TOWN OF SEABROOK, NH

2018 Water and Sewer Rate Study

Final Report / November 29, 2018

RAFTELIS

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November 29, 2018

William M. Manzi III
Town Manager
Town of Seabrook, NH
99 Lafayette Road
Seabrook, NH 03874

Subject: 2018 Water and Sewer Rate Study Report

Dear Mr. Manzi,

Raftelis is pleased to present this report describing the assumptions and findings of our Water and Sewer Rate Study (Study) performed for the Town of Seabrook (Town). Over the past several months, we have worked closely with the Town completing this engagement. We would like to take this opportunity to thank you and your staff for the efforts and participation you put forth during the Study.

The major objectives of the study included the following:

- Develop financial plans for the water and sewer enterprises to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital renewal and replacement (R&R) needs, and improve the financial health of the enterprises;
- Review the Town's current water and sewer rate structures and make recommendations as to any modifications the Town could implement in order to meet its pricing objectives; and
- Review the Town's water and sewer revenue sources other than user charges.

This report summarizes the key findings and recommendations related to the development of the financial plans for the water and sewer utilities and our review and recommended structural changes with regard to the Town's existing water and sewer rate structure.

It has been a pleasure working with you, and we thank you and other Town staff for the support provided during the course of this study.

Sincerely,
RAFTELIS FINANCIAL CONSULTANTS, INC.

Dave Fox
Manager

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1. INTRODUCTION

Raftelis was engaged by the Town of Seabrook (Town) to perform a water and sewer rate study (Study) for a five-year forecast period beginning in fiscal year (FY) 2019. This report summarizes the Study and recommends rate adjustments to address the Town's financial objectives.

1.1 SCOPE OF SERVICES

Raftelis was retained by the Town to perform a Water and Sewer Rate Study. The main goals of this Study were to assess the appropriateness of the Town's current water and sewer rate structures in comparison to the Town's rate structure objectives and to develop a forecast of water and sewer rates to fund current and future operating and capital needs. The Town requested that Raftelis take a comprehensive and fresh look at its current rate structures and provide recommendations that enhance the equity and cost-justification of the user charges while maintaining revenues sufficient to recover system costs.

Raftelis held a kick-off meeting with Town Staff for the Study to identify the primary objectives and financial goals for the water and sewer utilities. During this meeting, and in subsequent discussions, the following objectives were identified:

- Evaluate revenue sufficiency and recommend rates that recover the necessary revenues to meet existing and future operating and capital revenue requirements;
- Determine the appropriate amount, if any, of tax payer subsidy of the water and sewer funds;
- Evaluate the Town's existing miscellaneous fees and make recommendations as needed; and
- Provide a user-friendly financial planning and rate model, designed for continuous use by Town Staff.

Raftelis has developed a financial planning and rate model to forecast annual revenue requirements, customer demand, rates, and system revenues over a five-year planning period. The model provides a module for analyzing the Town's current financial position and the future impacts of the recommended program of rate adjustments to the system and its customers.

1.2 RATE STUDY PROCESS

Raftelis utilizes a systematic approach for rate setting, which was tailored to the Town's goals and objectives. The first step in the rate setting process was the identification of pricing objectives, which occurred during a project kick-off meeting with Town Staff. During this meeting, Raftelis also discussed the advantages and disadvantages of the Town's current rate structure, as well as potential rate structure modifications. This allowed Raftelis to identify rate structure adjustments that address as many of the Town's objectives as possible and that were the most applicable to the Town's current operation, customer characteristics, and available data.

The next step in the rate setting process was the development of a financial plan, which summarizes the revenue requirements and projected revenues for the five-year planning period, while also monitoring the annual financial health of each utility. The financial plan projects revenue shortfalls under the Town's existing rates and indicates the additional level of revenues necessary to support the projected revenue requirements.

Revenue requirements include all operations and maintenance (O&M) costs, capital costs (including debt service payments and other cash funded capital), and reserve fund balance requirements incurred by the Town to operate the water and sewer systems. The methodology for determining the Town's revenue requirements is discussed in detail in Section 2.1. After identifying revenue requirements, Raftelis analyzed customer demand, which is a critical element in developing rate recommendations. As will be discussed in Section 2.2, the Town's billing data for the utility customers was reviewed to develop a projection of accounts and billable consumption, upon which revenues were forecast using existing rates.

After the financial plan was developed, the process of calculating rate structure adjustments and resulting rates to recover the revenue shortfall identified in the financial plan began. Based on information provided during the kick-off meeting and subsequent correspondence, Raftelis developed preliminary rate recommendations to address the objectives identified. Raftelis modeled several different rate scenarios for recovering the revenue increases needed.

1.3 KICKOFF MEETING

The first step in the rate setting process was understanding the Town's utility pricing objectives. As mentioned previously, Raftelis conducted a project kick-off meeting with Town Staff. The purpose of this meeting was to: (1) discuss the overall rate setting process, (2) provide a forum for Town staff to communicate the utility's short- and long-term rate and financial goals, (3) discuss the advantages and disadvantages of the Town's current rate structures and potential rate structure adjustments, and (4) identify the Town's most important utility pricing objectives to guide the Study.

Utility pricing objectives are defined as a broad range of rate setting and rate structure objectives that reflect the values and goals of the utility and community and properly communicate the utility's pricing message. The importance and priority assigned to pricing objectives can vary significantly from one utility or community to the next. It is also important to note that several of these pricing criteria can conflict with each other. For example, increasing revenue stability through increases to fixed charges can cause affordability issues for low income users, since they cannot control that portion of their bill.

Town staff indicated that its most important pricing objectives were: Financial Sufficiency; Minimization of Customer Impacts; Revenue Stability; and Affordability. In congruence with the identified pricing objectives, Town staff in consultation with Raftelis indicated interest in exploring the following rate structure adjustments:

- Removing or reducing the subsidies from the General Fund;
- Exploring base charges by meter size; and
- Phasing options to reduce the initial impacts.

The discussion and potential rate structure adjustments that arose from the project kick-off meeting served as a roadmap for the remainder of the Study. Once the pricing objectives and utility goals were identified, Raftelis developed a financial plan and conceptual rate designs to address as many of the pricing objectives as possible.

2. FINANCIAL PLAN

The next step in the rate setting process was the development of a financial plan, which includes establishing a forecast of revenue requirements, determining the necessary revenue increases using demand projections, and examining the forecasted operating results over the five-year forecast period (FY 2019 – FY 2023).

2.1 REVENUE REQUIREMENTS

The first major task in establishing a financial plan is developing an understanding of the revenue requirements of the utility over the forecast period. As previously discussed, revenue requirements are comprised of cash-based expenses including: O&M expenses, annual debt service payments, cash-funded capital, and contributions to utility reserve funds.

2.1.1 Operating Expenses

O&M expenses represent normal, recurring expenses necessary to sustainably operate and maintain the system during the Town's annual accounting cycle, which is a Fiscal Year ending December 31st. Actual and budgeted operating expenses were provided to Raftelis by Town Staff and served as the baseline for the projection of utility operating costs.

To develop a five-year forecast of system operating costs and account for growing utility costs and inflation, escalation factors are used for each major operating expense category. In general, it was assumed that operating expenses will increase by approximately 3% per year throughout the five-year forecast period. These cost escalation factors are consistent with historical trends seen in the consumer price index, construction cost index, and actual Town historical results.

2.1.2 Capital Improvement Plan

One of the major components of establishing a financial plan was incorporating the Town's water and sewer Capital Improvement Plans (CIP) and corresponding capital financing plan based on the anticipated capital expenditures for the system over the forecast period.

The Town provided Raftelis with separate water and sewer system CIP's for the forecast period. Major elements of the water CIP include well cleaning, maintenance, and replacement, water tank purchase, line refurbishments, and a filter media replacement. The water CIP identifies approximately $1.6 million in capital expenditures from FY 2019 – FY 2023. The sewer system CIP includes approximately $1.3 million in general sewer repair and replacement capital costs over the forecast period (FY 2019 – FY 2023).

In addition to the water and sewer system CIP's, the Town provided Raftelis with its proposed financing plan. Funding for system projects is expected to be addressed through a combination of debt and cash financing. Exhibit 1 summarizes the CIP funding sources.

Exhibit 1: Capital Improvement & Financing Plan

	FY 2019 Forecast	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast
Water					
Total Anticipated Capital Needs	$ 2,299,100	$ 124,000	$ 965,000	$ 110,000	$ 110,000
Funding Sources					
Debt (SRF)	$ 2,039,100	$ -	$ 772,000	$ -	$ -
Cash (PAYGO)	260,000	124,000	193,000	110,000	110,000
Subtotal: Funding Sources	$ 2,299,100	$ 124,000	$ 965,000	$ 110,000	$ 110,000
Wastewater					
Total Anticipated Capital Needs	$ 113,000	$ 97,100	$ 250,000	$ 160,000	$ 65,000
Funding Sources					
Debt (SRF)	$ -	$ -	$ -	$ -	$ -
Cash (PAYGO)	113,000	97,100	250,000	160,000	65,000
Subtotal: Funding Sources	$ 113,000	$ 97,100	$ 250,000	$ 160,000	$ 65,000

2.1.3 Total Revenue Requirements

The total revenue requirements, O&M expenses, and the cash funded capital discussed in the proceeding sections are shown separately for water and sewer below (Exhibit 2 and 3, respectively) in the projection of revenue requirements for the forecast period. It should be noted that all debt-service will continued will continue to be funded through the Town's General Fund.

Exhibit 2: Water System Revenue Requirements

Water System Revenue Requirements	FY 2019 Forecast	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast
Operating Expenses					
Salaries	$ 737,793	$ 759,927	$ 782,725	$ 806,207	$ 830,393
Benefits	562,263	579,131	596,505	614,400	632,832
Operating Expenses	59,410	61,193	63,029	64,919	66,867
Electricity	157,438	162,161	167,026	172,036	177,197
Maintenance	89,858	92,554	95,331	98,191	101,136
Supplies	12,731	13,113	13,506	13,911	14,329
Equipment	10,503	10,818	11,143	11,477	11,821
Contract	53,045	54,636	56,275	57,964	59,703
Chemicals	37,132	38,245	39,393	40,575	41,792
Billing	9,548	9,835	10,130	10,433	10,746
Fuel/Energy	38,192	39,338	40,518	41,734	42,986
Distribution	5,305	5,464	5,628	5,796	5,970
Meters	25,462	26,225	27,012	27,823	28,657
Miscellaneous	6,684	6,884	7,091	7,303	7,523
Hydrants	10,609	10,927	11,255	11,593	11,941
Sludge	22,279	22,947	23,636	24,345	25,075
Subtotal: Operating Expenses	$ 1,838,251	$ 1,893,399	$ 1,950,201	$ 2,008,707	$ 2,068,968
Capital Expenditures & Transfers					
Rate Funded Capital (PAYGO)	$ 260,000	$ 124,000	$ 193,000	$ 110,000	$ 110,000
Subtotal: Capital Expenditures & Transfers	$ 260,000	$ 124,000	$ 193,000	$ 110,000	$ 110,000
Total: Water System Revenue Requirements	**$ 2,098,251**	**$ 2,017,399**	**$ 2,143,201**	**$ 2,118,707**	**$ 2,178,968**

Exhibit 3: Sewer System Revenue Requirements

Sewer System Revenue Requirements	FY 2019 Forecast	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast
Operating Expenses					
Salaries	$ 594,806	$ 612,651	$ 631,030	$ 649,961	$ 669,460
Benefits	330,870	340,796	351,019	361,550	372,397
Operating Expenses	320,212	329,819	339,713	349,905	360,402
Electricity	202,575	208,652	214,912	221,359	228,000
Equipment	66,481	68,476	70,530	72,646	74,825
Maintenance	107,273	110,491	113,806	117,220	120,736
Fuel / Energy	70,901	73,028	75,219	77,476	79,800
Chemicals	31,307	32,246	33,214	34,210	35,236
Supplies	16,252	16,740	17,242	17,759	18,292
Postage	921	948	977	1,006	1,036
Miscellaneous	18	19	20	20	21
Subtotal: Operating Expenses	$ 1,741,617	$ 1,793,865	$ 1,847,681	$ 1,903,112	$ 1,960,205
Capital Expenditures & Transfers					
Rate Funded Capital (PAYGO)	$ 113,000	$ 97,100	$ 250,000	$ 160,000	$ 65,000
Subtotal: Capital Expenditures & Transfers	$ 113,000	$ 97,100	$ 250,000	$ 160,000	$ 65,000
Total: Sewer System Revenue Requirements	**$ 1,854,617**	**$ 1,890,965**	**$ 2,097,681**	**$ 2,063,112**	**$ 2,025,205**

2.2 REVENUES

The Town collects revenue from several sources. Operating revenues consist primarily of revenues from water and sewer retail rates and charges. Other revenues include miscellaneous revenues such as installation and inspection fees, interest income, and transfers in from the General Fund. The General Fund has historically subsidized the water and sewer funds, but the Town is interested in removing this subsidy.

2.2.1 Demand for Services

To estimate system user charge revenue, a customer demand forecast must be developed and applied to utility rates and charges. To calculate demand, Raftelis reviewed the Town's historical demand and customer growth and projected future demand for service over the forecast period. Detailed billing data was provided to Raftelis by the Town. Raftelis then analyzed the detailed billing data to develop the demand forecast used in the model.

After discussions with Town staff, it was agreed that Raftelis would assume the following customer growth and usage assumptions over the forecast period. Customer accounts are projected to remain flat throughout the duration of the forecast. For customer consumption demand, usage is projected to decrease by 1% per year for all customer classes. Raftelis believes these assumptions to be reasonable particularly when considering the nationwide trend of declining per capita water and sewer usage.

2.2.2 User Charge Revenues

Operating revenues are generated primarily from user rates and charges assessed to retail customers. General customer classes include residential, commercial, and outside-Town customers. Revenue from each of these customer classes has been forecasted by using projected customer billing demand data over the study period and by applying the annual adjustments to the user rates and charges.

2.3 REVENUE SUFFICIENCY

The most crucial element to any rate study is to ensure that a utility generates revenues that are sufficient for the operation of the system. Once the revenue requirements for user charges have been forecasted over the forecast period, the next step was determining the ability of the existing user charges to recover sufficient revenues to fully meet the anticipated operating and capital needs of the utility.

Based on the assumptions laid out in this report, the existing rates will not be sufficient to recover the system revenue requirements over the forecast period for both utilities. To achieve revenue sufficiency, rate increases are needed. Raftelis has assumed rate revenue increases for the duration of the forecast period. In order to fund system revenue requirements an immediate 240.0% across-the-board increases will be needed for water rates while and immediate 86.7% increases will be needed for sewer rates for the duration of the forecast period (FY 2019 – FY 2023). Annual 3% increases are required thereafter to keep up with inflationary increases as well as reductions in per capita consumption. Raftelis also recommends a restructuring of the Town's fixed charges. This will be discussed further in Section 3.2.

Based on the projected revenue requirements (Section 2.1) and the projected revenues, the following exhibits, Exhibit 4 and Exhibit 5, show the resulting financial performance if the existing rates were left in place for the duration of the forecast for the water and sewer utilities as well as the projected results using the rate increases proposed by Raftelis.

Exhibit 4: Projected Financial Plan – Water

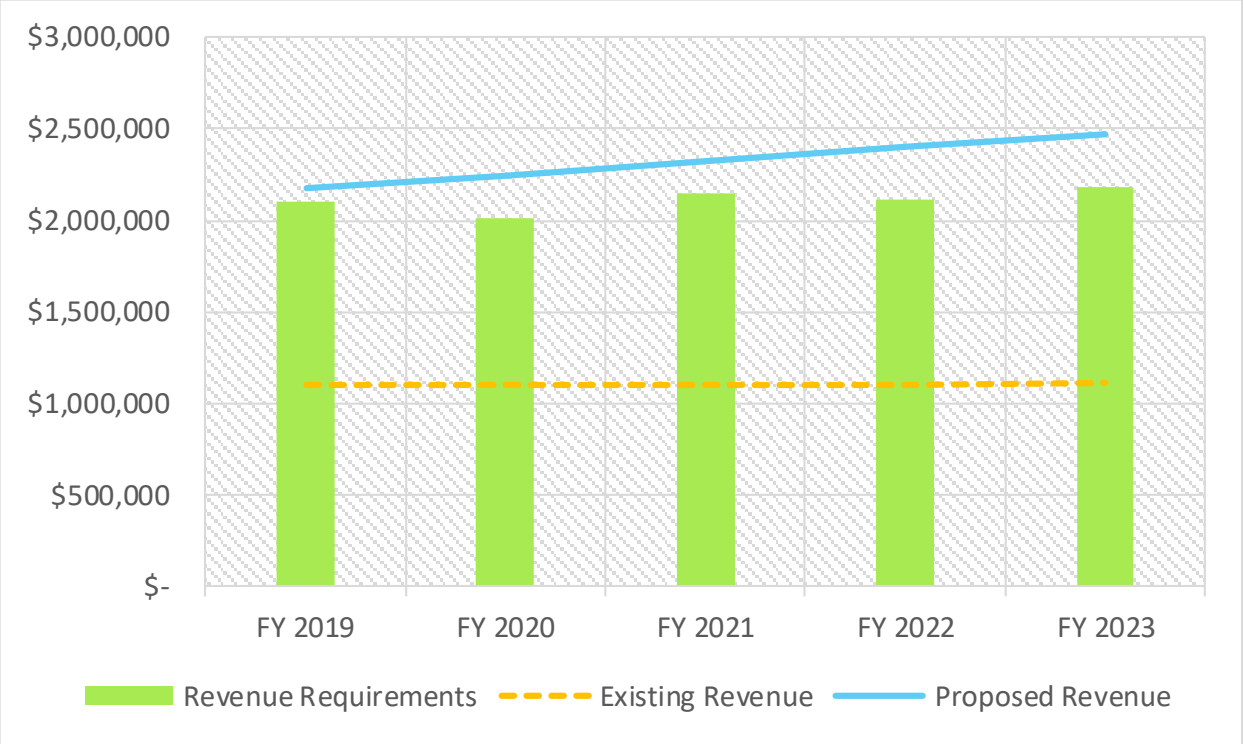
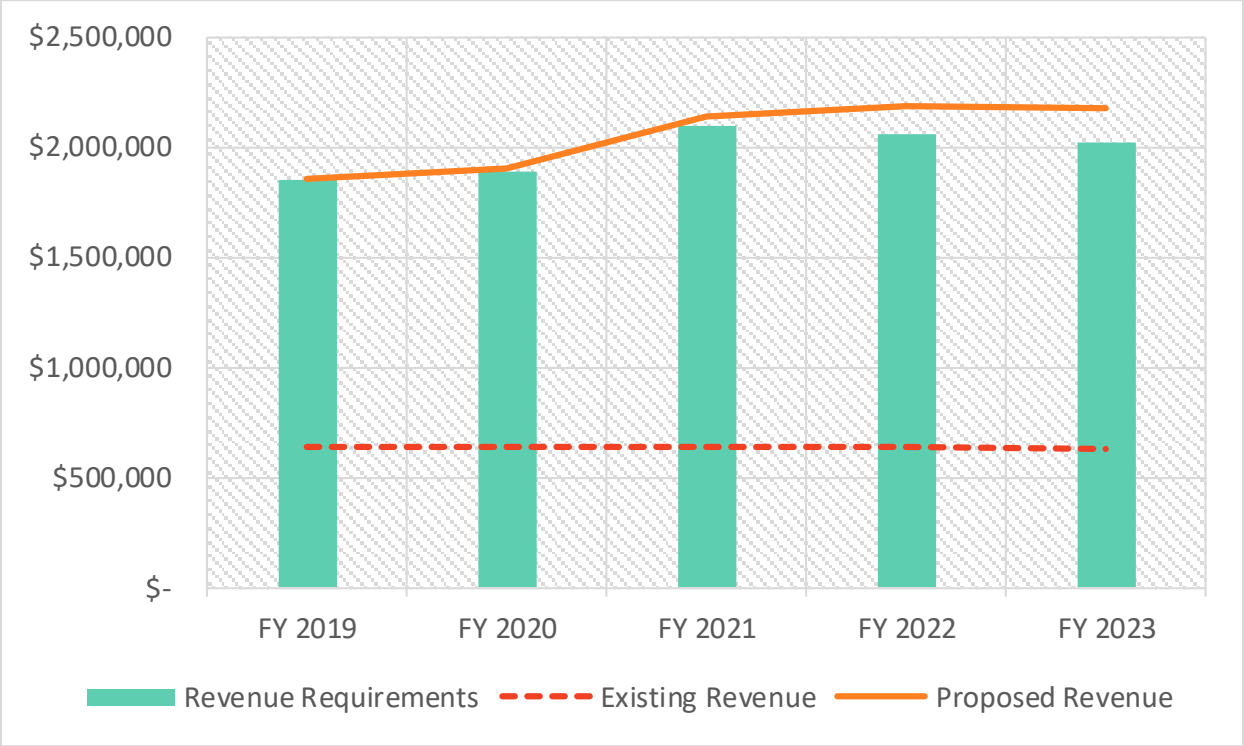
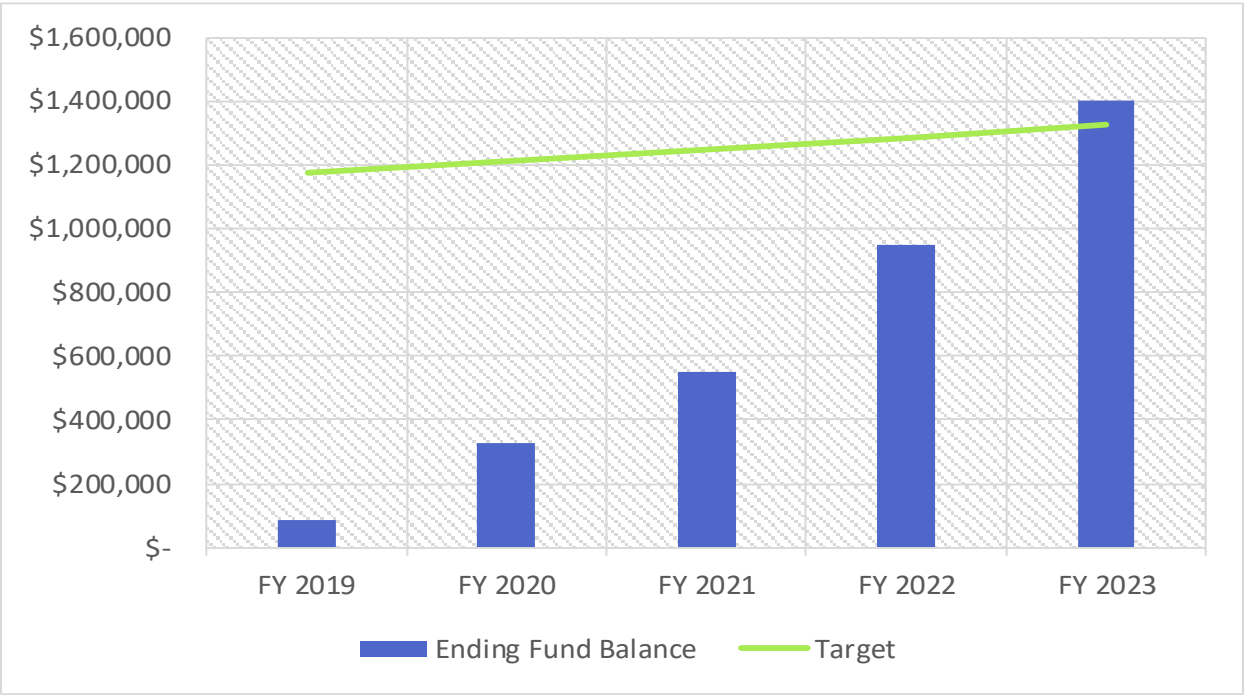


Exhibit 5: Projected Financial Plan - Sewer



As shown, the smooth projection of rate increases is slightly above the forecast of revenue requirements in a couple of years. The reason for this is that the Town plans to begin the establishment of reserve funds on hand for capital repair and replacement projects. Exhibit 6 shows the projected reserve fund balance and target over the forecast period.

Exhibit 6: Projected Fund Balances



3. PROPOSED RATE ADJUSTMENTS AND ASSOCIATED CUSTOMER IMPACTS

Once the financial plan was established, Raftelis modelled various rate scenarios and rate structure adjustments designed to enhance the equity between user charges and revenue recovery. This section discusses the conceptual side of each rate structure adjustment. The resulting rates and customer impacts can be found in Sections 4 and 5.

3.1 EXISTING RATES

As mentioned previously, the Town's current rate structure consists of two components, a fixed charge and a set of inclining-block volumetric charges, which are billed quarterly. The fixed charge is only assessed currently on the water rates and does not change based on the size of the account's associated meter. Exhibit 7 presents the Town's existing water and sewer rate structures.

Exhibit 7: Existing Water and Sewer Rate Structures

Fixed Charge per Bill (WATER ONLY)					
Quarterly - All Customer Classes				$	30.00
Monthly - All Customer Classes					10.00
Residential Volume Charges (per kgal)					
Quarterly - In Town					
Tier 1	0	-	5,000	$	0.30
Tier 2	5,001	-	13,500		0.80
Tier 3	13,501	-	25,000		1.30
Tier 4	25,001	-	250,000		1.80
Tier 5		>	250,000		2.30
Monthly - In Town					
Tier 1	0	-	3,000	$	0.30
Tier 2	3,001	-	4,500		0.80
Tier 3	4,501	-	8,333		1.30
Tier 4	8,334	-	83,333		1.80
Tier 5		>	83,333		2.30
Commercial Volume Charges (per kgal)					
Quarterly - In Town					
Tier 1	0	-	5,000	$	0.45
Tier 2	5,001	-	13,500		1.20
Tier 3	13,501	-	25,000		1.95
Tier 4	25,001	-	250,000		2.70
Tier 5		>	250,000		3.45
Monthly - In Town					
Tier 1	0	-	3,000	$	0.45
Tier 2	3,001	-	4,500		1.20
Tier 3	4,501	-	8,333		1.95
Tier 4	8,334	-	83,333		2.70
Tier 5		>	83,333		3.45

3.2 FIXED CHARGES BY METER SIZE

The key rate adjustment being proposed to the Town is scaling the existing Water fixed charge by meter size instead of by bill, and also establish a mirrored fixed charge for the sewer utility as well. Currently, the sewer utility is generating no user-charge revenue from fixed charges. Having some revenue being recovered through fixed charges increases the Town's revenue predictability and stability, which was one of the key pricing objectives identified during our kick-off meeting.

To assess the new fixed charges, Raftelis calculated the charges by meter size, with larger meters paying more. Assessing base charges by meter size is a customary practice in water and sewer rate setting, and appropriately recognizes that utilities incur additional capacity-related costs to service large meters and customers should contribute more proportionally to these "readiness-to-serve" costs incurred by the utilities. Costs are allocated to meter sizes by using AWWA flow equivalent ratios. A comparison of the Town's existing and proposed water and sewer fixed charges are presented in Exhibit 8.

Exhibit 8: Proposed Water and Sewer Fixed Charges

	FY 2018	FY 2019
Water Fixed Charge	*Actual*	*Proposed*
Meter Size		
5/8"	$ 30.00	$ 15.00
3/4"	30.00	22.50
1"	30.00	37.50
1 1/2"	30.00	75.00
2"	30.00	120.00
3"	30.00	240.00
4"	30.00	375.00
6"	30.00	750.00
8"	30.00	1,200.00
Sewer Fixed Charges		
Meter Size		
5/8"	$ -	$ 15.00
3/4"	-	22.50
1"	-	37.50
1 1/2"	-	75.00
2"	-	120.00
3"	-	240.00
4"	-	375.00
6"	-	750.00
8"	-	1,200.00

3.3 ADJUST TIER CUTOFFS FOR MONTHLY CUSTOMERS

Another proposed rate adjustment, albeit minor, is the adjustment of the tier cutoffs for monthly volumetric rates to be equivalent to exactly one-third of the tier cutoffs for quarterly rates. Making this change has a diminutive impact to rates and customers and brings the rates more in-line with equity, as well as enhancing customer's ease of understanding.

3.4 5-YEAR FORECAST OF RATES

Utilizing the financial plan presented in Section 2, a 5-year forecast of rates was then developed to fully support that financial plan. Again, other than the General Fund continuing to support the water and sewer utilities'

debt service, the forecast of rates presented in this section fully support the needs of the water and sewer utilities without any additional tax revenue subsidies, which has been the case in previous years.

After the initial significant increase in rates for FY 2019, of approximately 240% for water and approximately 87% for sewer, the increases are projected to be modest for the next four years of the forecast. To keep up with inflationary increases, declines in per capita consumption, as well as contributions to reserve funds, 2% increases annually are required. Exhibit 9 presents the existing water and sewer rates as well as the forecasted water and sewer rates from FY 2019 through FY 2023.

Exhibit 9: Five-Year Forecast of Water and Sewer Rates

			FY 2018 Actual	FY 2019 Proposed	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast
Water Fixed Charge								
Meter Size								
5/8"			$ 30.00	$ 15.00	$ 15.30	$ 15.61	$ 15.93	$ 16.25
3/4"			30.00	22.50	22.95	23.41	23.88	24.36
1"			30.00	37.50	38.25	39.02	39.81	40.61
1 1/2"			30.00	75.00	76.50	78.03	79.60	81.20
2"			30.00	120.00	122.40	124.85	127.35	129.90
3"			30.00	240.00	244.80	249.70	254.70	259.80
4"			30.00	375.00	382.50	390.15	397.96	405.92
6"			30.00	750.00	765.00	780.30	795.91	811.83
8"			30.00	1,200.00	1,224.00	1,248.48	1,273.45	1,298.92
Water Volume Charges (per Kgal)								
Residential	Quarterly	Monthly						
Tier 1	5,000	1,667	$ 0.30	$ 1.02	$ 1.05	$ 1.08	$ 1.11	$ 1.14
Tier 2	13,500	4,500	0.80	2.72	2.78	2.84	2.90	2.96
Tier 3	25,000	8,333	1.30	4.42	4.51	4.61	4.71	4.81
Tier 4	250,000	83,333	1.80	6.12	6.25	6.38	6.51	6.65
Tier 5	>250,000	>83,333	2.30	7.82	7.98	8.14	8.31	8.48
Commercial	Quarterly	Monthly						
Tier 1	5,000	1,667	$ 0.45	$ 1.53	$ 1.57	$ 1.61	$ 1.65	$ 1.69
Tier 2	13,500	4,500	1.20	4.08	4.17	4.26	4.35	4.44
Tier 3	25,000	8,333	1.95	6.63	6.77	6.91	7.05	7.20
Tier 4	250,000	83,333	2.70	9.18	9.37	9.56	9.76	9.96
Tier 5	>250,000	>83,333	3.45	11.73	11.97	12.21	12.46	12.71
Sewer Fixed Charges								
Meter Size								
5/8"			$ -	$ 15.00	$ 15.30	$ 15.61	$ 15.93	$ 16.25
3/4"			-	22.50	22.95	23.41	23.88	24.36
1"			-	37.50	38.25	39.02	39.81	40.61
1 1/2"			-	75.00	76.50	78.03	79.60	81.20
2"			-	120.00	122.40	124.85	127.35	129.90
3"			-	240.00	244.80	249.70	254.70	259.80
4"			-	375.00	382.50	390.15	397.96	405.92
6"			-	750.00	765.00	780.30	795.91	811.83
8"			-	1,200.00	1,224.00	1,248.48	1,273.45	1,298.92
Sewer Volume Charges (per Kgal)								
Residential	Quarterly	Monthly						
Tier 1	5,000	1,667	$ 0.30	$ 0.56	$ 0.58	$ 0.60	$ 0.62	$ 0.64
Tier 2	13,500	4,500	0.80	1.49	1.52	1.56	1.60	1.64
Tier 3	25,000	8,333	1.30	2.43	2.48	2.53	2.59	2.65
Tier 4	250,000	83,333	1.80	3.36	3.43	3.50	3.57	3.65
Tier 5	>250,000	>83,333	2.30	4.29	4.38	4.47	4.56	4.66
Commercial	Quarterly	Monthly						
Tier 1	5,000	1,667	$ 0.45	$ 0.84	$ 0.86	$ 0.88	$ 0.90	$ 0.92
Tier 2	13,500	4,500	1.20	2.24	2.29	2.34	2.39	2.44
Tier 3	25,000	8,333	1.95	3.64	3.72	3.80	3.88	3.96
Tier 4	250,000	83,333	2.70	5.04	5.15	5.26	5.37	5.48
Tier 5	>250,000	>83,333	3.45	6.44	6.57	6.71	6.85	6.99

3.5 CUSTOMER IMPACTS

Given the initial shift in water and sewer rates from FY 2018 to FY 2019, there are varying degrees of associated customer impacts depending on the type of customer, meter size, and consumption amount. The following exhibit presents customer impacts for various customer types. The top third of Exhibit 10 presents the combined bills, the middle third represents water only bills, and the bottom third represents sewer only bills. Once the initial change in rates and structure in FY 2019, all customers, no matter their class, meter size, or consumption level, will all experience approximately 2% higher bills each year.

Exhibit 10: Combined, Water-only, & Sewer-only Customer Impacts

				FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
				Existing	*Proposed*	*Forecast*	*Forecast*	*Forecast*	*Forecast*
Customer Class - Combined Water & Sewer									
Kgal	*meter*	*Class*	*Bill. Freq.*						
0	5/8"	Res.	Quarterly	$ 30.00	$ 30.00	$ 30.60	$ 31.22	$ 31.86	$ 32.50
6	5/8"	Res.	Quarterly	34.60	42.11	43.05	44.02	45.01	46.00
10	5/8"	Res.	Quarterly	41.21	59.50	60.81	62.19	63.60	65.00
11	5/8"	Res.	Quarterly	42.92	64.00	65.41	66.90	68.41	69.92
30	5/8"	Res.	Quarterly	94.50	199.86	204.09	208.53	213.11	217.79
4	5/8"	Comm.	Monthly	15.10	23.43	23.95	24.48	25.01	25.54
10	5/8"	Comm.	Monthly	40.26	89.67	91.61	93.55	95.51	97.51
50	2"	Comm.	Monthly	256.26	728.47	743.81	759.17	774.99	790.88
5978	6"	Comm.	Monthly	41,127.01	108,774.79	110,990.54	113,265.44	115,600.24	117,935.33
Customer Class Bill Impacts - Water Only									
Kgal	*meter*	*Class*	*Bill. Freq.*						
0	5/8"	Res.	Quarterly	$ 30.00	$ 15.00	$ 15.30	$ 15.61	$ 15.93	$ 16.25
6	5/8"	Res.	Quarterly	32.30	22.82	23.33	23.85	24.38	24.91
10	5/8"	Res.	Quarterly	35.60	34.05	34.81	35.58	36.36	37.13
11	5/8"	Res.	Quarterly	36.46	36.96	37.79	38.62	39.46	40.30
30	5/8"	Res.	Quarterly	62.25	124.65	127.30	130.07	132.85	135.68
4	5/8"	Comm.	Monthly	12.55	13.67	13.98	14.29	14.61	14.93
10	5/8"	Comm.	Monthly	25.13	56.43	57.64	58.85	60.09	61.36
50	2"	Comm.	Monthly	133.13	458.63	468.14	477.67	487.63	497.64
5978	6"	Comm.	Monthly	20,568.51	70,148.92	71,584.31	73,019.80	74,515.09	76,010.57
Customer Class Bill Impacts - Sewer Only									
Kgal	*meter*	*Class*	*Bill. Freq.*						
0	5/8"	Res.	Quarterly	$ 0.00	$ 15.00	$ 15.30	$ 15.61	$ 15.93	$ 16.25
6	5/8"	Res.	Quarterly	2.30	19.29	19.72	20.17	20.63	21.09
10	5/8"	Res.	Quarterly	5.60	25.44	26.00	26.61	27.24	27.86
11	5/8"	Res.	Quarterly	6.46	27.04	27.62	28.28	28.95	29.62
30	5/8"	Res.	Quarterly	32.25	75.21	76.79	78.47	80.27	82.12
4	5/8"	Comm.	Monthly	2.55	9.76	9.97	10.18	10.40	10.62
10	5/8"	Comm.	Monthly	15.13	33.24	33.96	34.69	35.42	36.16
50	2"	Comm.	Monthly	123.13	269.84	275.66	281.50	287.36	293.24
5978	6"	Comm.	Monthly	20,558.51	38,625.88	39,406.23	40,245.64	41,085.15	41,924.76

4. ADDITIONAL RECOMMENDATIONS

Although the water and sewer user charges are the biggest component of the Town's water and sewer revenue stream, there are other revenue source adjustments being proposed. The biggest of these are new System Development Charges (SDCs) for new connections into the water and sewer system. We have also recommended other miscellaneous charges that the Town should consider for its water and sewer utilities.

4.1 SYSTEM DEVELOPMENT CHARGES

System Development Charges are defined as one-time charges assessed against new development as a way to recover a proportional share of the costs of capital facilities constructed to provide service capacity for new customers connecting to the water and wastewater utility systems. Typically, the cost basis for setting system development fees is based on the major system components, or core system assets, that are necessary to serve, and that provide benefit to, all customers. These components typically include reservoirs, water treatment plants, storage tanks, major water transmission lines, wastewater treatment plants, and major wastewater interceptors.

In general, Raftelis recommends that system development fees should be developed to be consistent with the common legal consideration in setting system development fees in the water/wastewater industry – the Rational Nexus Test. The Rational Nexus test requires that: 1) the need for capacity is a result of new development; 2) the costs are identified to accommodate new development; and 3) the appropriate apportionment of that cost to new development in relation to the benefit the new development reasonably receives.

The proposed SDCs are presented in Exhibit 11.

Exhibit 11: Proposed System Development Charges

SDC by Meter Size	Water	Sewer
5/8"	$ 1,300.00	$ 800.00
3/4"	2,000.00	1,200.00
1"	3,300.00	2,000.00
1.5"	6,700.00	3,900.00
2"	10,700.00	6,200.00
3"	20,000.00	11,700.00
4"	33,300.00	19,500.00
6"	66,700.00	39,000.00
8"	106,700.00	62,400.00

It should be noted that due to the volatile nature of revenue associated with SDC's, these projected revenues have not been factored into the 5-year financial plan. It would be irresponsible to rely on this revenue for purposes of offsetting annual revenue requirements. In turn, it is recommended that all revenue collected from future SDCs should be used to reinvest in capital infrastructure.

4.2 OTHER MISCELLANEOUS CHARGES

In addition to the new System Development Charges described in Section 4.1, it is also recommended that the Town either maintain, modify, or to add to its existing water and sewer miscellaneous charges. These proposed miscellaneous charges can be viewed in Exhibits 12 and 13, respectively.

Exhibit 12: Proposed Water Miscellaneous Charges

Charge Description	Charge Amount
Turn on/off - during business hours	$ 50.00
Turn on/off - after busines hours	at cost + 10%
Service Calls - after business hours*	at cost + 10%
Change in Service (charge is per visit)	$ 50.00
Service Line Replacement (charge is per visit)	$ 100.00
Missed Appointment Fee	$ 50.00
Meter removal/install	$ 50.00
Meter Testing	at cost + 10%
Purchasing Meter Parts	at cost + 10%
Service Calls*	$ 100.00
Final Reads - during business hours	$ 50.00
Final Reads - after business hours	at cost + 10%
Pressure Leak Test Inspections and Line Chlorination	$ 150.00
Flow Testing	$ 50.00
New Backflow Permit - Non-Transferrable	$ 100.00
Renew Backflow Permit (every 5 years)	$ 50.00
Backflow Testing - 1 device	$ 50.00
Backflow Testing - 2 devices	$ 75.00
Backflow Testing - 3 devices	$ 100.00
Contracted Services	at cost + 10%
Bad Check	$ 25.00

** If service results in home/busines owner's responsibility*

Exhibit 13: Proposed Sewer Miscellaneous Charges

Charge Description	Charge Amount
Missed Appointment Fee	$ 50.00
Service Calls*	$ 100.00
Service Calls - after business hours*	at cost + 10%
Change in Service (charge is per visit)	$ 50.00
Service Line Replacement (charge is per visit)	$ 100.00
Locate External Cleanout in Lateral Line	at cost + 10%
*Attempt to Remedy for Customer if in Lateral Line**	at cost + 10%
Major and Minor Pump Station Annual Cleaning*	at cost + 10%
Service on Town Provided Simplex Station*	at cost + 10%
Repair of any Components to Simplex Stations*	at cost + 10%
Issue Permit with Service Requirements for Private Station	$ 100.00
After Hours Sewer Blockage Investigation*	at cost + 10%
Annual Service on Private Property	at cost + 10%
Responding to Problems in Mains*	at cost + 10%
Industrial Discharge Permit Annual Fee	
Class 1	$ 50.00
Class 2	$ 25.00
Class 3	$ 10.00
Bad Check	$ 25.00

** If service results in home/busines owner's responsibility*