

Metropolitan Sewer Subdistrict
MetroConnects

**Wastewater Financial Planning and
Rate Study**

Final Report / February 21, 2019



February 21, 2019

Mr. Jim Freeland
Commission Chairman
MetroConnects
120 Augusta Arbor Way
Greenville, SC 29605

Subject: Wastewater Financial Planning and Rate Study Report

Dear Mr. Freeland:

Raftelis is pleased to provide this Wastewater Financial Planning and Rate Study Report (Report) for the Metropolitan Sewer Subdistrict, SC (MetroConnects) to evaluate its current recovery of revenues and make recommendations for a retail wastewater rate structure that is consistent with industry standards and will provide for a more fair and equitable recovery of revenue from its customers.

This Report documents the results and findings of the study for the six-year forecast period fiscal years (FY) 2020 – 2025 (Forecast Period). The proposed rates for FY 2020 and thereafter are consistent with industry standards and pricing practices and designed to meet the forecast of annual revenue requirements. The projected revenue requirements over the six-year planning period are based on reasonable assumptions and prudent financial policies and objectives.

As part of the study, Raftelis also developed a Utility Rate and Financial Planning Model (Model) for MetroConnects, which provides a projection of operating and maintenance expenses based on the estimated 2019 Operating Budget and capital costs based on pay-as-you-go cash funding, and projected contributions from reserves. The Model also incorporates a financial planning component that includes the capital projects “proposed” over the planning horizon. Finally, the Model includes a module to assess the customer impacts of the recommended rates and on-going program of rate adjustments.

We have enjoyed the opportunity to provide assistance to MetroConnects. If you have any questions, comments, or concerns, please do not hesitate to contact me at (704) 373-1199.

Sincerely,

A handwritten signature in black ink that reads 'Melissa Levin'.

Melissa Levin
Senior Manager

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Introduction

In 2018, Metropolitan Sewer Subdistrict (MetroConnects) engaged Raftelis to conduct a wastewater financial planning and rate study (Study) to develop a sustainable and equitable wastewater rate structure, and a solvent financial plan for the special purpose district. This report provides a summary of the results and findings of the Study and provides a recommendation for the wastewater rate structure to address MetroConnects financial objectives.

BACKGROUND OF THE UTILITY

MetroConnects was created in 1969 based on South Carolina state legislation as a special purpose district to provide wastewater collection services within Greenville County, South Carolina. The MetroConnects district boundary was originally established to match the boundary of Renewable Water Resources (ReWa) except where another subdistrict or municipality already exists. MetroConnects imposes an ad valorem tax that is currently 5.7 mils on all properties within its district boundary. Greenville County Council reduced the MetroConnects wastewater district boundary through an ordinance in 1990 because of the sewer tax being levied where there were no plans for sewer infrastructure, namely in the northern and southern areas of the county. In 2011, MetroConnects also began serving approximately 300 properties within Anderson County as part of its agreement to take over and rehabilitate the Piedmont mill village area.

Currently, MetroConnects has approximately 63,000 properties within its district boundary that are assessed an ad valorem tax. The ad valorem tax is assessed on real and personal property, collected by Greenville County, and remitted to MetroConnects on an annual basis. In 2010, MetroConnects instituted a sewer fee for connected customers only. These 44,000 connected customers (out of the 63,000 properties within the district boundary) represent a mix of residential, commercial and industrial customers. The sewer fee structure is based on land use type and property value in an attempt to closely approximate wastewater capacity used by these connected customers and is also assessed and collected by the Greenville County Tax Office. The sewer fee revenue can only be used by MetroConnects for operations and maintenance (O&M) and existing system rehabilitation. The ad valorem tax revenue can be used for the same purposes as the sewer fee and can also be used for system upgrades and expansion.

Over the next several years, MetroConnects has significant revenue requirements in order to perform the necessary rehabilitation and system expansion needed in a growing Greenville County. The existing revenue structure presents numerous challenges in meeting that revenue need while maintaining MetroConnects' ability to operate on the same independent, self-sustaining basis that is required of any business. Therefore, MetroConnects is conducting this Study to explore its revenue options while focusing on a fair and equitable rate structure and rates, as well as the flexibility to meet the future needs of Greenville County.

SCOPE OF SERVICES

In August 2018, Raftelis and MetroConnects staff participated in kick-off workshop to identify the following objectives for the Study:

- 1) Develop a retail wastewater rate structure that is consistent with industry standards and will provide for a more fair and equitable recovery of revenue from MetroConnects customers (primary objective);

-) Evaluate the revenue sufficiency of MetroConnects' existing rates and make recommendations for improvements;
-) Recommend wastewater rates that are sufficient to meet operating and capital requirements for a six-year forecast period; and
-) Provide a user-friendly financial planning model designed for continuous use by MetroConnects as a financial planning tool.

Raftelis has developed a Utility Financial Planning and Rate Model (Model) to forecast annual revenue requirements, customer demand, rates, and system revenues over a six-year planning period. The Microsoft Excel-based model provides a module for analyzing MetroConnects' current financial position and the future impacts of the recommended program of rate adjustments to the system and its customers. The Model is included as a deliverable of the Study.

Related to this Study is an analysis of system development charges and existing permit fees. These sources of revenue are not guaranteed income as they depend on the level of development activity within the MetroConnects district boundary. The system development charges will be an important source of revenue to help MetroConnects support capital expansion projects that directly support the development community. The analysis and recommendations will be done through a separate study.

Financial Plan

The most important element to any rate study is to ensure that a utility generates revenues that are sufficient for the operation and maintenance of the system. In order to evaluate whether system revenues are sufficient to cover the forecast of revenue requirements, Raftelis developed a financial plan. Developing a financial plan includes establishing a forecast of revenue requirements, determining the necessary revenue increases using demand projections, and examining the forecasted operating results.

Revenue Requirements

Revenue requirements are comprised of operating expenses, annual debt service payments, cash-funded capital, and reserve transfers. For the Study, revenue requirements were developed and projected over a six-year forecast period, fiscal year (FY) 2020 through 2025. In all of the upcoming tables in this report, the six-year forecast period is identified as “Forecast” whereas the current fiscal year (FY 2019) is identified as “Actual”.

The sources of the information used in this Study include:

-) MetroConnects 2018-2019 Budget and 10-Year Projection
-) MetroConnects 2018 Capital Plan

OPERATING EXPENSES

Operating expenses represent normal, recurring expenses necessary to operate and maintain the system in good condition incurred during MetroConnects annual accounting cycle, fiscal year ending June 30th. The operating budget (FY 2019) was provided to Raftelis by MetroConnects and serves as the baseline for the utilities’ operating costs.

MetroConnects provided Raftelis with detailed budgeting information including projections for their operating expenses for a ten-year forecast period. The projections for operating expenses used for the Study are consistent with the forecast provided by MetroConnects and the net impact of these cost escalation rates during the forecast period equates to an average annual increase in total operating expenses of approximately 4.2%.

The FY 2019 budget and projected operating expenses for FY 2020 – FY 2025 are shown in Table 1.

Table 1: Projected Operating Expenses

Description	<u>FY2019</u> <i>Actual</i>	<u>FY2020</u> <i>Forecast</i>	<u>FY2021</u> <i>Forecast</i>	<u>FY 2022</u> <i>Forecast</i>	<u>FY 2023</u> <i>Forecast</i>	<u>FY 2024</u> <i>Forecast</i>	<u>FY 2025</u> <i>Forecast</i>
Sewer O&M Budget							
Operations							
Salaries, Wages & Benefits	\$ 4,238,540	\$ 4,491,454	\$ 4,749,590	\$ 5,022,418	\$ 5,386,710	\$ 5,772,441	\$ 6,026,065
Professional Fees	330,000	225,000	225,000	225,000	225,000	225,000	225,000
Computer Supplies, Telecommunications & Pri	186,000	191,900	194,885	197,958	201,120	204,375	237,726
Vehicle & Equipment Maintenance & Repairs	180,000	187,200	194,724	202,587	210,807	219,399	228,381
Building & Property Repairs, Maintenance, Uti	185,000	191,490	191,565	199,162	207,241	215,843	255,013
Pump Stations	413,200	238,300	218,200	223,700	228,600	255,000	274,700
Miscellaneous Expenses	246,000	269,120	267,377	265,779	264,331	268,041	276,916
Operation, Maintenance, Rehabilitation, Contr	608,000	550,960	603,979	457,059	468,300	429,766	488,461
Total: Sewer O&M	\$ 6,386,740	\$ 6,345,424	\$ 6,645,320	\$ 6,793,662	\$ 7,192,108	\$ 7,589,865	\$ 8,012,263
		-1%	5%	2%	6%	6%	6%

CAPITAL PLAN

MetroConnects capital plan identifies the anticipated capital needs for the wastewater system over the six-year forecast period. The MetroConnects 2018 Capital Plan identified the following types of projects:

- Capital Improvement Project (CIP)** Includes find and fix maintenance projects, roadway utility relocation projects, rehabilitation projects (point repairs and lining), as well as encroachment resolution projects.

- Capital Expansion Project (CEP)** Includes system upgrades due to development impacts, planned system improvements or upgrades, infrastructure expansion to serve new customers, and pump station elimination projects.

- Capital Expenditures (CEX)** Includes expenditures such as major facility upgrades, vehicle and equipment purchases and replacements, and enterprise information technology investments.

The capital improvement projects (CIP) are approximately \$3 million annually and are anticipated to be cash-funded using (PAYGO or Pay-As-You-Go financing) with money from both the tax millage and sewer user fee revenues.

Capital expansion projects (CEP) are approximately \$2.4 million annually and are anticipated to be cash-funded using a combination of PAYGO and reserve funds. The MetroConnects Sewer Fee revenue cannot be used to fund CEP projects.

Capital expenditures (CEX) are approximately \$450,000 annually and are anticipated to be cash-funded.

MetroConnect's Capital Plan and Funding Sources are presented in Table 2 and Table 3.

Table 2: Projected Capital Projects

Description	FY 2019 Actual	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Capital Projects							
<u>Capital Improvement Plan</u>							
Maintenance Projects (Contract)	\$ 475,000	\$ 475,000	\$ 415,000	\$ 415,000	\$ 415,000	\$ 415,000	\$ 415,000
Roadway Relocations (Contract)	1,566,000	250,000	250,000	250,000	250,000	250,000	250,000
Encroachment Expense	645,000	150,000	150,000	150,000	150,000	150,000	150,000
Rehabilitation Projects (Contract)	2,952,000	1,740,200	2,043,400	2,212,250	2,546,752	2,573,541	2,161,931
Total CIP Costs	\$ 5,638,000	\$ 2,615,200	\$ 2,858,400	\$ 3,027,250	\$ 3,361,752	\$ 3,388,541	\$ 2,976,931
		-54%	9%	6%	11%	1%	-12%
<u>Capital Expansion Plan</u>							
System Upgrades due to Development Impacts		\$ 520,800	\$ 520,800	\$ 520,800	\$ 520,800	\$ 520,800	\$ 520,800
Huff Creek Antioch Branch Sewer Project		1,050,000					
Ascot Ridge PS Elimination Project		425,900					
Piedmont Park/Oaks at Pebble Upgrade		192,000	768,700				
Webb Road Sewer Upgrade			566,300				
Coleman Shoals PS Elimination Project			351,400				
Mountain Creek Apts. Sewer Upgrade				285,300			
Scruggs Drive Sewer Upgrade				570,800			
Hollytown Condominiums/Trentwood Condominiums				771,700	514,700		
Freedom Court Gravity System				76,600	459,400	612,500	
Hwy 418 Payne Branch Tributary				173,600	694,400	1,388,300	2,082,400
Total CEP Costs	\$ 3,295,000	\$ 2,188,700	\$ 2,207,200	\$ 2,398,800	\$ 2,189,300	\$ 2,521,600	\$ 2,603,200
		-34%	1%	9%	-9%	15%	3%
Total Capital Expenditures	\$ 613,400	\$ 332,000	\$ 431,000	\$ 1,006,000	\$ 407,100	\$ 164,000	\$ 408,000
		-46%	30%	133%	-60%	-60%	149%
Total Capital Projects	\$ 9,546,400	\$ 5,135,900	\$ 5,496,600	\$ 6,432,050	\$ 5,958,152	\$ 6,074,141	\$ 5,988,131
		-46%	7%	17%	-7%	2%	-1%

MetroConnects provided Raftelis with a ten-year capital plan that included projects beyond the six-year forecast, including: Griffin Park Pump Station (PS) Elimination Project, Spaulding Farms/Avalon PS Elimination Project, and Circle Creek Interceptor and PS.

Table 3: Projected Funding for Capital Projects

Description	FY 2019 Actual	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Sewer Capital Projects							
Capital Expansion & Upgrade Projects		\$ 2,188,700	\$ 2,207,200	\$ 2,398,800	\$ 2,189,300	\$ 2,521,600	\$ 2,603,200
Capital Expenditures		332,000	431,000	1,006,000	407,100	164,000	408,000
Capital Improvements Projects		2,615,200	2,858,400	3,027,250	3,361,752	3,388,541	2,976,931
Capital Expansion Grant Funded Projects							
Total Sewer Capital Projects		\$ 5,135,900	\$ 5,496,600	\$ 6,432,050	\$ 5,958,152	\$ 6,074,141	\$ 5,988,131
Funding for Sewer Capital Projects							
Rate Funded Capital Projects		\$ 4,685,900	\$ 4,746,600	\$ 4,932,050	\$ 4,958,152	\$ 4,974,141	\$ 4,983,131
Grants		-	-	-	-	-	-
Transfers From Fund Balance		450,000	750,000	1,500,000	1,000,000	1,100,000	1,005,000
Other		-	-	-	-	-	-
Total Funding Sources		\$ 5,135,900	\$ 5,496,600	\$ 6,432,050	\$ 5,958,152	\$ 6,074,141	\$ 5,988,131

MetroConnects' six-year capital plan totals approximately \$35 million which will be funded primarily through rate-funded cash revenue and the use of approximately \$5.8 million of reserve funds. This capital plan does not include any revenue from grants or debt.

DEBT SERVICE OBLIGATIONS

Currently, MetroConnects has no outstanding debt and it anticipates funding its operating expenses and capital plan through a combination of revenue funds (PAYGO) and the use of existing reserves. There are no future debt issuances included in the forecast. However, MetroConnects may consider issuing debt, at a later date, to fund some of its capital plan.

Projected wastewater system revenue requirements for the six-year forecast period are shown below in Table 4.

Table 4: Projected Wastewater System Revenue Requirements

Description	FY2019 <i>Actual</i>	FY2020 <i>Forecast</i>	FY2021 <i>Forecast</i>	FY2022 <i>Forecast</i>	FY2023 <i>Forecast</i>	FY2024 <i>Forecast</i>	FY2025 <i>Forecast</i>
System Revenue Requirements							
<u>O&M Budget</u>							
Salaries, Wages & Benefits	\$ 4,238,540	\$ 4,491,454	\$ 4,749,590	\$ 5,022,418	\$ 5,386,710	\$ 5,772,441	\$ 6,026,065
Professional Fees	330,000	225,000	225,000	225,000	225,000	225,000	225,000
Computer Supplies, Telecommunications	186,000	191,900	194,885	197,958	201,120	204,375	237,726
Vehicle & Equipment Maintenance & Rep	180,000	187,200	194,724	202,587	210,807	219,399	228,381
Building & Property Repairs, Maintenance	185,000	191,490	191,565	199,162	207,241	215,843	255,013
Pump Stations	413,200	238,300	218,200	223,700	228,600	255,000	274,700
Miscellaneous Expenses	246,000	269,120	267,377	265,779	264,331	268,041	276,916
Operation, Maintenance, Rehabilitation, C	608,000	550,960	603,979	457,059	468,300	429,766	488,461
Subtotal: O&M Budget	\$ 6,386,740	\$ 6,345,424	\$ 6,645,320	\$ 6,793,662	\$ 7,192,108	\$ 7,589,865	\$ 8,012,263
<u>Debt Service</u>							
Existing Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Proposed Debt	-	-	-	-	-	-	-
Subtotal: Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<u>Other Expenditures & Transfers</u>							
Rate Funded Capital	\$ 9,546,400	\$ 4,685,900	\$ 4,746,600	\$ 4,932,050	\$ 4,958,152	\$ 4,974,141	\$ 4,983,131
Transfer to Operating Reserve Fund	-	-	-	-	-	-	-
Subtotal: Other Expenditures & Transfers	\$ 9,546,400	\$ 4,685,900	\$ 4,746,600	\$ 4,932,050	\$ 4,958,152	\$ 4,974,141	\$ 4,983,131
Total Systemwide Revenue Requirements	\$ 15,933,140	\$ 11,031,324	\$ 11,391,920	\$ 11,725,712	\$ 12,150,260	\$ 12,564,006	\$ 12,995,394
		-31%	3%	3%	3%	3%	3%

RESERVE TRANSFERS

The System Revenue Requirements as outlined in Table 4 has no additional future contribution to reserves over the six-year forecast period and includes the use of approximately \$5.8 million of existing reserves.

Revenues

MetroConnects existing rate structure includes the collection of revenue from several different sources. Its primary source of operating revenue is from tax millage and sewer fees. Non-operating revenues that are not guaranteed sources of revenue include connection permits and development fees.

TAX MILLAGE AND SEWER FEE

MetroConnects' existing rate structure consists of a tax millage charged to all properties within its sewer district within Greenville and Anderson Counties as well a Sewer Fee that is only charged to properties that are actually connected to the MetroConnects wastewater collection system. The tax millage and sewer fee revenue is assessed, billed, and collected by each county's tax office and remitted to MetroConnects on an annual basis.

The tax millage is assessed to residents of Greenville and Anderson Counties that are within the MetroConnects district boundary and is based on the property’s assessed value, its associated tax rate, and the MetroConnects approved millage rate. This tax millage applies to real property (real estate) as well as personal property (vehicles) and certain businesses (inventory) and motor carrier taxes. The Greenville County tax rates are shown in Table 5.

Table 5: County Tax Rate

Property	Tax Rate
Schools and Churches	0%
Residential Properties Whose Owners Reside in the Homestead	4%
Business and Rental Properties	6%
Industrial Properties	11%

The tax millage is calculated by multiplying the property’s tax market value times the tax rate for property, multiplied by MetroConnects’ millage rate (5.7 mils in Greenville County). For example, a residential property with a tax market value of \$100,000 and a tax rate of 4% (owner-occupied properties) has a taxable amount of \$4,000. The MetroConnects sewer tax of 5.7 mils is applied to that taxable amount which equates to \$22.80 annually.

The projected property tax revenues for the six-year forecast period, assuming the millage rate of 5.7 with no increase, are shown in Table 6. The projected property tax revenues assume an average annual 1% growth in the number of properties.

Table 6: Projected Tax Millage Revenue

Description	FY 2019 <i>Actual</i>	FY 2020 <i>Forecast</i>	FY 2021 <i>Forecast</i>	FY 2022 <i>Forecast</i>	FY 2023 <i>Forecast</i>	FY 2024 <i>Forecast</i>	FY 2025 <i>Forecast</i>
Property Tax Revenue							
Property Taxes-Current Gvnl	\$ 4,692,000	\$ 4,738,920	\$ 4,786,309	\$ 4,834,172	\$ 4,882,514	\$ 4,931,339	\$ 4,980,653
Property Taxes-Delinquent Gvnl	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Motor Carrier Tax Gvnl (1)	90,900	90,900	90,900	90,900	90,900	90,900	90,900
Inventory Tax Gvnl (2)	30,300	30,300	30,300	30,300	30,300	30,300	30,300
Property Taxes-Current And	11,730	11,730	11,730	11,730	11,730	11,730	11,730
Property Taxes-Delinquent And	3,500	3,500	3,500	3,500	3,500	3,500	3,500
Motor Carrier Tax And	40	40	40	40	40	40	40
Subtotal: Property Tax Revenue	\$ 5,028,470	\$ 5,075,390	\$ 5,122,779	\$ 5,170,642	\$ 5,218,984	\$ 5,267,809	\$ 5,317,123

The Sewer Fee that was added in 2010 was intended to support operating expenses and capital projects for rehabilitation and maintenance of the existing system, therefore, it is only charged to wastewater customers that are connected to the collection system. The Sewer Fee revenue cannot be used for capital expansion projects (CEP).

The Sewer Fee rate structure attempted to estimate the capacity used by customers through their property land use type, SCDHEC unit contributory flows, and property value. Table 7 shows an abbreviated list of the Sewer Fees.

Table 7: Sewer Fee

Property Type	Fee
Residential (Tax Mkt. Value < \$100,000)	\$38
Residential (Tax Mkt. Value \$100,000 to \$199,000)	\$46
Residential (Tax Mkt. Value \$200,000 to \$299,000)	\$53
Residential (Tax Mkt. Value \$300,000 to \$499,000)	\$61
Residential (Tax Mkt. Value > \$500,000)	\$65
Residential Multi-Family 1	\$38
Residential Multi-Family 2	\$19
Commercial 1	\$750
Commercial 2	\$625
Commercial 3	\$500
Industrial	\$1,000

This list is condensed from the original 121 property types defined in the MetroConnects sewer fee rate structure. MetroConnects has not increased these fees since they were implemented in 2010.

Projected Sewer Fee revenues for the six-year forecast period are shown in Table 8. An average annual growth of 1.5% is assumed for the number of connected properties.

Table 8: Projected Sewer Fee Revenue

Description	FY 2019 <i>Actual</i>	FY 2020 <i>Forecast</i>	FY 2021 <i>Forecast</i>	FY 2022 <i>Forecast</i>	FY 2023 <i>Forecast</i>	FY 2024 <i>Forecast</i>	FY 2025 <i>Forecast</i>
Sewer Fee Revenue							
Residential (Tax Mkt. Value < \$100,000)	\$ 165,041	\$ 167,517	\$ 170,029	\$ 172,580	\$ 175,169	\$ 177,796	\$ 180,463
Residential (Tax Mkt. Value \$100,000 to \$199,000)	807,378	819,489	831,781	844,258	856,922	869,776	882,822
Residential (Tax Mkt. Value \$200,000 to \$299,000)	634,082	643,593	653,247	663,045	672,991	683,086	693,332
Residential (Tax Mkt. Value \$300,000 to \$499,000)	350,154	355,406	360,737	366,148	371,641	377,215	382,873
Residential (Tax Mkt. Value > \$500,000)	90,945	92,309	93,694	95,099	96,526	97,974	99,443
Residential Multi-Fam 1	324,027	328,887	333,820	338,828	343,910	349,069	354,305
Residential Multi-Fam 2	25,610	25,995	26,385	26,780	27,182	27,590	28,004
Commercial 1	142,506	144,644	146,813	149,015	151,251	153,519	155,822
Commercial 2	95,309	96,738	98,189	99,662	101,157	102,674	104,214
Commercial 3	557,654	566,019	574,509	583,127	591,874	600,752	609,763
Industrial	70,187	71,240	72,309	73,393	74,494	75,612	76,746
Subtotal: Sewer Fee Revenue	\$ 3,262,893	\$ 3,311,836	\$ 3,361,514	\$ 3,411,937	\$ 3,463,116	\$ 3,515,062	\$ 3,567,788

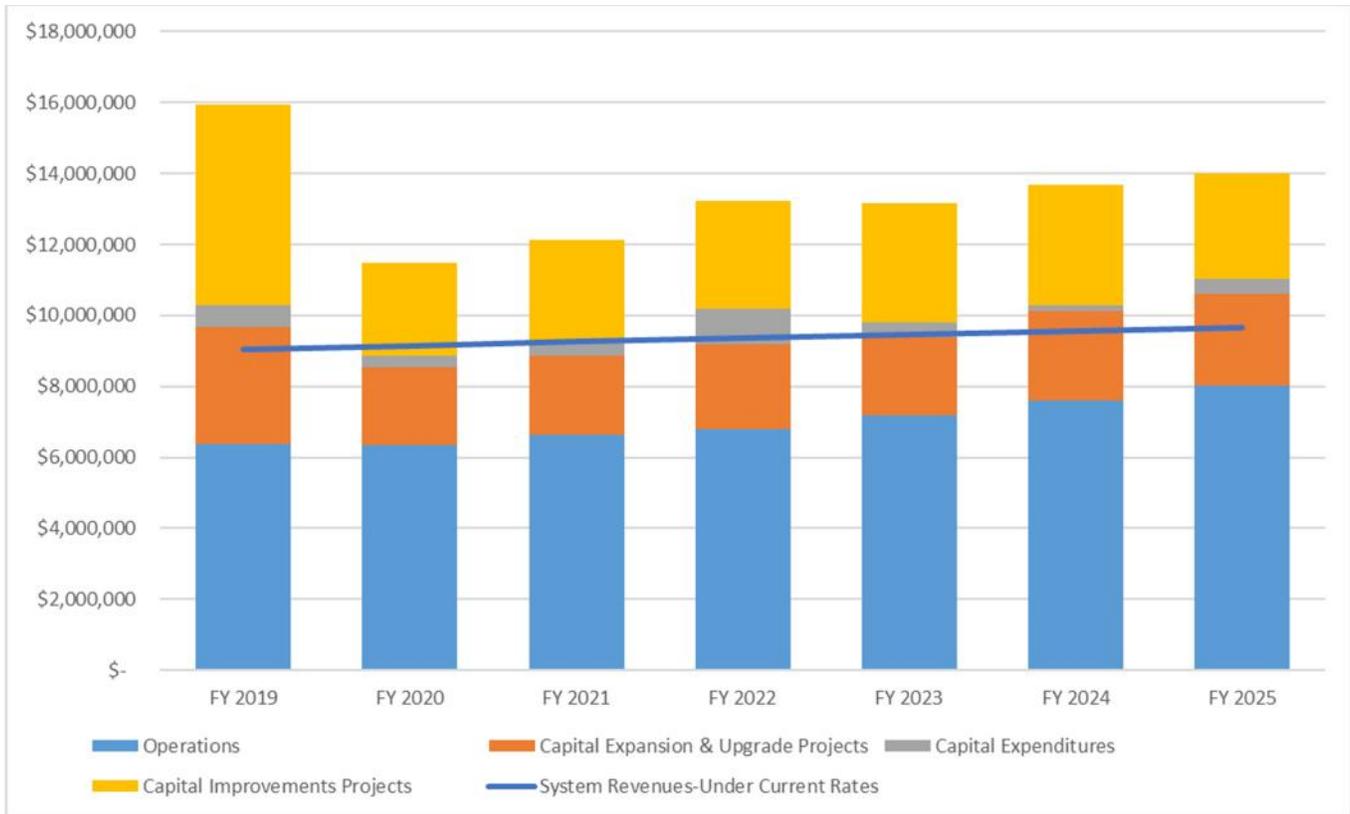
OTHER OPERATING AND NON-OPERATING REVENUES

In addition to tax millage and sewer fee revenues, MetroConnects collects revenue from several other operating and non-operating sources such as connection permits, development fees, reimbursement for municipal annexations, and investment income. These projected revenues were provided by MetroConnects and are projected to escalate by 0.15% over the forecast period.

Revenue Sufficiency

The most important element of any rate study is to ensure that the wastewater collection utility generates revenues that are sufficient for the operation and maintenance of the system. Raftelis modeled the six-year forecast with the projected revenue requirements and MetroConnects existing rate structure. Figure 1 depicts this six-year forecast with no rate adjustments.

Figure 1. Projected Revenue Sufficiency



The bars on the graph indicate the annual operating expenses, capital expansion projects (CEP), capital improvement projects (CIP), and capital expenses (CEX). The blue line is an indication of the projected revenues under the existing rate structure. The annual bar above the revenue line indicates a budget shortfall. Table 9 provides the breakdown of this forecast.

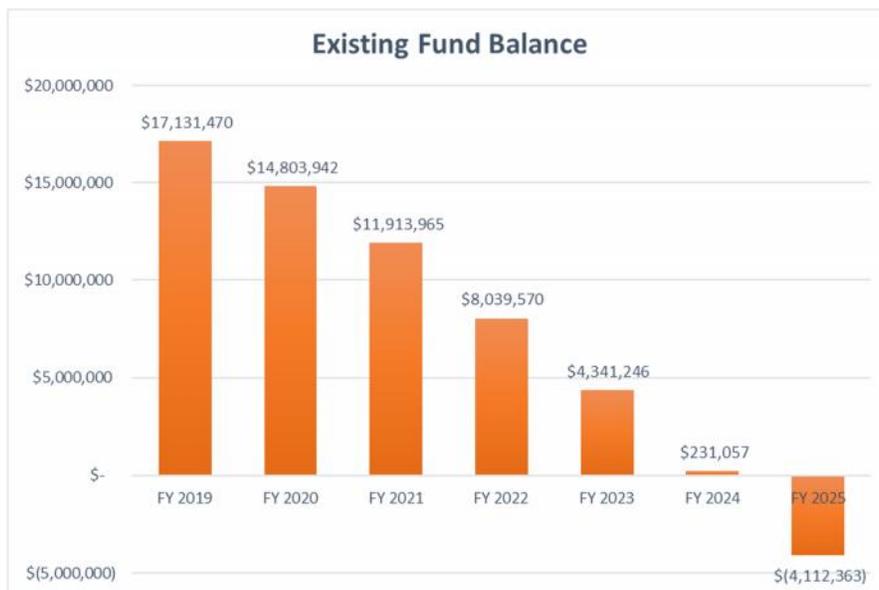
Table 9: Projected Revenue Sufficiency

Description	FY 2019 <i>Actual</i>	FY 2020 <i>Forecast</i>	FY 2021 <i>Forecast</i>	FY 2022 <i>Forecast</i>	FY 2023 <i>Forecast</i>	FY 2024 <i>Forecast</i>	FY 2025 <i>Forecast</i>
Revenue Projections							
Property Tax Revenue	\$ 5,028,470	\$ 5,075,390	\$ 5,122,779	\$ 5,170,642	\$ 5,218,984	\$ 5,267,809	\$ 5,317,123
Sewer Fee Revenue	3,262,893	3,311,836	3,361,514	3,411,937	3,463,116	3,515,062	3,567,788
Additional Revenue	765,500	766,570	767,649	768,738	769,837	770,945	772,064
Total Revenues	\$ 9,056,863	\$ 9,153,796	\$ 9,251,942	\$ 9,351,317	\$ 9,451,937	\$ 9,553,817	\$ 9,656,974
Revenue Requirements							
<u>O&M Budget</u>							
Subtotal: O&M Budget	\$ 6,386,740	\$ 6,345,424	\$ 6,645,320	\$ 6,793,662	\$ 7,192,108	\$ 7,589,865	\$ 8,012,263
<u>Debt Service</u>							
Subtotal: Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<u>Other Expenditures & Transfers</u>							
Capital Expansion & Upgrade Projects	\$ 3,295,000	\$ 2,188,700	\$ 2,207,200	\$ 2,398,800	\$ 2,189,300	\$ 2,521,600	\$ 2,603,200
Capital Expenditures	613,400	332,000	431,000	1,006,000	407,100	164,000	408,000
Capital Improvements Projects	5,638,000	2,615,200	2,858,400	3,027,250	3,361,752	3,388,541	2,976,931
Subtotal: Other Expenditures & Transfers	\$ 9,546,400	\$ 5,135,900	\$ 5,496,600	\$ 6,432,050	\$ 5,958,152	\$ 6,074,141	\$ 5,988,131
Total Revenue Requirements	\$ 15,933,140	\$ 11,481,324	\$ 12,141,920	\$ 13,225,712	\$ 13,150,260	\$ 13,664,006	\$ 14,000,394
Surplus/(Deficit)	\$ (6,876,277)	\$ (2,327,528)	\$ (2,889,978)	\$ (3,874,395)	\$ (3,698,324)	\$ (4,110,189)	\$ (4,343,420)

Under the existing rate structure with no rate increases, MetroConnects would not recover sufficient funds for its projected revenue requirements. MetroConnects would have to use its reserve funds to address this deficit.

MetroConnects has an available reserve fund balance for FY 2019 of approximately \$24 million. At the end of FY 2019, the deficit is projected to be \$6.9 million which will bring MetroConnects reserve balance to approximately \$17 million. There is projected to be an average annual \$3.5 million deficit over the next six years and by the end of FY 2025, MetroConnects will have exhausted its reserve fund. Figure 2 shows the fiscal year ending balance over the forecast period.

Figure 2. Existing Fund Balance



If MetroConnects were to keep its existing rate structure, rate increases would be necessary to meet the revenue requirements. Since Greenville County will not approve a tax millage increase or increase the size of the MetroConnects district boundary, the only option is to increase the sewer fee of the existing rate structure. Table 10 provides a high-level estimate of the increases that would be necessary to address this budget shortfall.

Table 10: Projected Sewer Fee Increases

Fiscal Year	Millage Rate Increase	Sewer Fee Increase
2020	0%	78%
2021	0%	5%
2022	0%	3%
2023	0%	5%
2024	0%	3%
2025	0%	4%

While increasing the sewer fee might appear to provide a short-term solution to MetroConnects revenue problem, it does not address the restrictions in the use of that sewer fee revenue. In addition, the existing tax millage aspect of the existing rate structure is controlled by the County and will not be increased in the near future. The tax millage structure also inhibits the County from approving any expansion of the MetroConnects district boundary size since properties within the district boundary are taxed and may not see any wastewater infrastructure in their area for some time.

Proposed Rate Structure

As previously discussed, MetroConnects primary objective for the Study is to have a wastewater rate structure developed that is consistent with industry standards and practices and will provide for a more fair and equitable recovery of revenue from MetroConnects customers. Moving from a rate structure based on tax millage and a sewer fee to a consumption-based rate structure will help MetroConnects address many other obstacles that have been identified in addition to the fairness of the existing rate structure. These obstacles as well as the proposed rate structure and customer impacts are addressed in the following sections.

Basis for Change

Based on input from MetroConnects and the results of the financial plan, it is evident that the existing rate structure cannot support MetroConnects' growth. MetroConnects would like to move towards a rate structure that is similar to the way in which the majority of utilities across the country set rates and collect revenues. As the largest wastewater collection system in Greenville County, South Carolina, MetroConnects should operate similar to a business on a self-sustaining basis, billing customers based on their consumption and use of system, instead of a revenue stream based on customer's property value.

The existing rate structure that imposes a tax on properties within the MetroConnects district boundary limits the expansion of the district boundaries since property owners may not utilize the benefits of the sewer infrastructure for many years. Changes to the district boundary as well as the tax millage rate must be approved by Greenville County Council who have been reluctant to approve such changes due to the tax implications. Although properties may be in need of a public wastewater provider due to failing septic systems, MetroConnects is unable to plan and deliver these services due to the area not being within the district's boundary.

Revenues collected through the existing sewer fee structure are designated for certain types of expenditures. The sewer fee was approved in 2010 to provide funding for operating expenses, but the statutory requirements for this fee restricted the funds usage for capital expansion projects. The new rate structure will allow MetroConnects to use revenues for all requirements; operating expenses, capital costs (including expansion), debt servicing, and reserve fund transfers.

A new consumption-based rate structure will also eliminate the problem that MetroConnects faces with municipal annexations of properties into their district. Under the existing rate structure, MetroConnects may provide service to a property, but as soon as that property is annexed into another district in Greenville County the sewer tax revenue is provided to the annexed district instead of MetroConnects. The sewer fee is still collected for MetroConnects by Greenville County, but attempts for reimbursement of the sewer tax from the municipalities to MetroConnects has generally been unsuccessful. Moving to the new rate structure, MetroConnects will no longer need to coordinate with these districts to recoup lost revenue due to annexation.

Accounts and Usage Information / Demand for Services

To develop a consumption-based rate structure, water usage and account information is needed. Greenville Water currently provides water service to MetroConnects' customers and has water usage and account information for these customers. Greenville Water also does the billing for ReWa, the provider of sewer trunk and treatment

services, who like Greenville Water assesses rates based on usage. For MetroConnects to make the transition to a consumption-based rate structure, it will be necessary for them to establish an agreement with Greenville Water to track MetroConnects customers and their usage, and to either provide that data to MetroConnects for them to bill their customers, or to have Greenville Water provide the billing service for MetroConnects. MetroConnects is currently in negotiations with Greenville Water to reach an agreement to provide billing services for MetroConnects.

For this Study, Greenville Water supplied the MetroConnects billing data (usage and accounts) for calendar years 2017 and 2018. This billing data provided the basis for the proposed rate structure. After discussion with MetroConnects, it was agreed that Raftelis would assume a conservative level of growth for both customer accounts and customer demand. Customer accounts are projected to grow at 1.5% annually while customer demand is projected to grow at 1.0% annually. Given the growth that Greenville County has been experiencing, this level of growth should provide a conservative estimate. Raftelis believes that a conservative estimate for growth should be used given that MetroConnects has no prior billing data available to them, and the switch to a new consumption-based rate structure. If MetroConnects experiences higher or lower levels of growth over the planning period, the forecast is designed to be updated on a rolling basis to accommodate these and other types of changes.

The following tables, Tables 11 and 12, show a summary of the projected number of customer accounts and usage for the forecast period.

Table 11: Projected Customer Accounts

Description	FY 2019 <i>Actual</i>	FY 2020 <i>Forecast</i>	FY 2021 <i>Forecast</i>	FY 2022 <i>Forecast</i>	FY 2023 <i>Forecast</i>	FY 2024 <i>Forecast</i>	FY 2025 <i>Forecast</i>
MetroConnects Customers							
5/8"	41,685	42,312	42,946	43,591	44,245	44,909	45,583
1"	320	324	329	335	340	345	351
1 1/2"	297	301	306	310	315	321	326
2"	145	147	149	152	154	156	158
3"	30	30	30	30	30	30	30
4"	4	4	4	4	4	4	4
6"	1	1	1	1	1	1	1
NULL	170	172	175	178	180	183	186
Total: MetroConnects Meters	42,652	43,292	43,941	44,601	45,270	45,949	46,638

Table 12: Projected Customer Usage (Gallons)

Description	FY 2019 <i>Actual</i>	FY 2020 <i>Forecast</i>	FY 2021 <i>Forecast</i>	FY 2022 <i>Forecast</i>	FY 2023 <i>Forecast</i>	FY 2024 <i>Forecast</i>	FY 2025 <i>Forecast</i>
Sewer Usage (gal)							
5/8"	2,767,496,948	2,795,171,917	2,823,123,636	2,851,354,873	2,879,868,421	2,908,667,106	2,937,753,777
1"	76,009,640	76,769,737	77,537,434	78,312,808	79,095,936	79,886,896	80,685,765
1 1/2"	215,526,310	217,681,573	219,858,389	222,056,972	224,277,542	226,520,318	228,785,521
2"	254,014,398	256,554,542	259,120,087	261,711,288	264,328,401	266,971,685	269,641,402
3"	107,294,229	108,367,171	109,450,843	110,545,351	111,650,805	112,767,313	113,894,986
4"	36,642,316	37,008,739	37,378,827	37,752,615	38,130,141	38,511,443	38,896,557
6"	1,753,483	1,771,018	1,788,728	1,806,616	1,824,682	1,842,929	1,861,358
Total: MetroConnects Usage	3,458,737,324	3,493,324,697	3,528,257,944	3,563,540,524	3,599,175,929	3,635,167,688	3,671,519,365

In order to calculate an estimate of system user charge revenue, a customer demand forecast must be developed to pair with the utility rates and charges as shown above. The proposed rates are discussed in the following section.

Proposed Rates and Rate Adjustments

At the request of MetroConnects, the proposed wastewater rate structure is similar to ReWa’s rate structure for trunk and treatment services. It is MetroConnects opinion that consistency with ReWa’s rate structure should help MetroConnects’ customers with the ease of implementation and understanding of the new rate structure. The new wastewater rate charge structure includes two components; a fixed charge component and a variable or volumetric component.

The fixed charge component is a uniform base charge. This charge is the same for all customer types and the customer will be assessed this monthly charge regardless of system usage. Although it is planned to be the same for all customer types now, this fixed charge could be different by water meter size since that data is available from Greenville Water. Generally speaking, within the water and wastewater utility industry, it can be argued most utility costs are fixed in nature. The charge typically covers costs related to billing and collections, account management, meter reading and meter service, as well as readiness to serve. Readiness-to-serve utility costs recognize that a water and wastewater utility must provide capacity 24 hours a day, 7 days a week, and 365 days a year regardless of whether one drop of water is consumed. As such, it is reasonable to recover at least a portion of a utility’s related costs in a fixed component.

It is anticipated that MetroConnects will formulate an agreement with Greenville Water to use their billing system as well as provide customer service on behalf of MetroConnects’ customers. For the purposes of the model, and based on discussions with Greenville Water, the Study has incorporated a \$1.06 charge per account per month for Greenville Water billing expenses which equates to \$625,000 annually over the forecast period. Greenville Water will also reduce the revenue provided to MetroConnects to cover the merchant fees associated with customers using their credit card or debit card to pay the monthly bill. This charge can be 3-5% of a customer’s bill and Raftelis assumed one third of MetroConnects’ customers would incur these merchant fees. Raftelis calculated an average bill for a residential customer using 4,000 gallons and took a 5% charge from this bill. This 5% charge was then assessed on one third of the total bills in the system. The total credit card cost is anticipated to be \$235,000 annually over the six-year forecast period.

The volumetric component consists of a volume charge for service measured per 1,000 gallons (kgal). This is a uniform volumetric rate and therefore is the same for all customers. The volumetric component covers the costs related to providing the collection of wastewater flow and the customers’ actual capacity used. It recovers all costs not recovered through the fixed charge. A volumetric charge is more equitable than a charge based on property value because it is based on customers’ actual use of the system and therefore every resident is responsible for their own wastewater flow.

Table 13 shows the proposed consumption-based wastewater rates for MetroConnects customers.

Table 13: Forecasted Proposed Rate Structure

Sewer User Charge	FY 2020	FY2021	FY2022	FY2023	FY2024	FY 2025
Base Charge	\$11.00	\$11.25	\$11.45	\$11.72	\$12.00	\$12.25
% Change		2%	2%	2%	2%	2%
Volumetric Charge (/kgal)	\$1.54	\$1.57	\$1.60	\$1.65	\$1.68	\$1.72
% Change		2%	2%	2%	2%	2%

It is assumed that MetroConnects will transition from the existing rates starting in FY 2020 and switch to the new base and volumetric change in a single year. After FY 2020, Raftelis assumed a 2% rate increase for both base and volumetric rates for the forecasted years.

Financial Forecast

Revenues have been estimated for the six-year forecast period (FY 2020 – FY2025) based on the projected number of customer accounts and usage (shown in Tables 11 and 12) and the proposed rates (Table 13). The financial forecast assuming the new rate structure and rates, and the revenue requirements as described in the financial plan with the addition of the charges to be assessed by Greenville Water is shown below in Table 14.

Table 14: Financial Forecast Assuming Proposed Rates

Description	FY 2019 Actual	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Revenue Projections							
New Sewer User Charge Revenue	\$ -	\$ 11,080,250	\$ 11,471,467	\$ 11,829,790	\$ 12,305,361	\$ 12,723,691	\$ 13,170,785
Property Tax Revenue	5,028,470	-	-	-	-	-	-
Sewer Fee Revenue	3,262,893	-	-	-	-	-	-
Additional Revenue	765,500	683,750	684,001	684,254	684,508	684,763	685,019
Total Revenues	\$ 9,056,863	\$ 11,764,000	\$ 12,155,468	\$ 12,514,044	\$ 12,989,868	\$ 13,408,453	\$ 13,855,804
Revenue Requirements							
<u>O&M Budget</u>							
Operations	\$ 6,386,740	\$ 6,345,424	\$ 6,645,320	\$ 6,793,662	\$ 7,192,108	\$ 7,589,865	\$ 8,012,263
Greenville Billing Charge	-	550,676	569,482	578,024	597,559	606,522	626,813
Greenville Charge for Use of Credit Card	-	182,000	191,100	200,655	210,688	221,222	232,283
<i>Subtotal: O&M Budget</i>	<i>\$ 6,386,740</i>	<i>\$ 7,078,100</i>	<i>\$ 7,405,902</i>	<i>\$ 7,572,341</i>	<i>\$ 8,000,355</i>	<i>\$ 8,417,610</i>	<i>\$ 8,871,360</i>
<u>Debt Service</u>							
<i>Subtotal: Debt Service</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>	<i>\$ -</i>
<u>Other Expenditures & Transfers</u>							
Capital Expansion & Upgrade Projects	\$ 3,295,000	\$ 2,188,700	\$ 2,207,200	\$ 2,398,800	\$ 2,189,300	\$ 2,521,600	\$ 2,603,200
Capital Expenditures	613,400	332,000	431,000	1,006,000	407,100	164,000	408,000
Capital Improvements Projects	5,638,000	2,615,200	2,858,400	3,027,250	3,361,752	3,388,541	2,976,931
<i>Subtotal: Other Expenditures & Transfers</i>	<i>\$ 9,546,400</i>	<i>\$ 4,685,900</i>	<i>\$ 4,746,600</i>	<i>\$ 4,932,050</i>	<i>\$ 4,958,152</i>	<i>\$ 4,974,141</i>	<i>\$ 4,983,131</i>
Total Revenue Requirements	\$ 15,933,140	\$ 11,764,000	\$ 12,152,502	\$ 12,504,391	\$ 12,958,507	\$ 13,391,751	\$ 13,854,491
Surplus/(Deficit)	\$ (6,876,277)	\$ -	\$ 2,966	\$ 9,653	\$ 31,361	\$ 16,703	\$ 1,313
Ending Fund Balance	\$ 17,131,470	\$ 16,681,470	\$ 15,934,436	\$ 14,444,089	\$ 13,475,450	\$ 12,392,153	\$ 11,388,466
<i>Days O&M</i>	<i>979</i>	<i>960</i>	<i>875</i>	<i>776</i>	<i>684</i>	<i>596</i>	<i>519</i>

As mentioned previously, the most important element to any rate study is to ensure that the utility generates revenues that are sufficient for the operation of the system. The new rate structure and rates provide enough revenue to cover all operating expenses with the addition of Greenville Water billing expenses and merchant fee revenue reduction.

Other Expenditures and Transfers shown in the financial forecast include capital projects that are to be funded directly through rates. Additional capital funding is provided through the use of MetroConnects reserve funds, as previously discussed. The fund balance is included at the bottom of the financial forecast. It is assumed that MetroConnects will use approximately \$5.8 million of reserve funds for capital projects over the six-year forecast period as shown below.

Table 15: Projected Fund Balance

Description	FY 2019 Forecast	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Fund Balances							
Operating Reserve							
Beginning Balance	\$ 24,007,747	\$ 17,131,470	\$ 16,681,470	\$ 15,934,436	\$ 14,444,089	\$ 13,475,450	\$ 12,392,153
Plus:							
Annual Surplus / (Deficit)	\$ (6,876,277)	\$ -	\$ 2,966	\$ 9,653	\$ 31,361	\$ 16,703	\$ 1,313
Transfers to Reserve Funds	-	-	-	-	-	-	-
Less:							
Transfers to Capital Reserve	\$ -	\$ 450,000	\$ 750,000	\$ 1,500,000	\$ 1,000,000	\$ 1,100,000	\$ 1,005,000
Ending Balance	\$ 17,131,470	\$ 16,681,470	\$ 15,934,436	\$ 14,444,089	\$ 13,475,450	\$ 12,392,153	\$ 11,388,466
Days O&M	979	960	875	776	684	596	519
Targeted Days Cash on Hand	500	500	500	500	500	500	500

MetroConnects has the flexibility to use reserve funds on these projects and still maintain a reserve fund balance of greater than 500 days of cash. MetroConnects has set a reserve fund target of greater than 500 days of O&M expenses for any future need for debt. Fitch rating agency’s median target for AA credit rating is 572 days of O&M.

Customer Impacts

When changing a rate structure, it is important to consider the impact that the new rate structure will have on various types of customers. Since the new water-consumption based rate structure will not be a tax on properties within the MetroConnects district boundary, approximately 20,000 properties in Greenville County that are within the district boundary, and not currently connected to the sewer system, will no longer pay a sewer tax. Therefore, the new rate structure will shift the revenue requirements solely to connected customers. In addition, some properties that are tax exempt and connected to sewer such as schools and churches will begin paying because they will be paying based solely on their water consumption which serves as a proxy for sewer usage.

Raftelis has provided a customer impact analysis for different types of customers at varying levels of usage in Table 16. The table focuses on the following three types of residential customers from the MetroConnects existing rate structure and compares the rates on a monthly basis. These three categories of residential customer make up approximately 40% of the entire MetroConnects customer base.

-) Residential customers with a tax market value of under \$100,000
-) Residential customers with a tax market value between \$200,000 and \$300,000
-) Residential customers with a tax market value above \$500,000

For these three categories of residential customers, three levels of usage were used to calculate the corresponding bill under the new rate structure:

-) Low – 2,000 gallons per month
-) Medium – 4,000 gallons per month
-) High – 10,000 gallons per month

Also included in this analysis are Commercial 1, Commercial 2, Commercial 3, and Industrial customers with typical higher property values and water usage levels.

Table 16: Projected Customer Impacts

Description		FY 2019 Actual	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast
Customer Type								
Residential (Tax Mkt. Value < \$100,000)								
<u>TaxMarket Value</u>	<u>Usage (KGAL)</u>							
\$ 90,000	2	\$4.88	\$14.07	\$14.39	\$14.65	\$15.02	\$15.36	\$15.69
		\$ Change	\$9.20	\$0.32	\$0.26	\$0.37	\$0.34	\$0.33
	<u>Usage (KGAL)</u>							
	4	\$4.88	\$17.14	\$17.53	\$17.85	\$18.32	\$18.72	\$19.13
		\$ Change	\$12.27	\$0.39	\$0.32	\$0.47	\$0.40	\$0.41
	<u>Usage (KGAL)</u>							
	10	\$4.88	\$26.36	\$26.95	\$27.45	\$28.22	\$28.80	\$29.45
		\$ Change	\$21.48	\$0.59	\$0.50	\$0.77	\$0.58	\$0.65
Customer Type								
Residential (Tax Mkt. Value \$200,000 to \$299,000)								
<u>TaxMarket Value</u>	<u>Usage (KGAL)</u>							
\$ 250,000	2	\$9.17	\$14.07	\$14.39	\$14.65	\$15.02	\$15.36	\$15.69
		\$ Change	\$4.91	\$0.32	\$0.26	\$0.37	\$0.34	\$0.33
	<u>Usage (KGAL)</u>							
	4	\$9.17	\$17.14	\$17.53	\$17.85	\$18.32	\$18.72	\$19.13
		\$ Change	\$7.98	\$0.39	\$0.32	\$0.47	\$0.40	\$0.41
	<u>Usage (KGAL)</u>							
	10	\$9.17	\$26.36	\$26.95	\$27.45	\$28.22	\$28.80	\$29.45
		\$ Change	\$17.19	\$0.59	\$0.50	\$0.77	\$0.58	\$0.65
Customer Type								
Residential (Tax Mkt. Value > \$500,000)								
<u>TaxMarket Value</u>	<u>Usage (KGAL)</u>							
\$ 700,000	2	\$18.68	\$14.07	\$14.39	\$14.65	\$15.02	\$15.36	\$15.69
		\$ Change	-\$4.61	\$0.32	\$0.26	\$0.37	\$0.34	\$0.33
	<u>Usage (KGAL)</u>							
	4	\$18.68	\$17.14	\$17.53	\$17.85	\$18.32	\$18.72	\$19.13
		\$ Change	-\$1.54	\$0.39	\$0.32	\$0.47	\$0.40	\$0.41
	<u>Usage (KGAL)</u>							
	10	\$18.68	\$26.36	\$26.95	\$27.45	\$28.22	\$28.80	\$29.45
		\$ Change	\$7.68	\$0.59	\$0.50	\$0.77	\$0.58	\$0.65
Customer Type								
Commercial 1, Commercial 2, Commercial 3, Industrial								
<u>TaxMarket Value</u>	<u>Usage (KGAL)</u>							
\$ 250,000	10	\$69.63	\$26.36	\$26.95	\$27.45	\$28.22	\$28.80	\$29.45
		\$ Change	-\$43.27	\$0.59	\$0.50	\$0.77	\$0.58	\$0.65
<u>TaxMarket Value</u>	<u>Usage (KGAL)</u>							
\$ 500,000	50	\$66.33	\$87.80	\$89.75	\$91.45	\$94.22	\$96.00	\$98.25
		\$ Change	\$21.47	\$1.95	\$1.70	\$2.77	\$1.78	\$2.25
<u>TaxMarket Value</u>	<u>Usage (KGAL)</u>							
\$ 750,000	75	\$63.04	\$126.20	\$129.00	\$131.45	\$135.47	\$138.00	\$141.25
		\$ Change	\$63.16	\$2.80	\$2.45	\$4.02	\$2.53	\$3.25
<u>TaxMarket Value</u>	<u>Usage (KGAL)</u>							
\$ 2,000,000	200	\$183.08	\$318.20	\$325.25	\$331.45	\$341.72	\$348.00	\$356.25
		\$ Change	\$135.11	\$7.05	\$6.20	\$10.27	\$6.28	\$8.25

FY 2019 rates represent the equivalent monthly bill for the existing MetroConnects customer including tax millage and sewer fee. Beginning in FY 2020, all customers will be charged a monthly base rate of \$11.00 regardless of usage, plus their volumetric water usage. The transition from the existing rates in FY 2019 to the new rates in FY

2020 will show the largest increase due to the rate structure change. Subsequent years show slight increases due to the annual 2% rate increase for the remaining years of this six-year period.

The rate structure change will impact lower residential tax market value customers, increasing their equivalent monthly bill. However, the MetroConnects existing rate structure is extremely low against comparable collection-only sewer districts and does not represent each customer's use of the system. Higher property value customers may see a slightly smaller increase and possibly even a lower monthly bill depending on their level of water consumption. MetroConnects has begun looking into hardship assistance programs for lower income properties, but no programs have been established as yet.

MetroConnects has recommended that the proposed rate structure be implemented in a one-year phase-in period. The change of the rate structure in a single year will have an impact to most customers, but totally removing the existing rate structure of tax millage and sewer fee in the same year will be clear to customers. Phasing the rate change over several years would require decreasing the tax millage and sewer fee while at the same time gradually phasing in the new fixed and volumetric rate structure.

Bill Comparison

Benchmarking is important to many utilities as commissions and councils often ask how they compare to other utilities. The figure below demonstrates the typical monthly bill that an average MetroConnects residential customer will see. It is important to note that the proposed wastewater rates will not only be those rates for MetroConnects wastewater collection services, but rates for ReWa's trunk and treatment services as well. For this reason, the figure below illustrates the combined monthly bill a customer will receive from both MetroConnects and ReWa. The bill assumes a residential customer using 4,000 gallons. MetroConnects is depicted in yellow and as a collection system, per month bill totals \$17.16 which is approximately 31% of the total bill of \$54.76. The ReWa portion of the monthly bill is 69% of the total.

Figure 3. Combined MetroConnects and ReWa Customer Bill

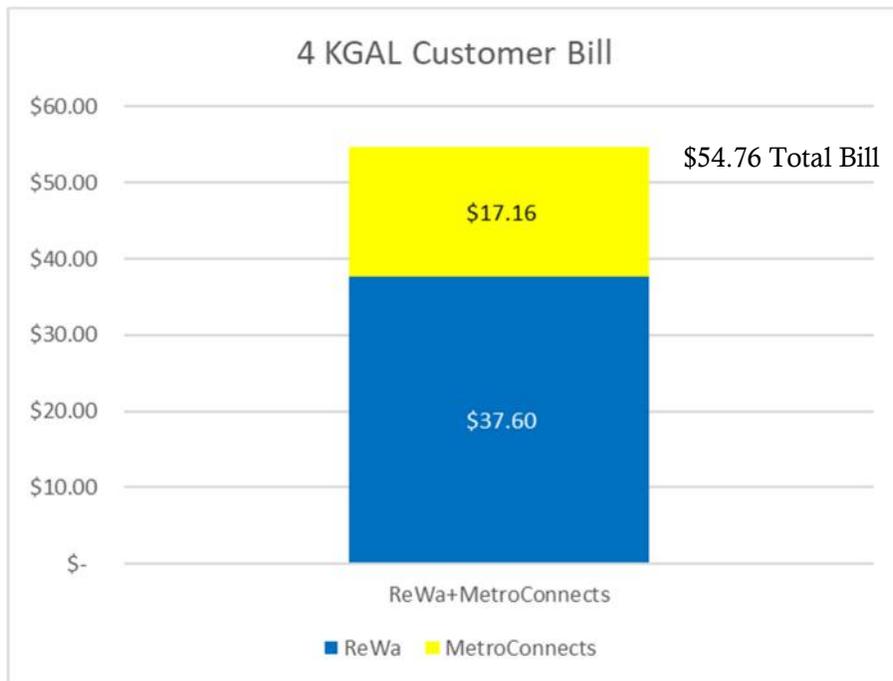
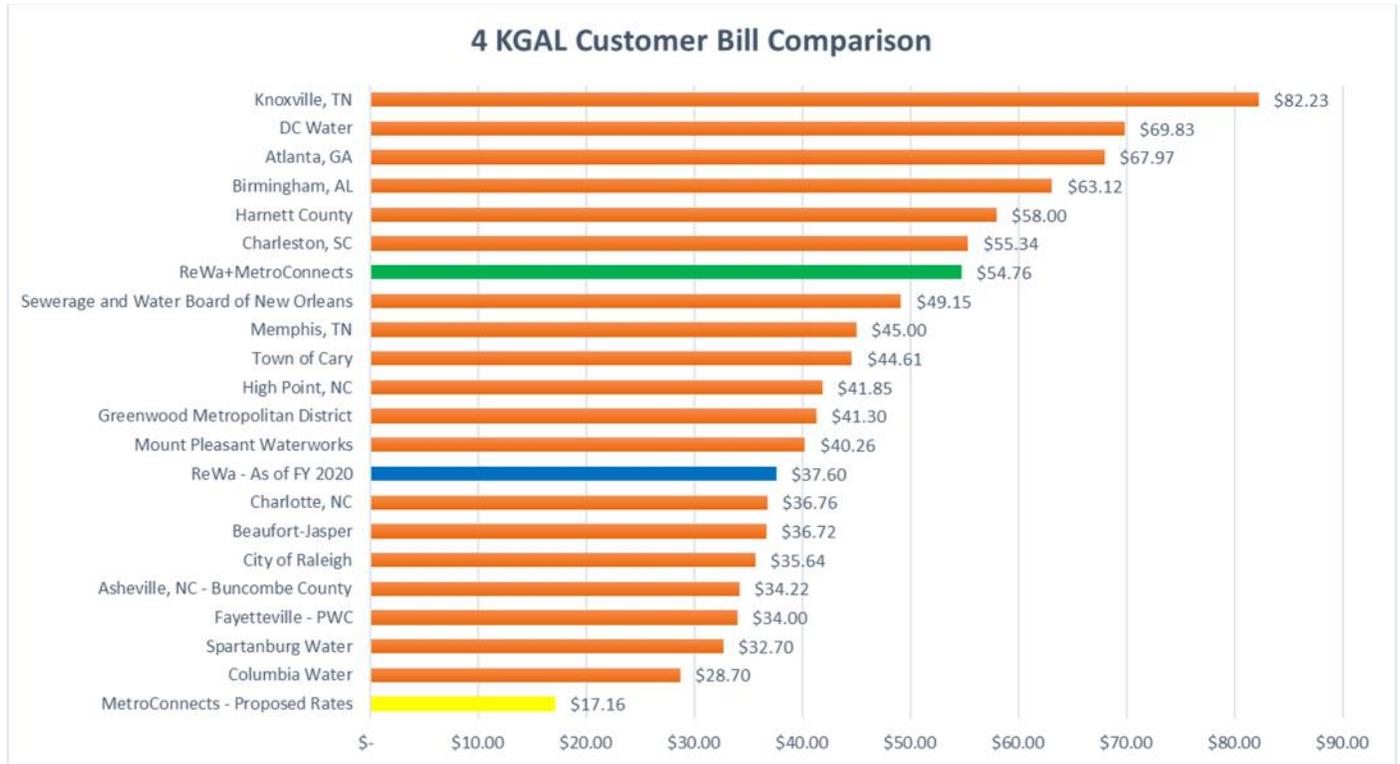


Figure 4 compares the combined MetroConnects and ReWa’s bill against other similar utilities. By itself, MetroConnects bill is the lowest among wastewater utilities, however, the MetroConnects bill represents only the collection system portion of the wastewater bill. A customer will receive a bill for both collection and trunk and treatment, the combined MetroConnects and ReWa bill. The combined bill is shown below in green.

Figure 4. Bill Comparison (Inside-City Rates)



It is important to note that the bill shown for the combined MetroConnects and ReWa services shows FY 2020 rates while the other communities are showing FY 2019 rates. In addition, the rates shown are inside-city rates. Some of these communities have both inside-city and outside-city rates. Rate increases in FY 2020 for the comparison communities will change the ordering which could place the combined MetroConnects and Rewa bill in a more favorable position.

For these reasons, the bill comparison has its limitations. It is just intended to provide a high-level view of how the new rate structure would compare to other utilities.

Conclusion

Based on MetroConnects' capital projects and projection of operating expenses over the six-year forecast period, rate structure and rate adjustments are required to ensure the financial sufficiency of the wastewater utility. Raftelis has recommended a consumption-based rate structure that will not only provide for the financial sufficiency of the wastewater utility, but will provide a fair and equitable rate structure for MetroConnects customers that is consistent with industry standards and practices. The new rate structure and rate increases will allow MetroConnects the flexibility to pay for the infrastructure needed to address its growing service area as the new rate structure will have no limitations on the use of the revenues collected from the wastewater rates. Also, assuming the new rate structure, district boundary issues such as municipal annexations will no longer be an issue for MetroConnects as the customers actually using the MetroConnects system will be the ones that are responsible for paying for the system.

As detailed in the report, the proposed rate structure will be composed of both a fixed and volumetric component. The fixed charge will be in the form of a monthly base charge that is the same for all customers regardless of meter size, and a volumetric charge that will be assessed based on per 1,000 gallons of use. The proposed wastewater rate structure recommends a monthly base charge of \$11.00. This charge will be assessed to all customers regardless of usage. The recommended volume charge is \$1.54 per 1,000 gallons of use. It is anticipated that the new rate structure will go into effect for FY 2020. After the implementation of the new rate structure, the recommended rates for FY 2020 are projected to increase 2% annually over the next five years. These annual rate increases will allow MetroConnects to meet its revenue requirements for FY 2020 – FY 2025 and maintain a recommended level of reserves of greater than 500 days consistent with Fitch rating agency's target for AA credit rated utilities.

Through the provided financial model, MetroConnects will be able to analyze its rate structure on an annual basis. It is recommended that an updated rate study be conducted every 3-5 years to determine if the projected rates are adequate or if changes are necessary based on more recent projection of operations, capital projects, wastewater use, and revenues from other sources including system development fees. The proposed rate structure provides a fair and equitable way of charging customers for their actual use of the system while maintaining MetroConnects ability to operate on a self-sustaining basis, similar to a business.