

Aerial view of City of Madera
via Google Earth



CITY OF MADERA

FINAL REPORT

Wastewater Rate Study

MARCH 2022

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ABBREVIATIONS & ACRONYMS

AAF	Average Annual Flow
AF	Acre Foot, equal to 435.6 HCF/CCF or 325,851 gallons
Alt.	Alternative
Avg.	Average
AWWA	American Water Works Association
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
CA	Customer
CAP	Capacity
CCF	Hundred Cubic Feet (same as HCF); equal to 748 gallons
CCI	Construction Cost Index
COD	Chemical Oxygen Demand
COM	Commodity
Comm.	Commercial
COS	Cost of Service
COSA	Cost of Service Analysis
CPI	Consumer Price Index
CIP	Capital Improvement Program
DU	Dwelling Unit
Excl.	Exclude
ENR	Engineering News Record
EDU	Equivalent Dwelling Unit
Exp.	Expense
FP	Fire Protection
FY	Fiscal Year (e.g., July 1 st to June 30 th)
GPD	Gallons per Day
GPM	Gallons per Minute
HCF	Hundred Cubic Feet; equal to 748 gallons or 1 CCF
Ind.	Industrial
Irr.	Irrigation
LAIF	Local Agency Investment Fund
Lbs.	Pounds
MFR	Multi-Family Residential
MGD	Million Gallons per Day
MG/L	Milligrams per Liter
Mo.	Month

This appendix identifies abbreviations and acronyms that may be used in this report. This appendix has not been viewed, arranged, or edited by an attorney, nor should it be relied on as legal advice. The intent of this appendix is to support the recognition and analysis of this report. Any questions regarding clarification of this document should be directed to staff or an attorney specializing in this particular subject matter.

NH3	Ammonia
NPV	Net Present Value
N/A	Not Available or Not Applicable
O&M	Operational & Maintenance Expenses
Prop 13	Proposition 13 (1978) – Article XIII A of the California Constitution which limits taxes on real property to 1% of the full cash value of such property.
Prop 218	Proposition 218 (1996) – State Constitutional amendment expanded restrictions of local government revenue collections.
Req't	Requirement
Res.	Residential
Rev.	Revenue
RTS	Readiness-to-Serve
R&R	Rehabilitation & Replacement
SFR	Single Family Residential
SRF Loan	State Revolving Fund Loan
SWRCB	State Water Resources Control Council
TSS / SS	Total Suspended Solids
V. / Vs. /vs.	Versus
WWTP	Wastewater Treatment Plant

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SECTION 1. PURPOSE AND OVERVIEW OF THE STUDY

A. Purpose

The City of Madera (City) retained NBS to conduct a comprehensive wastewater rate study for several reasons, including meeting revenue requirements, providing greater financial stability for the wastewater enterprise, and complying with certain legal requirements (such as California Constitution article XIII D, Section 6, which is commonly referred to as Proposition 218 [Prop 218]). The rates resulting from this study were developed in a manner that is consistent with industry standard cost of service principles. In addition to documenting the rate study methodology, this report is provided with the intent of assisting the City to maintain transparent communications with its residents and businesses.

In developing new wastewater rates, NBS worked cooperatively with City staff and the City Council (Council) in selecting appropriate rate alternatives. Based on input from all stakeholders, the proposed rates are summarized in this report.

B. Overview of the Study

Comprehensive rate studies such as this one typically includes the following three components, as outlined in **Figure 1**:

1. Preparation of a **Financial Plan**, which identifies the net revenue requirements for the utility.
2. **Cost of Service Analysis**, which determines the cost of providing service to each customer class.
3. **Rate Design Analysis**, which evaluates different rate design alternatives.

Figure 1. Primary Components of a Rate Study



These steps are intended to follow industry standards and reflect the fundamental principles of cost-of-service rate making embodied in the Water Environment Federation (WEF) Financing and Charges for Wastewater Systems¹. The rate study also addresses requirements under Proposition 218 that rates do not exceed the cost of providing the service, and that the rates be proportionate to the cost of providing service for all customers. In terms of the chronology of the study, these three steps represent the order they were

¹ *Financing and Charges for Wastewater Systems, WEF, Manual of Practice No. 27, Fourth Edition, 2018.*

performed. Detailed tables and figures documenting the development of the proposed rates are provided in the Appendix.

FINANCIAL PLAN

As a part of this rate study, NBS projected revenues and expenditures on a cash flow basis for the next five years. The amount of rate revenue required that will allow reserves to be maintained at the recommended levels is known as the *net revenue requirement*. Recommended reserve levels are based on a combination of industry standards and each utility's unique financial needs. More detail on recommended reserve levels is included in the Section 2. Rate adjustments -- or more accurately, adjustments in the total revenue collected from rates -- are recommended because of the capital improvements the City is needing to complete. This report presents an overview of the methodologies, assumptions, and data used, along with the financial plans and proposed rates developed in this study².

WASTEWATER RATE DESIGN ANALYSIS

Rate Design is typically the stage in the study where NBS, Staff, Committees and the Council must work closely together, to develop rate alternatives that will meet the City's objectives. It is important for the wastewater utility to send proper price signals to its customers about the actual cost of providing service. This objective is typically addressed through both the magnitude of the rate adjustments, and the rate structure design. In other words, both the amount of revenue collected, and the way in which the revenue is collected from customers are important.

Several criteria are typically considered in setting rates and developing sound rate structures. The fundamentals of this process have been documented in several rate-setting manuals, such as the WEF Manual. The foundation for evaluating rate structures is generally credited to James C. Bonbright in the *Principles of Public Utility Rates*³, which outlines pricing policies, theories, and economic concepts along with various rate designs. The following is a simplified list of the attributes of a sound rate structure:

- Rates should be easy to understand from the customer's perspective.
- Rates should be easy to administer from the utility's perspective.
- Rates should promote the efficient allocation of the resource.
- Rates should be equitable and non-discriminating (that is, cost based).
- There should be continuity in the ratemaking philosophy over time.
- Rates should address other utility policies (for example, encouraging conservation & economic development).
- Rates should provide month-to-month and year-to-year revenue stability.

The following are the basic rate design criteria that were considered in this study:

Rate Structure Basics – From a financial stability perspective, it is ideal when utilities recover their fixed costs from fixed charges and their variable costs from volumetric charges. When this is the case, fluctuations in variable revenues are directly offset by reductions or increases in variable expenses. However, other factors

² The complete financial plan is set forth in the Appendix.

³ James C. Bonbright; Albert L. Daniels and David R. Kamerschen, *Principles of Public Utility Rates*, (Arlington, VA: Public Utilities Report, Inc., Second Edition, 1988), p. 383-384.

are often considered when designing rates such as community values, water conservation goals, ease of understanding, and ease of administration.

The vast majority of rate structures contain a fixed or minimum charge in combination with a volumetric charge. However, many wastewater utilities choose to keep residential customers at a uniform fixed rate per equivalent dwelling unit (EDU). The rates proposed in this report are 100% fixed for residential customers and commercial customers are designed to collect 12 percent of rate revenue from the fixed meter charge and 88 percent from the variable commodity charge⁴.

Fixed Charges – Fixed charges can be called base charges, minimum monthly charges, customer charges, fixed meter charges, etc.

Volumetric (Consumption-Based) Charges – In contrast to fixed charges, variable costs such as the cost of electricity used in pumping, and the cost of chemicals for treatment tend to change with the quantity of wastewater produced. For a wastewater utility, variable charges are typically based on winter water usage (or estimated wastewater discharge) and charged on a dollar-per-unit cost (for example, per 100 cubic feet, or hcf).

⁴ The California Urban Water Conservation Council recommends recovering at least 70 percent of rate revenue through volume-based rates. However, water utilities are allowed to develop their own allocations that accurately reflect their actual cost allocations.

SECTION 2. WASTEWATER RATES

A. Key Wastewater Rate Study Priorities

The City's wastewater rate analysis was undertaken with a few specific objectives, including:

- Maintain wastewater service through operation and maintenance for the wastewater collection system.
- Maintain adequate reserve levels to ensure continuity in operations.
- Provide greater revenue stability for the Utility, due to the level of capital investment planned over the next five years.
- Comply with Prop 218 requirements to ensure cost of service are properly allocated amongst user classifications.

The proposed fixed and volume-based rates were calculated based on the net revenue requirements, number of customer accounts, winter water consumption, and other City-provided information.

B. Financial Plan

It is important for municipal utilities to maintain reasonable reserves in order to handle emergencies, fund working capital, maintain a good credit rating, and generally follow sound financial management practices. Rate increases are governed by the need to meet operating and capital costs, address new regulations and requirements, maintain adequate debt coverage, and build reasonable reserve funds. The current state of the City's Wastewater Utility, regarding these objectives, is as follows:

- **Meeting Net Revenue Requirements:** For Fiscal Year (FY) 2022/23 through FY 2026/27, the projected net revenue requirement (that is, total annual expenses plus debt service and rate-funded capital costs, less non-rate revenues) for the City averages \$9.2 million, annually. If no rate adjustments are implemented, the City is projected to have about a \$2.3 million deficit by FY 2026/27.
- **Building and Maintaining Reserve Funds:** Reserve funds provide a basis for a utility to cope with fiscal emergencies such as revenue shortfalls, asset failure, and natural disasters, among other events. Reserve policies provide guidelines for sound financial management, with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs, and emergencies. The City anticipates having an average of \$5.7 million in unrestricted wastewater fund reserves to meet targets, in following industry standard recommendations. The reserve funds for the Utility are considered unrestricted reserves and consist of the following:
 - **The Operating Reserve** should equal approximately 90 days of operating expenses (about 25% of the annual operating budget), and on average, the balance for the operating reserve should be approximately \$1.6 million over the next five years. An Operating Reserve is intended to promote financial viability in the event of any short-term fluctuation in revenues and/or expenditures. Fluctuations in revenue can be caused by weather patterns, the natural inflow and outflow of cash during billing cycles, natural variability in demand-based revenue streams (such as volumetric charges), and – particularly in periods of economic distress – changes or trends in age of receivables.

- **The Capital Outlay Reserve** should equal 3 percent of net capital assets, which averages approximately \$3 million over the next five years. This reserve is set aside to address long-term and routine capital system replacement and rehabilitation needs.
- **Funding Capital Improvement Projects:** The City must also be able to fund necessary capital improvements to maintain current service levels. City staff has identified roughly \$26.3 million (in current year dollars) in expected total capital expenditures for FY 2021/22 through FY 2026/27. With the recommended rate increases, these expenditures can be accomplished while also maintaining reserves at the minimum recommended target. The City was also able to secure grant monies from the American Rescue Plan Act (ARPA), in which \$16 million is allocated towards the wastewater enterprises' capital projects. This grant funding significantly helps offset the financial burden on rate payers.
- **Inflation and Growth Projections:** Assumptions regarding cost inflation were made to project future revenues and expenses for the study period.
 - Customer growth is expected to be 0% annually.
 - General inflation is assumed to be 3% annually.
 - Salaries, benefits, fuel, and electricity are all assumed to be 5% annually.
 - Some expenses are assumed to have no escalation annually.
- **Maintaining Adequate Bond Coverage:** The City currently has two outstanding wastewater debt obligations from 2006 and 2015 that require the City to maintain a debt service coverage ratio of at least 1.20. The benefit of exceeding the minimum debt coverage ratio is that it strengthens the City's credit rating, which can help lower the interest rates for debt-funded capital projects in the future, should the City decide to use them.

Rate revenue increases of 5 percent annually years from FY 2022/23 through 2026/27 will be needed to fully fund all operating expenses, debt services, planned capital projects and maintain reserves at the recommended targets. **Figure 2** summarizes the sources and uses of funds, net revenue requirements, and the recommended annual percent increases in total rate revenue recommended for the next 5 years for the City.

Figure 2. Summary of Wastewater Revenue Requirements

Summary of Sources and Uses of Funds and Net Revenue Requirements	Projected					
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Sources of Sewer Funds						
Rate Revenue Under Current Rates - Sewer	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960
Non-Rate Revenues	796,722	796,722	796,722	796,722	796,722	796,722
Interest Earnings	123,350	114,931	129,765	143,140	109,170	74,695
Total Sources of Funds	\$ 9,333,032	\$ 9,324,613	\$ 9,339,447	\$ 9,352,822	\$ 9,318,852	\$ 9,284,377
Uses of Sewer Funds						
Operating Expenses	\$ 6,061,934	\$ 6,286,151	\$ 6,521,094	\$ 6,767,283	\$ 7,025,266	\$ 7,295,616
Existing Debt Service	2,532,336	2,533,048	2,527,048	2,529,375	2,530,647	2,540,150
New Debt Service	-	-	-	-	-	-
Rate Funded Capital Expenses	-	-	-	120,852	2,228,762	1,826,517
Total Use of Funds	\$ 8,594,270	\$ 8,819,199	\$ 9,048,142	\$ 9,417,510	\$ 11,784,675	\$ 11,662,283
Surplus (Deficiency) before Rate Increase	\$ 738,762	\$ 505,414	\$ 291,306	\$ (64,688)	\$ (2,465,823)	\$ (2,377,906)
Additional Revenue from Rate Increases ¹	-	420,648	862,328	1,326,093	1,813,045	2,324,346
Surplus (Deficiency) after Rate Increase	\$ 738,762	\$ 926,062	\$ 1,153,634	\$ 1,261,405	\$ (652,777)	\$ (53,560)
Increase in Rate Revenue Needed to Avoid Deficit	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%
<i>Cumulative Increases</i>	<i>0.00%</i>	<i>5.00%</i>	<i>10.25%</i>	<i>15.76%</i>	<i>21.55%</i>	<i>27.63%</i>
Net Revenue Requirement²	\$ 7,674,198	\$ 7,907,546	\$ 8,121,654	\$ 8,477,648	\$ 10,878,783	\$ 10,790,866

1. Assumes new rates are implemented July 1, 2022, followed by July 1 implementations for FY 2023/24-FY 2026/27.

2. Total Use of Funds less non-rate revenues and interest earnings. This is the annual amount needed from rates.

Figure 3 summarizes the Capital Improvement Plan, providing the expected cost and timing of capital projects during the 5-year rate period. The American Rescue Plan Act (ARPA) grant monies, in which \$16 million are allocated to capital projects in the water enterprise fund are shown in this figure.

Figure 3. Summary of Capital Improvement Plan

CAPITAL FUNDING FORECAST	Projected					
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Funding Sources:						
Use of Development Impact Fee Reserve Fund ¹	\$ -	\$ -	\$ 200,000	\$ 1,000,000	\$ 1,000,000	\$ -
Use of American Rescue Plan Proceeds ²	5,630,000	2,020,000	1,600,000	4,660,500	-	-
Use of Capital Expenditure Reserve Fund	1,191,375	128,528	434,548	3,087,784	1,200,701	-
Rate Revenue	-	-	-	120,852	2,228,762	1,826,517
Total Sources of Capital Funds	\$ 6,821,375	\$ 2,148,528	\$ 2,234,548	\$ 8,869,137	\$ 4,429,463	\$ 1,826,517

- DIF reserve fund contributions from source: Sewer CIP ARPA.xlsx, with ARPA funding taken into account for eligible projects. These amounts keep DIF fund in financial plan from going negative.
- The City was awarded American Rescue Plan Act funds in which \$16 million is allocated to wastewater capital projects.

Figure 4 summarizes the projected reserve fund balances and reserve targets for the sewer utility’s unrestricted funds. A more detailed version of the utility’s proposed 5-year financial plan is included in the Appendix. As can be seen in Figure 3, given proposed rate increases, reserves will not meet the target levels at the end of the five-year rate period.

Figure 4. Summary of Reserve Funds

Beginning Reserve Fund Balances and Recommended Reserve Targets	Projected					
	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Operating Reserve						
Ending Balance	\$ 1,494,723	\$ 1,550,010	\$ 1,607,941	\$ 1,668,645	\$ 1,015,868	\$ 962,307
<i>Recommended Minimum Target</i>	<i>1,494,723</i>	<i>1,550,010</i>	<i>1,607,941</i>	<i>1,668,645</i>	<i>1,732,257</i>	<i>1,798,919</i>
Capital Outlay Reserve						
Ending Balance	\$ 4,684,382	\$ 5,426,629	\$ 6,087,784	\$ 4,200,701	\$ 3,000,000	\$ 3,000,000
<i>Recommended Minimum Target</i>	<i>3,000,000</i>	<i>3,000,000</i>	<i>3,000,000</i>	<i>3,000,000</i>	<i>3,000,000</i>	<i>3,000,000</i>
Total Ending Balance (Unrestricted)	\$ 6,179,106	\$ 6,976,639	\$ 7,695,725	\$ 5,869,346	\$ 4,015,868	\$ 3,962,307
Total Recommended Minimum Target (Unrestricted)	\$ 4,494,723	\$ 4,550,010	\$ 4,607,941	\$ 4,668,645	\$ 4,732,257	\$ 4,798,919

C. Cost of Service Analysis

Once the net revenue requirements are determined, the cost-of-service analysis proportionately distributes the revenue requirements to each customer class. The cost-of-service analysis consists of two major components: (1) the classification of expenses, and (2) the allocation of costs to customer classes. Costs were classified corresponding to the function they serve. All costs in the City’s budget are allocated to each component of the rate structure in proportion to the level of service required by customers. The levels of service are related to volume and strength of wastewater treated, infrastructure capacity, and customer service. These are based on allocation factors, such as water consumption and number of accounts by customer class. Ultimately, a cost-of-service analysis is intended to result in rates that are proportional to the cost of providing service to each customer class.

CLASSIFICATION OF COSTS

Most costs are not typically allocated 100 percent to fixed or variable categories and, therefore, are allocated to multiple functions of wastewater service. Budgeted costs were classified into three categories: flow (collection) costs, strength costs (for BOD and TSS) and customer costs. The classification process provides the basis for allocating costs to various customer classes based on the cost causation (classification) components described below:

- **Flow (Collection/Volume) related costs** are costs associated with collection and transportation of wastewater to the treatment facility.
- **Strength related costs** are the costs associated with treatment of the wastewater. This specifically allocates costs related to treating both biochemical oxygen demand (BOD) and total suspended solids (TSS).
- **Customer related costs** are associated with having customers connected to the City’s wastewater system, such as customer service, postage, billing, customer outreach and other administrative duties.

The City’s budgeted costs were reviewed and allocated to these cost causation components which are used as the basis for establishing new wastewater rates and translate to fixed and variable charges. Tables in the Appendix show how the City’s expenses were classified and allocated to these cost causation components.

The City’s current rate structure collects 100 percent of the revenue from residential customers from fixed monthly charges. The commercial customers collect roughly 12% from fixed charges and 88% from variable charges. Overall, this equates to about 83% of the City’s revenue comes from fixed monthly charges, and 17% comes from the commercial variable charges.

Figure 5 summarizes the allocation of the net revenue requirements to each cost causation component for the proposed new rates. More detail on the development of the allocation factors that resulted in this summary will be covered in the following section.

Figure 5. Allocation of Revenue Requirements by Customer Class

Customer Class	Cost Classification Components				Cost-of-Service Revenue Req't.	% of COS Revenue Req't.
	Volume	Treatment		Customer Related		
		BOD	TSS			
Net Revenue Requirements¹	\$ 2,305,889	\$ 1,905,472	\$ 1,905,472	\$ 3,622,220	\$ 9,739,053	--
	23.7%	19.6%	19.6%	37.2%	100%	
Single-Family	\$ 1,438,625	\$ 1,067,402	\$ 1,140,329	\$ 2,725,816	\$ 6,372,172	65.4%
Multi-Family (per unit)	369,430	137,051	146,415	701,907	1,354,803	13.9%
Commercial						
Car Dealer & Dept/Retail	22,480	25,019	24,501	12,128	84,129	0.9%
Game	1,902	1,940	1,884	1,323	7,049	0.1%
Grocery & Mortuary	27,852	103,326	77,270	3,969	212,417	2.2%
Hospital	10,460	11,641	11,400	1,544	35,045	0.4%
Hotel without dining	12,285	13,672	13,389	1,544	40,890	0.4%
Library & Church	12,858	14,310	14,014	8,821	50,002	0.5%
Professional Building	264,999	294,928	288,821	144,439	993,187	10.2%
Restaurant	27,164	120,928	64,595	11,467	224,155	2.3%
School	84,892	94,480	100,659	5,733	285,764	2.9%
Strip Mall	-	-	-	-	-	0.0%
Warehouse	-	-	-	-	-	0.0%
Industrial						
Light Industrial	32,941	20,775	22,194	3,528	79,438	0.8%
Medium Industrial	-	-	-	-	-	0.0%
High Industrial	-	-	-	-	-	0.0%
Total	\$ 2,305,889	\$ 1,905,472	\$ 1,905,472	\$ 3,622,220	\$ 9,739,053	100%

1. Revenue requirement for each customer class is determined by multiplying the revenue requirement from each cost classification by the allocation factors for each customer class.

CUSTOMER CLASSES

Customer classes are determined by combining customers with similar demand characteristics and types of use into categories that reflect the cost differentials to serve each type of customer. This process is limited by the desire to not overcomplicate the City’s rate structure. For the City, the customer classes are split between single family residential (SFR), multi-family residential (MFR) (dependent on number of units) and commercial (varies depending on commercial type).

As shown in **Figure 6**, the development of the collection/volume (or flow) allocation factor was calculated by taking the lowest consecutive 3-month water usage from 2019/20 and annualizing the usage per customer class. From here, the annual usage was adjusted to meet the flow data from the wastewater treatment plant. It should be noted that the detailed customer classes were further combined by similar usage patterns to match the current rate schedule.

Figure 6. Development of the Volume Allocation Factor

Customer Class	Number of Accounts	Winter Consumption Jan.-Mar. 2020 (hcf)	Annualized Winter Consumption (hcf)	Adjusted Annual Volume ² (hcf)	Percentage of Volume
Single-Family	12,361	330,244	1,320,976	1,553,198	62.39%
Multi-Family	452	84,805	339,219	398,852	16.02%
Commercial					
Auto Garage	39	940	3,762	4,423	0.18%
Bakeries	5	238	951	1,119	0.04%
Barber/Beauty	8	334	1,336	1,571	0.06%
Bars	1	4	15	18	0.00%
Car Wash	9	3,498	13,993	16,453	0.66%
Church	40	2,952	11,806	13,882	0.56%
Offices	630	57,375	229,498	269,843	10.84%
Grocery	18	6,394	25,574	30,070	1.21%
Hospitals	7	2,401	9,605	11,293	0.45%
Hotel-Motel	7	2,820	11,280	13,263	0.53%
Jails	2	638	2,553	3,001	0.12%
Laundromat	9	2,480	9,921	11,665	0.47%
School	24	18,849	75,397	88,651	3.56%
Rec Facility	6	437	1,746	2,053	0.08%
Restaurant	47	5,998	23,991	28,209	1.13%
Service Station	7	722	2,887	3,394	0.14%
Theater In	1	208	830	976	0.04%
Industrial	16	7,562	30,247	35,565	1.43%
Institutional	6	432	1,727	2,030	0.08%
Total	13,695	529,329	2,117,316	2,489,531	100.00%
				2,489,531	Flow (hcf/yr.)
				1.18	Flow Adj. Factor

1. Source files for water consumption: September 2019 through August 2020: MAIS Meter Usage 12 Months_Manipulated.xlsx

September-December 2020: 2020 SEP-DEC Munis Water Usage_Manipulated.xlsx

2. Adjusted annual volume based on wastewater treatment plant influent data.

Source file: Madera City of. WWTP Daily Flows Jan. 2012 through Dec. 2020.xlsx

Figure 7 shows the development of the strength allocation factors by customer class. The typical strength factors for biochemical oxygen demand (BOD) and total suspended solids (TSS) are derived from the previous strength factors used in past calculations as well as the State Water Resources Control Board Revenue Program Guidelines, Appendix G.

Figure 7. Development of the Strength Allocation Factor

Customer Class	Adjusted Annual Flow (hcf)	Rate Commercial Classes ³	Biochemical Oxygen Demand (BOD)			Total Suspended Solids (TSS)		
			Average Strength Factor ⁴ (mg/l)	Calculated BOD (lbs./yr.)	Percent of Total	Average Strength Factor ⁴ (mg/l)	Calculated TSS (lbs./yr.)	Percent of Total
Single-Family	1,553,198	n/a	200	1,937,870	56.0%	200	1,937,870	59.8%
Multi-Family	398,852	n/a	100	248,817	7.2%	100	248,817	7.7%
Commercial								
Auto Garage	4,423	Car Dealer & Dept/Retail	300	8,278	0.2%	275	7,588	0.2%
Bakeries	1,119	Restaurant	1,200	8,373	0.2%	600	4,187	0.1%
Barber/Beauty	1,571	Professional Building	300	2,941	0.1%	275	2,696	0.1%
Bars	18	Professional Building	300	33	0.0%	275	31	0.0%
Car Wash	16,453	Car Dealer & Dept/Retail	300	30,793	0.9%	275	28,226	0.9%
Church	13,882	Library & Church	300	25,980	0.8%	275	23,815	0.7%
Offices	269,843	Professional Building	300	505,010	14.6%	275	462,926	14.3%
Grocery	30,070	Grocery & Mortuary	1,000	187,588	5.4%	700	131,312	4.1%
Hospitals	11,293	Hospital	300	21,135	0.6%	275	19,374	0.6%
Hotel-Motel	13,263	Hotel without dining	300	24,822	0.7%	275	22,754	0.7%
Jails	3,001	School	300	5,617	0.2%	275	5,149	0.2%
Laundromat	11,665	Professional Building	300	21,830	0.6%	275	20,011	0.6%
School	88,651	School	300	165,911	4.8%	300	165,911	5.1%
Rec Facility	2,053	Game	275	3,522	0.1%	250	3,202	0.1%
Restaurant	28,209	Restaurant	1,200	211,173	6.1%	600	105,586	3.3%
Service Station	3,394	Car Dealer & Dept/Retail	300	6,352	0.2%	275	5,823	0.2%
Theater In	976	Professional Building	300	1,827	0.1%	275	1,675	0.1%
Industrial								
Low	35,565	Light Industrial	170	37,717	1.1%	170	37,717	1.2%
Medium ⁵		Medium Industrial	340			340		
High ⁵		High Industrial	510			510		
Institutional	2,030	Professional Building	300	3,800	0.1%	275	3,483	0.1%
Total	2,489,531			3,459,388	100.0%		3,238,150	100.0%

3. To match City's current rate schedule for commercial variable charges.

4. Typical strength factors for BOD and TSS are derived from previous rate study and the State Water Resources Control Board Revenue Program Guidelines, Appendix G

5. NBS is recommending medium and high industrial users are added to commercial classes.

Figure 8 summarizes the development of the customer allocation factor. Both the number of accounts and number of units are shown in this figure, but the percentage of the number of units are used in the rate calculation.

Figure 8. Development of the Customer Allocation Factor

Customer Class	Number of Accounts ¹	Percentage of Accounts	Number of Units ¹	Percentage of Units
Single-Family	12,361	90.3%	12,361	75.3%
Multi-Family	452	3.3%	3,183	19.4%
Commercial				
Auto Garage	39	0.3%	39	0.2%
Bakeries	5	0.0%	5	0.0%
Barber/Beauty	8	0.1%	8	0.0%
Bars	1	0.0%	1	0.0%
Car Wash	9	0.1%	9	0.1%
Church	40	0.3%	40	0.2%
Offices	630	4.6%	630	3.8%
Grocery	18	0.1%	18	0.1%
Hospitals	7	0.1%	7	0.0%
Hotel-Motel	7	0.1%	7	0.0%
Jails	2	0.0%	2	0.0%
Laundromat	9	0.1%	9	0.1%
School	24	0.2%	24	0.1%
Rec Facility	6	0.0%	6	0.0%
Restaurant	47	0.3%	47	0.3%
Service Station	7	0.1%	7	0.0%
Theater In	1	0.0%	1	0.0%
Industrial	16	0.1%	16	0.1%
Institutional	6	0.0%	6	0.0%
Total	13,695	100%	16,426	100%

1. Source files for accounts: December 2020: 2020 DEC MUNIS Billing_Manipulated.xlsx

D. Rate Design Analysis

The process of evaluating the wastewater rate structure provides the opportunity to incorporate a number of rate-design objectives and policies, including revenue stability, equity among customer classes, and water conservation. Based on input provided by City staff, the proposed rates were developed. The following sections describe this process.

FIXED CHARGES

The fixed charge recognizes that the wastewater utility incurs fixed costs regardless of whether customers send any wastewater into the City’s collection system. There are two factors used to develop the fixed charge: the number of dwelling units and the annual revenue requirement. The monthly fixed charge for residential customers is calculated by simple dividing the net revenue requirement by the number of units and the number of billing periods per year. For commercial customers, the fixed charge is calculated by taking the 12 percent fixed multiplied by the annual revenue requirement, then divide by the number of units and billing periods per year. The fixed charges for each customer class are shown in **Figure 9**.

VARIABLE CHARGES

The variable charges for commercial customers, on the other hand, are calculated by taking the additional 92 percent portion of the revenue requirement divided by the estimated annual sewage volume produced. This sewage volume is the adjusted annualized winter water consumption shown in **Figure 6**. The volumetric charges for each customer class are summarized in the rate design table shown in **Figure 9**.

Figure 9. Development of Fixed and Variable Charges

Customer Class	Number of Units	Annualized Winter Consumption	Net Revenue Requirement	Monthly Fixed Charge Per Unit	Volumetric Charge per HCF
Single-Family	12,361	1,553,198	\$ 6,372,172	\$ 42.96	
Multi-Family (per unit)	3,183	398,852	\$ 1,354,803	\$ 35.47	
Commercial					
Car Dealer & Dept/Retail	55	24,271	\$ 84,129	\$ 22.81	\$ 3.05
Game	6	2,053	\$ 7,049	\$ 22.81	\$ 3.02
Grocery & Mortuary	18	30,070	\$ 212,417	\$ 22.81	\$ 6.22
Hospital	7	11,293	\$ 35,045	\$ 22.81	\$ 2.73
Hotel without dining	7	13,263	\$ 40,890	\$ 22.81	\$ 2.71
Library & Church	40	13,882	\$ 50,002	\$ 22.81	\$ 3.17
Professional Building	655	286,104	\$ 993,187	\$ 22.81	\$ 3.05
Restaurant	52	29,328	\$ 224,155	\$ 22.81	\$ 6.73
School	26	91,653	\$ 285,764	\$ 22.81	\$ 2.74
Strip Mall	0	0	\$ -	\$ 22.81	\$ 3.05
Warehouse	0	0	\$ -	\$ 22.81	\$ 1.97
Industrial					
Light Industrial	16	35,565	\$ 79,438	\$ 22.81	\$ 1.97
Medium Industrial	0	0	\$ -	\$ 22.81	\$ 2.74
High Industrial	0	0	\$ -	\$ 22.81	\$ 3.81
Total	16,426	2,489,531	\$ 9,739,053		

2. HCF = hundred cubic feet, equal to 748 gallons of water.

E. Current and Proposed Wastewater Rates

Figure 10 provides a comparison of the current and proposed wastewater rates through FY 2026/27. Commercial rates with similar strength effluent are combined in the rate calculation to simplify the rate structure. This is a common industry standard with customers that have similar usage patterns and is consistent with the City's current rate structure.

Figure 10. Proposed Wastewater Rates

Sewer Rate Schedule	Current Rates	Proposed Sewer Rates				
		FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
FIXED MONTHLY CHARGES						
Single-Family	\$42.75	\$42.96	\$45.11	\$47.37	\$49.74	\$52.23
Multi-Family (per unit)	\$27.77	\$35.47	\$37.24	\$39.10	\$41.06	\$43.11
Commercial (All)	\$19.02	\$22.81	\$23.95	\$25.15	\$26.41	\$27.73
NON-RESIDENTIAL VOLUMETRIC CHARGES PER HCF¹						
Commercial						
Car Dealer & Dept/Retail	\$2.30	\$3.05	\$3.20	\$3.36	\$3.53	\$3.71
Game	\$3.46	\$3.02	\$3.17	\$3.33	\$3.50	\$3.68
Grocery & Mortuary	\$5.04	\$6.22	\$6.53	\$6.86	\$7.20	\$7.56
Hospital	\$2.28	\$2.73	\$2.87	\$3.01	\$3.16	\$3.32
Hotel without dining	\$2.28	\$2.71	\$2.85	\$2.99	\$3.14	\$3.30
Library & Church	\$2.25	\$3.17	\$3.33	\$3.50	\$3.68	\$3.86
Professional Building	\$2.28	\$3.05	\$3.20	\$3.36	\$3.53	\$3.71
Restaurant	\$5.22	\$6.73	\$7.07	\$7.42	\$7.79	\$8.18
School	\$2.38	\$2.74	\$2.88	\$3.02	\$3.17	\$3.33
Strip Mall	\$3.52	\$3.05	\$3.20	\$3.36	\$3.53	\$3.71
Warehouse	\$3.51	\$1.97	\$2.07	\$2.17	\$2.28	\$2.39
Industrial						
Light Industrial	\$3.51	\$1.97	\$2.07	\$2.17	\$2.28	\$2.39
Medium Industrial	N/A	\$2.74	\$2.88	\$3.02	\$3.17	\$3.33
High Industrial	N/A	\$3.81	\$4.00	\$4.20	\$4.41	\$4.63

1. HCF = hundred cubic feet, equal to 748 gallons of water.

F. Comparison of Current and Proposed Wastewater Bills

Figure 11, Figure 12, Figure 13, and Figure 14 compare monthly wastewater bills for the current and proposed wastewater rates as a result of the planned rate adjustment for single-family residential customers and non-single family residential customers.

Figure 11. Monthly Wastewater Bill Comparison for Single Family Customers

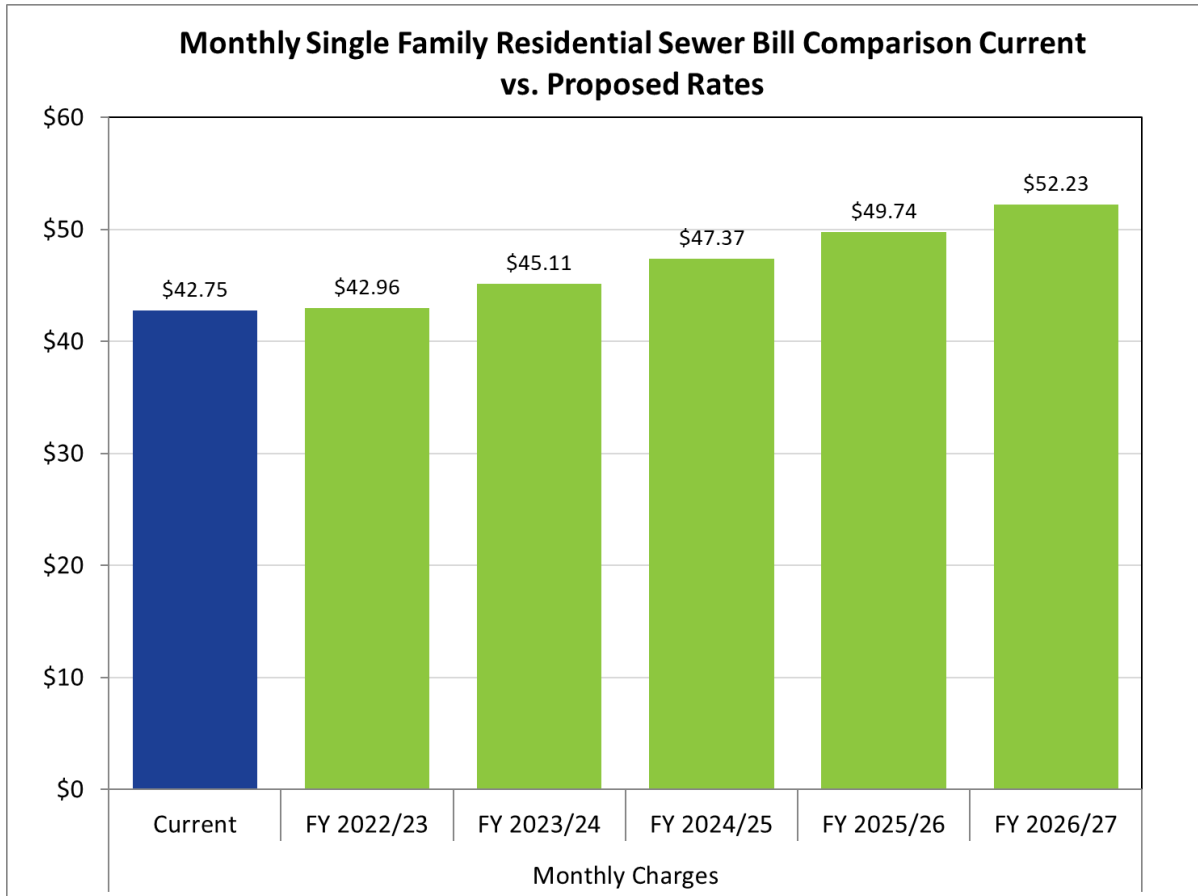


Figure 12. Monthly Wastewater Bill Comparison for Multi-Family Customers

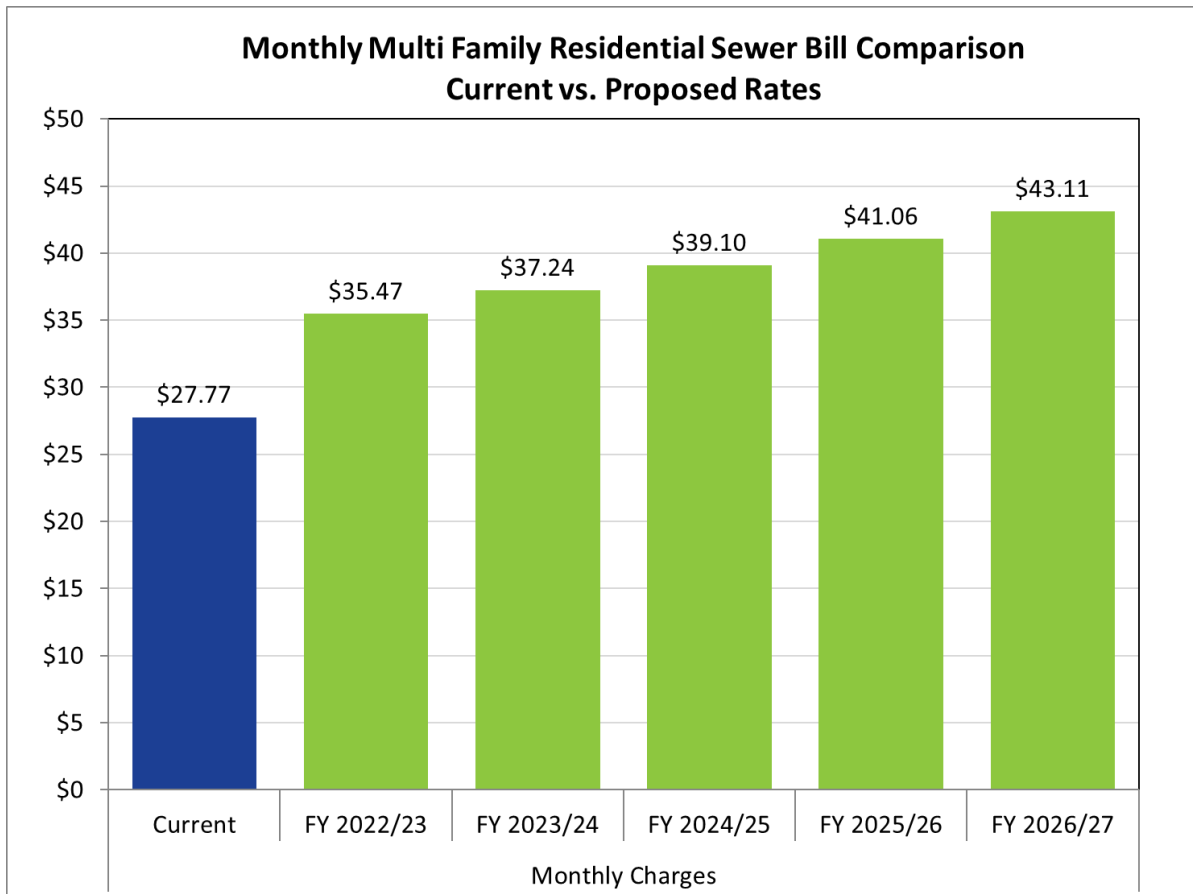


Figure 13. Monthly Wastewater Bill Comparison for Commercial Professional Building Customers

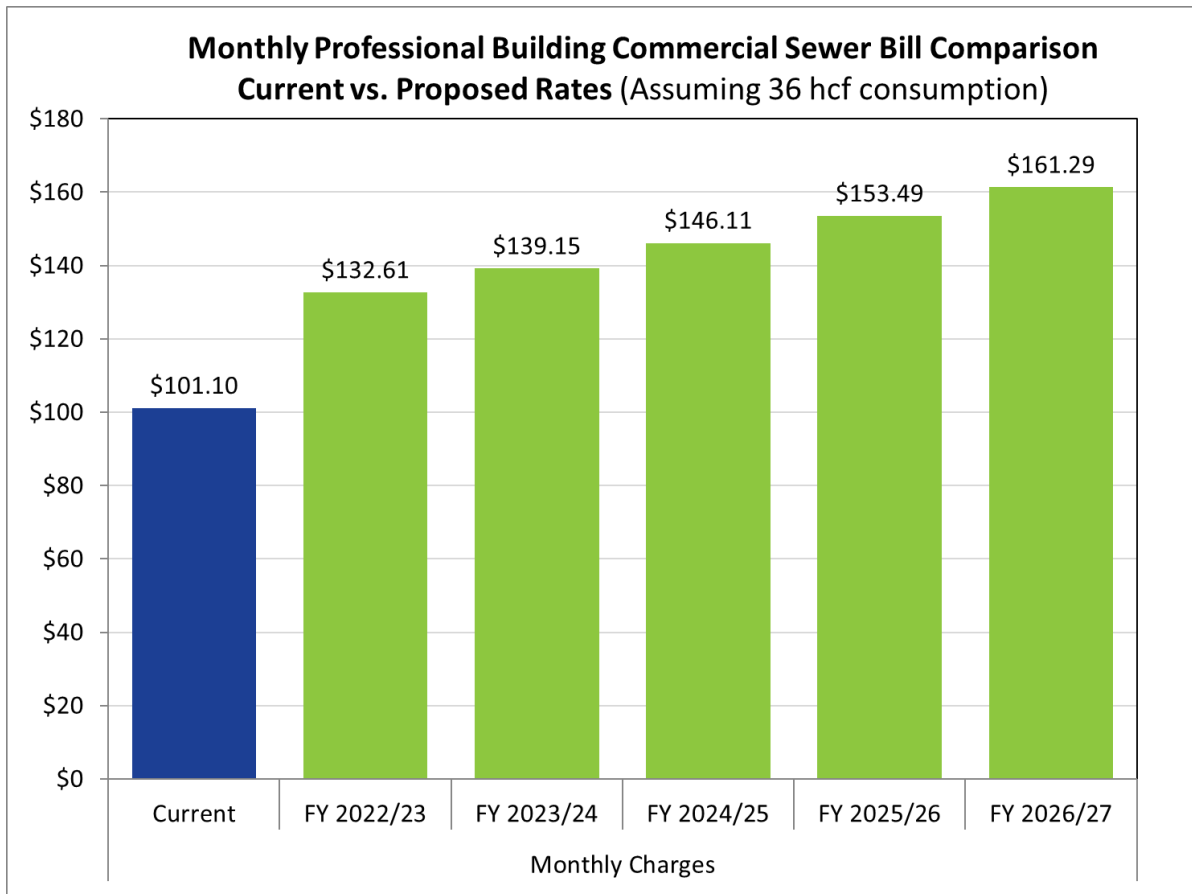


Figure 14. Monthly Wastewater Bill Comparison for Commercial Restaurant Customers

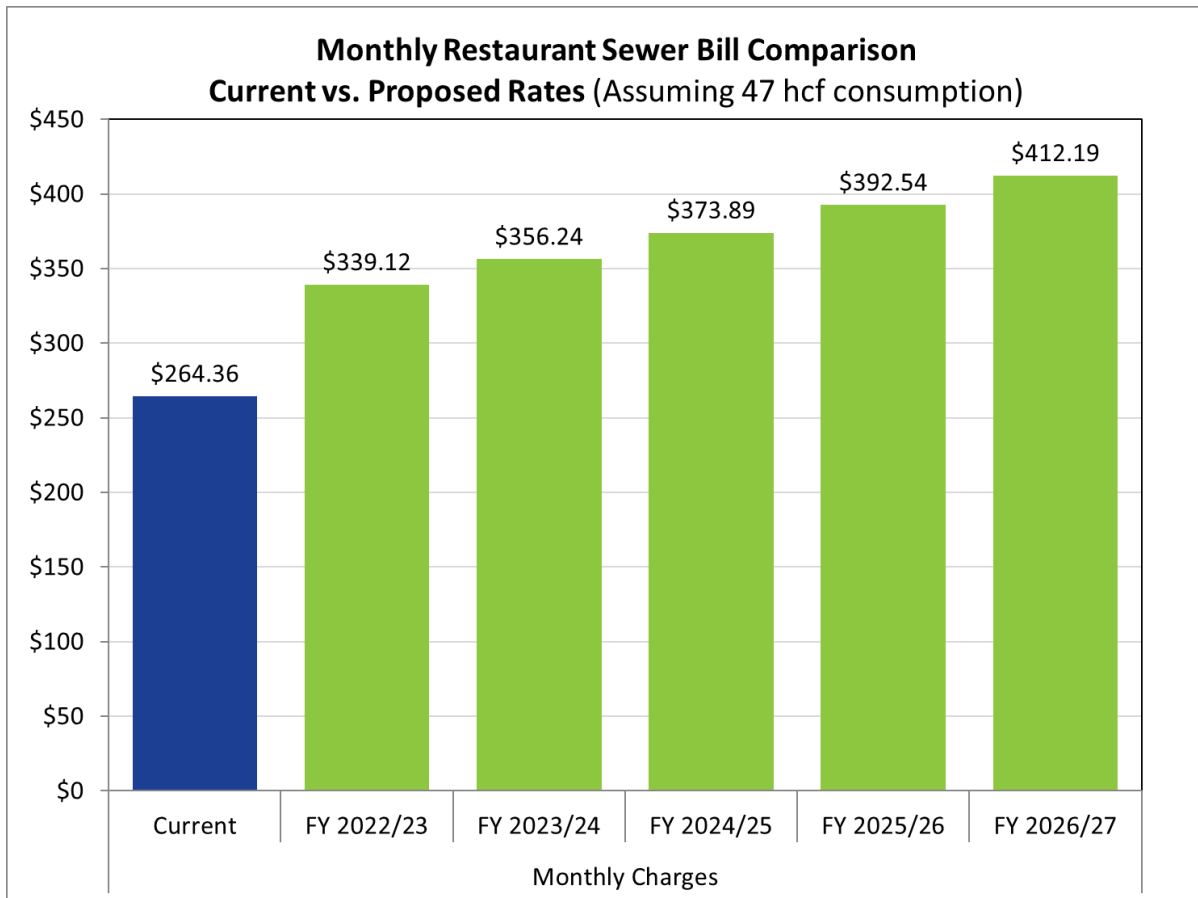


Figure 15, Figure 16 and Figure 17 show a comparison on bills for single-family residential, professional office commercial and restaurant commercial customers compared to other regionally located Cities.

Figure 15. Single-Family Residential Regional Bill Comparison

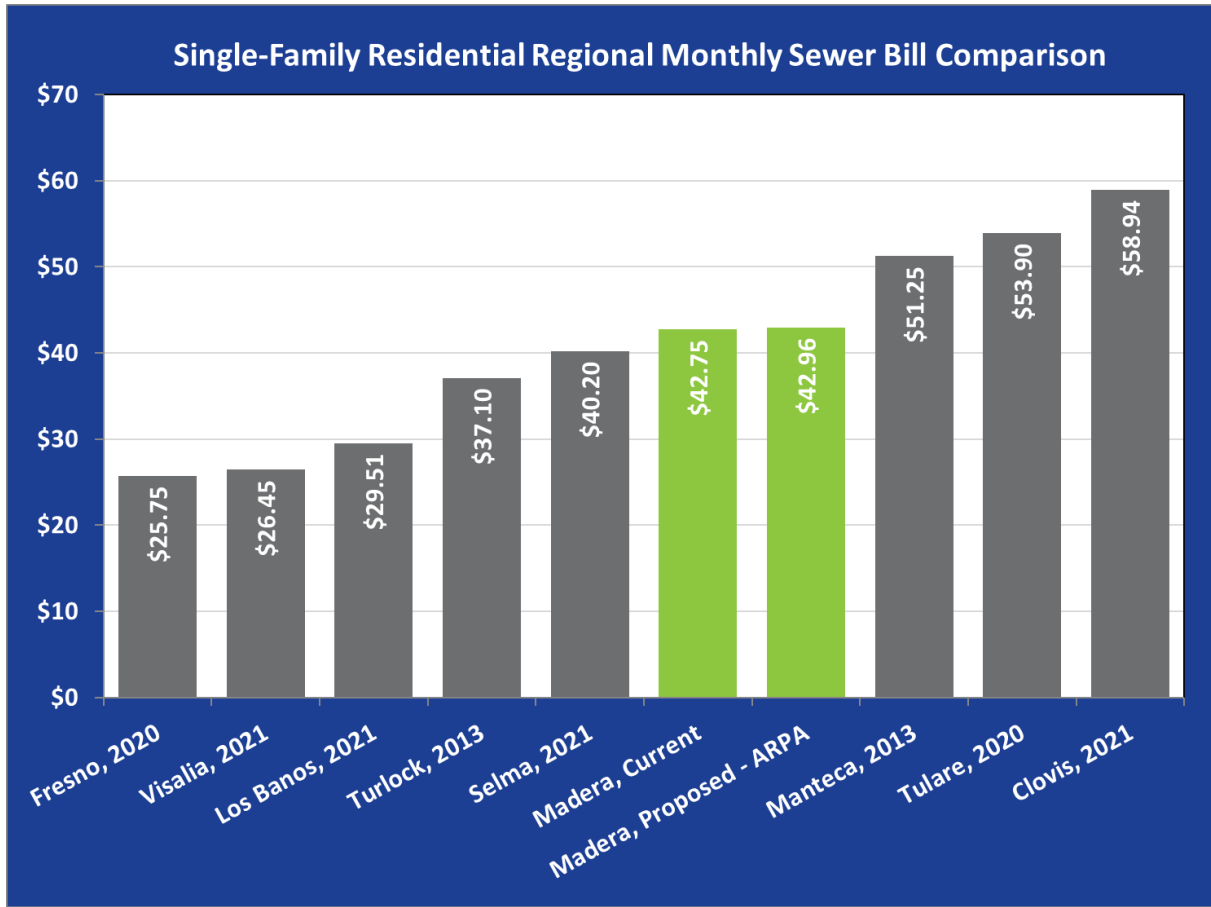


Figure 16. Professional Office Regional Bill Comparison

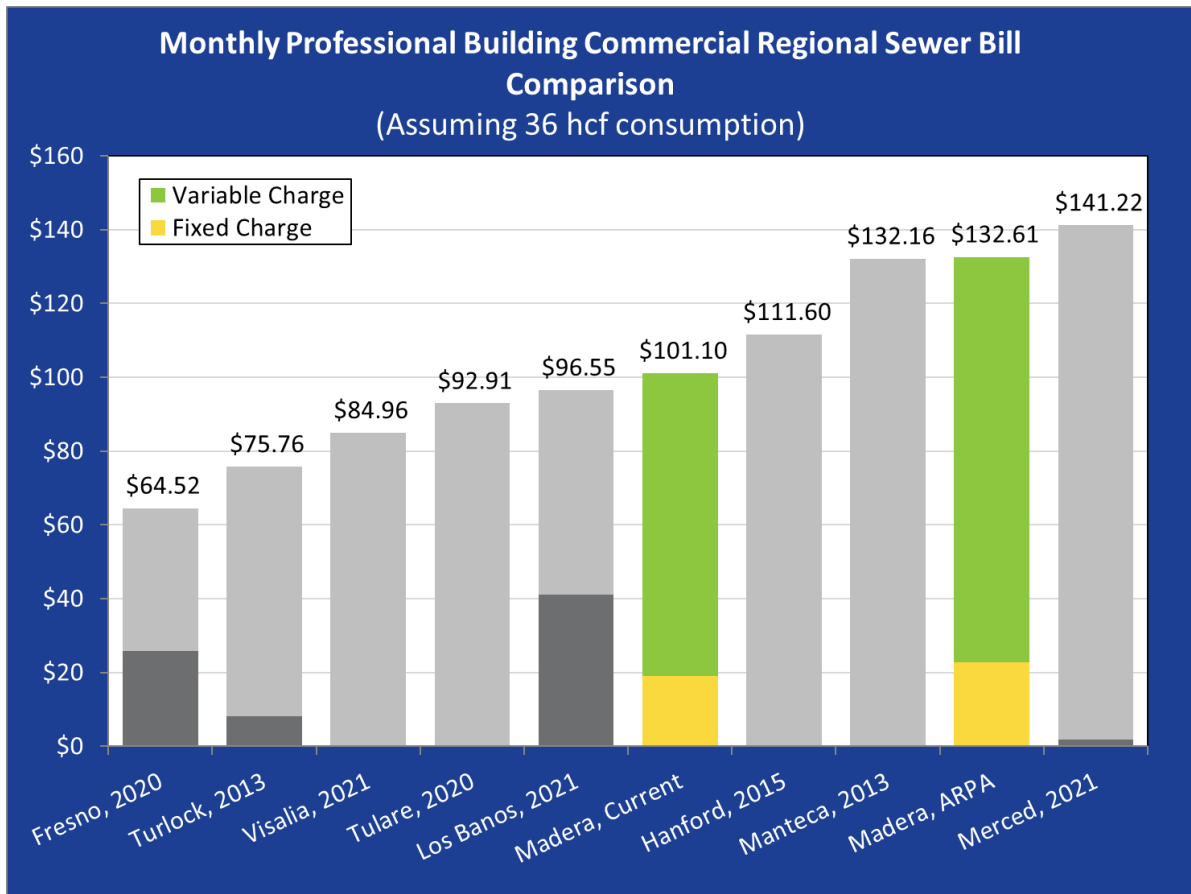
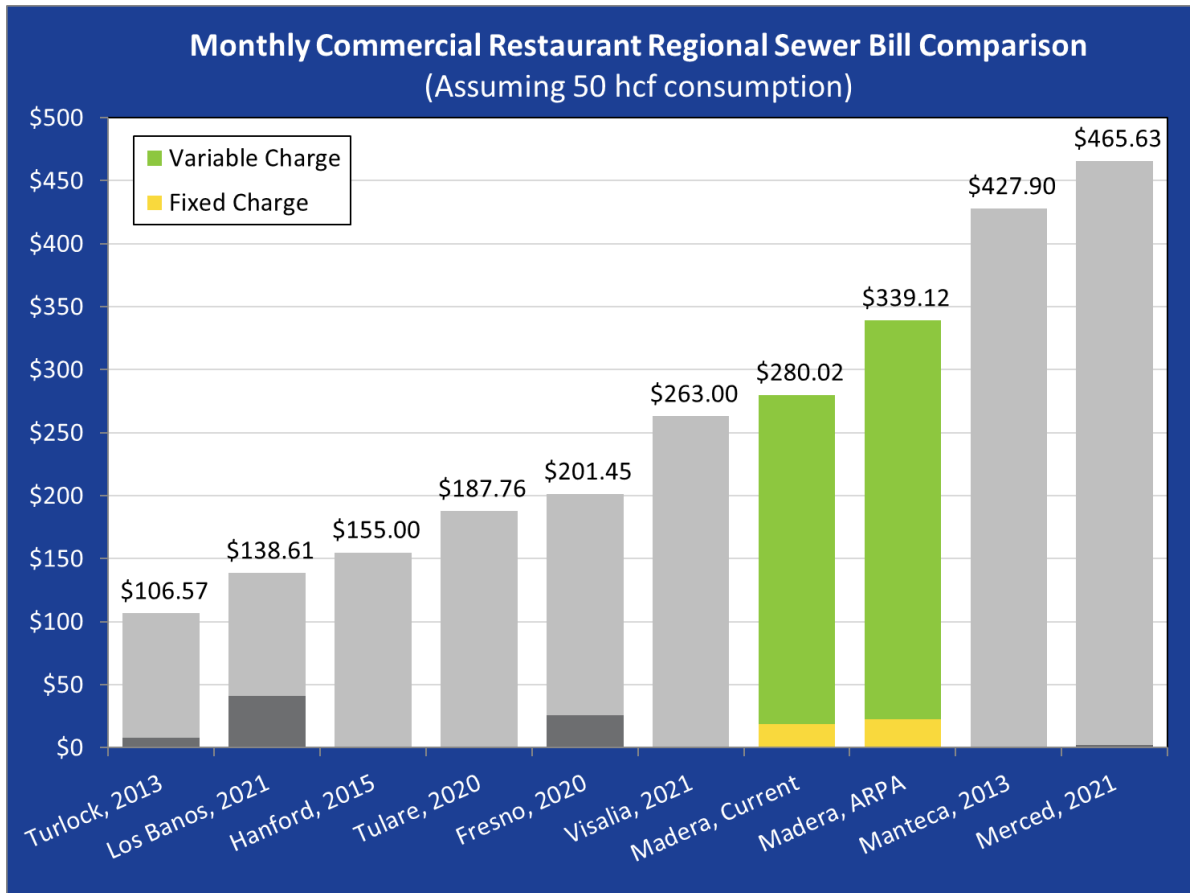


Figure 17. Restaurant Regional Bill Comparison



SECTION 3. RECOMMENDATIONS AND NEXT STEPS

A. Consultant Recommendations

NBS recommends the City take the following actions:

Approve and accept this Study: NBS recommends the City Council formally approve and adopt this Study and its recommendations and proceed with the steps required to implement the proposed rates to maintain current level of service and achieve the City’s strategic goals. This report will provide documentation of the rate study analyses and the basis for analyzing potential changes to future rates.

Implement Recommended Levels of Rate Adjustments and Proposed Rates: Based on successfully meeting the Proposition 218 procedural requirements, the City Council should proceed with implementing the 5-year schedule of proposed rates and rate adjustments previously shown in **Figure 10**. This will help ensure the continued financial health of City’s wastewater utility.

B. Next Steps

Annually Review Rates and Revenue – Any time an agency adopts new utility rates or rate structures, those new rates should be closely monitored over the next several years to ensure the revenue generated is sufficient to meet the annual revenue requirements. Changing economic and water consumption patterns underscore the need for this review, as well as potential and unseen changing revenue requirements—particularly those related to environmental regulations that can significantly affect capital improvements and repair and replacement costs.

Note: The attached Appendix provide more detailed information on the analysis of the wastewater revenue requirements, cost-of-service analysis and cost allocations, and the rate design analyses that have been summarized in this report.

C. NBS’ Principal Assumptions and Considerations

In preparing this report and the opinions and recommendations included herein, NBS has relied on a number of principal assumptions and considerations with regard to financial matters, conditions, and events that may occur in the future. This information and these assumptions, including City’s budgets, capital improvement costs, and information from City staff were provided by sources we believe to be reliable, although NBS has not independently verified this data.

While we believe NBS’ use of such information and assumptions is reasonable for the purpose of this report and its recommendations, some assumptions will invariably not materialize as stated herein and may vary significantly due to unanticipated events and circumstances. Therefore, the actual results can be expected to vary from those projected to the extent that actual future conditions differ from those assumed by us or provided to us by others.

Appendix: Detailed Wastewater Study Tables and Figures

TABLE 1 : FINANCIAL PLAN AND SUMMARY OF REVENUE REQUIREMENTS

5-Year Rate Period

RATE REVENUE REQUIREMENTS SUMMARY	Budgeted ¹	Projected					
	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Sources of Sewer Funds							
Sewer Rate Revenue:							
Sewer Rate Revenue Under Current Rates	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960
Revenue from Rate Increases	-	-	420,648	862,328	1,326,093	1,813,045	2,324,346
Subtotal: Rate Revenue After Rate Increases	\$ 8,412,960	\$ 8,412,960	\$ 8,833,608	\$ 9,275,288	\$ 9,739,053	\$ 10,226,005	\$ 10,737,306
Non-Rate Revenue:							
Septic Dump Income	\$ 310,641	\$ 310,641	\$ 310,641	\$ 310,641	\$ 310,641	\$ 310,641	\$ 310,641
Water Capital Fee	1,183	1,183	1,183	1,183	1,183	1,183	1,183
Other Fees	145,734	145,734	145,734	145,734	145,734	145,734	145,734
Refunds	1,864	1,864	1,864	1,864	1,864	1,864	1,864
Taxes & Licenses	87,300	87,300	87,300	87,300	87,300	87,300	87,300
Other Income	250,000	250,000	250,000	250,000	250,000	250,000	250,000
Interest Income	48,640	123,350	114,931	129,765	143,140	109,170	74,695
Subtotal: Non-Rate Revenue	\$ 845,362	\$ 920,072	\$ 911,653	\$ 926,487	\$ 939,862	\$ 905,892	\$ 871,417
Total Sources of Funds	\$ 9,258,322	\$ 9,333,032	\$ 9,745,261	\$ 10,201,776	\$ 10,678,915	\$ 11,131,897	\$ 11,608,723
Uses of Sewer Funds							
Operating Expenses:							
Salaries & Benefits	\$ 2,299,765	\$ 2,414,753	\$ 2,535,491	\$ 2,662,265	\$ 2,795,379	\$ 2,935,148	\$ 3,081,905
Materials & Services	1,563,847	1,626,583	1,691,992	1,760,194	1,831,315	1,905,484	1,982,840
Interfund Charges	1,208,145	1,208,145	1,208,145	1,208,145	1,208,145	1,208,145	1,208,145
Special Payments	717,137	752,994	790,644	830,176	871,685	915,269	961,032
Capital Outlay	14,085	14,494	14,915	15,348	15,795	16,255	16,729
Transfer Out	44,965	44,965	44,965	44,965	44,965	44,965	44,965
Subtotal: Operating Expenses	\$ 5,847,944	\$ 6,061,934	\$ 6,286,151	\$ 6,521,094	\$ 6,767,283	\$ 7,025,266	\$ 7,295,616
Other Expenditures:							
Existing Debt Service	\$ 2,534,738	\$ 2,532,336	\$ 2,533,048	\$ 2,527,048	\$ 2,529,375	\$ 2,530,647	\$ 2,540,150
New Debt Service	-	-	-	-	-	-	-
Rate-Funded Capital Expenses	1,090,000	-	-	-	120,852	2,228,762	1,826,517
Subtotal: Other Expenditures	\$ 3,624,738	\$ 2,532,336	\$ 2,533,048	\$ 2,527,048	\$ 2,650,227	\$ 4,759,409	\$ 4,366,667
Total Uses of Funds	\$ 9,472,682	\$ 8,594,270	\$ 8,819,199	\$ 9,048,142	\$ 9,417,510	\$ 11,784,675	\$ 11,662,283
Annual Surplus/(Deficit)	\$ (214,360)	\$ 738,762	\$ 926,062	\$ 1,153,634	\$ 1,261,405	\$ (652,777)	\$ (53,560)
Net Revenue Req't. (Total Uses less Non-Rate Rev.)	\$ 8,627,320	\$ 7,674,198	\$ 7,907,546	\$ 8,121,654	\$ 8,477,648	\$ 10,878,783	\$ 10,790,866
Projected Annual Rate Revenue Adjustment	0.00%	0.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Cumulative Increases	0.00%	0.00%	5.00%	10.25%	15.76%	21.55%	27.63%
Debt Coverage Ratio after Rate Increases	1.01	0.93	1.01	1.09	1.17	1.26	1.35

1. Revenue and expenses for FY 2020/21 are from source file: Enterprise Funds Budget 2020-21.pdf, pages 33-42.

TABLE 2: RESERVE FUND SUMMARY

SUMMARY OF CASH ACTIVITY UN-RESTRICTED RESERVES	5-Year Rate Period										
	Budgeted FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	Projected			
Total Beginning Cash²	\$ 7,526,796	\$ 8,127,754	\$ 7,986,232	\$ 9,100,643	\$ 9,942,500	\$ 7,441,175	\$ 4,900,197				
Sewer Operating Reserve Fund											
Beginning Reserve Balance	\$ 6,346,078	\$ 1,441,959	\$ 1,494,723	\$ 1,550,010	\$ 1,607,941	\$ 1,668,645	\$ 1,015,868	\$ 1,668,645	\$ 1,668,645	\$ 1,668,645	\$ 1,015,868
Plus: Net Cash Flow (After Rate Increases)	(214,360)	738,762	926,062	1,153,634	1,261,405	(652,777)	(53,560)	(652,777)	(652,777)	(652,777)	(53,560)
Less: Transfer Out to Capital Expenditure Reserve	(4,689,760)	(685,997)	(870,775)	(1,095,703)	(1,200,701)	(1,200,701)	-	-	-	-	-
Ending Operating Reserve Balance	\$ 1,441,959	\$ 1,494,723	\$ 1,550,010	\$ 1,607,941	\$ 1,668,645	\$ 1,015,868	\$ 962,307	\$ 1,015,868	\$ 1,015,868	\$ 1,015,868	\$ 962,307
Target Ending Balance (90-days of O&M) ³	\$ 1,441,959	\$ 1,494,723	\$ 1,550,010	\$ 1,607,941	\$ 1,668,645	\$ 1,732,257	\$ 1,798,919	\$ 1,732,257	\$ 1,732,257	\$ 1,732,257	\$ 1,798,919
Capital Outlay Reserve Fund											
Beginning Reserve Balance	\$ 500,000	\$ 5,189,760	\$ 4,684,382	\$ 5,426,629	\$ 6,087,784	\$ 4,200,701	\$ 3,000,000	\$ 4,200,701	\$ 4,200,701	\$ 4,200,701	\$ 3,000,000
Plus: Transfer In of Operating Reserve Surplus	4,689,760	685,997	870,775	1,095,703	1,200,701	-	-	1,200,701	-	-	-
Less: Use of Reserves for Capital Projects	-	(1,191,375)	(128,528)	(434,548)	(3,087,784)	(1,200,701)	-	(3,087,784)	(1,200,701)	(1,200,701)	-
Ending Capital Expenditure Reserve Balance	\$ 5,189,760	\$ 4,684,382	\$ 5,426,629	\$ 6,087,784	\$ 4,200,701	\$ 3,000,000	\$ 3,000,000	\$ 4,200,701	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000
Target Ending Balance (6% of Net Assets = ~\$3M) ⁴	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000
Ending Balance	\$ 6,631,719	\$ 6,179,106	\$ 6,976,639	\$ 7,695,725	\$ 5,869,346	\$ 4,015,868	\$ 3,962,307	\$ 5,869,346	\$ 4,015,868	\$ 4,015,868	\$ 3,962,307
Minimum Target Ending Balance	\$ 4,441,959	\$ 4,494,723	\$ 4,550,010	\$ 4,607,941	\$ 4,668,645	\$ 4,732,257	\$ 4,798,919	\$ 4,668,645	\$ 4,732,257	\$ 4,732,257	\$ 4,798,919
Ending Surplus (Deficit) Compared to Targets	\$ 2,189,760	\$ 1,684,382	\$ 2,426,629	\$ 3,087,784	\$ 1,200,701	\$ (716,390)	\$ (836,612)	\$ 1,200,701	\$ (716,390)	\$ (716,390)	\$ (836,612)

2. Beginning cash balance for the Sewer Fund is found in CAFR. Source File: FY-2019-2020-Comprehensive-Annual-Financial-Report.pdf, Page 42.

3. Updated beginning cash balance for FY 20/21 per comments from City 08.02.21.

3. NBS Recommends keeping the Operating Reserve Fund target at 90 days of operating and maintenance expenses. Source file: Rate Study 2015.pdf, Section 4.1.5, Page 42.

4. NBS recommends the target Capital Outlay Reserve to a minimum of 6% of net assets.

5-Year Rate Period

TABLE 3: RESERVE FUND SUMMARY

SUMMARY OF CASH ACTIVITY	Budgeted		Projected				
	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Restricted Reserves:							
Debt Service Reserve Fund							
Beginning Reserve Balance ⁵	\$ 680,718	\$ 680,718	\$ 693,379	\$ 706,276	\$ 719,413	\$ 732,794	\$ 746,424
Plus: Interest Earnings	-	12,661	12,897	13,137	13,381	13,630	13,883
Plus: Reserve Funding from New Debt Obligations	-	-	-	-	-	-	-
Ending Debt Reserve Balance	\$ 680,718	\$ 693,379	\$ 706,276	\$ 719,413	\$ 732,794	\$ 746,424	\$ 760,307
Target Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Development Impact Fee Reserve Fund							
Beginning Reserve Balance ⁶	\$ 692,053	\$ 815,318	\$ 1,113,747	\$ 1,417,727	\$ 1,527,362	\$ 839,035	\$ 137,906
Plus: Wastewater Dev. Impact Fee Revenues ⁷	283,264	283,264	283,264	283,264	283,264	283,264	283,264
Plus: Interest Earnings	-	15,165	20,716	26,370	28,409	15,606	2,565
Less: Transfer Out for Capacity-Related CIP Costs	(160,000)	-	-	(200,000)	(1,000,000)	(1,000,000)	-
Ending Capacity Reserve Fund Balance	\$ 815,318	\$ 1,113,747	\$ 1,417,727	\$ 1,527,362	\$ 839,035	\$ 137,906	\$ 423,735
Target Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Interest Earnings Rate⁸	0.00%	1.86%	1.86%	1.86%	1.86%	1.86%	1.86%

5. Beginning cash balance for Restricted Net Position in source file: FY-2019-2020-Comprehensive-Annual-Financial-Report.pdf, Page 42.
 6. Beginning fund balance for development impact fee funds 4083, 4084 and 4085 from City staff in source file: Water and Sewer DIF FB 7-1-20.xlsx
 7. Development impact fee revenue from current budget: FY-20-21-Adopted-Budget-City-of-Madera.pdf, page 349.
 8. District's actual or budgeted interest earnings are used in analysis for unrestricted reserves in FY 2020/21. For 2021/22 and beyond, interest earning rates are estimated at the 3-year average (FY '17/18 - '19/20) for funds invested in LAIF, per the California Treasurer's Office website, for the restricted reserves.
 Source: <https://www.treasurer.ca.gov/pmia-laif/historical/annual.asp>.

CHART 1

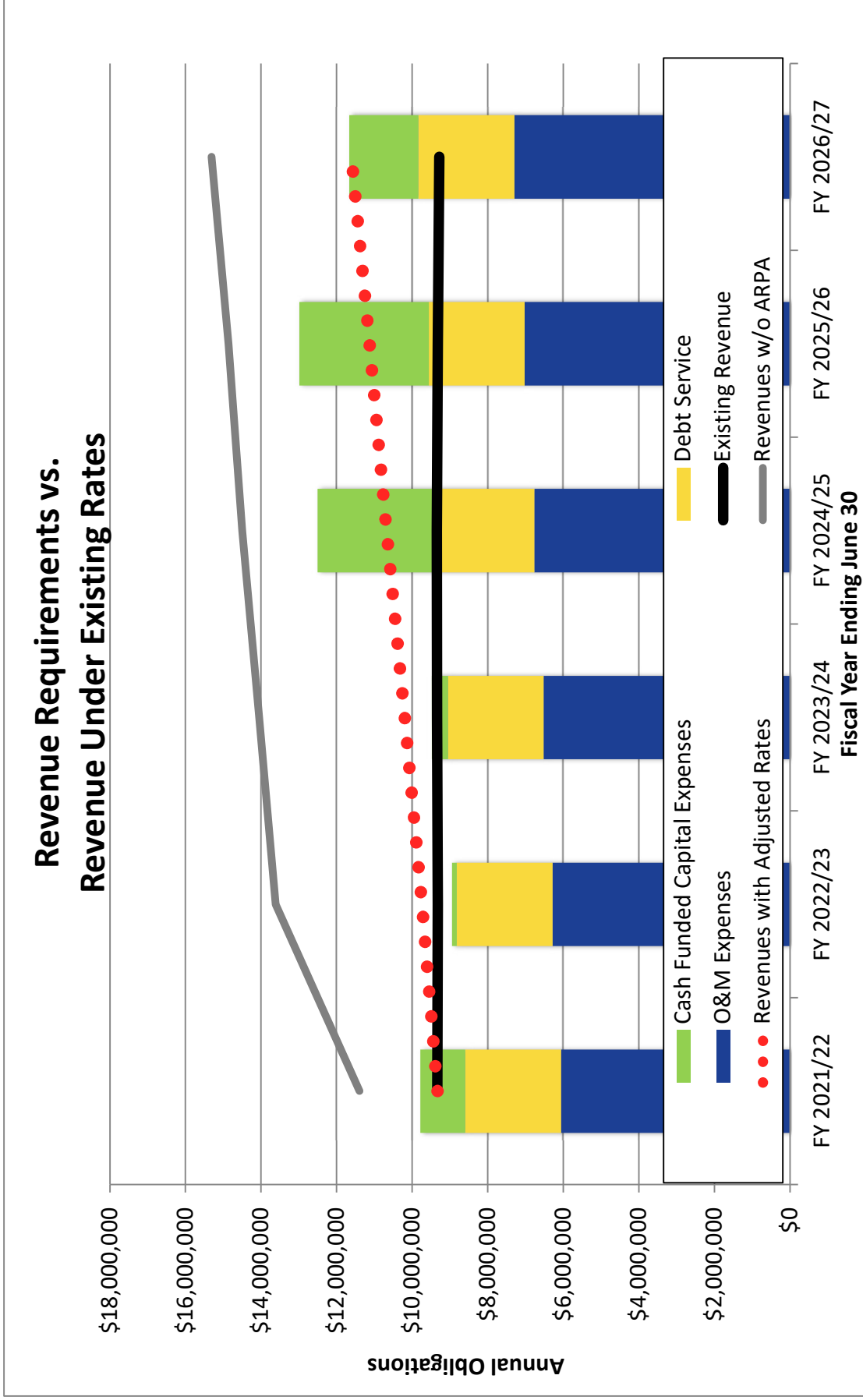
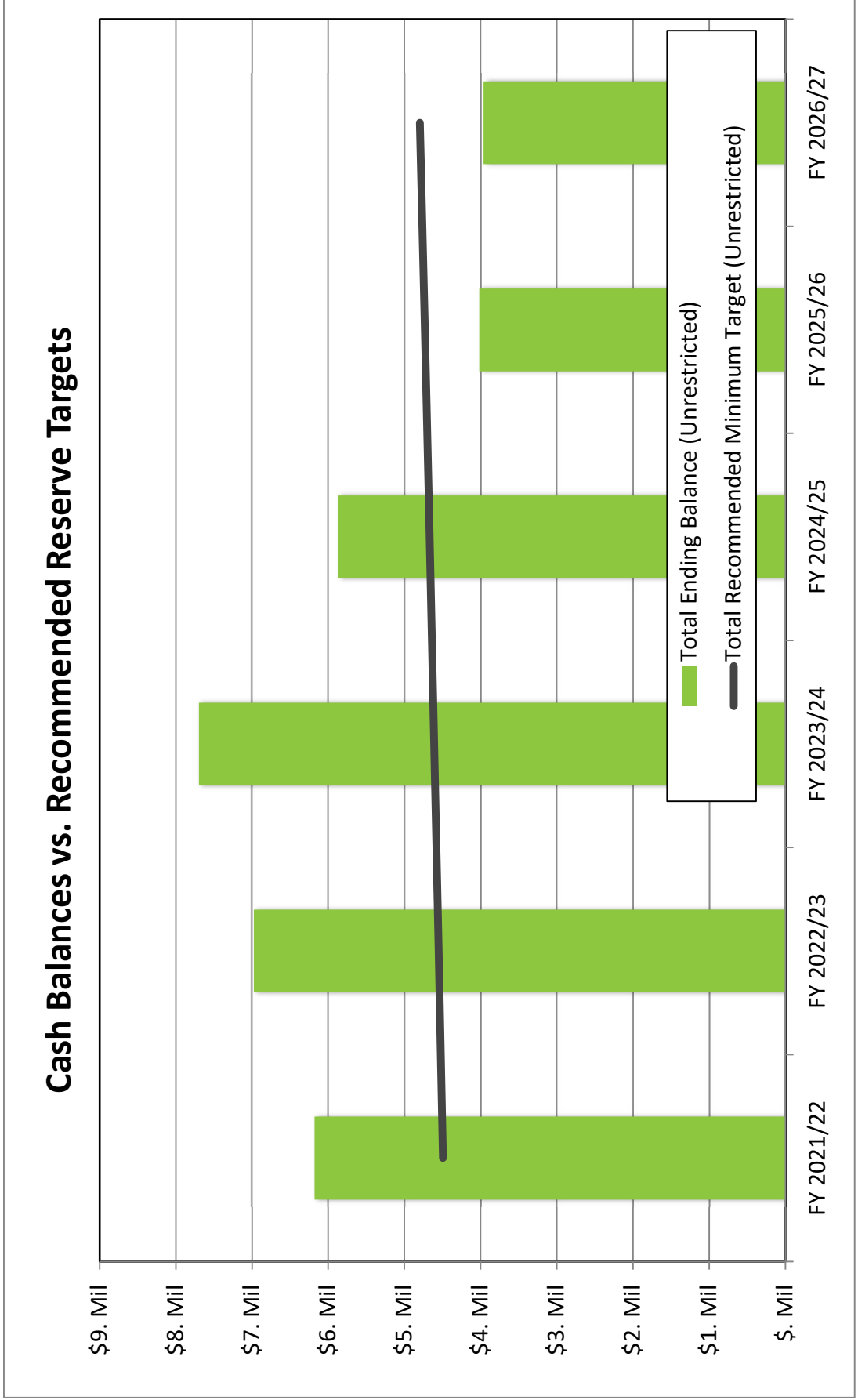
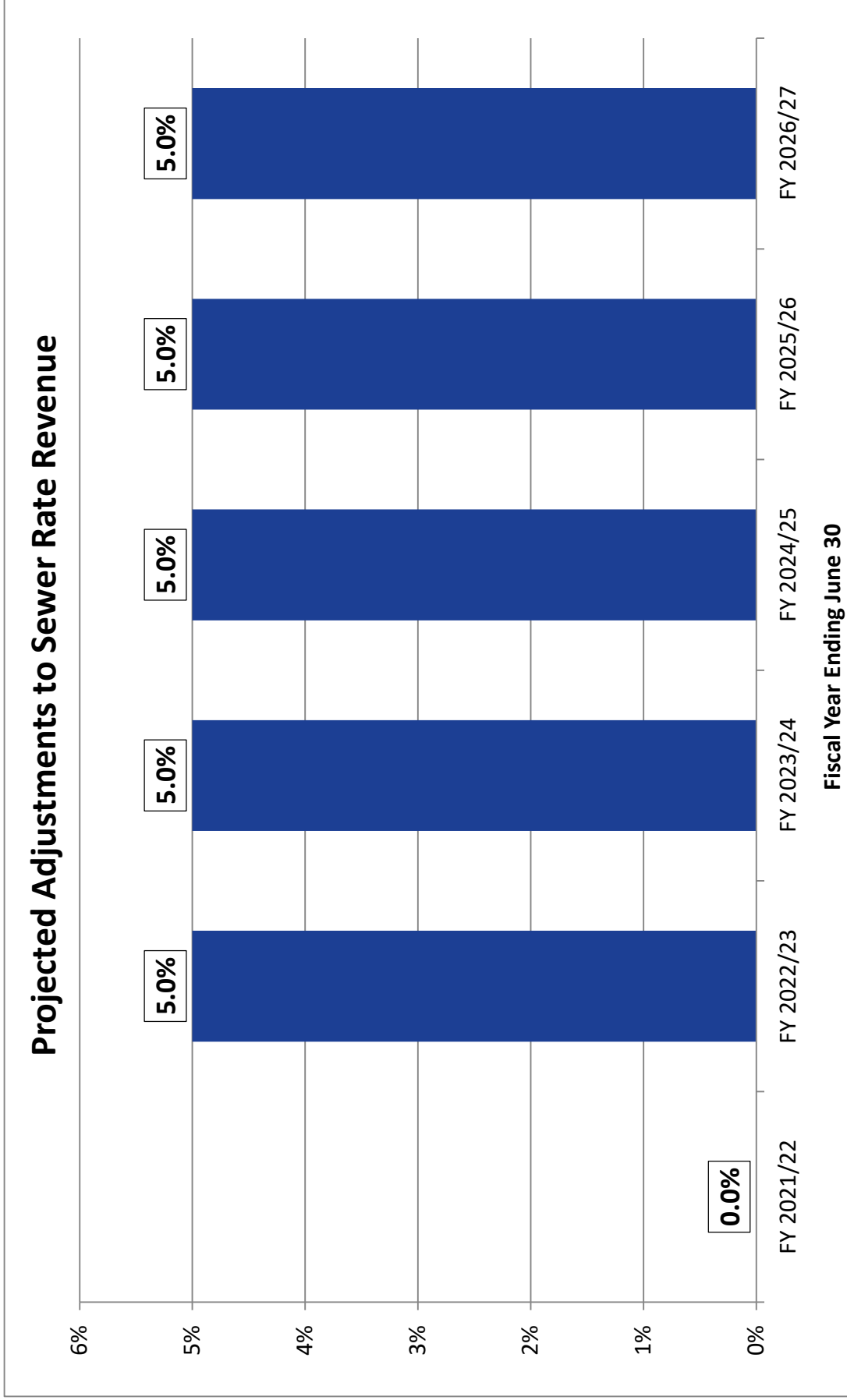


CHART 2



CITY OF MADERA
SEWER RATE STUDY
Rate Adjustment Charts and Report Tables

CHART 3



CITY OF MADERA
SEWER RATE STUDY
Operating Revenue and Expenses

TABLE 4 : REVENUE FORECAST¹

SOURCES OF REVENUE	Basis	Prop 218 Rate Period							
		Budget	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
SEWER FUND									
Taxes									
Current Secured Property Tax	1	\$ 87,300	\$ 87,300	\$ 87,300	\$ 87,300	\$ 87,300	\$ 87,300	\$ 87,300	\$ 87,300
Subtotal		\$ 87,300	\$ 87,300	\$ 87,300	\$ 87,300	\$ 87,300	\$ 87,300	\$ 87,300	\$ 87,300
Licenses & Permits									
Infrastructure Cost Payback	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fines & Forfeiture									
Late Payment/Other Penalty	1	\$ 145,734	\$ 145,734	\$ 145,734	\$ 145,734	\$ 145,734	\$ 145,734	\$ 145,734	\$ 145,734
Subtotal		\$ 145,734	\$ 145,734	\$ 145,734	\$ 145,734	\$ 145,734	\$ 145,734	\$ 145,734	\$ 145,734
Charges for Services									
Parkdale Sewer #3 User Fees	1	\$ 232,312	\$ 232,312	\$ 232,312	\$ 232,312	\$ 232,312	\$ 232,312	\$ 232,312	\$ 232,312
User Charges	1	8,180,648	8,180,648	8,180,648	8,180,648	8,180,648	8,180,648	8,180,648	8,180,648
Septic Dump Income	1	310,641	310,641	310,641	310,641	310,641	310,641	310,641	310,641
Waste Water Plant Capital Fee	1	1,183	1,183	1,183	1,183	1,183	1,183	1,183	1,183
Subtotal		\$ 8,724,784	\$ 8,724,784	\$ 8,724,784	\$ 8,724,784	\$ 8,724,784	\$ 8,724,784	\$ 8,724,784	\$ 8,724,784
Interest									
Interest Income ²	See FP	\$ 48,640	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal		\$ 48,640	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Gains & Proceeds									
Sale of Real & Personal Property	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Refunds									
Refunds & Reimbursements	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Collection Recovery	1	1,443	1,443	1,443	1,443	1,443	1,443	1,443	1,443
Subtotal		\$ 1,443	\$ 1,443	\$ 1,443	\$ 1,443	\$ 1,443	\$ 1,443	\$ 1,443	\$ 1,443
UTILITY BILLING & SEWER									
Refunds									
Refunds & Reimbursements	1	\$ 421	\$ 421	\$ 421	\$ 421	\$ 421	\$ 421	\$ 421	\$ 421
Subtotal		\$ 421	\$ 421	\$ 421	\$ 421	\$ 421	\$ 421	\$ 421	\$ 421
SEWER MAINTENANCE & OPERATIONS									
Non-Cash Capital Contribution									
Capital Contribution	7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

EXHIBIT 1

**CITY OF MADERA
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TABLE 5 : REVENUE FORECAST¹, continued

		Prop 218 Rate Period						
		Budget						
SOURCES OF REVENUE	Basis	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
WASTEWATER TREATMENT PLANT BOND ADMINISTRATION								
Transfers In								
Transfer-In	7	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000
Subtotal		\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ 250,000
GRAND TOTAL: SEWER REVENUE		\$ 9,258,322	\$ 9,209,682	\$ 9,209,682	\$ 9,209,682	\$ 9,209,682	\$ 9,209,682	\$ 9,209,682

TABLE 6 : SUMMARY OF REVENUES

		Prop 218 Rate Period						
		Budget						
REVENUE SUMMARY		FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
RATE REVENUE								
Sewer Rate Revenue		\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960	\$ 8,412,960
OTHER REVENUE:								
Septic Dump Income		310,641	310,641	310,641	310,641	310,641	310,641	310,641
Water Capital Fee		1,183	1,183	1,183	1,183	1,183	1,183	1,183
Other Fees		145,734	145,734	145,734	145,734	145,734	145,734	145,734
Refunds		1,864	1,864	1,864	1,864	1,864	1,864	1,864
Taxes & Licenses		87,300	87,300	87,300	87,300	87,300	87,300	87,300
Other Income		250,000	250,000	250,000	250,000	250,000	250,000	250,000
Interest Income ²		48,640	-	-	-	-	-	-
GRAND TOTAL: SEWER REVENUE		\$ 9,258,322	\$ 9,209,682	\$ 9,209,682	\$ 9,209,682	\$ 9,209,682	\$ 9,209,682	\$ 9,209,682

CITY OF MADERA
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TABLE 7 : OPERATING EXPENSE FORECAST^{1,3}

EXPENSES	Basis	Budget							Prop 218 Rate Period				
		FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27					
UTILITY BILLING & SEWER													
Salaries & Benefits													
Salaries/Full-Time	2	142,387	149,506	156,982	164,831	173,072	181,726	190,812					
Salaries/Part-Time	2	-	-	-	-	-	-	-					
Salaries/Overtime	2	-	-	-	-	-	-	-					
Salaries - Leave Payout	2	-	-	-	-	-	-	-					
Salaries - Auto & Expense Allo.	2	68	71	75	79	83	87	91					
Public Employees Retirement	3	16,404	17,224	18,085	18,990	19,939	20,936	21,983					
Long Term Disability Insurance	3	484	508	534	560	588	618	649					
Life Insurance Premiums	3	181	190	200	210	220	231	243					
Workers Compensation Insurance	3	12,488	13,112	13,768	14,456	15,179	15,938	16,735					
Medicare Tax - Employer's Share	3	2,054	2,157	2,265	2,378	2,497	2,621	2,753					
Unfunded Accrued Liability	3	25,629	26,910	28,256	29,669	31,152	32,710	34,345					
Deferred Comp/Part-Time	3	-	-	-	-	-	-	-					
Deferred Comp/Full-Time	3	4,988	5,237	5,499	5,774	6,063	6,366	6,684					
Unemployment Insurance	3	536	563	591	620	652	684	718					
Section 125 Benefit Allowance	3	40,627	42,658	44,791	47,031	49,382	51,851	54,444					
Subtotal		\$ 245,846	\$ 258,138	\$ 271,045	\$ 284,597	\$ 298,827	\$ 313,769	\$ 329,457					
Materials & Services													
Telephone & Fax Charges	3	4,000	4,200	4,410	4,631	4,862	5,105	5,360					
Advertising/Bids & Notices	3	250	263	276	289	304	319	335					
Office Supplies/Expendable	3	2,500	2,625	2,756	2,894	3,039	3,191	3,350					
Postage/Other Mailing Charge	3	20,000	21,000	22,050	23,153	24,310	25,526	26,802					
Vehicle Fuel, Supplies & Maintenance	5	375	394	413	434	456	479	503					
Contracted Services	3	15,000	15,750	16,538	17,364	18,233	19,144	20,101					
Bank Service Charges	3	7,500	7,875	8,269	8,682	9,116	9,572	10,051					
Conference/Training/Education	3	1,500	1,575	1,654	1,736	1,823	1,914	2,010					
Subtotal		\$ 51,125	\$ 53,681	\$ 56,365	\$ 59,184	\$ 62,143	\$ 65,250	\$ 68,512					
Interfund Charges													
Interfund Charges - Central Su.	7	2	2	2	2	2	2	2					
Interfund Charges - Admin Overhead	7	19,977	19,977	19,977	19,977	19,977	19,977	19,977					
Interfund Charges - Computer Maintenance	7	16,606	16,606	16,606	16,606	16,606	16,606	16,606					
Interfund Charges - Computer Replace.	7	3,743	3,743	3,743	3,743	3,743	3,743	3,743					
Interfund Charges - Motor Rental	7	1,485	1,485	1,485	1,485	1,485	1,485	1,485					
Subtotal		\$ 41,813	\$ 41,813	\$ 41,813	\$ 41,813	\$ 41,813	\$ 41,813	\$ 41,813					

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**CITY OF MADERA
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TABLE 8 : OPERATING EXPENSE FORECAST, cont.^{1,3}

EXPENSES	Basis	Prop 218 Rate Period									
		Budget	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27		
Special Payments											
OPEB Obligation Expense	3	\$ 825	\$ 866	\$ 910	\$ 955	\$ 1,003	\$ 1,053	\$ 1,106			
Pension Expense - GASB 68	3	<u>36,553</u>	<u>38,381</u>	<u>40,300</u>	<u>42,315</u>	<u>44,430</u>	<u>46,652</u>	<u>48,985</u>			
Subtotal		\$ 37,378	\$ 39,247	\$ 41,209	\$ 43,270	\$ 45,433	\$ 47,705	\$ 50,090			
Capital Outlay											
Vehicles & Equipment	4	<u>325</u>	<u>335</u>	<u>345</u>	<u>355</u>	<u>366</u>	<u>377</u>	<u>388</u>			
Subtotal		\$ 325	\$ 335	\$ 345	\$ 355	\$ 366	\$ 377	\$ 388			
Other Nonoperating Expense											
Bad Debt Expense	4	-	-	-	-	-	-	-			
Subtotal		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
Transfer Out											
Transfer Out - Insurance Reserve	7	<u>4,695</u>	<u>4,695</u>	<u>4,695</u>	<u>4,695</u>	<u>4,695</u>	<u>4,695</u>	<u>4,695</u>			
Subtotal		\$ 4,695	\$ 4,695	\$ 4,695	\$ 4,695	\$ 4,695	\$ 4,695	\$ 4,695			
Sub-Total: Utility Billing and Sewer		\$ 381,182	\$ 397,909	\$ 415,473	\$ 433,914	\$ 453,277	\$ 473,608	\$ 494,956			

TABLE 9 : OPERATING EXPENSE FORECAST, cont.^{1,3}

EXPENSES	Basis	Prop 218 Rate Period									
		Budget	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27		
SEWER MAINTENANCE & OPERATIONS											
Salaries & Benefits											
Salaries/Full-Time	2	\$ 404,092	\$ 424,297	\$ 445,511	\$ 467,787	\$ 491,176	\$ 515,735	\$ 541,522			
Salaries/Part-Time	2	-	-	-	-	-	-	-			
Salaries/Overtime	2	6,000	6,300	6,615	6,946	7,293	7,658	8,041			
Salaries - Uniform Pay	2	1,150	1,208	1,268	1,331	1,398	1,468	1,541			
Public Employees Retirement	3	55,156	57,914	60,809	63,850	67,042	70,395	73,914			
Long Term Disability Insurance	3	1,332	1,399	1,469	1,542	1,619	1,700	1,785			
Life Insurance Premiums	3	509	534	561	589	619	650	682			
Workers Compensation Insurance	3	38,999	40,949	42,996	45,146	47,404	49,774	52,262			
Medicare Tax - Employer's Share	3	6,288	6,602	6,933	7,279	7,643	8,025	8,427			
Unfunded Accrued Liability	3	89,938	94,435	99,157	104,114	109,320	114,786	120,526			
Deferred Comp/Part-Time	3	-	-	-	-	-	-	-			
Deferred Comp/Full-Time	3	15,380	16,149	16,956	17,804	18,694	19,629	20,611			
Unemployment Insurance	3	1,711	1,797	1,886	1,981	2,080	2,184	2,293			
Section 125 Benefit Allowance	3	82,026	86,127	90,434	94,955	99,703	104,688	109,923			
Subtotal		\$ 702,581	\$ 737,710	\$ 774,596	\$ 813,325	\$ 853,992	\$ 896,691	\$ 941,526			

CITY OF MADERA
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EXPENSES		Basis	Prop 218 Rate Period									
			Budget	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27		
Materials & Services												
	Gas & Electric Utilities	6	\$ 34,000	\$ 35,700	\$ 37,485	\$ 39,359	\$ 41,327	\$ 43,394	\$ 45,563			
	Telephone & Fax Charges	4	5,000	5,150	5,305	5,464	5,628	5,796	5,970			
	Advertising/Bids & Notices	4	1,500	1,545	1,591	1,639	1,688	1,739	1,791			
	Office Supplies/Expendable	4	3,000	3,090	3,183	3,278	3,377	3,478	3,582			
	Vehicle Fuel, Supplies & Maintenance	5	18,500	19,425	20,396	21,416	22,487	23,611	24,792			
	Contracted Services	4	25,000	25,750	26,523	27,318	28,138	28,982	29,851			
	Taxes & Assessments	4	12,000	12,360	12,731	13,113	13,506	13,911	14,329			
	Conference/Training/Education	4	4,300	4,429	4,562	4,699	4,840	4,985	5,134			
	Maintenance/Other Supplies	4	60,000	61,800	63,654	65,564	67,531	69,556	71,643			
	Subtotal		\$ 163,300	\$ 169,249	\$ 175,429	\$ 181,849	\$ 188,520	\$ 195,452	\$ 202,656			
Interfund Charges												
	Interfund Charges - Facility Maintenance	7	\$ 70,859	\$ 70,859	\$ 70,859	\$ 70,859	\$ 70,859	\$ 70,859	\$ 70,859			
	Interfund Charges - Central Su.	7	6,055	6,055	6,055	6,055	6,055	6,055	6,055			
	Interfund Charges - Cost Distr.	7	112,903	112,903	112,903	112,903	112,903	112,903	112,903			
	Interfund Charges - Admin Overhead	7	75,406	75,406	75,406	75,406	75,406	75,406	75,406			
	Interfund Charges - Vehicle Replacement	7	95,025	95,025	95,025	95,025	95,025	95,025	95,025			
	Interfund Charges - Vehicle Maintenance	7	48,931	48,931	48,931	48,931	48,931	48,931	48,931			
	Interfund Charges - Computer Maintenance	7	28,277	28,277	28,277	28,277	28,277	28,277	28,277			
	Interfund Charges - Computer Replace.	7	6,233	6,233	6,233	6,233	6,233	6,233	6,233			
	Interfund Charges - Software	7	131	131	131	131	131	131	131			
	Interfund Charges - Motor Rental	7	5,007	5,007	5,007	5,007	5,007	5,007	5,007			
	Subtotal		\$ 448,827	\$ 448,827	\$ 448,827	\$ 448,827	\$ 448,827	\$ 448,827	\$ 448,827			
Special Payments												
	Liability/Property Insurance	3	\$ 27,894	\$ 29,289	\$ 30,753	\$ 32,291	\$ 33,905	\$ 35,601	\$ 37,381			
	Retiree Insurance Premiums	3	1,994	2,094	2,198	2,308	2,424	2,545	2,672			
	OPEB Obligation Expense	3	22,696	23,831	25,022	26,273	27,587	28,966	30,415			
	Pension Expense - GASB 68	3	104,245	109,457	114,930	120,677	126,710	133,046	139,698			
	Subtotal		\$ 156,829	\$ 164,670	\$ 172,904	\$ 181,549	\$ 190,627	\$ 200,158	\$ 210,166			
Capital Outlay												
	Vehicles & Equipment	7	\$ 461	\$ 461	\$ 461	\$ 461	\$ 461	\$ 461	\$ 461			
	Subtotal		\$ 461	\$ 461	\$ 461	\$ 461	\$ 461	\$ 461	\$ 461			
Transfer Out												
	Transfer Out - Insurance Reserve	7	\$ 14,001	\$ 14,001	\$ 14,001	\$ 14,001	\$ 14,001	\$ 14,001	\$ 14,001			
	Subtotal		\$ 14,001	\$ 14,001	\$ 14,001	\$ 14,001	\$ 14,001	\$ 14,001	\$ 14,001			
	Sub-Total: Sewer Maintenance & Operations		\$ 1,485,999	\$ 1,534,919	\$ 1,586,217	\$ 1,640,013	\$ 1,696,428	\$ 1,755,590	\$ 1,817,637			
Depreciation (Non-cash item left out of analysis)⁴												
	Depreciation	7	\$ 33,268	\$ 33,268	\$ 33,268	\$ 33,268	\$ 33,268	\$ 33,268	\$ 33,268			
	Subtotal		\$ 33,268	\$ 33,268	\$ 33,268	\$ 33,268	\$ 33,268	\$ 33,268	\$ 33,268			

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TABLE 11 : OPERATING EXPENSE FORECAST, cont.^{1,3}

EXPENSES	Basis	Prop 218 Rate Period										
		FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	Budget			
WATER WASTE TREATMENT PLANT												
Salaries & Benefits												
Salaries/Full-Time	2	\$ 804,350	\$ 844,568	\$ 886,796	\$ 931,136	\$ 977,692	\$ 1,026,577	\$ 1,077,906				
Salaries/Part-Time	2	-	-	-	-	-	-	-				
Salaries/Overtime	2	15,000	15,750	16,538	17,364	18,233	19,144	20,101				
Salaries - Leave Payout	2	-	-	-	-	-	-	-				
Salaries - Uniform Pay	2	1,400	1,470	1,544	1,621	1,702	1,787	1,876				
Public Employees Retirement	3	95,222	99,983	104,982	110,231	115,743	121,530	127,607				
Long Term Disability Insurance	3	2,283	2,397	2,517	2,643	2,775	2,914	3,059				
Life Insurance Premiums	3	838	880	924	970	1,019	1,070	1,123				
Workers Compensation Insurance	3	77,919	81,815	85,906	90,201	94,711	99,447	104,419				
Medicare Tax - Employer's Share	3	12,405	13,025	13,677	14,360	15,078	15,832	16,624				
Unfunded Accrued Liability	3	140,106	147,111	154,467	162,190	170,300	178,815	187,755				
Deferred Comp/Part-Time	3	-	-	-	-	-	-	-				
Deferred Comp/Full-Time	3	28,199	29,609	31,089	32,644	34,276	35,990	37,789				
Unemployment Insurance	3	2,625	2,756	2,894	3,039	3,191	3,350	3,518				
Section 125 Benefit Allowance	3	170,991	179,541	188,518	197,943	207,841	218,233	229,144				
Subtotal		\$ 1,351,338	\$ 1,418,905	\$ 1,489,850	\$ 1,564,343	\$ 1,642,560	\$ 1,724,688	\$ 1,810,922				
Materials & Services												
Gas & Electric Utilities	6	\$ 671,410	\$ 704,981	\$ 740,230	\$ 777,241	\$ 816,103	\$ 856,908	\$ 899,754				
Telephone & Fax Charges	4	7,500	7,725	7,957	8,195	8,441	8,695	8,955				
Advertising/Other	4	12,510	12,885	13,272	13,670	14,080	14,503	14,938				
Office Supplies/Expendable	4	3,500	3,605	3,713	3,825	3,939	4,057	4,179				
Mileage Reimbursements	4	502	517	533	549	565	582	599				
Vehicle Fuel, Supplies & Maintenance	5	16,000	16,800	17,640	18,522	19,448	20,421	21,442				
Contracted Services	4	312,000	321,360	331,001	340,931	351,159	361,694	372,544				
Taxes & Assessments	4	41,000	42,230	43,497	44,802	46,146	47,530	48,956				
Conference/Training/Education	4	15,000	15,450	15,914	16,391	16,883	17,389	17,911				
Maintenance/Other Supplies	4	270,000	278,100	286,443	295,036	303,887	313,004	322,394				
Subtotal		\$ 1,349,422	\$ 1,403,653	\$ 1,460,198	\$ 1,519,161	\$ 1,580,651	\$ 1,644,782	\$ 1,711,672				
Interfund Charges												
Interfund Charges - Facility Maintenance	7	\$ 180,641	\$ 180,641	\$ 180,641	\$ 180,641	\$ 180,641	\$ 180,641	\$ 180,641				
Interfund Charges - Central Su.	7	2,677	2,677	2,677	2,677	2,677	2,677	2,677				
Interfund Charges - Admin Overhead	7	365,815	365,815	365,815	365,815	365,815	365,815	365,815				
Interfund Charges - Vehicle Replacement	7	70,708	70,708	70,708	70,708	70,708	70,708	70,708				
Interfund Charges - Vehicle Maintenance	7	64,251	64,251	64,251	64,251	64,251	64,251	64,251				
Interfund Charges - Computer Maintenance	7	26,810	26,810	26,810	26,810	26,810	26,810	26,810				
Interfund Charges - Computer Replace.	7	5,821	5,821	5,821	5,821	5,821	5,821	5,821				
Interfund Charges - Software	7	782	782	782	782	782	782	782				
Subtotal		\$ 717,505	\$ 717,505	\$ 717,505	\$ 717,505	\$ 717,505	\$ 717,505	\$ 717,505				

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SEWER RATE STUDY
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EXPENSES		Prop 218 Rate Period							
		Basis	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Special Payments									
Liability/Property Insurance	3	\$ 305,799	\$ 321,089	\$ 337,143	\$ 354,001	\$ 371,701	\$ 390,286	\$ 409,800	
OPEB Obligation Expense	3	28,676	30,110	31,615	33,196	34,856	36,599	38,429	
Pension Expense - GASB 68	3	188,455	197,878	207,772	218,160	229,068	240,522	252,548	
Subtotal		\$ 522,930	\$ 549,077	\$ 576,530	\$ 605,357	\$ 635,625	\$ 667,406	\$ 700,776	
Capital Outlay									
Vehicles & Equipment	4	\$ 13,299	\$ 13,698	\$ 14,109	\$ 14,532	\$ 14,968	\$ 15,417	\$ 15,880	
Subtotal		\$ 13,299	\$ 13,698	\$ 14,109	\$ 14,532	\$ 14,968	\$ 15,417	\$ 15,880	
Transfer Out									
Transfer Out - Insurance Reserve	7	\$ 26,269	\$ 26,269	\$ 26,269	\$ 26,269	\$ 26,269	\$ 26,269	\$ 26,269	
Subtotal		\$ 26,269	\$ 26,269	\$ 26,269	\$ 26,269	\$ 26,269	\$ 26,269	\$ 26,269	
Sub-Total: Water Waste Treatment Plant			\$ 3,980,763	\$ 4,129,106	\$ 4,284,461	\$ 4,447,167	\$ 4,617,578	\$ 4,796,067	\$ 4,983,024
Depreciation (Non-cash item left out of analysis)⁴									
Depreciation	7	\$ 22,522	\$ 22,522	\$ 22,522	\$ 22,522	\$ 22,522	\$ 22,522	\$ 22,522	
Subtotal		\$ 22,522	\$ 22,522	\$ 22,522	\$ 22,522	\$ 22,522	\$ 22,522	\$ 22,522	
GRAND TOTAL: SEWER OPERATING EXPENSES			\$ 5,847,944	\$ 6,061,934	\$ 6,286,151	\$ 6,521,094	\$ 6,767,283	\$ 7,025,266	\$ 7,295,616
<i>Net Income</i>			\$ 3,410,378	\$ 3,147,748	\$ 2,923,531	\$ 2,688,588	\$ 2,442,399	\$ 2,184,416	\$ 1,914,066

EXHIBIT 1

**CITY OF MADERA
SEWER RATE STUDY
Operating Revenue and Expenses**

TABLE 13 : FORECASTING ASSUMPTIONS³

INFLATION FACTORS	Basis	Prop 218 Rate Period						
		Budget FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Customer Growth	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Salaries	2	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Benefits	3	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
General Inflation	4	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Fuel	5	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Electricity	6	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
No Escalation	7	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

1. Revenue and expenses for FY 2019/20 through FY 2020/21 are from source file: *Enterprise Funds Budget 2020-21.pdf*, pages 33-42.

2. Interest income is calculated in the Financial Plan and excluded from this table.

3. Inflation factor values follow previous assumptions from 2015 Rate Study.

Source file: *Rate Study 2015.pdf*, Table 1-1, Page 12.

4. Depreciation expense is not considered in this projection since it is not a cash expense.

CITY OF MADERA
SEWER RATE STUDY
Capital Improvement Plan Expenditures

EXHIBIT 2

TABLE 14 : CAPITAL FUNDING SUMMARY

CAPITAL FUNDING FORECAST	Budget		Projected										
	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	
Funding Sources:													
Use of Development Impact Fee Reserve Fund ¹	\$ 160,000	\$ -	\$ -	\$ 200,000	\$ 1,000,000	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -
Use of American Rescue Plan Proceeds ²	2,089,500	5,630,000	2,020,000	1,600,000	4,660,500	-	-	-	-	-	-	-	-
Use of Capital Expenditure Reserve Fund	-	1,191,375	128,528	434,548	3,087,784	1,200,701	-	-	-	-	-	-	-
Rate Revenue	1,090,000	-	-	-	120,852	2,228,762	-	-	-	-	-	-	-
Total Sources of Capital Funds	\$ 3,339,500	\$ 6,821,375	\$ 2,148,528	\$ 2,234,548	\$ 8,869,137	\$ 4,429,463	\$ 1,826,517	\$ 2,148,528	\$ 2,234,548	\$ 8,869,137	\$ 4,429,463	\$ 1,826,517	\$ 1,826,517

- DIF reserve fund contributions from source: Sewer CIP ARPA.xlsx, with ARPA funding taken into account for eligible projects. These amounts keep DIF fund in financial plan from going negative.
- The City was awarded American Rescue Plan Act funds in which \$16 million is allocated to wastewater capital projects.

CITY OF MADERA
SEWER RATE STUDY
Capital Improvement Plan Expenditures

CAPITAL IMPROVEMENT PROGRAM

TABLE 15 : CAPITAL IMPROVEMENT PROGRAM COSTS (IN CURRENT-YEAR DOLLARS)^{3,4}

Project Description	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
GL ORG: 20403420							
CCTV Program				\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
SSMP Update Every 5 years - next is 2024	25,000	25,000	25,000	25,000	25,000	25,000	25,000
SS-00000 Engineering Support for Sewer Projects							
6804							
S-VI-002 -Sewer Line Video Inspection Services	100,000	695,000					
S-VI-002 -Sewer Line Video Inspection Services - Phase II				300,000			
Master Plan Update							
7030							
SS-00006 -Fairgrounds Lift Station	574,500						
SS-00010 -Airport Lift Station Pumps Replacement	150,000						
SS-00007 Airport Lift Station Force Main Study	20,000						
South Street Lift Station Recommendations		50,000	120,000				
North Airport Lift Station Recommendations							
7050							
S-STDY-1 -Sewer System Cond. Assess/Rehab	180,000						
S-STDY-2 Asset Management Software	75,000						
SS-00012 - Doubletree Sewer Laterals	325,000						
SS-00009 2018 Sewer Main Repair/Rehab Priority Lines	495,000	500,000					
SS-00008 2018 Sewer Manhole Restoration/Rehab	45,000	105,000					
SS-00014 - Avenue 13 Interceptor Sewer	400,000	5,000,000			2,900,000		
SS-00011 -Mainberry btwn Howard & Sunset Relocate	450,000	80,000					
S-000012-Schnoor Ave. Trunk Sewer System			500,000				
-Annual Depreciation Repair 1% of system per year			1,400,000	1,400,000	1,400,000	1,400,000	1,400,000
Wastewater Treatment Plant							
WWTP20-01 WDR Permit Renewal Project	500,000						
CV Salts Compliance							
WWTP 10.1 mgd Permit Requirements		200,000					
WWTP Nitrification/Denitrification							
WWTP Name Plate Deficiency - Influent Lift Station Expansion					260,000	2,340,000	
WWTP Sludge Thickener Class B Solids or digester				200,000	3,300,000		
NexGen Maintenance Management Program							
Data Recording and Back-up							
Future Projects⁴							
Total: CIP Program Costs (Current-Year Dollars)	\$ 3,339,500	\$ 6,655,000	\$ 2,045,000	\$ 2,075,000	\$ 8,035,000	\$ 3,915,000	\$ 1,575,000

3. CIP expenses found in source files: Sewer CIP ARPA.xlsx

4. Future projects, beyond FY2030/31 are estimated at the average of rate-funded capital projects in FY 2020/21-2031/32.

EXHIBIT 2

CITY OF MADERA
SEWER RATE STUDY
Capital Improvement Plan Expenditures

TABLE 16 : CAPITAL IMPROVEMENT PROGRAM COSTS (IN FUTURE-YEAR DOLLARS), CONTINUED

Project Description	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
GL ORG: 20403420							
CCTV Program	\$ -	\$ -	\$ -	\$ 161,534	\$ 165,572	\$ 169,711	\$ 173,954
SSMP Update Every 5 years - next is 2024	-	-	-	-	-	-	-
SS-00000 Engineering Support for Sewer Projects	25,000	25,625	26,266	26,922	27,595	28,285	28,992
6804							
S-VI-002 -Sewer Line Video Inspection Services	100,000	-	-	-	-	-	-
S-VI-002 -Sewer Line Video Inspection Services - Phase II	-	712,375	-	-	-	-	-
Master Plan Update	-	-	-	323,067	-	-	-
7030							
SS-00006 -Fairgrounds Lift Station	574,500	-	-	-	-	-	-
SS-00010 -Airport Lift Station Pumps Replacement	150,000	-	-	-	-	-	-
SS-00007 Airport Lift Station Force Main Study	20,000	-	-	-	-	-	-
South Street Lift Station Recommendations	-	-	126,075	-	-	-	-
North Airport Lift Station Recommendations	-	51,250	-	-	-	-	-
7050							
S-STDY-1 -Sewer System Cond. Assess/Rehab	180,000	-	-	-	-	-	-
S-STDY-2 Asset Management Software	75,000	-	-	-	-	-	-
SS-00012 - Doubletree Sewer Laterals	325,000	-	-	-	-	-	-
SS-00009 2018 Sewer Main Repair/Rehab Priority Lines	495,000	512,500	-	-	-	-	-
SS-00008 2018 Sewer Manhole Restoration/Rehab	45,000	107,625	-	-	-	-	-
SS-00014 - Avenue 13 Interceptor Sewer	400,000	5,125,000	-	-	3,201,057	-	-
SS-00011 -Mainberry btwn Howard & Sunset Relocate	450,000	-	-	-	-	-	-
S-000012-Schnoor Ave. Trunk Sewer System	-	82,000	525,313	-	-	-	-
-Annual Depreciation Repair 1% of system per year	-	-	1,470,875	1,507,647	1,545,338	1,583,971	1,623,571
Wastewater Treatment Plant							
WWTP20-01 WDR Permit Renewal Project	500,000	-	-	-	-	-	-
CV Salts Compliance	-	-	-	-	-	-	-
WWTP 10.1 mgd Permit Requirements	-	205,000	-	-	-	-	-
WWTP Nitrification/Denitrification	-	-	-	-	-	-	-
WWTP Name Plate Deficiency - Influent Lift Station Expansion	-	-	-	-	286,991	2,647,495	-
WWTP Sludge Thickener Class B Solids or digester	-	-	-	215,378	3,642,583	-	-
NexGen Maintenance Management Program	-	-	-	-	-	-	-
Data Recording and Back-up	-	-	-	-	-	-	-
Future Projects ⁴							
Total: CIP Program Costs (Future-Year Dollars)	\$ 3,339,500	\$ 6,821,375	\$ 2,148,528	\$ 2,234,548	\$ 8,869,137	\$ 4,429,463	\$ 1,826,517

4. Future projects, beyond FY2030/31 are estimated at the average of rate-funded capital projects in FY 2020/21-2031/32.

CITY OF MADERA
SEWER RATE STUDY
Capital Improvement Plan Expenditures

EXHIBIT 2

TABLE 17 : FORECASTING ASSUMPTIONS

Economic Variables	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
Annual Construction Cost Inflation, Per Engineering News Record ⁵	0.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Cumulative Construction Cost Multiplier from FY 2020/21	1.00	1.03	1.05	1.08	1.10	1.13	1.16

5. Construction inflator is based on the most current 10 year average of the Engineering News-Record Construction Cost Index.
Source: www.enr.com/economics (August 2010 to August 2020).

TABLE 18 : EXISTING DEBT OBLIGATIONS

CURRENT DISTRICT DEBT OBLIGATIONS									
Annual Repayment Schedules:	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27		
<u>2015 Wastewater Revenue Bonds (\$28,8115,000)¹</u>									
Principal Payment	\$ 1,120,000	\$ 1,165,000	\$ 1,210,000	\$ 1,250,000	\$ 1,300,000	\$ 1,350,000	\$ 1,400,000		
Interest Payment	886,150	844,710	801,605	756,835	710,585	662,485	612,535		
Subtotal: Annual Debt Service	\$ 2,006,150	\$ 2,009,710	\$ 2,011,605	\$ 2,006,835	\$ 2,010,585	\$ 2,012,485	\$ 2,012,535		
Coverage Requirement (\$-Amnt above annual payment)	120%	120%	120%	120%	120%	120%	120%		
Reserve Requirement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
<u>2021 BBVA Loan (\$10,000,000) - Refinanced²</u>									
Principal Payment	\$ 331,996	\$ 372,000	\$ 379,000	\$ 387,000	\$ 395,000	\$ 404,000	\$ 396,651		
Interest Payment	196,592	150,626	142,443	133,213	123,790	114,162	130,963		
Subtotal: Annual Debt Service	\$ 528,588	\$ 522,626	\$ 521,443	\$ 520,213	\$ 518,790	\$ 518,162	\$ 527,615		
Coverage Requirement (\$-Amnt above annual payment)	120%	120%	120%	120%	120%	120%	120%		
Reserve Requirement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		

1. 2015 Wastewater Revenue Bonds refund the 2006 Wastewater Revenue Bonds. Source files: *Wastewater_Refunding 2015 Amortization Schedule.pdf*, *Wastewater_Refunding 2015*
2015 wastewater refunding bond is due to mature in 2036.

2. 2021 BBVA Loan issued 02/01/2021. Loan refinanced and prop 218 rate period debt service updated per City notes 05-05-21.

TABLE 19 : EXISTING ANNUAL DEBT OBLIGATIONS TO BE SATISFIED BY SEWER RATES

<i>Existing Annual Debt Service</i>	\$ 2,534,738	\$ 2,532,336	\$ 2,533,048	\$ 2,527,048	\$ 2,529,375	\$ 2,530,647	\$ 2,540,150
<i>Existing Annual Coverage Requirement</i>	1.20	1.20	1.20	1.20	1.20	1.20	1.20
<i>Existing Debt Reserve Target</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

EXHIBIT 4

**CITY OF MADERA
SEWER RATE STUDY
Projected Water Rates Under Existing Rate Schedule**

TABLE 20 : CURRENT SEWER RATE SCHEDULE

Current Monthly Sewer Service Fee ¹		FYE 2020
Residential Flat Rates	Monthly Fixed Charge	\$42.75
Multi-Residential Rates	Monthly Fixed Charge	\$27.77
Non-Residential Rates	Monthly Fixed Service Charge	\$19.02
Non Residential Discharge Rates	CAR DLR & Dept/Ret Game	\$2.30 \$3.46
	GROC/MOR	\$5.04
	HOSP/CON	\$2.28
	HOTEL/WO	\$2.28
	LIB/CHUR	\$2.25
	Lt. Manufacturing	\$3.51
	PROF BLD	\$2.28
	RESTAURANT	\$5.22
	SCHOOLS	\$2.38
	STRP/MAL	\$3.52
	WRHSE	\$3.51
Non-Metered Non Residential Flat Rates	SEWER USE/BLDG/1000	\$19.01
CAR DLR & Dept/Ret	SEWER USE/BAYS	\$16.45
CAR SERV	SEWER USE/BLDG/1000	\$57.63
Game	SEWER USE/BLDG/1000	\$33.80
GROC/MOR	SEWER USE/BEDS	\$15.83
HOSP/CON	SEWER USE/ROOMS	\$35.15
HOTEL/W	SEWER USE/ROOMS	\$20.59
HOTEL/WO	SEWER USE/SEATING	\$0.50
LIB/CHUR	SEWER USE/SEATING	\$0.12
OPN/AIR	SEWER USE/BLDG/1000	\$38.02
PROF BLD	SEWER USE/SEATING	\$7.02
REST IN	SEWER USE/BLDG/1000	\$70.22
REST OUT	SEWER USE/STUDENTS	\$1.58
SCHOOLS	SEWER USE/BLDG/1000	\$41.16
STRP/MAL	SEWER USE/BLDG/1000	\$2.55
WRHSE		
High Industrial User Rates²	Rate per MG of Flow	\$1,234.50
	Rate per 1,000 lbs. of BOD	\$410.00
	Rate per 1,000 lbs. of TSS	\$340.00

1. Sewer rates for fiscal year ending 2020 are found in source file: 2142_001 Sewer Rates 2016-2020.pdf.
2. The City currently does not have high industrial users, however these will be the applicable charges.

TABLE 21 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses ¹		Total Revenue	Flow	Strength		Customer	Basis of Classification			
Budget Categories		FY 2024/25	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Sewer Fund										
UTILITY BILLING & SEWER										
Salaries & Benefits										
Salaries/Full-Time	\$	173,072	\$	-	\$	-	0%	0%	0%	100%
Salaries - Auto & Expense Allo.		83	-	-	-	83	0%	0%	0%	100%
Public Employees Retirement		19,939	-	-	-	19,939	0%	0%	0%	100%
Long Term Disability Insurance		588	-	-	-	588	0%	0%	0%	100%
Life Insurance Premiums		220	-	-	-	220	0%	0%	0%	100%
Workers Compensation Insurance		15,179	-	-	-	15,179	0%	0%	0%	100%
Medicare Tax - Employer's Share		2,497	-	-	-	2,497	0%	0%	0%	100%
Unfunded Accrued Liability		31,152	-	-	-	31,152	0%	0%	0%	100%
Deferred Comp/Full-Time		6,063	-	-	-	6,063	0%	0%	0%	100%
Unemployment Insurance		652	-	-	-	652	0%	0%	0%	100%
Section 125 Benefit Allowance		49,382	-	-	-	49,382	0%	0%	0%	100%
Subtotal	\$	298,827	\$	-	\$	298,827	0%	0%	0%	100%
Materials & Services										
Telephone & Fax Charges	\$	4,862	\$	-	\$	4,862	0%	0%	0%	100%
Advertising/Bids & Notices		304	-	-	-	304	0%	0%	0%	100%
Office Supplies/Expendable		3,039	-	-	-	3,039	0%	0%	0%	100%
Postage/Other Mailing Charge		24,310	-	-	-	24,310	0%	0%	0%	100%
Vehicle Fuel, Supplies & Maintenance		456	-	-	-	456	0%	0%	0%	100%
Contracted Services		18,233	-	-	-	18,233	0%	0%	0%	100%
Bank Service Charges		9,116	-	-	-	9,116	0%	0%	0%	100%
Conference/Training/Education		1,823	-	-	-	1,823	0%	0%	0%	100%
Subtotal	\$	62,143	\$	-	\$	62,143	0%	0%	0%	100%
Interfund Charges										
Interfund Charges - Central Su.	\$	2	\$	-	\$	2	0%	0%	0%	100%
Interfund Charges - Admin Overhead		19,977	-	-	-	19,977	0%	0%	0%	100%
Interfund Charges - Computer Maintenance		16,606	-	-	-	16,606	0%	0%	0%	100%
Interfund Charges - Computer Replace.		3,743	-	-	-	3,743	0%	0%	0%	100%
Interfund Charges - Motor Rental		1,485	-	-	-	1,485	0%	0%	0%	100%
Subtotal	\$	41,813	\$	-	\$	41,813	0%	0%	0%	100%

TABLE 22 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses ¹									
Budget Categories	Total Revenue	Flow	Strength		Customer		Basis of Classification		
	FY 2024/25	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Sewer Fund									
Special Payments									
OPEB Obligation Expense	\$ 1,003	\$ -	\$ -	\$ -	\$ 1,003	0%	0%	0%	100%
Pension Expense - GASB 68	44,430	-	-	-	44,430	0%	0%	0%	100%
Subtotal	\$ 45,433	\$ -	\$ -	\$ -	\$ 45,433				
Capital Outlay									
Vehicles & Equipment	\$ 366	\$ -	\$ -	\$ -	\$ 366	0%	0%	0%	100%
Subtotal	\$ 366	\$ -	\$ -	\$ -	\$ 366				
Transfer Out									
Transfer Out - Insurance Reserve	\$ 4,695	\$ -	\$ -	\$ -	\$ 4,695	0%	0%	0%	100%
Subtotal	\$ 4,695	\$ -	\$ -	\$ -	\$ 4,695				
Sub-Total: Utility Billing and Sewer	\$ 453,277	\$ -	\$ -	\$ -	\$ 453,277	0%	0%	0%	100%

TABLE 23 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses Continued ¹		Total Revenue	Flow	Strength		Customer	Basis of Classification			
Budget Categories		FY 2024/25	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Sewer Fund										
SEWER MAINTENANCE & OPERATIONS										
Salaries & Benefits										
Salaries/Full-Time	\$ 491,176	\$ 196,471	\$ 49,118	\$ 49,118	\$ 49,118	\$ 196,471	40%	10%	10%	40%
Salaries/Overtime	7,293	2,917	729	729	729	2,917	40%	10%	10%	40%
Salaries - Uniform Pay	1,398	559	140	140	140	559	40%	10%	10%	40%
Public Employees Retirement	67,042	26,817	6,704	6,704	6,704	26,817	40%	10%	10%	40%
Long Term Disability Insurance	1,619	648	162	162	162	648	40%	10%	10%	40%
Life Insurance Premiums	619	247	62	62	62	247	40%	10%	10%	40%
Workers Compensation Insurance	47,404	18,961	4,740	4,740	4,740	18,961	40%	10%	10%	40%
Medicare Tax - Employer's Share	7,643	3,057	764	764	764	3,057	40%	10%	10%	40%
Unfunded Accrued Liability	109,320	43,728	10,932	10,932	10,932	43,728	40%	10%	10%	40%
Deferred Comp/Full-Time	18,694	7,478	1,869	1,869	1,869	7,478	40%	10%	10%	40%
Unemployment Insurance	2,080	832	208	208	208	832	40%	10%	10%	40%
Section 125 Benefit Allowance	99,703	39,881	9,970	9,970	9,970	39,881	40%	10%	10%	40%
Subtotal	\$ 853,992	\$ 341,597	\$ 85,399	\$ 85,399	\$ 85,399	\$ 341,597				
Materials & Services										
Gas & Electric Utilities	\$ 41,327	\$ 16,531	\$ 4,133	\$ 4,133	\$ 4,133	\$ 16,531	40%	10%	10%	40%
Telephone & Fax Charges	5,628	2,251	563	563	563	2,251	40%	10%	10%	40%
Advertising/Bids & Notices	1,688	675	169	169	169	675	40%	10%	10%	40%
Office Supplies/Expendable	3,377	1,351	338	338	338	1,351	40%	10%	10%	40%
Vehicle Fuel, Supplies & Maintenance	22,487	8,995	2,249	2,249	2,249	8,995	40%	10%	10%	40%
Contracted Services	28,138	11,255	2,814	2,814	2,814	11,255	40%	10%	10%	40%
Taxes & Assessments	13,506	5,402	1,351	1,351	1,351	5,402	40%	10%	10%	40%
Conference/Training/Education	4,840	1,936	484	484	484	1,936	40%	10%	10%	40%
Maintenance/Other Supplies	67,531	27,012	6,753	6,753	6,753	27,012	40%	10%	10%	40%
Subtotal	\$ 188,520	\$ 75,408	\$ 18,852	\$ 18,852	\$ 18,852	\$ 75,408				

TABLE 24 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses Continued ¹										
Budget Categories	Total Revenue		Flow		Strength		Customer		Basis of Classification	
	FY 2024/25	(VOL)	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Sewer Fund										
Interfund Charges										
Interfund Charges - Facility Maintenance	\$ 70,859	\$ 28,344	\$ 7,086	\$ 7,086	\$ 7,086	\$ 28,344	40%	10%	10%	40%
Interfund Charges - Central Su.	6,055	2,422	606	606	606	2,422	40%	10%	10%	40%
Interfund Charges - Cost Distr.	112,903	45,161	11,290	11,290	11,290	45,161	40%	10%	10%	40%
Interfund Charges - Admin Overhead	75,406	30,162	7,541	7,541	7,541	30,162	40%	10%	10%	40%
Interfund Charges - Vehicle Replacement	95,025	38,010	9,503	9,503	9,503	38,010	40%	10%	10%	40%
Interfund Charges - Vehicle Maintenance	48,931	19,572	4,893	4,893	4,893	19,572	40%	10%	10%	40%
Interfund Charges - Computer Maintenance	28,277	11,311	2,828	2,828	2,828	11,311	40%	10%	10%	40%
Interfund Charges - Computer Replace.	6,233	2,493	623	623	623	2,493	40%	10%	10%	40%
Interfund Charges - Software	131	52	13	13	13	52	40%	10%	10%	40%
Interfund Charges - Motor Rental	5,007	2,003	501	501	501	2,003	40%	10%	10%	40%
Subtotal	\$ 448,827	\$ 179,531	\$ 44,883	\$ 44,883	\$ 44,883	\$ 179,531				
Special Payments										
Liability/Property Insurance	\$ 33,905	\$ 13,562	\$ 3,391	\$ 3,391	\$ 3,391	\$ 13,562	40%	10%	10%	40%
Retiree Insurance Premiums	2,424	969	242	242	242	969	40%	10%	10%	40%
OPEB Obligation Expense	27,587	11,035	2,759	2,759	2,759	11,035	40%	10%	10%	40%
Pension Expense - GASB 68	126,710	50,684	12,671	12,671	12,671	50,684	40%	10%	10%	40%
Subtotal	\$ 190,627	\$ 76,251	\$ 19,063	\$ 19,063	\$ 19,063	\$ 76,251				
Capital Outlay										
Vehicles & Equipment	\$ 461	\$ 369	\$ 46	\$ 46	\$ 46	\$ -	80%	10%	10%	0%
Subtotal	\$ 461	\$ 369	\$ 46	\$ 46	\$ 46	\$ -				
Transfer Out										
Transfer Out - Insurance Reserve	\$ 14,001	\$ 5,600	\$ 1,400	\$ 1,400	\$ 1,400	\$ 5,600	40%	10%	10%	40%
Subtotal	\$ 14,001	\$ 5,600	\$ 1,400	\$ 1,400	\$ 1,400	\$ 5,600				
Sub-Total: Sewer Maintenance & Operations	\$ 1,696,428	\$ 678,755	\$ 169,643	\$ 169,643	\$ 169,643	\$ 678,387	40%	10%	10%	40%

TABLE 25 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses Continued ¹		Total Revenue		Flow		Strength		Customer		Basis of Classification		
Budget Categories		FY 2024/25	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)		
Sewer Fund												
WATER WASTE TREATMENT PLANT												
Salaries & Benefits												
Salaries/Full-Time	\$ 977,692	\$ 195,538	\$ 244,423	\$ 244,423	\$ 244,423	\$ 293,308	20%	25%	25%	30%		
Salaries/Overtime	18,233	3,647	4,558	4,558	4,558	5,470	20%	25%	25%	30%		
Salaries - Uniform Pay	1,702	340	425	425	425	511	20%	25%	25%	30%		
Public Employees Retirement	115,743	23,149	28,936	28,936	28,936	34,723	20%	25%	25%	30%		
Long Term Disability Insurance	2,775	555	694	694	694	833	20%	25%	25%	30%		
Life Insurance Premiums	1,019	204	255	255	255	306	20%	25%	25%	30%		
Workers Compensation Insurance	94,711	18,942	23,678	23,678	23,678	28,413	20%	25%	25%	30%		
Medicare Tax - Employer's Share	15,078	3,016	3,770	3,770	3,770	4,524	20%	25%	25%	30%		
Unfunded Accrued Liability	170,300	34,060	42,575	42,575	42,575	51,090	20%	25%	25%	30%		
Deferred Comp/Full-Time	34,276	6,855	8,569	8,569	8,569	10,283	20%	25%	25%	30%		
Unemployment Insurance	3,191	638	798	798	798	957	20%	25%	25%	30%		
Section 125 Benefit Allowance	207,841	41,568	51,960	51,960	51,960	62,352	20%	25%	25%	30%		
Subtotal	\$ 1,642,560	\$ 328,512	\$ 410,640	\$ 410,640	\$ 410,640	\$ 492,768						
Materials & Services												
Gas & Electric Utilities	\$ 816,103	\$ 163,221	\$ 204,026	\$ 204,026	\$ 204,026	\$ 244,831	20%	25%	25%	30%		
Telephone & Fax Charges	8,441	1,688	2,110	2,110	2,110	2,532	20%	25%	25%	30%		
Advertising/Other	14,080	2,816	3,520	3,520	3,520	4,224	20%	25%	25%	30%		
Office Supplies/Expendable	3,939	788	985	985	985	1,182	20%	25%	25%	30%		
Mileage Reimbursements	565	113	141	141	141	170	20%	25%	25%	30%		
Vehicle Fuel, Supplies & Maintenance	19,448	3,890	4,862	4,862	4,862	5,834	20%	25%	25%	30%		
Contracted Services	351,159	70,232	87,790	87,790	87,790	105,348	20%	25%	25%	30%		
Taxes & Assessments	46,146	9,229	11,536	11,536	11,536	13,844	20%	25%	25%	30%		
Conference/Training/Education	16,883	3,377	4,221	4,221	4,221	5,065	20%	25%	25%	30%		
Maintenance/Other Supplies	303,887	60,777	75,972	75,972	75,972	91,166	20%	25%	25%	30%		
Subtotal	\$ 1,580,651	\$ 316,130	\$ 395,163	\$ 395,163	\$ 395,163	\$ 474,195						

TABLE 26 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses Continued ¹		Total Revenue	Flow	Strength		Customer	Basis of Classification			
Budget Categories		FY 2024/25	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Sewer Fund										
Interfund Charges										
Interfund Charges - Facility Maintenance		\$ 180,641	\$ 36,128	\$ 45,160	\$ 45,160	\$ 54,192	20%	25%	25%	30%
Interfund Charges - Central Su.		2,677	535	669	669	803	20%	25%	25%	30%
Interfund Charges - Admin Overhead		365,815	73,163	91,454	91,454	109,745	20%	25%	25%	30%
Interfund Charges - Vehicle Replacement		70,708	14,142	17,677	17,677	21,212	20%	25%	25%	30%
Interfund Charges - Vehicle Maintenance		64,251	12,850	16,063	16,063	19,275	20%	25%	25%	30%
Interfund Charges - Computer Maintenance		26,810	5,362	6,703	6,703	8,043	20%	25%	25%	30%
Interfund Charges - Computer Replace.		5,821	1,164	1,455	1,455	1,746	20%	25%	25%	30%
Interfund Charges - Software		782	156	196	196	235	20%	25%	25%	30%
Subtotal		\$ 717,505	\$ 143,501	\$ 179,376	\$ 179,376	\$ 215,252				
Special Payments										
Liability/Property Insurance		\$ 374,701	\$ 74,340	\$ 92,925	\$ 92,925	\$ 111,510	20%	25%	25%	30%
OPEB Obligation Expense		34,856	6,971	8,714	8,714	10,457	20%	25%	25%	30%
Pension Expense - GASB 68		229,068	45,814	57,267	57,267	68,720	20%	25%	25%	30%
Subtotal		\$ 635,625	\$ 127,125	\$ 158,906	\$ 158,906	\$ 190,687				
Capital Outlay										
Vehicles & Equipment		14,968	2,994	3,742	3,742	4,490	20%	25%	25%	30%
Subtotal		\$ 14,968	\$ 2,994	\$ 3,742	\$ 3,742	\$ 4,490				
Transfer Out										
Transfer Out - Insurance Reserve		\$ 26,269	\$ 5,254	\$ 6,567	\$ 6,567	\$ 7,881	20%	25%	25%	30%
Subtotal		\$ 26,269	\$ 5,254	\$ 6,567	\$ 6,567	\$ 7,881				
Sub-Total: Water Waste Treatment Plant		\$ 4,617,578	\$ 923,516	\$ 1,154,395	\$ 1,154,395	\$ 1,385,273	20%	25%	25%	30%
Total Operating Expense		\$ 6,767,283	\$ 1,602,271	\$ 1,324,037	\$ 1,324,037	\$ 2,516,937	23.7%	19.6%	19.6%	37.2%

TABLE 27 : CLASSIFICATION OF EXPENSES FOR COST OF SERVICE ANALYSIS

Classification of Expenses Continued ¹											
Budget Categories	Total Revenue		Flow		Strength		Customer		Basis of Classification		
	FY 2024/25	(VOL)	(VOL)	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Debt Services											
Existing Debt Service	\$ 2,529,375	\$ 598,873	\$ -	\$ 494,879	\$ -	\$ 494,879	\$ 940,744	24%	20%	20%	37%
New Debt Service	-	-	-	-	-	-	-	24%	20%	20%	37%
Capital Expenditures											
Rate-Funded Capital Expenses	\$ 120,852	\$ 28,614	\$ -	\$ 23,645	\$ -	\$ 23,645	\$ 44,948	24%	20%	20%	37%
TOTAL REVENUE REQUIREMENTS	\$ 9,417,510	\$ 2,229,758	\$ -	\$ 1,842,561	\$ 1,842,561	\$ 1,842,561	\$ 3,502,629	24%	20%	20%	37%
Less: Non-Rate Revenues											
Sewer Rate Revenue	\$ (310,641)	\$ (73,550)	\$ -	\$ (60,778)	\$ -	\$ (60,778)	\$ (115,536)	24%	20%	20%	37%
Septic Dump Income	(1,183)	(280)	-	(231)	-	(231)	(440)	24%	20%	20%	37%
Water Capital Fee	(145,734)	(34,505)	-	(28,513)	-	(28,513)	(54,202)	24%	20%	20%	37%
Other Fees	(1,864)	(441)	-	(365)	-	(365)	(693)	24%	20%	20%	37%
Refunds	(87,300)	(20,670)	-	(17,080)	-	(17,080)	(32,469)	24%	20%	20%	37%
Taxes & Licenses	(250,000)	(59,192)	-	(48,913)	-	(48,913)	(92,982)	24%	20%	20%	37%
Other Income	(143,140)	(33,891)	-	(28,006)	-	(28,006)	(53,238)	24%	20%	20%	37%
NET REVENUE REQUIREMENTS	\$ 8,477,648	\$ 2,007,229	\$ -	\$ 1,658,675	\$ 1,658,675	\$ 1,658,675	\$ 3,153,069	19.6%	19.6%	19.6%	37.2%
Allocation of Revenue Requirements	100.0%	23.7%	-	19.6%	19.6%	19.6%	37.2%				
<i>Net Revenue Req't: Check from Financial Plan \$ -</i>											

Adjustments to Classification of Expenses					
Adjustment to Current Rate Level:	Total	(VOL)	(BOD)	(TSS)	(CA)
Projected Sewer Rate Revenue at Current Rates	\$8,412,960				
Projected Sewer Rate Increase	5.00%				
Projected Sewer Rate Increase (\$)	\$1,326,093				
Target Rate Rev. After Rate Increases ²	\$9,739,053				
Adjusted Net Revenue	\$ 9,739,053	\$ 2,305,889	\$ 1,905,472	\$ 1,905,472	\$ 3,622,220
<i>Percent of Revenue</i>	<i>100.1%</i>	<i>23.7%</i>	<i>19.6%</i>	<i>19.6%</i>	<i>37.2%</i>

1. Revenue and expenses for FY 2020/21 are from source file: *Enterprise Funds Budget 2020-21.pdf, pages 33-42.*
2. Revenue from rate increases assumes an implementation date of April 1, 2022 and each July 1 annual thereafter.

CITY OF MADERA
SEWER RATE STUDY
Cost of Service Analysis

Allocation Factors

TABLE 28 : CUSTOMER ALLOCATION FACTOR

Development of the CUSTOMER Allocation Factor				
Customer Class	Number of Accounts ¹	Percentage of Accounts	Number of Units ¹	Percentage of Units
Single-Family	12,361	90.3%	12,361	75.3%
Multi-Family Commercial	452	3.3%	3,183	19.4%
Auto Garage	39	0.3%	39	0.2%
Bakeries	5	0.0%	5	0.0%
Barber/Beauty	8	0.1%	8	0.0%
Bars	1	0.0%	1	0.0%
Car Wash	9	0.1%	9	0.1%
Church	40	0.3%	40	0.2%
Offices	630	4.6%	630	3.8%
Grocery	18	0.1%	18	0.1%
Hospitals	7	0.1%	7	0.0%
Hotel-Motel	7	0.1%	7	0.0%
Jails	2	0.0%	2	0.0%
Laundromat	9	0.1%	9	0.1%
School	24	0.2%	24	0.1%
Rec Facility	6	0.0%	6	0.0%
Restaurant	47	0.3%	47	0.3%
Service Station	7	0.1%	7	0.0%
Theater In	1	0.0%	1	0.0%
Industrial	16	0.1%	16	0.1%
Institutional	6	0.0%	6	0.0%
Total	13,695	100%	16,426	100%

1. Source files for accounts: December 2020: 2020 DEC MUNIS Billing_Manipulated.xlsx

CITY OF MADERA
SEWER RATE STUDY
Cost of Service Analysis

Allocation Factors

TABLE 29 : VOLUME ALLOCATION FACTOR

Development of the VOLUME Allocation Factor ¹						
Customer Class	Number of Accounts	Winter Consumption Jan.-Mar. 2020 (hcf)	Annualized Winter Consumption (hcf)	Adjusted Annual Volume ² (hcf)	Percentage of Volume	
Single-Family	12,361	330,244	1,320,976	1,553,198	62.39%	
Multi-Family Commercial	452	84,805	339,219	398,852	16.02%	
Auto Garage	39	940	3,762	4,423	0.18%	
Bakeries	5	238	951	1,119	0.04%	
Barber/Beauty	8	334	1,336	1,571	0.06%	
Bars	1	4	15	18	0.00%	
Car Wash	9	3,498	13,993	16,453	0.66%	
Church	40	2,952	11,806	13,882	0.56%	
Offices	630	57,375	229,498	269,843	10.84%	
Grocery	18	6,394	25,574	30,070	1.21%	
Hospitals	7	2,401	9,605	11,293	0.45%	
Hotel-Motel	7	2,820	11,280	13,263	0.53%	
Jails	2	638	2,553	3,001	0.12%	
Laundromat	9	2,480	9,921	11,665	0.47%	
School	24	18,849	75,397	88,651	3.56%	
Rec Facility	6	437	1,746	2,053	0.08%	
Restaurant	47	5,998	23,991	28,209	1.13%	
Service Station	7	722	2,887	3,394	0.14%	
Theater In	1	208	830	976	0.04%	
Industrial	16	7,562	30,247	35,565	1.43%	
Institutional	6	432	1,727	2,030	0.08%	
Total	13,695	529,329	2,117,316	2,489,531	100.00%	
				2,489,531	Flow (hcf/yr.)	
				1.18	Flow Adj. Factor	

1. Source files for water consumption: September 2019 through August 2020: MAIS Meter Usage 12 Months_Manipulated.xlsx

September-December 2020: 2020 SEP-DEC Munis Water Usage_Manipulated.xlsx

2. Adjusted annual volume based on wastewater treatment plant influent data.

Source file: Madera City of WWTP Daily Flows Jan. 2012 through Dec. 2020.xlsx

TABLE 30 : STRENGTH ALLOCATION FACTOR

Development of the STRENGTH Allocation Factor		Adjusted Annual Flow (hcf)	Rate Commercial Classes ³	Biochemical Oxygen Demand (BOD)			Total Suspended Solids (TSS)		
				Average Strength Factor ⁴ (mg/l)	Calculated BOD (lbs./yr.)	Percent of Total	Average Strength Factor ⁴ (mg/l)	Calculated TSS (lbs./yr.)	Percent of Total
Customer Class									
Single-Family	1,553,198	n/a		200	1,937,870	56.0%	200	1,937,870	59.8%
Multi-Family Commercial	398,852	n/a		100	248,817	7.2%	100	248,817	7.7%
Auto Garage	4,423	Car Dealer & Dept/Retail		300	8,278	0.2%	275	7,588	0.2%
Bakeries	1,119	Restaurant		1,200	8,373	0.2%	600	4,187	0.1%
Barber/Beauty	1,571	Professional Building		300	2,941	0.1%	275	2,696	0.1%
Bars	18	Professional Building		300	33	0.0%	275	31	0.0%
Car Wash	16,453	Car Dealer & Dept/Retail		300	30,793	0.9%	275	28,226	0.9%
Church	13,882	Library & Church		300	25,980	0.8%	275	23,815	0.7%
Offices	269,843	Professional Building		300	505,010	14.6%	275	462,926	14.3%
Grocery	30,070	Grocery & Mortuary		1,000	187,588	5.4%	700	131,312	4.1%
Hospitals	11,293	Hospital		300	21,135	0.6%	275	19,374	0.6%
Hotel-Motel	13,263	Hotel without dining		300	24,822	0.7%	275	22,754	0.7%
Jails	3,001	School		300	5,617	0.2%	275	5,149	0.2%
Laundromat	11,665	Professional Building		300	21,830	0.6%	275	20,011	0.6%
School	88,651	School		300	165,911	4.8%	300	165,911	5.1%
Rec Facility	2,053	Game		275	3,522	0.1%	250	3,202	0.1%
Restaurant	28,209	Restaurant		1,200	211,173	6.1%	600	105,586	3.3%
Service Station	3,394	Car Dealer & Dept/Retail		300	6,352	0.2%	275	5,823	0.2%
Theater In Industrial	976	Professional Building		300	1,827	0.1%	275	1,675	0.1%
Low	35,565	Light Industrial		170	37,717	1.1%	170	37,717	1.2%
Medium ⁵		Medium Industrial		340			340		
High ⁵		High Industrial		510			510		
Institutional	2,030	Professional Building		300	3,800	0.1%	275	3,483	0.1%
Total	2,489,531				3,459,388	100.0%		3,238,150	100.0%

3. To match City's current rate schedule for commercial variable charges.

4. Typical strength factors for BOD and TSS are derived from previous rate study and the State Water Resources Control Board Revenue Program Guidelines, Appendix G

5. NBS is recommending medium and high industrial users are added to commercial classes.

CITY OF MADERA
SEWER RATE STUDY
Cost of Service Analysis

Allocation Factors

TABLE 31 : REVENUE BY CUSTOMER CLASS

Total Revenue by Customer Class ⁶		
Customer Class	Total Revenue 2020	% of Total Revenue
Single-Family	\$ 6,420,703	64.9%
Multi-Family	\$ 1,631,105	16.5%
Commercial	\$ 1,837,245	18.6%
Total	\$ 9,889,053	100.0%

6. Source files for accounts and billing data: September 2019 through August 2020: MAIS Meter Usage 12 Months_Manipulated.xlsx
September-November 2020: 2020 SEP-NOV MUNIS Billing2_Manipulated.xlsx
December 2020: 2020 DEC MUNIS Billing_Manipulated.xlsx

CITY OF MADERA
SEWER RATE STUDY
Sewer Cost of Service Analysis

Rate Calculation

TABLE 32 : ALLOCATION OF REVENUE REQUIREMENTS BY CUSTOMER CLASS

Customer Class	Cost Classification Components				Customer Related	Cost-of-Service Revenue Req't.	% of COS Revenue Req't.
	Volume	Treatment		TSS			
		BOD					
Net Revenue Requirements¹	\$ 2,305,889 23.7%	\$ 1,905,472 19.6%	\$ 1,905,472 19.6%	\$ 1,905,472 19.6%	\$ 3,622,220 37.2%	\$ 9,739,053 100%	--
Single-Family	\$ 1,438,625	\$ 1,067,402	\$ 1,140,329	\$ 2,725,816		\$ 6,372,172	65.4%
Multi-Family (per unit)	369,430	137,051	146,415	701,907		1,354,803	13.9%
Commercial							
Car Dealer & Dept/Retail	22,480	25,019	24,501	12,128		84,129	0.9%
Game	1,902	1,940	1,884	1,323		7,049	0.1%
Grocery & Mortuary	27,852	103,326	77,270	3,969		212,417	2.2%
Hospital	10,460	11,641	11,400	1,544		35,045	0.4%
Hotel without dining	12,285	13,672	13,389	1,544		40,890	0.4%
Library & Church	12,858	14,310	14,014	8,821		50,002	0.5%
Professional Building	264,999	294,928	288,821	144,439		993,187	10.2%
Restaurant	27,164	120,928	64,595	11,467		224,155	2.3%
School	84,892	94,480	100,659	5,733		285,764	2.9%
Strip Mall	-	-	-	-		-	0.0%
Warehouse	-	-	-	-		-	0.0%
Industrial							
Light Industrial	32,941	20,775	22,194	3,528		79,438	0.8%
Medium Industrial	-	-	-	-		-	0.0%
High Industrial	-	-	-	-		-	0.0%
Total	\$ 2,305,889	\$ 1,905,472	\$ 1,905,472	\$ 3,622,220	\$ 9,739,053	100%	

1. Revenue requirement for each customer class is determined by multiplying the revenue requirement from each cost classification by the allocation factors for each customer class.

**CITY OF MADERA
SEWER RATE STUDY
Sewer Cost of Service Analysis**

Rate Calculation

TABLE 33 : PROPOSED SEWER RATES

Customer Class	Number of Units	Annualized Winter Consumption	Net Revenue Requirement	Monthly Fixed Charge Per Unit	Volumetric Charge per HCF
Single-Family	12,361	1,553,198	\$ 6,372,172	\$ 42.96	
Multi-Family (per unit)	3,183	398,852	\$ 1,354,803	\$ 35.47	
Commercial					
Car Dealer & Dept/Retail	55	24,271	\$ 84,129	\$ 22.81	\$ 3.05
Game	6	2,053	\$ 7,049	\$ 22.81	\$ 3.02
Grocery & Mortuary	18	30,070	\$ 212,417	\$ 22.81	\$ 6.22
Hospital	7	11,293	\$ 35,045	\$ 22.81	\$ 2.73
Hotel without dining	7	13,263	\$ 40,890	\$ 22.81	\$ 2.71
Library & Church	40	13,882	\$ 50,002	\$ 22.81	\$ 3.17
Professional Building	655	286,104	\$ 993,187	\$ 22.81	\$ 3.05
Restaurant	52	29,328	\$ 224,155	\$ 22.81	\$ 6.73
School	26	91,653	\$ 285,764	\$ 22.81	\$ 2.74
Strip Mall	0	0	\$ -	\$ 22.81	\$ 3.05
Warehouse	0	0	\$ -	\$ 22.81	\$ 1.97
Industrial					
Light Industrial	16	35,565	\$ 79,438	\$ 22.81	\$ 1.97
Medium Industrial	0	0	\$ -	\$ 22.81	\$ 2.74
High Industrial	0	0	\$ -	\$ 22.81	\$ 3.81
Total	16,426	2,489,531	\$ 9,739,053		

2. HCF = hundred cubic feet, equal to 748 gallons of water.

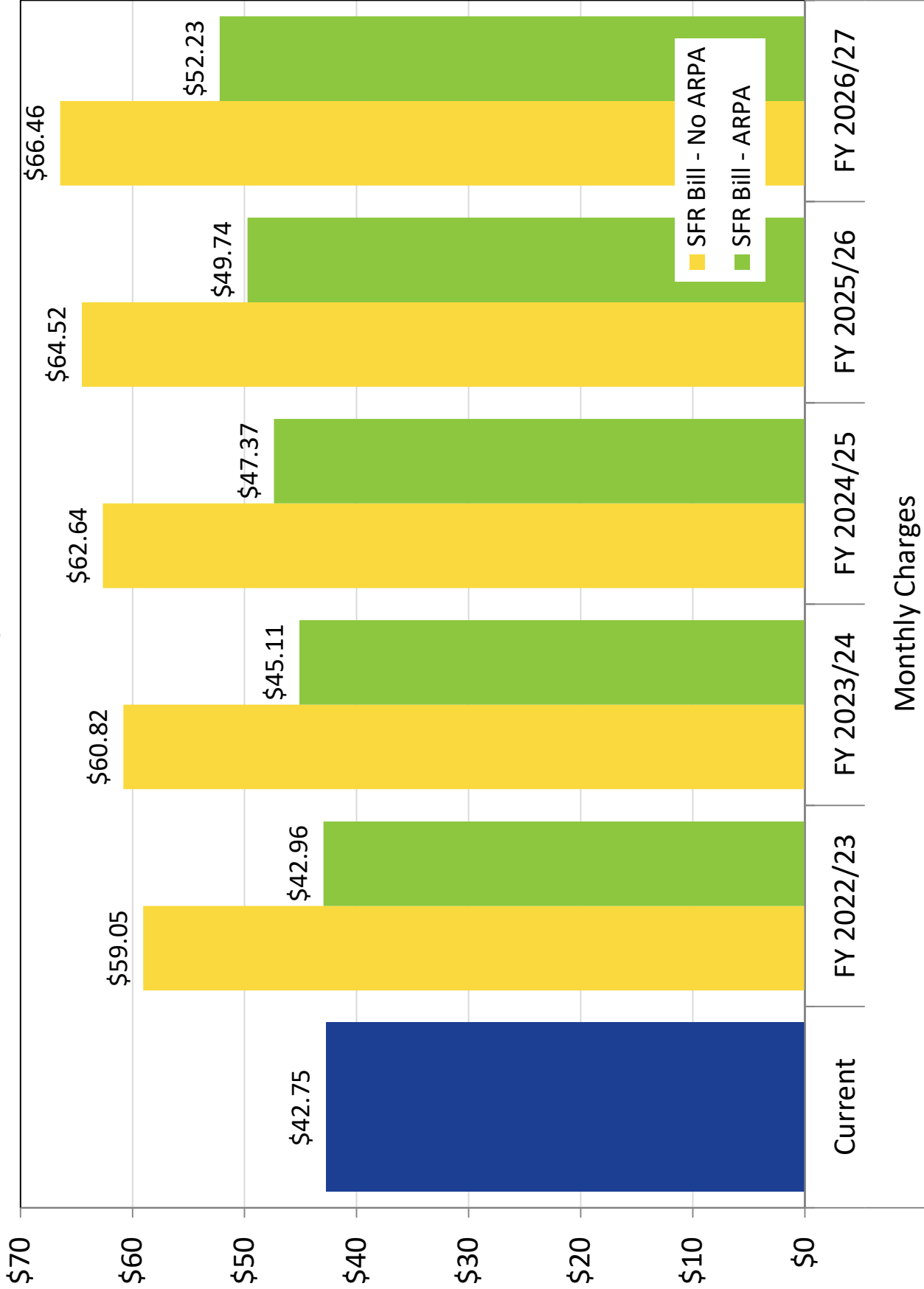
CITY OF MADERA
SEWER RATE STUDY
Sewer Rate Development

TABLE 34 : CURRENT VS. PROPOSED SEWER RATES (MONTHLY) - PROPOSED RATES

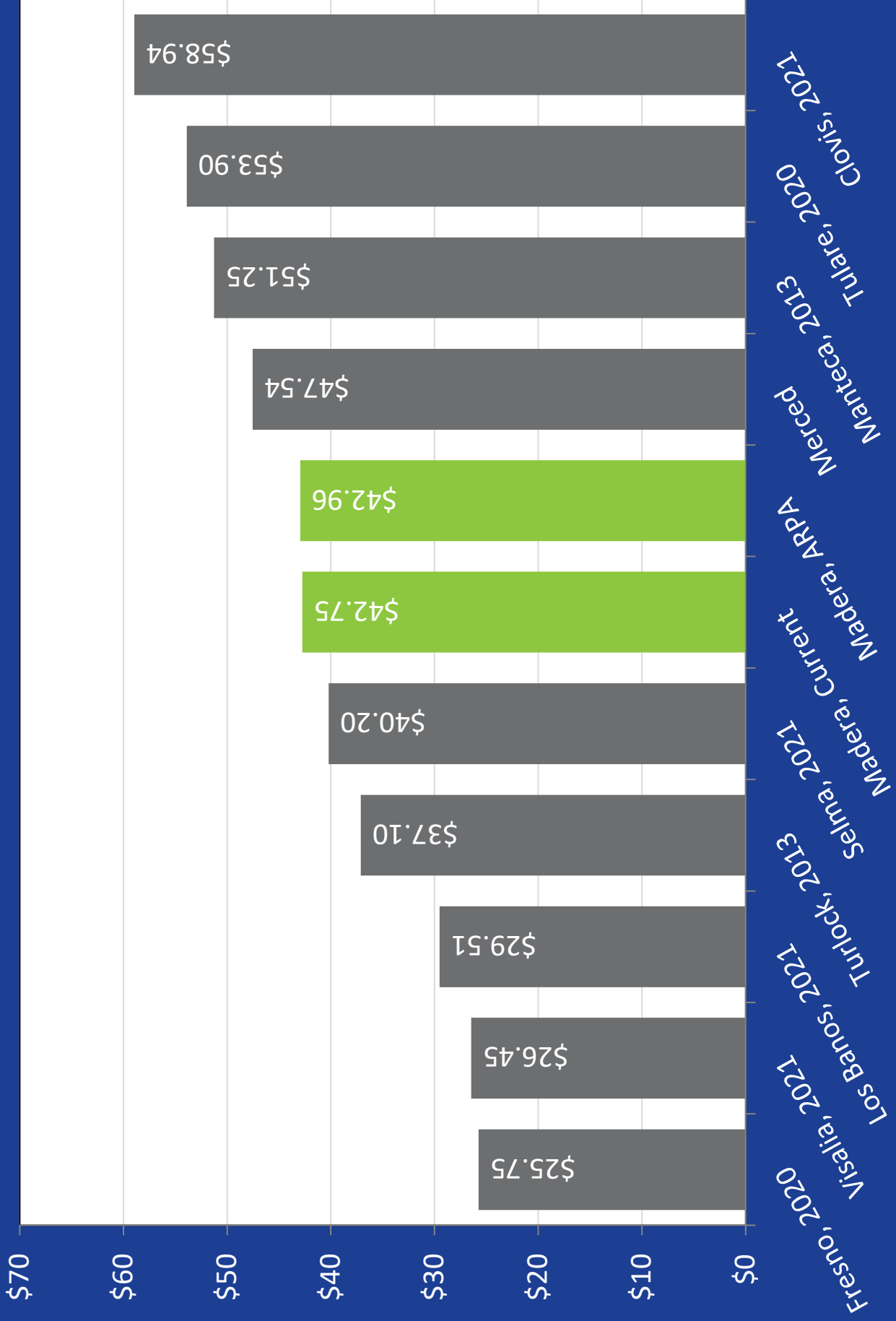
Sewer Rate Schedule	Current Rates	Proposed Sewer Rates				
		FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27
FIXED MONTHLY CHARGES						
Single-Family	\$42.75	\$42.96	\$45.11	\$47.37	\$49.74	\$52.23
Multi-Family (per unit)	\$27.77	\$35.47	\$37.24	\$39.10	\$41.06	\$43.11
Commercial (All)	\$19.02	\$22.81	\$23.95	\$25.15	\$26.41	\$27.73
NON-RESIDENTIAL VOLUMETRIC CHARGES PER HCF¹						
Commercial						
Car Dealer & Dept/Retail	\$2.30	\$3.05	\$3.20	\$3.36	\$3.53	\$3.71
Game	\$3.46	\$3.02	\$3.17	\$3.33	\$3.50	\$3.68
Grocery & Mortuary	\$5.04	\$6.22	\$6.53	\$6.86	\$7.20	\$7.56
Hospital	\$2.28	\$2.73	\$2.87	\$3.01	\$3.16	\$3.32
Hotel without dining	\$2.28	\$2.71	\$2.85	\$2.99	\$3.14	\$3.30
Library & Church	\$2.25	\$3.17	\$3.33	\$3.50	\$3.68	\$3.86
Professional Building	\$2.28	\$3.05	\$3.20	\$3.36	\$3.53	\$3.71
Restaurant	\$5.22	\$6.73	\$7.07	\$7.42	\$7.79	\$8.18
School	\$2.38	\$2.74	\$2.88	\$3.02	\$3.17	\$3.33
Strip Mall	\$3.52	\$3.05	\$3.20	\$3.36	\$3.53	\$3.71
Warehouse	\$3.51	\$1.97	\$2.07	\$2.17	\$2.28	\$2.39
Industrial						
Light Industrial	\$3.51	\$1.97	\$2.07	\$2.17	\$2.28	\$2.39
Medium Industrial	N/A	\$2.74	\$2.88	\$3.02	\$3.17	\$3.33
High Industrial	N/A	\$3.81	\$4.00	\$4.20	\$4.41	\$4.63

1. HCF = hundred cubic feet, equal to 748 gallons of water.

Monthly Single Family Residential Sewer Bill Comparison Current vs. Proposed Rates

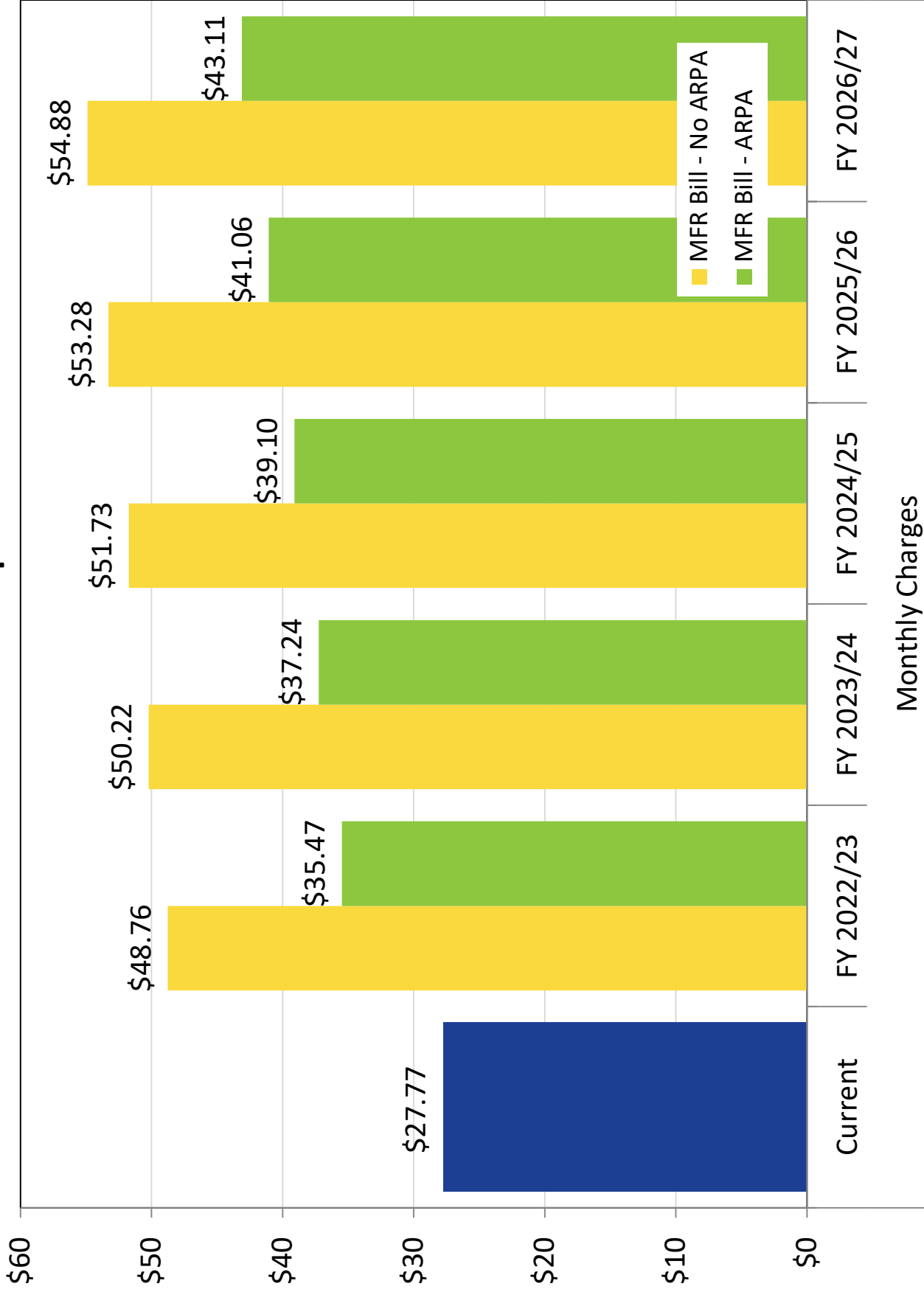


Single-Family Residential Regional Monthly Sewer Bill Comparison



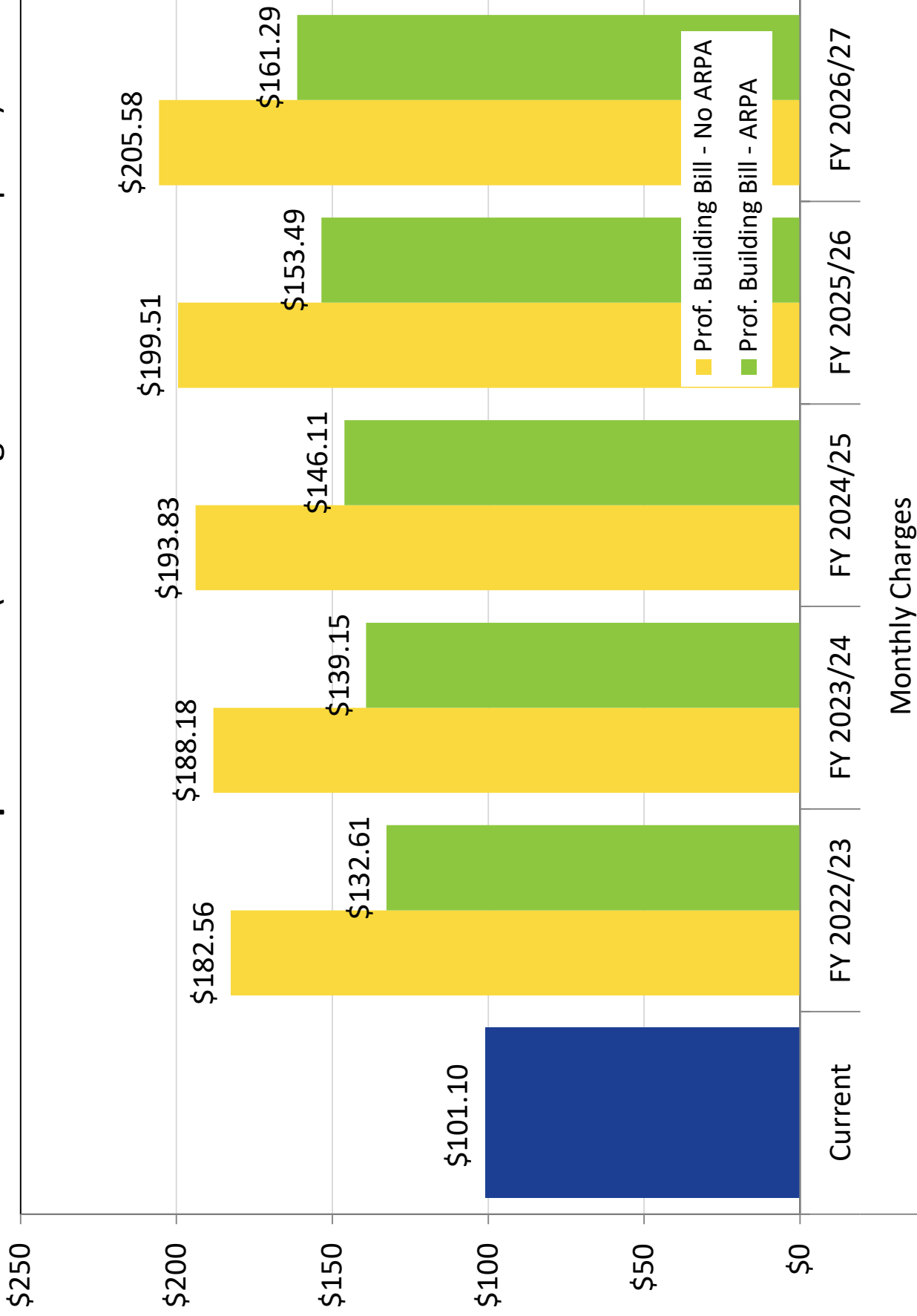
Monthly Multi Family Residential Sewer Bill Comparison

Current vs. Proposed Rates



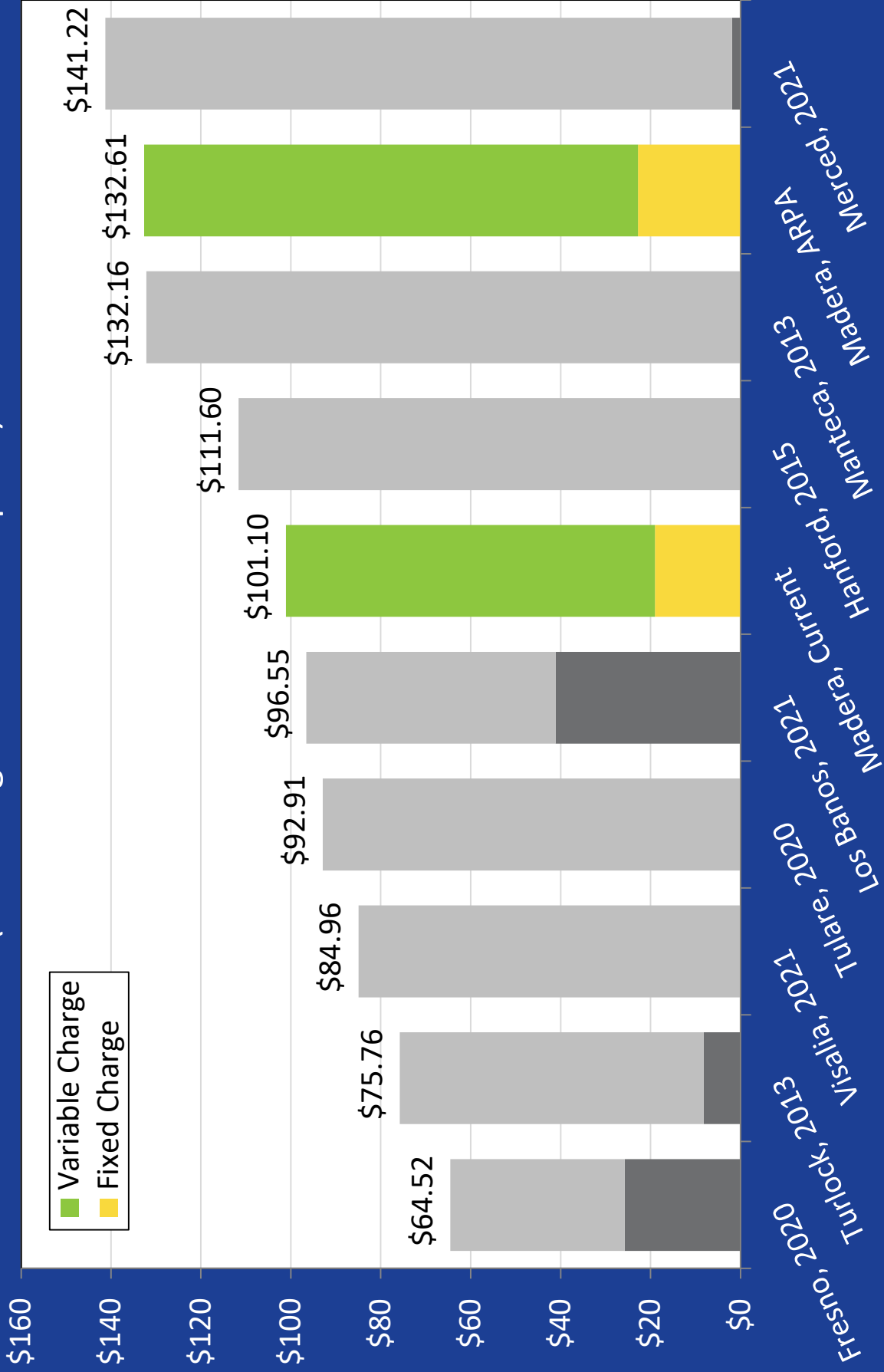
Monthly Professional Building Commercial Sewer Bill Comparison

Current vs. Proposed Rates (Assuming 36 hcf consumption)



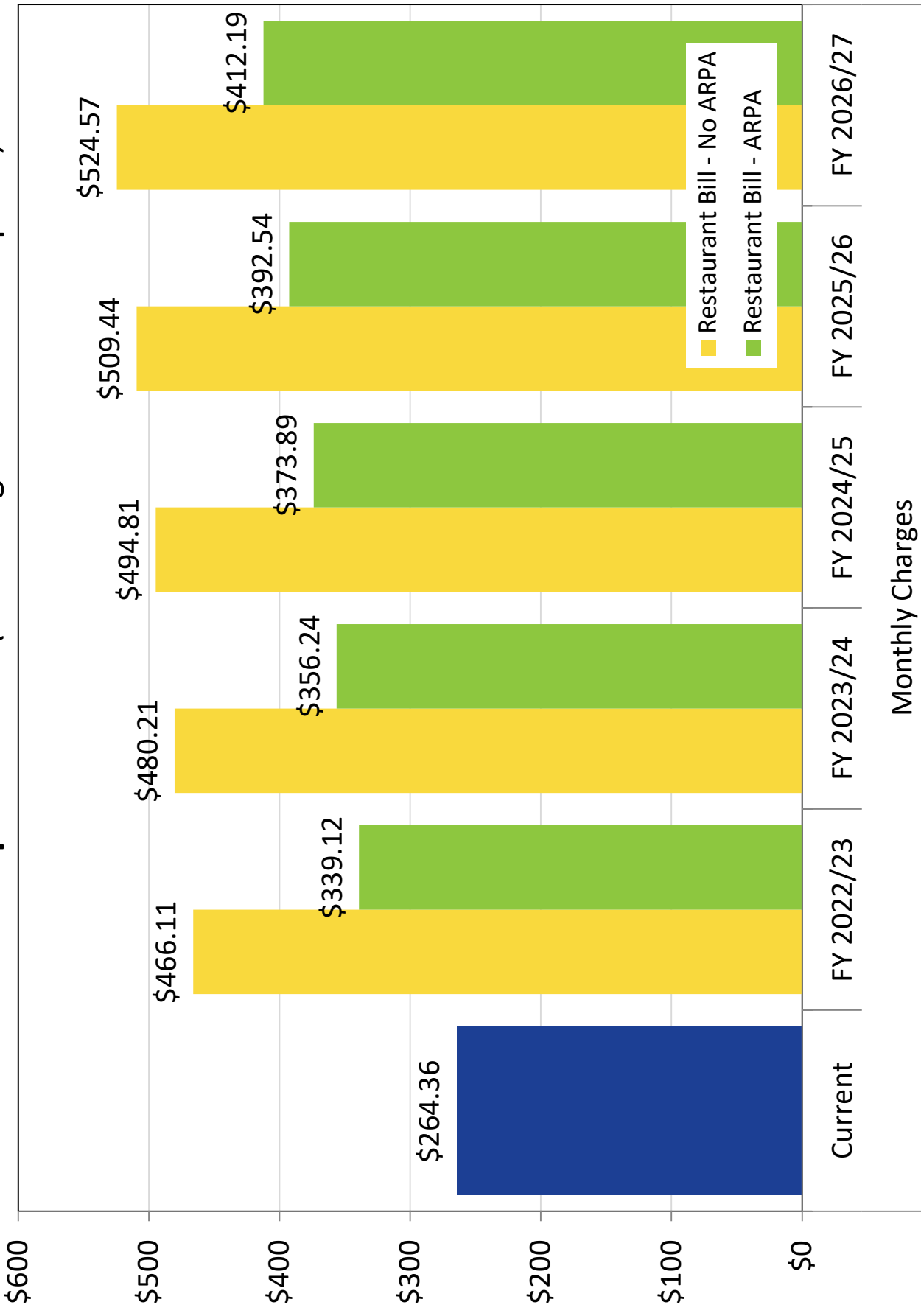
Monthly Professional Building Commercial Regional Sewer Bill Comparison

(Assuming 36 hcf consumption)



Monthly Restaurant Sewer Bill Comparison

Current vs. Proposed Rates (Assuming 47 hcf consumption)



Monthly Charges

Monthly Commercial Restaurant Regional Sewer Bill Comparison (Assuming 50 hcf consumption)

