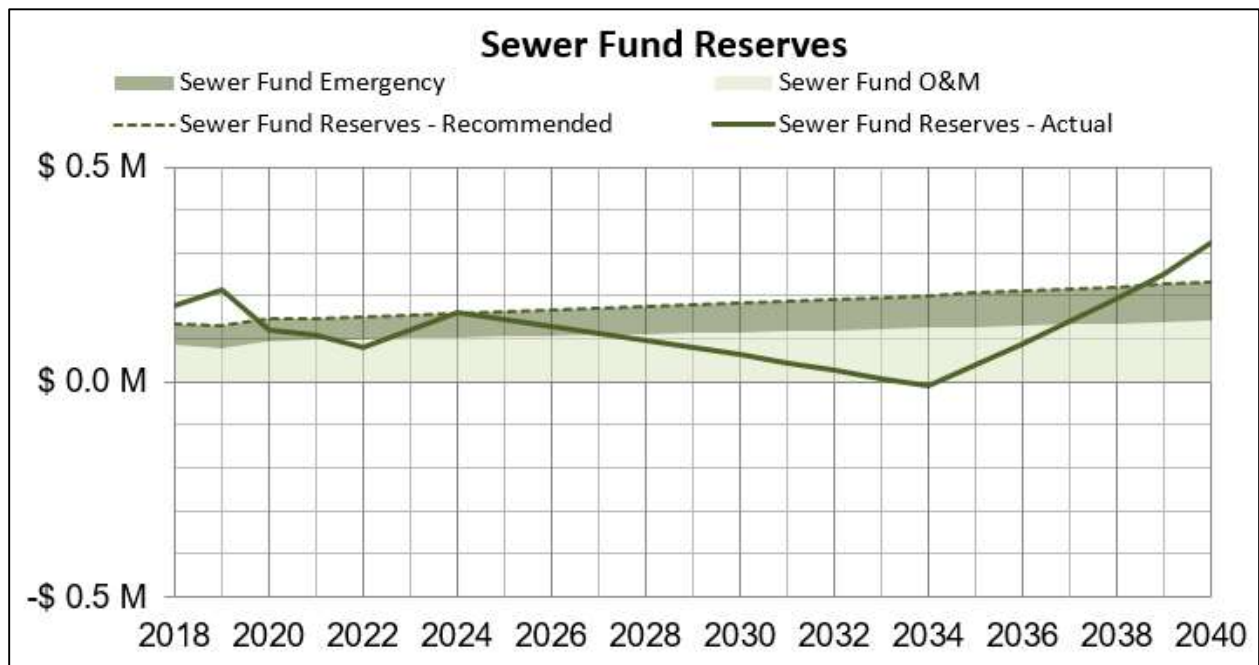


Figure 2-4.B. Sewer Fund Reserves – High Short-Term Rate Increases

As shown in Figure 2-4.B, even with high short-term rate increases, the Sewer Fund would like still fall below zero within a decade. This indicates that the Town will likely need to incorporate revenue building years into their sewer system capital planning.

2.4.5 Alternative 5 – High Short-Term Rate Increase w/Revenue Building

Alternative 5 includes high short-term rate increases, 10% annually for 2021-2024, inflation based rate increases for 2025+, and revenue building years (years with zero capital outlay) every three years beginning in 2023. Figures 2-5.A and 2-5.B show projections of the sewer revenues, expenses, and Sewer Fund reserves for Alternative 5.

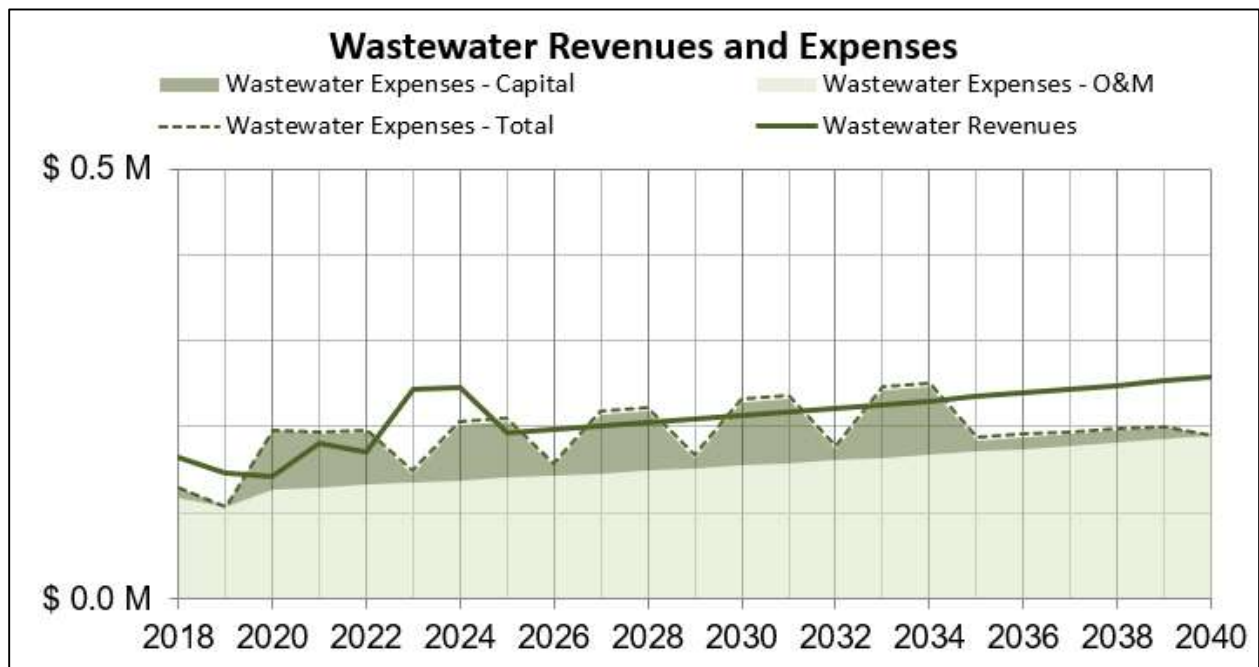


Figure 2-5.A. Sewer Revenues and Expenses – High Short-Term Rate Increases w/Revenue Building

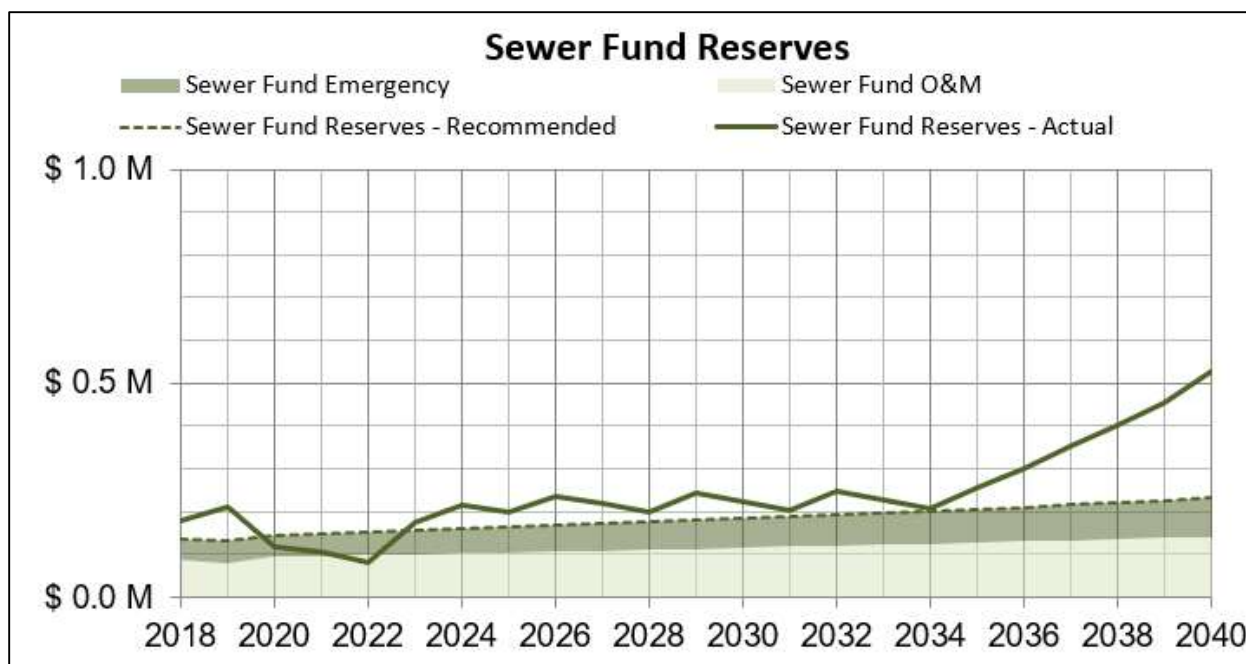


Figure 2-5.B. Sewer Fund Reserves – High Short-Term Rate Increases w/Revenue Building

As shown in Figure 2-5.B, the combination of high short-term rate increases and revenue building years provides a program that would allow the Town to maintain adequate Sewer Fund reserves in the coming years.

2.5 Discussion

The Town's sewer service rates/revenue and Sewer Fund reserves require some immediate attention in order to perform the needed capital improvements while maintaining adequate reserve funds. SGM recommends that Alternative 5, high short-term rate increases with revenue building years, is adapted in order to avoid a severe decrease in the Sewer Fund. As detailed in Section 1.5, the CFM can be updated after the first year to determine how additional rate increases and capital projects will impact the Sewer Fund.