



Water and Sewer Rate Study

- July 2019 -



TABLE OF CONTENTS

Executive Summary 1

Background 4

Water Utility 6

 Water Revenue Requirement Forecast 6

 Water Rate Structure Evaluation 12

 Schedule of Proposed Water Rates 17

 Water Customer Bill Impacts 18

Sewer Utility 22

 Sewer Revenue Requirement Analysis 22

 Sewer Rate Structure Evaluation 27

 Schedule of Proposed Sewer Rates 28

 Sewer Customer Bill Impacts 29

EXECUTIVE SUMMARY

The City of Gustine engaged ClearSource to complete a rate study for its water and sewer utilities. The purpose of this study is to design an updated schedule of water and sewer rates that promotes the financial sustainability of the utilities and recovers system costs in a fair manner from utility customers. The study focused on the five-year period, FY 2019/20 through FY 2023/24.

The key objectives and outcomes of this study are a culmination of industry best practice, consultant recommendations, and City policy direction. The key objectives are to:

- Design water and sewer rate structures in line with industry standards for cost-based rates
- Set rate levels sufficient to sustain ongoing operations and maintenance, pay existing debt service obligations, fund new capital investments and build adequate cash reserves
- Safeguard system sustainability, while providing fair and reasonable rates for customers

To accomplish the above-stated objectives, this study developed five-year financial plans and rate adjustments to recover the costs of water and sewer system operations, evaluated current water and sewer rate structures, and incorporated cost-based rate setting principals in the design of proposed modification to current rate structures.

Rate study findings indicate the need for annual rate revenue increases for the water and sewer utilities to meet the ongoing financial obligation of each utility system. Additionally, water rates were restructured to better align the City's utility pricing structures with current customer demands and best practice trends in utility rate setting.

Water Utility

Water rate revenues are projected to increase 8.0% annually for FY 2019/20 through FY 2023/24. The proposed increases represent the overall increase needed in water utility revenues to recover total water system costs. Impacts to individual customer bills may vary from the system-wide 8.0% increase based on actual water usage applied to restructured usage rates.

Sewer Utility

Sewer rate revenues are projected to increase 8.0% annually for FY 2019/20 through FY 2023/24. The proposed increases represent the overall increase needed in sewer utility revenues to recover total sewer system costs. Since no structural changes were proposed for sewer rates, the system-wide 8.0% increases are applied uniformly to all customer classes.

The proposed five-year schedule of water and sewer rates are presented below. Supporting analyses of the proposed water and sewer rate schedules are provided herein.

Five-Year Schedule of Proposed Water Rates

Rate	Unit	Current Rate	Monthly Rate, Effective				
			Nov 1, 2019	Jul 1, 2020	Jul 1, 2021	Jul 1, 2022	Jul 1, 2023
Base Rate	Residential, Commercial, Other [a]	\$25.33	\$27.36	\$29.54	\$31.91	\$34.46	\$37.22
	Apartments [b]	\$31.80	\$34.34	\$37.09	\$40.06	\$43.26	\$46.72
	Apartments (each additional Unit [b])	\$6.47	\$6.99	\$7.55	\$8.15	\$8.80	\$9.51
	Outside City [c]	\$75.99	\$82.07	\$88.63	\$95.73	\$103.38	\$111.65
Usage Tier	Metered Service (0 - 500 CF)	Base Rate *	n/a	n/a	n/a	n/a	n/a
	Metered Service (501 - 1,000 CF)	\$1.17	n/a	n/a	n/a	n/a	n/a
	Metered Service (1,001 - 2,000 CF)	\$1.43	n/a	n/a	n/a	n/a	n/a
	Metered Service (2,001 - 3,000 CF)	\$1.72	n/a	n/a	n/a	n/a	n/a
	Metered Service (3,001 - 4,000 CF)	\$2.14	n/a	n/a	n/a	n/a	n/a
	Metered Service (Greater than 4,000 CF)	\$2.63	n/a	n/a	n/a	n/a	n/a
Usage Tier	Metered Service (0 - 500 CF)	n/a	Base Rate *	Base Rate *	Base Rate *	Base Rate *	Base Rate *
	Metered Svc. (Greater than 500 CF) per CCF	n/a	\$1.79	\$1.93	\$2.09	\$2.26	\$2.44
Flat Rate	School - GHS	\$1,090.51	\$1,177.75	\$1,271.97	\$1,373.73	\$1,483.63	\$1,602.32
	School - GMS	\$1,160.85	\$1,253.72	\$1,354.02	\$1,462.34	\$1,579.32	\$1,705.67
	School - GES	\$1,160.85	\$1,253.72	\$1,354.02	\$1,462.34	\$1,579.32	\$1,705.67
	School - OLM	\$984.97	\$1,063.77	\$1,148.87	\$1,240.78	\$1,340.04	\$1,447.24
	Other Non-Metered / Flat Rate	[d]	[d]	[d]	[d]	[d]	[d]

CF represents cubic feet. CCF represents 100 cubic feet. One cubic foot is equivalent to 7.48 gallons. 500 cubic feet is equivalent to 3,740 gallons.

*The base rate includes the first 500 cubic feet of water supplied, or fraction thereof.

[a] Base rate for this class includes all customers other than: apartments; outside city; schools; and other non-metered / flat rate customers.

[b] For master water metered apartment complexes, each separate apartment unit will be charged a per unit fee in addition to either the initial base rate or meter reading fee, whichever is larger.

[c] For all water supplied by the City to a water service connection outside the City, the minimum rates and or charges for rendering such services shall be three (3) times the applicable minimum rates and charges for similar service within the City.

[d] For all water supplied through a non-metered service connection, a flat month charge shall be made that shall be determined by the City Council and based upon the estimated quantity of water supplied at the metered rates specified above, as determined by the character of use, but in no case less than the base rates specified above.

Five-Year Schedule of Proposed Sewer Rates

Class	Unit	Current Rate	Monthly Rate, Effective				
			Nov 1, 2019	Jul 1, 2020	Jul 1, 2021	Jul 1, 2022	Jul 1, 2023
Residential	per dwelling unit [a]	\$27.30	\$29.48	\$31.84	\$34.39	\$37.14	\$40.11
Apartments	per dwelling unit [a]	\$22.88	\$24.71	\$26.69	\$28.82	\$31.13	\$33.62
Mobile Homes	per dwelling unit [a]	\$19.45	\$21.01	\$22.69	\$24.50	\$26.46	\$28.58
School, primary	per avg daily attendance [b]	\$0.36	\$0.39	\$0.42	\$0.45	\$0.49	\$0.53
School, secondary	per avg daily attendance [b]	\$0.55	\$0.59	\$0.64	\$0.69	\$0.75	\$0.81
Commercial, base	each	\$19.45	\$21.01	\$22.69	\$24.50	\$26.46	\$28.58
Commercial, volume	per CCF over 700 CF [c]	\$0.020	\$0.022	\$0.023	\$0.025	\$0.027	\$0.029
Restaurant, base	each	\$27.30	\$29.48	\$31.84	\$34.39	\$37.14	\$40.11
Restaurant, volume	per CCF over 1,000 CF [c]	\$0.035	\$0.038	\$0.041	\$0.044	\$0.048	\$0.051
Light Industry	each	\$124.85	\$134.84	\$145.63	\$157.28	\$169.86	\$183.45
Heavy Industry	each [d]						
A	Saputo	\$39,207	\$42,344	\$45,731	\$49,390	\$53,341	\$57,608
	Hillview	\$4,949	\$5,345	\$5,773	\$6,234	\$6,733	\$7,272
B	per pound of biochemical oxygen demand discharge	\$0.17	\$0.18	\$0.20	\$0.21	\$0.23	\$0.25
C	per million gallons of actual flow	\$139.42	\$150.57	\$162.62	\$175.63	\$189.68	\$204.85

CF represents cubic feet. CCF represents 100 cubic feet. One cubic foot is equivalent to 7.48 gallons.

[a] One dwelling unit shall be assigned to each separate residential living unit consisting of, but not limited to, the following: single-family residence; apartment unit; duplex unit; mobile home unit.

[b] Based on the number of students as measured by average daily attendance.

[c] Based on each month's actual water usage.

[d] Monthly sewer charges based on the following formula for "permitted" flows and loadings. Charge Per Month = A + B + C where;

A = Individual Plant Base Rate

B = Allocated Cost Per Pound of Biochemical Oxygen Demand (BOD) Discharge

C = Allocated Cost Per Million Gallons of Actual Flow

*Values for BOD will be determined at the entry point to the public sewage system, utilizing sampling, analysis, and flow measurement procedures established by the City for determining the respective characteristics of the discharge.

*Discharges in excess of permitted flows and loadings may result in penalty charges in excess of the monthly charges.

BACKGROUND

The City of Gustine periodically examines and updates water and sewer rates as one component of a total management plan intended to provide current and future generations of Gustine residents and businesses with safe and reliable water and wastewater systems. The City's current schedule of water and sewer rates was adopted in 2014, and included a five-year schedule of annual rate adjustments (FY 2013/14 through FY 2017/18). The City's last scheduled rate adjustment was effective January 1, 2018.

The City engaged ClearSource to perform a rate study with an updated schedule of water and sewer rates that promotes the financial sustainability of the utilities and recovers system costs in a fair manner from utility customers. This study focuses on the five-year period, FY 2019/20 through FY 2023/24.

Study Objectives

The overall objectives and outcomes of this rate study are based on detailed analyses, consultant findings and recommendations, and policy direction received via multiple meetings with City staff and City Council committee members and presentations to City Council. The key objectives are to:

- Design water and sewer rate structures in line with industry standards for cost-based rates
- Set rate levels sufficient to sustain ongoing operations and maintenance, pay existing debt service obligations, fund new capital investments and build adequate cash reserves
- Safeguard system sustainability, while providing fair and reasonable rates for customers

Methodology

The objectives of the study, the methodology used to complete the study, and the proposed schedule of water and sewer rates were significantly influenced by legislative guidance and analytical principles that are generally accepted and widely followed throughout the industry. Resources included:

- Articles 13C and 13D of the California Constitution
- Proposition 218
- American Water Works Association, Manual of Water Supply Practices, *Principles of Water Rates, Fees, and Charge* (AWWA Manual M1)
- American Water Works Association, Manual of Water Supply Practices, *Developing Rates for Small Systems* (AWWA Manual M54)

The study involved comprehensive data analysis and the development of alternative rate revenue adjustment scenarios and alternative rate structures for City consideration. ClearSource worked closely with the City to arrive at rate recommendations that achieve near term City goals, consider industry best practice, and comply with legal requirements. Meetings were held with City staff and Council Committee members to validate input parameters, review interim findings, and receive policy direction.

Report Organization

The outcomes for the study are presented separately for each utility to address the following major study elements:

- Revenue Requirement Forecast
- Rate Structure Evaluation
- Schedule of Proposed Rates
- Customer Bill Impacts

WATER UTILITY

Water Revenue Requirement Forecast

The revenue requirement analysis forms the basis for a multi-year financial plan and rate adjustment strategy for the utility. It also forms the basis for establishing a water rate structure that recovers the total costs of operating the system. Linking utility rate levels to a financial plan helps to enable sound financial performance for the utility, and establishes a clear and reasonable relationship between the costs imposed on utility customers and the costs incurred to provide them service.

Financial Policies

In order to establish adequate rates, a utility must define its benchmarks for financial performance. The purpose of establishing financial policies for the City's utilities is to promote the financial integrity and stability of the utilities, and to provide for the sustainability of essential utility services. This section describes the financial policies incorporated in the Water Financial Plan.

Operating Reserves

An operating reserve is designed to provide a liquidity cushion. It protects the financial viability of the utility from the risk of short-term variation in revenues and expenses - primarily caused by seasonal fluctuations in billings and receipts, unanticipated operating expenses, or lower than expected revenue collections. Target funding levels are generally expressed in number of days' operating and maintenance (O&M) expense, with the minimum requirement varying with the expected risk of unanticipated needs or revenue volatility. Industry practice ranges from 30 days to 120 days of O&M, with the lower end more appropriate for utilities with very stable revenue streams and the higher end more appropriate for utilities with significant seasonal variations. A total of 180 days of O&M is suggested when taking into account total cash on hand (operating and capital reserves). Consistent with general industry guidelines, this study established a minimum water operating reserve of 90 days of O&M – ranging from about \$223,000 to \$261,000 over the study period. Any excess reserves above the established threshold are transferred to the capital fund to build reserves for future capital needs.

Capital Reserves

In addition to protecting against variations in operating costs and revenues, it is prudent to maintain a capital reserve to meet unexpected emergency capital outlays. Common industry practice is to maintain a minimum balance in the capital account equal to 1%-2% of system fixed assets. This study established a minimum water capital reserve of 2% of fixed assets – starting at about \$83,000 based on current water system assets of \$4.2 million. The water capital fund is projected to have a cash balance of \$287,000 by the end of the five-year study period.

Total combined water operating and capital reserves are projected to achieve the minimum target of 180 days of O&M. Total operating and capital cash reserves reach about \$548,000 by the end of the study period.

Debt Reserve

A restricted debt reserve is often a requirement associated with the issuance of revenue bonds and some other forms of debt. The reserve is typically set equal to annual or maximum annual debt service payments (principal and interest). This study recommends a water debt reserve target equal to annual debt service payments on all outstanding debt. The water utility has four outstanding debt instruments with annual principal and interest payments averaging about \$106,000 over the study period. For purposes of this study, the water debt reserve account is funded at about \$191,000 from current operating reserves. Monies from this account are assumed to be used to pay the final debt service payment for each debt issue.

Debt Service Coverage

Debt service coverage is also a requirement associated with revenue bonds and some other forms of debt. Under this requirement, the agency agrees to collect sufficient annual system revenues to meet all operating expenses, pay annual debt service, and collect an additional multiple of that debt service. Debt coverage ratios typically range from 1.10 to 1.50 times annual debt service payments. For example, a coverage requirement of 1.25 means the agency will collect an additional 25% of annual debt service payments. The extra revenue is a cushion that makes creditors more confident that debt service will be paid on time. The extra revenue can be used for capital expenditures and/or to build cash reserves. This study assumes a minimum water debt service coverage requirement of 1.0, with a target coverage of 1.25. Rates were not impacted by this policy; cash needs are the driver of proposed water rate increases.

Debt-to-Fixed Assets Ratio

Another useful measurement in assessing the debt burden of a utility is the capital structure: the outstanding debt as a percentage of net capital assets (original cost less accumulated depreciation). Industry best practice suggests that a target capital structure of no more than 60% debt is appropriately conservative. A debt percentage lower than 60% suggests that the utility has the financial capacity to issue more debt if needed. Conversely, ratios above 60% may limit the City's ability to secure new debt. The water utility's capital structure is currently 51% debt.

As described later in this report, two capital scenarios were prepared for City Council consideration; one scenario includes a portion of debt-financing and one scenario includes cash-only financing. The current debt ratio will improve under the "cash only" scenario and climb to about 70% under the "debt-financing" scenario over the five-year study period. As new capital investment continues during the next five-year period, the ratio is expected to reduce within the targeted threshold.

Operating Forecast

The operating forecast focuses on annual expenses incurred to operate, maintain, and manage the utility systems and annual revenue collections to meet those expenses. The baseline for the expense forecast is the adopted FY 2018/19 budget, adjusted for future years to incorporate cost escalation, anticipated customer growth, and known or anticipated future expenditures.

Key Assumptions

The following assumptions were used in preparing the operating forecast:

- Customer revenue growth:
 - 300 single family homes FY 2020/21
 - 350 single family homes FY 2023/34
- Penalties and miscellaneous revenue maintained at current levels
- Interest earnings on cash balances at 0.62% per year (5-year average California Local Agency Investment Fund (LAIF))
- Annual cost escalation:
 - General inflation 2.5% per year
 - Labor cost 3.0% per year
 - Benefits cost 5.0% per year
 - Capital cost 3.0% per year
- New groundwater sustainability expense of \$15,000 per year (beginning in FY 2018/19)
- Water repayment of \$160,000 loan from sewer (FY 2019/20): assumed as transfer from water capital account to sewer capital account.

Results

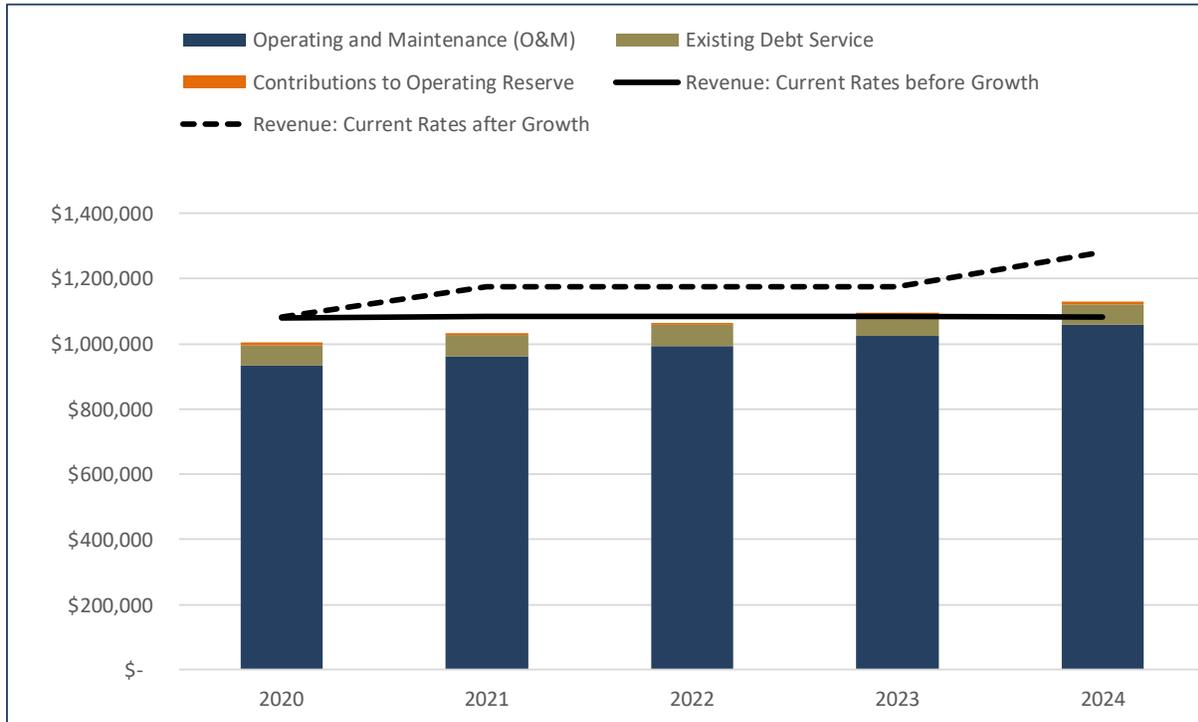
Water Baseline Operations

Water utility O&M expense is forecasted at \$904,000 in FY 2018/19, increasing to \$1.0 million by the end of the study period. Incorporating annual debt service payments and contributions to operating reserves, brings total operating costs to \$1.1 million by the end of the study period.

Water operating revenues are categorized as rate revenue and non-rate revenue. Rate revenue under the existing level of rates uses historical FY 2017/18 customer billing system data reconciled with actual reported revenue and forecasted to incorporate assumed customer growth over the study period. Total operating revenue is currently projected at about \$1.1 million increasing with customer growth to \$1.3 million by the end of the study period.

Exhibit W-1 presents the results of the water utility operating forecast.

Exhibit W-1 – Water Operating Forecast



As illustrated in the exhibit, current rates under anticipated customer growth are forecasted to recover O&M expenses, existing debt service, and contributions to minimum operating reserves. As a test of sensitivity, inflationary level increases would be needed to recover total operating expenses should no growth occur over the study period.

Capital Spending and Funding Plan

The City provided a water system capital program totaling \$6.2 million over the five-year study period. Based on discussion with City staff, it was determined that annual projects would be re-prioritized and extended over a longer time period in order to mitigate near-term customer impacts. Multiple scenarios were developed to evaluate alternative levels of capital spending under various rate revenue adjustment strategies and combinations of debt and cash-funding for new capital investment. Two capital funding scenarios were selected for City Council consideration. The following parameters are constant between the two capital funding scenarios:

- Proposed annual rate revenue adjustments of 8.0% per year over the study period
- Incorporates revenue from assumed customer growth
- Recovers forecasted baseline operating costs

The primary difference between the two capital scenarios is the assumption for debt versus cash-funding of capital and the resulting level of annual capital spending:

- **Scenario A** - Debt-finance identified large capital projects; determine additional annual capital spending plan assuming cash-funding only
- **Scenario B** – Remove identified large capital projects; determine annual capital spending plan assuming cash-funding only

Scenario A: Debt-Financing and Cash-Funding of capital

Scenario A assumes debt-financing of \$3.35 million for the large capital projects listed below. Debt issuance is assumed through the State Water Resources Control Board (SWRCB) at 3.0% interest over a 20-year term. Annual debt service payments begin in FY 2020/21 and reach about \$260,000.

- Ground water tank (1mg) and new booster pump - \$1.6 million (FY 2020/21)
- Water/sewer loop around city (50%-50% water/sewer split) - \$750,000 water share (FY 2021/22)
- Fix water/sewer lines under Hwy 33 and South Ave (50%-50% water/sewer split) - \$1.0 million water share (FY 2021/22)

In addition to the debt-financed capital projects, Scenario A provides for \$1.4 million in cash-funded capital over the study period; an average of \$231,000 per year.

Scenario B: All Cash-Funding of capital

Scenario B provides for \$2.2 million in cash-funded capital over the study period; an average of \$365,000 per year.

Exhibit W-2 presents summary results for each capital scenario.

Exhibit W-2 – Water Capital Scenario Summary

CAPITAL SCENARIOS	SCENARIO A		SCENARIO B	
	Use of Debt and Cash		Use of Cash Only	
PRIMARY SCENARIO: ANNUAL SYSTEM-WIDE WATER RATE REVENUE INCREASE OF 8.0%				
Total Original Capital Program	\$	6,200,000	\$	6,200,000
Total Available Capital Spending	\$	4,735,000	\$	2,190,000
Debt-Financed	\$	3,350,000		-
Cash-Funded	\$	1,385,000	\$	2,190,000
Average Annual Cash Funding	\$	230,833	\$	365,000

* Expressed in Current Day Dollars

Revenue Needs Assessment

The revenue needs assessment evaluates the sufficiency of current water utility revenues in meeting forecasted obligations of the utility, and designs a rate adjustment strategy to close any revenue

shortfall over the study period. As previously discussed, total water utility rate revenues are proposed to increase 8.0% per year FY 2019/20 through FY 2023/24. The proposed increases represent the overall increase needed in water utility revenues to recover:

- Baseline operating costs: O&M, existing debt service, and contributions to operating reserves
- New debt service (depending on capital scenario)
- Cash-funding of capital projects
- Contributions to capital reserves

It is important to emphasize that the proposed 8.0% annual rate revenue increases represent the amount of additional annual rate revenues needed for the water utility as a whole to recover total revenue requirements. The portion of total additional revenues to be collected from individual customers will vary from the system-wide increase based on individual customer water usage patterns applied to the restructured water usage tiers, further discussed in the next section - Water Rate Structure Evaluation.

Exhibit W-3 presents the total water revenue requirement forecast under Scenario A.

Exhibit W-3 – Scenario A: Total Water Revenue Requirement

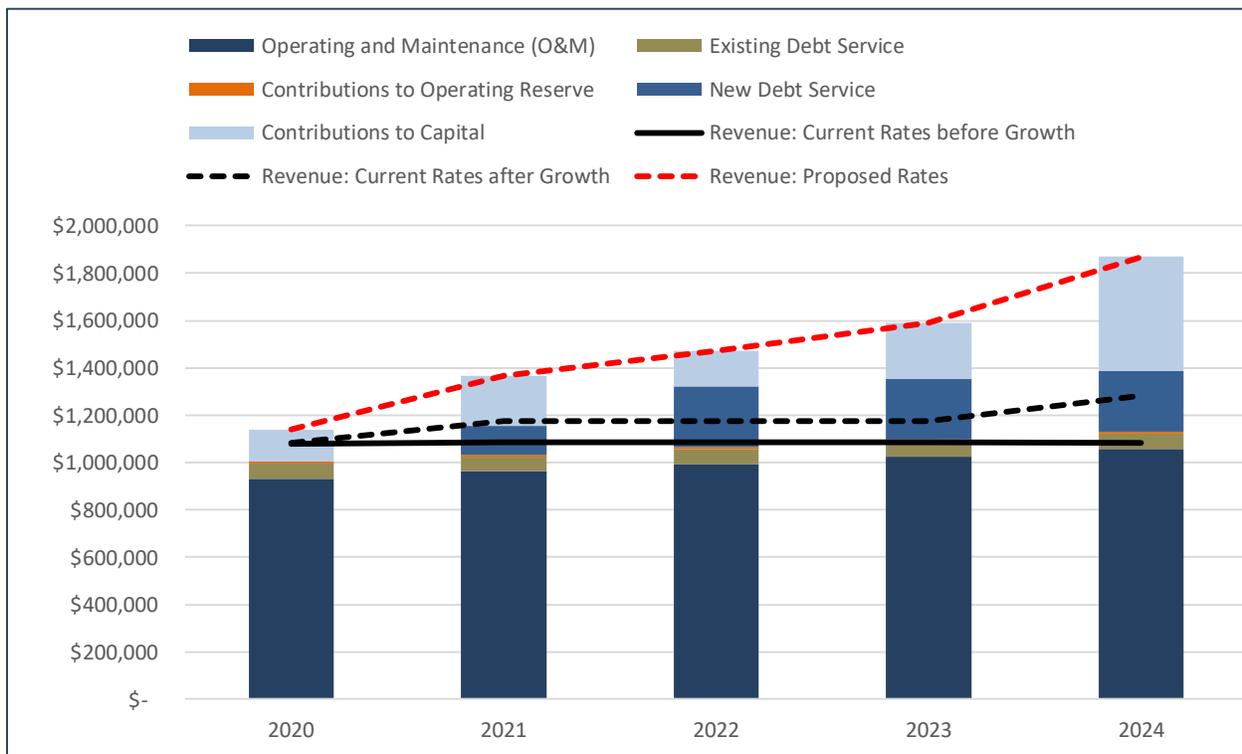
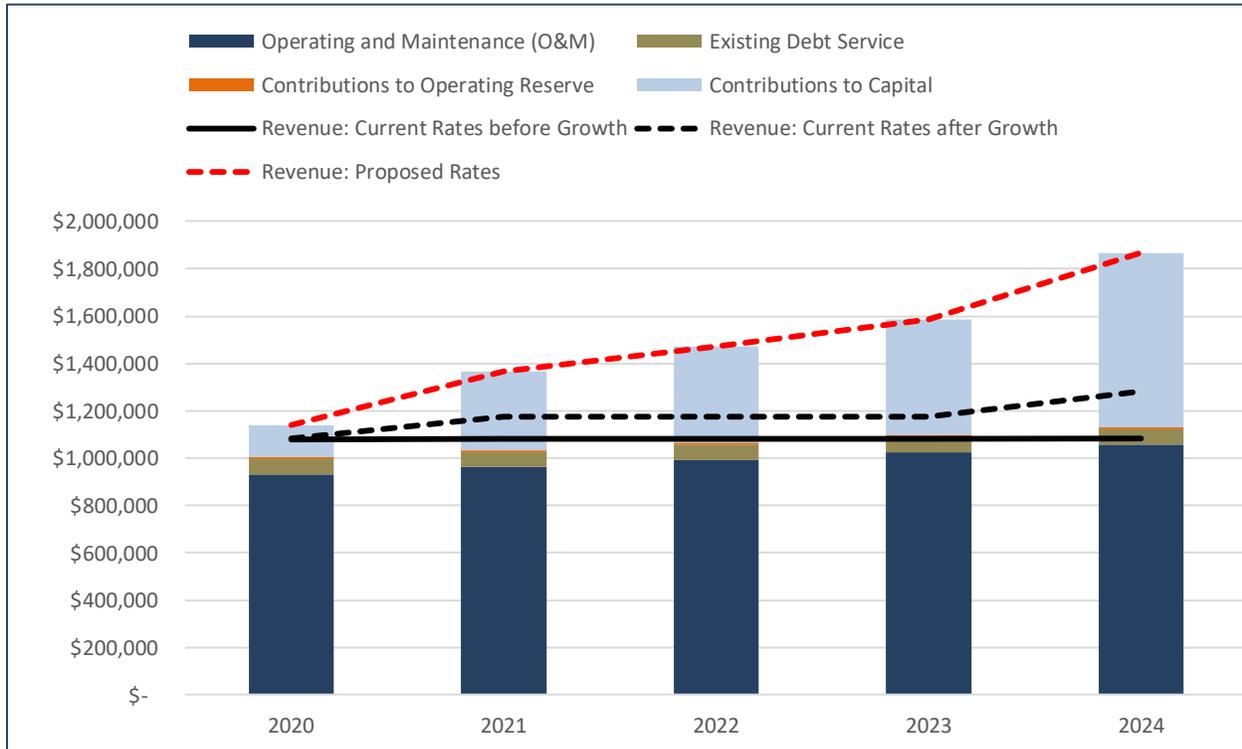


Exhibit W-4 presents the total water revenue requirement forecast under Scenario B.

Exhibit W-4 – Scenario B: Total Water Revenue Requirement



It is important to note that should customer growth not occur as planned, the indicated level of annual capital spending under each scenario would need to be re-evaluated based on a lower annual revenue projection.

Water Rate Structure Evaluation

The principal consideration in designing utility rate structures is to establish rates for customers that generate sufficient revenues for the utility and that are reasonably commensurate with the cost of providing utility service. Other considerations in rate design should include City pricing objectives, ease of understanding and implementation, and impact on customer bills.

Water System Customer Base

The water system customer base is comprised of residential, apartments, and commercial customers. For rate setting purposes, schools are categorized separately from other commercial customers. Residential customers represent about 92% of system customers, with apartments and commercial/schools representing the remaining 8%. Exhibit W-5 summarizes customer class account and usage characteristics.

Exhibit W-5 – Customer Class Characteristics

Customer Class	No. of Accounts	Average Monthly Use per Account (ccf)	Average Off-Peak Use per Account (ccf)	Average Peak Use per Account (ccf)
Residential	1,727	14	10	18
Apartments	60	31	29	34
Commercial	87	22	19	25
School - GHS	1	-	-	-
School - GMS	1	-	-	-
School - GES	3	-	-	-
School - OLM	1	-	-	-
Outside	9	15	11	21
Total System	1,889	15	11	19

Existing Water Rate Structure

The existing metered water rate structure for residential, apartment, and commercial customers is comprised of fixed charge and volume charge components. The monthly fixed (base) charge includes cost recovery for a 500 cubic foot water usage allowance. The volume charge includes five usage block tiers applied to water usage above the allowance. Incrementally higher unit charges are applied for each successive tier. Varying flat rates apply for the various school classifications and other unmetered customers. Outside-city rates are based on a multiplier of inside-city rates.

The City applies the same schedule of water usage rates to all metered customers on the system. For a small water system of Gustine's size, potential demand differences between residential and non-residential customers are presumed immaterial to the cost of providing water service, and as such, a single schedule of water usage rates achieves reasonable equity. Residential and commercial customers pay the same base charge per account. The apartment base charge includes a charge per account, plus a reduced charge for each additional dwelling unit.

Industry best practice suggests that cost recovery for small water systems should be about 60% from fixed charges and 40% from volume charges. This suggested ratio of revenue generation is intended to balance the needs of the utility for adequate revenue stability and a customer's ability to control their water bill through water conservation efforts. The current water rate structure generates about 60% of the utility's rate revenue from the metered base charge and unmetered/flat rates. The remaining 40% of revenue is generated from volume charges - right in line with industry guidelines.

Other ratemaking trends include eliminating usage allowances from the fixed charge component and applying the volume charge component to total actual usage and, in some cases, collapsing multiple

usage blocks to a single rate per unit of water in order to simplify customer understanding. The most common fixed charge structure for water systems is a base charge by meter size, with the charge increasing with the size of meter.

Proposed Water Rate Structure

ClearSource recommends that the City ultimately move to a base charge structure by meter size. Since the City does not currently maintain meter size data for each customer, this study maintains the existing base charge structure. Prior to implementation of the proposed change, meter size data needs be collected for all customers and incorporated into the billing system. For administrative practicality, the City could consider assigning all single-family residential customers the smallest meter size (if presumed reasonably accurate), and collect actual meter size data for all other customers.

ClearSource recommends that the City maintain its current revenue generation ratio between fixed and variable rate components. This can be accomplished by retaining the water usage allowance of 500 cubic feet in the base charge and applying the system-wide annual rate revenue adjustment of 8.0% to both the fixed charge components and total volume charge components.

To summarize, the proposed water rate structure incorporates the following changes:

- Base Charges/Flat Rates – No structural change:
 - Retain the water usage allowance of 500 cubic feet in the base charge
 - Apply the proposed annual rate revenue increase of 8.0% to the current base charges and flat rate charges
- Volume Charges - Collapse the multiple water usage tiers to a single usage block for all water usage above the 500 cubic foot allowance:
 - Establish a single rate per unit of water applied to all usage over the allowance
 - Apply the proposed annual rate revenue increase of 8.0% to the realigned single block usage rate

The combination of proposed changes simplifies customer understanding, realigns usage rate structures consistent with industry standards for cost-based rates, and generates the required amount of annual revenues to meet utility financial obligations.

Water Rate Restructuring Implications

The rate restructuring itself is intended to be revenue neutral for the water utility. Meaning, the revenue generated under the revised rate structure (incorporating the system-wide 8.0% increase) is expected to be the same as if the system-wide increase were applied uniformly to each component of the current rate structure. The primary implication of the proposed rate restructuring is the impact on individual customer bills based on their actual water usage.

Since no structural change is proposed for the base charges and flat rates, the base charge component of the rate structure will increase 8.0% for all customers in FY 2019/20. While the total revenue generated from the restructured volume charges is expected to be the same for the water utility as if the system-wide increase were applied uniformly to each current water usage tier, individual customer bills will vary from 8.0% based on individual water use applied to the restructured water usage tiers.

A critical caveat for volume charge revenue generation is the presumption that customers will continue to use the same amount of water under the revised structure as currently used. It is likely that some customers, especially those experiencing higher water bills, will use less water in future years in order to manage their water bills. While there are general assumptions that can be made, it is implausible to predict with accuracy the degree to which water conservation might occur. As such, water usage patterns must be carefully monitored over the next few years to evaluate potential reductions in water use resulting from the new rate structure. To mitigate the risk of potentially lower revenue collections, this study incorporated a more robust operating cash reserve (refer to Financial Policy discussion).

Exhibit W-6 presents a comparison of the existing water rate structure and proposed restructured water rates for FY 2019/20, incorporating the first year 8.0% system-wide increase.

Exhibit W-6 – Current and Proposed Restructured Water Rates

Water Rate Schedule	Current	Proposed Nov 1, 2019
INSIDE CITY		
METERED		
Base Rate - \$/Month		
Residential, Commercial, Other	\$ 25.33	\$ 27.36
Apartments		
First Unit (per account)	\$ 31.80	\$ 34.34
Each Additional Unit	\$ 6.47	\$ 6.99
Usage Charge Charge - \$/ccf		
0 - 500 CF	\$ -	\$ -
501 - 1,000 CF	\$ 1.17	\$ 1.79
1,001 - 2000 CF	\$ 1.43	\$ 1.79
2,001 - 3,000 CF	\$ 1.72	\$ 1.79
3,001 - 4000 CF	\$ 2.14	\$ 1.79
Over 4,000 CF	\$ 2.63	\$ 1.79
FLAT RATE - \$/Month		
School - GHS	\$ 1,090.51	\$ 1,177.75
School - GMS	\$ 1,160.86	\$ 1,253.72
School - GES	\$ 1,160.85	\$ 1,253.72
School - OLM	\$ 984.97	\$ 1,063.77
Residential Flat	\$ 25.33	
OUTSIDE CITY		
Base Rate - \$/Month	\$ 75.99	\$ 82.07

The following observations are made:

- The combination of the system-wide 8.0% rate revenue increase and collapsing the usage tiers results in higher unit rates for lower tiers and lower unit rates for higher tiers
- Overall usage charges will increase for customers using up to 3,000 cubic feet (30 ccf) of water
- About 90% of residential customers average 3,000 cubic feet or less of water per month
- The majority of apartment and commercial usage is greater than 3,000 cubic feet per month

Distribution of Water Use

To further illustrate potential customer impacts, Exhibit W-7 presents a comparison of the distribution of water use amongst existing water usage tiers and restructured water usage tiers.

Exhibit W-7 – Comparison of Distribution of Water Use

Distribution of Water Usage	Existing Block Structure						Revised Block Structure	
	Customer Class	0 - 5 ccf	6 - 10 ccf	11 - 20 ccf	21 - 30 ccf	30 - 40 ccf	> 40 ccf	0 - 5 ccf
Residential	32%	23%	25%	10%	4%	6%	32%	68%
Apartments	14%	10%	13%	7%	4%	51%	14%	86%
Commercial	12%	7%	9%	5%	4%	62%	12%	88%
Outside	25%	18%	22%	14%	8%	13%	25%	75%
Total System	29%	21%	23%	9%	4%	13%	29%	71%

The following observations are made:

- The majority of residential water use falls in the lower two tiers
- The majority of apartment and commercial water use falls in the highest tier

As noted previously, water usage patterns must be carefully monitored over the next few years to evaluate potential reductions in water use resulting from the revised usage rate structure. The 60-day operating reserve recommended in the prior rate study is now proposed to increase to 90 days of O&M to mitigate the risk of potential reductions in water use and resulting revenues.

Comparison of Revenue Under Existing and Proposed Rates

Exhibit W-8 presents a comparison of revenue under existing rates and proposed “test year” rates by customer class. Test year is the year new rates are expected to go into effect.

Exhibit W-8 – Comparison of Existing and Proposed Revenue Distribution

Comparison of Existing Revenue to Revenue under Proposed Rates				
Customer Classes	Test Year	Test Year	Test Year	Resulting
	Revenue under	Revenue under	Revenue under	Increase /
	Existing Rates	Proposed Rates	Proposed Rates	(Decrease)
Residential	\$ 823,305	\$ 914,055		11.0%
Apartments	64,897	59,314		-8.6%
Commercial	72,602	64,359		-11.4%
School - GHS	13,086	14,133		8.0%
School - GMS	13,930	15,045		8.0%
School - GES	41,791	45,134		8.0%
School - OLM	11,820	12,765		8.0%
Outside	10,192	10,948		7.4%
Total	\$ 1,051,623	\$ 1,135,752		8.0%

The following observations are made:

- FY 2019/20 system-wide water rate revenue increase of 8.0%
- Flat rate customers and metered customers using up to the 500 cubic foot allowance will experience the system-wide average increase of 8.0%
- Individual customer bill impacts will vary from 8.0% based on actual water usage; in general:
 - Lower water users will see relatively higher bills
 - Higher water users will see relatively lower bills

Schedule of Proposed Water Rates

Exhibit W-9 presents the current water rate schedule and proposed five-year schedule of water rates.

Exhibit W-9 – Proposed Five-Year Water Rate Schedule

Rate	Unit	Current Rate	Monthly Rate, Effective				
			Nov 1, 2019	Jul 1, 2020	Jul 1, 2021	Jul 1, 2022	Jul 1, 2023
Base Rate	Residential, Commercial, Other [a]	\$25.33	\$27.36	\$29.54	\$31.91	\$34.46	\$37.22
	Apartments [b]	\$31.80	\$34.34	\$37.09	\$40.06	\$43.26	\$46.72
	Apartments (each additional Unit [b])	\$6.47	\$6.99	\$7.55	\$8.15	\$8.80	\$9.51
	Outside City [c]	\$75.99	\$82.07	\$88.63	\$95.73	\$103.38	\$111.65
Usage Tier	Metered Service (0 - 500 CF)	Base Rate *	n/a	n/a	n/a	n/a	n/a
	Metered Service (501 - 1,000 CF)	\$1.17	n/a	n/a	n/a	n/a	n/a
	Metered Service (1,001 - 2,000 CF)	\$1.43	n/a	n/a	n/a	n/a	n/a
	Metered Service (2,001 - 3,000 CF)	\$1.72	n/a	n/a	n/a	n/a	n/a
	Metered Service (3,001 - 4,000 CF)	\$2.14	n/a	n/a	n/a	n/a	n/a
	Metered Service (Greater than 4,000 CF)	\$2.63	n/a	n/a	n/a	n/a	n/a
Usage Tier	Metered Service (0 - 500 CF)	n/a	Base Rate *	Base Rate *	Base Rate *	Base Rate *	Base Rate *
	Metered Svc. (Greater than 500 CF) per CCF	n/a	\$1.79	\$1.93	\$2.09	\$2.26	\$2.44
Flat Rate	School - GHS	\$1,090.51	\$1,177.75	\$1,271.97	\$1,373.73	\$1,483.63	\$1,602.32
	School - GMS	\$1,160.85	\$1,253.72	\$1,354.02	\$1,462.34	\$1,579.32	\$1,705.67
	School - GES	\$1,160.85	\$1,253.72	\$1,354.02	\$1,462.34	\$1,579.32	\$1,705.67
	School - OLM	\$984.97	\$1,063.77	\$1,148.87	\$1,240.78	\$1,340.04	\$1,447.24
	Other Non-Metered / Flat Rate	[d]	[d]	[d]	[d]	[d]	[d]

CF represents cubic feet. CCF represents 100 cubic feet. One cubic foot is equivalent to 7.48 gallons. 500 cubic feet is equivalent to 3,740 gallons.

* The base rate includes the first 500 cubic feet of water supplied, or fraction thereof.

[a] Base rate for this class includes all customers other than: apartments; outside city; schools; and other non-metered / flat rate customers.

[b] For master water metered apartment complexes, each separate apartment unit will be charged a per unit fee in addition to either the initial base rate or meter reading fee, whichever is larger.

[c] For all water supplied by the City to a water service connection outside the City, the minimum rates and or charges for rendering such services shall be three (3) times the applicable minimum rates and charges for similar service within the City.

[d] For all water supplied through a non-metered service connection, a flat month charge shall be made that shall be determined by the City Council and based upon the estimated quantity of water supplied at the metered rates specified above, as determined by the character of use, but in no case less than the base rate specified above.

Water Customer Bill Impacts

Residential Base Charge Comparison

Exhibit W-10 presents a comparison of the existing and proposed residential base charge. This represents the bill impact for those customers that do not use water above the 500 cubic foot allowance. This represents about 26% of current average annual residential customer bills.

Exhibit W-10 – Comparison of Existing and Proposed Residential Base Charge

FISCAL YEAR	Current	2020	2021	2022	2023	2024
Effective Date:		1-Nov-19	1-Jul-20	1-Jul-21	1-Jul-22	1-Jul-23
Rate Adjustments						
Annual Rate Adjustment		8.00%	8.00%	8.00%	8.00%	8.00%
Cumulative Rate Adjustment		8.00%	16.64%	25.97%	36.05%	46.93%
Monthly Bill Comparison [1]						
Monthly Bill	\$25.33	\$ 27.36	\$29.54	\$31.91	\$34.46	\$37.22
Monthly Dollar Difference	\$	2.03 \$	2.19 \$	2.36 \$	2.55 \$	2.76

[1] Base Charge up to 500 cubic feet per month

The water bill for customers under this usage profile will increase an average of \$2.38 / month over the five-year study period.

Other Customer Bill Impacts

The next series of exhibits illustrates FY 2019/20 water bill impacts for each metered customer classes.

Exhibit W-11 illustrates a comparison of existing and proposed residential monthly water bills at varying units of water usage.

Exhibit W-11 – Sample Residential Water Bill Impacts

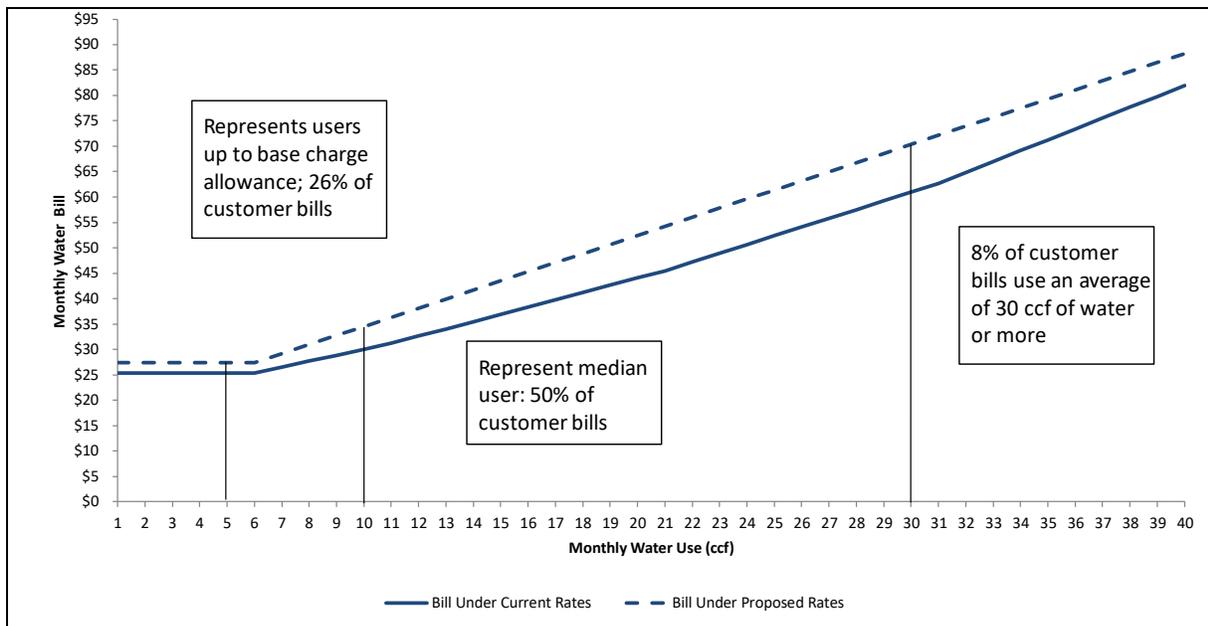


Exhibit W-11 illustrates water bill impacts encompassing all residential customers.

Exhibit W-12 – Total Residential Bill Impacts

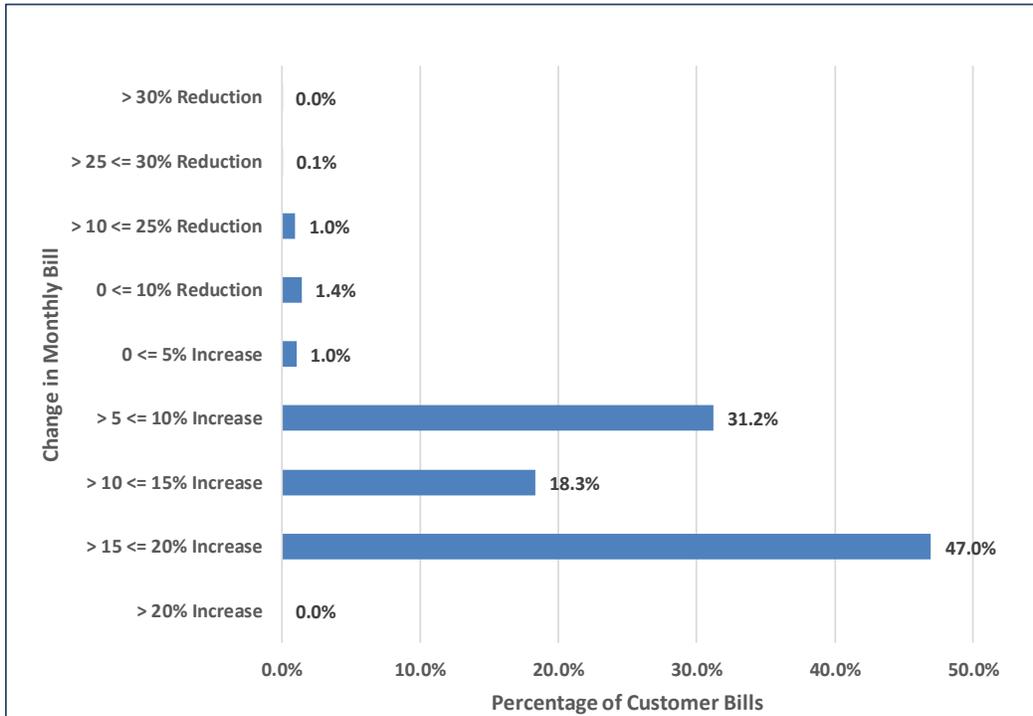


Exhibit W-13 – Total Apartment Bill Impacts

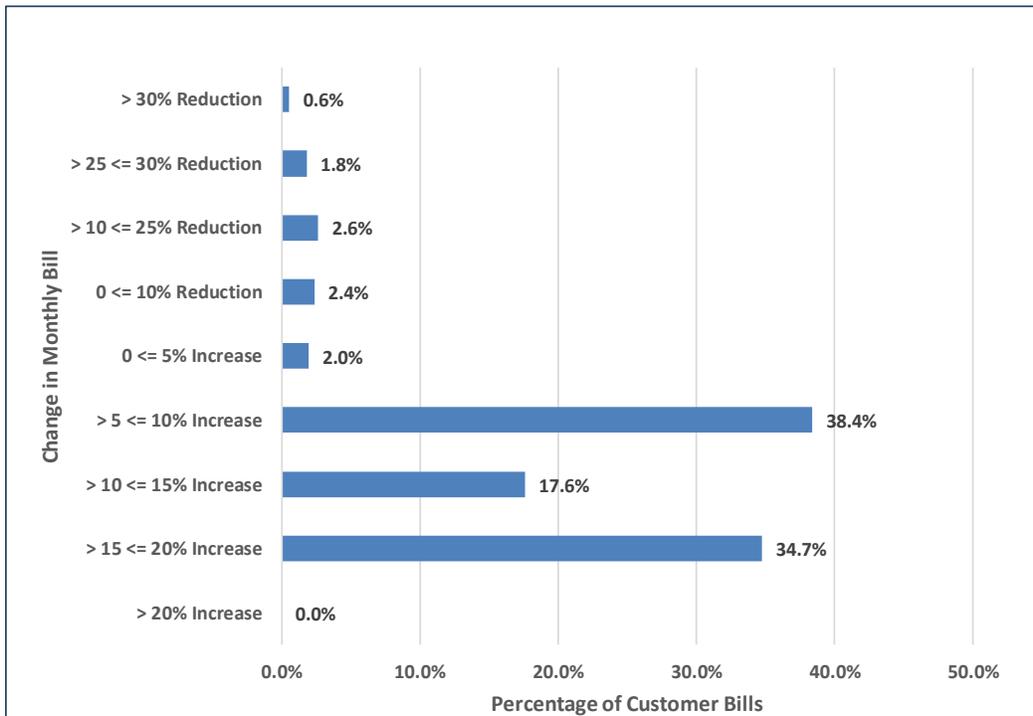
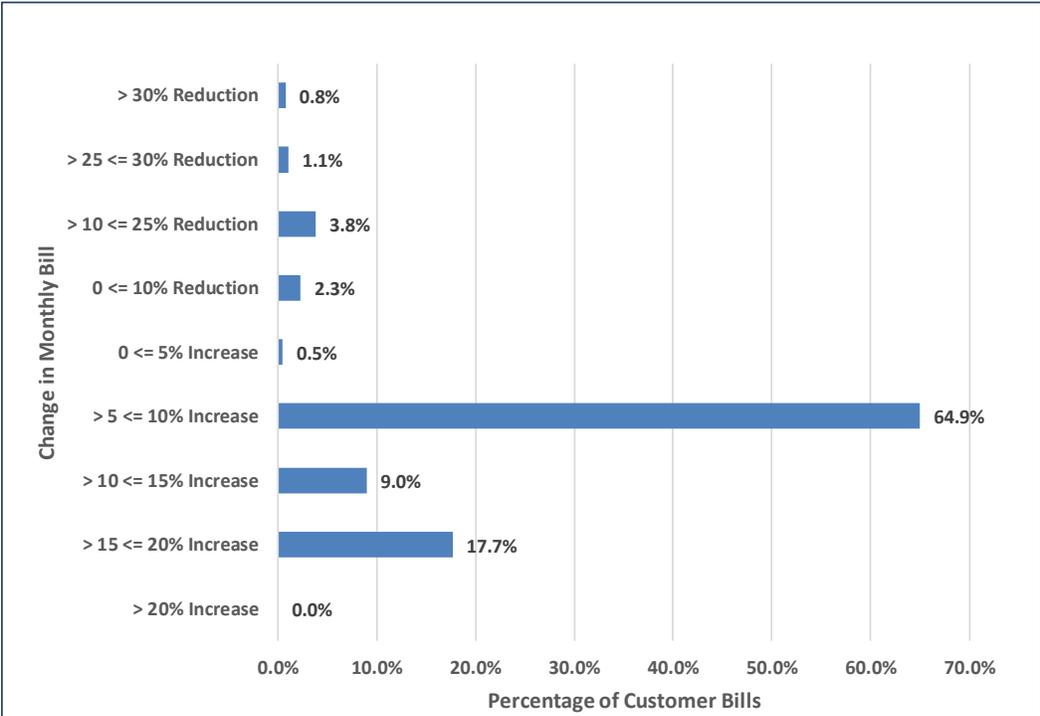


Exhibit W-14 – Total Commercial Bill Impacts



SEWER UTILITY

Sewer Revenue Requirement Forecast

Consistent with the water revenue requirement analysis, this study developed a multi-year financial plan for the sewer utility.

Financial Policies

This section describes the financial policies incorporated in the Sewer Financial Plan.

Operating Reserves

Consistent with general industry guidelines, this study established a minimum sewer operating reserve of 60 days of O&M – ranging from about \$189,000 to \$220,000. The sewer utility has a lower target threshold than water due to greater revenue stability realized from the predominantly flat rate structure. Any excess reserves above the established threshold are transferred to the capital fund to build reserves for future capital needs.

Capital Reserves

Consistent with the water utility, a minimum sewer capital reserve was established at 2% of fixed assets – starting at about \$250,000 based on current water system assets of \$12.3 million. The sewer capital fund is projected to have a cash balance of about \$460,000 by the end of the five-year study period.

Total combined sewer operating and capital reserves are projected to achieve the minimum target of 180 days of O&M. Total operating and capital cash reserves reach about \$680,000 by the end of the study period.

Debt Reserve

Consistent with the water utility, a sewer debt reserve target was set equal to annual debt service payments on all outstanding debt. The sewer utility has four outstanding debt instruments with annual principal and interest payments averaging about \$136,000 over the study period. The current sewer debt reserve account is funded at about \$114,000. Monies from this account are assumed to be used to pay the final debt service payment for each debt issue.

Debt Service Coverage

Consistent with the water utility, a minimum sewer debt service coverage requirement was set at 1.0, with a target coverage of 1.25. Rates were not impacted by this policy; cash needs are the driver of proposed sewer rate increases.

Debt-to-Fixed Assets Ratio

The sewer utility’s capital structure is currently 15% debt. The current debt ratio will improve under the “cash only” scenario, and climb to 20% under the “debt-financing” scenario.

Operating Forecast

The sewer utility operating forecast relies on the same key assumptions as previously described for the water utility. New groundwater sustainability expense applies only to the water utility.

Results

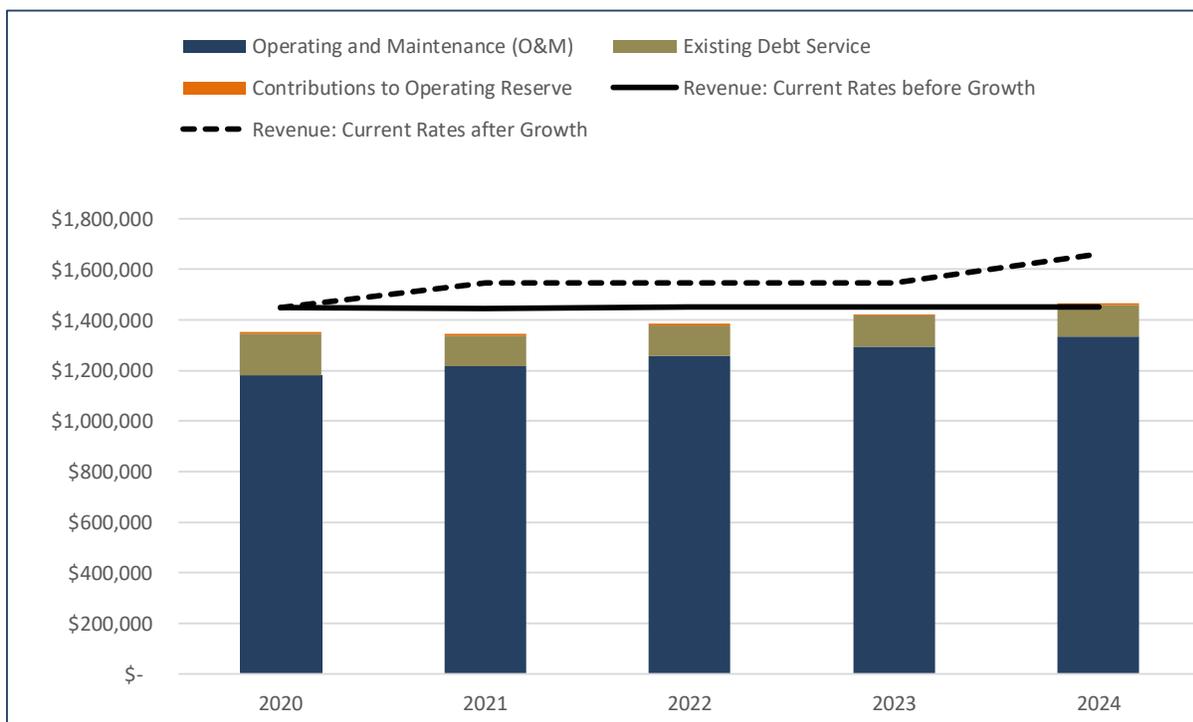
Sewer Baseline Operations

Sewer utility O&M expense is forecasted at \$1.1 million in FY 2018/19, increasing to \$1.3 million by the end of the study period. Incorporating annual debt service payments and contributions to operating reserves, brings total operating costs to \$1.5 million by the end of the study period.

Sewer operating revenues are categorized as rate revenue and non-rate revenue. Rate revenue under the existing level of rates uses historical FY 2017/18 customer billing system data reconciled with actual reported revenue and forecasted to incorporate assumed customer growth over the study period. Total operating revenue is currently projected at about \$1.5 million increasing with customer growth to \$1.7 million by the end of the study period.

Exhibit S-1 presents the results of the sewer utility operating forecast.

Exhibit S-1 – Sewer Operating Forecast



As illustrated in the exhibit, current rates under anticipated customer growth are forecasted to recover O&M expenses, existing debt service, and contributions to minimum operating reserves. As a test of sensitivity, inflationary level increases would be needed to recover total operating expenses should no growth occur over the study period.

Capital Spending and Funding Plan

The City provided a sewer system capital program totaling \$6.6 million over the five-year study period. Based on discussion with City staff, it was determined that annual projects would be re-prioritized and extended over a longer time period in order to mitigate near-term customer impacts. Consistent with the water utility, multiple scenarios were developed to evaluate alternative levels of capital spending under various rate revenue adjustment strategies and combinations of debt and cash-funding for new capital investment. Two capital scenarios were selected for City Council consideration. The following parameters are constant between the two capital scenarios:

- Proposed annual rate revenue adjustments of 8.0% per year over the study period
- Incorporates revenue from assumed customer growth
- Recovers forecasted baseline operating costs

The primary difference between the two capital scenarios is the assumption for debt versus cash-funding of capital and the resulting level of annual capital spending:

- **Scenario A** - Debt-finance identified large capital projects (shared with water utility); determine additional annual capital spending plan assuming cash-funding only
- **Scenario B** – Remove identified large capital projects (shared with water utility); determine annual capital spending plan assuming cash-funding only

Scenario A: Debt-Financing and Cash-Funding of capital

Scenario A assumes debt-financing of \$1.75 million for the large capital projects listed below. Debt issuance is assumed through the State Water Resources Control Board (SWRCB) at 3.0% interest over a 20-year term. Annual debt service payments begin in FY 2021/22 at about \$137,000.

- Water/sewer loop around city (50%-50% water/sewer split) - \$750,000 sewer share (FY 2021/22)
- Fix water/sewer lines under Hwy 33 and South Ave (50%-50% water/sewer split) - \$1.0 million sewer share (FY 2021/22)

In addition to the debt-financed capital projects, Scenario A provides for cash-funding the \$2.0 million Wastewater Treatment Plant Rehabilitation (WWTP) project in FY 2020/21, plus \$3.0 million in additional cash-funded capital over the study period; an average of about \$500,000 per year.

Scenario B: All Cash-Funding of capital

Scenario B provides for cash-funding the \$2.0 million WWTP Rehabilitation project in FY 2020/21, plus \$3.5 million in additional cash-funded capital over the study period; an average of \$560,000 per year.

Exhibit S-2 presents summary results for each capital scenario.

Exhibit S-2 – Sewer Capital Scenario Summary

CAPITAL SCENARIOS	SCENARIO A		SCENARIO B	
	Use of Debt and Cash		Use of Cash Only	
PRIMARY SCENARIO: ANNUAL SYSTEM-WIDE WATER RATE REVENUE INCREASE OF 8.0%				
Total Original Capital Program	\$	6,600,000	\$	6,600,000
Total Available Capital Spending	\$	6,735,000	\$	5,360,000
Debt-Financed	\$	1,750,000		-
Cash Funded: WWTP Rehabilitation	\$	2,000,000	\$	2,000,000
Cash-Funded: Additional	\$	2,985,000	\$	3,360,000
Average Annual Cash Funding	\$	497,500	\$	560,000

* Expressed in Current Day Dollars

Revenue Needs Assessment

The revenue needs assessment evaluates the sufficiency of current sewer utility revenues in meeting forecasted obligations of the utility, and designs a rate adjustment strategy to close any revenue shortfall over the study period. As previously discussed, total sewer utility rate revenues are proposed to increase 8.0% per year FY 2019/20 through FY 2023/24. The proposed increases represent the overall increase needed in sewer utility revenues to recover:

- Baseline operating costs: O&M, existing debt service, and contributions to operating reserves
- New debt service (depending on scenario)
- Cash-funding of capital projects
- Contributions to capital reserves

Exhibit S-3 presents the total sewer revenue requirement forecast under Scenario A.

Exhibit S-3 – Scenario A: Total Sewer Revenue Requirement

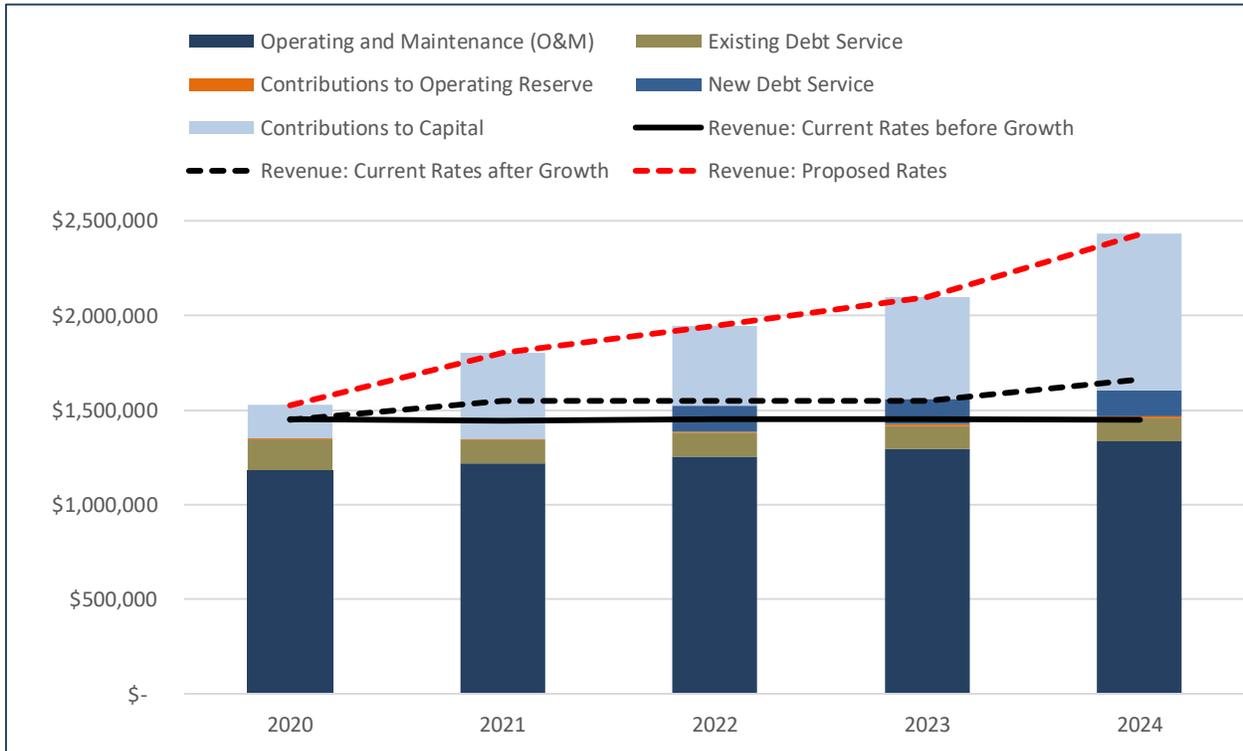
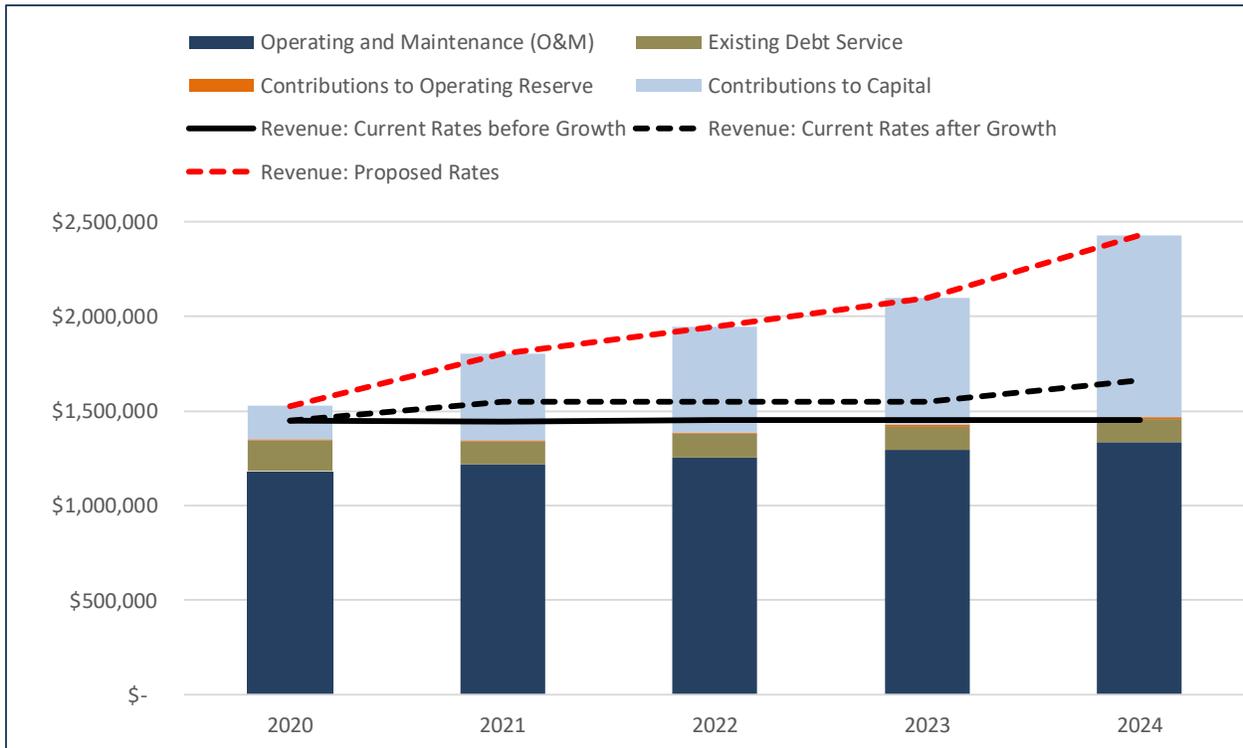


Exhibit S-4 presents the total sewer revenue requirement forecast under Scenario B.

Exhibit S-4 – Scenario B: Total Sewer Revenue Requirement



It is important to note that should customer growth not occur as planned, the indicated level of annual capital spending under each scenario would need to be re-evaluated based on a lower annual revenue projection.

Sewer Rate Structure Evaluation

The principal consideration in designing utility rate structures is to establish rates for customers that generate sufficient revenues for the utility and that are reasonably commensurate with the cost of providing utility service. Other considerations in rate design should include City pricing objectives, ease of understanding and implementation, and impact on customer bills.

Sewer System Customer Base

The sewer system customer base is comprised of residential, apartments, commercial, and two (2) heavy industrial customers. While there are minor differences in customers served by the water and sewer systems, the distribution of customers is about the same: residential customers represent about 92% of system customers, with all other classes representing the remaining 8%.

Existing Sewer Rate Structure

The existing sewer rate structure applies a flat rate per unit for residential, apartments, schools, and light industry. Commercial customers are assessed a base rate plus a volume rate applied to all water use over the stated base charge allowance. Heavy industrial users are charged an individual plant base rate (\$/month), plus a flow rate (\$/million gallons) and BOD rate (\$/pound).

The City assumes all non-industrial customers contribute domestic-level strength to the sewer system. Strength contribution is measured for each heavy industrial user. For a small sewer system of Gustine's size, potential differences in strength contribution amongst the non-industrial customers is considered immaterial to the cost of providing treatment services. As such, an evaluation of cost of service between total non-industrial customers and industrial users achieves reasonable equity. The City conducted an Industrial Sewer Charge study in 2013, which assigned sewer system costs between industrial and non-industrial users based on customer demand characteristics. The sewer rates developed in the 2014 rate study incorporated those cost of service findings.

Industry best practice has trended toward volume-base rates for all customers, plus an account servicing charge. For administrative practicality, many utilities maintain flat rates per dwelling unit for residential customers and charge commercial customers based on water usage.

Proposed Sewer Rate Structure

ClearSource recommends that the City ultimately move toward a volume-based rate structure for schools and light industry – similar to the commercial rate structure. Prior to implementation of this change, all schools and light industrial customers must be metered with at least one-full year of metered

data collected to ensure reliability of revenues from a volume-based structure. ClearSource further recommends that the 2013 Industrial Sewer Charge study be updated to reflect current conditions and policy objectives. Following the updated industrial analysis, cost allocations between non-industrial and industrial customers should be re-evaluated.

For this study, the current sewer rate structure is maintained with the indicated system-wide rate increase of 8.0% per year applied to uniformly to all customer classes and rate structure components, as illustrated in Exhibit S-5.

Exhibit S-5 – Proposed Schedule of Rate Increases

Customer	Description	Nov 1, 2019	Jul 1, 2020	Jul 1, 2021	Jul 1, 2022	Jul 1, 2023
Residential and Commercial	Percentage Change Applied Uniformly to Fixed and Variable Rate Components for Non-Industrial Customer Classes	8.0%	8.0%	8.0%	8.0%	8.0%

Customer	Description	Nov 1, 2019	Jul 1, 2020	Jul 1, 2021	Jul 1, 2022	Jul 1, 2023
Saputo Dairy Foods	Percentage Change for Individual Plant Base Rate - (\$/ per month)	8.0%	8.0%	8.0%	8.0%	8.0%
	Percentage Change per Million Gallons of Actual Flow	8.0%	8.0%	8.0%	8.0%	8.0%
	Percentage Change per Pound of Biochemical Oxygen Demand Discharge	8.0%	8.0%	8.0%	8.0%	8.0%
	Overall Percentage Change to Customer Bill	8.0%	8.0%	8.0%	8.0%	8.0%

Customer	Description	Nov 1, 2019	Jul 1, 2020	Jul 1, 2021	Jul 1, 2022	Jul 1, 2023
Hillview Packing	Percentage Change for Individual Plant Base Rate - (\$/ per month)	8.0%	8.0%	8.0%	8.0%	8.0%
	Percentage Change per Million Gallons of Actual Flow	8.0%	8.0%	8.0%	8.0%	8.0%
	Percentage Change per Pound of Biochemical Oxygen Demand Discharge	8.0%	8.0%	8.0%	8.0%	8.0%
	Overall Percentage Change to Customer Bill	8.0%	8.0%	8.0%	8.0%	8.0%

Schedule of Proposed Sewer Rates

Exhibit S-6 presents the current sewer rate schedule and proposed five-year schedule of sewer rates.

Exhibit S-6 – Proposed Five-Year Sewer Rate Schedule

Class	Unit	Current Rate	Monthly Rate, Effective				
			Nov 1, 2019	Jul 1, 2020	Jul 1, 2021	Jul 1, 2022	Jul 1, 2023
Residential	per dwelling unit [a]	\$27.30	\$29.48	\$31.84	\$34.39	\$37.14	\$40.11
Apartments	per dwelling unit [a]	\$22.88	\$24.71	\$26.69	\$28.82	\$31.13	\$33.62
Mobile Homes	per dwelling unit [a]	\$19.45	\$21.01	\$22.69	\$24.50	\$26.46	\$28.58
School, primary	per avg daily attendance [b]	\$0.36	\$0.39	\$0.42	\$0.45	\$0.49	\$0.53
School, secondary	per avg daily attendance [b]	\$0.55	\$0.59	\$0.64	\$0.69	\$0.75	\$0.81
Commercial, base	each	\$19.45	\$21.01	\$22.69	\$24.50	\$26.46	\$28.58
Commercial, volume	per CCF over 700 CF [c]	\$0.020	\$0.022	\$0.023	\$0.025	\$0.027	\$0.029
Restaurant, base	each	\$27.30	\$29.48	\$31.84	\$34.39	\$37.14	\$40.11
Restaurant, volume	per CCF over 1,000 CF [c]	\$0.035	\$0.038	\$0.041	\$0.044	\$0.048	\$0.051
Light Industry	each	\$124.85	\$134.84	\$145.63	\$157.28	\$169.86	\$183.45
Heavy Industry	each [d]						
A	Saputo	\$39,207	\$42,344	\$45,731	\$49,390	\$53,341	\$57,608
	Hillview	\$4,949	\$5,345	\$5,773	\$6,234	\$6,733	\$7,272
B	per pound of biochemical oxygen demand discharge	\$0.17	\$0.18	\$0.20	\$0.21	\$0.23	\$0.25
C	per million gallons of actual flow	\$139.42	\$150.57	\$162.62	\$175.63	\$189.68	\$204.85

CF represents cubic feet. CCF represents 100 cubic feet. One cubic foot is equivalent to 7.48 gallons.

[a] One dwelling unit shall be assigned to each separate residential living unit consisting of, but not limited to, the following: single-family residence; apartment unit; duplex unit; mobile home unit.

[b] Based on the number of students as measured by average daily attendance.

[c] Based on each month's actual water usage.

[d] Monthly sewer charges based on the following formula for "permitted" flows and loadings. Charge Per Month = A + B + C where;

A = Individual Plant Base Rate

B = Allocated Cost Per Pound of Biochemical Oxygen Demand (BOD) Discharge

C = Allocated Cost Per Million Gallons of Actual Flow

*Values for BOD will be determined at the entry point to the public sewage system, utilizing sampling, analysis, and flow measurement procedures established by the City for determining the respective characteristics of the discharge.

*Discharges in excess of permitted flows and loadings may result in penalty charges in excess of the monthly charges.

Sewer Customer Bill Impacts

Residential Rate Comparison

Exhibit S-7 presents a comparison of the existing and proposed residential sewer charge.

Exhibit S-7 – Comparison of Existing and Proposed Residential Sewer Charge

FISCAL YEAR	Current	2020	2021	2022	2023	2024
Effective Date:		1-Nov-19	1-Jul-20	1-Jul-21	1-Jul-22	1-Jul-23
Rate Adjustments						
Annual Rate Adjustment		8.00%	8.00%	8.00%	8.00%	8.00%
Cumulative Rate Adjustment		8.00%	16.64%	25.97%	36.05%	46.93%
Monthly Bill Comparison						
Monthly Bill	\$27.30	\$29.48	\$31.84	\$34.39	\$37.14	\$40.11
Monthly Dollar Difference		\$ 2.18	\$ 2.36	\$ 2.55	\$ 2.75	\$ 2.97

The residential sewer rate will increase an average of \$2.56 / month over the five-year study period.

Other Customer Bill Impacts

Assuming the same demand characteristics, all other customer sewer bills will increase 8.0% over current sewer bills.

Combined Residential Water and Sewer Bill

The following exhibit presents combined residential water and sewer bill impacts over the study period.

FISCAL YEAR:	Current	2019/20	2020/21	2021/22	2022/23	2023/24	Total 5-Year
<i>Effective Date:</i>		<i>1-Nov-2019</i>	<i>1-Jul-2020</i>	<i>1-Jul-2021</i>	<i>1-Jul-2022</i>	<i>1-Jul-2023</i>	
Combined Water and Sewer							
Water Monthly Bill *	\$ 25.33	\$ 27.36	\$ 29.54	\$ 31.91	\$ 34.46	\$ 37.22	
Sewer Monthly Bill	27.30	29.48	31.84	34.39	37.14	40.11	
Combined Month Bill	\$ 52.63	\$ 56.84	\$ 61.39	\$ 66.30	\$ 71.60	\$ 77.33	
Monthly Dollar Difference	\$ -	\$ 4.21	\$ 4.55	\$ 4.91	\$ 5.30	\$ 5.73	\$ 4.94
Percentage Change	0.00%	8.00%	8.00%	8.00%	8.00%	8.00%	47%

* Monthly bills represent Residential Base Charge up to 500 cubic feet of water use

The combined residential water and sewer bill will increase an average of just under \$5.00 / month over the five-year study period.