

Village of Hoffman Estates, Illinois

Water, Sewer, and Storm Rate Study



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Water and Sewer Rate Study

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LIST OF ABBREVIATIONS

AMR	-	automatic meter reading
AWWA	-	American Water Works Association
CDWM	-	Chicago Department of Water Management
CIP	-	capital improvement plan
CMAP	-	Chicago Metropolitan Agency for Planning
CPI	-	consumer price index
ft	-	feet
ft ²	-	square feet
ft ³	-	cubic feet
FY	-	Fiscal Year
GFOA	-	Government Finance Officers Association
GIS	-	Geographic Information System
GO	-	General Obligation
gpcpd	-	gallons per capita per day
gpd	-	gallons per day
gpm	-	gallons per minute
hp	-	horsepower
IDNR	-	Illinois Department of Natural Resources
IEPA	-	Illinois Environmental Protection Agency
kgal	-	1,000 gallons
MG	-	million gallons (or mil gal)
MGD	-	million gallons per day
MWRD	-	Metropolitan Water Reclamation District
NRW	-	non-revenue water
NSMJAWA	-	Northwest Suburban Municipal Joint Action Water Agency
PE	-	population equivalent
psi	-	pounds per square inch
SCADA	-	supervisory control and data acquisition
USEPA	-	United States Environmental Protection Agency
WIFIA	-	Water Infrastructure Finance and Innovation Act

1. WATER, SEWER, AND STORM RATE STUDY OVERVIEW

1.1 Water, Sewer, and Storm Rate Study Background

Enterprise Funds, like the Village of Hoffman Estates' Water and Sewer Fund, are specific municipal funds that are used to account for operations that provide goods or services to the general public on a continuing basis and are financed primarily through user rates and charges, as well as other sources such as connection/tap-on fees, late/shut-off fees, and investment income. In addition to covering the day-to-day expenses related to operating the utility systems, the fund is responsible for costs related to the rehabilitation, replacement, and improvement of the infrastructure as well as any debt service incurred to finance such projects.

The Village elected to conduct a Water, Sewer, and Storm Rate Study to better navigate resource management challenges and meet increasing demand for water resources, ensure Village practices promote fair and equitable billing, and determine what resources are necessary to support infrastructure and maintenance upgrades.

This study specifically evaluated the Village's existing water, sewer, and stormwater rates and charges to assess the adequacy of any implemented rate increases to sustainably support the Village's operational, capital, and debt services needs beginning Fiscal Year 2025 through 2032. Additionally, this study investigated the potential adoption of alternative rate structures that would allow the Village to prorate its expenses more equitably across its diverse customer base.

The Village of Hoffman Estates should discuss any information and material contained in this report with any and all internal or external advisors and experts that the Village deems appropriate before acting on this information. Baxter & Woodman, Inc. is not acting as a financial advisor to the Village and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to the Village of Hoffman Estates with respect to the information and material contained in this report. This report is representative of the data made available to Baxter & Woodman, Inc. through October 14, 2024.

1.2 Water and Sewer Usage Patterns

The Village of Hoffman Estates' water, sewer, and storm utilities serve a population of approximately 52,530 as of the 2020 Census. The customers served are generally categorized as Residential and Commercial. Currently, the Village's water system is supplied by seven water towers, three active ground storage reservoirs, two high-service pumping stations, two booster stations, and seven emergency backup supply wells. The Village also operates and maintains a sanitary sewer collection system that is ultimately treated by the Metropolitan Water Reclamation District (MWRD).

Customer Base Analysis

In discussions with Village staff, the following user groups were identified within the billing system that were assigned to each customer account:

- Residential
- Commercial

Commercial also includes all other users including apartments, industrial, and institutional/governmental.

The following observations are made in relation to each of the major user groups based on real billing data issued by the Village in 2023:

- Single-family home Residential users make up around 94% of accounts in the Village with around 59% of total water usage. Average per household usage was around 4.5 kgal.
- Commercial users include accounts with meter sizes ranging from ¾" up to 12". Despite making up 6% of all accounts, the Commercial user category is responsible for roughly 40% of total consumption.

1.3 Water Purchasing and Consumption

The Village of Hoffman Estates purchases treated water from NSMJAWA, who in turn purchases treated Lake Michigan Water from the Chicago Department of Water Management (CDWM). Both NSMJAWA and CDWM own, operate, and maintain a wide range of infrastructure used in the treatment and distribution of potable water to serve customers like the Village.

CDWM currently charges a uniform volumetric rate to all of its wholesale customers including NSMJAWA and its historical rates are shown in Table 1 below.

Table 1 – CDWM Historical Rates

Effective Date	Percent Increase	Water Rate (per 1,000 Cubic Feet)	Approximate Water Cost (per kgal)
1/1/2004	3.00%	\$9.66	\$1.29
1/1/2005	3.00%	\$9.95	\$1.33
1/1/2006	0.00%	\$9.95	\$1.33
1/1/2007	0.00%	\$9.95	\$1.33
1/1/2008	15.00%	\$11.44	\$1.53
1/1/2009	15.00%	\$13.15	\$1.76
1/1/2010	14.00%	\$15.00	\$2.01
1/1/2011	0.00%	\$15.00	\$2.01
1/1/2012	25.00%	\$18.75	\$2.51
1/1/2013	15.00%	\$21.56	\$2.88
1/1/2014	15.00%	\$24.80	\$3.31
1/1/2015	15.00%	\$28.52	\$3.81
1/1/2016	0.00%	\$28.52	\$3.81
6/1/2017	1.83%	\$29.04	\$3.88
6/1/2018	1.54%	\$29.49	\$3.95
6/1/2019	0.82%	\$29.73	\$3.98
6/1/2020	2.45%	\$30.46	\$4.08
6/1/2021	1.10%	\$30.79	\$4.13
6/1/2022	5.00%	\$32.33	\$4.33
6/1/2023	5.00%	\$33.95	\$4.55
6/1/2024	3.37%	\$35.10	\$4.70

NSMJAWA assesses its own fee in addition to the base cost of water from CDWM which is calculated per bill as a volumetric cost. These factors include administrative, operational, and maintenance costs which are dependent on several factors including the purchasing utility's usage and distance away from NSMJAWA's main pumping station. The average annual cost to purchase water is summarized in Table 2 below.

Table 2 – NSMJAWA Historical Rates

Year	Average Percent Increase	Approximate Water Cost (per kgal)
2018	1.74%	\$5.65
2019	0.24%	\$5.66
2020	0.68%	\$5.70
2021	1.70%	\$5.80
2022	1.75%	\$5.90
2023	-1.72%	\$5.80

The Village has observed a decline in the amount of water purchased between 2018 through 2023, as reflected in Table 3 below, with an estimated average of 1.51 million gallons annually, while the billed amount has remained steady at an estimated annual average of 1.33 million gallons over the same time period. The difference in purchased and billed broadly represents the Village’s non-revenue water, which has averaged at 12% yet has been trending downwards over this time period.

Table 3 – Water Billing

Year	Gallons Purchased	Gallons Billed	Water Loss
2018	1,546,169	1,333,304	14%
2019	1,537,331	1,318,574	14%
2020	1,514,418	1,334,074	12%
2021	1,518,657	1,361,962	10%
2022	1,466,065	1,319,121	10%
2023	1,486,260	1,328,936	11%

The Illinois Department of Natural Resources (IDNR) requires all communities who receive Lake Michigan water to complete an annual water allocation audit (LMO-2) which includes monitoring non-revenue water. It is recommended that the Village continue to monitor its non-revenue water to ensure the non-revenue goal of below 10% is met. In the event the Village exceeds 10% non-revenue water, the IDNR requires communities to submit an action plan to reduce their non-revenue water below the goal.

1.4 Existing Utility Rate Structure

The Village utilizes a Fixed Scaled Meter plus Volumetric water rate structure and Volumetric sewer rate structure which are billed on a monthly basis. The Water and Sewer Volumetric Rates are calculated against the total water metered for each customer in addition to the Fixed Meter Fee which is applied per bill.

The Village also charges a stormwater fee, and this fee is different for residential and commercial users. Depending on their property size, residential users are charged a Stormwater Utility Fee based on a tiered rate structure. Commercial users (including multi-unit residential) are charged an Impervious Area Fee applied based on the customer’s assessed Equivalent Residential Units (ERU). An ERU was established as 3,300 square feet of impervious surface area per parcel to determine the proportional runoff that would be generated.

The Village’s existing rates and fees are summarized in Table 4 and Table 5 below.

Table 4 – 2024 Water and Sewer Rates

	Volumetric (per 1,000 gals)		Fixed Charge
	Water	Sewer	Base Meter Fee
Residential	\$12.74	\$1.83	\$6.73
Commercial	\$12.74	\$1.83	\$6.73

Table 5 – 2024 Stormwater Rates

	Stormwater			Impervious Area Fee (per ERU)
	Tier 1 (0-7,500 SF)	Tier 2 (7,501-12,500 SF)	Tier 3 (12,501+ SF)	
Residential	\$1.50	\$2.00	\$2.50	---
Commercial	---	---	---	\$2.00

1.5 Utility Revenue and Expense Analysis

For this assessment, the revenue line items associated with the water, sewer, and stormwater rates were modeled using historical data and the following assumptions and inputs, confirmed with the Village’s Finance and Public Works Departments:

- Although there are prospective developments within the Village that may tie into the Village’s system within the forecast of the financial model, no adjustments were made to the current financial model to project population growth or commercial development at this time. It is recommended that the Village continue to monitor these developments and adjust the model accordingly.
- All of the Village’s revenue line items that are not directly tied to the rates and charges associated with the Water and Sewer Rates, are generally held constant unless a specific budget amount was determined by Village staff. This would allow the model to provide a

slightly more conservative estimate and does not seek to rely on revenue line items such as Turn-on Fees, Penalties, Meter Sales, and other miscellaneous revenue line items.

- The total count for Equivalent Residential Units (ERU) for Commercial properties was provided by the Village for Fiscal Year 2023 which was used to represent the historical data from 2019 through 2023. This data was also used for the remainder of the forecast period to project the stormwater revenue.
- Monthly water billing and usage totals were provided from the Village along with the total number of accounts per meter size for the Fiscal Years 2019 through 2023. The resulting totals from 2023 were used for 2024 and held constant through the remainder of the forecast for a more conservative estimate.

Similarly, the following assumptions and inputs were made with the Village's Finance and Public Works Departments to develop and project the Water and Sewer Fund expense line items:

- With the exception of Capital Improvement Projects and any associated proposed Debt Service for these projects, all of the Village's expenditures were inflated or entered manually to best reflect realistic projections with the data available at this time.
- The Water and Sewer Fund currently has five debt obligations associated with existing IEPA Loans with only one approaching its maturity date within the time period of the forecasted projection. The total annual payment of principal and interest were provided by Village staff and are included in the projected expenses
- The proposed Capital Improvement Project Plan and associated debt service are covered in greater detail below.

For this assessment, all other revenue line items were set to the amounts identified under the Village's Fiscal Year 2024 Adopted Annual Budget and were held constant through the projection period. Expense line items not modeled were assigned an inflationary rate or fixed value to reflect their anticipated projections through the forecast period.

This provides for a conservative financial model that projects revenues based largely upon the change in water and sewer rates taking into account the increased costs to both operate and maintain the infrastructure systems.

Capital Improvement Project Plan

The American Water Works Association (AWWA) M1 *Principals of Water Rates, Fees, and Charges Manual* outlines two generally accepted approaches to calculating the revenue requirements:

- **Utility Basis:** Forecasts revenue requirements taking into account existing operations and maintenance expenses and the depreciation of historical capital expenditures to generate sufficient future revenues. The Utility Basis approach is best suited for utilities that have minimal projected growth, but can leave utilities vulnerable to changes in economic pricing or Federal/State regulations that require additional capital improvements to a system.
- **Cash Basis:** Forecasts revenue requirements using inflated historical operations and maintenance expenses, as well as budgeted near-term capital improvement projects that are identified via strategic planning studies. The Cash Basis approach is best suited for utilities where significant capital improvement projects are identified that are added to or modify existing infrastructure. However, this can lead to potential rate shocks in years where significant amounts of capital are needed suddenly.

Both approaches are heavily influenced by the on-going need to address large capital expenditures generally associated with aging infrastructure, growth and development, and/or changes in Federal and State requirements. Without proper oversight and management of either approach, this can lead to negative impacts on the financial health of the fund, the health of the infrastructure systems, or steep rate hikes necessary to meet the revenue requirements.

For this study, the Cash basis is utilized in conjunction with the Village's Capital Improvement Project Plan. This would allow the financial model to set rates that would enable the Water and Sewer Fund to manage its year-over-year net operating balance to address its critical infrastructure needs while providing a level of stability to the rates being set.

The Village's Capital Improvement Plan largely consists of a variety of water main replacements, sanitary lift station replacements/rehabilitation, and other internal improvement projects to the water and sewer system. Other high-priority projects include the replacement of Tower 1 with a higher capacity tower, providing backup supply sources to the South and West Zones, and increasing the number of utility crossings underneath the I-90 Tollway. These projects are spread out between Fiscal Years 2025 through 2029. The total projected costs for the entire Capital Improvement Plan, not including projects listed in 2024, is \$51 million.

Additionally, the Village's CIP Plan includes stormwater projects funded through the Stormwater Management Fund. A total of \$3.8 million in construction costs are slated for Fiscal Years 2024 and 2025 for overall improvements to the Stormwater Management System which the Village stated cannot be deferred. The remainder of this forecast includes yearly costs assigned to general operation and maintenance activities for the Stormwater Management System.

This CIP assumed all projects would be cash-funded and required raising rates to levels the Village's staff deemed unacceptable. Alternative CIP plans were created starting with the Reduced Capital Plan which sought to determine allowable capital expenditures for the proposed rate increases to be

considered reasonable and acceptable; however, this plan was not ideal as it did not include the full scope of the Village’s capital improvement needs. The remaining plans incorporated various quantities of loan funding options to reduce the necessary rate increases required to address the full scope of capital projects.

Proposed Debt Service Schedules

The Village has evaluated loans including the Public Water Supply Loan Program and Water Pollution Control Loan Program State Revolving Fund as potential funding sources for its water and sewer capital improvement projects. Multiple scenarios were created to determine the appropriate amount of funding that resulted in acceptable rate increases for the Village. Yearly loan payments were calculated based on a 30-year payback period with 2.00% interest. Based on discussions with Village Staff, a rate scenario was created with loans amounting to \$12 million to finance water and sewer improvements, which is discussed in detail in Section 2.5 of this report. This scenario also includes a \$1 million transfer from the General Fund to the Stormwater Management Fund in Fiscal Years 2025 and 2026. The resulting \$2 million will be paid back to the General Fund through yearly transfers of \$250,000 over eight years.

Purchasing Water Rates

Based on the available data provided by the Village and the historical CDWM rates, a projected annual increase of 3.00% is anticipated, which would be passed on through NSMJAWA. Although NSMJAWA also assesses its own fee in addition to the base cost of water from CDWM, which is inclusive of a base fixed cost and volumetric usage, the overall NSMJAWA component of the rate is currently anticipated to remain stable with no anticipated increases.

The Village’s estimated water purchase cost from NSMJAWA, which is broken out by the CDWM and NSMJAWA component, are summarized in Table 6 below.

Table 6 – Projected Water Rates

Fiscal Year	CDWM (per kgal)	NSMJAWA (per kgal)	Village's Estimated Water Purchase Cost (per kgal)
2025	\$4.83	\$1.21	\$6.04
2026	\$4.98	\$1.21	\$6.19
2027	\$5.13	\$1.21	\$6.34
2028	\$5.28	\$1.21	\$6.49
2029	\$5.44	\$1.21	\$6.65
2030	\$5.60	\$1.21	\$6.81
2031	\$5.77	\$1.21	\$6.98
2032	\$5.94	\$1.21	\$7.15

1.6 Reserve Goals

The AWWA M1 *Principles of Water Rates, Fees, and Charges Manual* emphasizes the importance of establishing and maintaining adequate financial reserves. Historically, it was recommended that an operating reserve goal be set at 25% of a utility's total annual expenses less capital, depreciation, and debt.

However, recent trends such as declining water usage, aging infrastructure, and the potential for water supply shortages and/or restrictions are contributing to increased financial liability and revenue volatility. AWWA has since emphasized and encouraged utilities to identify individual reserve goals dedicated to large capital improvement projects, depreciation, and/or debt service. Set properly, reserves can help shield utilities from sudden financial shifts and provide for more reactionary time to address planned and, to a lesser degree, unplanned years of deficit that can be caused by sudden dips in water usage, large capital expenditures, and emergency repairs without the need to borrow debt.

Additionally, reserves can help mitigate rate shocks that may otherwise be necessary to cover sudden changes in either revenues or expenses and temporary shortfalls that can occur due to seasonal changes in demand that impact a utility's revenue stream month to month. These reserves should be set to appropriate levels above those established for normalized, recurring operating cash flow, and be replenished over time if drawn down.

In discussions with Village staff, an operating reserve goal set at 50% of its annual expenditures less capital, debt, and depreciation was identified which approximately amounts to \$10 million in FY25 to \$12 million by the end of the projection period. An additional \$2 million reserve goal is recommended to assist the Village in handling its upcoming larger capital expenditures. No other reserve goals were identified as part of this rate study.

2. WATER AND SEWER RATE STUDY ANALYSIS

2.1 Scenario 0: Baseline – No Rate Increases

A preliminary Baseline Scenario was prepared to observe the Village's Water and Sewer Fund's and Stormwater Management Fund's balance in which no rate increases were applied to the existing rates as of January 1, 2025. The Baseline Scenario serves as a boundary condition to observe the Funds' balance over time as expense line items are inflated in addition to the Village's budgeted Capital Improvement Project Plan and proposed debt service schedules.

Generally, a five-year projection is utilized for rate study evaluations that are intended to observe nominal adjustments to rates and/or rate structures with identified and budgeted operating, capital, and debt expenses. The accuracy of the financial model is heavily dependent on the input data, which may change during or between fiscal years and should be updated as an on-going and cyclical process to ensure that the rates identified are sufficient.

A long-term forecast may be beneficial in certain cases where long term debt is being considered and/or if larger capital expenditures have not been identified to occur in a specific year. However, the loss of accuracy in a long-term projection can stem from any number of the data inputs to the financial model including large changes in usage pattern, population, capital addition/deferral, and rising inflation rates that are assigned to specific expense line items within the model, which may overestimate expenses in the long run.

Based on the Village's projected timeline for the alternate water supply source projects as well as the numerous variables associated with the larger capital improvement projects and associated debt service, the financial forecast was run for eight years through Fiscal Year 2032.

Figure 1 shows the Village's projected Revenues and Expenses under the Baseline Scenario through Fiscal Year Ending 2032. The following observations are made:

- The Village's Operating Revenues, represented by the dotted blue line, is comprised primarily of the revenue generated from water and sewer bills but also includes miscellaneous revenue items such as Tap-On Fees, Penalty Fees, Meter Sales, Turn-On Fees, and Cross Connection Fees. The Operating Revenue has generally stayed in excess of the Village's historical Operating Expenses and Debt Service, however is projected to be insufficient beginning in Fiscal Year 2025 as a result of the increase in capital expenditures.

Figure 1 – Scenario 0: Baseline Revenues and Expenses Cash Flow Projection

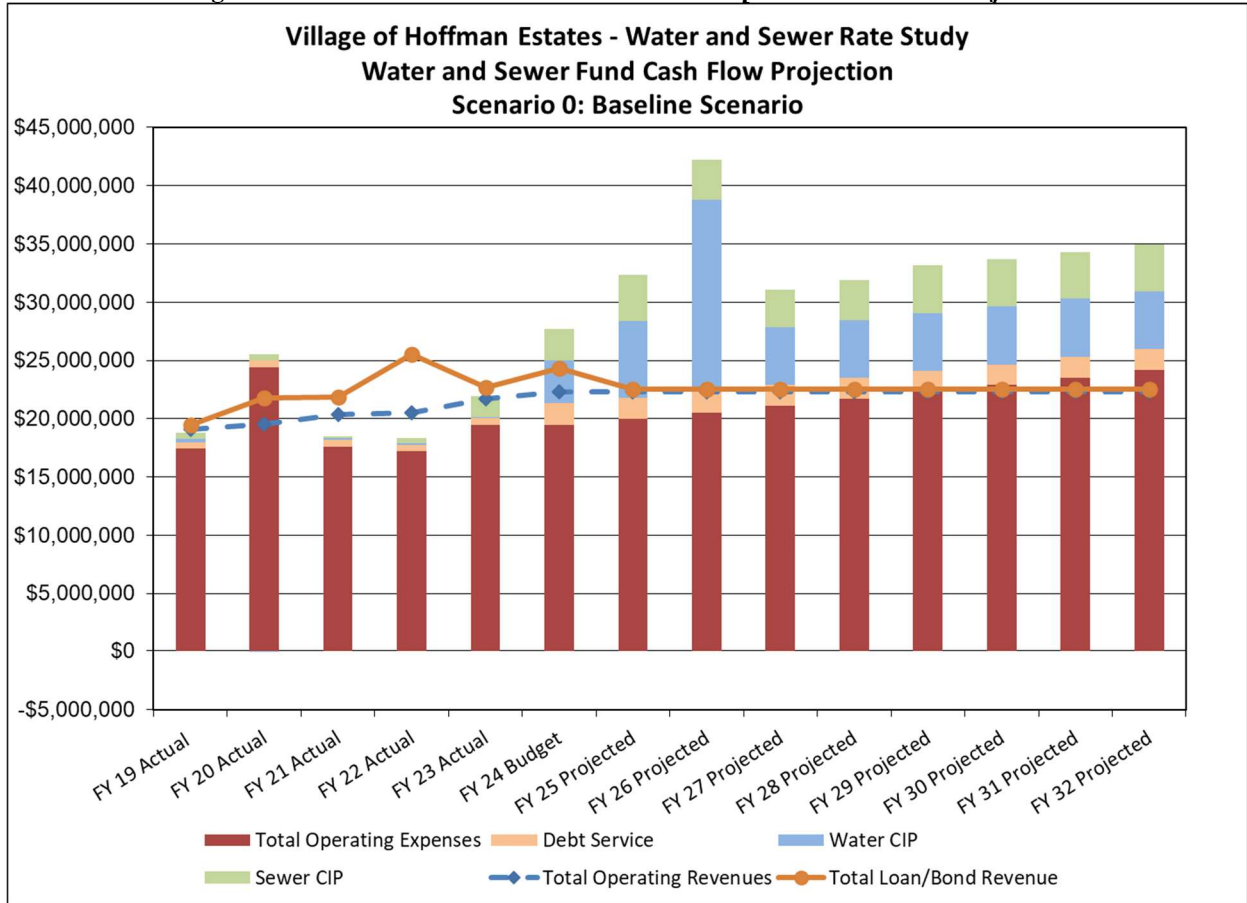


Figure 2 – Scenario 0: Baseline Utility Fund Balance Projection shows the projected Utility Fund’s balance and Operating and Capital Reserve Goals.

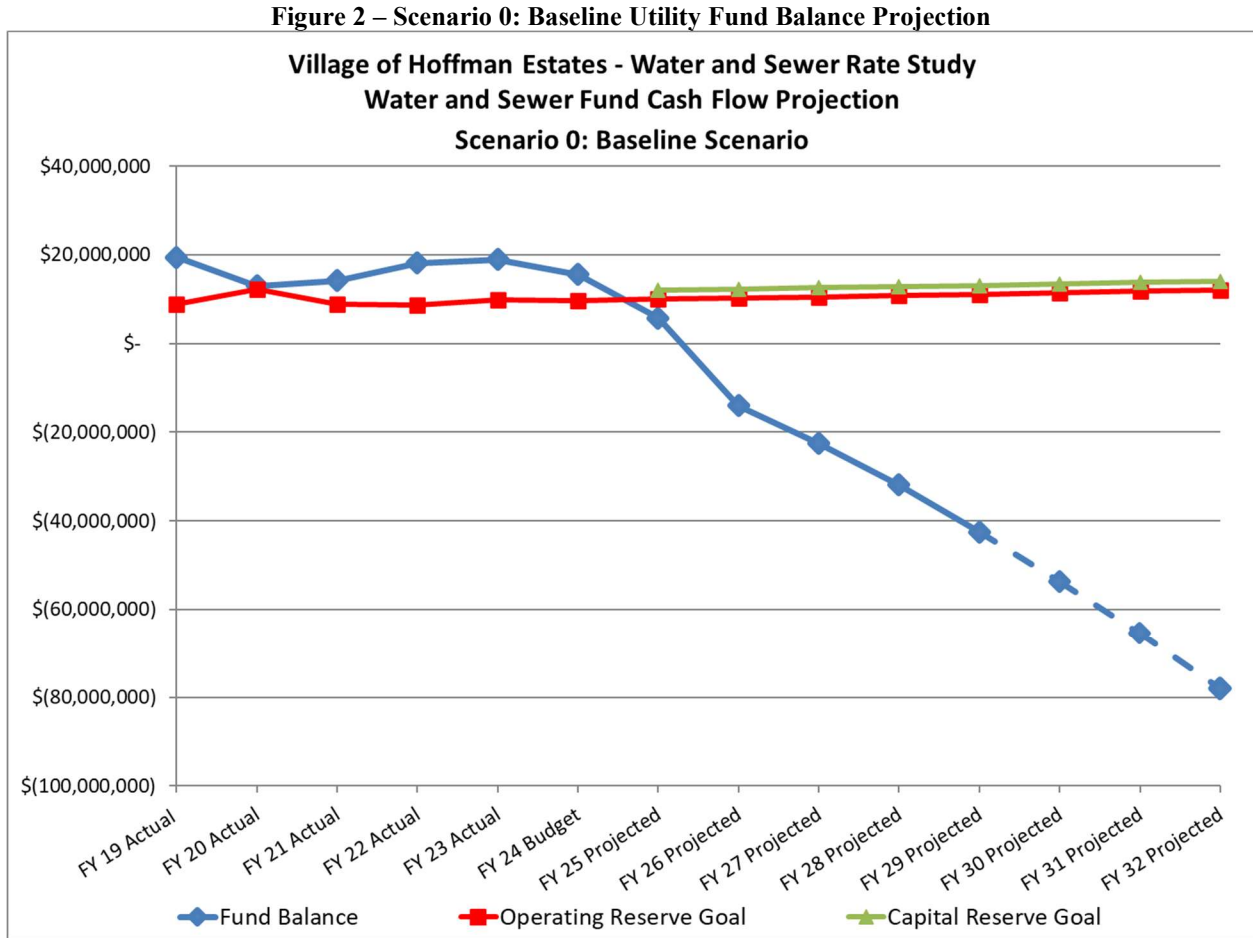
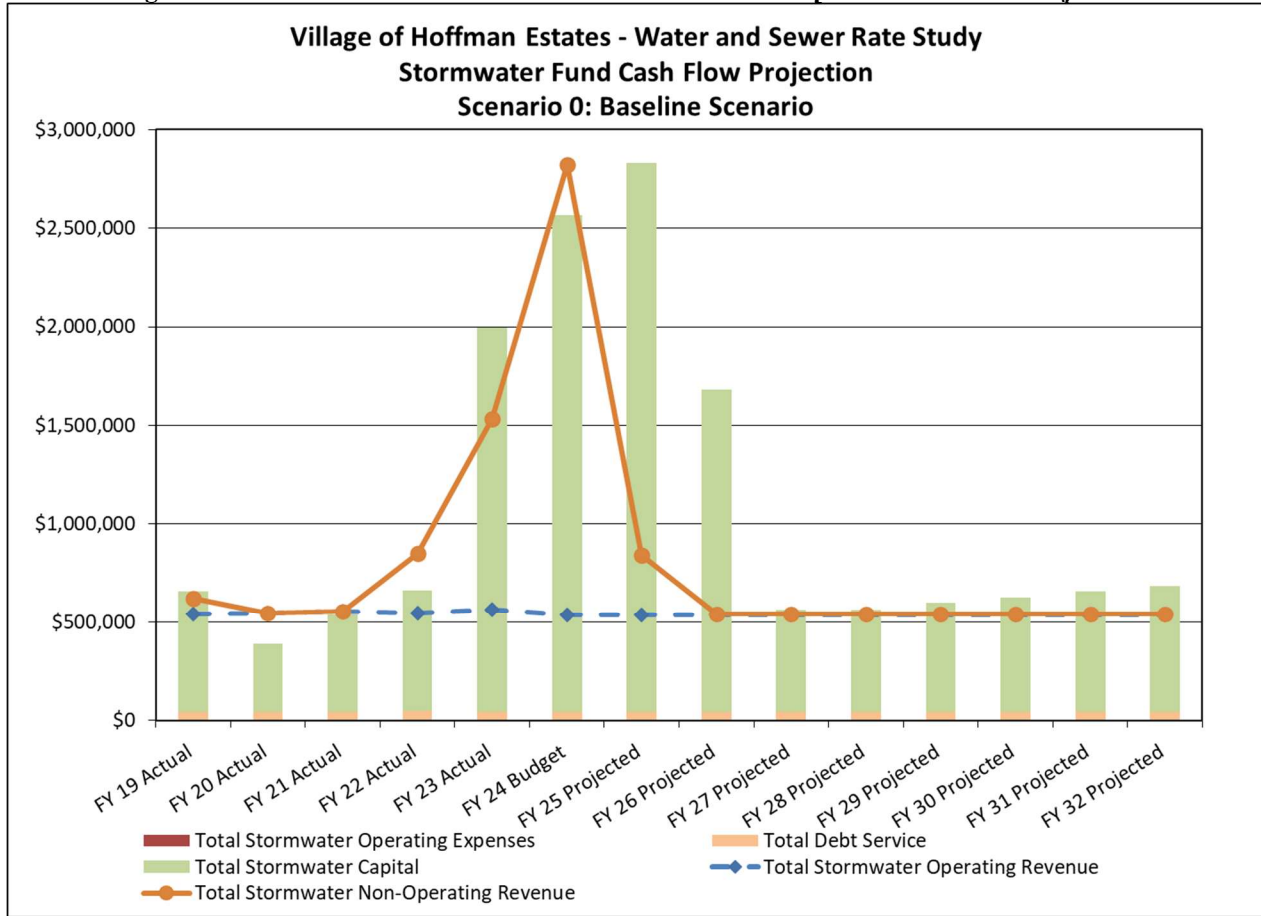


Figure 3 - Scenario 0: Baseline Stormwater Revenues and Expenses Cash Flow Projection



In analyzing the Water and Sewer Fund’s projected fund balance, represented in the blue line in Figure 2, the Village has maintained a balance above the operating reserve goal for the last several years. However, with no further rate increases, the Village’s planned capital improvements will deplete the operating funds by 2025 and ultimately exhaust the fund balance by 2026. The Stormwater Management Fund experiences a similar outcome, with funds depleting after Fiscal Year 24, despite the transfers previously made to the Fund.

Ultimately, rate increases will be needed to finance the anticipated revenue requirements based on the budgeted and planned capital expenditures, projected debt service payments, and water purchasing cost identified. Rate adjustments allow the Village to maintain a proactive stance towards addressing its aging infrastructure, maintaining the high level of quality and services the Village’s customers depend on, and preventing costly emergency repairs.

2.2 Scenario 1: Existing Water and Sewer Rate Structure Increases

Scenario 1 evaluates proposed rate increases to the Village’s existing rate structure to meet the revenue requirements. This scenario also uses the existing CIP plan through Fiscal Year 2029 and does not include additional debt service. The Village also discussed the uncertainty in the full scope of projects starting in Fiscal Year 2027. Yearly Water CIP was rounded to \$5 million from Fiscal Year 2027 through 2032 and Sewer CIP was rounded to \$4 million to address unforeseen projects through the forecast period bringing the Water and Sewer CIP from Fiscal Years 2025 through 2032 total to \$83 million.

Based on the analysis conducted, volumetric and meter fees increased sharply in the first two years to raise sufficient funds for the nearly \$20M in capital projects planned for Fiscal Year 26. After this year, rates do not increase for the remainder of the projection. Table 7 and Table 8 Table 7 outline the rates and charges throughout the projection period.

Table 7 – Scenario 1: Existing Rate Structure Rate Increases

		2024	2025	2026	2027	2028	2029	2030	2031	2032
Water Volumetric	Rate Increases		15%	12%	0%	0%	0%	0%	0%	0%
	Volumetric Rate	\$12.74	\$14.65	\$16.41	\$16.41	\$16.41	\$16.41	\$16.41	\$16.41	\$16.41
Sewer Volumetric	Rate Increases		15%	12%	0%	0%	0%	0%	0%	0%
	Volumetric Rate	\$1.83	\$2.10	\$2.36	\$2.36	\$2.36	\$2.36	\$2.36	\$2.36	\$2.36
Base Line Fee (5/8-inch Meter)	Rate Increases		\$18.00	\$10.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$6.73	\$24.73	\$34.73	\$34.73	\$34.73	\$34.73	\$34.73	\$34.73	\$34.73
Stormwater Fee (Tier 1)	Rate Increases		\$5.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$1.50	\$6.50	\$6.50	\$6.50	\$6.50	\$6.50	\$6.50	\$6.50	\$6.50
Stormwater Fee (Tier 2)	Rate Increases		\$10.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00	\$12.00
Stormwater Fee (Tier 3)	Rate Increases		\$15.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.50	\$17.50	\$17.50	\$17.50	\$17.50	\$17.50	\$17.50	\$17.50	\$17.50
Impervious Area Fee	Rate Increases		\$8.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00

Table 8 – Scenario 1: Existing Water Fixed Scaled Meter Fees

	2024	2025	2026	2027	2028	2029	2030	2031	2032
5/8-inch Meter Rate Increase		\$18.00	\$10.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Base Line Fee	\$6.73	\$24.73	\$34.73	\$34.73	\$34.73	\$34.73	\$34.73	\$34.73	\$34.73
3/4-inch meter	\$7.08	\$26.02	\$36.54	\$36.54	\$36.54	\$36.54	\$36.54	\$36.54	\$36.54
1-inch meter	\$8.50	\$31.23	\$43.86	\$43.86	\$43.86	\$43.86	\$43.86	\$43.86	\$43.86
1 ½-inch meter	\$12.04	\$44.24	\$62.13	\$62.13	\$62.13	\$62.13	\$62.13	\$62.13	\$62.13
2-inch meter	\$16.29	\$59.86	\$84.06	\$84.06	\$84.06	\$84.06	\$84.06	\$84.06	\$84.06
3-inch meter	\$29.75	\$109.32	\$153.52	\$153.52	\$153.52	\$153.52	\$153.52	\$153.52	\$153.52
4-inch meter	\$47.45	\$174.36	\$244.86	\$244.86	\$244.86	\$244.86	\$244.86	\$244.86	\$244.86
6-inch meter	\$104.11	\$382.56	\$537.26	\$537.26	\$537.26	\$537.26	\$537.26	\$537.26	\$537.26
8-inch meter	\$182.02	\$668.85	\$939.31	\$939.31	\$939.31	\$939.31	\$939.31	\$939.31	\$939.31
10-inch meter	\$274.10	\$1,007.21	\$1,414.49	\$1,414.49	\$1,414.49	\$1,414.49	\$1,414.49	\$1,414.49	\$1,414.49
12-inch meter	\$419.29	\$1,540.72	\$2,163.74	\$2,163.74	\$2,163.74	\$2,163.74	\$2,163.74	\$2,163.74	\$2,163.74

These rate increases allow the Water and Sewer Fund to generate the necessary revenues to maintain a fund balance above the operating reserve goal throughout the financial projection, except in Fiscal Year 2026. Figure 4, Figure 5, and Figure 6 show the Revenues and Expenses, Water and Sewer Fund balance, and Stormwater Revenue and Expenses for Scenario 1, respectively.

Figure 4 – Scenario 1: Revenue and Expense Cash Flow Projection

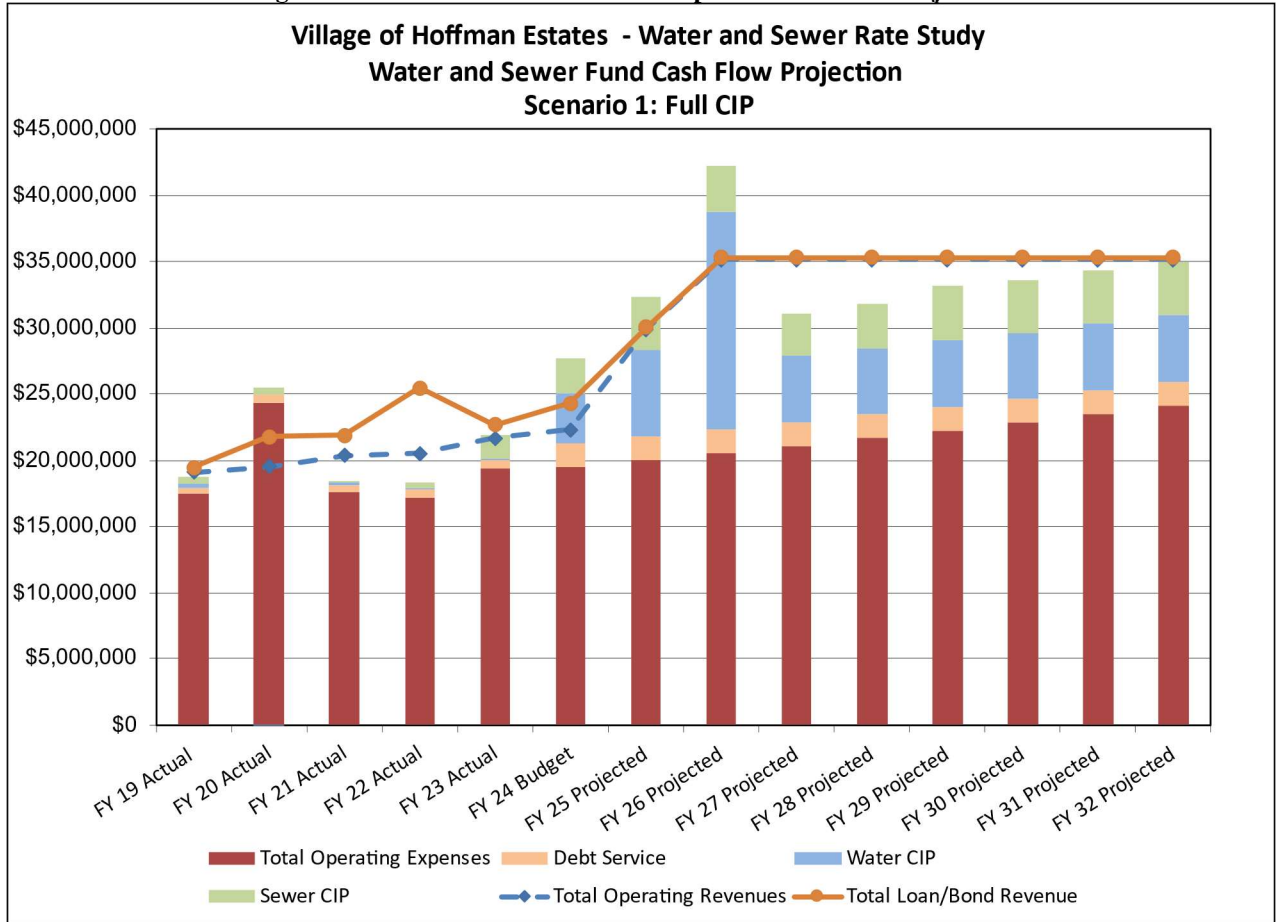


Figure 5 – Scenario 1: Utility Fund Balance Projection

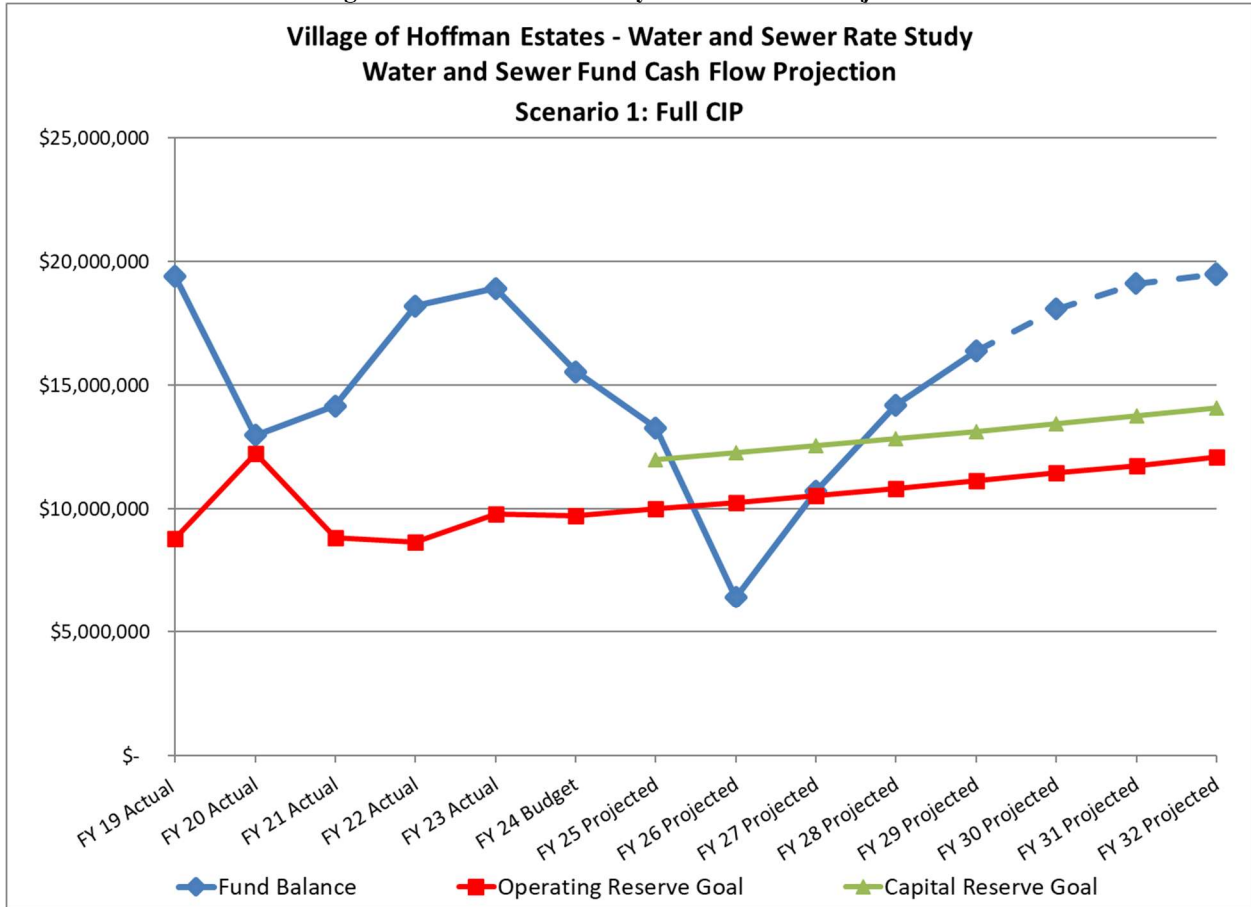
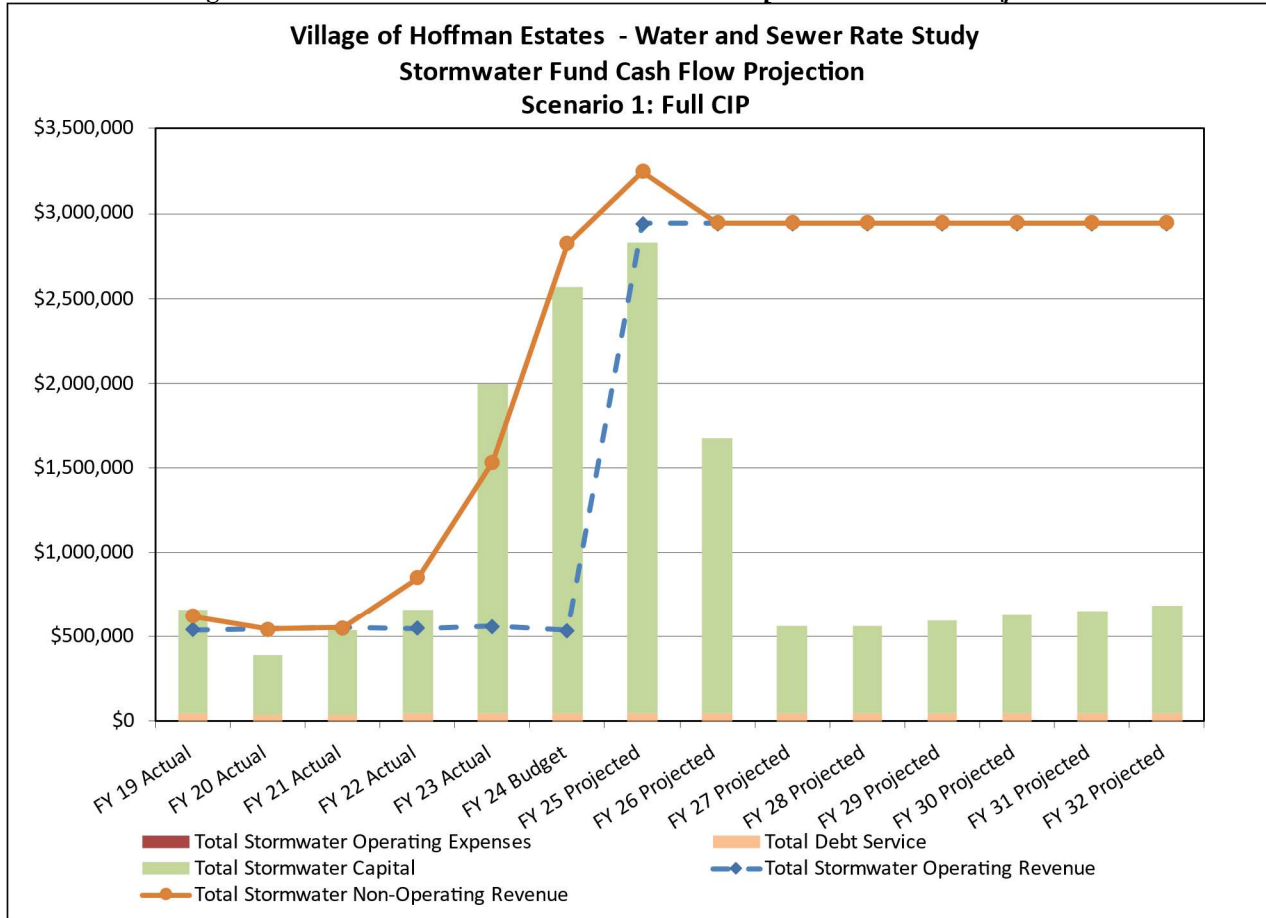


Figure 6 - Scenario 1: Stormwater Revenue and Expense Cash Flow Projection



Overall, the Village’s foresight to build its reserves for the planned capital improvements helped to mitigate near-term rate hikes, however the planned capital improvement projects are far greater than the available reserve. The total cost for capital improvements in Fiscal Year 2026 is much greater than the amount the Village typically plans for within a given year. These rate increases allow the Village to recover its balance back above the operating reserve goal after Fiscal Year 2026 and maintain its balance above this goal through the remainder of the projection period.

Regarding stormwater, the upfront rate increases necessary to fund the near-term capital projects appear excessive after these projects are completed. The difference between the Revenues shown by the lines and the Expenses shown by the bars indicates the surplus in revenue generated each year. Additional stormwater projects may occur in the future, but if this is not the case, the Village has the option to reduce stormwater rates in order to reduce the charges to its customers.

The increases identified have significantly different impacts based on the customer group and usage patterns. As part of the analysis, sample bills were prepared based on specific user groups to better understand the consequences of the rate increases that were used to develop the rates.

1. A Residential User billed at 5,000 and 20,000 gallons monthly served by a ¾-inch meter.

Table 9 – Scenario 1: Average Residential User 5,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$81.43			\$977.16	
2025	\$116.29	\$34.86	42.8%	\$1,395.52	\$418.36
2026	\$136.87	\$20.57	17.7%	\$1,642.40	\$246.88
2027	\$136.87	\$0.00	0%	\$1,642.40	\$0.00
2028	\$136.87	\$0.00	0%	\$1,642.40	\$0.00
2029	\$136.87	\$0.00	0%	\$1,642.40	\$0.00
2030	\$136.87	\$0.00	0%	\$1,642.40	\$0.00
2031	\$136.87	\$0.00	0%	\$1,642.40	\$0.00
2032	\$136.87	\$0.00	0%	\$1,642.40	\$0.00

Table 10 – Scenario 1: Large Residential User 20,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$299.98			\$3,599.76	
2025	\$367.63	\$67.65	22.6%	\$4,411.51	\$811.75
2026	\$418.36	\$50.73	13.8%	\$5,020.31	\$608.80
2027	\$418.36	\$0.00	0%	\$5,020.31	\$0.00
2028	\$418.36	\$0.00	0%	\$5,020.31	\$0.00
2029	\$418.36	\$0.00	0%	\$5,020.31	\$0.00
2030	\$418.36	\$0.00	0%	\$5,020.31	\$0.00
2031	\$418.36	\$0.00	0%	\$5,020.31	\$0.00
2032	\$418.36	\$0.00	0%	\$5,020.31	\$0.00

- An Average Commercial User billed at 45,000 gallons monthly and served by a 2-inch water meter.

Table 11 – Scenario 1: Average Commercial User 45,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$701.94			\$8,423.28	
2025	\$963.86	\$261.92	37.3%	\$11,566.28	\$3,143.00
2026	\$1,078.54	\$114.68	11.9%	\$12,942.50	\$1,376.22
2027	\$1,078.54	\$0.00	0%	\$12,942.50	\$0.00
2028	\$1,078.54	\$0.00	0%	\$12,942.50	\$0.00
2029	\$1,078.54	\$0.00	0%	\$12,942.50	\$0.00
2030	\$1,078.54	\$0.00	0%	\$12,942.50	\$0.00
2031	\$1,078.54	\$0.00	0%	\$12,942.50	\$0.00
2032	\$1,078.54	\$0.00	0%	\$12,942.50	\$0.00

- A Large Commercial User billed at 200,000 gallons monthly and served by a 2-inch water meter.

Table 12 – Scenario 1: Large Commercial User 200,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$3,050.29			\$36,603.48	
2025	\$4,010.96	\$960.67	31.5%	\$48,131.51	\$11,528.03
2026	\$4,437.30	\$426.34	10.6%	\$53,247.55	\$5,116.04
2027	\$4,437.30	\$0.00	0%	\$53,247.55	\$0.00
2028	\$4,437.30	\$0.00	0%	\$53,247.55	\$0.00
2029	\$4,437.30	\$0.00	0%	\$53,247.55	\$0.00
2030	\$4,437.30	\$0.00	0%	\$53,247.55	\$0.00
2031	\$4,437.30	\$0.00	0%	\$53,247.55	\$0.00
2032	\$4,437.30	\$0.00	0%	\$53,247.55	\$0.00

The overall burden of the rate increases under the existing CIP/Debt Service plan is seen across all users in both Residential and Commercial Groups. The total monthly bills for larger water volume

users experience a smaller overall percent increase based on the rate increases applied under Scenario 1. Regardless, all users experience significant and untenable rate hikes.

It should be noted however that while these percentages are intended to show the relative burden each sample customer bill experiences, the percentages should not be reviewed in isolation. This can be best observed when reviewing the average Residential user, in which the relatively low starting bills cause even small dollar increases to yield a large percentage increase.

2.3 Scenario 2: Reduced CIP

Scenario 2 evaluates the yearly allowable capital expenditures required for the proposed rate increases to be considered reasonable and acceptable. Through discussions with the Village, “reasonable and acceptable” was quantified as 4% yearly increases to Water and Sewer Volumetric rates, \$0.50 yearly increases to the base meter fee, and for stormwater, a \$0.50 yearly increase to each Stormwater Utility Fee tier and a \$3.00 yearly increase to the Impervious Area Fee through Fiscal Years 2025 through 2027 only. In order to meet these rates, the Village’s Water and Sewer CIP was reduced to \$28 million from Fiscal Year 2025 through 2032. Table 7 and Table 14 outline the rates and charges throughout the projection period.

Table 13 – Scenario 2: Reduced CIP Rates

		2024	2025	2026	2027	2028	2029	2030	2031	2032
Water Volumetric	Rate Increases		4%	4%	4%	4%	4%	4%	4%	4%
	Volumetric Rate	\$12.74	\$13.25	\$13.78	\$14.33	\$14.90	\$15.50	\$16.12	\$16.76	\$17.44
Sewer Volumetric	Rate Increases		4%	4%	4%	4%	4%	4%	4%	4%
	Volumetric Rate	\$1.83	\$1.90	\$1.98	\$2.06	\$2.14	\$2.23	\$2.32	\$2.41	\$2.50
Base Line Fee (5/8-inch Meter)	Rate Increases		\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
	Fixed Fee	\$6.73	\$7.23	\$7.73	\$8.23	\$8.73	\$9.23	\$9.73	\$10.23	\$10.73
Stormwater Fee (Tier 1)	Rate Increases		\$0.50	\$0.50	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$1.50	\$2.00	\$2.50	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00
Stormwater Fee (Tier 2)	Rate Increases		\$0.50	\$0.50	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.00	\$2.50	\$3.00	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50
Stormwater Fee (Tier 3)	Rate Increases		\$0.50	\$0.50	\$0.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.50	\$3.00	\$3.50	\$4.00	\$4.00	\$4.00	\$4.00	\$4.00	\$4.00
Impervious Area Fee	Rate Increases		\$3.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00

The proposed Water Volumetric rate increases are summarized in Table 14. The Sewer Volumetric Rate Increases are identical to those discussed in Scenario 1.

Table 14 – Scenario 2: Fixed Scaled Meter Fees

	2024	2025	2026	2027	2028	2029	2030	2031	2032
5/8-inch Meter Rate Increase		\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50
Base Line Fee	\$6.73	\$7.23	\$7.73	\$8.23	\$8.73	\$9.23	\$9.73	\$10.23	\$10.73
3/4-inch meter	\$7.08	\$26.02	\$36.54	\$36.54	\$36.54	\$36.54	\$36.54	\$36.54	\$36.54
1-inch meter	\$8.50	\$31.23	\$43.86	\$43.86	\$43.86	\$43.86	\$43.86	\$43.86	\$43.86
1 ½-inch meter	\$12.04	\$44.24	\$62.13	\$62.13	\$62.13	\$62.13	\$62.13	\$62.13	\$62.13
2-inch meter	\$16.29	\$59.86	\$84.06	\$84.06	\$84.06	\$84.06	\$84.06	\$84.06	\$84.06
3-inch meter	\$29.75	\$109.32	\$153.52	\$153.52	\$153.52	\$153.52	\$153.52	\$153.52	\$153.52
4-inch meter	\$47.45	\$174.36	\$244.86	\$244.86	\$244.86	\$244.86	\$244.86	\$244.86	\$244.86
6-inch meter	\$104.11	\$382.56	\$537.26	\$537.26	\$537.26	\$537.26	\$537.26	\$537.26	\$537.26
8-inch meter	\$182.02	\$668.85	\$939.31	\$939.31	\$939.31	\$939.31	\$939.31	\$939.31	\$939.31
10-inch meter	\$274.10	\$1,007.21	\$1,414.49	\$1,414.49	\$1,414.49	\$1,414.49	\$1,414.49	\$1,414.49	\$1,414.49
12-inch meter	\$419.29	\$1,540.72	\$2,163.74	\$2,163.74	\$2,163.74	\$2,163.74	\$2,163.74	\$2,163.74	\$2,163.74

Figure 7, Figure 8, and Figure 9, show the Revenues and Expenses, Water and Sewer Fund balance, and the Stormwater Revenues and Expenses for Scenario 2, respectively.

Figure 7 – Scenario 2: Revenue and Expense Cash Flow Projection

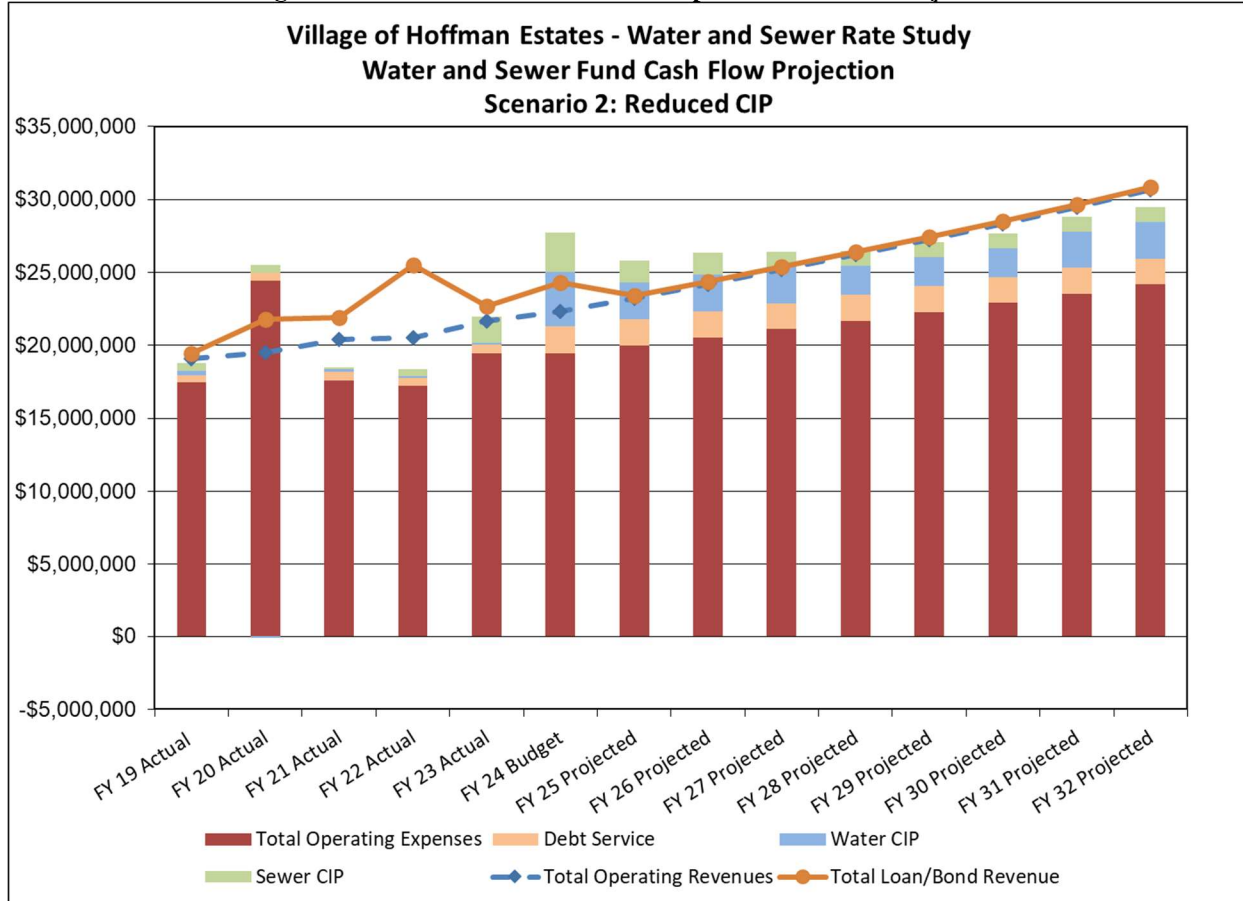


Figure 8 – Scenario 2: Water and Sewer Fund Balance Projection

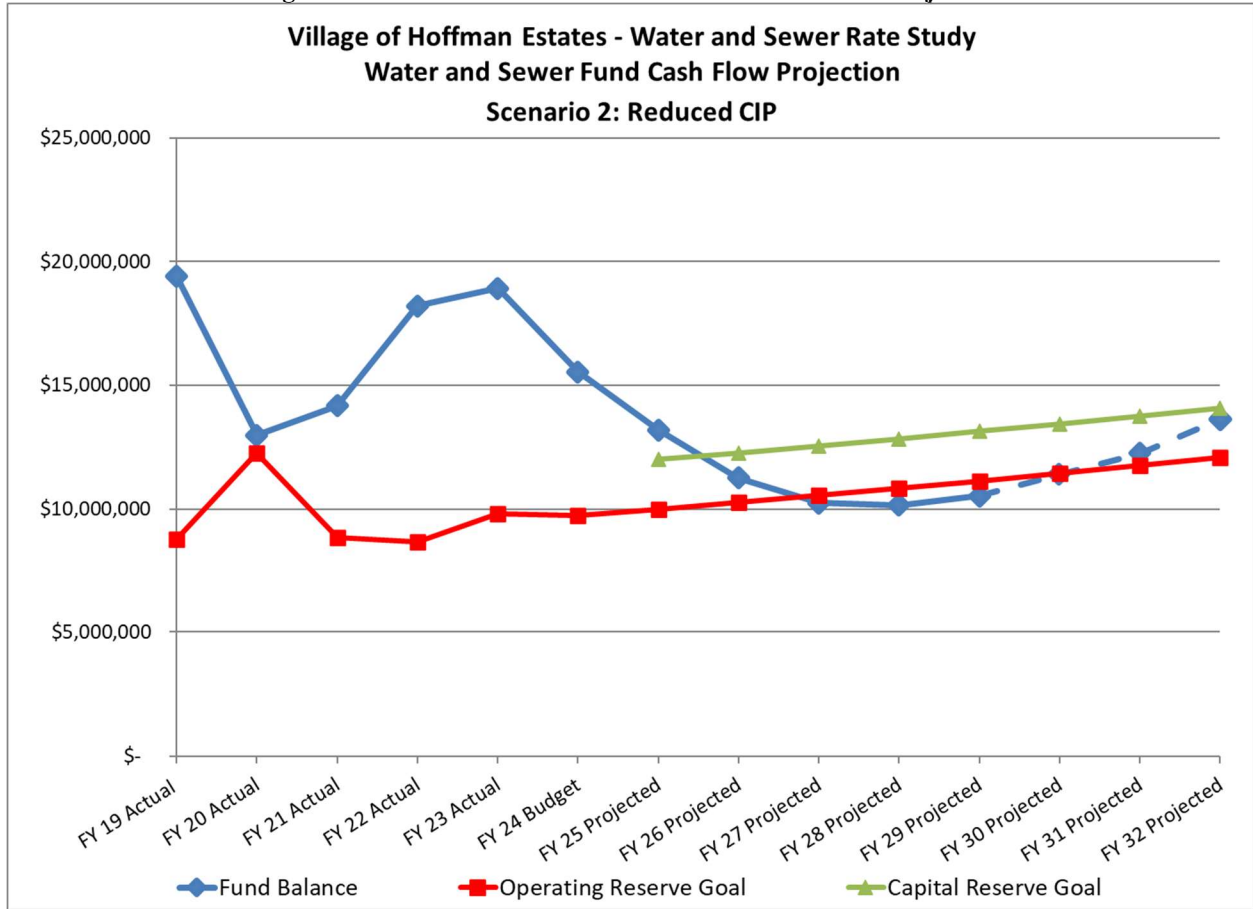
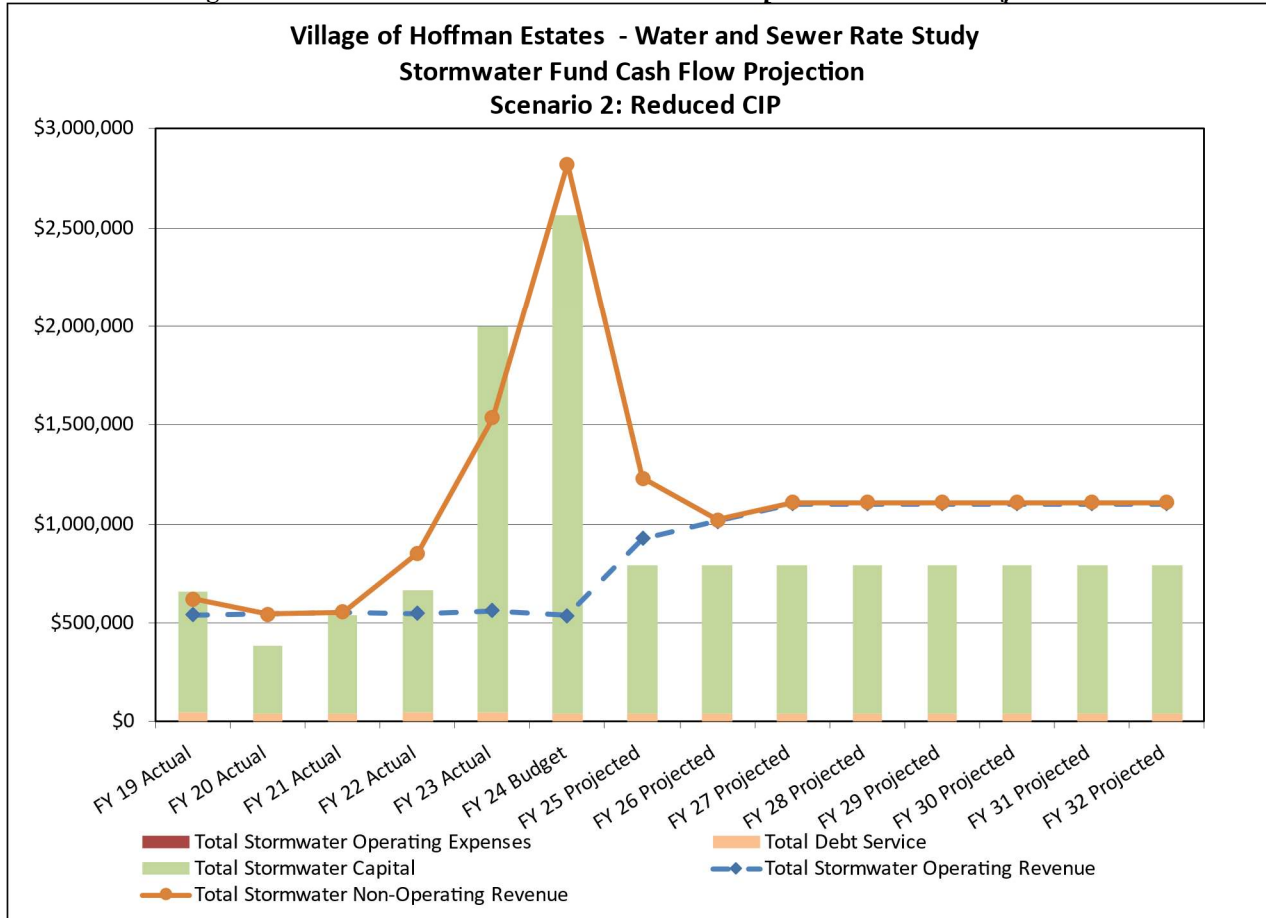


Figure 9 - Scenario 2: Stormwater Revenue and Expense Cash Flow Projection



As mentioned, this reduced capital plan allows the Village to implement standard gradual rate increases that generate the necessary revenues to recover from a slight dip in the operating reserves despite not meeting the Village’s capital needs. It also is specifically designed to establish a lower boundary for rate increases and determine the corresponding allowable capital spending. Sample bills for the customer bases were calculated under the proposed rates outlined under Scenario 2 and are summarized below:

1. A Residential User billed at 5,000 and 20,000 gallons monthly served by a ¾-inch and 1-inch water meter respectively.

Table 15 – Scenario 2: Average Residential User 5,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$81.43			\$977.16	
2025	\$85.37	\$3.94	4.8%	\$1,024.44	\$47.28
2026	\$89.43	\$4.06	4.8%	\$1,073.12	\$48.68
2027	\$93.60	\$4.18	4.7%	\$1,123.25	\$50.13
2028	\$97.41	\$3.80	4.1%	\$1,168.90	\$45.65
2029	\$101.34	\$3.93	4.0%	\$1,216.12	\$47.22
2030	\$105.41	\$4.07	4.0%	\$1,264.97	\$48.86
2031	\$109.63	\$4.21	4.0%	\$1,315.53	\$50.56
2032	\$113.63	\$4.36	4.0%	\$1,367.86	\$52.33

Table 16 – Scenario 2: Large Residential User 20,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$299.98			\$3,599.76	
2025	\$312.66	\$12.68	4.2%	\$3,751.94	\$152.18
2026	\$325.81	\$13.15	4.2%	\$3,909.72	\$157.78
2027	\$339.44	\$13.63	4.2%	\$4,073.32	\$163.60
2028	\$353.08	\$13.64	4.0%	\$4,236.97	\$163.65
2029	\$367.24	\$14.16	4.0%	\$4,406.91	\$169.94
2030	\$381.95	\$14.71	4.0%	\$4,583.40	\$176.49
2031	\$397.22	\$15.27	4.0%	\$4,766.69	\$183.29
2032	\$413.09	\$15.86	4.0%	\$4,957.07	\$190.37

- An Average Commercial User billed at 45,000 gallons monthly and served by a 2-inch water meter.

Table 17 – Scenario 2: Average Commercial User 45,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$701.94			\$8,423.28	
2025	\$774.38	\$72.44	10.3%	\$9,292.52	\$869.24
2026	\$802.86	\$28.49	3.7%	\$9,634.34	\$341.82
2027	\$832.44	\$29.58	3.7%	\$9,989.25	\$354.92
2028	\$863.15	\$30.71	3.7%	\$10,357.79	\$368.53
2029	\$895.04	\$31.89	3.7%	\$10,740.48	\$382.69
2030	\$928.16	\$33.12	3.7%	\$11,137.90	\$397.42
2031	\$962.55	\$34.39	3.7%	\$11,550.63	\$412.73
2032	\$998.27	\$35.72	3.7%	\$11,979.29	\$428.66

- A Large Commercial User billed at 200,000 gallons monthly and served by a 2-inch water meter.

Table 18 – Scenario 2: Large Commercial User 200,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$3,050.29			\$36,603.48	
2025	\$3,348.06	\$297.77	9.8%	\$40,176.72	\$3,573.24
2026	\$3,470.49	\$122.43	3.7%	\$41,645.91	\$1,469.19
2027	\$3,597.77	\$127.28	3.7%	\$43,173.29	\$1,527.38
2028	\$3,730.10	\$132.32	3.7%	\$44,761.19	\$1,587.89
2029	\$3,867.67	\$137.57	3.7%	\$46,412.01	\$1,650.83
2030	\$4,010.69	\$143.02	3.7%	\$48,128.29	\$1,716.28
2031	\$4,159.39	\$148.70	3.7%	\$49,912.64	\$1,784.35
2032	\$4,313.98	\$154.60	3.7%	\$51,767.79	\$1,855.14

2.5 Scenario 3: Loan Funding - \$12 Million

Scenario 3 evaluates proposed rate increases to the Village's existing rate structure to meet the revenue requirements, but unlike Scenario 1, this scenario also evaluates the impact of financing certain capital projects, namely the Tower 1 replacement, through loans amounting to \$12 million. Additionally, some less critical capital projects were deferred to later years to alleviate the near-term rate increases. The yearly water CIP was rounded to \$5 million and Sewer CIP to \$4M to address unforeseen projects in FY 2030 through 2032, which occurs after the CIP timeline developed by the Village. The overall cash-funded Water and Sewer CIP from Fiscal Years 2025 through 2032 amounts to \$61 million.

Regarding stormwater, the Village advised that near-term projects were not to be deferred as these are ongoing projects in Fiscal Year 24 or planned for construction in Fiscal Year 25. To mitigate the sharp increases seen in Scenario 1, the Village has discussed internally the option to take a personal loan from the General Fund of \$2 million spread out over two years, with subsequent payments of \$250,000 to be made back to the General Fund over eight years.

Based on the analysis conducted, volumetric and meter fees still required higher upfront rate increases to address the more critical near-term projects, however, the rate shock previously seen in Scenario 1 was mitigated by extending the necessary increases over a longer period of time. As for stormwater, the effects of the personal loan from the General Fund substantially alleviated the rate increases to occur in Fiscal Year 25. Table 19Table 7 and Table 20Table 8Table 7 outline the rates and charges throughout the projection period.

Table 19 – Scenario 3: Water Volumetric Rate Increases

		2024	2025	2026	2027	2028	2029	2030	2031	2032
Water Volumetric	Rate Increases		6.0%	6.0%	6.0%	4.0%	4.0%	4.0%	4.0%	4.0%
	Volumetric Rate	\$12.74	\$13.50	\$14.31	\$15.17	\$15.78	\$16.41	\$17.07	\$17.75	\$18.46
Sewer Volumetric	Rate Increases		6.0%	6.0%	6.0%	4.0%	4.0%	4.0%	4.0%	4.0%
	Volumetric Rate	\$1.83	\$1.94	\$2.06	\$2.18	\$2.27	\$2.36	\$2.45	\$2.55	\$2.65
Base Line Fee (5/8-inch Meter)	Rate Increases		\$5.00	\$4.00	\$4.00	\$3.00	\$3.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$6.73	\$11.73	\$15.73	\$19.73	\$22.73	\$25.73	\$25.73	\$25.73	\$25.73
Stormwater Fee (Tier 1)	Rate Increases		\$2.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$1.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50
Stormwater Fee (Tier 2)	Rate Increases		\$4.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
Stormwater Fee (Tier 3)	Rate Increases		\$4.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
Impervious Area Fee	Rate Increases		\$3.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$1.50	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50

Table 20 – Scenario 3: Fixed Scaled Meter Fees

	2024	2025	2026	2027	2028	2029	2030	2031	2032
5/8-inch Meter Rate Increase		\$5.00	\$4.00	\$4.00	\$3.00	\$3.00	\$0.00	\$0.00	\$0.00
Base Line Fee	\$6.73	\$11.73	\$15.73	\$19.73	\$22.73	\$25.73	\$25.73	\$25.73	\$25.73
3/4-inch meter	\$7.08	\$12.34	\$16.55	\$20.76	\$23.91	\$27.07	\$27.07	\$27.07	\$27.07
1-inch meter	\$8.50	\$14.82	\$19.87	\$24.92	\$28.71	\$32.50	\$32.50	\$32.50	\$32.50
1 ½-inch meter	\$12.04	\$20.99	\$28.14	\$35.30	\$40.66	\$46.03	\$46.03	\$46.03	\$46.03
2-inch meter	\$16.29	\$28.39	\$38.07	\$47.76	\$55.02	\$62.28	\$62.28	\$62.28	\$62.28
3-inch meter	\$29.75	\$51.85	\$69.53	\$87.22	\$100.48	\$113.74	\$113.74	\$113.74	\$113.74
4-inch meter	\$47.45	\$82.70	\$110.90	\$139.11	\$160.26	\$181.41	\$181.41	\$181.41	\$181.41
6-inch meter	\$104.11	\$181.46	\$243.34	\$305.21	\$351.62	\$398.03	\$398.03	\$398.03	\$398.03
8-inch meter	\$182.02	\$317.25	\$425.43	\$533.62	\$614.76	\$695.90	\$695.90	\$695.90	\$695.90
10-inch meter	\$274.10	\$477.74	\$640.65	\$803.57	\$925.75	\$1,047.93	\$1,047.93	\$1,047.93	\$1,047.93
12-inch meter	\$419.29	\$730.80	\$980.00	\$1,229.21	\$1,416.12	\$1,603.02	\$1,603.02	\$1,603.02	\$1,603.02

Figure 10, Figure 11, and Figure 12 show the Revenues and Expenses, Water and Sewer Fund balance, and Stormwater Revenues and Expenses for Scenario 3, respectively.

Figure 10 – Scenario 3: Revenue and Expense Cash Flow Projection

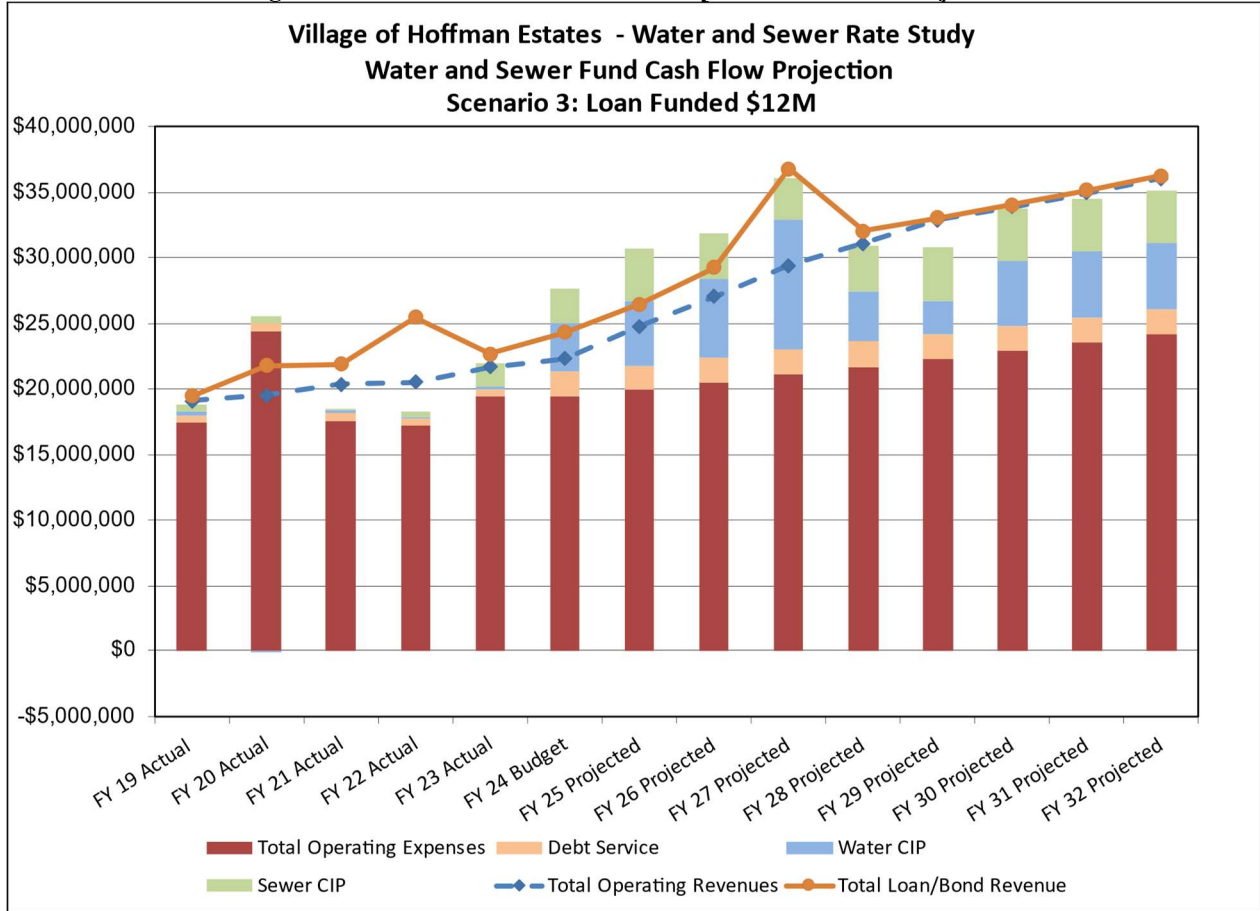


Figure 11 – Scenario 3: Water and Sewer Fund Balance Projection

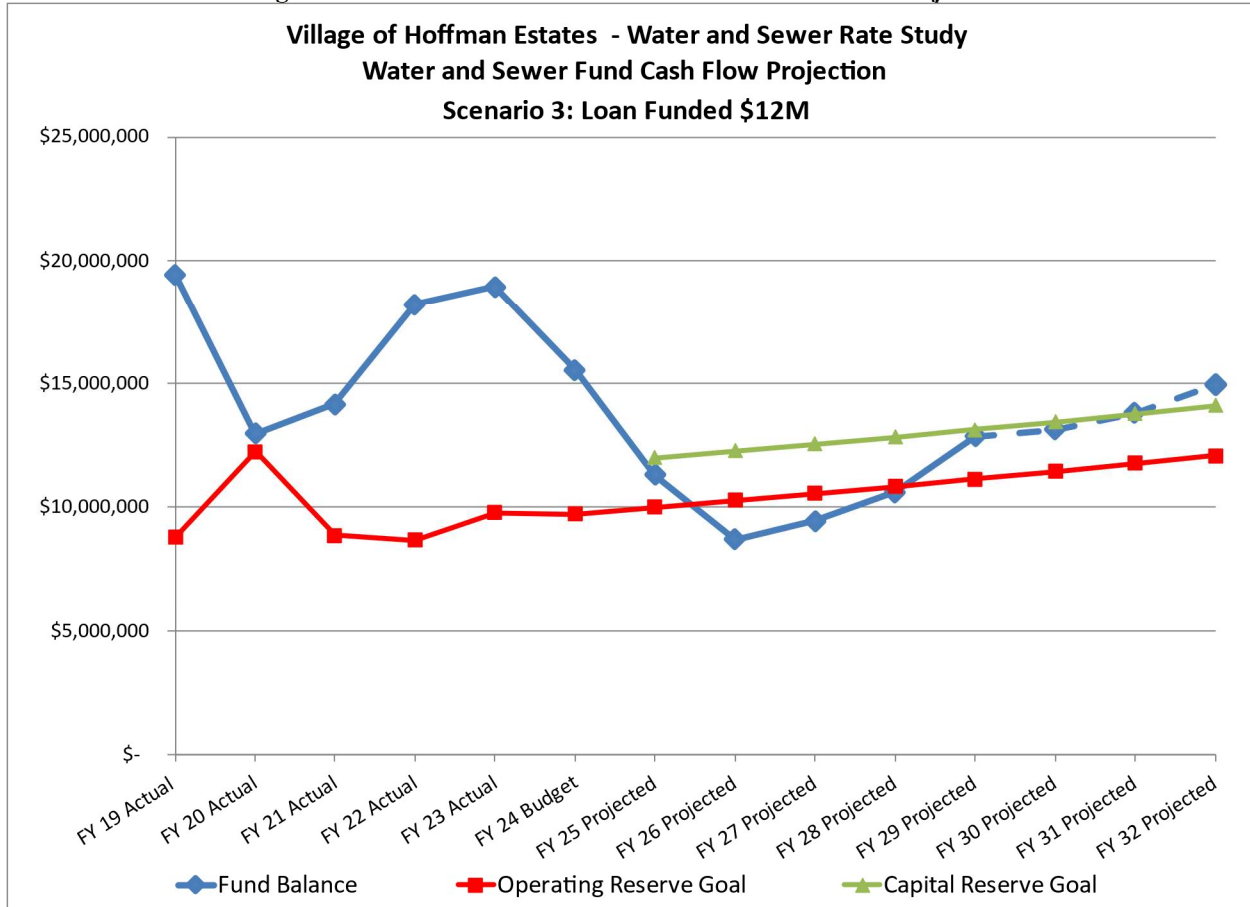
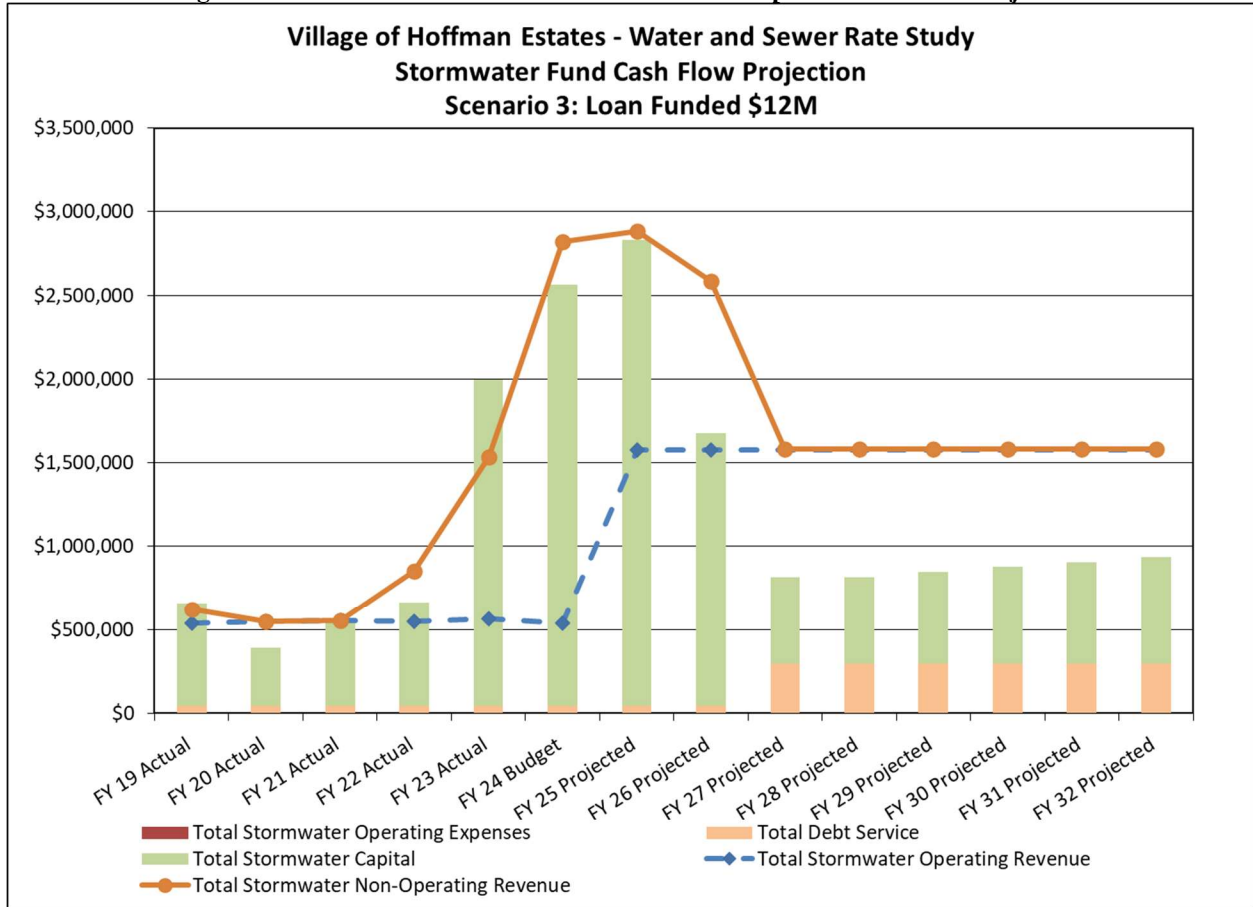


Figure 12 – Scenario 3: Stormwater Revenue and Expense Cash Flow Projection



The \$12 million in loans will facilitate the implementation of these rate increases, enabling the Water and Sewer Fund to generate the required revenues to exceed the operating reserve target beginning in Fiscal Year 29. These increases are designed to closely match with the final fund balance position determined in Scenario 2, allowing for an assessment of the impact on the customer base. Below is a summary of sample bills calculated based on the proposed rates detailed in Scenario 3.

1. A Residential User billed at 5,000 and 20,000 gallons monthly served by a ¾-inch and 1-inch water meter respectively.

Table 21 – Scenario 3: Average Residential User 5,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$81.43			\$977.16	
2025	\$93.06	\$11.63	14.3%	\$1,116.73	\$139.57
2026	\$101.90	\$8.84	9.5%	\$1,222.83	\$106.10
2027	\$111.02	\$9.12	8.9%	\$1,332.26	\$109.43
2028	\$117.65	\$6.63	6.0%	\$1,411.78	\$79.52
2029	\$124.41	\$6.77	5.8%	\$1,492.96	\$81.19
2030	\$128.17	\$3.75	3.0%	\$1,538.01	\$45.05
2031	\$132.07	\$3.90	3.0%	\$1,584.86	\$46.85
2032	\$136.13	\$4.06	3.0%	\$1,633.58	\$48.72

Table 22 – Scenario 3: Large Residential User 20,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$299.98			\$3,599.76	
2025	\$324.72	\$24.74	8.2%	\$3,896.69	\$296.93
2026	\$347.47	\$22.74	7.0%	\$4,169.58	\$272.89
2027	\$371.32	\$23.85	6.9%	\$4,455.82	\$286.24
2028	\$388.36	\$17.04	4.6%	\$4,660.28	\$204.46
2029	\$405.95	\$17.59	4.5%	\$4,871.41	\$211.13
2030	\$420.97	\$15.02	3.7%	\$5,051.59	\$180.18
2031	\$436.58	\$15.62	3.7%	\$5,238.98	\$187.39
2032	\$452.82	\$16.24	3.7%	\$5,433.87	\$194.89

- An Average Commercial User billed at 45,000 gallons monthly and served by a 2-inch water meter.

Table 23 – Scenario 3: Average Commercial User 45,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$701.94			\$8,423.28	
2025	\$813.38	\$111.44	15.9%	\$9,760.58	\$1,337.30
2026	\$864.76	\$51.38	6.3%	\$10,377.15	\$616.58
2027	\$918.65	\$53.88	6.2%	\$11,023.75	\$646.60
2028	\$957.14	\$38.50	4.2%	\$11,485.72	\$461.97
2029	\$996.89	\$39.75	4.2%	\$11,962.68	\$476.96
2030	\$1,030.67	\$33.78	3.4%	\$12,368.09	\$405.41
2031	\$1,065.81	\$35.14	3.4%	\$12,789.72	\$421.63
2032	\$1,102.35	\$36.54	3.4%	\$13,228.21	\$438.49

- A Large Commercial User billed at 200,000 gallons monthly and served by a 2-inch water meter.

Table 24 – Scenario 3: Large Commercial User 200,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$3,050.29			\$36,603.48	
2025	\$3,477.23	\$426.94	14.0%	\$41,726.79	\$5,123.31
2026	\$3,672.24	\$195.01	5.6%	\$44,066.94	\$2,340.15
2027	\$3,878.38	\$206.13	5.6%	\$46,540.53	\$2,473.59
2028	\$4,024.46	\$146.09	3.8%	\$48,293.56	\$1,753.04
2029	\$4,176.10	\$151.64	3.8%	\$50,113.23	\$1,819.67
2030	\$4,326.26	\$150.15	3.6%	\$51,915.07	\$1,801.84
2031	\$4,482.41	\$156.16	3.6%	\$53,788.98	\$1,873.91
2032	\$4,644.82	\$162.41	3.6%	\$55,737.84	\$1,948.86

2.6 Scenario 4: Loan Funded - \$30 Million

Scenario 4 uses the same CIP from Scenario 3 along with the same debt service assumptions outlined in Section 1.5 of this report. In addition to the proposed loan-funded projects included in Scenario 3, Scenario 4 adds all planned sanitary sewer improvement and lift station replacement and rehabilitation projects scheduled for Fiscal Years 25 through 27 to further reduce near-term rate hikes. Additional water main replacement projects were also included bringing the total loan-funded capital projects to \$30 million. All prior assumptions to the stormwater CIP and debt service remain consistent from Scenario 3, however, overall rates were lowered as outlined in the rates and charges included in Table 25 and Table 26 Table 7 below. The reduced stormwater rates can apply to Scenario 3 as well.

The analysis indicates that funding most of the near-term projects through loans resulted in reduced increases to both the water volumetric rates and fixed meter fees. Nevertheless, this required sewer rates to increase as a compensatory measure. Incremental adjustments to the sewer volumetric rate have a minimal effect on the overall fund balance primarily because the initial rate is much lower than the water volumetric rate.

Table 25 – Scenario 4: Water Volumetric Rate Increases

		2024	2025	2026	2027	2028	2029	2030	2031	2032
Water Volumetric	Rate Increases Volumetric Rate		4.0%	4.0%	4.0%	4.0%	4.0%	5.0%	5.0%	5.0%
		\$12.74	\$13.25	\$13.78	\$14.33	\$14.90	\$15.50	\$16.28	\$17.09	\$17.94
Sewer Volumetric	Rate Increases Volumetric Rate		10.0%	7.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
		\$1.83	\$2.01	\$2.15	\$2.26	\$2.37	\$2.49	\$2.62	\$2.75	\$2.89
Base Line Fee (5/8-inch Meter)	Rate Increases		\$4.00	\$3.00	\$3.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
	Fixed Fee	\$6.73	\$10.73	\$13.73	\$16.73	\$18.73	\$20.73	\$22.73	\$24.73	\$26.73
Stormwater Fee (Tier 1)	Rate Increases		\$2.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$1.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50
Stormwater Fee (Tier 2)	Rate Increases		\$2.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.00	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50
Stormwater Fee (Tier 3)	Rate Increases		\$3.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50
Impervious Area Fee	Rate Increases		\$3.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.00	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50

Table 26 – Scenario 4: Fixed Scaled Meter Fees

	2024	2025	2026	2027	2028	2029	2030	2031	2032
5/8-inch Meter Rate Increase		\$4.00	\$3.00	\$3.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
Base Line Fee	\$6.73	\$10.73	\$13.73	\$16.73	\$18.73	\$20.73	\$22.73	\$24.73	\$26.73
3/4-inch meter	\$7.08	\$11.29	\$14.44	\$17.60	\$19.70	\$21.81	\$23.91	\$26.02	\$28.12
1-inch meter	\$8.50	\$13.55	\$17.34	\$21.13	\$23.66	\$26.18	\$28.71	\$31.23	\$33.76
1 ½-inch meter	\$12.04	\$19.20	\$24.56	\$29.93	\$33.51	\$37.09	\$40.66	\$44.24	\$47.82
2-inch meter	\$16.29	\$25.97	\$33.23	\$40.50	\$45.34	\$50.18	\$55.02	\$59.86	\$64.70
3-inch meter	\$29.75	\$47.43	\$60.69	\$73.96	\$82.80	\$91.64	\$100.48	\$109.32	\$118.16
4-inch meter	\$47.45	\$75.65	\$96.80	\$117.96	\$132.06	\$146.16	\$160.26	\$174.36	\$188.46
6-inch meter	\$104.11	\$165.99	\$212.40	\$258.81	\$289.74	\$320.68	\$351.62	\$382.56	\$413.50
8-inch meter	\$182.02	\$290.20	\$371.34	\$452.48	\$506.57	\$560.66	\$614.76	\$668.85	\$722.94
10-inch meter	\$274.10	\$437.01	\$559.20	\$681.38	\$762.84	\$844.29	\$925.75	\$1,007.21	\$1,088.66
12-inch meter	\$419.29	\$668.50	\$855.40	\$1,042.31	\$1,166.91	\$1,291.51	\$1,416.12	\$1,540.72	\$1,665.32

Figure 13, Figure 14, and Figure 15 **Error! Reference source not found.** **Error! Reference source not found.** show the Revenues and Expenses, Water and Sewer Fund balance, and Stormwater Revenues and Expenses for Scenario 4, respectively.

Figure 13 – Scenario 4: Revenue and Expense Cash Flow Projection

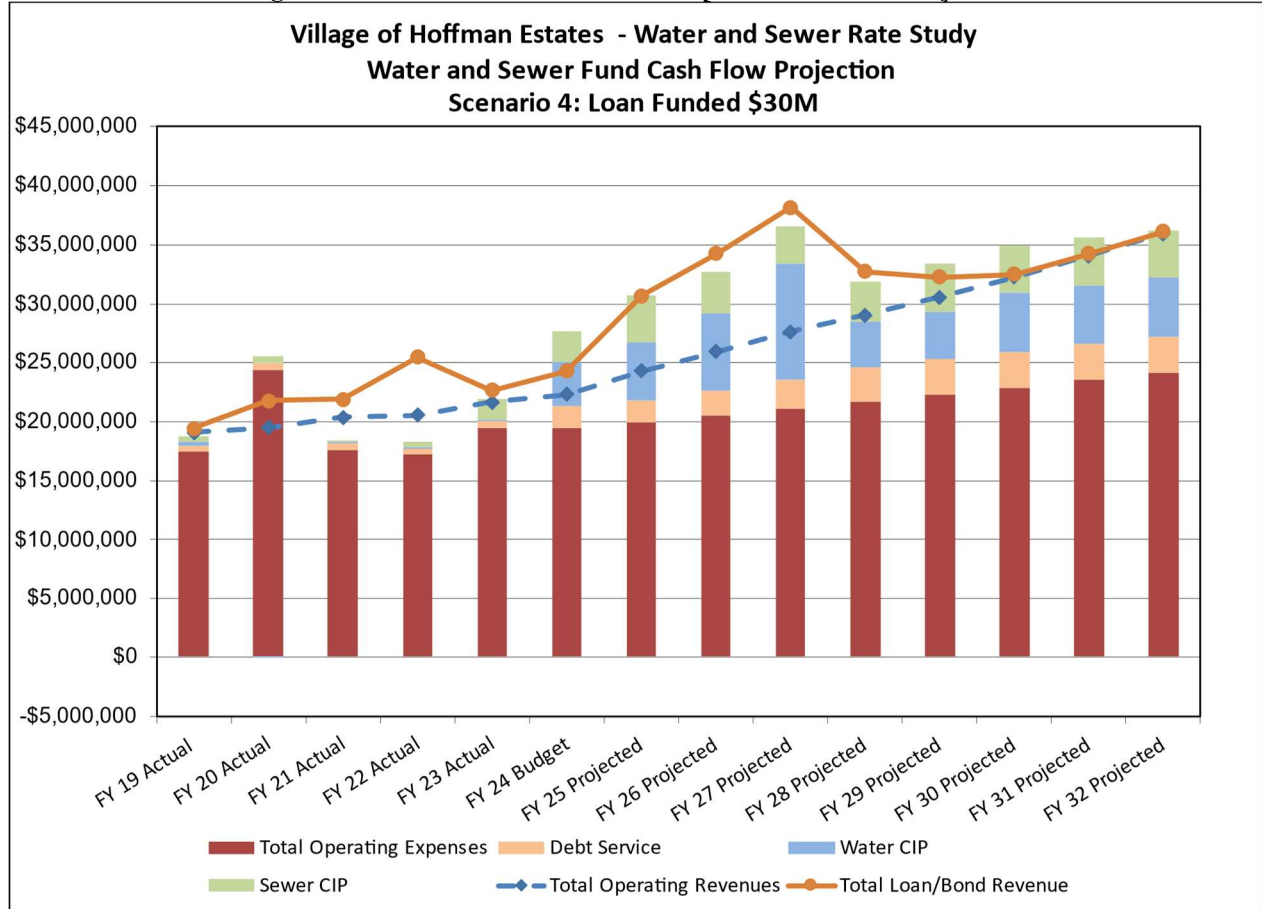


Figure 14 – Scenario 4: Water and Sewer Fund Balance Projection

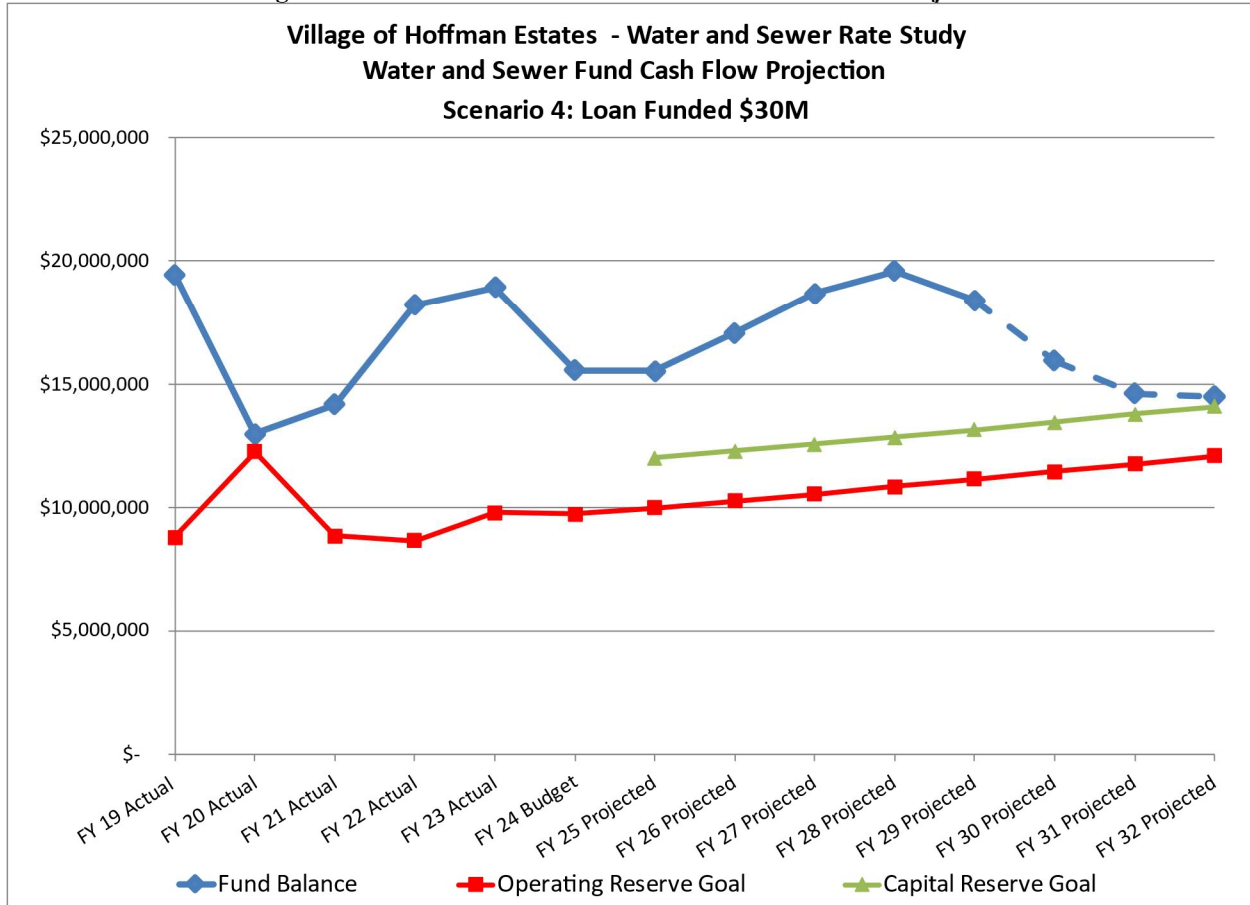
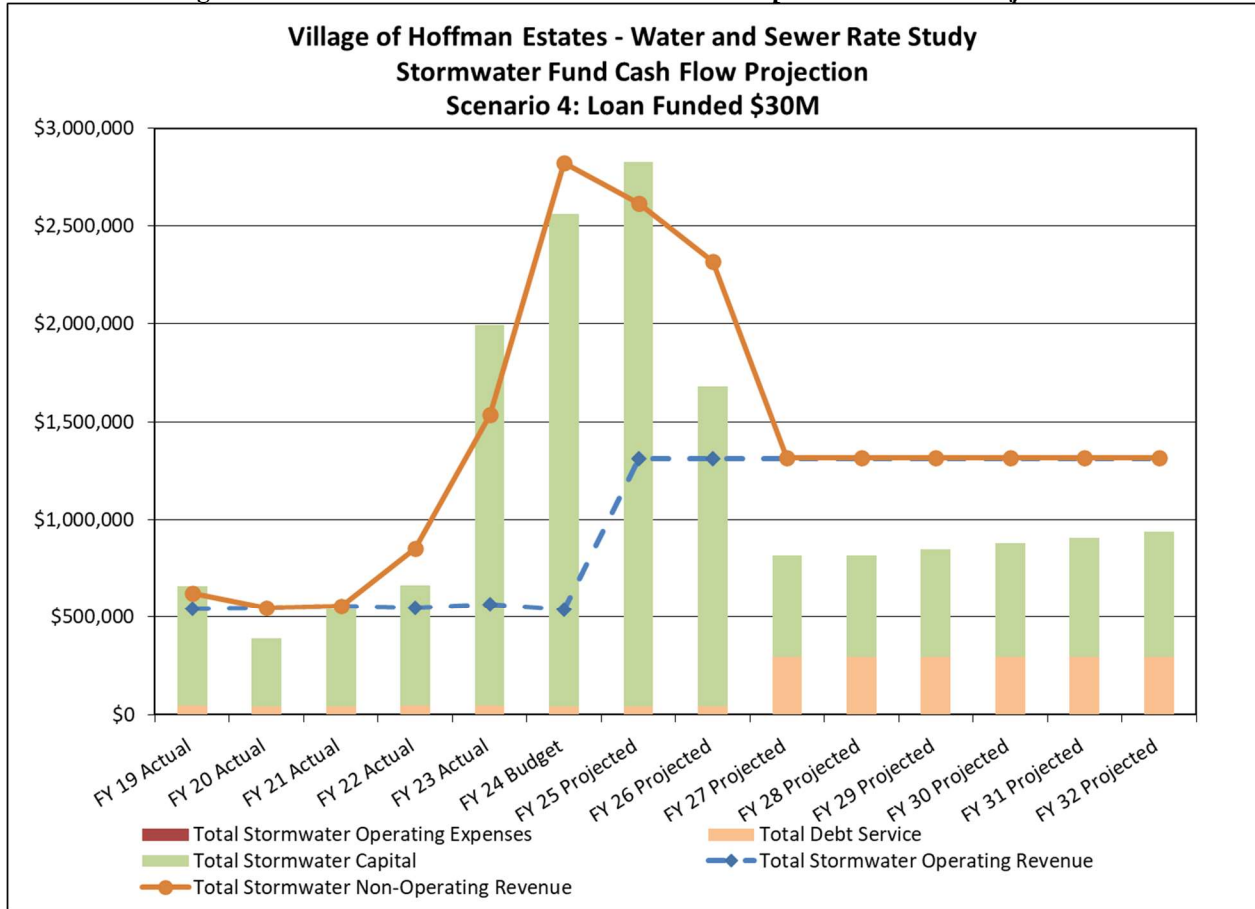


Figure 15 – Scenario 4: Stormwater Revenue and Expense Cash Flow Projection



Overall, Scenario 4 proposes modest rate increases while the fund balance sits comfortably above the capital reserve goal. This large sum prepares the Village to manage its future debt obligations effectively and achieve its capital reserve objectives throughout the forecast period. Furthermore, the reduced stormwater rates still enable the Village to fulfill its immediate capital objectives while also increasing its reserves, allowing for the transfer of revenue back to the General Fund and the financing of future unspecified projects. Sample bills were calculated under the proposed rates outlined under Scenario 4 and are summarized below:

4. A Residential User billed at 5,000 and 20,000 gallons monthly served by a ¾-inch and 1-inch water meter respectively.

Table 27 – Scenario 4: Average Residential User 5,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$81.43			\$977.16	
2025	\$91.10	\$9.67	11.9%	\$1,093.21	\$116.05
2026	\$97.61	\$6.51	7.1%	\$1,171.34	\$78.13
2027	\$104.06	\$6.45	6.6%	\$1,248.74	\$77.40
2028	\$109.60	\$5.54	5.3%	\$1,315.17	\$66.43
2029	\$115.28	\$5.68	5.2%	\$1,383.31	\$68.14
2030	\$121.88	\$6.60	5.7%	\$1,462.54	\$79.23
2031	\$128.71	\$6.83	5.6%	\$1,544.47	\$81.93
2032	\$135.77	\$7.06	5.5%	\$1,629.23	\$84.76

Table 28 – Scenario 4: Large Residential User 20,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$299.98			\$3,599.76	
2025	\$320.04	\$20.06	6.7%	\$3,840.48	\$240.72
2026	\$336.61	\$16.57	5.2%	\$4,039.37	\$198.89
2027	\$352.95	\$16.33	4.9%	\$4,235.37	\$196.00
2028	\$368.78	\$15.83	4.5%	\$4,425.33	\$189.96
2029	\$385.18	\$16.40	4.4%	\$4,622.16	\$196.82
2030	\$405.28	\$20.10	5.2%	\$4,863.33	\$241.17
2031	\$426.27	\$21.00	5.2%	\$5,115.29	\$251.97
2032	\$448.22	\$21.94	5.1%	\$5,378.60	\$263.30

5. An Average Commercial/Industrial User billed at 45,000 gallons monthly and served by a 2-inch water meter.

Table 29 – Scenario 4: Average Commercial User 45,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$701.94			\$8,423.28	
2025	\$795.29	\$93.35	13.3%	\$9,543.47	\$1,120.19
2026	\$832.74	\$37.45	4.7%	\$9,992.89	\$449.42
2027	\$869.65	\$36.91	4.4%	\$10,435.82	\$442.93
2028	\$905.38	\$35.73	4.1%	\$10,864.52	\$428.70
2029	\$942.39	\$37.01	4.1%	\$11,308.66	\$444.13
2030	\$987.71	\$45.33	4.8%	\$11,852.58	\$543.92
2031	\$1,035.07	\$47.35	4.8%	\$12,420.79	\$568.21
2032	\$1,084.54	\$49.48	4.8%	\$13,014.50	\$593.72

6. A Large Commercial/Industrial User billed at 200,000 gallons monthly and served by a 2-inch water meter.

Table 30 – Scenario 4: Large Commercial User 200,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$3,050.29			\$36,603.48	
2025	\$3,408.49	\$358.20	11.7%	\$40,901.90	\$4,298.42
2026	\$3,549.93	\$141.44	4.1%	\$42,599.19	\$1,697.28
2027	\$3,688.97	\$139.04	3.9%	\$44,267.64	\$1,668.45
2028	\$3,831.07	\$142.10	3.9%	\$45,972.87	\$1,705.24
2029	\$3,978.89	\$147.82	3.9%	\$47,746.71	\$1,773.84
2030	\$4,163.67	\$184.78	4.6%	\$49,964.03	\$2,217.32
2031	\$4,357.44	\$193.77	4.7%	\$52,289.32	\$2,325.28
2032	\$4,560.66	\$203.22	4.7%	\$54,727.96	\$2,438.64

2.7 Scenario 5: Loan Funded - \$21 Million

Scenario 5 serves as the middle ground between Scenarios 3 and 4 utilizing \$21 million in loans to fund water and sewer capital projects. The proposed rate increases are similar to those in Scenario 4, albeit with marginally elevated water rates at the beginning of the projection period. Increases to fixed meter fees were held constant at \$3.00 annually, and sewer volumetric rates and stormwater rates remained consistent with Scenario 4. Table 31 and Table 32 outline the rates and charges throughout the projection period.

Table 31 – Scenario 5: Water Volumetric Rate Increases

		2024	2025	2026	2027	2028	2029	2030	2031	2032
Water Volumetric	Rate Increases		5.0%	5.0%	5.0%	5.0%	4.0%	4.0%	4.0%	4.0%
	Volumetric Rate	\$12.74	\$13.38	\$14.05	\$14.75	\$15.49	\$16.10	\$16.75	\$17.42	\$18.12
Sewer Volumetric	Rate Increases		10.0%	7.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
	Volumetric Rate	\$1.83	\$2.01	\$2.15	\$2.26	\$2.37	\$2.49	\$2.62	\$2.75	\$2.89
Base Line Fee (5/8-inch Meter)	Rate Increases		\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00
	Fixed Fee	\$6.73	\$9.73	\$12.73	\$15.73	\$18.73	\$21.73	\$24.73	\$27.73	\$30.73
Stormwater Fee (Tier 1)	Rate Increases		\$2.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$1.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50
Stormwater Fee (Tier 2)	Rate Increases		\$2.50	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.00	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50	\$4.50
Stormwater Fee (Tier 3)	Rate Increases		\$3.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50
Impervious Area Fee	Rate Increases		\$3.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	Fixed Fee	\$2.00	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50	\$5.50

Table 32 – Scenario 5: Fixed Scaled Meter Fees

	2024	2025	2026	2027	2028	2029	2030	2031	2032
5/8-inch Meter Rate Increase		\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00
Base Line Fee	\$6.73	\$9.73	\$12.73	\$15.73	\$18.73	\$21.73	\$24.73	\$27.73	\$30.73
3/4-inch meter	\$7.08	\$10.24	\$13.39	\$16.55	\$19.70	\$22.86	\$26.02	\$29.17	\$32.33
1-inch meter	\$8.50	\$12.29	\$16.08	\$19.87	\$23.66	\$27.45	\$31.23	\$35.02	\$38.81
1 ½-inch meter	\$12.04	\$17.41	\$22.77	\$28.14	\$33.51	\$38.88	\$44.24	\$49.61	\$54.98
2-inch meter	\$16.29	\$23.55	\$30.81	\$38.07	\$45.34	\$52.60	\$59.86	\$67.12	\$74.38
3-inch meter	\$29.75	\$43.01	\$56.27	\$69.53	\$82.80	\$96.06	\$109.32	\$122.58	\$135.84
4-inch meter	\$47.45	\$68.60	\$89.75	\$110.90	\$132.06	\$153.21	\$174.36	\$195.51	\$216.66
6-inch meter	\$104.11	\$150.52	\$196.93	\$243.34	\$289.74	\$336.15	\$382.56	\$428.97	\$475.38
8-inch meter	\$182.02	\$263.16	\$344.30	\$425.43	\$506.57	\$587.71	\$668.85	\$749.99	\$831.13
10-inch meter	\$274.10	\$396.28	\$518.47	\$640.65	\$762.84	\$885.02	\$1,007.21	\$1,129.39	\$1,251.57
12-inch meter	\$419.29	\$606.19	\$793.10	\$980.00	\$1,166.91	\$1,353.81	\$1,540.72	\$1,727.62	\$1,914.53

Figure 16 and Figure 17 **Error! Reference source not found.** show the Revenue and Expense and Water and Sewer Fund balance for Scenario 4, respectively.

Figure 16 – Scenario 5: Revenue and Expense Cash Flow Projection

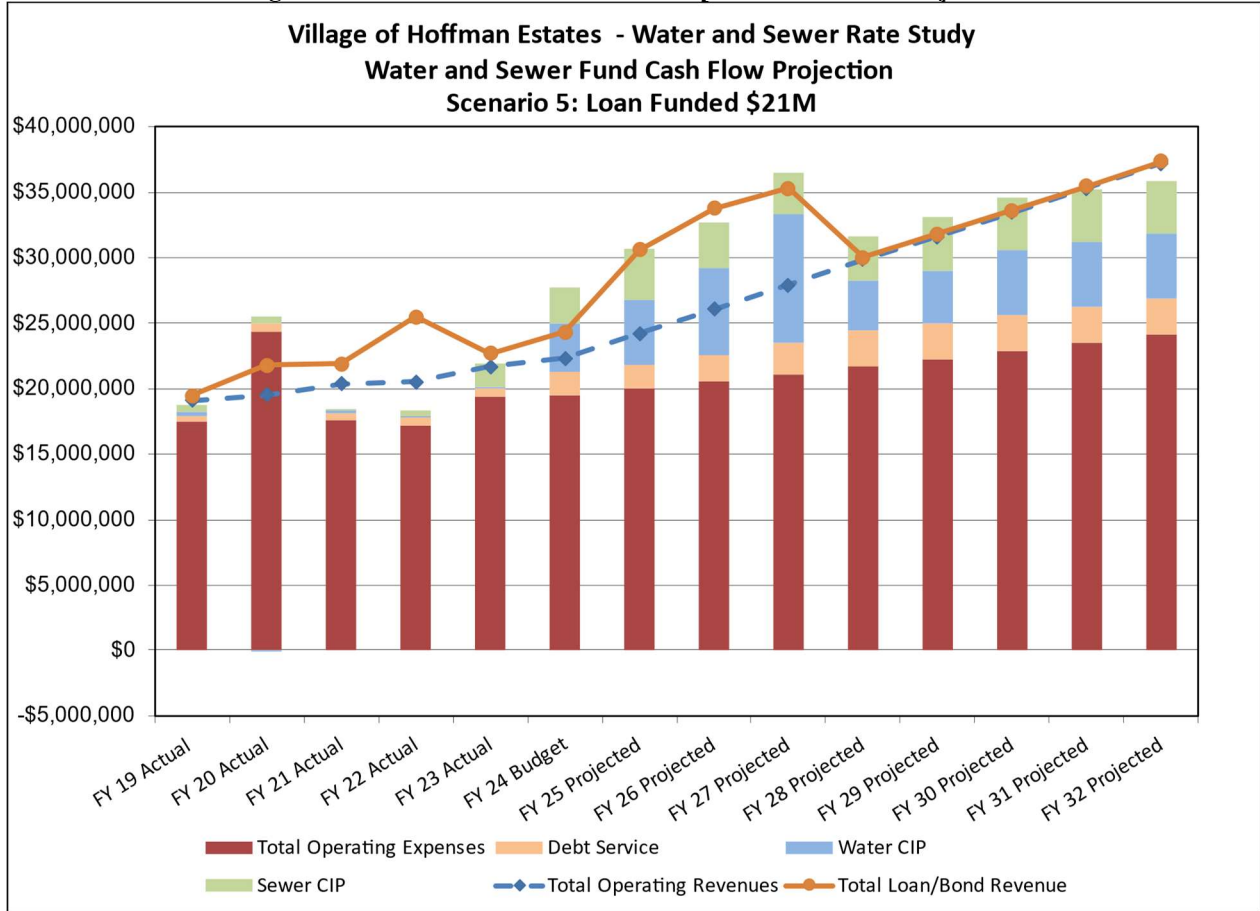
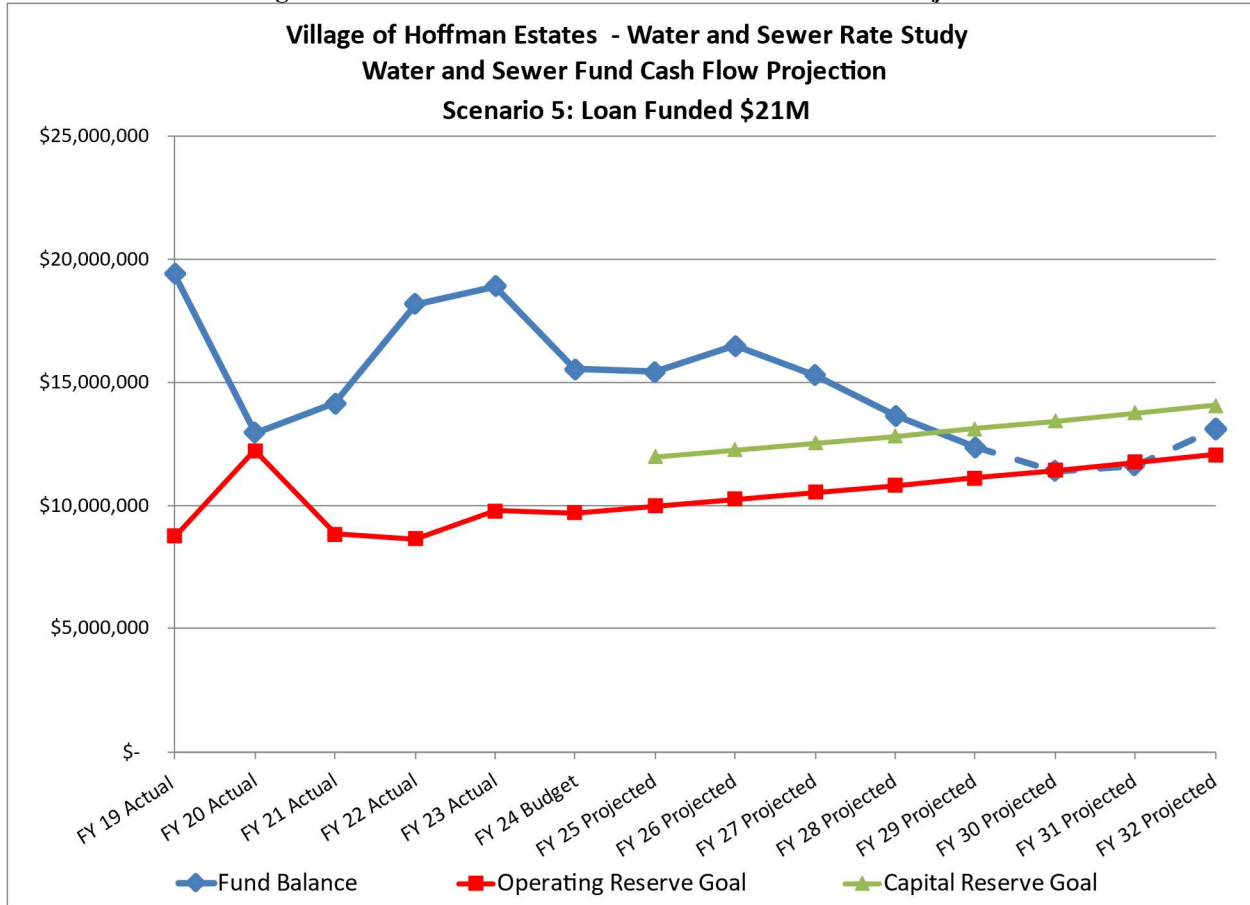


Figure 17 – Scenario 5: Water and Sewer Fund Balance Projection



Despite the downward trend, the fund balance hovers around the operating reserve goal before recovering back to an upward trend at the tail end of the projection period. Sample bills calculated under the proposed rates outlined under Scenario are summarized below:

7. A Residential User billed at 5,000 and 20,000 gallons monthly served by a ¾-inch and 1-inch water meter respectively.

Table 33 – Scenario 5: Average Residential User 5,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$81.43			\$977.16	
2025	\$90.69	\$9.26	11.4%	\$1,088.23	\$111.07
2026	\$97.89	\$7.20	7.9%	\$1,174.69	\$86.46
2027	\$105.10	\$7.21	7.4%	\$1,261.16	\$86.47
2028	\$112.51	\$7.41	7.0%	\$1,350.06	\$88.90
2029	\$119.35	\$6.85	6.1%	\$1,432.22	\$82.16
2030	\$126.35	\$7.00	5.9%	\$1,516.23	\$84.00
2031	\$133.51	\$7.16	5.7%	\$1,602.15	\$85.92
2032	\$140.84	\$7.33	5.5%	\$1,690.08	\$87.93

Table 34 – Scenario 5: Large Residential User 20,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$299.98			\$3,599.76	
2025	\$321.54	\$21.56	7.2%	\$3,858.43	\$258.67
2026	\$340.89	\$19.35	6.0%	\$4,090.65	\$232.21
2027	\$360.24	\$19.36	5.7%	\$4,322.92	\$232.27
2028	\$380.41	\$20.17	5.6%	\$4,564.91	\$241.99
2029	\$398.33	\$17.92	4.7%	\$4,779.94	\$215.03
2030	\$416.86	\$18.53	4.7%	\$5,002.34	\$222.40
2031	\$436.03	\$19.17	4.6%	\$5,232.42	\$230.08
2032	\$455.88	\$19.84	4.6%	\$5,470.50	\$238.08

- 8. An Average Commercial/Industrial User billed at 45,000 gallons monthly and served by a 2-inch water meter.

Table 35 – Scenario 5: Average Commercial User 45,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$701.94			\$8,423.28	
2025	\$798.60	\$96.66	13.8%	\$9,583.22	\$1,159.94
2026	\$842.30	\$43.70	5.5%	\$10,107.63	\$524.41
2027	\$886.01	\$43.71	5.2%	\$10,632.16	\$524.53
2028	\$931.55	\$45.53	5.1%	\$11,178.56	\$546.40
2029	\$972.03	\$40.48	4.3%	\$11,664.30	\$485.74
2030	\$1,013.89	\$41.86	4.3%	\$12,166.63	\$502.33
2031	\$1,057.19	\$43.30	4.3%	\$12,686.24	\$519.61
2032	\$1,101.99	\$44.80	4.2%	\$13,223.85	\$537.61

- 9. A Large Commercial/Industrial User billed at 200,000 gallons monthly and served by a 2-inch water meter.

Table 36 – Scenario 5: Large Commercial User 200,000 Gallons Sample Bill

Fiscal Year	Monthly Bill	Monthly Increase	Percent Increase	Annual Bill	Annual Increase
2024	\$3,050.29			\$36,603.48	
2025	\$3,431.55	\$381.26	12.5%	\$41,178.62	\$4,575.14
2026	\$3,600.77	\$169.21	4.9%	\$43,209.18	\$2,030.56
2027	\$3,770.02	\$169.26	4.7%	\$45,240.29	\$2,031.11
2028	\$3,947.38	\$177.36	4.7%	\$47,368.60	\$2,128.31
2029	\$4,102.28	\$154.89	3.9%	\$49,227.31	\$1,858.71
2030	\$4,263.31	\$161.04	3.9%	\$51,159.74	\$1,932.43
2031	\$4,430.75	\$167.44	3.9%	\$53,168.97	\$2,009.23
2032	\$4,604.85	\$174.10	3.9%	\$55,258.22	\$2,089.25

2.8 Impact to Sample Bill Comparisons

Based on the Tower 1 Replacement/Rehabilitation, Water Main Replacements, Tollway Utility Crossings, and Backup Water Supply projects, the Village's revenue requirements will necessitate rate increases in order to maintain the operating reserve goal in any given year. Although all five scenarios allow the Village to generate the necessary revenue to finance and maintain its operating and capital reserves over time, the quantity of loan funding and the various iterations to capital deferment can have significantly different impacts on how the burden is placed across the Village's customers.

Under the proposed rate scenario examined under Scenario 3, the adoption of \$12 million in loans to fund the Tower 1 Replacement/Rehabilitation and the South and West Backup Supplies projects in conjunction with the deferment of near-term water main replacements and the Tollway Utility crossings significantly alleviates the cost burden experienced by all users compared to Scenario 1. Nevertheless, customers face the largest cost burden in the first year mostly because of the necessary stormwater fee rate increases.

The fundamental effects of capital deferment and loan funding become evident when analyzing their influence on different sample bills. In particular, the rate hikes in Scenario 1 significantly impact each customer segment, however, these effects are not disproportionately felt due to the established fixed-scaled meter rate structure. In contrast, the allocation of \$30 million in loans in Scenario 4 substantially alleviated the financial pressure on all customer groups.

Table 37 shows the sample bill for the average Residential user that consumes 5,000 gallons monthly with a ¾-inch water meter, and Table 38 shows the sample bill for a large Residential user that consumes 20,000 gallons monthly with a ¾-inch water meter. Overall, the average Residential user experiences the highest impacts under Scenarios 1 and 3, with Scenario 4 providing the lowest impact over time. The large Residential users also experience the highest impacts in Scenarios 1 and 3. Scenario 2, despite yielding the lowest user impacts, is not necessary for inclusion in this discussion, as it does not provide a basis for comparison with other scenarios that utilize the full extent of the Village's Capital Improvement Plan.

Table 37 – Average Residential Comparison, 5,000 Gallons Sample Bill

	2024	2025	2026	2027	2028	2029	2030	2031	2032
Scenario 1	\$81.43	\$116.29	\$136.87	\$136.87	\$136.87	\$136.87	\$136.87	\$136.87	\$136.87
Percent Increase		42.8%	17.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Dollar Increase		\$34.86	\$20.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Scenario 2	\$81.43	\$85.37	\$89.43	\$93.60	\$97.41	\$101.34	\$105.41	\$109.63	\$113.99
Percent Increase		4.8%	4.8%	4.7%	4.1%	4.0%	4.0%	4.0%	4.0%
Dollar Increase		\$3.94	\$4.06	\$4.18	\$3.80	\$3.93	\$4.07	\$4.21	\$4.36
Scenario 3	\$81.43	\$93.06	\$101.90	\$111.02	\$117.65	\$124.41	\$128.17	\$132.07	\$136.13
Percent Increase		14.3%	9.5%	8.9%	6.0%	5.8%	3.0%	3.0%	3.1%
Dollar Increase		\$11.63	\$8.84	\$9.12	\$6.63	\$6.77	\$3.75	\$3.90	\$4.06
Scenario 4	\$81.43	\$91.10	\$97.61	\$104.06	\$109.60	\$115.28	\$121.88	\$128.71	\$135.77
Percent Increase		11.9%	7.1%	6.6%	5.3%	5.2%	5.7%	5.6%	5.5%
Dollar Increase		\$9.67	\$6.51	\$6.45	\$5.54	\$5.68	\$6.60	\$6.83	\$7.06
Scenario 5	\$81.43	\$90.69	\$97.89	\$105.10	\$112.51	\$119.35	\$126.35	\$133.51	\$140.84
Percent Increase		11.4%	7.9%	7.4%	7.0%	6.1%	5.9%	5.7%	5.5%
Dollar Increase		\$9.67	\$6.51	\$6.45	\$5.54	\$5.68	\$6.60	\$6.83	\$7.06

Table 38 – Large Residential Comparison, 20,000 Gallons Sample Bill

	2024	2025	2026	2027	2028	2029	2030	2031	2032
Scenario 1	\$299.98	\$367.63	\$418.36	\$418.36	\$418.36	\$418.36	\$418.36	\$418.36	\$418.36
Percent Increase		22.55%	13.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dollar Increase		\$67.65	\$50.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Scenario 2	\$299.98	\$312.66	\$325.81	\$339.44	\$353.08	\$367.24	\$381.95	\$397.22	\$413.09
Percent Increase		4.2%	4.2%	4.2%	4.0%	4.0%	4.0%	4.0%	4.0%
Dollar Increase		\$12.68	\$13.15	\$13.63	\$13.64	\$14.16	\$14.71	\$15.27	\$15.86
Scenario 3	\$299.98	\$324.72	\$347.47	\$371.32	\$388.36	\$405.95	\$420.97	\$436.58	\$452.82
Percent Increase		8.2%	7.0%	6.9%	4.6%	4.5%	3.7%	3.7%	3.7%
Dollar Increase		\$24.74	\$22.74	\$23.85	\$17.04	\$17.59	\$15.02	\$15.62	\$16.24
Scenario 4	\$299.98	\$320.04	\$336.61	\$352.95	\$368.78	\$385.18	\$405.28	\$426.27	\$448.22
Percent Increase		6.7%	5.2%	4.9%	4.5%	4.4%	5.2%	5.2%	5.1%
Dollar Increase		\$20.06	\$16.57	\$16.33	\$15.83	\$16.40	\$20.10	\$21.00	\$21.94
Scenario 5	\$299.98	\$321.54	\$340.89	\$360.24	\$380.41	\$398.33	\$416.86	\$436.03	\$455.88
Percent Increase		7.2%	6.0%	5.7%	5.6%	4.7%	4.7%	4.6%	4.6%
Dollar Increase		\$20.06	\$16.57	\$16.33	\$15.83	\$16.40	\$20.10	\$21.00	\$21.94

Table 39 shows the sample bill for the average Commercial user that consumes 45,000 gallons monthly with a 2-inch water meter, and Table 40 shows the sample bill for a large Commercial user that consumes 200,000 gallons monthly with a 2-inch water meter.

Table 39 – Average Commercial Comparison, 45,000 Gallons Sample Bill

	2024	2025	2026	2027	2028	2029	2030	2031	2032
Scenario 1	\$701.94	\$367.63	\$418.36	\$418.36	\$418.36	\$418.36	\$418.36	\$418.36	\$418.36
Percent Increase		37.31%	13.80%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dollar Increase		\$261.92	\$50.73	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Scenario 2	\$701.94	\$774.38	\$802.86	\$832.44	\$863.15	\$895.04	\$928.16	\$962.55	\$998.27
Percent Increase		10.3%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
Dollar Increase		\$72.44	\$28.49	\$29.58	\$30.71	\$31.89	\$33.12	\$34.39	\$35.72
Scenario 3	\$701.94	\$813.38	\$864.76	\$918.65	\$957.14	\$996.89	\$1,030.67	\$1,065.81	\$1,102.35
Percent Increase		15.9%	6.3%	6.2%	4.2%	4.2%	3.4%	3.4%	3.4%
Dollar Increase		\$111.44	\$51.38	\$53.88	\$38.50	\$39.75	\$33.78	\$35.14	\$36.54
Scenario 4	\$701.94	\$795.29	\$832.74	\$869.65	\$905.38	\$942.39	\$987.71	\$1,035.07	\$1,084.54
Percent Increase		13.3%	4.7%	4.4%	4.1%	4.1%	4.8%	4.8%	4.8%
Dollar Increase		\$93.35	\$37.45	\$36.91	\$35.73	\$37.01	\$45.33	\$47.35	\$49.48
Scenario 5	\$701.94	\$798.60	\$842.30	\$886.01	\$931.55	\$972.03	\$1,013.89	\$1,057.19	\$1,101.99
Percent Increase		13.8%	5.5%	5.2%	5.1%	4.3%	4.3%	4.3%	4.2%
Dollar Increase		\$93.35	\$37.45	\$36.91	\$35.73	\$37.01	\$45.33	\$47.35	\$49.48

Table 40 – Large Commercial Comparison, 200,000 Gallons Sample Bill

	2024	2025	2026	2027	2028	2029	2030	2031	2032
Scenario 1	\$3,050.29	\$4,010.96	\$4,437.30	\$4,437.30	\$4,437.30	\$4,437.30	\$4,437.30	\$4,437.30	\$4,437.30
Percent Increase		31.49%	10.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Dollar Increase		\$960.67	\$426.34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Scenario 2	\$3,050.29	\$3,348.06	\$3,470.49	\$3,597.77	\$3,730.10	\$3,867.67	\$4,010.69	\$4,159.39	\$4,313.98
Percent Increase		9.8%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%
Dollar Increase		\$297.77	\$122.43	\$127.28	\$132.32	\$137.57	\$143.02	\$148.70	\$154.60
Scenario 3	\$3,050.29	\$3,477.23	\$3,672.24	\$3,878.38	\$4,024.46	\$4,176.10	\$4,326.26	\$4,482.41	\$4,644.82
Percent Increase		14.0%	5.6%	5.6%	3.8%	3.8%	3.6%	3.6%	3.6%
Dollar Increase		\$426.94	\$195.01	\$206.13	\$146.09	\$151.64	\$150.15	\$156.16	\$162.41
Scenario 4	\$3,050.29	\$3,408.49	\$3,549.93	\$3,688.97	\$3,831.07	\$3,978.89	\$4,163.67	\$4,357.44	\$4,560.66
Percent Increase		11.7%	4.1%	3.9%	3.9%	3.9%	4.6%	4.7%	4.7%
Dollar Increase		\$358.20	\$141.44	\$139.04	\$142.10	\$147.82	\$184.78	\$193.77	\$203.22
Scenario 5	\$3,050.29	\$3,431.55	\$3,600.77	\$3,770.02	\$3,947.38	\$4,102.28	\$4,263.31	\$4,430.75	\$4,604.85
Percent Increase		12.5%	4.9%	4.7%	4.7%	3.9%	3.9%	3.9%	3.9%
Dollar Increase		\$358.20	\$141.44	\$139.04	\$142.10	\$147.82	\$184.78	\$193.77	\$203.22

Overall, based on the comparisons above, it is evident that lower usage customers experience the highest impacts under Scenario 1 and the lowest impacts under Scenario 4. Comparing groups with the same sized meter, those who regularly use more water will experience a lower impact than those who use less. Without the existing Fixed Scaled Meter rate structure, the burden experienced by the larger users would be disproportionately lower than seen here.

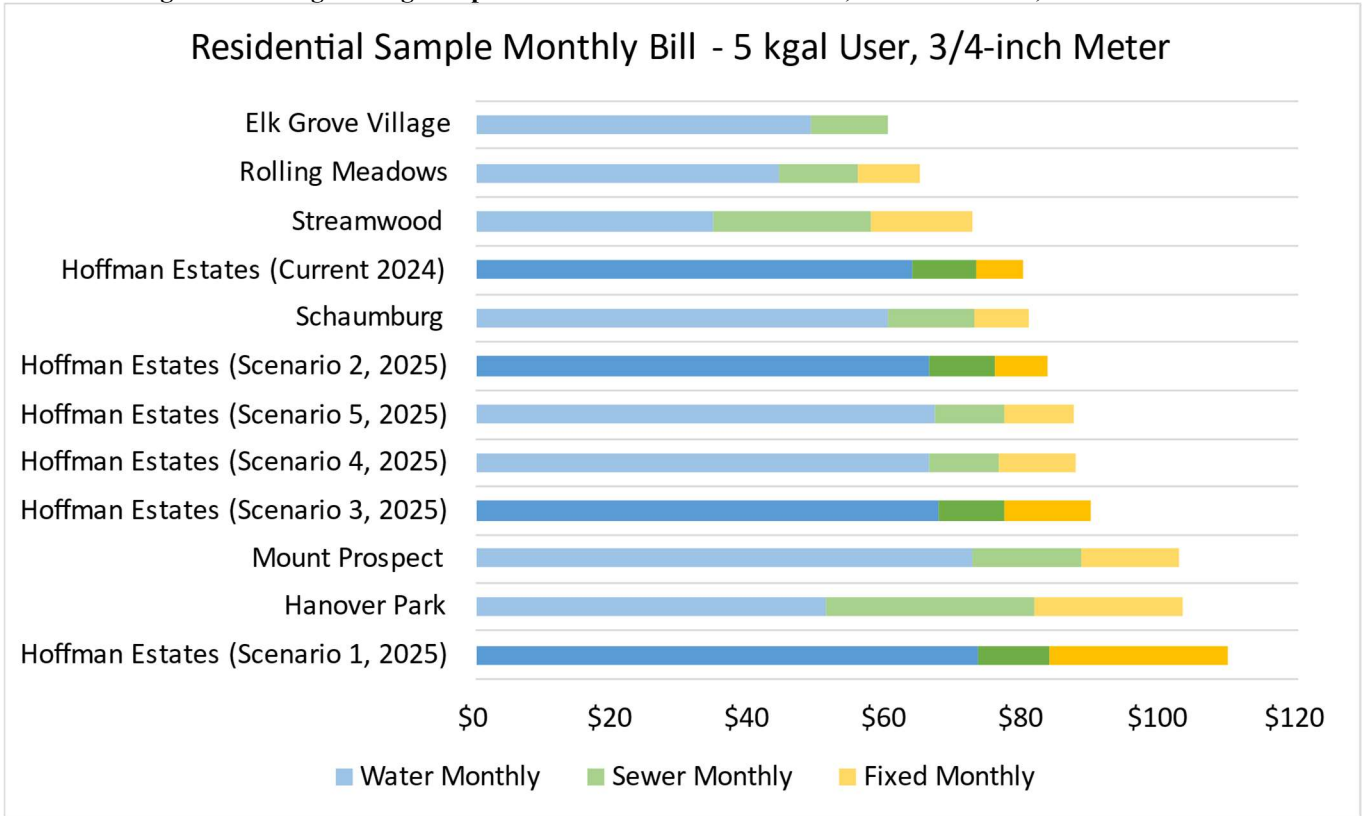
2.8 Neighboring Rate Sample Bills

A rate comparison survey was conducted on both neighboring communities as well as similarly sized municipal utility systems to the Village of Hoffman Estates. These figures are intended to provide a “snapshot” of how the Village’s current and proposed rate changes compare to other municipal systems, but is not necessarily an exact representation of what a customer might actually pay under other systems. Some of these key considerations include:

- The rates used to calculate the neighboring utilities were obtained by their public websites and/or municipal ordinances. Some rates and ordinances were last updated between one to two years ago.
- Certain charges may not necessarily be reflected through water and sewer rates alone, such as charges assessed by the Metropolitan Water Reclamation District which treats wastewater for much of the Cook County area and recuperates its costs through property taxes.
- Each utility is different and may not have the same infrastructure age or needs, which can lead to significantly different water and sewer rates. This can be caused by factors including, but not limited to different customer composition, treating versus purchasing water, and a lack of recent rate studies.
- Smaller utilities may often observe higher costs due to the relatively high costs of infrastructure being supported by fewer customers, or predominantly low usage users.

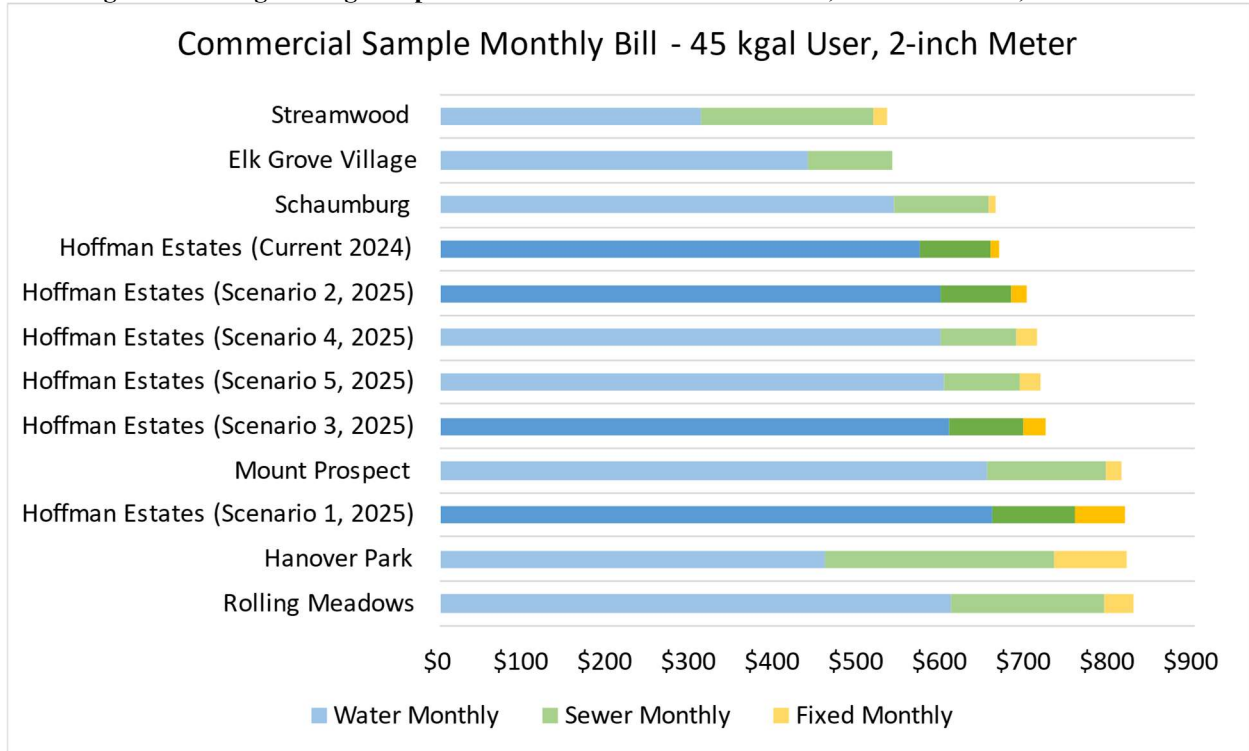
The figures below show a comparison of a sample Residential and Commercial customer bill under the existing rate structure in Fiscal Year 2024 and the proposed rate increases and rate structure modifications under Scenario 1, 2, 3, 4, and 5 in Fiscal Year 2025.

Figure 18 – Neighboring Sample Residential Customer Bill – 5,000 Gallon User, 3/4-inch Meter



For Residential users, the Village’s current water and sewer rates place it in the lower middle half as compared to these neighboring utility rates. The 2025 rates for Scenarios 2 through 5 will keep the Village in the middle, however, Scenario 1 would raise the future bill above all other communities.

Figure 19 – Neighboring Sample Commercial Customer Bill – 100,000 Gallon User, 2-inch Meter



The Village’s existing rate structure for the Commercial user group also places it in the lower middle half compared to these neighboring utility rates, with the Scenario 1 sample bill being the third highest amongst the compared communities.

Stormwater rates were not included in this comparison because each community handles stormwater differently and may not be comparable to each other.

3. CONCLUSION AND RECOMMENDATIONS

3.1 Conclusion and Recommendations

In order to continue providing the highest quality service to its customers and provide a new long term sustainable water source, the Village will ultimately need to increase its water and sewer rates to maintain its strong financial position. Although all identified scenarios accomplish this goal, based on discussions with the Village staff, Scenario 3 is recommended. This would allow the Village to mitigate the initial rate increases without deferring too many projects into the future. Furthermore, taking on too many loans as shown under Scenarios 4 and 5 could reduce the Village's bond rating, add additional administrative work to the staff, and prove harder to acquire loans in the future.

It should be noted, however, that the rate increases identified and prepared as part of this rate study present a reasonably conservative estimate of future revenues and expenses, while taking into account the wide variability associated with some of the projected capital improvement projects and associated debt service. The major factors that could have a significant impact on the financial model calculated as part of this rate study include:

- The current Capital Improvement Plan may be adjusted after each year as planning, engineering, and construction costs become clearer.
- The proposed Debt Service may vary based on loan terms, interest rates, and total loan amounts.
- Significant growth or decline in population projections and future commercial/industrial development that deviate from the projected forecast can directly impact the total revenues and expenses associated with the water usage pattern. This could directly impact the projected rates to compensate for the variations in usage.
- The projection includes several inflating factors which may over or underestimate actuals, including expense line items such as operational and maintenance costs, the actual cost of purchasing water from CDWM and NSMJAWA in the future, and the annual inflation applied to the rest of the Village's expense line items.

The Village retains the ability to fine tune the annual rate increases to adjust based on actual year-to-year revenues and expenses. The Village is able to further control the changes made to the Fixed Fee to best reflect an equitable distribution of its expenses across its customer base.

Baxter & Woodman recommends that the Village thoroughly review this report and consult with Village staff and any financial advisors who are familiar with all aspects of the Village's finances. The

Village should discuss any information and material contained in this report with any and all internal or external advisors and experts that the Village deems appropriate before acting on this information. Baxter & Woodman is not acting as a financial advisor to the Village and does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to the Village of Hoffman Estates with respect to the information and material contained in this report.