



REPORT #2 OF 3:

HAMILTON SEWER
RATES REPORT

FEBRUARY, 2022



Prepared for:
Hamilton Township, New Jersey
300 Hobson Avenue
Hamilton, NJ 08610



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February 2, 2022

Carrie D. Feuer, P.E., Director
Hamilton Township Department of Water Pollution Control
300 Hobson Avenue
Hamilton, NJ 08610

Subject: Report #2 of 3 – Hamilton Sewer Rates Report

Dear Ms. Feuer:

NewGen Strategies and Solutions, LLC (NewGen) is pleased to submit to the Township of Hamilton this report detailing our completed Sewer Rate Study. This report details the results of our analysis of the forecasted costs of providing wastewater service to the Township's retail customers and our recommendations for recovering these costs over the next five years. Included in this report are assumptions regarding the cost allocation to the Township's wastewater customers in Robbinsville Township, which are described in our a. Report #1 of 3: Wastewater System Cost Allocation Report.

We appreciate the opportunity to provide our professional services to the Township and would like to express our sincere appreciation to Township staff. The dedication and assistance provided by Township staff was essential to the completion of this study. It has been a distinct pleasure to work with the Township of Hamilton.

Should you require additional information regarding the enclosed report, please contact me at 443-951-4207 or via e-mail at ecallocchia@newgenstrategies.net.

Very truly yours,

DocuSigned by:

C11651334F8F462...

Eric Callocchia
Principal
NewGen Strategies and Solutions, LLC

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EXECUTIVE SUMMARY

This section of the report summarizes the major findings and recommendations that are the result of the study.

Projected Wastewater System Revenue Requirement

NewGen’s forecast of the Hamilton wastewater system revenue requirements is shown in Table E-1. This forecast includes all operating and maintenance, debt service, capital investment, and reserve contributions for the next five fiscal years (FY 2022 – FY 2026). Also included is the assumption that Hamilton and Robbinsville Townships adopt the recommended cost allocation developed in NewGen’s Report #1 – Multi-Municipal Sewerage System Cost Allocation Report.

**Table E-1
Hamilton Wastewater System Net Revenue Requirement Projection**

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Operating Expenses	\$13,969,579	\$14,362,282	\$14,766,080	\$15,181,291	\$15,608,237	\$16,047,253
Reserve Funded Capital	\$3,586,500	\$3,228,000	\$3,028,500	\$2,416,000	\$2,802,500	\$2,098,500
Existing Debt Service	\$5,506,325	\$5,486,988	\$5,508,550	\$5,495,800	\$5,562,082	\$3,499,419
New Debt Service	\$ -	\$344,140	\$887,664	\$1,051,260	\$1,261,531	\$1,397,436
Total Rev. Req.	\$23,062,405	\$23,421,409	\$24,190,795	\$24,144,351	\$25,234,350	\$23,042,608
Less: Misc. Revenues	(\$550,000)	(\$550,000)	(\$550,000)	(\$550,000)	(\$550,000)	(\$550,000)
Less: Robbinsville	(\$3,091,896)	(\$2,678,474)	(\$2,829,624)	(\$2,905,778)	(\$2,996,859)	(\$2,858,889)
Net Rev. Req.	\$19,420,509	\$20,192,935	\$20,811,170	\$20,688,573	\$21,687,490	\$19,633,719

The above forecast includes reasonable cost escalation and an assumption that Hamilton Township will finance a portion of its planned capital improvement plan with new debt service beginning in FY 2022.

Recommended Revenue Increases

Based on the net revenue requirement forecast in Table E-1, NewGen projected the wastewater system’s expenses and revenues for the next five fiscal years assuming that the Township did not increase any wastewater rates or fees. Exhibits E-2 and E-3 show the resulting expense and revenue forecast and resulting Sewer Fund balance assuming Hamilton’s rates remain at the FY 2021 level.

Executive Summary

Exhibit E-2 Hamilton Wastewater System Expenses vs. Revenues Under FY 2021 Rates

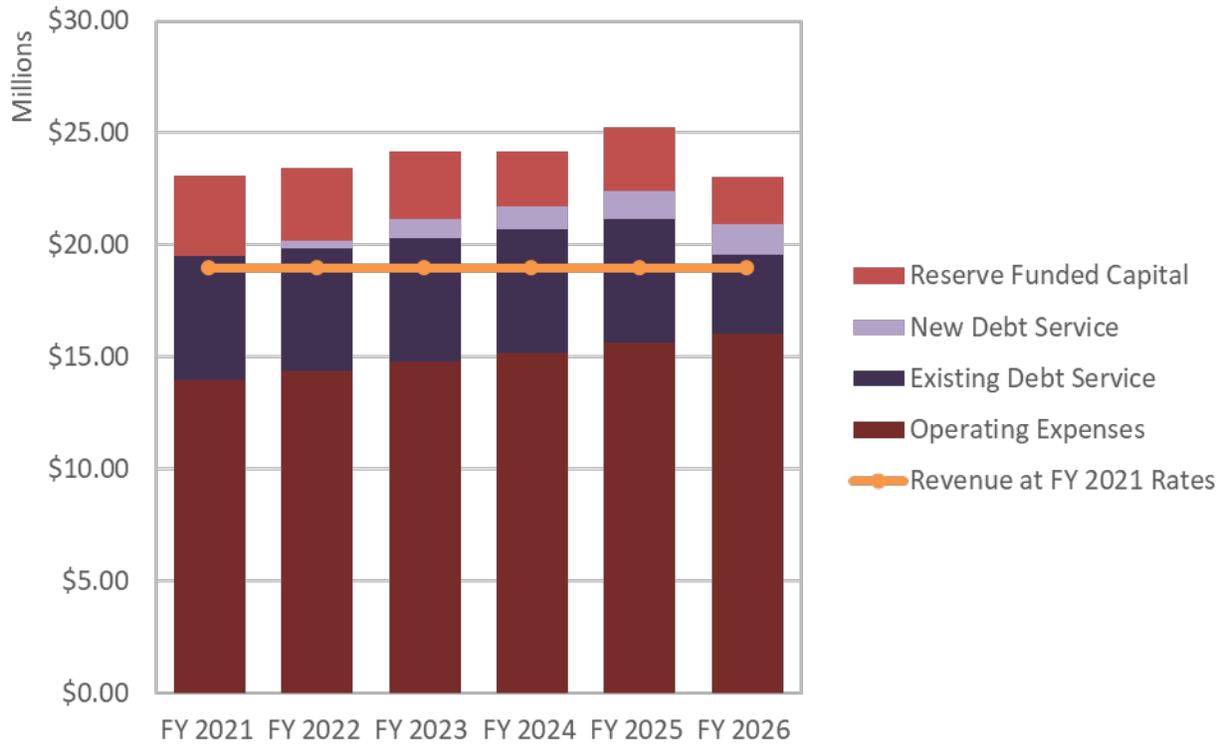
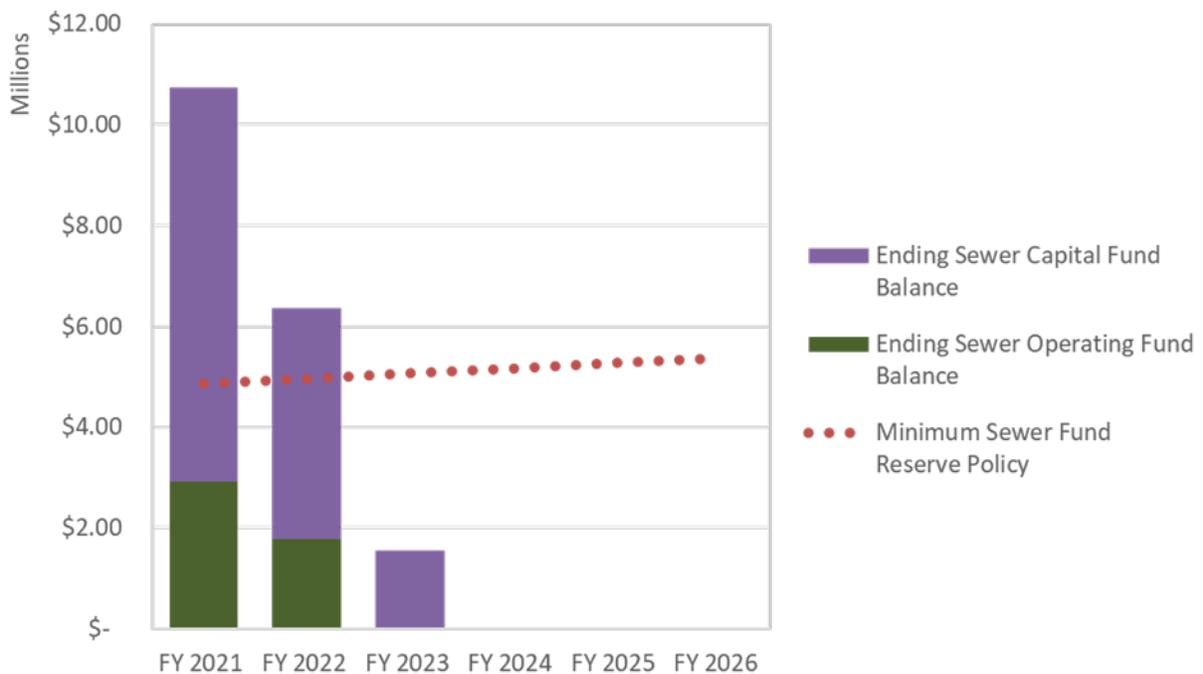


Exhibit E-3 Projected Sewer Fund Cash Balance Projection Under FY 2021 Rates



Hamilton’s FY 2021 sewer rates are not sufficient to support the forecasted operating, debt service, capital investment of Hamilton’s wastewater system. NewGen’s study identified increases to Township’s wastewater rates and fees that would sustain the Township’s wastewater system given the forecasted costs.

**Table E-2
Recommended Sewer Rate Increases**

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Rate Increase	0.0%	30.0%	0.0%	0.0%	0.0%	0.0%
<i>FY Month Effective</i>		<i>July</i>	<i>July</i>	<i>July</i>	<i>July</i>	<i>July</i>
Resulting Cash Flow						
Beginning Fund Balance	\$14,847,898	\$10,739,338	\$8,740,987	\$8,497,608	\$8,376,825	\$7,257,126
Operating Income / (Loss)	(\$522,060)	\$1,229,649	\$2,785,120	\$2,295,218	\$1,682,800	\$3,032,572
Use of Reserves	(\$3,586,500)	(\$3,228,000)	(\$3,028,500)	(\$2,416,000)	(\$2,802,500)	(\$2,098,500)
Ending Fund Balance	\$10,739,338	\$8,740,987	\$8,497,608	\$8,376,825	\$7,257,126	\$8,191,197
Minimum Required Balance	\$4,867,137	\$4,963,967	\$5,063,534	\$5,165,915	\$5,271,189	\$5,379,440

Customer Bill Impacts

Assuming the Township adopt rates effective July 1 each fiscal year, the impact on a Hamilton Township Single Family Residential customer and a typical Non-Residential customer is shown in Table E-3:

**Table E-3
Projected Annual Customer Bills – Recommended Rates**

Sample Customer	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Single Family Residential	\$390.00	\$448.50	\$507.00	\$507.00	\$507.00	\$507.00
<i>\$ Change</i>		<i>\$58.50</i>	<i>\$58.50</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>
<i>% Change</i>		<i>15.00%</i>	<i>13.04%</i>	<i>0.00%</i>	<i>0.00%</i>	<i>0.00%</i>
Medium Non-Residential	\$981.00	\$1,128.15	\$1,275.30	\$1,275.30	\$1,275.30	\$1,275.30
10,000 Gallons / month	\$ Change	\$147.15	\$147.15	\$0.00	\$0.00	\$0.00
	% Change	15.00%	13.04%	0.00%	0.00%	0.00%

Section 1

STUDY BACKGROUND AND SCOPE OF WORK

Study Background

The Township of Hamilton in Mercer County New Jersey, through its Department of Wastewater Pollution Control (WPC), operates a Wastewater Pollution Control Facility (WPCF) permitted to operate at an average of 16.0 million gallons per day (MGD). Hamilton’s WPCF also serves users in Robbinsville Township, New Jersey under the terms of a 1976 Multi-Municipal Sewerage System (MMSS) Agreement (the Agreement). There are a few specific facilities in West Windsor which also flow to Hamilton’s WPCF through Hamilton’s collection system. All sewage treated at Hamilton’s WPCF is discharged into Crosswicks Creek.

Through a joint engagement, the Townships of Hamilton and Robbinsville engaged NewGen Strategies and Solutions, LLC to complete a Sewer Cost of Service and Rate Study. The objectives of the study were to:

“Analyze both Hamilton’s and Robbinsville’s different rate structures and charges, with particular attention paid to financial stability, equity, wastewater management and other best management practices. Other important considerations include ratepayer sensitivity, economic competitiveness, ease of implementation, future system needs, affordable housing stock and regulatory/wastewater quality concerns.”

A key component of this analysis was the appropriate cost allocation methodology for Robbinsville’s and Hamilton’s use of the MMSS. NewGen’s Report #1 of 3: Wastewater System Cost Allocation Report details alternative methodologies to calculate Robbinsville’s cost for its use of the MMSS. This report assumes that beginning in FY 2022 the Townships of Hamilton and Robbinsville implement the system wide cost allocation provided in NewGen’s Report #1.

This Report #2 – Hamilton Sewer Rates Study details the results of NewGen’s sewer rate study for the Township of Hamilton. Included in this report are forecasts of Hamilton’s wastewater system operating, debt service, capital investment, and reserve contributions as well as recommended rate adjustments to maintain Hamilton’s Sewer Fund reserves.

Study Scope of Work and Objectives

NewGen’s scope of work included several related tasks. The study has resulted in several recommendations regarding the cost allocation of the MMSS and how best to collect each Township’s wastewater utility revenue. Table 1-1 lists the specific tasks of NewGen’s study.

Table 1-1
Study Scope of Work Tasks

Task #	Description
Task 1	Review Existing Data and Project Kickoff Meeting
Task 2	Identify Policy Issues



**Table 1-1
Study Scope of Work Tasks**

Task #	Description
Task 3	Review Capital Improvement Plan
Task 4	Review O&M Costs
Task 5	Evaluate Current and Projected Demand
Task 6	Analyze Current and Projected Debt Service
Task 7	Evaluate Potential Financing Sources
Task 8	Develop Revenues from Miscellaneous Fees
Task 9	Develop Revenue Requirement From Rates
Task 10	Compare Revenue Requirement to Projected Revenues
Task 11	Develop Cost of Service
Task 12	Identify and Evaluate Rate Alternatives
Task 13	Develop Recommended Rates
Task 14	Document Financial Model
Task 15	Final Report and Presentations

The broad objectives of the study were as follows:

- Determine the true cost of providing service to the customers of the Hamilton wastewater system, including the appropriate costs for the service to customers in Robbinsville. Customers include residential, commercial and industrial users.
- Evaluate the current cost allocation methodology used to allocate system costs to the MMSS and to the Townships.
- Develop an industry standard cost allocation to account for the shared use of the MMSS by the Townships.
- Develop a financial plan and wastewater rates for both Townships given the results of the new MMSS cost allocation.

The objectives of this study required the development of a cost allocation methodology that is consistent with industry standards, understandable and agreeable to stakeholders at both Townships, and able to be clearly described in a formula to be incorporated into either a revised Agreement or new agreement between the Townships.

This report describes the impact of the recommended cost allocation on Hamilton’s retail sewer rates.

Guiding Principles of the Study

NewGen applies several guiding principles to every rate study. These principles inform key decisions throughout the study so that the study's results are consistent with both industry standards and the realities and perceptions of system customers. While these guiding principles serve as benchmarks for results, ultimately the results of any study are based on the data relating to each system's design and operation.

- Each Township's wastewater utility must be financially self-supporting. It is assumed that the cost of operating and maintaining each system will be supported by the wastewater fees and charges collected from each system's customers with no support or subsidy from other Township revenues.
- Each Township's wastewater rates shall be sufficient to ensure the funding of an appropriate level of system rehabilitation and replacement.
- Wastewater rates in each Township are recommended to be kept as low as practical while balancing the other guiding principles of the study.
- Each Township shall maintain reserves to provide for contingencies and unplanned expenses.

These guiding principles allow NewGen to evaluate whether the study has achieved the requirements relating to financial sustainability and stakeholder understanding.

Fiscal Year

Hamilton Township operates on a fiscal year beginning January 1st and ending on December 31st each year. All years shown in this report refer to the fiscal year ending that year. For example, 2021 refers to the fiscal year beginning January 1, 2021 and ending December 31, 2021.

Section 2

WASTEWATER SYSTEM REVENUE REQUIREMENTS

The first step of the rate study is to compile the costs of owning and operating Hamilton’s wastewater utility system. The three cost components of the Township’s wastewater system are: Operating and Maintenance, Capital Improvements, and Debt Service (both existing and future). These three cost components total to the amount needed each year to run the wastewater system. Also, each year the Township must maintain a minimum amount of reserves in its Sewer Fund.

While the study is based on the latest available actual data, there are several major assumptions that are included in the study’s cost projections.

Major Study Assumptions

In order to project the operating, debt service, and capital expenses of the Township’s wastewater system, several major assumptions must be made. NewGen’s assumptions are conservative to ensure that the study’s recommendations reflect a reasonable projection of the costs of the Township’s system.

Operating Budget Escalation Factors

NewGen’s cost projections are based on the latest available actual and budgeted data. The basis for NewGen’s forecasts is the Township’s FY 2021 budget. In order to reasonably project future costs, NewGen applied escalation and inflation factors to the Township’s budget line items. NewGen’s financial model includes the following operating and maintenance budget line item inflation factors in Table 2-1. NewGen used the most up to date historical data related to the three items projected to increase in the future:

- United States Bureau of Labor Statistics (BLS) Employment Cost Index (ECI) current annualized increase in labor costs as of June 2020.
- United States Bureau of Labor Statistics (BLS) Consumer Price Index – Urban (CPI-U) at the end of 2020.
- Engineer News Record (ENR) Materials Cost Index (MCI) averages the increased cost of materials over the past 30 years.

Table 2-1
Operating Budget Escalation Factors

	Change Per Year	Source
Wages and Salaries	2.60%	BLS Employment Cost Index – June 2020
Benefits	3.10%	BLS Employment Cost Index – June 2020
Services (Contractual, Professional)	2.90%	ENR CCI 30 Year Average
Supplies (Maintenance, Construction Materials)	2.00%	ENR Materials Index 30 Year Average
Equipment and Maintenance	2.90%	ENR CCI 30 Year Average



Section 2

On average, NewGen projects that Hamilton’s wastewater utility operating budget will increase 2.7% per year over the five-year projection period.

Minimum Required Wastewater Fund Cash Balance

Maintaining a minimum Wastewater Fund cash balance is an essential component of the proper financial management of the Township’s wastewater system. The wise management of resources and maintenance of a reasonable cash balance allows the Township to be responsive to emergencies and to plan for long term sustainability. As a part of the wastewater rate study, NewGen developed a policy regarding the minimum fund balance reserves that are appropriate for the Township’s wastewater utility fund. There are two components to the study’s recommended minimum cash balance:

- **Operating Reserve** – The minimum operating reserve balance shall be 90 days of each year’s annual Operating and Maintenance (O&M) expenses (not including debt service).
- **Capital Reserve** – The minimum capital reserve balance shall be one year of system asset depreciation, estimated to be \$1,528,969 in FY 2021. NewGen calculated this value by assuming Hamilton’s wastewater assets depreciate on an average life cycle of 50 years. Therefore, this reserve value is arrived at by taking the book value of Hamilton’s wastewater assets as of the end of FY 2019 and dividing by 50. Going forward, as Hamilton makes capital investments into its system, 1/50th of each year’s capital spending is added to the target reserve amount.

As the Township continues to invest in the wastewater system, this annual depreciation of the system will increase, which will increase the capital reserve policy minimum. The minimum reserve projection is shown below in Table 2-2.

Table 2-2
Minimum Wastewater Fund Cash Balance Recommendation

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Operating Reserve	\$4,867,137	\$4,963,967	\$5,063,534	\$5,165,915	\$5,271,189	\$5,379,440
Capital Reserve	1,528,969	1,787,109	1,879,407	1,976,859	2,049,422	2,092,373
Total Minimum Cash Balance	\$6,396,106	\$6,751,077	\$6,942,941	\$7,142,774	\$7,320,611	\$7,471,813

The minimum cash balance policy drives the financial plan detailed in this report. Rates and fees are set in order to cover the operating, debt service, and capital needs of the system, as well as to maintain the minimum cash balance shown above. If at any time the projected rates in a given year would not sustain the minimum cash balance in the next fiscal year, then rates must be increased to achieve the minimum required balance.

Operating and Maintenance Expenses

The operating and maintenance (O&M) expenses of the Township’s wastewater system are organized into several categories:

- Utility Management
- Salaries and Wages
- Statutory Expenses (Benefits)
- Treatment Plant
- Sewer Lines
- Pump Stations

NewGen’s study is based on the FY 2021 adopted O&M budget. The FY 2021 adopted operating budget totals about \$13.96 million as shown in Table 2-3 below.

**Table 2-3
Projected Operating and Maintenance Expenses**

	Adopted FY 2021	Projected FY 2022	Projected FY 2023	Projected FY 2024	Projected FY 2025	Projected FY 2026
Utility Management	\$1,453,228	\$1,495,372	\$1,538,737	\$1,583,361	\$1,629,278	\$1,676,527
Sewer Lines	\$40,000	\$41,160	\$42,354	\$43,582	\$44,846	\$46,146
Pump Stations	\$541,510	\$557,214	\$573,373	\$590,001	\$607,111	\$624,717
Treatment Plant	\$2,629,800	\$2,706,064	\$2,784,540	\$2,865,292	\$2,948,385	\$3,033,888
Salaries and Wages	\$6,205,140	\$6,366,474	\$6,532,002	\$6,701,834	\$6,876,082	\$7,054,860
Statutory Benefits	\$3,099,901	\$3,195,998	\$3,295,074	\$3,397,221	\$3,502,535	\$3,611,114
Total O&M Expenses	\$13,969,579	\$14,362,282	\$14,766,080	\$15,181,291	\$15,608,237	\$16,047,253
<i>% Change</i>		2.7%	2.7%	2.7%	2.7%	2.7%

In general, Hamilton’s operating budget is appropriate given the size of its system. The FY 2021 O&M budget reflects spending of \$415 per retail customer, which is above the 75th percentile of nationwide systems service less than 50,000 connections¹. The rates and fees developed in this study are sufficient to cover the increasing operating and maintenance costs of the wastewater utility.

Existing Debt Obligations

As of FY 2021, Hamilton’s wastewater system had outstanding debt payments related to nine loans with an outstanding principal amount owed of \$51,137,712 and total amount owed (including interest) of \$70,136,094. The farthest amortization schedule related to the Township’s 2017B Bonds extends to FY 2042. NewGen’s study includes payment for all of Hamilton’s existing debt obligations.

Table 2-4 shows Hamilton’s wastewater system loan payments over the five-year study planning period.

¹ 2019 American Water Works Association (AWWA) *Utility Benchmarking: Performance Management for Water and Wastewater*

**Table 2-4
Future Hamilton Debt Service Payments – FY 2021 through FY 2026**

Loan	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
2010 NJEIT Loan	\$9,209	\$9,209	\$9,209	\$9,209	\$9,209	\$9,209
2010 Improvement Bonds	\$317,786	\$316,967	\$320,670	\$318,880	\$321,574	\$323,642
2013 Refunding Bonds	\$2,013,100	\$2,012,000	\$2,013,200	\$2,006,600	\$2,012,400	\$0
2014 Bonds (Taxable)	\$227,438	\$221,969	\$216,063	\$234,500	\$227,500	\$220,000
2014 Bonds (Non-Taxable)	\$877,651	\$891,901	\$895,398	\$892,926	\$903,958	\$936,708
2015 Bonds	\$375,650	\$374,550	\$374,050	\$372,800	\$376,800	\$0
2017B Bonds	\$1,271,825	\$1,248,075	\$1,273,075	\$1,251,700	\$1,298,325	\$1,594,700
2019 Bonds (Taxable)	\$209,835	\$211,073	\$203,285	\$208,285	\$209,173	\$209,885
2019 Bonds (Non-Taxable)	\$203,831	\$201,244	\$203,600	\$200,900	\$203,144	\$205,275
Total Debt Service	\$5,506,325	\$5,486,988	\$5,508,550	\$5,495,800	\$5,562,082	\$3,499,419
<i>% Change</i>		<i>(0.4%)</i>	<i>0.4%</i>	<i>(0.2%)</i>	<i>1.2%</i>	<i>(58.9%)</i>

The 2013 and 2015 refunding bonds will be paid off in FY 2025, resulting in a significant reduction in the Township's wastewater debt service payments beginning in FY 2026. The rates and fees developed in this report are sufficient to fund the above stated debt obligations now and through their maturities.

Capital Improvement Plan

A major component of owning a sustainable wastewater utility is the planning for the rehabilitation and replacement of assets. Hamilton Township's wastewater system Capital Improvement Plan (CIP) is a detailed listing of projects with planned completion years and anticipated project costs. The Township can either pay cash for projects as they are completed (i.e., from annual revenues, or reserves), or the Township may issue new debt to finance projects with loan proceeds, and pay off the loans over a longer term. Tables 2-5 through 2-8 detail the projects included in Hamilton Township's current wastewater CIP. The Township develops projected projects for four categories: Treatment Plant, Pumping Stations, Collection System, and Miscellaneous Equipment.

**Table 2-5
Hamilton Wastewater Capital Improvement Plan – Treatment Plant**

Project	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Unanticipated Improvements	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
General Engineering	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
Grit Chamber Repair & Bypass	\$360,000					
WPCF Upgrade Phase I	\$1,000,000					
WPCF Upgrade Phase II		\$1,530,000				
WPCF Upgrade Phase III			\$345,000			
WPCF Upgrade Phase IV				\$920,000		
SCADA/Fiber/PLC Upgrades	\$700,000					
RBC Replacement	\$750,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Digester Engineering	\$150,000					
Boiler Replacement	\$200,000					
Sludge Filter Press Replacement	\$360,000	\$4,600,000				
Emergency Eye-Wash Upgrade	\$150,000					
Tank Replacements	\$30,000					
Digester Biogas Scrubber	\$60,000	\$440,000				
Chloromat Building	\$150,000	\$1,850,000				
Old Laboratory Rehabilitation	\$60,000	\$200,000				
WCPF Roof Replacements	\$100,000					
Curb/Road Repair/Pavement	\$50,000	\$450,000				
Scrubber #1 Upgrade		\$60,000	\$165,000			
Water Tower Installation		\$155,000				
RBC Building Painting				\$200,000	\$1,400,000	
Master Plan	\$220,000					
NFPA - Plant Buildings	\$25,000					
Plant Perimeter Fence	\$120,000					
Headworks Building Lighting	\$50,000					
Total Treatment Plant CIP	\$5,135,000	\$11,885,000	\$3,110,000	\$3,720,000	\$4,000,000	\$2,600,000

Section 2

**Table 2-6
Hamilton Wastewater Capital Improvement Plan – Pumping Stations**

Project	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Unanticipated Improvements	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
Instrumentation Upgrades	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Emergency Generator	\$180,000					
Yardville-Groveville Pump Station	\$2,000,000					
Melody & Middleton Pump Station	\$500,000					
Kuser Hollow Pump Station	\$100,000					
NJDOT Pump Station Replacement	\$175,000	\$175,000				
Pump Station Driveways		\$140,000				
Pole Barn for Parts Storage		\$35,000				
Route #130 Pump Station Upgrades		\$100,000				
Bioxide Feed System Replacements		\$20,000	\$30,000			
Wet Well Concrete Rehabilitation		\$45,000	\$360,000			
Emergency Generator Replacement			\$75,000			
Total Pump Stations CIP	\$3,285,000	\$845,000	\$795,000	\$330,000	\$330,000	\$330,000

**Table 2-7
Hamilton Wastewater Capital Improvement Plan – Collection System**

Project	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Sewer Improvements	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
Underground Infrastructure Repair	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000
Unanticipated Sanitary Sewer	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Vegetation Maintenance	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Force Main Inspections	\$240,000	\$135,000	\$55,000			
Deutzville Force Main Replacement	\$275,000					
Whitehead Force Main Engineering	\$50,000					
Line 42 inch Pipe Crossing Pond Run		\$150,000				
Lining of Larger Diameter Pipe		\$50,000	\$500,000			
Miry Run Interceptor Cleaning		\$75,000	\$600,000			
Lining of Larger Diameter Pipe				\$500,000		
Whitehead Force Main				\$1,000,000		
Total Collection System CIP	\$1,740,000	\$1,585,000	\$2,330,000	\$2,675,000	\$1,175,000	\$1,175,000

**Table 2-8
Hamilton Wastewater Capital Improvement Plan – Miscellaneous Equipment**

Project	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Lab Equipment Upgrades	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Computers	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000	\$12,000
Desk & Chair - 6 Supervisors	\$7,000					
Jet/Vac (replacement-#521)	\$450,000					
Lateral Camera (replacement)	\$15,000					
Utility Vehicle (golf-carts)	\$4,000	\$4,000			\$8,000	
Chemical Storage/Transfer Tank	\$20,000					
Tow-Behind Generator			\$100,000			
Tow-Behind Air Compressor			\$40,000			
Ford F-250 Utility Body (replacement)		\$40,000				
Ford Transit Tall Roof (replacement)		\$40,000				
Lawn Mower (replacement)		\$10,000			\$10,000	
Ford F-350 4x4					\$55,000	
Total Misc. Equipment CIP	\$523,000	\$121,000	\$167,000	\$27,000	\$100,000	\$27,000

Table 2-9 summarizes the annual planned capital improvement projects provided to NewGen by Hamilton during the study.

**Table 2-9
Hamilton Wastewater Capital Improvement Plan – Summary**

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Treatment Plant	\$5,135,000	\$11,885,000	\$3,110,000	\$3,720,000	\$4,000,000	\$2,600,000
Pumping Stations	\$3,285,000	\$845,000	\$795,000	\$330,000	\$330,000	\$330,000
Collection System	\$1,740,000	\$1,585,000	\$2,330,000	\$2,675,000	\$1,175,000	\$1,175,000
Miscellaneous Equipment	\$523,000	\$121,000	\$167,000	\$27,000	\$100,000	\$27,000
Total Wastewater CIP	\$10,683,000	\$14,436,000	\$6,402,000	\$6,752,000	\$5,605,000	\$4,132,000

Hamilton’s CIP reflects an appropriate level of system investment, exceeding annual system depreciation in each year. The investments reflected in the Township’s CIP should result in a well maintained and efficient wastewater system.

The financial plan and rates developed during the study are projected to fully recover the cost of the above stated capital plan, including all cash outlays and additional debt service. The additional debt service projected for the loan financed projects is detailed in the next section of this report.

New Total Debt Service Projections

Hamilton’s Sewer Capital Reserve balance at the end of FY 2019 was \$11,393,656. Given the forecasted level of capital spending, Hamilton’s capital reserve balance was not sufficient to support the entire CIP over the next five years. Therefore, NewGen made an assumption that the Township would issue new debt service to fund a portion of the CIP over the five year projection period. Table 2-10 shows the estimated new debt issues included in NewGen’s forecasts for FY 2021 – FY 2026.

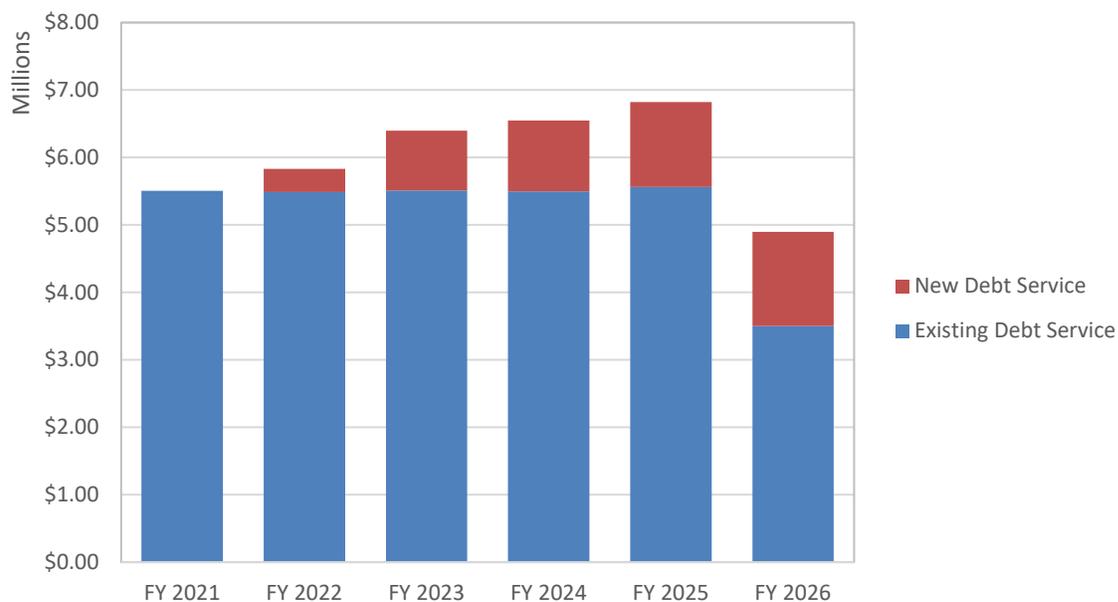
**Table 2-10
Estimated Capital Financing Plan**

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Total Wastewater CIP	\$10,683,000	\$14,436,000	\$6,402,000	\$6,752,000	\$5,605,000	\$4,132,000
Funded by Capital Reserves	\$3,586,500	\$3,228,000	\$3,028,500	\$2,416,000	\$2,802,500	\$2,098,500
Funded by New Debt Service	\$7,096,500	\$11,208,000	\$3,373,500	\$4,336,000	\$2,802,500	\$2,098,500

It should be noted that Hamilton will evaluate both its CIP and the level of new debt to be issued each year. The results of this study rely upon the above stated estimations and differences in actual results or initial data assumptions will have a material impact on the forecasts presented in this report. NewGen relied upon the most recently available information to develop our recommendations. Actual data available at a later time, changes in planned capital investment, or different debt financing assumptions will result in different rate increase needs.

The total projected debt service built into the study’s financial plan are shown in Exhibit 2-11. For each new debt issue, NewGen assumed a payment term of 30 years, an interest rate of 2.5%, and level annual payments.

Exhibit 2-11 Total Wastewater Debt Service Projections



The projected debt service payments shown above are included in the financial plan and recommended rates contained within this report.

Miscellaneous Non-Rate Revenues

Hamilton’s wastewater utility is supported by revenues that are not related to the sewer rates charged to its residential and non-residential customers. There are two categories of non-rate revenues. The first are the Township’s sewer connection fees which are charged to new customers of the system. The second are other miscellaneous non-rate revenues. The Township’s FY 2021 budget included just over \$500,000 in revenues related to these two line items. NewGen, in order to be conservative, did not assume any increases in these revenues as a part of our forecasts. Table 2-12 shows the forecasted miscellaneous non-rate revenues included in the study.

**Table 2-12
Miscellaneous Wastewater Revenues**

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Sewer Connection	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000
Miscellaneous	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000	\$250,000
Total Non-Rate Revenues	\$550,000	\$550,000	\$550,000	\$550,000	\$550,000	\$550,000

The second, and much more significant non-rate revenue that supports Hamilton’s wastewater system is the annual charge to the Township of Robbinsville. NewGen’s Report #1 of 3: Wastewater System Cost Allocation Report details alternative methodologies to collect this revenue. Table 2-13 shows the revenue related to Hamilton’s wholesale wastewater service to Robbinsville assuming that both Townships agree to adopt NewGen’s system wide cost allocation method.

**Table 2-13
Projected Revenues from Robbinsville Township**

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Robbinsville Revenue	\$3,091,896	\$2,678,474	\$2,829,624	\$2,905,778	\$2,996,859	\$2,858,889

Revenue Requirement Projection

Based on the latest available operating, debt service, and capital expense data and the methodologies and assumptions detailed above, NewGen developed a net revenue requirement forecast for the Township’s wastewater system, shown in Table 2-14.

Table 2-14
Hamilton Wastewater System Net Revenue Requirement Projection

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Operating Expenses	\$13,969,579	\$14,362,282	\$14,766,080	\$15,181,291	\$15,608,237	\$16,047,253
Reserve Funded Capital	\$3,586,500	\$3,228,000	\$3,028,500	\$2,416,000	\$2,802,500	\$2,098,500
Existing Debt Service	\$5,506,325	\$5,486,988	\$5,508,550	\$5,495,800	\$5,562,082	\$3,499,419
New Debt Service	\$0	\$344,140	\$887,664	\$1,051,260	\$1,261,531	\$1,397,436
Total Rev. Req.	\$23,062,405	\$23,421,409	\$24,190,795	\$24,144,351	\$25,234,350	\$23,042,608
Less: Misc. Revenues	(\$550,000)	(\$550,000)	(\$550,000)	(\$550,000)	(\$550,000)	(\$550,000)
Less: Robbinsville	(\$3,091,896)	(\$2,678,474)	(\$2,829,624)	(\$2,905,778)	(\$2,996,859)	(\$2,858,889)
Net Rev. Req.	\$19,420,509	\$20,192,935	\$20,811,170	\$20,688,573	\$21,687,490	\$19,633,719

The net revenue requirement is the basis upon which all rates and fees are calculated for the Township's retail customers. Although the net revenue requirement varies from year to year, the financial plan developed during the study takes a long-term perspective in order to maintain stable rates and sufficient reserves.

Before a financial plan can be developed for the Township's system, a detailed analysis of the system's customer base must be completed. The Township's wastewater customer base defines the number of accounts, units, and wastewater usage that can be charged to generate revenues to fund the net revenue requirement. The next section of this report details the Township's wastewater customers and their use of the wastewater system.

Section 3 CUSTOMERS AND USAGE

Hamilton Retail Customers and Usage

Hamilton Township serves about 33,650 retail (i.e., excluding Robbinsville) wastewater units grouped into two customer classes – Residential and Non-Residential. The Township’s current rate structure includes an annual charge for Residential customers and both an annual charge and a consumption rate per unit for Non-Residential customers, with a unit being one thousand gallons (kgal). The units are based on the water consumption of Non-Residential customers.

The latest available information for NewGen’s study was actual FY 2019 customer data. NewGen did not include any increase in the number of retail customers in its study forecast, therefore the number of units and sewer usage remains the same in each year of NewGen’s forecast. The number of Township wastewater units and usage by customer class included in the study is shown in Table 3-1.

**Table 3-1
Estimated FY 2021 Retail Customer Units and Usage**

Customer Class	Annual Units	Billed Usage (kgal)
Residential	33,210	-
Non-Residential	442	424,929
Totals	33,652	424,929

The Township’s sewer rate structure is simple and easy to understand. It is also easy for the Township to administer and generates a large proportion of fixed revenue. As a part of NewGen’s study, discussions with Township staff indicated that there was no desire to modify the Townships sewer rate structure. Therefore, all projections of rates and revenues in this report assume that the Township adjusts its rates within the existing structure without modification.

Section 4 FINANCIAL PLAN AND RECOMMENDED RATES

Financial Projections Under Current Rates

NewGen developed cash flow and cash balance projections assuming the revenue requirements detailed in Section 2 of this report, the customer base described in Section 3, and an assumption that the Township does not increase its wastewater rates. This establishes a baseline projection to which rate increase scenarios can be compared. The Township’s FY 2021 rates are summarized below.

FY 2021 Rates

The Township’s FY 2021 wastewater rates have two components. As mentioned previously, the Township’s rate structure includes an annual charge for Residential customers and both an annual charge and a consumption rate per unit for Non-Residential customers, with a unit being one thousand gallons (kgal). The units are based on the water consumption of Non-Residential customers.

Table 4-1 shows the Township’s FY 2021 sewer rates.

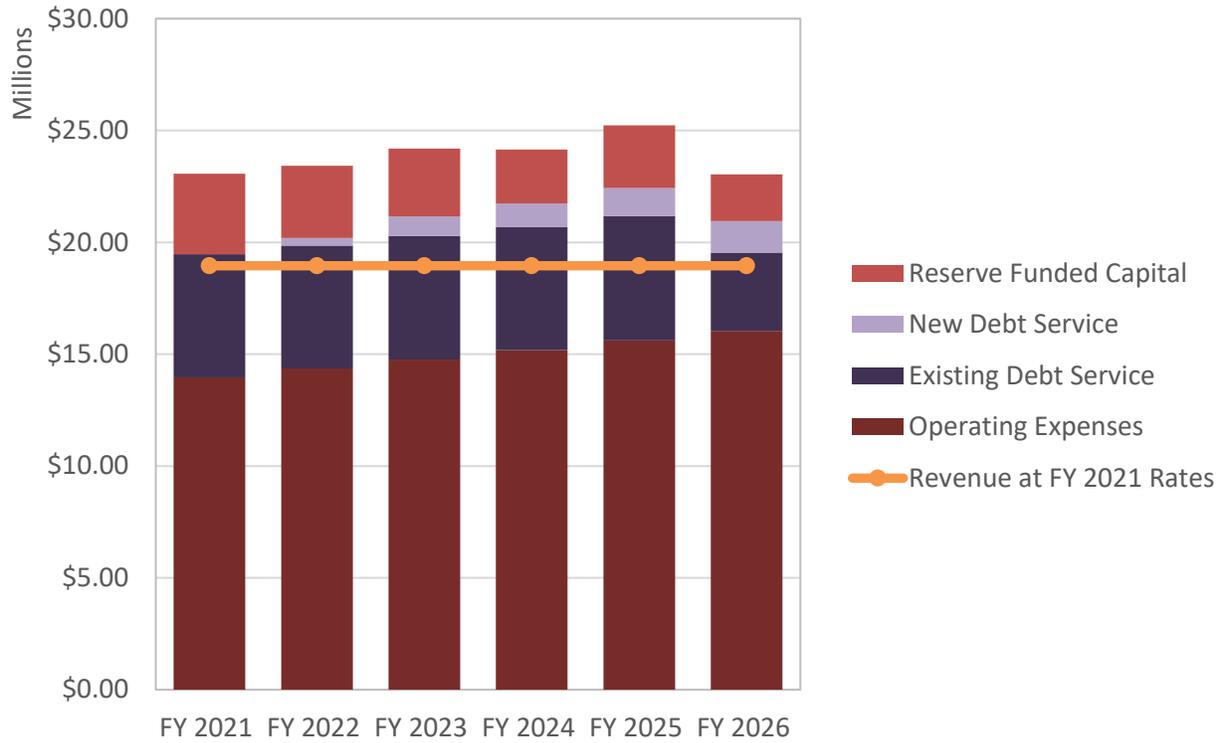
**Table 4-1
Hamilton Township FY 2021 Sewer Rates**

Customer Class	Annual Fee per Unit	Unit Rate per kgal
Residential	\$390	
Non-Residential	\$195	\$6.55

Cash Flow and Fund Balance Projections Under FY 2021 Rates

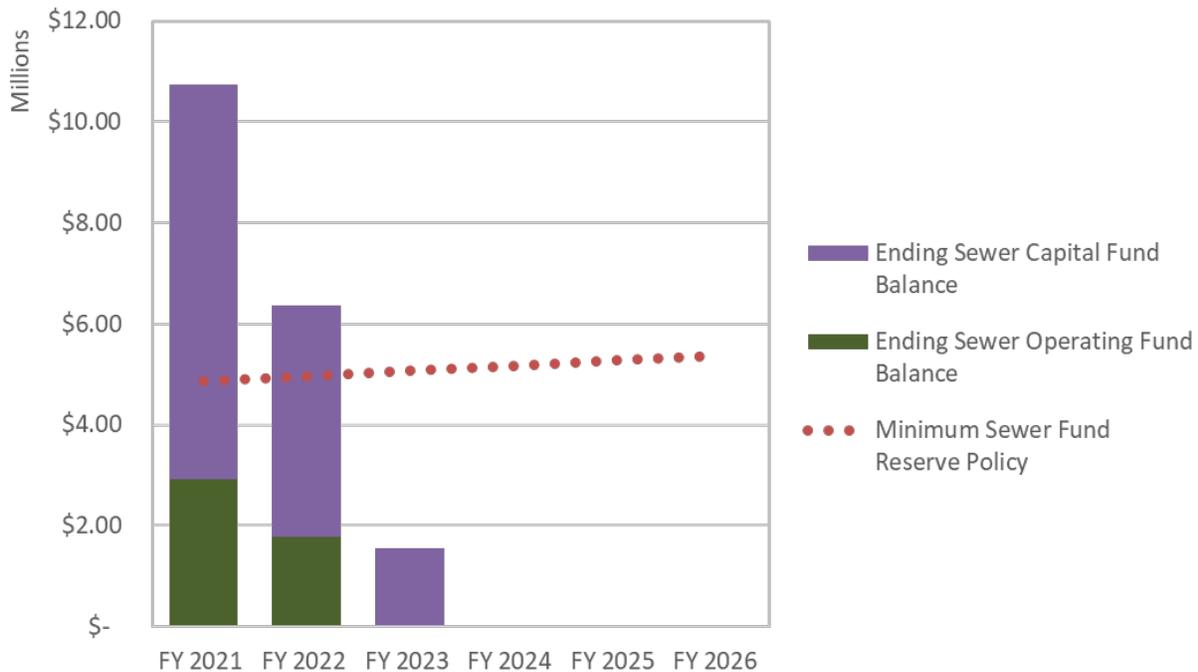
Given the Township’s Capital Reserve balance and the planned capital investment included in the five-year CIP, the revenue generated by Hamilton’s FY 2021 rates alone cannot sustain the Township’s annual wastewater revenue requirements in any of the next five fiscal years (FY 2022 – FY 2026). The expenses shown in the following charts include the projected operating, existing debt, new debt, and cash funded capital projects discussed in Section 2 of this report. The projected revenues assume that the Township does not increase sewer rates in any fiscal year. The projected revenues and expenses are shown in Exhibit 4-2.

Exhibit 4-2 Expenses vs. Revenues Under Current FY 2021 Rates



As of December 31, 2019, the Township’s Sewer Capital and Operating fund cash balances totaled \$15.72 million. If the Township were not to raise rates in any of the next five years, then current reserves would need to be relied upon to support the wastewater system’s capital plan. However, the projected cash deficits would exhaust the wastewater utility’s capital and operating cash balances by FY 2024 as shown in Exhibit 4-3.

Exhibit 4-3 Projected Wastewater Fund Cash Balance Projection Under Current FY 2021 Rates



The current revenues generated by the Township’s FY 2021 sewer rates and the Township’s Wastewater Fund cash reserves cannot support the projected operating, capital, debt service, and reserve requirements of the wastewater system. Rate increases over that time period are necessary to increase revenues so that the Township’s wastewater operating and capital needs are met and the Township maintains adequate Sewer Fund reserves.

Based on the expenses projected in Section 2 of this report, the Township’s wastewater customers and usage detailed in Section 3, and the Township’s FY 2021 wastewater rates detailed previously in this section, NewGen’s rate study has determined that revenue increases are necessary to sustain the Township’s wastewater system. A key focus of the study is the impact any revenue increases will have on customers.

Recommended Revenue Increases

In order to increase revenues that will sustain the Township’s wastewater system, NewGen recommends increases to the Township’s sewer rates as shown in Table 4-4.

**Table 4-4
Recommended Sewer Rate Increases**

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Rate Increase	0.0%	30.0%	0.0%	0.0%	0.0%	0.0%
<i>FY Month Effective</i>	<i>N/A</i>	<i>July</i>	<i>July</i>	<i>July</i>	<i>July</i>	<i>July</i>
Resulting Cash Flow						
Beginning Fund Balance	\$14,847,898	\$10,739,338	\$8,740,987	\$8,497,608	\$8,376,825	\$7,257,126
Operating Income / (Loss)	(\$522,060)	\$1,229,649	\$2,785,120	\$2,295,218	\$1,682,800	\$3,032,572
Use of Reserves	(\$3,586,500)	(\$3,228,000)	(\$3,028,500)	(\$2,416,000)	(\$2,802,500)	(\$2,098,500)
Ending Fund Balance	\$10,739,338	\$8,740,987	\$8,497,608	\$8,376,825	\$7,257,126	\$8,191,197
Minimum Required Balance	\$4,867,137	\$4,963,967	\$5,063,534	\$5,165,915	\$5,271,189	\$5,379,440

NewGen’s forecast assumes that the Township adopt rates effective July 1 each fiscal year.

Assuming that the Township increase its wastewater revenues consistent with the table above, the result is that the Township is able to fund the system’s projected operating, capital, and debt service expenses while also maintaining the recommended reserves.

Recommended Rates

If the Township were to not change the retail sewer rate structure, then the following rates shown in Table 4-5 are forecasted to fully support the future operating, capital, debt service, and reserve requirements of the system.

**Table 4-5
Recommended Hamilton Sewer Rates**

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Residential Annual Fee	\$390	\$507	\$507	\$507	\$507	\$507
Non-Residential						
Annual Fee	\$195	\$254	\$254	\$254	\$254	\$254
Unit Rate per kgal	\$6.55	\$8.52	\$8.52	\$8.52	\$8.52	\$8.52

Customer Bill Impacts

The following Table 4-6 shows the impact of modifying the Township’s Facility Fee structure to a per unit monthly fee. Due to the rate being effective on July 1 each fiscal year, the impact in the first year of the effective rate is half of the rate increase. The next fiscal year results in a full year of the increased rate.

Section 4

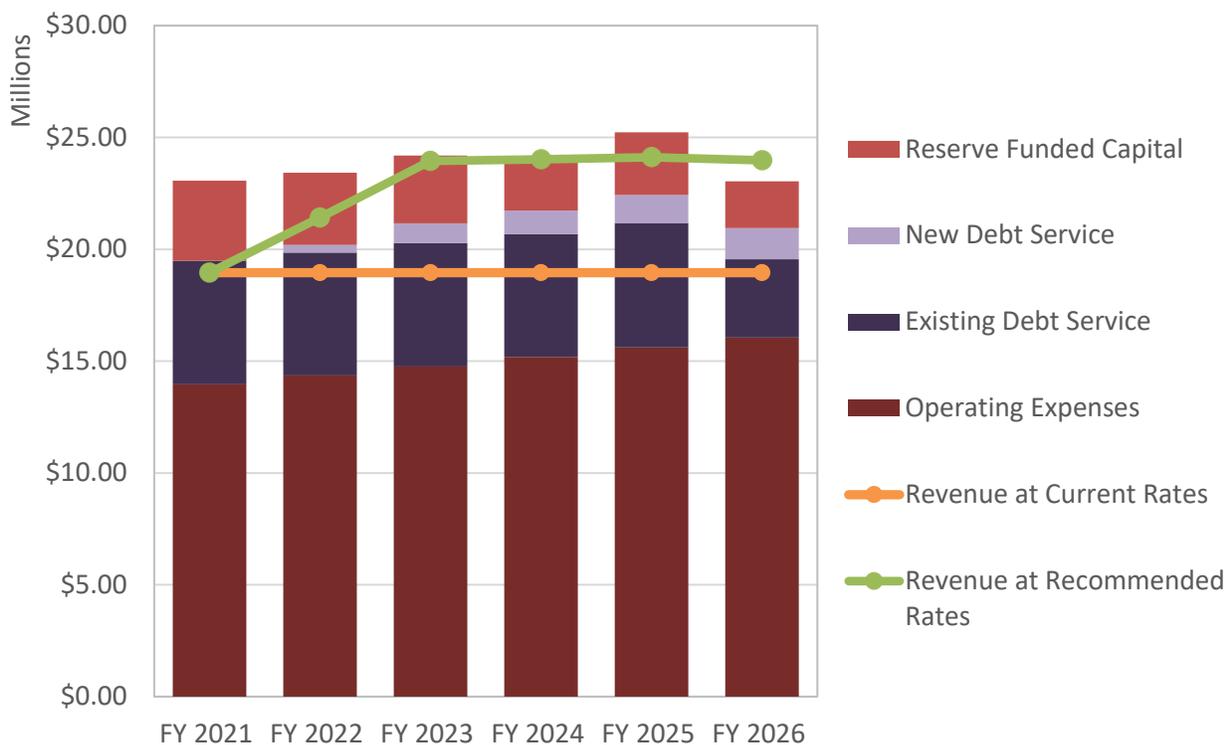
**Table 4-6
Projected Annual Customer Bills – Recommended Rates**

Sample Customer	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Single Family Residential	\$390.00	\$448.50	\$507.00	\$507.00	\$507.00	\$507.00
	\$ Change	\$58.50	\$58.50	\$0.00	\$0.00	\$0.00
	% Change	15.00%	13.04%	0.00%	0.00%	0.00%
Medium Non-Residential	\$981.00	\$1,128.15	\$1,275.30	\$1,275.30	\$1,275.30	\$1,275.30
10,000 Gallons / month	\$ Change	\$147.15	\$147.15	\$0.00	\$0.00	\$0.00
	% Change	15.00%	13.04%	0.00%	0.00%	0.00%

Cash Flow Under Recommended Revenue Increases

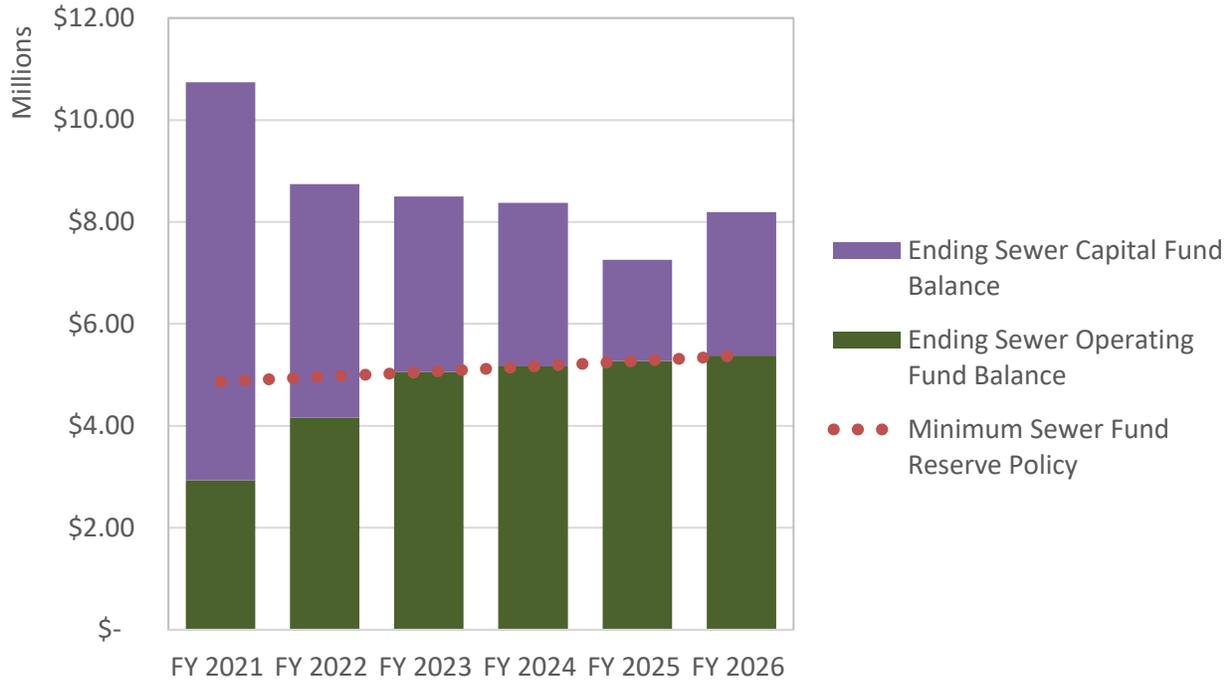
Assuming that the Township increases rates consistent with the financial plan in Table 4-5. Exhibit 47 shows the projected expenses and revenues under the proposed revenue increase plan.

Exhibit 4-7 Expenses vs. Revenues Under Recommended Rate Increases



Although the revenues projected in FY 2022 through FY 2025 do not fully fund the annual revenue requirement in most years, the Township's Sewer Capital Fund reserves are sufficient to support the system as revenues are increases incrementally over the five year projection. Exhibit 4-8 shows the Township's projected cash balances of the Township' Sewer Operating and Sewer Capital Fund under the recommended rate increases.

Exhibit 4-8 Projected Wastewater Utility Cash Balance Under Recommended Rates

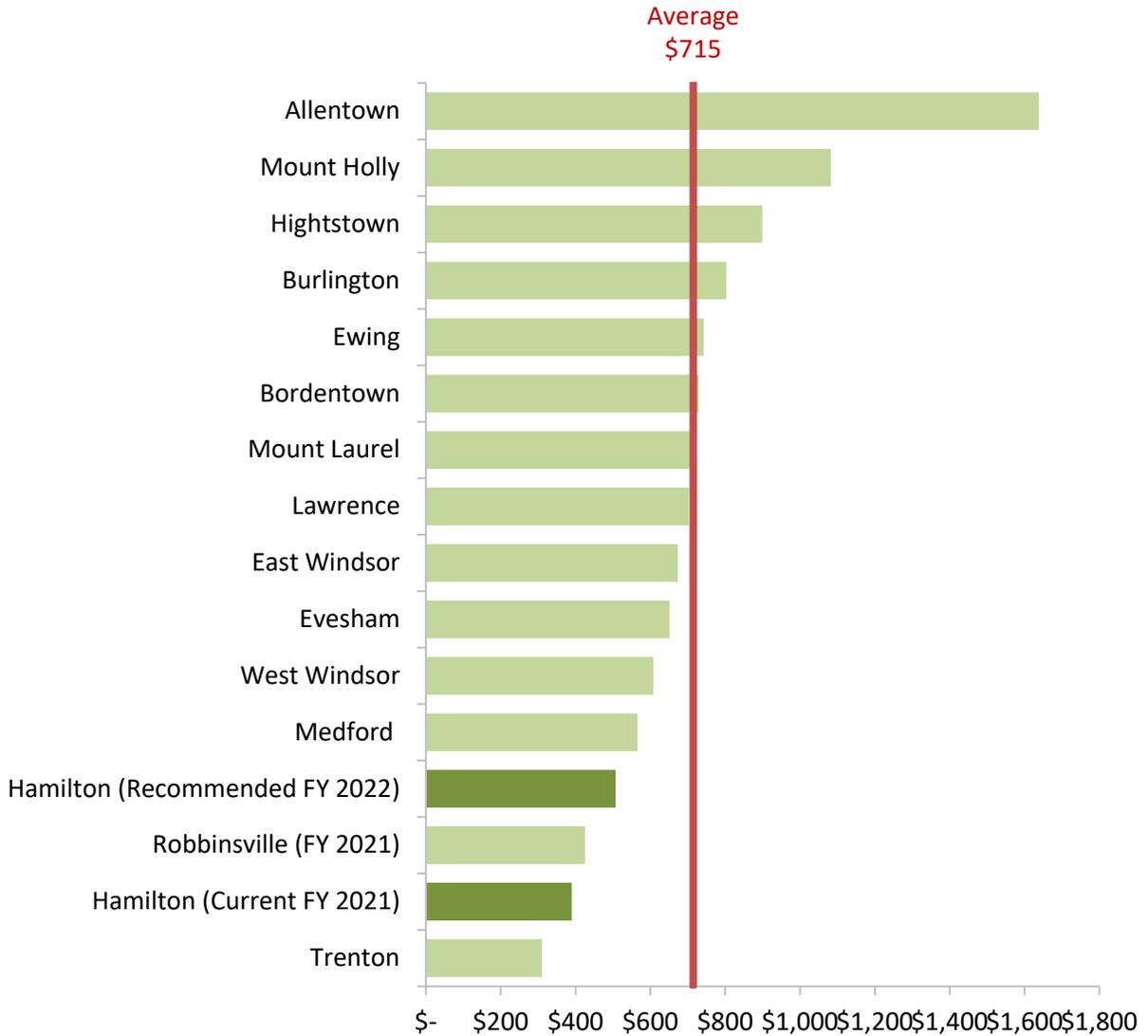


The Township’s Sewer Capital and Sewer Operating reserves can support the system during the revenue increase phase in period of FY 2022 through FY 2025.

Section 5 REGIONAL BILL COMPARISON

The following exhibit shows a comparative bill for a Single Family Residential customer in surrounding wastewater service areas.

Exhibit 5-6 Sample Single Family Annual Bill



While regional comparisons may provide some context, the ranking of individual customer bills is not a consideration when developing a financial plan and rate structure. The Township’s cash needs are independent of the rates in the surrounding jurisdictions, and this comparison is provided for information only.

Section 6 FINDINGS AND RECOMMENDATIONS

Below are the findings and recommendations resulting from NewGen’s sewer rate study for the Township of Hamilton.

Findings

- The Township’s wastewater system is well managed financially and operationally.
- The Township’s planned capital spending is appropriate for the size and value of the Township’s system and reflects a sufficient level of investment in the Township’s wastewater infrastructure.
- The Township’s FY 2021 sewer rates are not adequate to fully fund the future operating, capital, and reserve requirements of the Township’s system.

Recommendations

Based on the above stated findings, NewGen recommends several items to address the necessary revenue increases needed to support the Township’s wastewater system.

- Adopt the rates shown in the following table, effective July 1 each fiscal year:

**Table 6-1
Recommended Hamilton Sewer Rates**

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Rate Increase	0.0%	30.0%	0.0%	0.0%	0.0%	0.0%
<i>FY Month Effective</i>		<i>July</i>	<i>July</i>	<i>July</i>	<i>July</i>	<i>July</i>
Residential Annual Fee	\$390	\$507	\$507	\$507	\$507	\$507
Non-Residential						
Annual Fee	\$195	\$254	\$254	\$254	\$254	\$254
Unit Rate per kgal	\$6.55	\$8.52	\$8.52	\$8.52	\$8.52	\$8.52

- Re-evaluate the financing plan for the Township’s CIP and update the forecasted rate impact each fiscal year.



THANK YOU!



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