

Athens Village Sewer System Rate Study



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Compiled for the Village of Athens

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EXECUTIVE SUMMARY

The Village of Athens owns and operates a wastewater collection system and two wastewater treatment facilities that serve about 1,500 individuals. Customers are billed quarterly with a flat rate per billing unit. The wastewater collection system experiences significant inflow and infiltration (I&I) that has caused violations of the facility's average monthly flows. After completing an I&I study, the Village has developed capital project plans to investigate and slip-line sewer collection lines to mitigate I&I. These improvements will be partially grant-funded but sewer customers will need to cover new long-term debt payments beginning in FY28. The sewer rates have not been updated since at least 2011 and the net income of the sewer fund has dropped consistently in recent years, such that the revenue cannot sustain the existing expenses. The Village seeks a rate structure that ensures long-term financial sustainability while equitably allocating costs among users. An increase in revenue is required to meet new financial targets. A review of actual expenditures and customer water use is analyzed within the report and five scenarios for additional revenue generation are presented for consideration. Recommendations include that the Village implement a volume-based fee for gallons above a minimum volume and increase the flat rate per user.

1. Background/Purpose of Study

The Village of Athens is located along the Hudson River in Greene County, New York. The Village owns and operates a wastewater collection and treatment system serving 687 active connections in the Village. The customers are primarily residential and include some commercial businesses, restaurants, a hotel, marina, an elementary school, and an assisted living facility.

The Village is preparing for necessary improvements to the collection system and has secured outside funding to support the project. Remaining project costs will be financed and paid by sewer system customers as long-term debt. Revenue from sewer billing charges has remained flat over time as expenses have increased, such that additional revenue is needed to meet current operational expenses. The Village is interested in implementing a rate structure that can promote financial sustainability for the sewer system and fairness among users of the sewer system.

The purpose of this report is to present a sewer rate analysis and propose rate scenarios for consideration by the Village. This report outlines the financial targets for the sewer fund in FY2027 and FY2028, how different rate structures can be applied to meet those targets, the proposed impact on customers, and recommendations.

2. Technical Description Of Wastewater System

The Village of Athens owns, operates, and maintains two wastewater treatment facilities (WWTF) and the associated sanitary collection systems. The Athens WWTF serves most of the Village while the Brick Row WWTF serves only twenty-nine users. The Athens WWTF is an activated sludge facility that has a Daily Design Flow of 0.325 MGD. Improvements to the Athens WWTF in the last 20 years include improvements to secondary clarification, influent screening, grit removal, and the aeration system. The Brick Row WWTF is an activated sludge facility with a design flow of 0.017 MGD. Both facilities disinfect effluent with sodium hypochlorite and discharge treated effluent to the Hudson River.

The Athens WWTF collection system consists of 113 manholes and approximately 36,000 feet of gravity collection sewer lines of 8-10" diameter with 4-6" laterals connecting customers to the main. The Brick Row WWTF consists of 7 manholes and 1100 feet of gravity collection sewer lines made of 8" clay tile.

3. Financial Summary

Overview

Sewer system revenue is generated through a flat rate fee per billing unit, billed on a quarterly basis. The current fee is \$129 per billing unit per quarter or \$516 annually. The sewer rates have not been adjusted since 2011 at the time of the last capital project. Revenue from sewer bills has remained around \$340,000 annually for the last three years.

End of Year Revenues & Expenses

A comparison of budgeted vs. actual expenditures and revenues was made for the three most recent complete fiscal years for the sewer fund and is summarized in Table 1.

	5/31/2023	5/31/2024	5/31/2025
Total Revenue	\$ 350,190	\$ 351,638	\$ 373,090
Total Operating Expenses	\$ 161,178	\$ 180,323	\$ 217,776
Total Debt Service	\$ 169,835	\$ 169,374	\$ 173,636
Net Income	\$19,177	\$1,941	(\$18,322)

Table 1. Actual revenue and expenditures FY23-FY25

Financial Forecast

The necessary expenditures for the proper operation and maintenance of the sewer system will vary from year to year and increase over time. Approximately 81% of the expenditures are fixed costs and 19% are variable costs that are dependent on system use and volume of wastewater treated. Interviews with Village officials, operator, and project engineer have informed revenue and expenditure projections through 2028, shown in Table 2.

	5/31/2026	5/31/2027	5/31/2028
Total Projected Revenue (Current Rates)	\$359,644	\$363,044	\$362,144
Total Projected Operating Expenses	\$231,667	\$248,592	\$262,484
Total Projected Long-Term Debt	\$178,499	\$199,240	\$279,631
Total Projected Reserve Contributions	0	0	\$ 5,000
Projected Net Income (Loss)	(\$50,522)	(\$84,788)	(\$184,971)

Table 2. Projected revenue and expenses under current sewer rates and usage

A loss of \$50,522 is projected for the current fiscal year, however, this number is projected to increase substantially in the next two fiscal years as the costs associated with the I&I mitigation project convert to long-term debt. An inflation increase rate of 3.5% is applied to operating expenses, except for contractual, chemical, and electric utility expenses which have a rate of 8% applied due to more significant increases in these budget lines. It is noted that current geopolitical conflicts affecting the global supply and costs of fuel leave significant uncertainty for projecting energy and material costs, and the potential for large increases in associated expenditures.

An estimated \$18,309 to pay the municipal Bond Anticipation Note (BAN) is projected in FY27 to cover the cost of engineering design. An estimated \$98,700 annual payment will begin in FY28. It is recommended that the Village re-evaluate capital equipment needs after the completion of the capital project and begin making regular transfers to a capital reserve fund for unplanned equipment expenditures that cannot be included in the typical annual budget.

While a rate increase is needed in the short term to adjust to meet existing operation and maintenance expenses and the new debt payments, regular rate adjustments should continue annually or at least bi-annually to adjust for inflation and future system needs.

Capital Project Needs

The upcoming capital improvements to the wastewater collection system will focus on reducing I&I by a combination of acquiring leak detection equipment for further investigations, slip-lining portions of the sewer main, and sewer main replacement in areas that cannot be slip-lined. The total project cost is estimated to be \$3.05 million and a total of \$1,538,984 has been awarded in grant funds from US EPA and the New York State Water Infrastructure Improvement Act (WIIA). The remaining project costs are to be financed through the Clean Water State Revolving Fund (CWSRF) with a 30-year market rate loan.

In addition to the I&I improvements, there remain additional capital improvements in lower priority areas of the collection system, at the Athens and Brick Row WWTFs, and within the Brick Row collection system. Currently, the replacement of the grit pump and raw water pumps, and the control building roof at the Athens WWTF are identified as upcoming needs, as well as improvements to the secondary clarifiers. Once the I&I project is completed, the Village should reassess and prioritize the remaining capital needs to develop a realistic plan for regular transfers to a capital or equipment reserve fund.

New Debt Service

New annual debt service payments estimated at \$98,700 will be due for the upcoming I&I capital project beginning in FY28. Once the project goes to bid and is closer to completion, the exact amount and rate to be financed will be known. The estimated \$98,700 represents the high end estimate. If the new debt payments are divided evenly among customers, additional payment of \$36 per unit per quarter, or \$144 annually will be required, beginning in FY28.

Financial Targets

Under current rates and expenditures, the sewer fund is projected to face a deficit this fiscal year ending 5/31/26 and that rates will be adjusted to begin June 1, 2026, or later. The projected total financial target and additional revenue target for FY27 and FY28 are the basis for the rate options presented here. The projected net losses in Table 2 are used to set the target amounts for additional revenue needed: \$85,000 in FY27 and \$185,000 in FY28.

4. Billing and Customer Summary

The Village sewer system currently has 562 customer accounts totaling 687 billing units. All customers are inside the Village limits. Customers are billed quarterly, with the flat rate of \$129 applied per billing unit. The fee remains the same regardless of customer water usage. Most accounts are single family residential users and are assigned one billing unit. Multi-unit residences are assigned one billing unit per housing unit. Commercial and retail establishments are assigned multiple units. The Village evaluated and re-aligned water billing units in 2025 to ensure the appropriate billing of non-residential accounts, and these billing unit adjustments have also been applied to the sewer billing units.

Water Use Summary

Customer water consumption and billing data from June 2022 to December 2025 is used as the basis for the calculations in this report. Water meters are read and billed quarterly. Total water sold is about 23.5 million gallons annually among sewer customers. Customer consumption averages 10,519 gallons per quarter, with a median value of 8,317 per quarter. Customer consumption by average quarterly use is summarized in Figure 1. It is noted that not all water that passes through water meters enters the wastewater collection system, due to drinking, cooking, irrigation, or outdoor faucets. Filling pools delays the disposal of wastewater into the collection system.

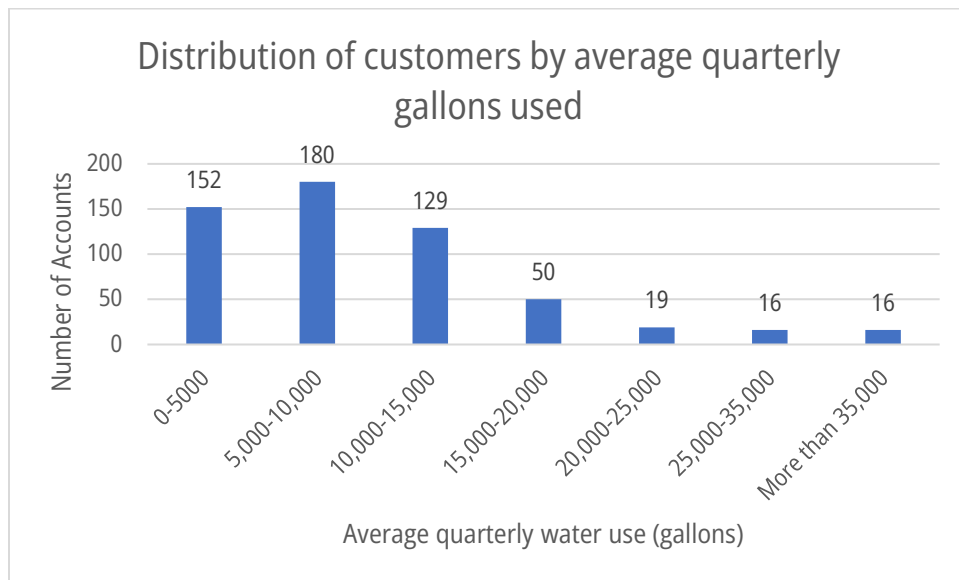


Figure 1. Distribution of customer accounts by average quarterly consumption

5. Rate options

Multiple methods are available to the Village to generate the additional revenue required for safe and sustainable operation of the sewer system. In addition to the existing flat rate, the Village has the authority to implement additional use-based fees, increase or add fees for new connections, late penalties, or a relevy fee for unpaid balances that are collected through a property tax bill at the end of a fiscal year. Five scenarios are presented for consideration for the Village to meet revenue targets, each with different benefits and risks. **The additional revenue target is \$85,000 for FY27 and \$185,000 for FY28.**

1. Increase Base Rate Only

The first and most straightforward method for generating additional revenue is to evenly divide the deficit among the number of billing units and raise the base rate only. Using this method, a \$30/unit in the base rate for all customers is required for the FY27 revenue target. A \$66/unit (or additional \$36/unit over FY27) increase in the base rate is required for the FY28 revenue target, summarized in Table 3.

This option has the advantage of continuing the single base fee structure that customers expect on their sewer bills and produces predictable revenue for the Village. The disadvantage is that there is no incentive for customers to conserve water and may create a financial burden on the lowest volume users who are paying much more than their proportional use of the sewer system.

	Current Quarterly Rates	FY27 - Increase Base only	FY28 -Increase Base only
Base Rate	\$ 129.00	\$ 159.00	\$ 195.00
Included Gallons	0	0	0
Flow Rate (\$/1,000 gal.)	\$ -	\$ -	\$ -

Table 3. Rates with increase in base rate only

2. Add a Flow Rate Only

The second method for generating additional revenue is to add a fee that is charged based on water used. Using this method, the base rate remains flat, and customers are charged a set amount per 1,000 gallons of water used. To meet FY27 revenue targets, a flow rate of \$3.50/1,000 gallons is required, increasing to \$7.85/1,000 gallons to meet FY28 revenue targets, summarized in Table 4.

This option has the advantage of connecting customer water use habits to the outcomes of the sewer bill, increasing final bill amounts proportionally to customer use of the sewer system. However, this option relies entirely on customer water consumption to generate additional revenue, placing the Village in a more vulnerable position when it comes to reliable cash flow and making accurate projections.

	Current Quarterly Rates	FY27 - Add Flow Rate only	FY28 -Add Flow Rate only
Base Rate	\$ 129.00	\$ 129.00	\$ 129.00
Included Gallons	0	0	0
Flow Rate (\$/1,000 gal.)	\$ -	\$ 3.50	\$ 7.85

Table 4. Rates with addition of flow rate only

3. Add Flow Rate with Included Gallons

The next option for meeting revenue targets is to adopt a flow rate that applies only above a certain volume of water used, like the structure of the Village's water rates. Under this scenario, the base rate remains flat, and 10,000 gallons are included each quarter at no additional charge, matching the amount included with quarterly water bills. For gallons used over 10,000 per unit per quarter, a flow rate of \$16.00/1,000 gallons is required for FY27, and \$36.00/1,000 gallons is required for FY28 and is summarized in Table 5.

As with option 2, this directly correlates customer water use to final bill outcomes, but only for higher volume use customers. The additional revenue generation would only come from customers using more than the included gallons per quarter, rather than from all customer usage. This additional revenue is even less predictable, as it is based on a smaller subset of customer use, and may be difficult for the Village to accurately project and budget revenue.

	Current Quarterly Rates	FY27 - Add flow rate with included gallons	FY28 - Add flow rate with included gallons
Base Rate	\$ 129.00	\$ 129.00	\$ 129.00
Included Gallons	0	10,000	10,000
Flow Rate (\$/1,000 gal.)	\$ -	\$ 16.00	\$ 36.00

Table 5. Rates with addition of flow rate and included gallons

4. Increase base and add flow rate

Option 4 blends options 1 and 2 together, for a moderate increase to the base rate while adding a flow rate without an included volume. For FY27, a \$10/unit increase in the base fee plus \$2.35/1,000 gallons is required to meet revenue targets. For FY27, a \$30/unit increase (or additional \$20/unit over FY27) plus \$4.25/1,000 gallons is required to meet revenue targets and is summarized in Table 6.

Under this option, all customers will see an increase in their final bill amounts, and part of that increase is dependent on customer usage. Lower volume use customers will experience the smallest increases in their bills, with higher volume use customers contributing a higher proportion of the additional revenue. This provides the Village with more stable revenue from base fees than options 2 and 3, while accepting some vulnerability to changes in revenue if water consumption is reduced. This option could be a suitable for FY27 as a transition for both the Village and customers to adjust to the addition of a volume-based flow rate.

	Current Quarterly Rates	FY27 -Base and Flow Increase	FY28 - Base and Flow Increase
Base Rate	\$ 129.00	\$ 139.00	\$ 159.00
Included Gallons	0	0	0
Flow Rate (\$/1,000 gal.)	\$ -	\$ 2.35	\$ 4.25

Table 6. Rates with increase to base rate and flow rate

5. Combination Method

The last rate option presented combines all three methods – increase the base rate, add a flow rate, to be charged for gallons over the included amount per quarter. This combination method encourages water conservation by rewarding low volume customers with the smallest increases to their bills, while also ensuring steady additional revenue is generated from an increase to the base rate.

A combination method provides a balanced approach, where the Village can ensure adequate revenue for meeting fixed expenses such as debt payments while also giving customers some ability to impact their final bill based on water usage. This structure matches that of the water billing that customers are already familiar with and is recommended for implementation.

To meet FY27 financial targets, a \$20/unit increase to the base fee is required, plus \$4.00/1,000 gallons used over 8,000 gallons. For FY28, a \$51/unit increase (or additional \$31/unit over FY27) is required, plus \$6.00/1,000 gallons used over 8,000 gallons, summarized in Table 7. Current usage data shows a median value of 8,317 gallons per quarter, which means that about half of current customers will continue to pay the base rate only if water use remains consistent.

	Current Quarterly Rates	FY27 - Combination	FY28 -Combination
Base Rate	\$ 129.00	\$ 149.00	\$ 180.00
Included Gallons	0	8,000	8,000
Flow Rate (\$/1,000 gal.)	\$ -	\$ 4.00	\$ 6.00

Table 7. Rates with the combination method

Rate Option Comparison

The five rate structures presented each offer a pathway to meeting new financial targets with different benefits and drawbacks for the Village and customers. Tables 8 and 9 summarize the five options for FY27 and FY28 for consideration.

	Current Rates	1 - Increase Base rate Only	2 - Add Flow Rate Only	3 - Add Flow Rate With Included Gallons	4 - Base And Flow	5 - Combination
Base Rate	\$ 129.00	\$ 159.00	\$ 129.00	\$ 129.00	\$ 139.00	\$ 149.00
Included Gallons	0	0	0	10,000	0	8,000
Flow Rate (\$/1,000 gal.)	\$ -	\$ -	\$ 3.50	\$ 16.00	\$ 2.35	\$ 4.00

Table 8. Comparison of rate options to meet FY27 Financial Targets

	Current Rates	1 - Increase Base rate Only	2 - Add Flow Rate Only	3 - Add Flow Rate With Included Gallons	4 - Base And Flow	5 - Combination
Base Rate	\$ 129.00	\$ 195.00	\$ 129.00	\$ 129.00	\$ 159.00	\$ 180.00
Included Gallons	0	0	0	10,000	0	8,000
Flow Rate (\$/1,000 gal.)	\$ -	\$ -	\$ 7.85	\$ 36.00	\$ 4.25	\$ 6.00

Table 9. Comparison of rate options to meet FY28 Financial Targets

Customer Bill Impact

Sewer customers currently pay the same per-unit quarterly bill regardless of water use. The addition of a flow rate would result in a differentiation in sewer bills based on water use, such that low-volume customers receive lower bills than high volume customers. Table 10 provides bill outcomes under the five rate options for three example customers – an average customer using 10,000 gallons per quarter, a high-volume customer using 40,000 gallons per quarter, and a low-volume customer using 5,000 gallons per quarter. The option with the highest bill for the example customers is shown in bold. Options 1, 2, and 3 create more extreme outcomes for different users, whereas options 4 and 5 result in more moderate changes for all customers.

Customer Type	FY	Current	Option 1 – Increase Base	Option 2 – Add Flow	Option 3 – Flow + Included	Option 4 – Base + Flow	Option 5 – Combination
Average (10,000 gal)	FY27	\$129	\$159	\$167	\$143	\$165	\$159
	FY28	\$129	\$195	\$215	\$161	\$205	\$197
High Volume (40,000 gal)	FY27	\$129	\$159	\$272	\$624	\$235	\$204
	FY28	\$129	\$195	\$450	\$1,242	\$333	\$378
Low-Volume (5,000 gal)	FY27	\$129	\$159	\$147	\$129	\$151	\$155
	FY28	\$129	\$195	\$169	\$129	\$181	\$180

Table 10. Example quarterly sewer bills by rate option (FY27-FY28)

New Relevy Fee

When a sewer customer has an unpaid balance at the end of the fiscal year, they are notified that the balance will be transferred to the annual property tax bill. The County transmits the unpaid balances to the Village and pursues payment from the property owner. In addition to presenting an administrative burden for Village staff, the payment from the County is not realized in the same fiscal year as the balances are billed and presents cash flow problems for the Village. It is estimated that 5% of accounts allow balances to be transferred to the property tax bill. Like the recently considered relevy fee for unpaid water balances, a **relevy fee of \$100 or 20% of the unpaid balance, whichever is higher, is recommended**. An additional \$3,400 in projected revenue from relevy fees for FY27 and \$2,500 for FY28 is included in these options.

Revenue by Fee Type

Revenue from base rate fees is fixed based on the number of billing units and is considered a reliable and predictable source of revenue for the sewer fund. Revenue from flow rate fees is dependent on customer water use, therefore revenue is subject to change and is more difficult to accurately project. Figures 2 and 3 compare the revenues projected by fee type for each rate option. Because 81% of the expenses of the sewer fund are fixed, at least this much revenue is recommended to come from fixed sources. Options 2 and 3 have similar revenue projections from flow rate fees, but Option 3 places this cost on above average volume customers only. These options generate the least amount of revenue from base fees, subjecting the Village to greater risk of revenue shortfall.

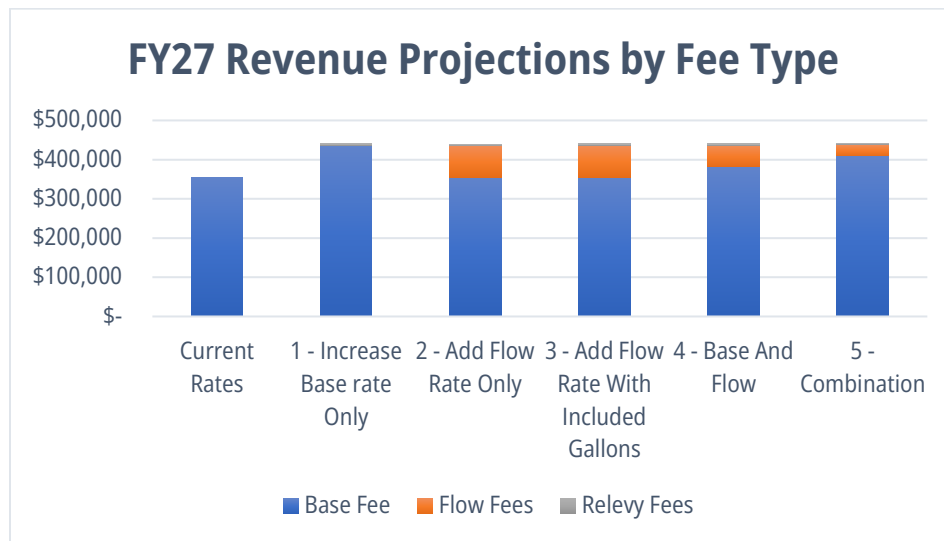


Figure 2. FY27 Revenue projections by fee type under each rate option

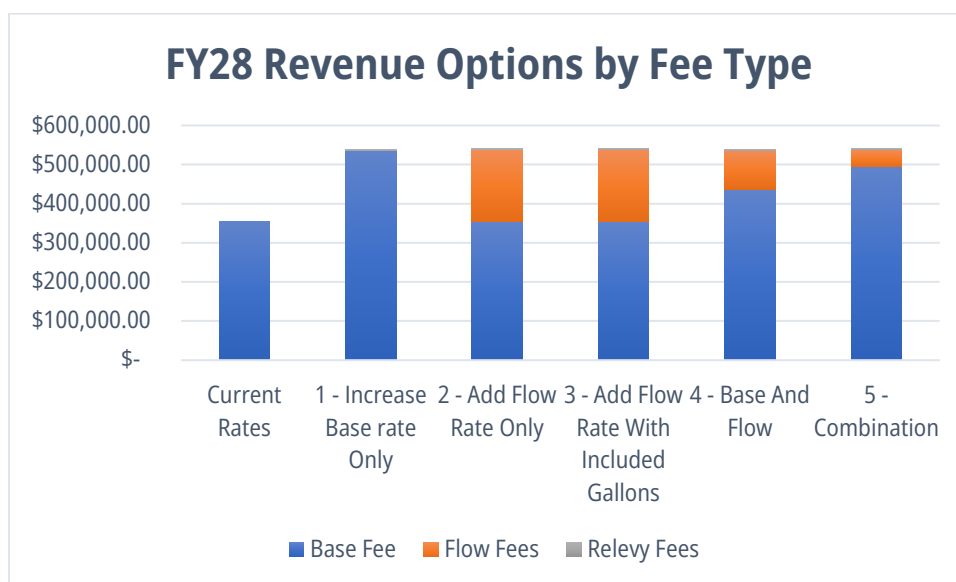


Figure 3. FY28 Revenue projections by fee type under each rate option

6. Recommendations

In consideration of the options presented in this report, Option 5 – Combination is recommended for the basis of the FY27 and FY28 sewer rates. This rate structure provides the Village with enough additional revenue to meet fixed costs and upcoming debt payments, while ensuring the smallest bill impact on the customers with the lowest use. By adding a flow rate that is based on usage, there will be greater variation in customer bills, such that each customer is paying closer to their “fair share” or proportion of the system’s use and overall cost. Including a fixed volume in each quarterly bill mirrors the structure of the water rates and results in about half of customers only seeing the increase in base rate fees on their bill. Table 11 summarizes the projected revenue by fee type with the recommended rates.

For all rate options, a rate increase is needed for both FY27 and FY28 if the sewer fund is to be financially sustainable. Because the rates have gone unchanged for 15 years, these increases are more substantial than the increases that will be required in FY29 and beyond, at which point smaller adjustments for cost increases and inflation will be the driver of rate changes.

<i>Revenue Source</i>	<i>Revenue under current rates</i>	<i>Projected FY27 Revenue - New Rates</i>	<i>Projected FY28 Revenue - New Rates</i>
<i>Base Rate</i>	\$354,492	\$409,452.00	\$494,640.00
<i>Flow Rate (\$/1,000 gal. above included)</i>	\$ -	\$29,456.29	\$43,836.44
<i>Relevy Fee</i>	\$ -	\$3,400	\$2,500
<i>Other Revenue (penalties/fees)</i>	\$5,152	\$5,152	\$5,152
<i>Total Projected Revenue</i>	\$359,644	\$447,460	\$546,128
<i>Financial Target</i>		<i>\$447,832</i>	<i>\$547,115</i>

Table 11. Projected revenue by fee type with recommended FY27 and FY28 water rates

Additional Recommendations

In addition to the recommended changes to the rate structure and amounts, additional recommendations are offered to further Village goals of safe and compliant operation of the sewer system, financial sustainability, and customer fairness.

1. A relevy fee of \$100 or 20% of unpaid balance, whichever is more, should be implemented.
2. Ensure that existing fees and penalties are being applied and collected when appropriate.
3. There are a small number of accounts where customers have an onsite septic tank prior to the collection pipe. These customers are responsible for septic tank pumping and solids removal, and effluent leaves these tanks and enters the wastewater collection system. Because these customers are not contributing solids to the system and are covering the cost of pumping, it is recommended that these customers receive a 0.25 unit reduction on their account in exchange for proof of septic pumping every 3 years.

4. Once the Village has closed on long-term financing for the I&I capital project, the Village should assess remaining capital project needs to determine adequate reserve contributions for capital expenses not included in the current project and include these contributions in the annual budget process.
5. An annual or biannual review of customer use and sewer expenditures should be completed by the Village Board or its designees to continue adjusting rates in smaller increments, as needed, to remain financially sustainable.

7. Acknowledgements

A special thank you to the Village officials and staff that contributed time and resources toward this rate study, especially: Amy Serrago, Mayor; Mary Jo Wynne, Village Clerk; Dawn Palmateer, Deputy Village Clerk; Joe Myers, Wastewater Operator.

The 2025 Village of Athens Sanitary Sewer Collection System Inflow and Infiltration Study Preliminary Engineering Report was prepared by Jason Priesner at Lamont Engineering was used as reference material.

The RCAP Formulate Great Rates Guide and Toolkit were used as guidance for the analysis in this report.

RCAP Solutions' Jesse Lavigne contributed Excel tools and assistance to support this project.