City of City of Santa Monica[®]

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FINAL REPORT

Wastewater Rate Study

October 2019

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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
САР	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)
FY 2017/18	July 1, 2017 through June 30, 2018
GPD	Gallons per Day
GPM	Gallons per Minute
HCF	Hundred Cubic Feet; equal to 748 gallons or 1 CCF
Ind.	Industrial
lrr.	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.

Muni.	Municipal
NH3	Ammonia
NPV	Net Present Value
N/A	Not Available or Not Applicable
0&M	Operational & Maintenance Expenses
Prop 13	Proposition 13 (1978) – Article XIIIA 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	Waste Water Treatment Plant

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SECTION 1. PURPOSE AND OVERVIEW OF THE STUDY

A. Purpose

The City of Santa Monica (City) retained NBS to conduct a comprehensive wastewater rate study for a number of 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, the Task Force on the Environment (Task Force) and the City Council (Council) in selecting appropriate rate alternatives. A Council Study Session was held on August 13, 2019 to obtain public input. 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



Compares current sources and uses of funds and determines the revenue needed from rates and projects rate adjustments. Proportionately allocates the revenue requirements to the customer classes in compliance with industry standards and State Law. Considers what rate structure will best meet the City's need to collect rate revenue from each customer class.

These steps are intended to follow industry standards and reflect the fundamental principles of cost-ofservice rate making embodied in the American Water Works Association (AWWA) Principles of Water Rates, Fees, and Charges¹, also referred to as the M1 Manual. 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

1 Principles of Water Rates, Fees, and Charges, Manual of Water Supply Practices, M1, AWWA, seventh edition, 2017.



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 performed in this Study. 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. As current rate revenue falls short of the net revenue requirement, rate adjustments -- or more accurately, adjustments in the total revenue collected from rates -- are recommended. 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 a number of rate-setting manuals, such as the AWWA Manual M1. 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, when utilities recover all of their fixed costs from fixed charges and all of 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. When rates are set in

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



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

this manner, they provide the greatest revenue stability for the utility. However, other factors 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. The revenue requirements for each customer class are collected from both fixed bi-monthly meter charges and variable commodity charges. Based on input from the Council, the rates proposed in this report are designed to collect 15 percent (15%) of rate revenue from the fixed meter charge and 85 percent (85%) from the variable commodity charge⁴.

Fixed Charges – Fixed charges can be called base charges, minimum bi-monthly charges, customer charges, fixed meter charges, etc. Fixed charges for wastewater utilities typically increase by meter size.

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). Following general industry practice, the City has established a "discharge factor" that represents the percent of water consumption that is discharged into the wastewater system, based on the lowest four months of water use during a twelve month period. This factor is used in the rate design to determine the customer's volumetric portion of their bill.

⁴ The California Urban Water Conservation Council recommends recovering at least 70 percent of rate revenue through volumebased 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 of an extensive wastewater collection system.
- Achieve water self-sufficiency by 2023.
- Improve environmental sustainability by reusing local water resources and indirectly reducing imported water purchases.
- Increase local control on wastewater treatment through the Sustainable Water Infrastructure Project (SWIP).
- 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.

NBS developed various wastewater rate alternatives as requested by City staff and the Task Force over the course of this Study. All rate structure alternatives relied on industry standards and cost-of-service principles. The rate alternative that will be implemented, is ultimately the decision of the City Council. The fixed and volume-based charges were calculated based on the net revenue requirements, number of customer accounts, water consumption/estimated wastewater discharge, 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, maintain adequate debt coverage, and build reasonable reserve funds. The current state of the City's Wastewater Utility, with regard to these objectives, is as follows:

- Meeting Net Revenue Requirements: For Fiscal Year (FY) 2019/20 through FY 2023/24, 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 \$22.4 million, annually. If no rate adjustments are implemented, the City is projected to average a \$5.5 million deficit each year.
- 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 plans to have at least \$12.5 million in wastewater fund reserves by the end of FY 2023/24, to follow 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), in FY 2023/24, the balance for the operating reserve



should be approximately \$3.9 million. 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 Rehabilitation and Replacement Reserve should equal 3 percent of net capital assets, which is approximately \$7.5 million by the end of for FY 2023/24. This reserve is set aside to address long-term and routine capital system replacement and rehabilitation needs.
- **Rate Stabilization Reserve** has a target reserve of \$1 million and is to remain unchanged from current City policy. This reserve is intended to provide additional financial security to the Utility should any unforeseen revenue shortages or capital emergency occur.
- Funding Capital Improvement Projects: The City must also be able to fund necessary capital improvements in order to maintain current service levels. City staff has identified roughly \$118 million in expected total capital expenditures for FY 2018/19 through 2023/24, which includes the SWIP. With the recommended rate increases, these expenditures can be accomplished while also maintaining reserves at the minimum recommended target. The SWIP capital cost will be funded through various sources: approximately \$69.8 million of the SWIP capital will be funded with a low interest State Revolving Fund (SRF) loan that will be paid back over a 30-year period, \$6.6 million will be funded with contributions from the Storm Water fund, and \$14.6 million funded with Capacity Fee reserves. Capacity fees are one-time fees paid by new connections upon connecting to the wastewater system.
- Inflation and Growth Projections: Assumptions regarding cost inflation were made in order to project future revenues and expenses for the study period. Customer growth is expected to be nearly 0.42 percent annually per the 2018 Sustainable Water Master Plan (SWMP). This factor was used in the analysis for some revenues and expenses, and all other factors were set by the City budget.
- Impact of Annual Rate Adjustment Date: The financial plan modelling assumes that rate adjustments occur in January of each year⁵. This means that only about half of the planned revenue to be collected from the rate adjustment listed for one fiscal year will be collected in that year. For example, there is a 10 percent increase in rate revenue planned for FY 2019/20; meaning, the rates are developed to recover \$18.5 million, which is a 10 percent increase over the expected \$16.8 million that would be collected without a rate increase. However, because of the timing for when the rates will go into effect, the Financial Plan results in only \$17.6 million in rate revenue that will be collected for FY 2019/20, due to the mid-fiscal year implementation.

Rate revenue increases of 10 percent annually for four years from FY 2019/20 through 2022/23, and a 3 percent increase in FY 2023/24 will be needed in order to fully fund all operating expenses, planned capital projects and maintain reserves at the recommended targets by FY 2023/24⁶. **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 City⁷. This rate represents feedback from majority of

⁷ Wastewater rates were last increased by the City in 2014 by 0.4%.



⁵ The first rate increase is scheduled for January 1, 2020 but could be delayed to March 1, 2020.

⁶ Because of the mid-year adjustment to the rates, the full impact of each year's increase does not affect revenue until the following year.

Council which does not defer capital projects, an alternative rate option that was considered is shown in the Appendix.

Summary of Sources and Uses of Funds and			Projected		
Net Revenue Requirements	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Sources of Wastewater Funds					
Rate Revenue Under Current Rates	16,800,000	16,870,560	16,941,416	17,012,570	17,084,023
Non-Rate Revenues	1,569,636	1,442,657	1,664,044	1,612,308	1,665,413
Total Sources of Funds	\$ 18,369,636	\$ 18,313,217	\$ 18,605,460	\$ 18,624,878	\$ 18,749,436
Uses of Wastewater Funds					
Salaries and Benefits	2,845,181	2,954,468	3,058,206	3,178,626	3,290,403
Supplies and Expenses	11,123,098	11,663,044	11,843,789	12,158,761	12,381,805
Retirement and OPEB	77,287	63,871	91,273	83,912	87,742
Interfund Transactions	10,317,185	(28,380)	(89,072)	(71,195)	(53,799
Debt Service	2,677,274	5,045,645	5,304,871	5,312,346	2,948,946
Rate-Funded Capital Expenses			2,700,267	5,360,069	5,407,949
Total Use of Funds	\$ 27,040,025	\$ 19,698,648	\$ 22,909,334	\$ 26,022,518	\$ 24,063,045
Surplus (Deficiency) before Rate Increase	\$ (8,670,388)	\$ (1,385,431)	\$ (4,303,874)	\$ (7,397,640)	\$ (5,313,609
Additional Revenue from Rate Increases ¹	840,000	2,614,937	4,582,653	6,763,347	8,303,886
Surplus (Deficiency) after Rate Increase	\$ (7,830,388)	\$ 1,229,506	\$ 278,779	\$ (634,293)	\$ 2,990,277
Projected Annual Rate Revenue Increase	10.00%	10.00%	10.00%	10.00%	3.00%
Cumulative Increases	10.00%	21.00%	33.10%	46.41%	50.80%
Net Revenue Requirement ²	\$ 25,470,388	\$ 18,255,991	\$ 21,245,290	\$ 24,410,211	\$ 22,397,632

Figure 2. Summary of Wastewater Revenue Requirements

1. Assumes new rates are implemented January 1, 2020 and each subsequent January 1st thereafter.

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

Figure 3 summarizes the City's full Capital Improvement Plan, providing the expected cost and timing of capital projects during the 5-year rate period. It is notable to mention that the Sustainable Water Infrastructure Project (SWIP) will be funded with SRF loans and paid back over the next 30 years.

Conital Improvement Drogram	Projected					
Capital Improvement Program	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	
Wastewater Main Replacement	3,000,000	3,090,000	3,182,700	3,278,181	3,376,526	
Moss Avenue Pumping Station	792,940	236,488	477,405	109,273	112,551	
Sustainable Water Infrastructure Project ¹	29,102,952	-	-	-	-	
Hyperion Capital Payments	3,993,100	4,615,327	3,478,691	2,982,598	3,040,449	
Other One-Time Capital Projects	4,019,914	1,419,954	-	327,818	-	
Recurring Capital Projects	595,542	623,908	653,819	685,366	716,831	
Total	\$ 41,504,448	\$ 9,985,677	\$ 7,792,615	\$ 7,383,236	\$ 7,246,358	

Figure 3. Summary of Capital Improvement Plan

1. This is only the wastewater fund's portion of the SWIP project.

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 Appendix A. The appendix tables include revenue requirements, reserve funds, revenue sources, proposed



rate increases, and the City's capital improvement program. As can be seen in Figure 4, given proposed rate increases, reserves will be well over the minimum target by the end of the five-year rate period.

Beginning Reserve Fund Balances and			Projected		
Recommended Reserve Targets	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Operating Reserve					
Ending Balance	\$ 2,730,223	\$ 3,663,251	\$ 3,726,049	\$ 3,091,756	\$ 3,926,537
Recommended Minimum Target	6,090,688	3,663,251	3,726,049	3,837,526	3,926,537
Capital Rehabilitation & Replacement Reserv	e				
Ending Balance	\$ 19,056,602	\$ 10,864,841	\$ 7,760,281	\$ 7,535,700	\$ 9,678,796
Recommended Minimum Target	7,471,600	7,540,900	7,544,300	7,535,700	7,523,300
Rate Stabilization Reserve					
Ending Balance	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Recommended Minimum Target	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Total Ending Balance (Unrestricted)	\$ 22,786,825	\$ 15,528,092	\$ 12,486,330	\$ 11,627,456	\$ 14,605,333
Total Recommended Minimum Target	\$ 14,562,288	\$ 12,204,151	\$ 12,270,349	\$ 12,373,226	\$ 12,449,837
Surplus/(Deficit)	\$ 8,224,537	\$ 3,323,941	\$ 215,981	\$ (745,770)	\$ 2,155,496

Figure 4. Summary of Reserve Funds

C. Cost of Service Analysis

Once the net revenue requirements are determined, the cost of service analysis proportionately distributes the revenue requirements to each of the customer classes. 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: collection costs, strength costs 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:

- **Collection 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 primarily includes costs related to treatment and disposal by the City of Los Angeles, the cost of capital infrastructure for City of Santa Monica treatment facilities, and other related costs.
- **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.

Based on the City's projected costs, the Cost of Service Analysis (COSA) resulted in a distribution that is approximately 75 percent fixed and 25 percent variable. The City's current rate structure collects 100 percent of the revenue from variable charges. The City Council has decided that revenue stability is an important factor in this rate setting process and has selected a rate structure that will collect 15 percent (15%) of revenue from fixed charges and 85 percent (85%) from variable charges. This adjustment moves the City closer to the cost of service analysis results and will provide more financial stability for the City than the current rate structure. However, a majority of the City's fixed costs will still need to be collected from the variable rates.

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

	(Cost Classificati	Cost-of-	% of COS Net		
Customer Class	Volume	Treat	ment	Customer	Service Net	Revenue
	volume	BOD	TSS	Related	Revenue	Req'ts.
Net Revenue Requirements ¹	\$ 11,959,976	\$ 2,654,712	\$ 2,654,712	\$ 1,210,601	\$ 18,480,000	
	64.7%	14.4%	14.4%	6.6%	100.0%	
Single Family	\$ 2,770,553	\$ 489,605.89	\$ 535,001	\$ 564,606	\$ 4,359,766	23.6%
MFR : Duplex	183,349	32,401	35,405	42,082	293,238	1.6%
MFR : Triplex	200,731	35,473	38,762	37,260	312,226	1.7%
MFR : Fourplex	371,297	65,615	71,698	54,868	563,478	3.0%
MFR : Over 4 Units	4,468,111	789,595	862,804	224,367	6,344,876	34.3%
MFR : Individually Metered	236,853	41,856	45,737	115,288	439,734	2.4%
MFR : Mixed Use	122,739	21,690	23,701	2,265	170,395	0.9%
Commercial - Low	1,831,516	344,925	376,905	121,645	2,674,990	14.5%
Commercial - Medium	73,732	22,153	14,423	2,411	112,719	0.6%
Commercial - High	1,273,826	728,690	559,896	21,991	2,584,403	14.0%
Institutional	196,798	41,886	45,769	8,256	292,709	1.6%
Church/Schools	193,642	34,220	37,393	12,274	277,529	1.5%
Misc Industrial	24,679	4,457	4,870	804	34,809	0.2%
Wastewater Only ⁴	12,150	2,147	2,346	2,484	19,127	0.1%
	\$11,959,976	\$ 2,654,712	\$ 2,654,712	\$ 1,210,601	\$18,480,000	100%

Figure 5. Allocation of Revenue Requirements by Customer Class

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. Multi-Family Residential = MFR

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, multi-family residential (MFR) (dependent on number of units), commercial (low, medium and high strength), institutional, church/school,



industrial and wastewater only customers (these customers are contracted with the City of LA for water service, and are all single-family residential accounts).

As shown in **Figure 6**, the development of the collection (or volume) allocation factor was calculated by taking the lowest consecutive 4-month water usage from FY 2017/18 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 this is where the discharge factor was also analyzed and calculated to reflect current cost of service. The discharge factor was calculated by taking the estimated wastewater flow and dividing it by the annual metered water use volume per customer class. This discharge factor is the multiplier specific to each customer class that estimates the amount of sewage discharged to the City's wastewater system.

Customer Class	Annual Volume (hcf) ¹	Lowest 4-Months Water Use (hcf) ^{1,2}	Estimated Wastewater Flow	Updated Discharge Factors	Adjusted Annual Volume (hcf) ³	Percentage of Adjusted Volume
Calculation Components	A	В	C = B * 3	= C / A	E = C * 1.12	
Single Family	1,220,522	345,886	1,037,657	85%	1,158,453	23.2%
MFR : Duplex	74,954	22,890	68,670	92%	76,664	1.5%
MFR : Triplex	84,048	25,060	75,180	89%	83,932	1.7%
MFR : Fourplex	147,953	46,354	139,062	94%	155,250	3.1%
MFR : Over 4 Units	1,719,271	557,815	1,673,445	97%	1,868,254	37.4%
MFR : Individually Metered	90,049	29,570	88,709	99%	99,036	2.0%
MFR : Mixed Use	48,187	15,323	45,970	95%	51,321	1.0%
Commercial - Low	733,712	228,653	685,959	93%	765,813	15.3%
Commercial - Medium	29,317	9,205	27,615	94%	30,830	0.6%
Commercial - High	499,958	159,029	477,087	95%	532,626	10.7%
Institutional	89,532	24,569	73,707	82%	82,287	1.6%
Church/Schools	89,004	24,175	72,525	81%	80,968	1.6%
Misc Industrial	10,475	3,081	9,243	88%	10,319	0.2%
Wastewater Only ⁴	5,352.47	1,516.85	4,551	85%	5,080	0.1%
Total	4,842,334	1,493,126	4,479,379	93%	5,000,833	100.0%

Figure 6. Development of the Volume Allocation Factor and Discharge Factors

1. Metered water consumption from May-June 2018 found in Source File: Santa Monica_Sewer Bill Data FY 17-18.xlsx. Multi-Family Residential = MFR

2. The four consecutive month period of lowest water usage during Fiscal Year 2017/18, for each customer class.

3. NBS adjusted the average winter consumption to the outgoing wastewater flows pumped from the City's Moss Avenue Pump Station to the City of Los Angeles' Hyperion Water Reclamation Plant for treatment and disposal. Source file: Data Request Notes - 2018.11.13.docx, Item 19 information.

4. Estimated volume for Wastewater Only customers is the average adjusted annual per EDU for SFR customers, multiplied by the number of Wastewater Only customers. All Wastewater Only customers are SFR.

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 Amalgamated System Sewerage Facilities Charge (ASSFC) report for March-April 2018-19 to Los Angeles Sanitation District (LASAN) and calculated for commercial customers based on weighted averages for each class.



		Bio	chemical Oxyg	en Demand (B	OD)		Total Suspend	led Solids (TSS)	
Customer Class	Adjusted Annual Flow (hcf)	Average Strength Factor (mg/l)	Calculated BOD (lbs./yr.)	Adjusted BOD (lbs./yr.)	Percent of Total	Average Strength Factor (mg/I)	Calculated TSS (lbs./yr.)	Adjusted TSS (lbs./yr.)	Percent of Total
Single Family	1,158,453	310	2,240,308	1,132,938	18.4%	350	2,529,381	913,812	20.2%
MFR : Duplex	76,664	310	148,259	74,975	1.2%	350	167,389	60,474	1.3%
MFR : Triplex	83,932	310	162,314	82,083	1.3%	350	183,258	66,207	1.5%
MFR : Fourplex	155,250	310	300,236	151,831	2.5%	350	338,976	122,465	2.7%
MFR : Over 4 Units	1,868,254	310	3,612,978	1,827,106	29.7%	350	4,079,169	1,473,717	32.5%
MFR : Individually Metered	99,036	310	191,523	96,854	1.6%	350	216,235	78,121	1.7%
MFR : Mixed Use	51,321	310	99,248	50,191	0.8%	350	112,055	40,483	0.9%
Commercial - Low	765,813	330	1,578,285	798,149	13.0%	373	1,781,934	643,775	14.2%
Commercial - Medium	30,830	527	101,365	51,261	0.8%	355	68,191	24,636	0.5%
Commercial - High	532,626	1003	3,334,293	1,686,173	27.4%	797	2,647,078	956,333	21.1%
Institutional	82,287	373	191,659	96,923	1.6%	422	216,389	78,177	1.7%
Church/Schools	80,968	310	156,582	79,184	1.3%	350	176,786	63,869	1.4%
Misc Industrial	10,319	317	20,392	10,312	0.2%	358	23,023	8,318	0.2%
Wastewater Only ⁴	5,080	310	9,825	4,968	0.1%	350	11,092	4,007	0.1%
Total	5,000,833		12,147,266	6,142,950	100%		12,550,956	4,534,395	100%
	Target, from V	WTP Data		6,142,950	BOD (lbs./yr.)			4,534,395	TSS (lbs./yr.)
				0.51	BOD Adj. Facto	r		0.36	TSS Adj. Factor

Figure 7. Development of the Strength Allocation Factor

1. Consumption, accounts and EDUs from May-June 2018 found in Source File: Santa Monica_Sewer Bill Data FY 17-18.xlsx.

2. Typical strength factors for BOD and TSS are derived from the ASSFC Report for March-April 2018-19 and calculated for Commercial customers with weighted averages.

Source files: Santa Monica_Sewer Bill Data FY 17/18 gg jt_07.16.19_kb_v3.xlsx and ASSFC_Report_March-April_2018-19_to_LASAN.xlsx

Figure 8 summarizes the development of the customer allocation factor.

Customer Class	Number of Accounts ¹	Percentage of Accounts
Single Family	7,728	46.64%
MFR : Duplex	576	3.48%
MFR : Triplex	510	3.08%
MFR : Fourplex	751	4.53%
MFR : Over 4 Units	3,071	18.53%
MFR : Individually Metered	1,578	9.52%
MFR : Mixed Use	31	0.19%
Commercial - Low	1,665	10.05%
Commercial - Medium	33	0.20%
Commercial - High	301	1.82%
Institutional	113	0.68%
Church/Schools	168	1.01%
Misc Industrial	11	0.07%
Sewer Only ⁴	34	0.21%
Total	16,570	100%

Figure 8. Development of the Customer Allocation Factor

 Consumption, accounts and EDUs from May-June 2018 found in Source File: Santa Monica_Sewer Bill Data FY 17-18.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. NBS discussed several wastewater rate alternatives and methodologies with City Staff over the course of this study, such as the percentage of revenue collected from fixed vs. variable charges and differentiating rates by customer class. Based on input provided by City staff, the Task Force, and the City Council, the proposed rates were developed. The following sections describe this process.

NBS recommends that the City make the following modifications to the wastewater rate structure:

- 1. Introduce a modest fixed charge, for all customer classes.
- 2. Update the discharge factor to reflect current consumption patterns.
- 3. Update the volumetric charges that will be calculated based on each unit of water consumed, and multiplied by the discharge factor.

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 three factors used to develop the fixed charge: the number of dwelling units for Residential customers and number of accounts for Non-Residential customers, and the annual revenue requirement. The bi-monthly fixed charge is calculated by taking the 15 percent fixed multiplied by the annual revenue requirement, then divide by the number of dwelling units (for Residential customers) and accounts (for Non-Residential customers) and billing periods per year. The fixed charges for each customer class are shown in **Figure 9**.

VARIABLE CHARGES

The variable charges, on the other hand, are calculated by taking the additional 85 percent portion of the revenue requirement divided by the estimated sewage volume produced. This sewage volume is the water consumption multiplied by the updated discharge factors calculated 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
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Customer Class	No. of Accounts ¹	No. of Dwelling Units ¹	Estimated Sewage Volume ²	Re	nnual venue iirement	New Discharge Factor	Bi- Monthly Fixed Charge ³	Volumetric Charge Per hcf ⁴
Residential							<u>Per DU</u>	
Single Family	7,728	7,753	1,037,657	\$4,	,359,766	85%	\$14.06	\$3.40
MFR: Duplex + Triplex	1,086	2,674	143,850		605,464	90%	\$5.66	\$3.40
MFR: Fourplex + Larger	3,822	40,480	1,812,507	6,	,908,354	97%	\$4.27	\$3.40
MFR : Individually Metered	1,578	1,601	88,709		439,734	99%	\$6.87	\$3.40
Subtotal	14,214	52,508	3,082,723	\$12,	313,318			
Non-Residential							Per Accnt.	
MFR : Mixed Use	31	989	45,970	\$	170,395	95%	\$137.42	\$3.15
Commercial - Low	1,665	2,050	685,959	\$2,	,674,990	93%	\$40.17	\$3.31
Commercial - Medium	33	33	27,615	\$	112,719	94%	\$85.39	\$3.47
Commercial - High	301	499	477,087	\$2,	,584,403	95%	\$214.65	\$4.60
Institutional	113	131	73,707	\$	292,709	82%	\$64.76	\$3.38
Church/Schools	168	181	72,525	\$	277,529	81%	\$41.30	\$3.25
Misc Industrial	11	11	9,243	\$	34,809	88%	\$79.11	\$3.20
Wastewater Only	34	34	4,551	\$	19,127	85%	\$93.76	N/A
Subtotal	2,356	3,928	1,396,656	\$6,	166,682			
Total	16,570	56,436	4,479,379	\$18,	480,000			

1. Consumption, accounts and EDUs from Source File: Santa Monica_Sewer Bill Data FY 17-18.xlsx.

Multi-Family Residential = MFR

2. Estimated sewage volume is annual water consumption multiplied by the discharge factor.

3. Fixed charges are designed to collect 15% of the total revenue requirement. For residential customers, the charges are per dwelling unit. For non-residential the charges are per account. Dwelling unit = DU

4. Volumetric charges are designed to collect 85% of the total revenue requirement.



E. Current and Proposed Wastewater Rates

Figure 10 and **Figure 11** collectively provide a comparison of the current and proposed wastewater rates through FY 2023/24. Residential rates with similar strength effluent are combined in the rate calculation in order to simplify the rate structure. This is a common industry standard with customers that have similar usage patterns.

Westervister Dete Celesdule			Propos	ed Wastewate	er Rates							
Wastewater Rate Schedule	Current	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24						
% Increase in Annual Rate Revenue:	Rates	10.00%	10.00%	10.00%	10.00%	3.00%						
Fixed Charges (\$/bi-monthly)												
Residential (\$/Dwelling Unit)												
Single Family	\$0.00	\$14.06	\$15.46	\$17.01	\$18.71	\$19.27						
MFR: Duplex + Triplex	\$0.00	\$5.66	\$6.23	\$6.85	\$7.53	\$7.76						
MFR: Fourplex + Larger	\$0.00	\$4.27	\$4.69	\$5.16	\$5.68	\$5.85						
MFR : Individually metered	\$0.00	\$6.87	\$7.55	\$8.31	\$9.14	\$9.41						
<u>Non-Residential (\$/Account)</u>												
MFR : Mixed Use	\$0.00	\$137.42	\$151.16	\$166.27	\$182.90	\$188.39						
Commercial - Low	\$0.00	\$40.17	\$44.18	\$48.60	\$53.46	\$55.06						
Commercial - Medium		\$85.39	\$93.93	\$103.33	\$113.66	\$117.07						
Commercial - High	\$0.00	\$214.65	\$236.12	\$259.73	\$285.70	\$294.27						
Institutional	\$0.00	\$64.76	\$71.23	\$78.36	\$86.19	\$88.78						
Church/Schools	\$0.00	\$41.30	\$45.43	\$49.97	\$54.97	\$56.62						
Misc Industrial	\$0.00	\$79.11	\$87.02	\$95.72	\$105.30	\$108.46						
Wastewater Only	\$0.00	\$93.76	\$103.14	\$113.45	\$124.80	\$128.54						

Figure 10. Proposed Wastewater Rates – Fixed Charges

Note - The City does not currently have a fixed charge portion of wastewater rates.



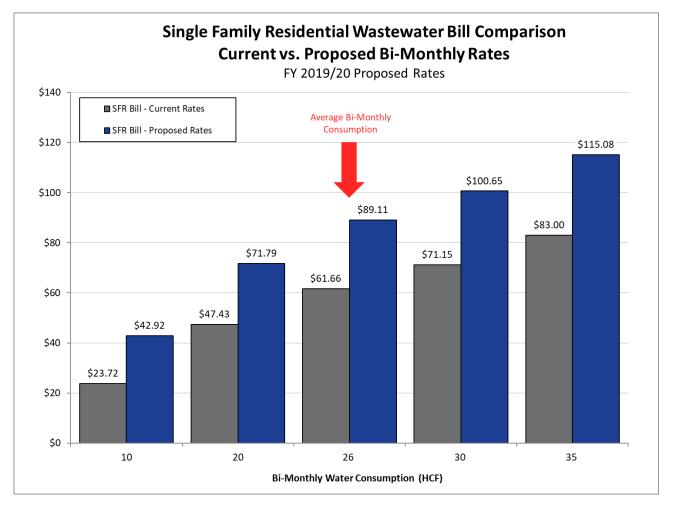
			Proposed Wastewater Rates								
Wastewater Rate Schedule	Current	Updated Discharge	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24				
% Increase in Annual Rate Revenue:	Rates	Factor	10.00%	10.00%	10.00%	10.00%	3.00%				
Volumetric Charges (\$/hcf of average winter water consumption)											
<u>Residential</u>											
Single Family	\$4.65	85%	\$3.40	\$3.73	\$4.11	\$4.52	\$4.65				
MFR: Duplex + Triplex	\$4.65	90%	\$3.40	\$3.73	\$4.11	\$4.52	\$4.65				
MFR: Fourplex + Larger	\$4.65	97%	\$3.40	\$3.73	\$4.11	\$4.52	\$4.65				
MFR : Individually metered	\$4.65	99%	\$3.40	\$3.73	\$4.11	\$4.52	\$4.65				
Non-Residential											
MFR : Mixed Use	\$4.65	95%	\$3.15	\$3.47	\$3.81	\$4.19	\$4.32				
Commercial - Low	\$4.24	93%	\$3.31	\$3.65	\$4.01	\$4.41	\$4.54				
Commercial - Medium	\$5.55	94%	\$3.47	\$3.82	\$4.20	\$4.62	\$4.76				
Commercial - High	\$6.50	95%	\$4.60	\$5.06	\$5.57	\$6.13	\$6.31				
Institutional	\$4.19	82%	\$3.38	\$3.71	\$4.08	\$4.49	\$4.63				
Church/Schools	\$4.19	81%	\$3.25	\$3.58	\$3.94	\$4.33	\$4.46				
Misc Industrial	\$5.16	88%	\$3.20	\$3.52	\$3.87	\$4.26	\$4.39				
Wastewater Only		85%									

Figure 11. Proposed Wastewater Rates – Volumetric Charges



F. Comparison of Current and Proposed Wastewater Bills

Figure 12, Figure 13 and **Figure 14** compare bi-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. These bi-monthly bills are based on typical wastewater volume for each customer class.







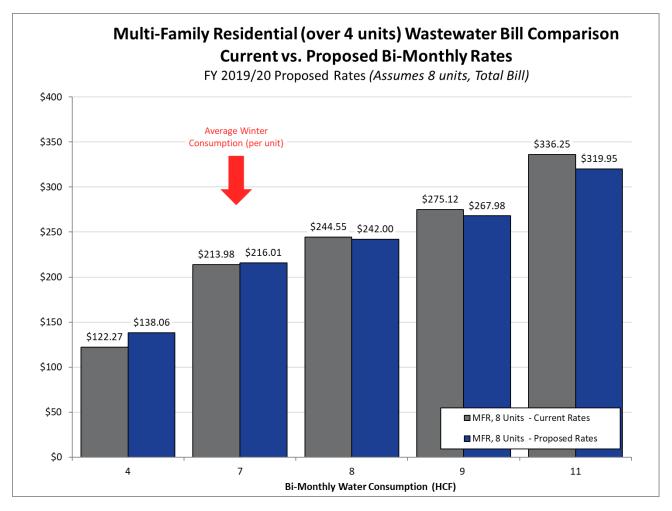


Figure 13. Bi-Monthly Wastewater Bill Comparison for Multi-Family Customers



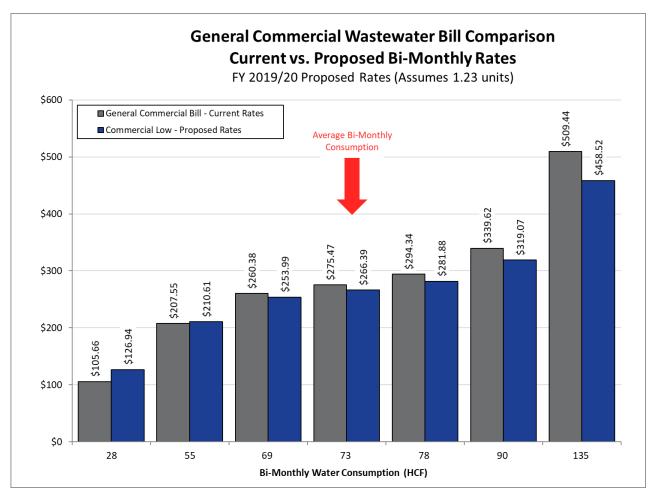


Figure 14. Bi-Monthly Wastewater Bill Comparison for Commercial Customers



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 in order to maintain current level of service and achieve the City's strategic goals, including achieving water self-sufficiency by 2023. This will provide documentation of the rate study analyses and the basis for analyzing potential changes to future rates. The alternative rates and financial plan that NBS and City staff reviewed are in the Appendix.

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** and **Figure 11**. 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 A: Detailed Wastewater Study Tables and Figures

CITY OF SANTA MONICA WASTEWATER RATE STUDY Financial Plan and Reserve Projections

Financial Plan & Reserve Summary

TABLE 1 : FINANCIAL PLAN AND SUMMARY OF REVENUE REQUIREMENTS

	Budget			Projected		
RATE REVENUE REQUIREMENTS SUMMARY ¹	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Sources of Wastewater Funds						
Wastewater Fund, 51						
Rate Revenue:						
Revenue Under Current Rates	\$ 16,800,000	\$ 16,800,000	\$ 16,870,560	\$ 16,941,416	\$ 17,012,570	\$ 17,084,023
Revenue from Rate Increases ²		840,000	2,614,937	4,582,653	6,763,347	8,303,886
Subtotal: Rate Revenue After Rate Increases	\$ 16,800,000	\$ 17,640,000	\$ 19,485,497	\$ 21,524,069	\$ 23,775,918	\$ 25,387,909
Non-Rate Revenue:						
Charges for Services	\$ 1,596,568	\$ 597,183	\$ 597,183	\$ 942,002	\$ 950,810	\$ 959,829
Fines and Forfeitures	-	-	-	-	-	-
Interest Income	850,000	621,453	494,474	354,040	284,688	319,755
Other Revenue	352,500	351,000	351,000	368,002	376,810	385,829
Subtotal: Non-Rate Revenue	\$ 2,799,068	\$ 1,569,636	\$ 1,442,657	\$ 1,664,044	\$ 1,612,308	\$ 1,665,413
Total Sources of Funds	\$ 19,599,068	\$ 19,209,636	\$ 20,928,154	\$ 23,188,113	\$ 25,388,225	\$ 27,053,322
Uses of Wastewater Funds						
Wastewater Fund, 51						
Operating Expenses ³						
Salaries and Benefits	\$ 2,749,589	\$ 2,845,181	\$ 2,954,468	\$ 3,058,206	\$ 3,178,626	\$ 3,290,403
Supplies and Expenses	11,379,068	11,123,098	11,663,044	11,843,789	12,158,761	12,381,805
Retirement and OPEB	24,224	77,287	63,871	91,273	83,912	87,742
Interfund Transactions	10,303,846	10,317,185	(28,380)	(89,072)	(71,195)	(53,799)
Subtotal: Operating Expenses:	\$ 24,456,727	\$ 24,362,751	\$ 14,653,003	\$ 14,904,196	\$ 15,350,104	\$ 15,706,150
Other Expenditures						
Existing Debt Service	\$ 2,696,174	\$ 2,677,274	\$ 5,045,645	\$ 5,304,871	\$ 5,312,346	\$ 2,948,946
New Debt Service	-	-	-	-	-	-
Rate-Funded Capital Expenses				2,700,267	5,360,069	5,407,949
Subtotal: Other Expenditures	\$ 2,696,174	\$ 2,677,274	\$ 5,045,645	\$ 8,005,138	\$ 10,672,415	\$ 8,356,895
Total Uses of Funds	\$ 27,152,901	\$ 27,040,025	\$ 19,698,648	\$ 22,909,334	\$ 26,022,518	\$ 24,063,045
Annual Surplus/(Deficit)	\$ (7,553,833)	\$ (7,830,388)	\$ 1,229,506	\$ 278,779	\$ (634,293)	\$ 2,990,277
Net Revenue Req't. (Total Uses less Non-Rate Revenue)	\$ 24,353,833	\$ 25,470,388	\$ 18,255,991	\$ 21,245,290	\$ 24,410,211	\$ 22,397,632
Projected Annual Rate Revenue Adjustment	0.00%	10.00%	10.00%	10.00%	10.00%	3.00%
Cumulative Increase from Annual Revenue Increases	0.00%	10.00%	21.00%	33.10%	46.41%	50.80%
Debt Coverage After Rate Increase (minimum 1.2 ratio)	(1.80)	(1.92)	1.24	1.56	1.89	3.85

1. Revenue and expenses for FY 2017/18 & FY 2018-19 are from source file: Item 1-FYE2018_OperatingBudget_LineItem.pdf, Pages 88-89 and 424-426.

Budget values have been adjusted as part of the analysis, as detailed in Exhibit 1 (O&M).

2. Revenue from rate increases assumes an implementation date of January 1, 2020 and then January 1 each year thereafter.

3. The FY 2018/19 operating expenses are from the budget. Inflationary factors are applied to these expenses to project costs in FY 2019/20 and beyond.

4. Stormwater fund 52 contributes to the SWIP project. Source file: Fund Forecast - Stormwater (52) - 20181212.xlsx, Summary tab.

Financial Plan & Reserve Summary

CITY OF SANTA MONICA WASTEWATER RATE STUDY Financial Plan and Reserve Projections

TABLE 2 : RESERVE FUND SUMMARY

SUMMARY OF CASH ACTIVITY	Budget			Projected		
UN-RESTRICTED RESERVES	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Total Beginning Cash ¹	\$ 50,800,897					
Operating Reserve						
Beginning Reserve Balance	\$ 18,114,444	\$ 10,560,611	\$ 2,730,223	\$ 3,663,251	\$ 3,726,049	\$ 3,091,756
Plus: Net Cash Flow (After Rate Increases)	(7,553,833)	(7,830,388)	1,229,506	278,779	(634,293)	2,990,277
Plus: Transfer of Debt Reserve Surplus	-	-	-	-	-	-
Less: Transfer Out to Capital Replacement Reserve	-	-	(296,479)	(215,981)	-	(2,155,496)
Ending Operating Reserve Balance	\$ 10,560,611	\$ 2,730,223	\$ 3,663,251	\$ 3,726,049	\$ 3,091,756	\$ 3,926,537
Target Ending Balance (90-days of O&M)	\$ 6,114,182	\$ 6,090,688	\$ 3,663,251	\$ 3,726,049	\$ 3,837,526	\$ 3,926,537
Capital Rehabilitation & Replacement Reserve						
Beginning Reserve Balance	\$ 20,505,328	\$ 20,146,200	\$ 19,056,602	\$ 10,864,841	\$ 7,760,281	\$ 7,535,700
Plus: Transfer of Operating Reserve Surplus	-	-	296,479	215,981	-	2,155,496
Less: Use of Reserves for Capital Projects	(359,128)	(1,089,597)	(8,488,240)	(3,320,541)	(224,581)	(12,400)
Ending Capital Rehab & Replacement Reserve Balance	\$ 20,146,200	\$ 19,056,602	\$ 10,864,841	\$ 7,760,281	\$ 7,535,700	\$ 9,678,796
Current Target Reserve (50% of CIP or min \$3 million) ¹	\$ 22,057,147	\$ 20,752,224	\$ 4,992,838	\$ 3,896,307	\$ 3,691,618	\$ 3,623,179
Target Capital R&R Balance (3% of Net Assets)	\$ 6,454,500	\$ 7,471,600	\$ 7,540,900	\$ 7,544,300	\$ 7,535,700	\$ 7,523,300
Rate Stabilization Fund						
Beginning Reserve Balance	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Less: Use of Reserves for Capital Projects	-	-	-	-	-	-
Ending Rate Stabilization Reserve Balance	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Target Rate Stabilization Balance (\$1million)	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Ending Balance	\$ 31,706,811	\$ 22,786,825	\$ 15,528,092	\$ 12,486,330	\$ 11,627,456	\$ 14,605,333
Minimum Target Ending Balance	\$ 13,568,682	\$ 14,562,288	\$ 12,204,151	\$ 12,270,349	\$ 12,373,226	\$ 12,449,837
Ending Surplus/(Deficit) Compared to Reserve Targets	\$ 18,138,129	\$ 8,224,537	\$ 3,323,941	\$ 215,981	\$ (745,770)	\$ 2,155,496

CITY OF SANTA MONICA WASTEWATER RATE STUDY Financial Plan and Reserve Projections

TABLE 3 : RESERVE FUND SUMMARY (continued)

Restricted Reserves:	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Clean Water SRF Reserve						
Beginning Reserve Balance	\$ -	\$-	\$-	\$-	\$-	\$-
Plus: SRF Loan Funding Proceeds	30,903,461	38,942,952	-	-	-	-
Plus: Revenue Bond Proceeds	-	-	-	-	-	-
Less: Use of Bond & Loan Funds for CIP	(30,903,461)	(38,942,952)	-	-	-	-
Ending Bond Project Fund Balance	\$-	\$ -	\$ -	\$-	\$-	\$-
Target Ending Balance	\$-	\$-	\$-	\$-	\$-	\$-
Debt Reserve						
Beginning Reserve Balance	\$-	\$-	\$-	\$-	\$-	\$-
Plus: Reserve Funding from New Debt Obligations	-	-	-	-	-	-
Less: Transfer of Surplus to Operating Reserve	-	-	-	-	-	-
Ending Debt Reserve Balance	\$-	\$ -	\$-	\$-	\$-	\$-
Target Ending Balance	\$-	\$-	\$-	\$-	\$-	\$-
Connection and Capital Facility Fee Reserve						
Beginning Reserve Balance	\$ 11,181,125	\$-	\$-	\$-	\$-	\$-
Plus: Connection and Capital Facility Fee Revenue	407,782	407,782	407,782	656,000	656,000	656,000
Interest Earnings	223,623	-	-	-	-	-
Less: Use of Reserves for Capital Projects	(11,812,530)	(407,782)	(407,782)	(656,000)	(656,000)	(656,000)
Ending Connection Fee Fund Balance	\$-	\$-	\$-	\$-	\$-	\$-
Annual Interest Earnings Rate ²	2.00%	1.96%	2.17%	2.28%	2.28%	2.75%

1. Total beginning cash and Reserve Targets for the Wastewater Fund for FY 2017/18 and FY 2018/19 found in source files: 51(31)Fund Forecast - Wastewater (May 2019)-Final.xlsx, Summary

2. City estimated interest earnings rate per LAIF. Source file: 51(31) Fund Forecast - Wastewater (May 2019) - Final.xlsx, 'Interest Schedule' tab.

CITY OF SANTA MONICA WASTEWATER RATE STUDY Rate Adjustment Charts and Report Tables

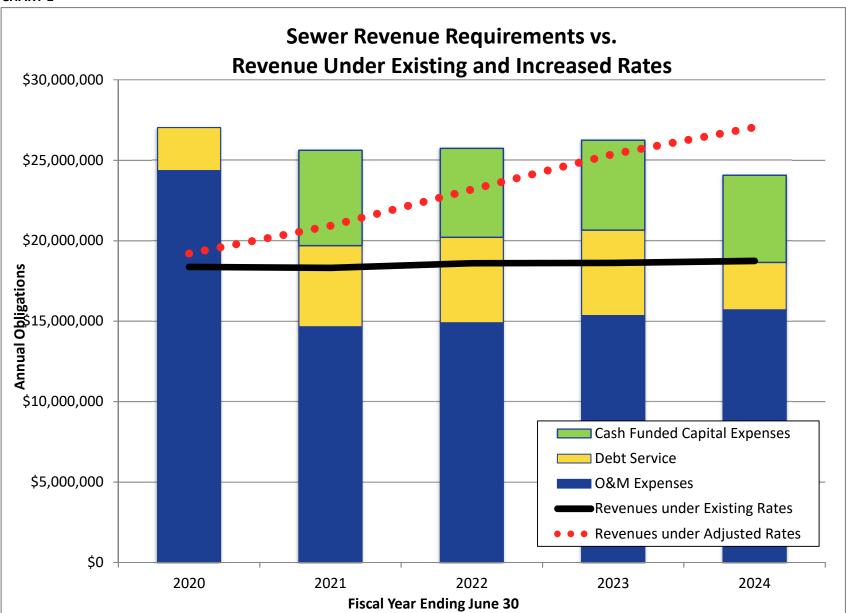
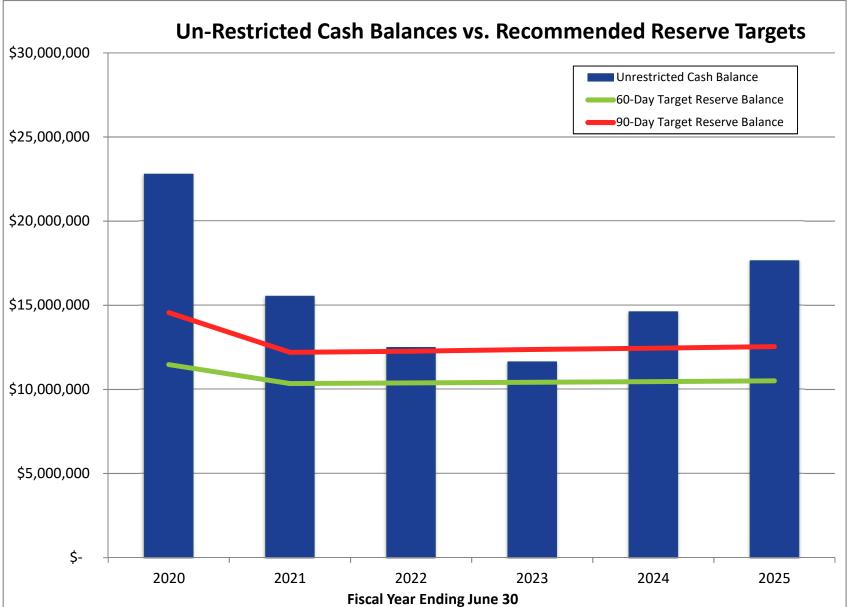


CHART 1

CITY OF SANTA MONICA WASTEWATER RATE STUDY Rate Adjustment Charts and Report Tables

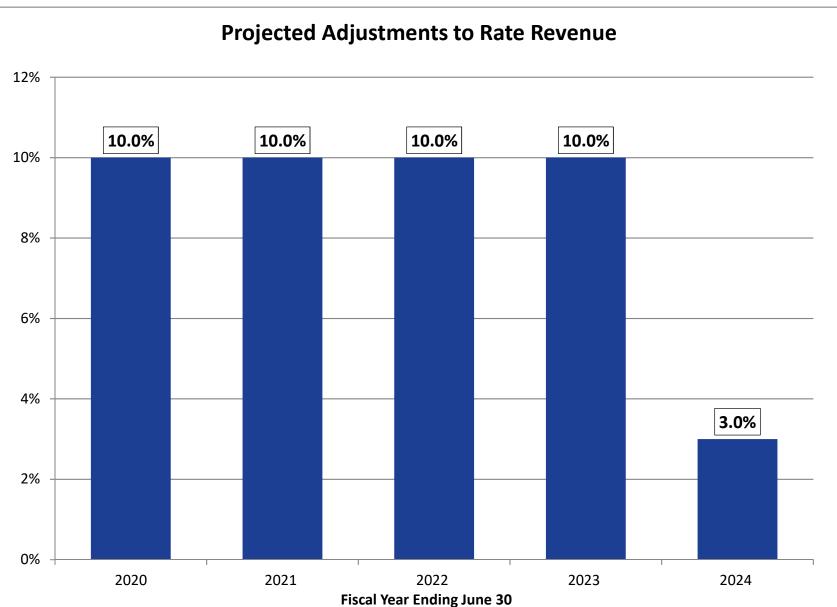




Charts and Tables, 5 of 41 10/31/2019

CITY OF SANTA MONICA WASTEWATER RATE STUDY Rate Adjustment Charts and Report Tables





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TABLE 4 : OPERATING REVENUE FORECAST

DESCRIPTION	Basis	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Wastewater Fund, 51							
City of LA - Wastewater Repair	1	\$ 1,000,000	\$-	\$-	\$ 367,002	\$ 375,810	\$ 384,829
Connection / Capacity Permit Fees	1	7,782	7,782	7,782	6,000	6,000	6,000
Wastewater Services Charges	1	16,800,000	16,800,000	16,870,560	16,941,416	17,012,570	17,084,023
Wastewater Capital Facility Fees	1	400,000	400,000	400,000	650,000	650,000	650,000
Saddle Fees	1	59,385	60,000	60,000	75,000	75,000	75,000
Industrial Waste Fees	1	537,183	537,183	537,183	500,000	500,000	500,000
Charges for Services - SUBTOTAL		\$ 18,804,350	\$ 17,804,965	\$ 17,875,525	\$ 18,539,418	\$ 18,619,380	\$ 18,699,852
Admin Fines / Penalties	8		-				
Fines and Forfeitures - SUBTOTAL		\$-	\$ -	\$ -	\$ -	\$ -	\$-
Int. Dep. / Investment	See FP	850,000	-	-	-	-	-
Unrealized Gain (Loss)	8	-	-	-	-	-	-
Accrued Investment Income	8	-	-	-	-	-	-
Int. Inc Loan 34 Fund (Stormwater)	8		-				
Investment Income - SUBTOTAL		\$ 850,000	\$ -	\$ -	\$ -	\$ -	\$-
ASSFC Pass-Thru	8	350,000	350,000	350,000	367,002	375,810	384,829
Wastewater Misc. Non-Operating	8	2,500	1,000	1,000	1,000	1,000	1,000
Int. Wastewater Bond Proceeds	8	-	-	-	-	-	-
Alt. Fuel Tax Credit	8		-				
Other - SUBTOTAL		\$ 352,500	\$ 351,000	\$ 351,000	\$ 368,002	\$ 376,810	\$ 385,829
TOTAL : Wastewater Fund, 51		\$ 20,006,850	\$ 18,155,965	\$ 18,226,525	\$ 18,907,420	\$ 18,996,190	\$ 19,085,681

TABLE 5 : OPERATING REVENUE SUMMARY

DESCRIPTION	Basis	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Wastewater Fund, 51							
Wastewater Rate Revenue		\$ 16,800,000	\$ 16,800,000	\$ 16,870,560	\$ 16,941,416	\$ 17,012,570	\$ 17,084,023
Charges for Services		1,596,568	597,183	597,183	942,002	950,810	959,829
Connection and Capacity Fees		407,782	407,782	407,782	656,000	656,000	656,000
Fines and Forfeitures		-	-	-	-	-	-
Interest Income		850,000	-	-	-	-	-
Other Revenue		352,500	351,000	351,000	368,002	376,810	385,829
TOTAL : OPERATING REVENUE ¹		\$ 20,006,850	\$ 18,155,965	\$ 18,226,525	\$ 18,907,420	\$ 18,996,190	\$ 19,085,681

1. Revenue and expenses for FY 2017/18 & FY 2018-19 are from source files: *Item 1-O&M Budgets.xlsx* and *Item 1-FYE2018_OperatingBudget_LineItem.pdf*, Pages 88-89 and 42 Source files for 10-year budget: 51(31)Fund Forecast - Wastewater (May 2019)-Final.xlsx and Fund Forecast - Stormwater (52) - 20181212.xlsx

EXHIBIT 1

TABLE 6 : OPERATING EXPENSE FORECAST

DESCRIPTION	Basis	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Wastewater Fund, 51							
Salaries and Benefits							
Permanent Employees	3	\$ 1,771,149	\$ 1,816,914	\$ 1,853,313	\$ 1,890,379	\$ 1,928,187	\$ 1,966,751
Year-End Cash Outs	4	-	-	-	-	-	-
Vacation Lump Sum Pays	4	-	-	-	-	-	-
Standby Pay	3	21,097	21,519	21,949	22,388	22,836	23,293
Overtime	3	39,675	40,469	41,278	42,103	42,945	43,804
Temporary Employees	3	-	-	-	-	-	-
Medicare - Misc. Employees	4	26,045	26,436	26,832	27,235	27,643	28,058
Workers' Comp Insurance	4	61,265	34,248	36,153	39,045	42,169	45,542
Medical - Misc. Employees	4	389,494	396,115	419,486	453,045	493,819	538,263
Med. Trust - Misc. Employees	4	42,403	43,251	44,116	44,998	45,898	46,816
Dental	4	21,571	22,218	22,885	23,571	24,278	25,007
Vision	4	2,939	2,983	3,028	3,073	3,119	3,166
Employee Health Contribution	4	(27,018)	(27,728)	(29,364)	(31,713)	(34,567)	(37,678
Retirement - Misc. Employees	4	371,874	439,202	484,763	513,559	551,269	575,825
Retirement - As Needed	4	-	-	-	-	-	-
Unemployment	4	8,236	8,236	8,236	8,236	8,236	8,236
EAP	4	2,092	2,113	2,134	2,155	2,177	2,199
DCAP	4	1,582	1,582	1,582	1,582	1,582	1,582
Life Insurance and AD&D	4	5,155	5,413	5,683	5,968	6,266	6,579
Disability Insurance	4	12,030	12,210	12,394	12,580	12,768	12,960
Salaries and Benefits - SUBTOTAL		\$ 2,749,589	\$ 2,845,181	\$ 2,954,468	\$ 3,058,206	\$ 3,178,626	\$ 3,290,403
Supplies and Expenses							
Vehicles - Fuels / Lubrication	7	\$ 7,700	\$ 7,700	\$ 7,885	\$ 8,074	\$ 8,268	\$ 8,466
CNG Fuel	7	15,400	18,000	18,000	18,432	18,874	19,327
Reimburse Water Fund	2	321,747	370,000	370,973	379,876	388,993	398,329
Utilities Billing Services	2	350,000	411,000	421,369	431,482	441,837	452,442
Metered Postage	2	15,000	2,000	2,000	2,048	2,097	2,147
Indirect Cost Allocation	2	717,765	747,911	780,071	798,793	817,964	837,595
Memberships and Dues	2	5,600	6,000	6,000	6,144	6,291	6,442
Rent	2	113,000	118,000	119,223	122,084	-	-
Other Operating Rent	2	226,556	226,556	226,556	231,993	237,561	243,263
Reimburse Engineering Office	2	14,806	14,806	15,161	15,525	15,897	16,279
Office Supplies / Expense	2	8,200	5,000	5,447	5,578	5,712	5,849
SPEC Department Supplies	2	233,766	131,498	158,498	162,302	166,197	170,186
Rideshare and Parking Programs	2	-	-	-	-	-	
Uniform / Protective Clothing	2	12,800	16,000	16,000	16,384	16,777	17,180
Utilities - Electricity	5	3,100	2,426	2,424	2,482	2,542	2,603
Utilities - Water	5	2,600	1,738	1,736	1,778	1,820	1,864

TABLE 7 : OPERATING EXPENSE FORECAST

DESCRIPTION	Basis	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Wastewater Fund, 51							
Supplies and Expenses, cont.							
Utilities - Telephone	5	10,200	13,755	14,149	14,489	14,836	15,192
Vehicle Management Fund - Maint.	2	143,000	146,568	150,486	154,098	157,796	161,583
Computer Eqt. / Software Maint.	2	80,000	78,613	80,500	82,432	84,410	86,436
Sewage Pump Plant Maint.	2	400,000	365,400	375,170	384,174	393,394	402,836
Storm Drain Maintenance	2	150,000	146,400	151,314	154,946	158,664	162,472
SMURRF Plant Maintenance	2	400,000	325,000	335,000	343,040	351,273	359,704
Conferences / Meetings / Travel	2	15,400	15,000	15,000	15,360	15,729	16,106
Food Purchases	2	1,000	1,000	1,024	1,049	1,074	1,100
Training Costs	2	-	-	-	-	-	-
Training	2	10,200	15,000	15,000	15,360	15,729	16,106
Bank Fees	2	10,200	9,755	9,749	9,983	10,223	10,468
General Liability - Auto	2	117,954	195,134	195,134	214,647	236,112	247,918
Property Insurance	2	59,305	44,449	48,894	53,783	59,162	65,078
LA Sewage Disposal	2	7,140,200	6,400,000	6,555,511	5,800,000	5,900,000	6,000,000
ASSFC Pass-Thru	2	350,000	350,000	358,400	367,002	375,810	384,829
SCADA O&M	2	25,600	56,386		-	-	-
Transfer Station Fee	2	6,100	8,854	8,850	9,062	9,280	9,503
Fiscal Agent Fees	2	2,000	2,000	2,048	2,097	2,147	2,199
Contractual Services	2	150,000	250,000	256,000	262,144	268,435	274,878
Employee Medical Exams	2	5,100	5,100	5,222	5,348	5,476	5,608
Professional Services	2	155,000	366,280	375,071	384,072	393,290	402,729
Computer Equipment	2	(231)	(231)	(231)	(231)	(231)	(231)
Miscellaneous Equipment	2	-	-	-	-	-	-
SWIP - SMURRF Operating costs	2	-	-		622,080	829,440	829,440
SWIP - Civic Lot Plant Operating costs	2	100,000	250,000	1,105,920	1,474,560	1,474,560	1,474,560
SWIP - tanks Operating costs	2	-	-	138,240	184,320	184,320	184,320
SWIP - City of LA sewerage payments	2			(684,750)	(913,000)	(913,000)	(913,000)
Supplies and Expenses - SUBTOTAL		\$ 11,379,068	\$ 11,123,098	\$ 11,663,044	\$ 11,843,789	\$ 12,158,761	\$ 12,381,805

TABLE 8 : OPERATING EXPENSE FORECAST

DESCRIPTION	Basis	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Retirement and OPEB							
Retirement - Misc. Employees	4	8,693	61,756	48,340	74,966	66,789	69,763
OPEB Payment ARC	4	28,267	28,267	28,267	29,680	31,164	32,723
Reimbursement from OPEB Trust	4	(12,736)	(12,736)	(12,736)	(13,373)	(14,041)	(14,744)
OPEB Expense	4		-		-	-	
Retirement and OPEB - SUBTOTAL ²		\$ 24,224	\$77,287	\$ 63,871	\$ 91,273	\$ 83,912	\$ 87,742
Interfund Transactions							
Transfer to GF for SCADA Analyst	8	73,242	76,415	79,730	82,725	86,098	89,112
Transfer to WW for Process Engineer	8	-	-	84,785	87,970	91,557	94,762
Environmental Reimbursement	8	823,604	843,370	863,611	884,338	905,562	927,296
Reimburse GF for Computer Equipment	8	-	-	-	-	-	-
Transfer to Fund 06	8	9,840,000	9,840,000	-	-	-	-
SMURRF O&M Costs	8	(400,000)	(409,600)	(419,430)	(429,497)	(439,805)	(450,360)
Stormwater / Wastewater	8	-	-	-	-	-	-
Transfer in from GF - Low Income Disc.	8	(33,000)	(33,000)	(33,000)	(33,000)	(33,000)	(33,000)
Transfer-In Fund 06 CWSRF Debt Share	8			(604,077)	(681,608)	(681,608)	(681,608)
Interfund Transactions - SUBTOTAL ²		\$ 10,303,846	\$ 10,317,185	\$ (28,380)	\$ (89,072)	\$ (71,195)	\$ (53,799)
TOTAL : Wastewater Fund, 51		\$ 24,456,727	\$ 24,362,751	\$ 14,653,003	\$ 14,904,196	\$ 15,350,104	\$ 15,706,150

TABLE 9 : FORECASTING ASSUMPTIONS

INFLATION FACTORS ³	Basis	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Customer Growth ⁴	1	1	0.00%	0.42%	0.42%	0.42%	0.42%

1. Revenue and expenses for FY 2017/18 & FY 2018-19 are from source files: *Item 1-O&M Budgets.xlsx* and *Item 1-FYE2018_OperatingBudget_LineItem.pdf*, Pages 88-89 and 42 Source file for 10-year budget: 51(31)Fund Forecast - Wastewater (May 2019) -Final.xlsx and Fund Forecast - Stormwater (52) - 20181212.xlsx

2. Some revenues and expenditures found in source file: Item 1-WastewaterFund31_ExpendituresTransfers_FY15-18.pdf, Pages 12-13.

3. For fiscal years 2017/18-2027/28, inflation factors are determined by the City. For the following fiscal years, NBS is estimating inflation factors based on industry standards.

4. Customer growth is estimated at 0.42% per year per 2018 Sustainable Water Master Plan.

CITY OF SANTA MONICA WASTEWATER RATE STUDY Capital Improvement Plan Expenditures

TABLE 10 : CAPITAL FUNDING SUMMARY

CAPITAL FUNDING FORECAST	Budget	Projected							
Funding Sources	FY 2018/19	FY 2019/20	FY 2020/21		FY 2021/22	FY 2022/23	FY 2023/24		
Grants	\$-	\$-	\$	-	\$ -	\$-	\$	-	
Use of Capacity Fee Reserves	11,812,530	407,782	4	407,782	656,000	656,000		656,000	
Use of New SRF Loan ¹	30,903,461	38,942,952		-	-	-		-	
Use of New Revenue Bond Proceeds	-	-		-	-	-		-	
Use of Stormwater Fund Reserves ²	1,039,176	1,064,116	1,0	089,655	1,115,807	1,142,586	:	1,170,008	
Use of Capital R&R Reserve	359,128	1,089,597	8,4	188,240	3,320,541	224,581		12,400	
Rate Revenue	-	-		-	2,700,267	5,360,069		5,407,949	
Total Sources of Capital Funds	\$ 44,114,295	\$ 41,504,448	\$ 9,9	985,677	\$ 7,792,615	\$ 7,383,236	\$ 3	7,246,358	
Uses of Capital Funds:									
Total Project Costs	\$ 44,114,295	\$ 41,504,448	\$ 9,9	985,677	\$ 7,792,615	\$ 7,383,236	\$	7,246,358	
Capital Funding Surplus (Deficiency)	\$-	\$-	\$	-	\$ -	\$-	\$	-	
Clean Water SRF Loan ¹	\$ 30,903,461	\$ 38,942,952	\$	-	\$-	\$-	\$	-	
New Revenue Bond Proceeds	\$-	\$-	\$	-	\$-	\$-	\$	-	
Stormwater Fund Transfers for projects ²	\$ 1,039,176	\$ 1,064,116	\$ 1,0	089,655	\$ 1,115,807	\$ 1,142,586	\$	1,170,008	

1. Balance sheet transfer in from Clean Water State Revolving Fund. Source file: 51(31)Fund Forecast - Wastewater (May 2019) - Final.xlsx, Summary tab.

Added \$13million to FY 2019/20 per request of City April 30, 2019.

2. Stormwater fund 52 contributes to the SWIP project. Source file: Fund Forecast - Stormwater (52) - 20181212.xlsx, Summary tab.

CITY OF SANTA MONICA WASTEWATER RATE STUDY Capital Improvement Plan Expenditures

CAPITAL IMPROVEMENT PROGRAM

TABLE 11 : Capital Improvement Program Costs (in Current-Year Dollars)

Project Description ¹	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Wastewater Tenant Improvements	\$ 521,500	\$ 3,810,400	\$-	\$-	\$-	\$-
Wastewater Main Replacement	4,140,562	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
Moss Avenue Pumping Station	987,845	792,940	229,600	450,000	100,000	100,000
Utility Billing Software	84,907	-	-	-	300,000	-
SCADA Systems Upgrade	100,000	-	-	-	-	-
Colorado Ave Esp. Wastewater	110,000	-	-	-	-	-
Hansen 8 Software Upgrade	68,180	-	300,000	-	-	-
Wastewater Modeling Software	93,014	-	-	-	-	-
Non-Potable Water Main Expansion	1,370,317	-	-	-	-	-
Sustainable Water Infrastructure Project	27,795,826	16,102,952	-	-	-	-
Possible Increase Cost (Loan Against Revolving Fund)	-	13,000,000	-	-	-	-
Computer Equipment Replacement Program	39,154	40,310	40,310	40,310	40,310	40,310
Telecommunications Services	13,968	13,968	13,968	13,968	13,968	13,968
Fleet Vehicle Replacement Program	281,414	291,264	301,458	312,009	322,929	332,617
Annual Paving and Sidewalk Repair Program	553,968	250,000	250,000	250,000	250,000	250,000
Hyperion Capital Payment	4,518,300	3,993,100	4,480,900	3,279,000	2,729,500	2,701,400
Sustainable Water Infrastructure Project Injection Well	-	-	-	-	-	-
Info Master Implementation	100,000	-	-	-	-	-
Groundwater Resiliency Well (Charnock-10)	3,250,000	-	-	-	-	-
Fleet Software Update/Telematics	-	200,000	-	-	-	-
PENDING Software ProRata Share	-	9,514	-	-	-	-
PENDING CY ProRata Share	-	-	1,078,596	-	-	-
SCADA Improvements	85,339	-	-	-	-	-
Future Projects ³	-	-	-	-	-	-
Total: CIP Program Costs (Current-Year Dollars) ¹	\$ 44,114,295	\$ 41,504,448	\$ 9,694,832	\$ 7,345,287	\$ 6,756,707	\$ 6,438,295
Rate Funded Projects	\$ 359,128	\$ 1,089,597	\$ 8,488,240	\$ 6,020,808	\$ 5,584,650	\$ 5,420,349

CITY OF SANTA MONICA WASTEWATER RATE STUDY Capital Improvement Plan Expenditures

TABLE 12 : Capital Improvement Program Costs (in Future-Year Dollars)

Project Description ¹	F	Y 2018/19	F	Y 2019/20	F	Y 2020/21	F	Y 2021/22	F	Y 2022/23	F	Y 2023/24
Wastewater Tenant Improvements	\$	521,500	\$	3,810,400	\$	-	\$	-	\$	-	\$	-
Wastewater Main Replacement	\$	4,140,562	\$	3,000,000	\$	3,090,000	\$	3,182,700	\$	3,278,181	\$	3,376,526
Moss Avenue Pumping Station	\$	987,845	\$	792,940	\$	236,488	\$	477,405	\$	109,273	\$	112,551
Utility Billing Software	\$	84,907	\$	-	\$	-	\$	-	\$	327,818	\$	-
SCADA Systems Upgrade	\$	100,000	\$	-	\$	-	\$	-	\$	-	\$	-
Colorado Ave Esp. Wastewater	\$	110,000	\$	-	\$	-	\$	-	\$	-	\$	-
Hansen 8 Software Upgrade	\$	68,180	\$	-	\$	309,000	\$	-	\$	-	\$	-
Wastewater Modeling Software	\$	93,014	\$	-	\$	-	\$	-	\$	-	\$	-
Non-Potable Water Main Expansion	\$	1,370,317	\$	-	\$	-	\$	-	\$	-	\$	-
Sustainable Water Infrastructure Project	\$	27,795,826	\$	16,102,952	\$	-	\$	-	\$	-	\$	-
Possible Increase Cost (Loan Against Revolving Fund)	\$	-	\$	13,000,000	\$	-	\$	-	\$	-	\$	-
Computer Equipment Replacement Program	\$	39,154	\$	40,310	\$	41,519	\$	42,765	\$	44,048	\$	45,369
Telecommunications Services	\$	13,968	\$	13,968	\$	14,387	\$	14,819	\$	15,263	\$	15,721
Fleet Vehicle Replacement Program	\$	281,414	\$	291,264	\$	310,502	\$	331,010	\$	352,873	\$	374,363
Annual Paving and Sidewalk Repair Program	\$	553,968	\$	250,000	\$	257,500	\$	265,225	\$	273,182	\$	281,377
Hyperion Capital Payment	\$	4,518,300	\$	3,993,100	\$	4,615,327	\$	3,478,691	\$	2,982,598	\$	3,040,449
Sustainable Water Infrastructure Project Injection Well	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Info Master Implementation	\$	100,000	\$	-	\$	-	\$	-	\$	-	\$	-
Groundwater Resiliency Well (Charnock-10)	\$	3,250,000	\$	-	\$	-	\$	-	\$	-	\$	-
Fleet Software Update/Telematics	\$	-	\$	200,000	\$	-	\$	-	\$	-	\$	-
PENDING Software ProRata Share	\$	-	\$	9,514	\$	-	\$	-	\$	-	\$	-
PENDING CY ProRata Share	\$	-	\$	-	\$	1,110,954	\$	-	\$	-	\$	-
SCADA Improvements	\$	85,339	\$	-	\$	-	\$	-	\$	-	\$	-
Future Projects ³	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Total: CIP Program Costs (Future-Year Dollars)	\$	44,114,295	\$	41,504,448	\$	9,985,677	\$	7,792,615	\$	7,383,236	\$	7,246,358

TABLE 13 : FORECASTING ASSUMPTIONS

Economic Variables ²	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Annual Construction Cost Inflation, Per Engineering	0.00%	0.00%	3.00%	3.00%	3.00%	3.00%
News Record	0.0078	0.00%	5.00%	5.00%	5.0070	5.00%
Cumulative Construction Cost Multiplier from FY 2018/	1.00	1.00	1.03	1.06	1.09	1.13

1. FY 2017/18 - 2028/29 given from City and assumed for future years. Source file: Item 17-FYE2019_CIP_Budget.pdf, Pages 148 in Wastewater Fund 51 and 51(31)Fund Forecast - Wastewater (May 2019)-final.xlsx, 'Capital (CIP)' tab. Updates made to CIP per City request on 07.12.2019. Source file: SM Sewer CIP Comparison_IT.xlsx

2. Construction inflator is based on the most current 10 year average of the Engineering News-Record Construction Cost Index. Source: www.enr.com/economics

3. NBS assumed future CIP costs to be the average of CIP costs for years 2019-2023.

<u>EXHIBIT 2</u>

CITY OF SANTA MONICA WASTEWATER RATE STUDY Capital Improvement Plan Expenditures

TABLE 14 : ALLOCATION OF TOTAL CIP COSTS

Description	Total Cost	Flow	Strength		Customer		Basis of Classification		
Description	Total Cost	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Wastewater Tenant Improvements	\$ 4,331,900	\$ 4,331,900	\$-	\$ -	\$-	100%	0%	0%	0%
Wastewater Main Replacement	34,140,562	34,140,562	-	-	-	100%	0%	0%	0%
Moss Avenue Pumping Station	3,160,385	3,160,385	-	-	-	100%	0%	0%	0%
Utility Billing Software	384,907	384,907	-	-	-	100%	0%	0%	0%
SCADA Systems Upgrade	100,000	100,000	-	-	-	100%	0%	0%	0%
Colorado Ave Esp. Wastewater	110,000	110,000	-	-	-	100%	0%	0%	0%
Hansen 8 Software Upgrade	368,180	368,180	-	-	-	100%	0%	0%	0%
Wastewater Modeling Software	93,014	93,014	-	-	-	100%	0%	0%	0%
Non-Potable Water Main Expansion	1,370,317	1,370,317	-	-	-	100%	0%	0%	0%
Sustainable Water Infrastructure Project	43,898,778	43,898,778	-	-	-	100%	0%	0%	0%
Possible Increase Cost (Loan Against Revolving Fund)	13,000,000	13,000,000	-	-	-	100%	0%	0%	0%
Computer Equipment Replacement Program	442,254	442,254	-	-	-	100%	0%	0%	0%
Telecommunications Services	153,648	153,648	-	-	-	100%	0%	0%	0%
Fleet Vehicle Replacement Program	3,660,576	3,660,576	-	-	-	100%	0%	0%	0%
Annual Paving and Sidewalk Repair Program	3,053,968	3,053,968	-	-	-	100%	0%	0%	0%
Hyperion Capital Payment	36,702,200	22,021,320	7,340,440	7,340,440	-	60%	20%	20%	0%
Sustainable Water Infrastructure Project Injection Well	-	-	-	-	-	100%	0%	0%	0%
Info Master Implementation	100,000	100,000	-	-	-	100%	0%	0%	0%
Groundwater Resiliency Well (Charnock-10)	3,250,000	3,250,000	-	-	-	100%	0%	0%	0%
Fleet Software Update/Telematics	200,000	200,000	-	-	-	100%	0%	0%	0%
PENDING Software ProRata Share	9,514	9,514	-	-	-	100%	0%	0%	0%
PENDING CY ProRata Share	1,078,596	1,078,596	-	-	-	100%	0%	0%	0%
SCADA Improvements	85,339	85,339	-	-	-	100%	0%	0%	0%
Future Projects	n/a	n/a	n/a	n/a	n/a	100%	0%	0%	0%
Total Costs	\$149,694,139	\$135,013,259	\$ 7,340,440	\$ 7,340,440	\$-	90%	5%	5%	0%

CITY OF SANTA MONICA WASTEWATER RATE STUDY Debt Service

TABLE 15 : EXISTING AND PLANNED DEBT OBLIGATIONS

CURRENT CITY DEBT OBLIGATIONS		Budget					P	rojected				
Annual Repayment Schedules:	F١	/ 2018/19	F١	2019/20	F	Y 2020/21	F۱	(2021/22	F	Y 2022/23	F	2023/24
Wastewater 2012A Series Bond												
Principal Payment ¹	\$	2,106,300	\$	2,130,000	\$	2,210,000	\$	2,275,000	\$	2,340,000	\$	-
Interest Payment		266,550		223,950	_	148,200		80,925		23,400		-
Subtotal: Annual Debt Service	\$	2,372,850	\$ 3	2,353,950	\$	2,358,200	\$	2,355,925	\$	2,363,400	\$	-
Coverage Req't (% of debt service) ¹		120%		120%		120%		120%		120%		120%
Reserve Requirement (total fund balance) ¹	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
Repayment of \$13M modification to Loan												
Principal Payment	\$	-	\$	-	\$	650,000	\$	650,000	\$	650,000	\$	650,000
Interest Payment	_	-		-		-		-	_	-	_	-
Subtotal: Annual Debt Service	\$	-	\$	-	\$	650,000	\$	650,000	\$	650,000	\$	650,000
Coverage Req't (\$-Amnt. above annual payment)		120%		120%		120%		120%		120%		120%
Reserve Requirement (total fund balance)	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
California Clean Water SRF Payment Schedule												
Principal Payment ²	\$	-	\$	-	\$	1,251,784	\$	1,417,901	\$	1,395,054	\$	1,420,165
Interest Payment ²	_	-		-	_	785,661		881,045		903,892		878,781
Subtotal: Annual Debt Service	\$	-	\$	-	\$	2,037,445	\$	2,298,946	\$	2,298,946	\$	2,298,946
Coverage Req't (\$-Amnt. above annual payment)		0%		0%		0%		0%		0%		0%
Reserve Requirement (total fund balance)	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-
State Water Resources Control Board Clean Water	SRF	(SMURRF)										
Principal Payment ³		307,144		315,130		-		-		-		-
Interest Payment ³	_	16,179		8,193		-		-	_	-		-
Subtotal: Annual Debt Service	\$	323,324	\$	323,324	\$	-	\$	-	\$	-	\$	-
Coverage Req't (\$-Amnt. above annual payment)		0%		0%		0%		0%		0%		0%
Reserve Requirement (total fund balance)	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-

1. Principal payments found in Source file: *Item 7-Wastewater2012ASeriesBondRedeenSchedule_2019-2022.pdf.*

Per the official statement, there is a 120% coverage requirement of the operating fund and no reserve fund requirement. Source: Item 7-Wastewater2012ASeriesOS.p

2. Principal and Interest payments found in Source file: Item 7-WastewaterandCleanBeachesFund_SWIP_CWSRFLoanRepayment_8211-110.pdf.

3. Per official statement, no coverage or reserve requirement. Principal and Interest payments found in Source file: Item 7-Wastewater_SMURRF_CWSRFLoan.pdf.

TABLE 16 : EXISTING ANNUAL DEBT OBLIGATIONS TO BE SATISFIED BY WATER RATES

Existing Annual Debt Service	\$ 2,696,174	\$ 2,677,274	\$ 5,045,645	\$ 5,304,871	\$ 5,312,346	\$ 2,948,946
Existing Annual Coverage Requirement	120%	120%	120%	120%	120%	120%
Existing Debt Reserve Target	\$-	\$-	\$-	\$-	\$-	\$-

CITY OF SANTA MONICA WASTEWATER RATE STUDY Projected Water Rates Under Existing Rate Schedule

TABLE 17 : CURRENT WASTEWATER RATE SCHEDULE

Current Bi-Monthly Was	tewater Rates 1	, 2											
Amount of Water Used (hcfs) x Rate x Discharge Factor = Wastewater Service Charge (bi-monthly bill)													
Single Family Accounts	Discharge Factor	Rate per hcf											
All SFR Accounts	51%	\$4.65											
Multi-Family Accounts	Discharge Factor	Rate per hcf											
Duplex	80%	\$4.65											
Triplex	85%	\$4.65											
Fourplex	90%	\$4.65											
Over 4 Units	95%	\$4.65											
Individually Metered	95%	\$4.65											
Residential Low Income Pate	Discharge	Rate per											
Residential Low Income Rate	Discharge Factor	Rate per hcf											
Residential Low Income Rate All Residential Low Income	5	-											
	Factor	hcf \$2.24 Rate per											
All Residential Low Income	Factor 51% Discharge	<i>hcf</i> \$2.24											
All Residential Low Income Non-Residential Accounts	Factor 51% Discharge Factor	hcf \$2.24 Rate per hcf											
All Residential Low Income Non-Residential Accounts General Commercial	Factor 51% Discharge Factor 89%	hcf \$2.24 Rate per hcf \$4.24											
All Residential Low Income Non-Residential Accounts General Commercial Medium Low	Factor 51% Discharge Factor 89% 89%	hcf \$2.24 Rate per hcf \$4.24 \$4.40											
All Residential Low Income Non-Residential Accounts General Commercial Medium Low Medium	Factor 51% Discharge Factor 89% 89% 89%	hcf \$2.24 Rate per hcf \$4.24 \$4.40 \$5.09											
All Residential Low Income Non-Residential Accounts General Commercial Medium Low Medium Medium Medium High	Factor 51% Discharge Factor 89% 89% 89% 89% 89%	hcf \$2.24 Rate per hcf \$4.24 \$4.60 \$5.09 \$5.55											
All Residential Low Income Non-Residential Accounts General Commercial Medium Low Medium Medium High High	Factor 51% Discharge 89% 89% 89% 89% 89% 89% 89%	hcf \$2.24 Rate per hcf \$4.24 \$4.24 \$5.09 \$5.55 \$6.50											
All Residential Low Income Non-Residential Accounts General Commercial Medium Low Medium Medium High Churches	Factor 51% Discharge 89% 89% 89% 89% 89% 89% 89% 89% 89% 89%	hcf \$2.24 Rate per hcf \$4.24 \$4.00 \$5.09 \$5.55 \$6.50 \$4.19											

1. Bi-Monthly Wastewater Rates per source file: water and Wastewater rates and capital facility fees 2018.pdf

2. HCF = Hundred Cubic Feet or 748 gallons.

City recovers 100% of rate requirements currently with volumetric rates only.

EXHIBIT 4

TABLE 18 : CLASSIFICATION OF EXPENSES

	Total Revenue	Collection	Stree	nath	Customer		Basis of Cla	ocification					
Budget Categories	Requirements	Collection	Stre	ngth	Customer		Basis of Cla	assification)	Fixed %	Variable %	Fixed \$	Variable \$
	FY 2019/20	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)				
Wastewater Fund, 31													
Salaries and Benefits													
Permanent Employees	\$ 1,816,914	\$ 1,726,068	\$-	\$-	\$ 90,846	95%	0%	0%	5%	100%	0%	\$ 1,816,914	\$
Year-End Cash Outs	-	-	-	-	-	95%	0%	0%	5%	100%	0%	\$-	\$
Vacation Lump Sum Pays	-	-	-	-	-	95%	0%	0%	5%	100%	0%	\$-	\$
Standby Pay	21,519	20,443	-	-	1,076	95%	0%	0%	5%	100%	0%	\$ 21,519	\$
Overtime	40,469	38,445	-	-	2,023	95%	0%	0%	5%	100%	0%	\$ 40,469	\$
Temporary Employees	-	-	-	-	-	95%	0%	0%	5%	100%	0%	\$-	\$
Medicare - Misc. Employees	26,436	25,114	-	-	1,322	95%	0%	0%	5%	100%	0%	\$ 26,436	\$
Workers' Comp Insurance	34,248	32,536	-	-	1,712	95%	0%	0%	5%	100%	0%	\$ 34,248	\$
Medical - Misc. Employees	396,115	376,310	-	-	19,806	95%	0%	0%	5%	100%	0%	\$ 396,115	\$
Med. Trust - Misc. Employees	43,251	41,089	-	-	2,163	95%	0%	0%	5%	100%	0%	\$ 43,251	\$
Dental	22,218	21,107	-	-	1,111	95%	0%	0%	5%	100%	0%	\$ 22,218	\$
Vision	2,983	2,834	-	-	149	95%	0%	0%	5%	100%	0%	\$ 2,983	\$
Employee Health Contribution	(27,728)	(26,342)	-	-	(1,386)	95%	0%	0%	5%	100%	0%	\$ (27,728)	\$
Retirement - Misc. Employees	439,202	417,242	-	-	21,960	95%	0%	0%	5%	100%	0%	\$ 439,202	\$
Retirement - As Needed	-	-	-	-	-	95%	0%	0%	5%	100%	0%	\$-	\$
Unemployment	8,236	7,824	-	-	412	95%	0%	0%	5%	100%	0%	\$ 8,236	\$
EAP	2,113	2,007	-	-	106	95%	0%	0%	5%	100%	0%	\$ 2,113	\$
DCAP	1,582	1,503	-	-	79	95%	0%	0%	5%	100%	0%	\$ 1,582	\$
Life Insurance and AD&D	5,413	5,142	-	-	271	95%	0%	0%	5%	100%	0%	\$ 5,413	\$
Disability Insurance	12,210	11,600	-	-	611	<u>95%</u>	<u>0%</u>	<u>0%</u>	<u>5%</u>	100%	0%	\$ 12,210	\$
Salaries and Benefits - SUBTOTAL			\$ -	\$ -	\$ 142,259	95%	0%	0%	5%				

TABLE 19 : CLASSIFICATION OF EXPENSES, CONTINUED

Budget Categories	Total Revenue Requirements	Flow	Stre	ength	Customer		Basis of Cla	assificatio	ı				
	FY 2019/20	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)	Fixed %	Variable %	Fixed \$	Variable \$
Wastewater Fund, 31													
Supplies and Expenses													
Vehicles - Fuels / Lubrication	\$ 7,700	\$ 7,700	\$-	\$ -	\$-	100%	0%	0%	0%	100%	0%	\$ 7,700	\$.
CNG Fuel	18,000	18,000	-	-	-	100%	0%	0%	0%	100%	0%	\$ 18,000	\$.
Reimburse Water Fund	370,000	370,000	-	-	-	100%	0%	0%	0%	100%	0%	\$ 370,000	\$
Utilities Billing Services	411,000	-	-	-	411,000	0%	0%	0%	100%	100%	0%	\$ 411,000	\$
Metered Postage	2,000	-	-	-	2,000	0%	0%	0%	100%	100%	0%	\$ 2,000	\$ ·
Indirect Cost Allocation	747,911	-	-	-	747,911	0%	0%	0%	100%	100%	0%	\$ 747,911	\$.
Memberships and Dues	6,000	-	-	-	6,000	0%	0%	0%	100%	100%	0%	\$ 6,000	\$.
Rent	118,000	-	-	-	118,000	0%	0%	0%	100%	100%	0%	\$ 118,000	\$
Other Operating Rent	226,556	-	-	-	226,556	0%	0%	0%	100%	100%	0%	\$ 226,556	\$.
Reimburse Engineering Office	14,806	-	-	-	14,806	0%	0%	0%	100%	100%	0%	\$ 14,806	\$
Office Supplies / Expense	5,000	-	-	-	5,000	0%	0%	0%	100%	100%	0%	\$ 5,000	\$.
Discounts Available	-	-	-	-	-	0%	0%	0%	100%	100%	0%	\$-	\$.
Discounts Lost	-	-	-	-	-	0%	0%	0%	100%	100%	0%	\$-	\$.
SPEC Department Supplies	131,498	131,498	-	-	-	100%	0%	0%	0%	100%	0%	\$ 131,498	\$
Rideshare and Parking Programs	-	-	-	-	-	100%	0%	0%	0%	100%	0%	\$-	\$
Uniform / Protective Clothing	16,000	16,000	-	-	-	100%	0%	0%	0%	100%	0%	\$ 16,000	\$.
Utilities - Electricity	2,426	2,305	-	-	121	95%	0%	0%	5%	100%	0%	\$ 2,426	\$.
Utilities - Water	1,738	1,651	-	-	87	95%	0%	0%	5%	100%	0%	\$ 1,738	\$.
Utilities - Telephone	13,755	-	-	-	13,755	0%	0%	0%	100%	100%	0%	\$ 13,755	\$
Vehicle Management Fund - Maint.	146,568	146,568	-	-	-	100%	0%	0%	0%	100%	0%	\$ 146,568	\$
Computer Eqt. / Software Maint.	78,613	-	-	-	78,613	0%	0%	0%	100%	100%	0%	\$ 78,613	\$.
Sewage Pump Plant Maint.	365,400	365,400	-	-	-	100%	0%	0%	0%	20%	80%	\$ 73,080	\$ 292,320
Storm Drain Maintenance	146,400	80,520	29,280	29,280	7,320	55%	20%	20%	5%	100%	0%	\$ 146,400	\$
SMURRF Plant Maintenance	325,000	178,750	65,000	65,000	16,250	55%	20%	20%	5%	100%	0%	\$ 325,000	\$
Conferences / Meetings / Travel	15,000	15,000	-	-	-	100%	0%	0%	0%	100%	0%	\$ 15,000	\$
Food Purchases	1,000	1,000	-	-	-	100%	0%	0%	0%	100%	0%	\$ 1,000	\$
Training Costs	-	-	-	-	-	100%	0%	0%	0%	100%	0%	\$ -	\$.

TABLE 20 : CLASSIFICATION OF EXPENSES, CONTINUED

Budget Categories	Total Revenue Requirements	Flow	Stre	ngth	Customer		Basis of Cla	assificatio	n				
	FY 2019/20	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)	Fixed %	Variable %	Fixed \$	Variable \$
Wastewater Fund, 31													
Training	15,000	15,000	-	-	-	100%	0%	0%	0%	100%	0%	\$ 15,000	\$-
Bank Fees	9,755	-	-	-	9,755	0%	0%	0%	100%	100%	0%	\$ 9,755	\$ -
General Liability - Auto	195,134	195,134	-	-	-	100%	0%	0%	0%	100%	0%	\$ 195,134	\$-
Property Insurance	44,449	44,449	-	-	-	100%	0%	0%	0%	100%	0%	\$ 44,449	\$-
Interest Expense - Bonds	-	-	-	-	-	100%	0%	0%	0%	100%	0%	\$-	\$-
LA Sewage Disposal	6,400,000	3,840,000	1,280,000	1,280,000	-	60%	20%	20%	0%	0%	100%	\$-	\$ 6,400,000
ASSFC Pass-Thru	350,000	210,000	70,000	70,000	-	60%	20%	20%	0%	100%	0%	\$ 350,000	\$-
SCADA O&M	56,386	56,386	-	-	-	100%	0%	0%	0%	100%	0%	\$ 56,386	\$-
Transfer Station Fee	8,854	8,854	-	-	-	100%	0%	0%	0%	100%	0%	\$ 8,854	\$-
Fiscal Agent Fees	2,000	-	-	-	2,000	0%	0%	0%	100%	100%	0%	\$ 2,000	\$-
Contractual Services	250,000	250,000	-	-	-	100%	0%	0%	0%	100%	0%	\$ 250,000	\$-
Employee Medical Exams	5,100	5,100	-	-	-	100%	0%	0%	0%	100%	0%	\$ 5,100	\$-
Professional Services	366,280	183,140	73,256	73,256	36,628	50%	20%	20%	10%	100%	0%	\$ 366,280	\$-
Computer Equipment	(231)	-	-	-	(231)	0%	0%	0%	100%	100%	0%	\$ (231)	\$-
Miscellaneous Equipment	-	-	-	-	-	100%	0%	0%	0%	100%	0%	\$-	\$ -
SWIP - SMURRF Operating costs	-	-	-	-	-	60%	20%	20%	0%	100%	0%	\$-	\$ -
SWIP - Civic Lot Plant Operating costs	250,000	250,000	-	-	-	100%	0%	0%	0%	100%	0%	\$ 250,000	\$-
SWIP - tanks Operating costs	-	-	-	-	-	100%	0%	0%	0%	100%	0%	\$-	\$-
SWIP - City of LA sewerage payments	-	-	-	-	-	100%	0%	0%	0%	100%	0%	\$-	\$-
SWIP - MWD imported water costs		-	-	-	-	100%	0%	0%	0%	100%	0%	\$-	\$-
A/R Bad Debt Expense	-	-	-	-	-	0%	0%	0%	100%	100%	0%	\$-	\$ -
Amortization Expense	-	-	-	-	-	0%	0%	0%	100%	100%	0%	\$-	\$ -
Depreciation Expense		-		-		<u>0%</u>	<u>0%</u>	<u>0%</u>	<u>100%</u>	100%	0%	\$-	\$-
Supplies and Expenses - SUBTOTAL	\$ 11,123,098	\$ 6,392,455	\$ 1,517,536	\$ 1,517,536	\$ 1,695,571	57%	14%	14%	15%				

TABLE 21 : CLASSIFICATION OF EXPENSES, CONTINUED

Budget Categories	Total Revenue Requirements	Flow	Stre	ngth	Customer		Basis of Cla	assification	n				
	FY 2019/20	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)				
Wastewater Fund, 51										Fixed %	Variable %	Fixed \$	Variable \$
Retirement and OPEB													
Retirement - Misc. Employees	61,756	61,756	-	-	-	100%	0%	0%	0%	100%	0%	\$ 61,756	\$ -
Retirement - GASB 68	-	-	-	-	-	100%	0%	0%	0%	100%	0%	\$-	\$ -
PERS Paydown Savings	-	-	-	-	-	100%	0%	0%	0%	100%	0%	\$-	\$ -
OPEB Payment ARC	28,267	28,267	-	-	-	100%	0%	0%	0%	100%	0%	\$ 28,267	\$ -
Reimbursement from OPEB Trust	(12,736)	(12,736)	-	-	-	100%	0%	0%	0%	100%	0%	\$ (12,736)	\$ -
OPEB Expense						<u>100%</u>	<u>0%</u>	<u>0%</u>	<u>0%</u>	100%	0%	\$-	\$-
Retirement and OPEB - SUBTOTAL	\$ 77,287	\$ 77,287	\$-	\$-	\$-	100%	0%	0%	0%				
Transfer to GF for SCADA Analyst	76,415	76,415	-	-	-	100%	0%	0%	0%	100%	0%	\$ 76,415	\$-
Transfer to WW for Process Engineer	-	-	-	-	-	100%	0%	0%	0%	100%	0%	\$-	\$-
Environmental Reimbursement	843,370	843,370	-	-	-	100%	0%	0%	0%	100%	0%	\$ 843,370	\$-
Reimburse GF for Computer Equipment	-	-	-	-	-	0%	0%	0%	100%	100%	0%	\$-	\$-
Transfer to Fund 06	9,840,000	5,904,000	1,968,000	1,968,000	-	60%	20%	20%	0%	100%	0%	\$ 9,840,000	\$-
SMURRF O&M Costs	(409,600)	(245,760)	(81,920)	(81,920)	-	60%	20%	20%	0%	100%	0%	\$ (409,600)	\$-
Stormwater / Wastewater	-	-	-	-	-	60%	20%	20%	0%	100%	0%	\$-	\$-
Transfer in from GF - Low Income Disc.	(33,000)	-	-	-	(33,000)	0%	0%	0%	100%	100%	0%	\$ (33,000)	\$ -
Transfer-In Fund 06 CWSRF Debt Share	-	-	-	-	-	<u>60%</u>	<u>20%</u>	<u>20%</u>	<u>0%</u>	100%	0%	\$-	\$ -
Interfund Transactions - SUBTOTAL	\$ 10,317,185	\$ 6,578,025	\$ 1,886,080	\$ 1,886,080	\$ (33,000)	64%	18%	18%	0%				
ub-Total: Wastewater (51) Expenses	\$ 24,362,751	\$ 15,750,689	\$ 3,403,616	\$ 3,403,616	\$ 1,804,830	65%	14%	14%	7%				

TABLE 22 : CLASSIFICATION OF EXPENSES, CONTINUED

Budget Categories	Total Revenue Requirements	Flow	Stre	ngth	Customer		Basis of Cl	assificatior	۱ 				
	FY 2019/20	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)				
Debt and Capital Expenditures									-	Fixed %	Variable %	Fixed \$	Variable \$
Existing Debt Service:													
Wastewater 2012A Series Bond	2,353,950	1,412,370	470,790	470,790	-	60%	20%	20%	0%	100%	0% \$	2,353,950	\$-
\$13M addition to SRF	-	-	-	-	-	60%	20%	20%	0%	100%	0% \$		\$-
California Clean Water SRF	-	-	-	-	-	60%	20%	20%	0%	100%	0% \$	- 5	\$-
SWRCB Clean Water SRF (SMURRF)	323,324	193,994	64,665	64,665	-	60%	20%	20%	0%	100%	0% \$	323,324	\$-
New Debt Service	-	-	-	-	-	50%	20%	20%	10%	100%	0% \$	- 5	\$-
Rate-Funded Capital Expenses	-	-	-	-	-	89%	5%	5%	0%	100%	0% \$	- 5	\$-
TOTAL REVENUE REQUIREMENTS	\$ 27,040,025	\$ 17,357,053	\$ 3,939,071	\$ 3,939,071	\$ 1,804,830	64%	15%	15%	7%	Total Cost	Distribution	20,347,705	\$ 6,692,320
Less: Non-Rate Revenues										to Fixed	/ Variable	75.3%	24.7%
City of LA - Wastewater Repair	-	-	-	-	-	50%	20%	20%	10%			TRUE	
Connection / Capacity Permit Fees													
Wastewater Services Charges													
Wastewater Capital Facility Fees													
Saddle Fees	(60,000)	(30,000)	(12,000)	(12,000)	(6,000)	50%	20%	20%	10%	1			
Industrial Waste Fees	(537,183)	(268,592)	(107,437)	(107,437)	(53,718)	50%	20%	20%	10%				
Admin Fines / Penalties	-	-	-	-	-	50%	20%	20%	10%				
Unrealized Gain (Loss)	-	-	-	-	-	50%	20%	20%	10%				
ASSFC Pass-Thru	(350,000)	(175,000)	(70,000)	(70,000)	(35,000)	50%	20%	20%	10%				
Wastewater Misc. Non-Operating	(1,000)	(500)	(200)	(200)	(100)	50%	20%	20%	10%				
Int. Wastewater Bond Proceeds	-	-	-	-		50%	20%	20%	10%				
Alt. Fuel Tax Credit	-	-	-	-		50%	20%	20%	10%				
Interest Income	(621,453)	(398,912)	(90,531)	(90,531)	(41,480)	64%	15%	15%	7%				
NET REVENUE REQUIREMENTS	\$ 25,470,388	\$ 16,484,049	\$ 3,658,904	\$ 3,658,904	\$ 1,668,532					-			
Allocation of Revenue Requirements	100.0%	64.7%	14.4%	14.4%	6.6%								

TABLE 23 : ADJUSTMENTS TO CLASSIFICATIONS OF EXPENSES

Adjustment to Current Rate Level:	Total	(VOL)	(BOD)	(TSS)	(CA)
FY 2019/20 Target Rate Rev. After Rate Increases	\$18,480,000				
Projected Rate Revenue at Current Rates	\$16,800,000				
FY 2019/20 Projected Rate Increase	10%				
Adjusted Net Revenue Req'ts	\$18,480,000	\$ 11,959,976	\$ 2,654,712	\$ 2,654,712	\$ 1,210,601
Percent of Revenue	100.0%	64.7%	14.4%	14.4%	6.6%

CITY OF SANTA MONICA WASTEWATER RATE STUDY Customer Data

TABLE 24 : CITY CUSTOMER BILLING DATA

					Based on Wate	r Consumption					
			Annual Sewage	Average Bi-monthly	Average Bi-monthly	Average Bi-monthly	Average Bi-monthly		Most Common	Average Winter ÷	
			Volume	Volume per	Winter Volume	Volume per	Winter Volume	Average	Discharge	Average	
Summary of by Class	Accounts	Units	(hcf x DF)	Account	per Account	Unit	per Unit	units/Account	Factor	Annual Volume	Difference
Single Family	7,728	7,753	621,354	26.32	22.38	26.24	22.31	1.00	51%	85%	34%
MFR : Duplex	576	1,151	59,392	21.69	19.87	10.85	9.94	2.00	80%	92%	12%
MFR : Triplex	510	1,523	71,064	27.47	24.57	9.20	9.19	2.99	85%	89%	4%
MFR : Fourplex	751	2,998	132,758	32.83	30.86	8.23	7.73	3.99	90%	94%	4%
MFR : Over 4 Units	3,071	37,482	1,619,091	93.31	90.82	7.64	7.45	12.21	95%	97%	2%
MFR : Individually Metered	1,578	1,601	85,501	9.51	9.37	9.37	9.33	1.01	95%	99%	4%
MFR : Mixed Use	31	989	43,886	259.07	247.15	8.12	8.36	31.90	89%	95%	6%
Commercial - Low	1,665	2,050	650,854	73.44	68.66	59.65	55.77	1.23	89%	93%	4%
Commercial - Medium	33	33	26,092	148.07	139.47	148.07	154.42	1.00	89%	94%	5%
Commercial - High	301	499	444,963	276.83	264.17	166.99	162.87	1.66	89%	95%	6%
Institutional	113	131	71,905	132.05	108.71	113.91	94.52	1.16	89%	82%	-7%
Church/Schools	168	181	79,130	88.30	71.95	81.96	66.78	1.08	89%	81%	-8%
Misc Industrial	11	11	9,323	158.71	140.05	158.71	155.23	1.00	89%	88%	-1%
Wastewater Only	34	34	0	0.00	0.00	0.00	0.00	1.00	89%	N/A	N/A
otal	16,570	56,436	3,915,313	1,348	1,238	809	764	3.41		92%	

1. Consumption, accounts and EDUs from Source File: Copy of Santa Monica_Sewer Bill Data FY 17-18 gg.xlsx

TABLE 25 : DEVELOPMENT OF THE VOLUME ALLOCATION FACTOR

Customer Class	Number of Accounts ¹	Number of EDUs ¹	Annual Volume (hcf) ¹	Lowest 4-Months Water Use (hcf) ^{1,2}	Estimated Wastewater Flow	Updated Discharge Factors	Adjusted Annual Volume (hcf) ³	Percentage of Adjusted Volume
Calculation Components			A	В	C = B * 3	= C / A	E = C * 1.12	
Single Family	7,728	7,753	1,220,522	345,886	1,037,657	85%	1,158,453	23.2%
MFR : Duplex	576	1,151	74,954	22,890	68,670	92%	76,664	1.5%
MFR : Triplex	510	1,523	84,048	25,060	75,180	89%	83,932	1.7%
MFR : Fourplex	751	2,998	147,953	46,354	139,062	94%	155,250	3.1%
MFR : Over 4 Units	3,071	37,482	1,719,271	557,815	1,673,445	97%	1,868,254	37.4%
MFR : Individually Metered	1,578	1,601	90,049	29,570	88,709	99%	99,036	2.0%
MFR : Mixed Use	31	989	48,187	15,323	45,970	95%	51,321	1.0%
Commercial - Low	1,665	2,050	733,712	228,653	685,959	93%	765,813	15.3%
Commercial - Medium	33	33	29,317	9,205	27,615	94%	30,830	0.6%
Commercial - High	301	499	499,958	159,029	477,087	95%	532,626	10.7%
Institutional	113	131	89,532	24,569	73,707	82%	82,287	1.6%
Church/Schools	168	181	89,004	24,175	72,525	81%	80,968	1.6%
Misc Industrial	11	11	10,475	3,081	9,243	88%	10,319	0.2%
Wastewater Only ⁴	34	34	5,352.47	1,516.85	4,551	85%	5,080	0.1%
Total	16,570	56,436	4,842,334	1,493,126	4,479,379	93%	5,000,833	100.0%
							5,000,833	Flow (hcf/yr.)
							1.12	Flow Adj. Factor

1. Consumption, accounts and EDUs from May-June 2018 found in Source File: Santa Monica_Sewer Bill Data FY 17-18.xlsx.

2. The four consecutive month period of lowest water usage during Fiscal Year 2017/18, for each customer class.

3. NBS adjusted the average winter consumption to the outgoing wastewater flows pumped from the City's Moss Avenue Pump Station to the City of Los Angeles' Hyperion Water Reclamation Plant for treatment and disposal. Source file: Data Request Notes - 2018.11.13.docx, Item 19 information.

4. Estimated volume for Wastewater Only customers is the average adjusted annual volume per EDU for SFR customers, multiplied by the number of EDU's in this class. All Wastewater Only customers are SFR.

TABLE 26 : DEVELOPMENT OF THE STRENGTH ALLOCATION FACTOR

		Bioc	chemical Oxyg	en Demand (B	OD)		Total Suspe	nded Solids (T	SS)
Customer Class	Adjusted Annual Flow (hcf)	Average Strength Factor (mg/l)	Calculated BOD (lbs./yr.)	Adjusted BOD (lbs./yr.)	Percent of Total	Average Strength Factor (mg/l)	Calculated TSS (lbs./yr.)	Adjusted TSS (lbs./yr.)	Percent of Total
Single Family	1,158,453	310	2,240,308	1,132,938	18.4%	350	2,529,381	913,812	20.2%
MFR : Duplex	76,664	310	148,259	74,975	1.2%	350	167,389	60,474	1.3%
MFR : Triplex	83,932	310	162,314	82,083	1.3%	350	183,258	66,207	1.5%
MFR : Fourplex	155,250	310	300,236	151,831	2.5%	350	338,976	122,465	2.7%
MFR : Over 4 Units	1,868,254	310	3,612,978	1,827,106	29.7%	350	4,079,169	1,473,717	32.5%
MFR : Individually Metered	99,036	310	191,523	96,854	1.6%	350	216,235	78,121	1.7%
MFR : Mixed Use	51,321	310	99,248	50,191	0.8%	350	112,055	40,483	0.9%
Commercial - Low	765,813	330	1,578,285	798,149	13.0%	373	1,781,934	643,775	14.2%
Commercial - Medium	30,830	527	101,365	51,261	0.8%	355	68,191	24,636	0.5%
Commercial - High	532,626	1003	3,334,293	1,686,173	27.4%	797	2,647,078	956,333	21.1%
Institutional	82,287	373	191,659	96,923	1.6%	422	216,389	78,177	1.7%
Church/Schools	80,968	310	156,582	79,184	1.3%	350	176,786	63,869	1.4%
Misc Industrial	10,319	317	20,392	10,312	0.2%	358	23,023	8,318	0.2%
Wastewater Only ⁴	5,080	310	9,825	4,968	0.1%	350	11,092	4,007	0.1%
Total	5,000,833		12,147,266	6,142,950	100%		12,550,956	4,534,395	100%
	Target, from V	NWTP Data		6,142,950	BOD (lbs./yr.)			4,534,395	TSS (lbs./yr.)
				0.51	BOD Adj. Facto	or		0.36	TSS Adj. Factor

1. Consumption, accounts and EDUs from May-June 2018 found in Source File: Santa Monica_Sewer Bill Data FY 17-18.xlsx.

2. Typical strength factors for BOD and TSS are derived from the ASSFC Report for March-April 2018-19 and calculated for Commercial customers with weighted averages. Source files: Santa Monica_Sewer Bill Data FY 17/18 gg jt_07.16.19_kb_v3.xlsx and ASSFC_Report_March-April_2018-19_to_LASAN.xlsx

TABLE 27 : DEVELOPMENT OF THE CUSTOMER ALLOCATION FACTOR

Customer Class	Number of Accounts ¹	Percentage of Accounts
Single Family	7,728	46.64%
MFR : Duplex	576	3.48%
MFR : Triplex	510	3.08%
MFR : Fourplex	751	4.53%
MFR : Over 4 Units	3,071	18.53%
MFR : Individually Metered	1,578	9.52%
MFR : Mixed Use	31	0.19%
Commercial - Low	1,665	10.05%
Commercial - Medium	33	0.20%
Commercial - High	301	1.82%
Institutional	113	0.68%
Church/Schools	168	1.01%
Misc Industrial	11	0.07%
Wastewater Only ⁴	34	0.21%
Total	16,570	100%

1. Consumption, accounts and EDUs from May-June 2018 found in Source File: Santa Monica_Sewer Bill Data FY 17-18.xlsx.

TABLE 28 : TOTAL REVENUE BY CUSTOMER CLASS

Customer Class	FY 2017/18 Rate Revenue ¹	Percentage of Accounts
Single Family	\$ 2,861,961	15.78%
MFR : Duplex	273,235	1.51%
MFR : Triplex	313,911	1.73%
MFR : Fourplex	616,765	3.40%
MFR : Over 4 Units	7,524,895	41.49%
MFR : Individually Metered	393,754	2.17%
MFR : Mixed Use	195,559	1.08%
Commercial - Low	2,837,005	15.64%
Commercial - Medium	115,276	0.64%
Commercial - High	2,309,847	12.74%
Institutional	304,346	1.68%
Church/Schools	331,686	1.83%
Misc Industrial	40,380	0.22%
Wastewater Only ⁴	16,291	0.09%
Total	\$18,134,909	100%

1. Per Source File: Santa Monica_Sewer Bill Data FY 17-18.xlsx.

TABLE 29 : ALLOCATION OF REVENUE REQUIREMENTS BY CUSTOMER CLASS

	(Cost Classificati	on Component	S	Cost-of-	% of COS Net
Customer Class	Volume	Treat	tment	Customer	Service Net	Revenue
	volume	BOD	TSS	Related	Revenue	Req'ts.
Net Revenue Requirements ¹	\$ 11,959,976	\$ 2,654,712	\$ 2,654,712	\$ 1,210,601	\$ 18,480,000	
	64.7%	14.4%	14.4%	6.6%	100.0%	
Single Family	\$ 2,770,553	\$ 489,605.89	\$ 535,001	\$ 564,606	\$ 4,359,766	23.6%
MFR : Duplex	183,349	32,401	35,405	42,082	293,238	1.6%
MFR : Triplex	200,731	35,473	38,762	37,260	312,226	1.7%
MFR : Fourplex	371,297	65,615	71,698	54,868	563,478	3.0%
MFR : Over 4 Units	4,468,111	789,595	862,804	224,367	6,344,876	34.3%
MFR : Individually Metered	236,853	41,856	45,737	115,288	439,734	2.4%
MFR : Mixed Use	122,739	21,690	23,701	2,265	170,395	0.9%
Commercial - Low	1,831,516	344,925	376,905	121,645	2,674,990	14.5%
Commercial - Medium	73,732	22,153	14,423	2,411	112,719	0.6%
Commercial - High	1,273,826	728,690	559,896	21,991	2,584,403	14.0%
Institutional	196,798	41,886	45,769	8,256	292,709	1.6%
Church/Schools	193,642	34,220	37,393	12,274	277,529	1.5%
Misc Industrial	24,679	4,457	4,870	804	34,809	0.2%
Wastewater Only ⁴	12,150	2,147	2,346	2,484	19,127	0.1%
	\$ 11,959,976	\$ 2,654,712	\$ 2,654,712	\$ 1,210,601	\$ 18,480,000	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. Multi-Family Residential = MFR

TABLE 30 : PROPOSED WASTEWATER RATES

Customer Class	No. of Accounts ¹	No. of Dwelling Units ¹	Estimated Sewage Volume ²	Annual Revenue Requirement	New Discharge Factor	Bi-Monthly Fixed Charge ³	Volumetric Charge Per hcf ⁴		
Residential Per DU									
Single Family	7,728	7,753	1,037,657	\$ 4,359,766	85%	\$14.06	\$3.40		
MFR: Duplex + Triplex	1,086	2,674	143,850	605,464	90%	\$5.66	\$3.40		
MFR: Fourplex + Larger	3,822	40,480	1,812,507	6,908,354	97%	\$4.27	\$3.40		
MFR : Individually Metered	1,578	1,601	88,709	439,734	99%	\$6.87	\$3.40		
Subtotal	14,214	52,508	3,082,723	\$ 12,313,318					
Non-Residential						<u>Per Account</u>			
MFR : Mixed Use	31	989	45,970	\$ 170,395	95%	\$137.42	\$3.15		
Commercial - Low	1,665	2,050	685,959	\$ 2,674,990	93%	\$40.17	\$3.31		
Commercial - Medium	33	33	27,615	\$ 112,719	94%	\$85.39	\$3.47		
Commercial - High	301	499	477,087	\$ 2,584,403	95%	\$214.65	\$4.60		
Institutional	113	131	73,707	\$ 292,709	82%	\$64.76	\$3.38		
Church/Schools	168	181	72,525	\$ 277,529	81%	\$41.30	\$3.25		
Misc Industrial	11	11	9,243	\$ 34,809	88%	\$79.11	\$3.20		
Wastewater Only	34	34	4,551	\$ 19,127	85%	\$93.76	N/A		
Subtotal	2,356	3,928	1,396,656	\$ 6,166,682					
Total	16,570	56,436	4,479,379	\$18,480,000					

1. Consumption, accounts and EDUs from Source File: Santa Monica_Sewer Bill Data FY 17-18.xlsx.

2. Estimated sewage volume is annual water consumption multiplied by the discharge factor.

3. Fixed charges are designed to collect 15% of the total revenue requirement. For residential customers, the charges are per dwelling unit.

For non-residential customers, the charges are per account.

4. Volumetric charges are designed to collect 85% of the total revenue requirement.

CITY OF SANTA MONICA WASTEWATER RATE STUDY Wastewater Rate Development

TABLE 31 : CURRENT VS. PROPOSED WASTEWATER RATES (BI-MONTHLY)

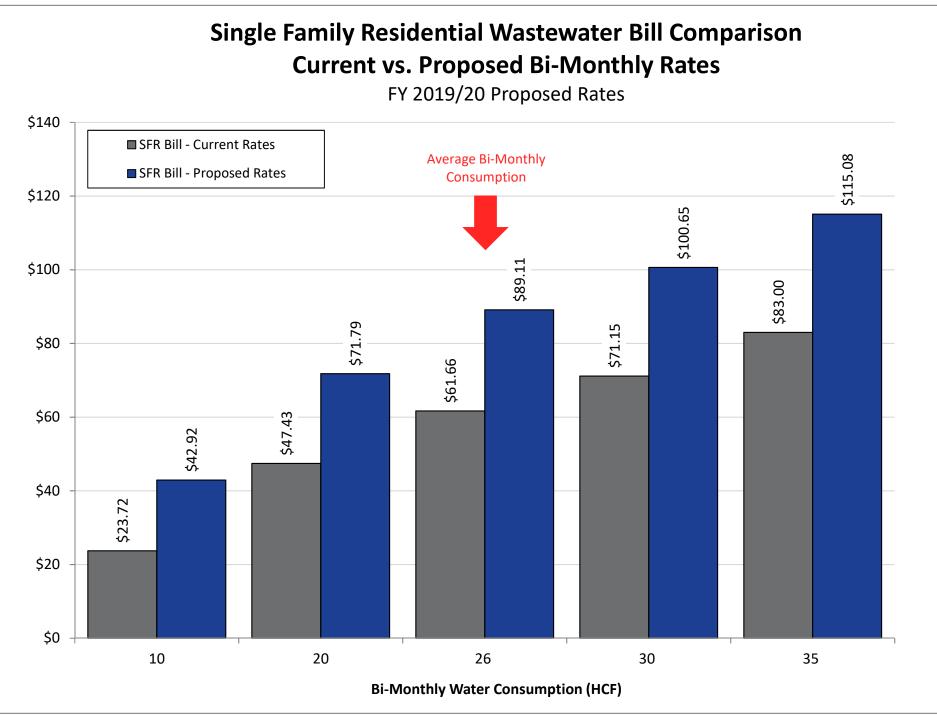
Westowator Data Schodula			Propos	ed Wastewate	er Rates						
Wastewater Rate Schedule	Current	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24					
% Increase in Annual Rate Revenue:	Rates	10.00%	10.00%	10.00%	10.00%	3.00%					
Fixed Charges (\$/bi-monthly)											
Residential (\$/Dwelling Unit)											
Single Family	\$0.00	\$14.06	\$15.46	\$17.01	\$18.71	\$19.27					
MFR: Duplex + Triplex	\$0.00	\$5.66	\$6.23	\$6.85	\$7.53	\$7.76					
MFR: Fourplex + Larger	\$0.00	\$4.27	\$4.69	\$5.16	\$5.68	\$5.85					
MFR : Individually metered	\$0.00	\$6.87	\$7.55	\$8.31	\$9.14	\$9.41					
Non-Residential (\$/Account)											
MFR : Mixed Use	\$0.00	\$137.42	\$151.16	\$166.27	\$182.90	\$188.39					
Commercial - Low	\$0.00	\$40.17	\$44.18	\$48.60	\$53.46	\$55.06					
Commercial - Medium		\$85.39	\$93.93	\$103.33	\$113.66	\$117.07					
Commercial - High	\$0.00	\$214.65	\$236.12	\$259.73	\$285.70	\$294.27					
Institutional	\$0.00	\$64.76	\$71.23	\$78.36	\$86.19	\$88.78					
Church/Schools	\$0.00	\$41.30	\$45.43	\$49.97	\$54.97	\$56.62					
Misc Industrial	\$0.00	\$79.11	\$87.02	\$95.72	\$105.30	\$108.46					
Wastewater Only	\$0.00	\$93.76	\$103.14	\$113.45	\$124.80	\$128.54					

Note - The City does not currently have a fixed charge portion of wastewater rates.

CITY OF SANTA MONICA WASTEWATER RATE STUDY Wastewater Rate Development

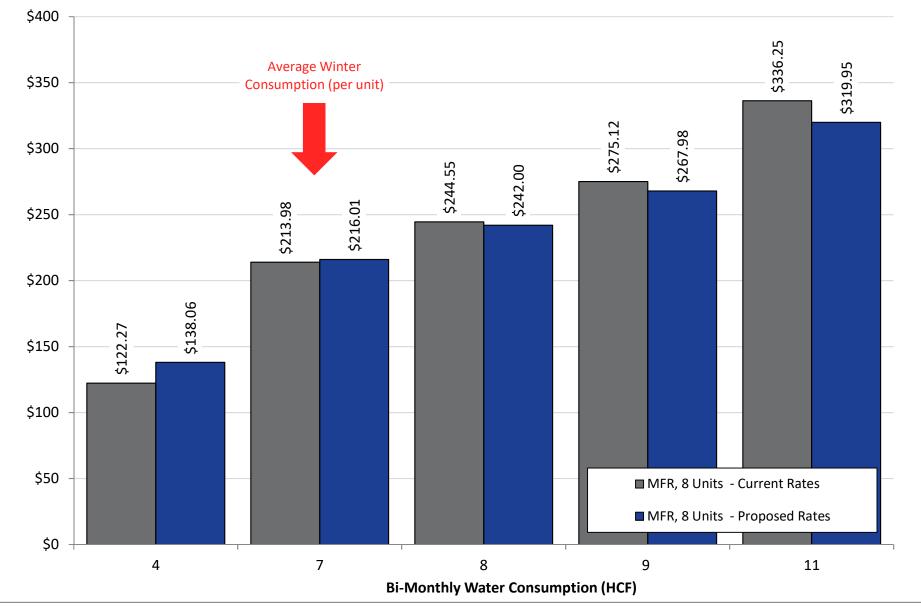
TABLE 32 : CURRENT VS. PROPOSED WASTEWATER RATES (BI-MONTHLY)

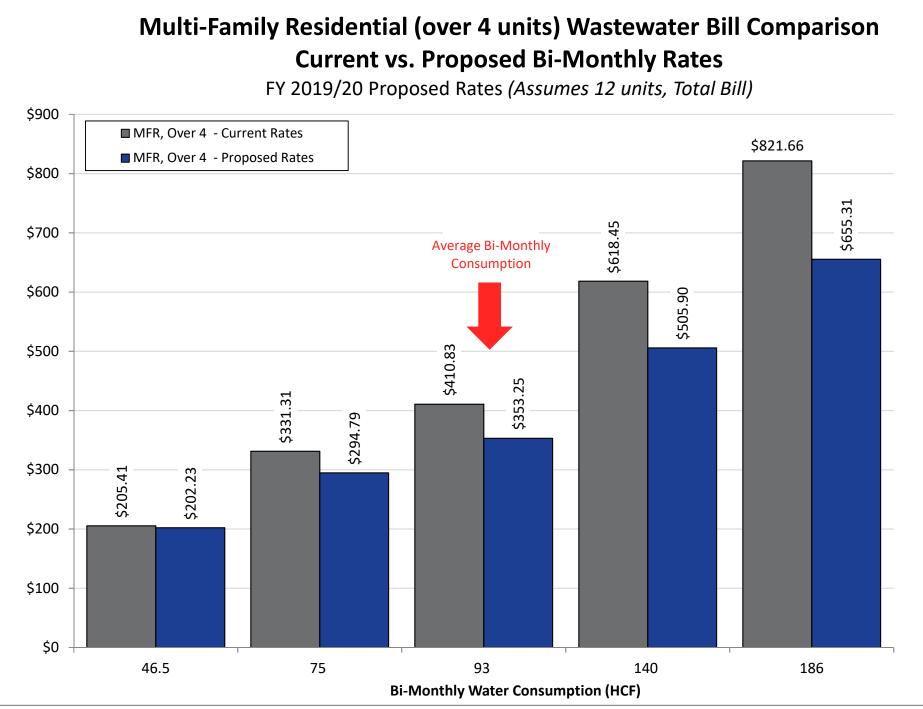
Westswater Data Cahadula		Updated	Proposed Wastewater Rates								
Wastewater Rate Schedule	Current	Discharge	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24				
% Increase in Annual Rate Revenue:	Rates	Factor	10.00%	10.00%	10.00%	10.00%	3.00%				
Volumetric Charges (\$/hcf of average winter water consumption)											
<u>Residential</u>											
Single Family	\$4.65	85%	\$3.40	\$3.73	\$4.11	\$4.52	\$4.65				
MFR: Duplex + Triplex	\$4.65	90%	\$3.40	\$3.73	\$4.11	\$4.52	\$4.65				
MFR: Fourplex + Larger	\$4.65	97%	\$3.40	\$3.73	\$4.11	\$4.52	\$4.65				
MFR : Individually metered	\$4.65	99%	\$3.40	\$3.73	\$4.11	\$4.52	\$4.65				
<u>Non-Residential</u>											
MFR : Mixed Use	\$4.65	95%	\$3.15	\$3.47	\$3.81	\$4.19	\$4.32				
Commercial - Low	\$4.24	93%	\$3.31	\$3.65	\$4.01	\$4.41	\$4.54				
Commercial - Medium	\$5.55	94%	\$3.47	\$3.82	\$4.20	\$4.62	\$4.76				
Commercial - High	\$6.50	95%	\$4.60	\$5.06	\$5.57	\$6.13	\$6.31				
Institutional	\$4.19	82%	\$3.38	\$3.71	\$4.08	\$4.49	\$4.63				
Church/Schools	\$4.19	81%	\$3.25	\$3.58	\$3.94	\$4.33	\$4.46				
Misc Industrial	\$5.16	88%	\$3.20	\$3.52	\$3.87	\$4.26	\$4.39				
Wastewater Only		85%									



Multi-Family Residential (over 4 units) Wastewater Bill Comparison Current vs. Proposed Bi-Monthly Rates

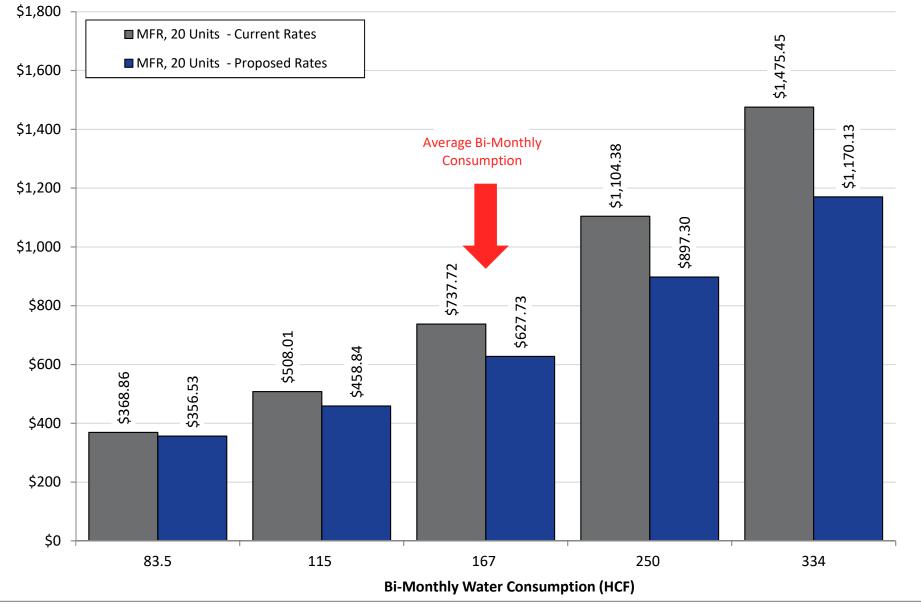
FY 2019/20 Proposed Rates (Assumes 8 units, Total Bill)





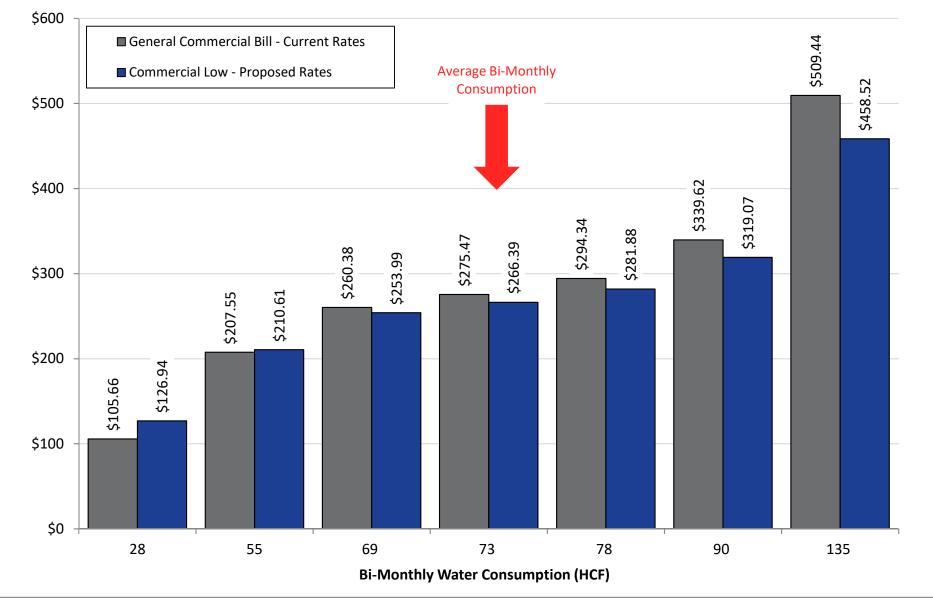
Multi-Family Residential (over 4 units) Wastewater Bill Comparison Current vs. Proposed Bi-Monthly Rates

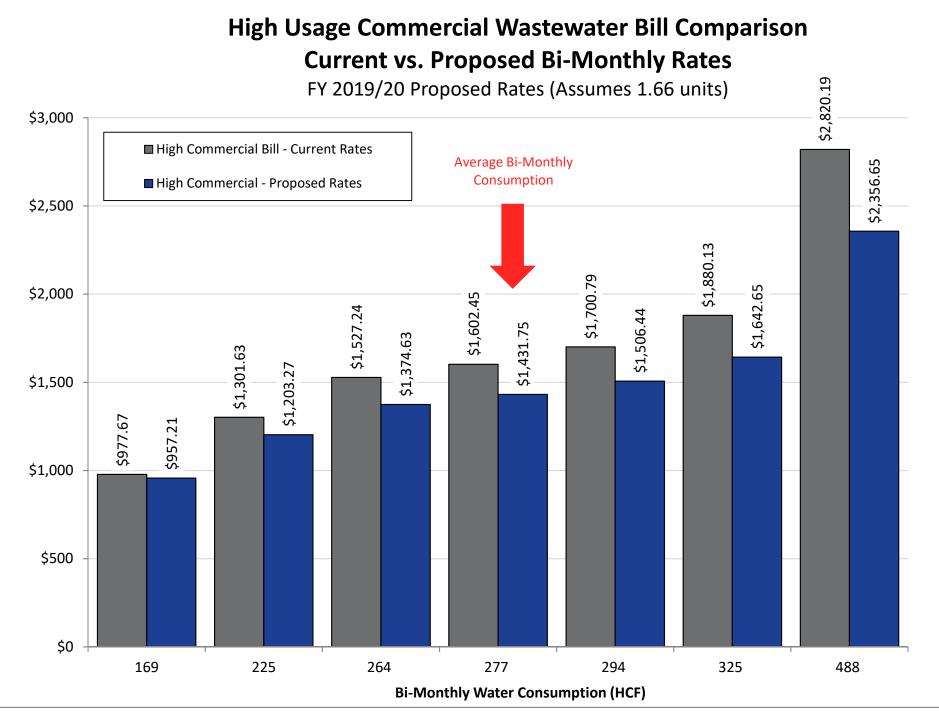
FY 2019/20 Proposed Rates (Assumes 20 units, Total Bill)

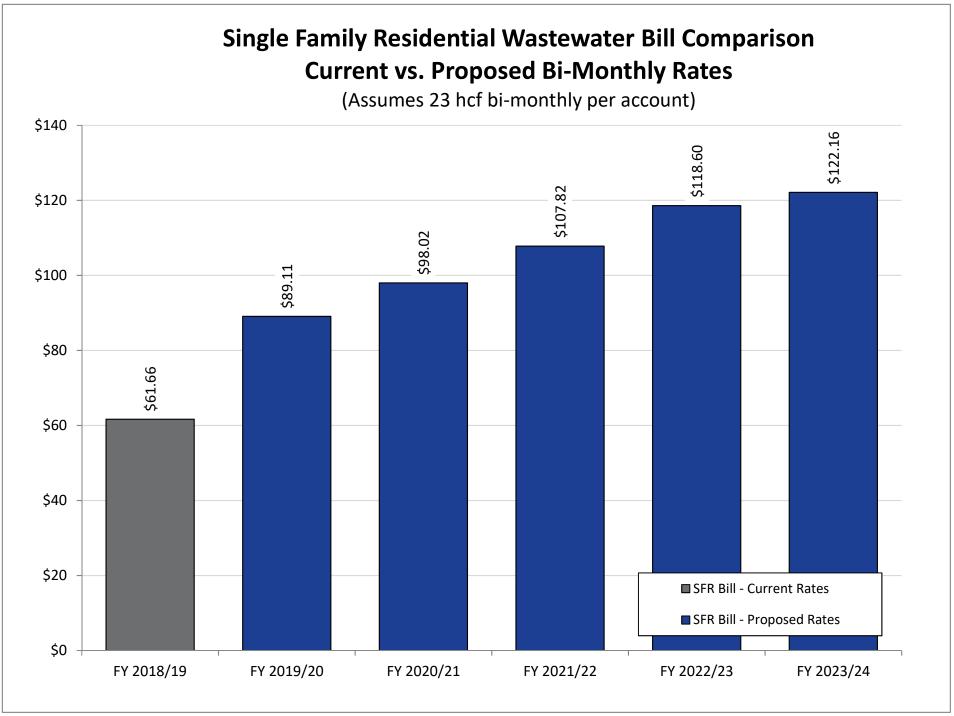


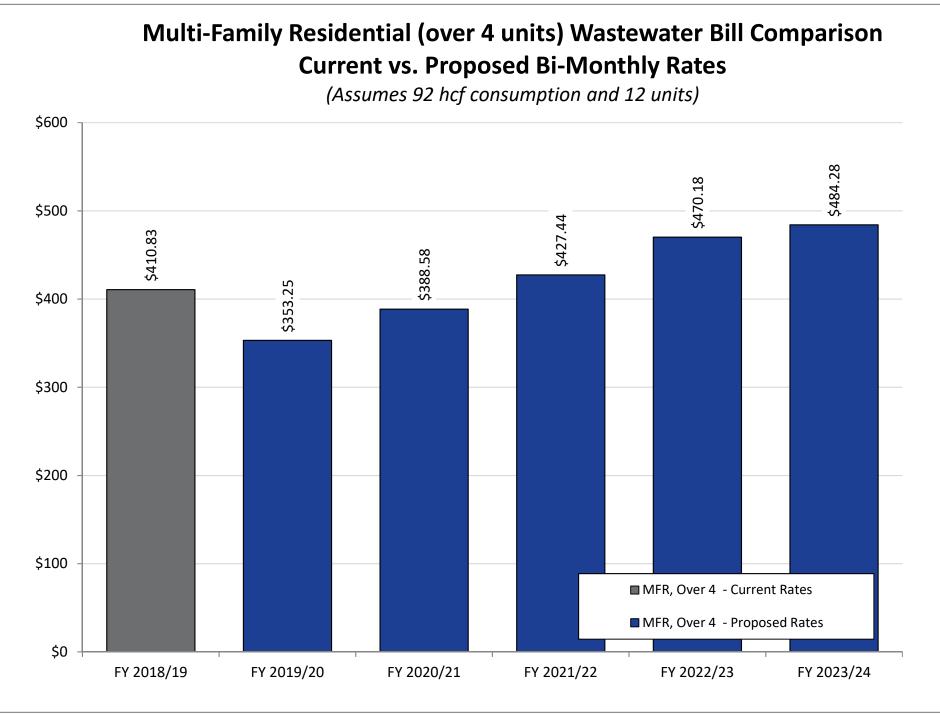
General Commercial Wastewater Bill Comparison Current vs. Proposed Bi-Monthly Rates

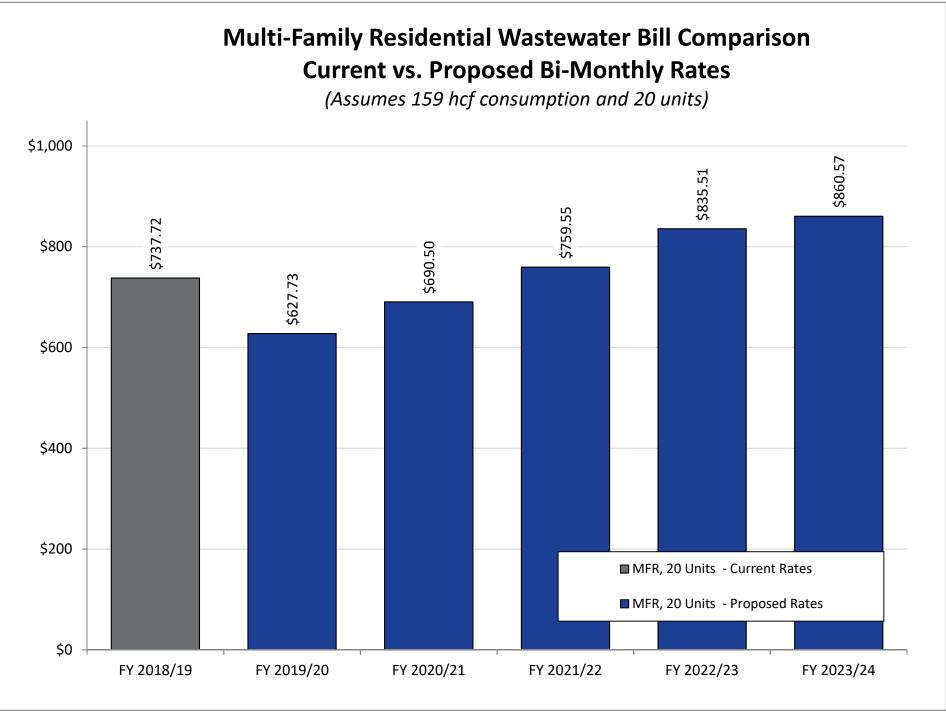
FY 2019/20 Proposed Rates (Assumes 1.23 units)

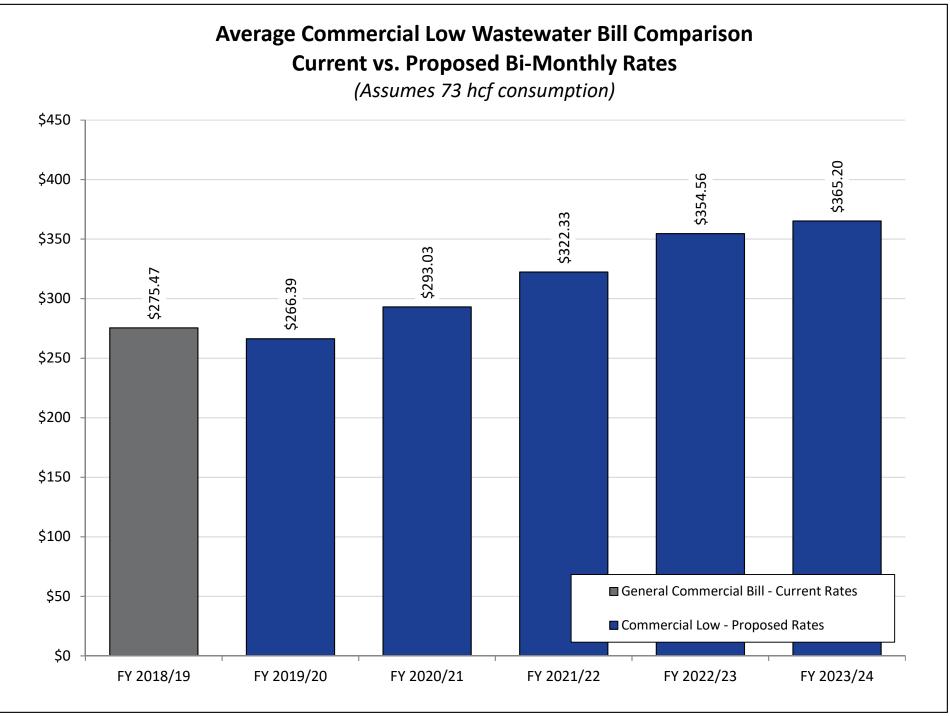


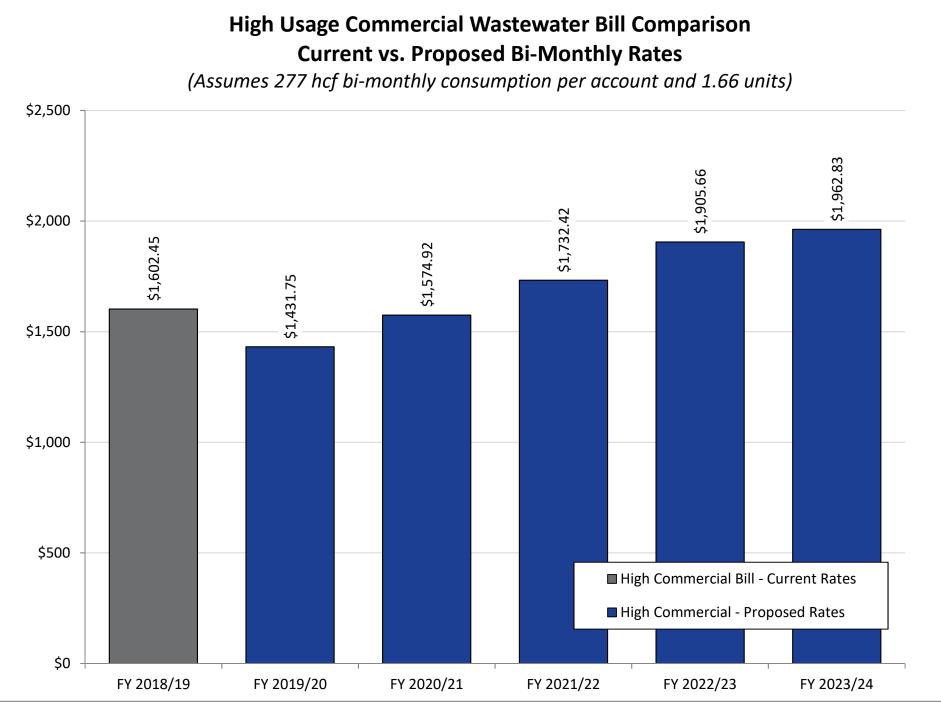












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Appendix B: Alternatives Considered – Detailed Wastewater Rate Study Tables and Figures

Wastewater Rate Schedule			Propos	ed Wastewate	r Rates						
wastewater Rate Schedule	Current	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24					
% Increase in Annual Rate	Rates	9.00%	9.00%	9.00%	9.00%	3.00%					
Revenue:		9.00%	9.00%	9.00%	9.00%	3.00%					
Fixed Charges (\$/bi-monthly)											
Residential (\$/Dwelling Unit)											
Single Family	\$0.00	\$13.93	\$15.18	\$16.55	\$18.04	\$18.58					
MFR: Duplex + Triplex	\$0.00	\$5.61	\$6.11	\$6.66	\$7.26	\$7.48					
MFR: Fourplex + Larger	\$0.00	\$4.23	\$4.61	\$5.02	\$5.48	\$5.64					
MFR : Individually metered	\$0.00	\$6.80	\$7.42	\$8.08	\$8.81	\$9.08					
<u>Non-Residential (\$/Account)</u>											
MFR : Mixed Use	\$0.00	\$136.17	\$148.42	\$161.78	\$176.34	\$181.63					
Commercial - Low	\$0.00	\$39.80	\$43.38	\$47.29	\$51.54	\$53.09					
Commercial - Medium		\$84.62	\$92.23	\$100.53	\$109.58	\$112.87					
Commercial - High	\$0.00	\$212.70	\$231.84	\$252.71	\$275.45	\$283.72					
Institutional	\$0.00	\$64.17	\$69.95	\$76.24	\$83.10	\$85.60					
Church/Schools	\$0.00	\$40.92	\$44.61	\$48.62	\$53.00	\$54.59					
Misc Industrial	\$0.00	\$78.39	\$85.45	\$93.14	\$101.52	\$104.57					
Wastewater Only	\$0.00	\$92.91	\$101.27	\$110.39	\$120.32	\$123.93					

CURRENT VS. PROPOSED WASTEWATER RATES (BI-MONTHLY) WITH LOW REDUCED CIP

Note - The City does not currently have a fixed charge portion of wastewater rates.

CURRENT VS. PROPOSED WASTEWATER RATES (BI-MONTHLY) WITH LOW REDUCED CIP

Masteriater Data Cabadula		Undeted	Proposed Wastewater Rates								
Wastewater Rate Schedule	Current	Updated Discharge	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24				
% Increase in Annual Rate	Rates	Factor	9.00%	9.00%	9.00%	9.00%	3.00%				
Revenue:		Factor	9.00%	9.00%	9.00%	9.00%	3.00%				
Volumetric Charges (\$/hcf of average winter water consumption)											
<u>Residential</u>											
Single Family	\$4.65	85%	\$3.36	\$3.67	\$4.00	\$4.36	\$4.49				
MFR: Duplex + Triplex	\$4.65	90%	\$3.36	\$3.67	\$4.00	\$4.36	\$4.49				
MFR: Fourplex + Larger	\$4.65	97%	\$3.36	\$3.67	\$4.00	\$4.36	\$4.49				
MFR : Individually metered	\$4.65	99%	\$3.36	\$3.67	\$4.00	\$4.36	\$4.49				
<u>Non-Residential</u>											
MFR : Mixed Use	\$4.65	95%	\$3.12	\$3.40	\$3.71	\$4.04	\$4.16				
Commercial - Low	\$4.24	93%	\$3.28	\$3.58	\$3.90	\$4.25	\$4.38				
Commercial - Medium	\$5.55	94%	\$3.44	\$3.75	\$4.08	\$4.45	\$4.59				
Commercial - High	\$6.50	95%	\$4.56	\$4.97	\$5.42	\$5.91	\$6.09				
Institutional	\$4.19	82%	\$3.34	\$3.65	\$3.97	\$4.33	\$4.46				
Church/Schools	\$4.19	81%	\$3.22	\$3.51	\$3.83	\$4.17	\$4.30				
Misc Industrial	\$5.16	88%	\$3.17	\$3.46	\$3.77	\$4.11	\$4.23				
Wastewater Only		85%									

City of Santa Monica Wastewater Rate Study Alternative 1- Low, Proposed Wastewater Rates incorporation of CIP Efficiencies

Masterioten Dete Cebedule			Propos	ed Wastewate	r Rates						
Wastewater Rate Schedule	Current	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24					
% Increase in Annual Rate	Rates	9.50%	9.50%	9.50%	9.50%	3.00%					
Revenue:		9.30%	9.30%	9.30%	9.30%	5.00%					
Fixed Charges (\$/bi-monthly)											
Residential (\$/Dwelling Unit)											
Single Family	\$0.00	\$13.99	\$15.32	\$16.78	\$18.37	\$18.92					
MFR: Duplex + Triplex	\$0.00	\$5.63	\$6.17	\$6.76	\$7.40	\$7.62					
MFR: Fourplex + Larger	\$0.00	\$4.25	\$4.65	\$5.09	\$5.58	\$5.74					
MFR : Individually metered	\$0.00	\$6.84	\$7.48	\$8.20	\$8.97	\$9.24					
Non-Residential (\$/Account)											
MFR : Mixed Use	\$0.00	\$136.79	\$149.79	\$164.02	\$179.60	\$184.99					
Commercial - Low	\$0.00	\$39.98	\$43.78	\$47.94	\$52.49	\$54.07					
Commercial - Medium		\$85.01	\$93.08	\$101.92	\$111.61	\$114.95					
Commercial - High	\$0.00	\$213.68	\$233.97	\$256.20	\$280.54	\$288.96					
Institutional	\$0.00	\$64.46	\$70.59	\$77.29	\$84.64	\$87.18					
Church/Schools	\$0.00	\$41.11	\$45.02	\$49.29	\$53.98	\$55.60					
Misc Industrial	\$0.00	\$78.75	\$86.23	\$94.42	\$103.40	\$106.50					
Wastewater Only	\$0.00	\$93.34	\$102.20	\$111.91	\$122.54	\$126.22					

CURRENT VS. PROPOSED WASTEWATER RATES (BI-MONTHLY) WITH MEDIUM REDUCED CIP

Note - The City does not currently have a fixed charge portion of wastewater rates.

CURRENT VS. PROPOSED WASTEWATER RATES (BI-MONTHLY) WITH MEDIUM REDUCED CIP

Wastewater Rate Schedule	Current	Updated Discharge Factor	Proposed Wastewater Rates				
			FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
% Increase in Annual Rate Revenue:	Rates		9.50%	9.50%	9.50%	9.50%	3.00%
Volumetric Charges (\$/hcf of average winter water consumption)							
<u>Residential</u>							
Single Family	\$4.65	85%	\$3.38	\$3.70	\$4.05	\$4.44	\$4.57
MFR: Duplex + Triplex	\$4.65	90%	\$3.38	\$3.70	\$4.05	\$4.44	\$4.57
MFR: Fourplex + Larger	\$4.65	97%	\$3.38	\$3.70	\$4.05	\$4.44	\$4.57
MFR : Individually metered	\$4.65	99%	\$3.38	\$3.70	\$4.05	\$4.44	\$4.57
<u>Non-Residential</u>							
MFR : Mixed Use	\$4.65	95%	\$3.14	\$3.43	\$3.76	\$4.12	\$4.24
Commercial - Low	\$4.24	93%	\$3.30	\$3.61	\$3.96	\$4.33	\$4.46
Commercial - Medium	\$5.55	94%	\$3.45	\$3.78	\$4.14	\$4.53	\$4.67
Commercial - High	\$6.50	95%	\$4.58	\$5.02	\$5.50	\$6.02	\$6.20
Institutional	\$4.19	82%	\$3.36	\$3.68	\$4.03	\$4.41	\$4.54
Church/Schools	\$4.19	81%	\$3.24	\$3.55	\$3.88	\$4.25	\$4.38
Misc Industrial	\$5.16	88%	\$3.19	\$3.49	\$3.82	\$4.18	\$4.31
Wastewater Only		85%					