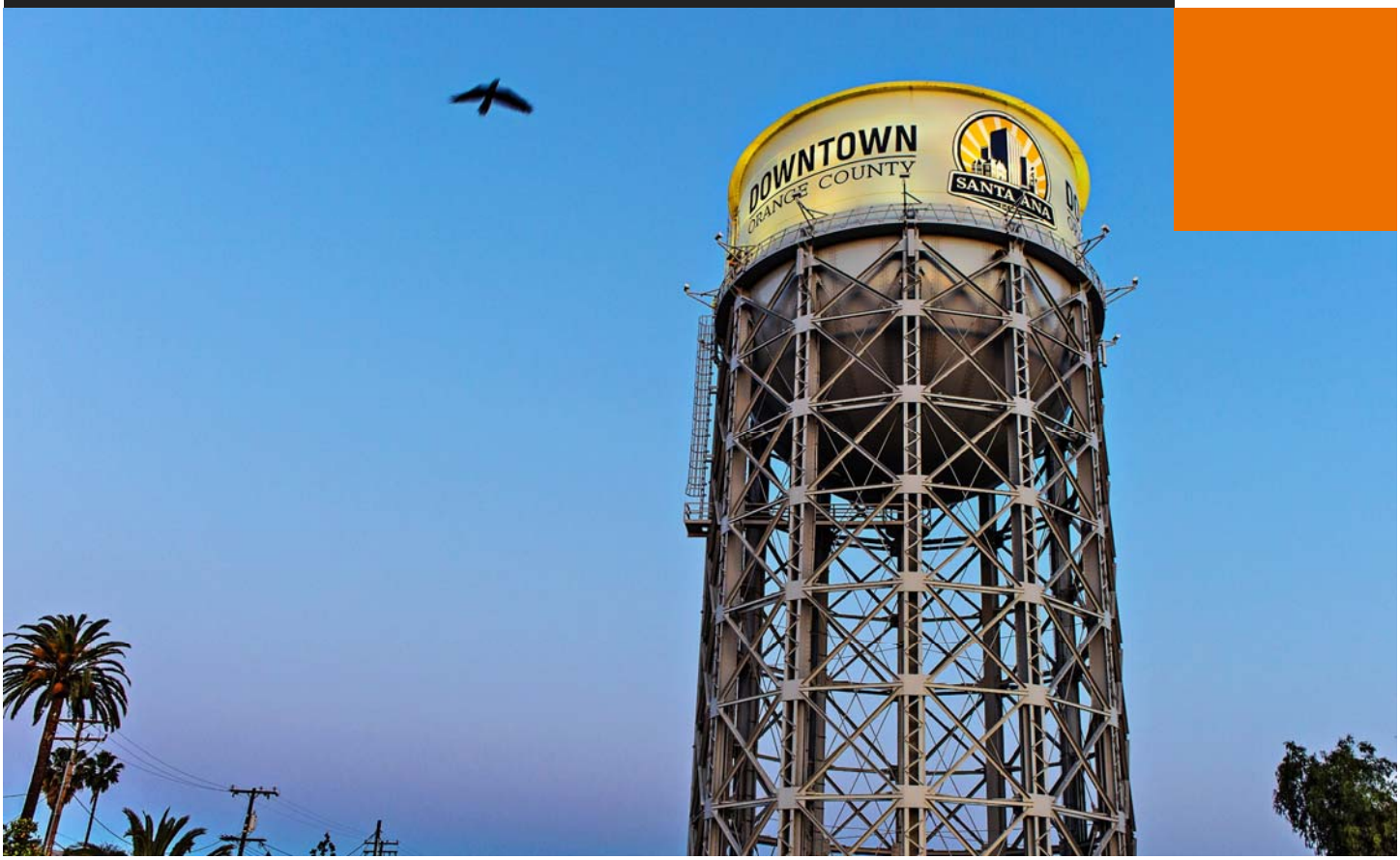
Stantec HILDEBRAND CONSULTING

City of Santa Ana, CA

2019 Water, Recycled Water, & Sewer Rate Study Report

FINAL

October 1, 2019



October 1, 2019

Mr. Nabil Saba
Water Resource Manager
City of Santa Ana Public Works Agency
220 S. Daisy Avenue, Santa Ana, CA 92703

Subject:
2019 Water, Recycled Water, and Sewer Rate Study

Dear Mr. Saba,

Stantec Consulting and Hildebrand Consulting are pleased to provide you with this final report of the findings for the 2019 Water, Recycled Water, and Sewer Rate Study (Study) that we completed for the City of Santa Ana (City). We appreciate the fine assistance provided by you and all of the members of the City staff who participated and contributed to the Study.

If you or others at the City have any questions, please do not hesitate to call either point of contact, listed below:

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Project Consultant
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We appreciate the opportunity to be of service to the City of Santa Ana and look forward to the possibility of doing so again in the near future.

Sincerely,

Mark Hildebrand
Project Manager

Matthew Freiberg
Project Consultant

Enclosure

EXECUTIVE SUMMARY

This Executive Summary presents an overview of the results of the 2019 Water, Recycled Water and Sewer Rate Study (Study) that was conducted for the City of Santa Ana ("City") by Stantec Consulting and Hildebrand Consulting.

The primary objectives of this Study are to:

i. Develop a multi-year financial management plan that provides for the City's Water and Sewer Enterprise capital funding needs;

ii. Identify future rate adjustments to water, recycled water (included as part of the water enterprise fund), and sewer rates that will ensure adequate revenues to meet the respective enterprises' ongoing financial requirements;

iii. Determine the cost of providing water, recycled water, and sewer service to customers using industry accepted methodologies; and

iv. Recommend specific rate structures that equitably recover the cost of service while minimizing the financial impact to ratepayers and comporting with industry practices and legal requirements.

The following describes the drivers that initiated the need for this Study, and a general description of the solutions that were used to address those challenges.

Driver: The rate schedules adopted based upon the past 2014 rate study had a planning period that ended during this current fiscal year (2018/2019).

> **Solution**: Update the Water & Sewer Enterprise Fund financial plans and rates to meet the revenue needs over the next five years.

Driver: The City has recently updated its Water and Sewer Master Plans which provide guidance for capital spending over the next planning period.

> **Solution**: Adopt a capital spending plan from the respective Master Plans that provides the enterprises with the needed level of service and maintains the utilities' assets in good working condition, and benefit rate payers by making timely re-investments in critical infrastructure.

Driver: The legal environment in California over the past 5 years (namely Proposition 218) has significantly increased the burden of proof required of public utilities to demonstrate that the rates being charged for utility service are proportionate to the cost of providing the utility services.

> **Solution:** Conduct a full cost-of-service allocation analysis and make rate structure modification to ensure inter- and intra-class equity in rates charged to water, recycled water, and sewer customers.

This Study used methodologies that are aligned with industry standard practices for rate setting as promulgated by the American Water Works Association (AWWA), the Water Environment Federation (WEF), and all applicable law, including California Constitution Article XIII D, Section 6(b) (for water, recycled water, and sewer rates) commonly known as Proposition 218.

This Study consisted of the following phases:

1. Revenue Sufficiency Analysis (RSA) – The Study developed multi-year financial forecasting models for the City's Water and Sewer Enterprises to determine the level of annual rate revenue required to satisfy projected annual operating costs, debt service expenses, and capital cost requirements while maintaining adequate financial reserves. In the RSA, the Stantec team evaluated the financial requirements of each Enterprise over a 10-year projection period and made recommendations for rate revenue adjustments over a 5-year period. Input data and key assumptions were reviewed with City staff, and several alternative capital spending scenarios were evaluated by staff during the RSA. This process generated a recommended financial plan and corresponding annual rate increases. While our analysis provides 10-year rate revenue increases, it is recommended that they City conduct an updated analysis in the next 2 – 5 years, as many of the assumptions used in this analysis may change in this time period, which may result in over or under collection of revenues from customers.

Like many utilities around the state and country, the City's water and sewer utilities are currently facing challenges of aging infrastructure. According to City Staff, the City's infrastructure is generally in good working condition; however, about 20% of the City's water distribution system has already exceeded the theoretical useful life (some of which date back to before the 1930s). This number is expected to jump to 70% by 2040 if no pipe replacements are made. In addition, many of the Water Enterprise's wells, pump stations, and reservoirs have reached the end of their useful service life. The City has completed Water and Sewer Master plans which both recommend a material increase in capital spending to address critical infrastructure repairs. As part of the RSA, multiple capital spending scenarios were considered to balance the need for infrastructure re-investment while limiting the financial impact to utility rate payers.

The Study also made recommendation for targeted cash reserves, which is an important component of an enterprise's financial stability and maintaining a strong credit rating. Recommended reserves include an Operating & Maintenance Reserve target equal to 90-days (3 months) of annual operating expenses, an Emergency Reserve set a $4 million (for both the Water and Sewer Enterprises), and a Repair, Renewal, and Replacement (3R) Capital Reserve equal to 50% of average annual projected capital spending. The target levels of the above policies are consistent with 1) the Stantec team's industry experience for similar systems, 2) the findings of reserve studies conducted by the AWWA, and 3) a healthy level of reserves for a municipal utility system per the evaluation criteria published by the municipal utility rating agencies (e.g. Fitch, Moody's, and Standard & Poor's).

Due to the different financial needs for the Water and Sewer Enterprises, respectively, this Study is recommending different rate increase schedules for each enterprise. As presented in Table ES-1, rate

increases are being recommended for the next five fiscal years for both enterprises; with the fiscal year (FY) 2019/20 increase scheduled for January 1, 2020, and all subsequent increases at the beginning of each respective fiscal year on July 1. Rate increases for recycled water will be tied to the proposed rate increases for the water enterprise.

It is important to note that, while in Year 1 rate revenues across all customer classes will increase on average by 7.0% for the water utility and 3.0% for the sewer utility. However, the proposed rate structure adjustments (discussed further below) will result in single-family residential accounts with average water usage, experiencing an increase of $4.46 per month (or just under ten percent) in their water bill and a decrease of $1.51 per month (or just over twenty one percent) in their sewer bill. Results will vary among different customers due to the proposed rate structure adjustments. To be clear, due to the rate structure adjustments, some customers' bills will increase by more than the average rate revenue adjustment for Year 1, while other customers' bills will increase by less. Starting in Year 2 (FY 2020/21) and continuing thereafter, all customers will experience the same uniform percentage change to their bill.

Table ES-1 Proposed Water & Sewer Enterprise Rate Revenue Increases

	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24
Rate Schedule	January 1, 2020	July 1, 2020	July 1, 2021	July 1, 2022	July 1, 2023
Water Enterprise	7.0%	7.0%	6.5%	2.0%	2.0%
Sewer Enterprise	3.0%	5.0%	9.0%	9.0%	9.0%

2. Cost-of-Service Analysis (COSA) – Using the revenue requirements from the RSA for FY 2019/20, the Stantec team performed a detailed COSA based upon principles outlined by the AWWA, WEF, and other generally accepted industry practices, in order to determine the proper distribution of costs and corresponding revenue requirements. The purpose of a COSA is to determine the cost of providing water and sewer service so that the revenue requirements of the utility may be equitably collected through rates. The Study employed methods promulgated in AWWA's Manual M1: Principles of Water Rates, Fees, and Charges (M1) for the water and recycled water rates and WEF's Financing and Charges for Wastewater Systems, Manual of Practice No. 27 for the sewer rates. The COSA included the following steps:

- Step 1: Allocate costs to the appropriate activities/functions
- Step 2: Allocate the costs assigned to each function to specific system parameters
- Step 3: Credit non-rate revenue as a reduction of assigned costs
- Step 4: Distribute resulting costs to customer classes

3. Rate Structure Analysis – The Study developed specific rate schedules to recover the identified level of required rate revenue as identified by the COSA analysis from the appropriate customers. The recommended rate schedules were designed to:

- Fairly and equitably recover costs through rates;
- Conform to accepted industry practice and legal requirements; and
- Provide fiscal stability and recovery of fixed costs of the system.

The existing water rates have a two-part structure comprised of a fixed service charge that is assessed based on meter size and a consumption-based rate (as measured in hundred cubic feet or "CCF") that is assessed based on the total amount of water that is used during the billing period. Additional details that describe the current rate structure are included in the full report. This Study recommends implementing the following changes to the existing water rate structure:

1. Update the meter equivalency schedule;
2. Establish four Customer Classes: Single Family, Multi-Family, Non-Residential, and Recycled Water;
3. Enhance the connection between water rates and the cost to provide water service by primarily recovering water supply costs through the Water Usage Charge as well as calculating the tiered rates based on the cost of the Water Utility's two sources of water supply;
4. Update the Tier 1 water allocation for each customer class to enhance the connection of water use in each tier to reflect the Water Enterprise's utilization of each source of supply; and
5. Update the Pass-Through Adjustment Policy, which updates Water Usage Charges based on actual changes to water supply costs.

This Study recommends implementing the following changes to the existing sewer rate structure:

1. Create three customer classes: Single Family, Multi-Family, and Non-Residential based on their respective "Return-to-Sewer Factors"; and
2. Establish a single fixed Sewer Utility Charge to replace the existing rate structure.

Tables ES-2 through ES-5 indicate the proposed rates for FY 2019/20 through FY 2023/24. Note that the Pass-Through Adjustment Policy would adjust rates in addition to the proposed rate revenue increases shown in Table ES-1.

Table ES-2 Proposed Water Usage Charges ($/CCF)

	Effective Jan. 1, 2020	Effective July 1, 2020	Effective July 1, 2021	Effective July 1, 2022	Effective July 1, 2023
Tier 1	$2.03	$2.17	$2.31	$2.36	$2.41
Tier 2	$4.76	$5.09	$5.42	$5.53	$5.64
Recycled Water	$2.15	$2.30	$2.45	$2.50	$2.55

Table ES-3 Proposed Monthly Water Utility Charges

Meter Size	Effective Jan. 1, 2020	Effective July 1, 2020	Effective July 1, 2021	Effective July 1, 2022	Effective July 1, 2023
5/8" X 3/4"	$20.51	$21.94	$23.37	$23.84	$24.31
3/4"	$30.76	$32.91	$35.05	$35.75	$36.47
1"	$51.27	$54.85	$58.42	$59.59	$60.78
1 1/2"	$102.53	$109.70	$116.83	$119.17	$121.55
2"	$164.04	$175.52	$186.93	$190.67	$194.48
3"	$358.84	$383.96	$408.92	$417.10	$425.44
4"	$645.91	$691.12	$736.04	$750.76	$765.78
6"	$1,332.83	$1,426.12	$1,518.82	$1,549.20	$1,580.18
8"	$2,460.60	$2,632.84	$2,803.97	$2,860.05	$2,917.25

Table ES-4 Proposed Monthly Sewer Utility Charges

SINGLE FAMILY RESIDENTIAL

Meter Size	Effective Jan. 1, 2020	Effective July 1, 2020	Effective July 1, 2021	Effective July 1, 2022	Effective July 1, 2023
5/8" X 3/4"	$5.60	$5.88	$6.41	$6.99	$7.62
3/4"	$7.93	$8.33	$9.08	$9.90	$10.79
1"	$12.59	$13.22	$14.41	$15.71	$17.12
1 1/2"	$24.23	$25.44	$27.73	$30.23	$32.95
2"	$38.20	$40.11	$43.72	$47.65	$51.94
3"	$82.43	$86.55	$94.34	$102.83	$112.08
4"	$147.62	$155.00	$168.95	$184.16	$200.73
6"	$303.61	$318.79	$347.48	$378.75	$412.84
8"	$559.71	$587.70	$640.59	$698.24	$761.08
10"	$885.66	$929.94	$1,013.63	$1,104.86	$1,204.30

MULTI-FAMILY RESIDENTIAL

Meter Size	Effective Jan. 1, 2020	Effective July 1, 2020	Effective July 1, 2021	Effective July 1, 2022	Effective July 1, 2023
5/8" X 3/4"	$8.40	$8.82	$9.61	$10.47	$11.41
3/4"	$12.12	$12.73	$13.88	$15.13	$16.49
1"	$19.57	$20.55	$22.40	$24.42	$26.62
1 1/2"	$38.20	$40.11	$43.72	$47.65	$51.94
2"	$60.55	$63.58	$69.30	$75.54	$82.34
3"	$131.32	$137.89	$150.30	$163.83	$178.57
4"	$235.63	$247.41	$269.68	$293.95	$320.41
6"	$485.21	$509.47	$555.32	$605.30	$659.78
8"	$894.97	$939.72	$1,024.29	$1,116.48	$1,216.96
10"	$1,416.49	$1,487.31	$1,621.17	$1,767.08	$1,926.12

NON-RESIDENTIAL

Meter Size	Effective Jan. 1, 2020	Effective July 1, 2020	Effective July 1, 2021	Effective July 1, 2022	Effective July 1, 2023
5/8" X 3/4"	$9.33	$9.80	$10.68	$11.64	$12.69
3/4"	$13.52	$14.20	$15.48	$16.87	$18.39
1"	$21.90	$23.00	$25.07	$27.33	$29.79
1 1/2"	$42.85	$44.99	$49.04	$53.45	$58.26
2"	$68.00	$71.40	$77.83	$84.83	$92.46
3"	$147.62	$155.00	$168.95	$184.16	$200.73
4"	$264.96	$278.21	$303.25	$330.54	$360.29
6"	$545.74	$573.03	$624.60	$680.81	$742.08
8"	$1,006.73	$1,057.07	$1,152.21	$1,255.91	$1,368.94
10"	$1,593.43	$1,673.10	$1,823.68	$1,987.81	$2,166.71
FOG Customers	$40.92	$42.97	$46.84	$51.06	$55.66

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List of Acronyms

AMI	Advanced Metering Infrastructure
AWWA	American Water Works Association
CCF	hundred cubic feet
CIP	capital improvement plan
COSA	cost of service analysis
CPI	construction price index
DCR	debt service coverage ratio
EM	equivalent meter
FAMS-XL	Financial Analysis and Management System model
FOG	Fats, Oils and Grease (program)
FTE	full-time equivalent (employee)
FY	fiscal year (which ends on June 30 for the City)
G&A	general and administrative
MWD	Metropolitan Water District of Southern California
O&M	operations and maintenance
OCSD	Orange County Sanitation District
OCWD	Orange County Water District
RSA	revenue sufficiency analysis
WEF	Water Environment Federation

1. INTRODUCTION

Stantec Consulting and Hildebrand Consulting have been retained by the City of Santa Ana (City) to conduct a Water, Recycled Water, and Sewer Rate Study (Study). This report describes the detailed assumptions, procedures, and results of the Study, including our conclusions and recommendations.

1.1 UTILITY BACKGROUND

The City of Santa Ana is located in Orange County, with a population of approximately 343,000. The City owns and maintains an extensive water and recycled water system that are managed by the Water Enterprise, and a sewer collection system that is managed by the Sewer Enterprise.

The infrastructure of the Water Utility includes water production and distribution facilities that deliver potable water to retail customers within the City. The Water Utility consists of 20 active groundwater wells, 8 reservoirs, 7 water connections to Metropolitan Water District (MWD), 16 interconnections with neighboring water utilities, and 478 miles of water mains. The Water Utility currently depends on two sources of supply – pumped groundwater managed by the Orange County Water District (OCWD) and purchased surface water from the Metropolitan Water District (MWD). The Water Utility limits its groundwater use to meet no more than 75% of its retail water demands, in conformance with OCWD regulations.

The Water Utility also provides recycled water to customers where available. The Water Enterprise acts in a retail capacity and obtains all recycled water supplies from OCWD. The transmission and distribution infrastructure for recycled water is owned and maintained by the OCWD; however, any expansion of the existing distribution pipeline network must be funded by the City's Water Enterprise.

The Sewer Enterprise owns and maintains an extensive system of sanitary sewer infrastructure that includes approximately 390 miles of sanitary sewer, 9,000 manholes, 48,500 sewer laterals, and 2 sewer lift stations. All sewage is conveyed to the Orange County Sanitation District (OCSD) for treatment.

1.2 OBJECTIVES

The primary objectives of this Study are to:

i. Develop a multi-year financial management plan that provides for the Water and Sewer Enterprise operational and capital funding needs;
ii. Identify future rate adjustments to water, recycled water, and sewer rates that will ensure adequate rate revenue to meet the Water and Sewer Enterprise's ongoing financial requirements;
iii. Determine the cost of providing water, recycled water, and sewer service to customers using industry accepted methodologies; and

iv. Recommend specific rate structures that equitably recover the cost of service from each customer class, while minimizing the financial impact to ratepayers and comporting with industry practices and legal requirements.

This report has been organized into the revenue sufficiency analysis (financial plan), cost of service/rate design, and rate recommendations.

1.3 STUDY DRIVERS

The following describes the drivers that initiated the need for this Study, and a general description of the recommended solutions that were used to address those challenges.

Driver: The rate schedules adopted by the 2014 rate study had a planning period that ended during this current fiscal year (2018/2019).

> **Solution**: Update the Water & Sewer Enterprise financial plans and rates to meet the revenue needs for the next five years.

Driver: The City has recently updated its Water and Sewer Master Plans which provide guidance for capital spending over the next planning period.

> **Solution**: Adopt a capital spending plan from the respective Master Plans that provides the enterprises with the needed level of service and maintains the utilities' assets in good working condition, and benefit rate payers by making timely re-investments in critical infrastructure.

Driver: The legal environment in California over the past 5 years (namely Proposition 218) has significantly increased the burden of proof required of public utilities to demonstrate that the rates being charged for utility service are proportionate to the cost of providing the utility services.

> **Solution:** Conduct a full cost-of-service allocation analysis and make rate structure modification to ensure inter- and intra-class equity in rates charged to water, recycled water, and sewer customers.

1.4 STUDY METHODOLOGY

This Study applied methodologies that are aligned with industry standard practices for rate setting as promulgated by the American Water Works Association (AWWA), Water Environment Federation (WEF), and all applicable law, including California Constitution Article XIII D, Section 6(b), commonly known as Proposition 218.

The Study began with development of a multi-year financial management plan that determined the level of annual rate revenue required to cover projected annual operating expenses, debt service (including coverage targets), and capital cost requirements, while maintaining adequate reserves. This portion of the Study was conducted using the revenue sufficiency and financial planning module of Stantec's

proprietary Financial Analysis and Management System (FAMS-XL) modeling system. The model was customized to reflect the Water and Sewer Enterprises' financial dynamics and latest available data for the water, recycled water, and sewer utility's operations in order to develop a long-term financial management plan, inclusive of projected annual revenue requirements and corresponding annual rate adjustments.

Revenue requirements calculated during the revenue sufficiency analysis (RSA) for fiscal year ending June 30, 2020 (FY 2019/20) were then used to perform a detailed cost-of-service allocation (COSA) analysis. The COSA analysis and rate structure design were conducted based upon principles outlined by the AWWA, WEF, legal requirements (Proposition 218) and other generally accepted industry practices to develop rates that reflect the cost of providing service.

2. FINANCIAL PLAN

2.1 DESCRIPTION

This section presents the financial management plan and corresponding plan of water, recycled water, and sewer rate revenue adjustments developed in the RSA, including a description of the source data, assumptions, and policies reflected in the RSA. Appendix A and B include detailed schedules supporting the Water Enterprise and Sewer Enterprise financial plans, respectively, discussed herein.

During the RSA, the Stantec team reviewed alternative multi-year financial management plans through several interactive work sessions with City staff. As a result of this process, the Study has produced proposed financial plans that will allow the Water and Sewer Enterprises to meet their respective revenue requirements and financial performance objectives throughout the projection period while striving to minimize rate increases.

2.2 DATA AND ASSUMPTIONS

The City provided historical and budgeted financial information associated with operation of the water, recycled water, and sewer systems, including a multi-year capital improvement plan (CIP), and outstanding debt service obligations and covenants. City staff also assisted in providing other data, assumptions and policies, such as water demands and customer growth, debt service coverage requirements, operating and capital reserve targets, earnings on invested funds, and escalation rates for operating costs (all of which are described in the following subsections). The following sections present the key source data relied upon in conducting the RSA.

2.2.1 Beginning Fund Balances

The ending cash balances for FY 2017/18 were used to establish the FY 2018/19 beginning balances, as outlined in Schedule 1 of Appendix A for the Water Enterprise and Schedule 6 of Appendix B for the Sewer Enterprise.

2.2.2 Customer Growth & Volume Forecast

Forecasting the future usage of water is a perennial challenge for water utilities. Figure 1 below presents a three-year history of the City's water usage, as tracked from pumping records and water purchases. Water production from the two sources of supply is illustrated by the black (groundwater) and orange (surface water purchased from MWD) shading. This figure shows water usage over the last three years has held fairly constant, with a slight uptick in usage in FY 2017/18. This data is consistent with the general water industry assumption there will be little "rebound" in water usage after the decline in usage during the recent California drought. As such, this Study assumes that the growth in water usage will

track with general population growth, which was assumed to be about 1% per year according to City Staff, and as evidenced by recent growth patterns.

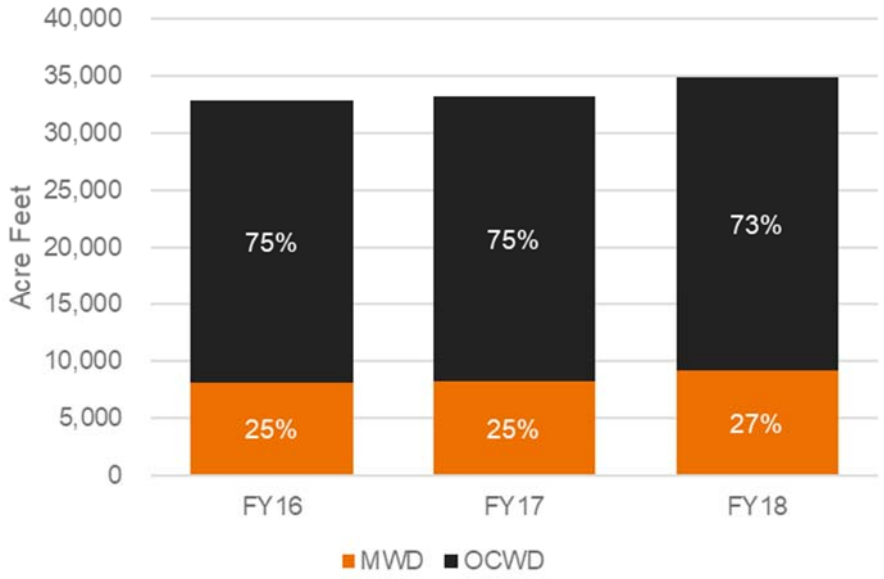

Figure 1: Historical Water Production from MWD and OCWD Water Purchases

Regarding recycled water usage, the City expects to add five new accounts over the next ten years. Given the relatively small size of the recycled water utility and the relatively large size of each account, those five accounts represent an annual growth rate of about 2%.

2.2.3 Rate Revenues

Rate revenue is the revenue generated from customers for water and sewer service. The City receives rate revenue in the form of fixed bi-monthly charges (hereafter referred to as the Sewer Utility Charge and Water Utility Charge, respectively) and consumption-based charges (hereafter referred to as the Water Usage Charge for water and recycled water and “Commodity Charge” for sewer).

The water rate revenue in the financial plan is based on FY 2017/18 actual revenue, adjusted for FY 2018/19 by the percent rate increase in that year, and then adjusted annually to reflect assumed customer growth and any applicable rate revenue adjustments that are proposed by this Study.

Recycled water rate revenue is a new item in the City’s Budget, and as such, is based off of FY 2018/19 budgeted amounts and adjusted thereafter to reflect the assumed customer growth and rate revenue adjustments proposed by this Study.

Details of the budgeted and projected revenues are listed in detail in Schedule 2 of Appendix A for the Water Enterprise and Schedule 7 of Appendix B for the Sewer Enterprise.

2.2.4 Non-Rate Revenues

In addition to rate revenue, the Water and Sewer Enterprises receive a limited amount of non-rate revenue. The Water Enterprise collects revenues related to miscellaneous service fees, fire line service, cell tower rental revenues, rental of property, and interest revenue on investments. The Sewer Enterprise collects a very small amount of revenue from penalties and service charges and other miscellaneous recoveries. Projections of all non-rate revenues were based on FY 2018/19 budgeted revenues, with the exception of interest income which was calculated annually based upon projected average fund balances and assumed interest rates (see Section 2.2.8). Budgeted and projected non-rate revenues are listed in detail in Schedule 2 of Appendix A for the Water Enterprise and Schedule 7 of Appendix B for the Sewer Enterprise.

2.2.5 Operation, Maintenance and Existing Debt Service Expenditures

The Water & Sewer Enterprises' operating expenses include all salaries, benefits, maintenance, internal transfers, utility costs and other miscellaneous costs. The Water Enterprise also incurs water purchases costs and debt service expenses on an existing, outstanding loan (see Section 2.2.9). For both the Water and Sewer Enterprises the financial plan started with actual expenditures from FY 2017-18 (as opposed to budget values) and escalated those costs for future years (see Section 2.2.6). Current and projected operating and debt expenses are provided in detail in Schedule 3 of Appendix A for the Water Enterprise and Schedule 8 of Appendix B for the Sewer Enterprise. Actual expense categories for FY 2017/18 are depicted in Figure 2-1 and Figure 2-2.

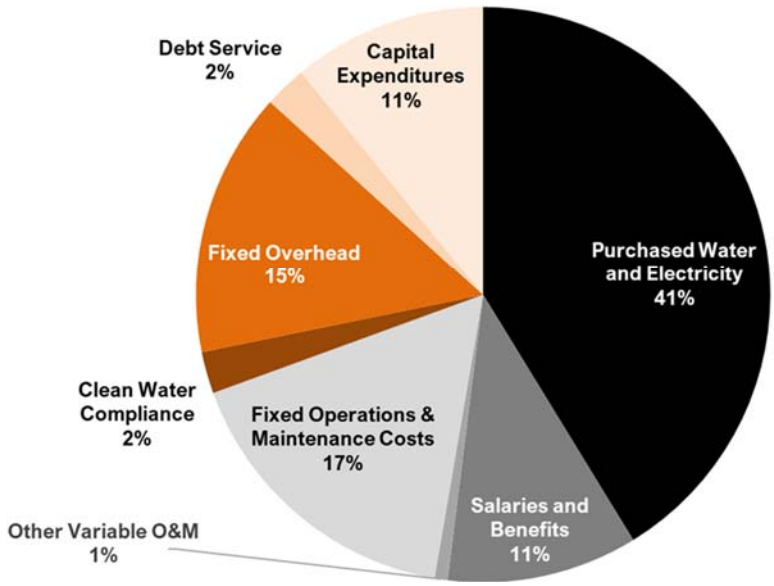

Figure 2-1: FY 2017/18 Water Expense Categories

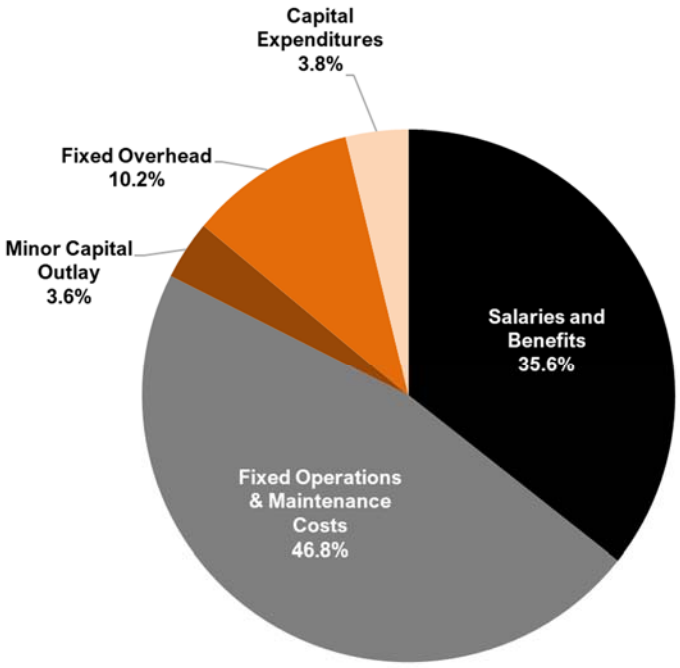

Figure 2-2: FY 2017/18 Sewer Expense Categories

2.2.6 Cost Escalation

Future operating expenses were in large part projected based upon the actual expenditures from FY 2017/18, with a few exceptions for expenses that are new in the FY 2018/19 budget, and any additional staff that has been recommended from the financial planning process to deliver upcoming capital projects. All expenses starting in FY 2019/20 were adjusted for inflation.

Annual cost escalation factors for the various types of expenses were developed based upon a review of historical inflation trends, published inflation forecasts, industry experience, and detailed discussions with City staff. Table 2-1 summarizes the cost escalation factors used to project assumed increases across all expense categories for both the Water and Sewer Enterprises.

This Study assumes that the City will adopt a dynamic Pass-Through Adjustment Policy, which will annually adjust the Water Usage Charge in accordance with actual changes in water supply costs (see Section 4.6).

Table 2-1: Cost Escalation Factors for Water Analysis

	FISCAL YEARS									
	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
Salaries	0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Benefits	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Pension	13.7%	13.7%	13.7%	13.7%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
Fuel	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Electricity	0%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Consumer Price Index	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
MWD Water Purchases[1]	-0.4%	4.7%	4.7%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
OCWD Pumping Charges[1]	10.2%	8.00%	5.4%	8.6%	7.3%	7.3%	7.3%	7.3%	7.3%	7.3%
Green Acres Recycled Water Purchases	3.7%	0.0%	3.6%	0.0%	3.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Capital Improvement	0%	0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%

[1] The decrease in MWD Water Purchase costs in FY 2018/19 is due to an anticipated decrease in water purchase from MWD in that year. The decrease in MWD water is offset by an increase in OCWD Pumped water.

2.2.7 Capital Improvement Plan

Like many utilities around the state and country, the City's water and sewer utilities are currently facing challenges of aging infrastructure. In 2016 and 2017, the City completed updated Master Plans for the Sewer and Water utilities respectively. Each Master Plan provided 30-year Capital Improvement Plans (CIP) for the utilities which laid out a plan for re-investing in each utilities' aging infrastructure. As part of this Study, the project team and City staff have evaluated multiple capital spending scenarios and identified the CIP that allows the Water and Sewer Enterprises to maintain its infrastructure in good working order, while limiting the impacts to rate payers. Below we discuss the recommended capital spending strategy over the planning period.

Water Enterprise

The City's Water enterprise serves all of Santa Ana's residents and businesses over its 27.2 square mile service area. The City's existing infrastructure includes 21 ground water wells, 7 import water connections, 7 pump stations, 10 reservoirs, and ~480 miles of transmission and distribution mains. The City's infrastructure is generally in good working condition; however, about 20% of the City's distribution

system has already exceeded the theoretical useful life (some of which date back to before the 1930s). This number is expected to jump to 70% by 2040 if no pipe replacements are made.

The City's CIP has prioritized building resilience in the City's water supply by building new wells in places where infrastructure has been damaged, adding on demand generators to critical wells to maintain water supply even during power outages, and the systematic rehabilitation of the City's wells, reservoirs, pump stations, and water distribution system to keep the City's infrastructure in good working order. The City is also installing new Advanced Metering Infrastructure (AMI), which will allow the City personnel and customers access to real-time water consumption data.

As part of this Study, the project team and City staff reviewed the recommended and limited CIP options from the 2017 Master Plan, updated the project scheduling for the 10-year planning period, based upon which projects have already been completed, and what is currently scheduled. The final CIP totaled approximately $154.9M (in current dollars) over the period of FY 2018/19 through FY 2029/30, averaging $12.9M per year. **This capital plan reflects a material increase from the historic capital spending for the Water Enterprise**, which has averaged $3.4M per year over the past four years. In conjunction with this increase in capital spending, the Water O&M budget assumes that the Water Enterprise will require 8 additional full-time equivalent (FTEs) staff.

A detailed list of repair and replacement projects and associated costs for the Water Enterprise is provided in Schedule 4 of Appendix A. It should be noted that capital spending forecasts beyond a 5-year planning horizon have less certainty than near-term planning. As a result, this Study is primarily concerned with the capital spending forecasts within the next five years. Since capital spending estimates are provided in current dollars, the water RSA includes an annual cost escalation factor for capital costs (see Section 2.2.6).

Sewer Enterprise

The City's Sewer enterprise serves all of the City of Santa Ana, portions of Garden Grove, Orange, and Tustin that discharge wastewater into the City's sewer system. The City's sewer collection system, consists of approximately 450 miles of sewer mains, including 60 miles of trunk sewers that are currently owned by OCSD. The collection system operates largely by gravity and discharges into gravity trunk sewers that convey wastewater to the OCSD Treatment Plant Number 1. The majority of the City's sewers were built in the 1950s and 1960s, and are now over 60 years old, but portions of the system date back to the 1920s. OCSD recently transferred ownership of 8.7 miles of trunk sewer to the City, along with $23 million to pay for the future repairs and rehabilitation of the trunk sewer.

Similar to the Water Enterprise, this Study proposes a financial plan for materially increasing the annual level of capital reinvestment in the sewer utility. Historically the Sewer Enterprise has made efforts to replace and repair the older portions of the sewer main network that has capacity issues. However, due to financial shortfalls, the City's pipe replacement schedule has been limited to about 0.5 miles of pipe per year. Capital spending plan assumed for this Study established a miles-of-pipe replacement approach with the goal of **ramping up from 0.5 miles of pipe per year to 3.5 miles of pipe per year by FY**

2022/23, with a couple years of enhanced replacements to address the most critical infrastructure needs in FY 2020/21 and 2021/22. In addition to pipe replacement, the City also has one pump station rebuild scheduled for FY 2019/20. The final CIP totaled approximately $73.6M (in current dollars) over the period of FY 2018/19 through FY 2029/30. In conjunction with this increase in capital spending, the Sewer O&M budget assumes that the Sewer Enterprise will require 3 additional FTEs by FY 2021-22.

A detailed list of repair and replacement projects and associated costs for the Sewer Enterprise is provided in Schedule 9 of Appendix B. It should be noted that capital forecasts beyond a 5-year planning horizon have less certainty than near-term planning. As a result, this Study is primarily concerned with the capital spending forecasts within the next five years. Since capital spending estimates are provided in current dollars, the sewer RSA includes an annual cost escalation factor for capital costs (see Section 2.2.6).

2.2.8 Interest Earnings on Invested Funds

An interest earning rate of 1.36% and 2.34% for invested funds have been used for the Water and Sewer Enterprises respectively. The percentages are based on prior interest earnings from each Enterprise's actual revenue statements and have been approved by City Staff as representative of what they expect for interest earnings moving forward. The Study assumes that all interest earnings will be retained within their respective funds.

2.2.9 Proposed Debt Strategy

Existing Outstanding Debt

The Water Enterprise's outstanding debt includes a 2014 Series Revenue Bond that will be fully repaid in FY 2031/32. The corresponding annual debt service for the 2014 Series Revenue Bond is provided in Schedule 5 of Appendix A. The City's Sewer Enterprise does not carry any existing debt.

Future Borrowing Assumptions

This Report proposes that the enterprises cash finance all of their ongoing capital replacements, with exception of the Water Enterprise's AMI project, which has already been approved for debt financing. The assumed financing terms for the AMI project, were as follows:

- 30-year term
- 2.0 percent cost of issuance
- Fixed interest rate of 5.0 percent
- A 1-year debt service reserve requirement

The existing 2014 Water Revenue Bond has a debt service coverage ratio (DCR) requirement of 1.20. Based on recently published guidance from Fitch Ratings, utility systems with mid-range financial profiles

should maintain a DCR greater than 1.50 times annual debt service. As such, the Stantec team ensured that a DCR of at least 1.50 was maintained throughout the projection period to enable the City to access favorable terms from the debt market, should the need arise.

The forecasted debt service for the AMI project is provided in Row 18 of Schedule 5 (Appendix A).

2.2.10 Reserve Targets

Targeted cash reserves for utilities are balances retained for specific cash flow needs. The policy target for reserves is an important component when developing a multi-year financial plan as utilities rely on the reserves for financial stability. Credit rating agencies evaluate utilities in part on their adherence to formally adopted reserve targets, and lending agencies require utilities to maintain specific debt reserves for outstanding loans.

While the City has not adopted a formal reserves policy for either enterprise, the City's Finance Department, in practice, has been following the reserve targets established by the 2014 Comprehensive Water Rate Study Update. The current Study expands upon the same recommendations, and recommends the following reserve policies:

- An Operating & Maintenance Reserve sets a target minimum balance equal to 90-days (3 months) of annual operating expenses. This reserve ensures continuity of service regardless of short-term changes in cash flow or sudden increases in operating costs. Because this reserve target is set relative to the City's operating budget, the target will change as the expenses change. The Water Enterprise FY 2018/19 budget for O&M expenses totals $50.4 million, resulting in an Operating Reserve balance of about $12.4 million. The Sewer Enterprise FY 2018/19 budget for O&M expenses totals $5.0 million, resulting in an Operating Reserve balance of about $1.2 million.
- An Emergency Reserve establishes a reserve for the urgent repair of a piece of infrastructure that fails unexpectedly. The previous rate study recommended a $1 million reserve be set aside for each enterprise. This report recommends increasing these reserves based on the value of a critical piece of infrastructure. A reserve of $4 million is recommended for both the Water and Sewer Enterprises, which is approximately the cost of replacing a production well or a pump station. It is recommended that the Emergency Reserve be adjusted annually to track with the Construction Price Index (CPI).
- Repair, Renewal, and Replacement (3R) Capital Reserve is currently set at one year of annual depreciation of capital assets. Given that the purpose of the 3R capital reserve is to smooth out volatility in capital spending, this Study recommends modifying the 3R Capital Reserve to be equal to 50% of the average capital spending over the respective Enterprise's 10-year capital spending projections. This updated approach would establish a Water 3R Capital Reserve of $6.6 million in FY 2019/20 and a Sewer 3R Capital Reserve of $3.1 million in FY 2019/20. While this report has made projections of how the 3R Capital Reserve may increase over time (tracking with

CPI), in reality any adjustments to the 3R Capital Reserves should be based on changes to capital spending projections.

The target levels of the above policies are consistent with 1) the Stantec team's industry experience for similar systems, 2) the findings of reserve studies conducted by the AWWA, and 3) a healthy level of reserves for a municipal utility system per the evaluation criteria published by the municipal utility rating agencies (e.g. Fitch, Moody's, and Standard & Poor's). This Study recommends that the Operating and Maintenance Reserve as well as the Emergency Capital reserve targets be adopted by the City as formal minimum fund balance policies, with the addition of the 3R Capital Reserve as a target reserve policy. Once the reserve targets are established, they should be reviewed annually during the budgeting process to monitor current levels and assure conformance with stated policies and practices. Decisions can be made to maintain, increase, or spend down reserve balances, as appropriate, depending upon the impact of such decisions to the upcoming budget period.

The total reserve targets by year are shown in Schedule 5 (Row 28) of Appendix A for the Water Enterprise and Schedule 10 (Row 26) of Appendix B for the Sewer Enterprise.

2.3 PROPOSED RATE REVENUE INCREASES

All of the above information, including the significant increase in capital spending as described in Section 2.2.7, was entered into Stantec's FAMS-XL interactive modeling system. This module of FAMS-XL produced a ten-year projection of financial requirements for each enterprise, which formed the basis for a financial strategy of needed rate adjustments over the next 5 years for both the Water and Sewer Enterprises. It is important to note that the above rate increases for the Water Enterprise do not include the Pass-Through Adjustment Policy, as described in Section 4.6.

On the surface, rate increases may seem un-necessary for the Sewer Enterprise given the recent receipt of $23 million from OCSD (see Section 2.2.7), however this Study is recommending a "spike" in capital spending in FY 2020/21 and FY 2019/20 to draw down on those reserves and address the Sewer Enterprise's most critical infrastructure needs. Once those reserves are spent down to target levels, the Sewer Enterprise will transition to a more sustainable level of capital spending.

Both rate revenue adjustment schedules have been detailed in Table 2-2.

Table 2-2: Recommended Water and Sewer Rate Revenue Increases

Rate Adjustment Date	Water Rate Revenue Adjustment	Sewer Rate Revenue Adjustment
January 1, 2019	7.0%	3.0%
July 1, 2020	7.0%	5.0%
July 1, 2021	6.5%	9.0%
July 1, 2022	2.0%	9.0%
July 1, 2023	2.0%	9.0%

The revenues, expenses, recommended rate revenue increases, and resulting fund balances with relation to the recommended minimum and target fund balances and resulting DCR are summarized in Schedule 5 (Appendix A) for the Water Enterprise and Schedule 10 (Appendix B) for the Sewer Enterprise. These schedules show that the minimum reserve target is maintained over the duration of the planning period and each enterprise meets the target reserve by the end of the planning period.

3. COST-OF-SERVICE ANALYSIS

The Cost-of-Service Allocation (COSA) analysis is intended to evaluate the cost of providing water, sewer and recycled water service, and to allocate those costs to respective customer classes and rate structure components to ensure the proposed rate structure is aligned with costs to provide such service. This is done in order to be equitable among the City's ratepayers and to comply with Proposition 218, which requires water rates to be proportionate to the cost of providing water service. This Study employed well-established industry practices as recognized by the AWWA, WEF, and other accepted industry standards. The following section presents a detailed description of the COSA methodology and corresponding results.

The water and recycled water rate study employed a method that is consistent with the "commodity-demand" COSA methodology promulgated in AWWA's Manual M1: Principles of Water Rates, Fees, and Charges (M1). With this approach, costs are functionalized to system activities, allocated to two functional categories: Source of Supply Costs and Utility Costs, and then distributed to different customer classes based on their usage behavior. Unit costs are then used to distribute system costs to the various components of the rate structure (see Section 4). Similarly, the sewer rate study followed principles promulgated in WEF's Financing and Charges for Wastewater Systems, Manual of Practice No. 27 and allocated to two functional categories: Account Costs and Utility Costs.

3.1 PROCESS

Both the water and sewer COSAs were conducted based upon the City's FY 2019/20 annualized expenditure and revenue requirements per the RSA. The water COSA included the steps illustrated in Figure 3-1. Likewise, the sewer COSA included the steps illustrated in Figure 3-2.

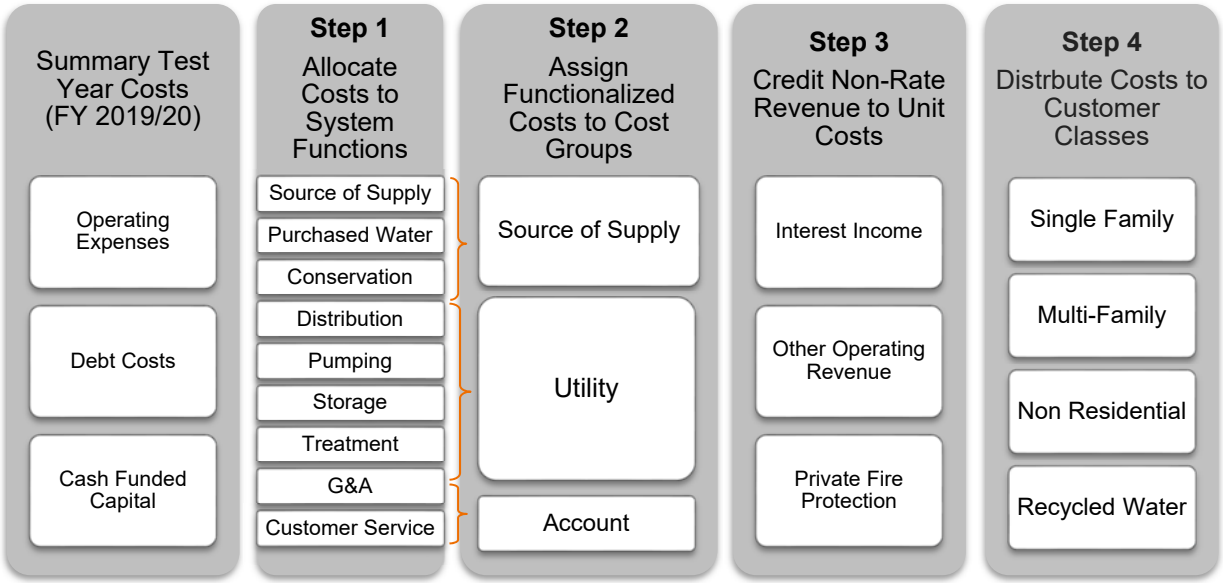

Figure 3-1: Summary of the Water Cost-of-Service Analysis Methodology

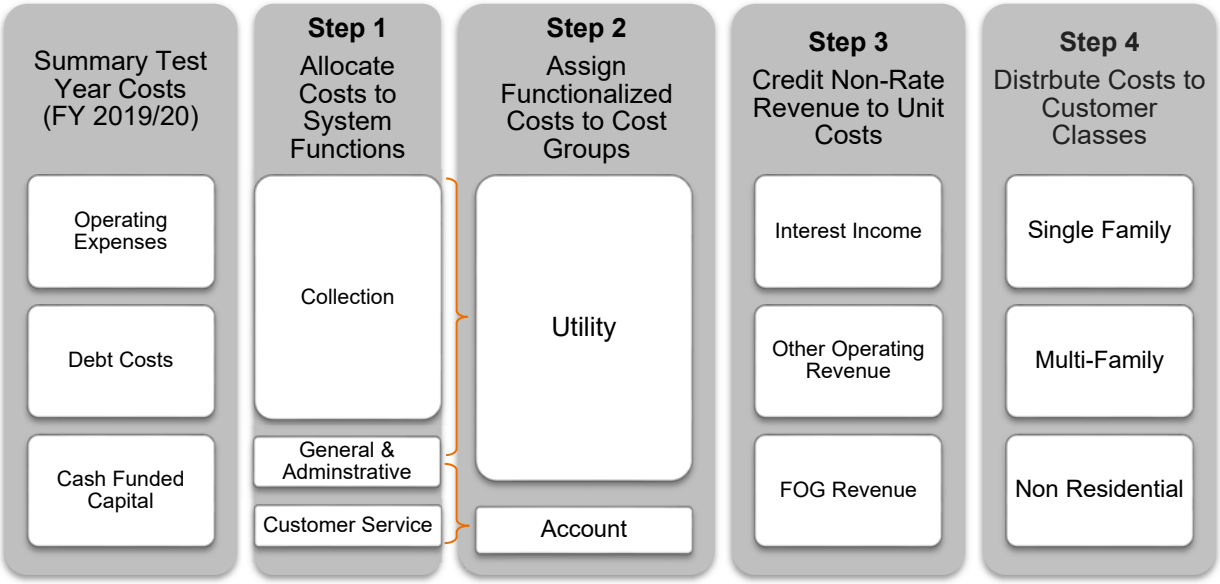

Figure 3-2: Summary of the Sewer Cost-of-Service Analysis Methodology

The following sub-sections give a detailed description of the COSA methodology and summary results, while Appendix C and D (for water and sewer, respectively) include detailed schedules of cost allocations that support those results.

3.1.1 Step 1: Allocate Costs to System Functions

The operating expenses, debt service, and cash-funded capital requirements were distributed to specific functional components within each respective enterprise. While many costs can be allocated directly to a functional component (e.g. Water Purchase costs are allocated to the Water Purchase function), some costs are divided among multiple functional components. For example, costs that are best allocated based on the proportionate value of the system's assets, such as capital costs and debt service, were allocated based on the book value of existing assets ("Fixed Assets").

A summary of cost functionalization (for water and sewer, respectively) are presented in Table 3-1 and Table 3-3. Subsequently, each line item in the budget is assigned one of the cost categories shown in Table 3-1 (for water) and Table 3-3 (for sewer). These assignments are detailed in Appendix C (Schedule 11) for water and Appendix D (Schedule 12) for sewer. The summary results from those assignments (by budget category) are provided in Table 3-2 and Table 3-4.

Table 3-1: Allocation of Water System Costs to Functional Components

	Functional Components									
Cost Categories	Water Purchase	Production and Supply	Pumping Electricity	Treatment - Chemicals	Treatment	Transmission & Distribution	Meters & Services	Storage	General & Administrative	Recycled Water
Water Purchase	100%	-	-	-	-	-	-	-	-	-
Production and Supply	-	100%	-	-	-	-	-	-	-	-
Pumping Electricity	-	-	100%	-	-	-	-	-	-	-
Treatment - Chemicals	-	-	-	100%	-	-	-	-	-	-
Treatment	-	-			100%	-	-	-	-	-
Transmission & Distribution	-	-	-	-	-	100%	-	-	-	-
Meters & Services	-	-	-	-	-	-	100%	-	-	-
Storage	-	-	-	-	-	-	-	100%	-	-
General & Administrative	-	-	-	-	-	-	-	-	100%	-
Recycled Water	-	-	-	-	-	-	-	-	-	100%
Fixed Assets	5.0%	0.3%	0.0%	0.1%	0.2%	67.3%	3.8%	18.4%	4.7%	0.2%

Table 3-2: Summary of Water Cost Functionalization by Budget Category

	Functional Components									
Budget Category	Water Purchase	Production and Supply	Pumping Electricity	Treatment - Chemicals	Treatment	Transmission & Distribution	Meters & Services	Storage	General & Administrative	Recycled Water
O&M Expenses	$24,435,641	$4,394,347	$1,687,746	$0	$2,757,481	$5,183,909	$0	$0	$19,815,841	$272,071
Debt Service Payments	$67,377	$4,432	$0	$708	$2,188	$911,115	$51,987	$248,431	$64,207	$3,255
Cash Funded Capital	$666,350	$43,836	$0	$6,999	$21,637	$9,010,866	$514,145	$2,456,968	$635,007	$32,193
Interfund Transfers	$0	$0	$0	$0	$0	$0	$0	$0	$1,379,195	$0
Change in Fund Balance	($598,287)	($39,359)	$0	($6,284)	($19,427)	($8,090,478)	($461,630)	($2,206,008)	($570,146)	($28,904)
TOTAL	**$24,571,080**	**$4,403,257**	**$1,687,746**	**$1,423**	**$2,761,878**	**$7,015,412**	**$104,503**	**$499,391**	**$21,324,105**	**$278,614**

Table 3-3: Allocation of Sewer System to Functional Components

System Function	Functional Component	
	Utility	Account
Collection	100.0%	
Customer		100.0%
Indirect	90.6%	9.4%
Staff FTE Allocation	90.0%	10.0%
Capital	100.0%	

Table 3-4: Summary of Sewer Cost Functionalization by Budget Category

Budget Category	Functional Components	
	Utility	Account
O&M Expenses	$4,849,392	$504,244
Capital	$3,090,000	$0
Interfund Transfers	$281,805	$0
Change in Fund Balance	-$786,244	$0
TOTAL:	**$7,434,954**	**$504,244**

3.1.2 Step 2: Assign Functionalized Costs to Cost Groups

Next the costs associated with each functional component were designated to specific Cost Groups in order to create the foundation for developing rates that are directly aligned with the cost to provide service (as required by Proposition 218).

Step 2 - Water

For the Water Enterprise, the functionalized expenses are allocated to two cost components: Commodity Costs (which is further designated as either Potable Water or Recycled Water) and Utility Costs (see Table 3-5 for the percent allocations and Table 3-6 for the dollar results). The Potable Water Commodity Costs include all variable operation expenses such as purchased water expenses, water pumping electricity, treatment expenses and some general and administrative (G&A) expenses (see below). The Recycled Water Commodity Cost is strictly the purchase costs of Green Acre recycled water from OCWD.

The Utility Costs are all remaining Water Enterprise expenses, which are predominately fixed costs such as salaries, benefits and capital expenses. G&A costs are allocated between the Potable Water Commodity Costs and Utility Costs using the indirect method based on operating expenses.

Table 3-5: Water Functionalization to Cost Group Allocation Factors

	Cost Groups		
	Commodity Costs		Utility Costs
Functional Components	Potable Water	Recycled Water	
Water Purchase	100.0%		
Production and Supply			100.0%
Pumping Electricity	100.0%		
Treatment - Chemicals	100.0%		
Treatment			100.0%
Transmission & Distribution			100.0%
Meters & Services			100.0%
Storage			100.0%
General & Administrative	67.9%		32.1%
Recycled Water		100.0%	

Table 3-6: Water Cost Group Allocation

	Commodity Costs		Utility Costs	
	Potable Water	Recycled Water		Total
Water Purchase	$24,571,080	$0	$0	$24,571,080
Production and Supply	$0	$0	$4,403,257	$4,403,257
Pumping Electricity	$1,687,746	$0	$0	$1,687,746
Treatment - Chemicals	$1,423	$0	$0	$1,423
Treatment	$0	$0	$2,761,878	$2,761,878
Transmission & Distribution	$0	$0	$7,015,412	$7,015,412
Meters & Services	$0	$0	$104,503	$104,503
Storage	$0	$0	$499,391	$499,391
General & Administrative	$14,484,413	$0	$6,839,691	$21,324,105
Recycled Water	$0	$278,614	$0	$278,614
TOTAL	**$40,744,662**	**$278,614**	**$21,624,132**	**$62,647,408**

Step 2 - Sewer

For the Sewer Enterprise, the functionalized expenses already coincide with the two Cost Groups: Account Costs and Utility Costs (see Table 3-7 and Table 3-8). As such, no further allocations are necessary.

Table 3-7: Sewer System Cost Allocation Factors

Functional Components	Cost Groups	
	Utility Costs	Account Costs
Utility Costs	100.0%	
Account Costs		100%

Table 3-8: Sewer Cost Group Allocation

Functional Components	Cost Groups	
	Utility Costs	Account Costs
Utility	$7,434,954	$0
Account	$0	$504,244
TOTAL:	**$7,434,954**	**$504,244**

3.1.3 Step 3: Credit Non-Rate Revenue to Cost Groups

The next step of the COSA is to calculate the rate revenue requirement for each Cost Group by crediting other sources of revenue. Non-rate revenue is used to offset costs that would otherwise need to be recovered through rates. Non-rate revenue includes interest income, other operating revenue (such as miscellaneous fees); fats, oils, and grease (FOG) program revenue for the Sewer Enterprise; and private fire protection revenue for the Water Enterprise (see Schedule 2 for Water and Schedule 7 for Sewer). For the Water Enterprise non-rate revenue is allocated equitability among the Cost Groups in proportion to their relative value, while non-rate revenue is credited to the Utility Costs for the Sewer Enterprise. These credits are shown below in Table 3-9 and Table 3-10, which show the total rate revenue requirement for water and sewer respectively.

Table 3-9: Water Rate Revenue Requirement Calculation

	Commodity Costs			
	Potable Water	Recycled Water	Utility	Total
Total Costs	$40,744,662	$278,614	$21,624,132	**$62,647,408**
Non-Rate Revenue	($1,415,204)	($9,677)	($751,081)	**($2,175,962)**
Revenue Requirement	**$39,329,459**	**$268,937**	**$20,873,051**	**$60,471,446**

Table 3-10: Total Sewer Rate Revenue Requirement Calculation Summary

	Utility Costs	Account Costs	Total
Total Costs	$7,434,954	$504,244	**$7,939,197**
Non-Rate Revenue	($1,443,194)		**($1,443,194)**
Revenue Requirement	**$5,991,759**	**$504,244**	**$6,496,003**

3.1.4 Step 4: Distribute Costs to Customer Classes

Finally, rate revenue requirements are then distributed to customer classes based on the customer class units of service characteristics with regard to each Cost Group. The units of service are measured in terms of number of accounts, water usage (for water only), and equivalent meters (which are explained below).

A meter equivalency schedule is an industry-standard factor used to represent the relative capacity associated with different types and sizes of meters. A meter equivalency schedule allows for indexing of each meter size in terms of multiples of the lowest common denominator (in this case a 5/8" x 3/4" meter). The existing meter equivalency schedule, that is inferred from the Water Enterprise's current Basic Water Service Charge, is not recognized by the Stantec team as a published or calculated equivalency schedule. This Study recommends that it be replaced with a standard meter equivalency table from AWWA's M22 manual as shown in Table 3-11.

Table 3-11: Proposed Meter Equivalency Schedule

Meter Size	Meter Type	GPM	Meter Equivalence (a)
5/8" x 3/4"	Multijet	20	1.00
3/4"	Turbine Class 1	30	1.50
1"	Turbine Class 1	50	2.50
1 1/2"	Turbine Class 1	100	5.00
2"	Turbine Class 1	160	8.00
3"	Turbine Class 1	350	17.50
4"	Turbine Class 1	630	31.50
6"	Turbine Class 1	1,300	65.00
8"	Turbine Class 2	2,400	120.00
10"	Turbine Class 2	3,800	190.00

(a) Source: Table 6-1 AWWA meter Standards, *AWWA M22 Manual*, 2nd Ed.

Therefore, a single 5/8" x 3/4" meter is equal to one equivalent meter (EM), while an 8" meters is equal to 120 EMs.

Step 4 - Water

For the Water Enterprise, the Potable Water Commodity Costs are distributed across customer classes based on each customer classes' total use of water use of potable water, Recycled Water Commodity Costs are allocated 100% to the recycled water customers, and Utility Costs are allocated to each respective customer class based on their respective number of equivalent meters (see Table 3-12 and Table 3-13). For example, in Step 3 we calculated the revenue requirement for Potable Water Commodity Costs to be $39,339,769 (see Table 3-9). Single Family customers account for 37.34% of the total annual potable water use (see Table 3-12) and therefore are charged for that percentage of the potable water revenue requirement, totaling $14,692,083 (see Table 3-13).

Table 3-12: Water Customer Class Units of Service

Customer Classes*	Annual Use HCFs	Percent of Use	No. of Accounts	Percent of Accounts	No. of Units	Equivalent Meters (EM)	Percent of EMs
Single Family Residential	5,406,506	37.3%	35,991	79.3%	35,991	41,979	49.5%
Multi-Family Residential	4,257,723	29.4%	3,713	8.2%	44,254	12,542	14.8%
Non-Residential	4,812,323	33.2%	5,672	12.5%	5,672	29,810	35.1%
Recycled Water	124,997	NA**	25	0.1%	25	489	0.6%

*Values are based off of FY 2018 water use data

** Recycled water use is not considered in the allocation of retail water use among retail customers.

Table 3-13: Water revenue requirement allocation to each customer class

Customer Class	Commodity Costs		Utility	Total
	Potable Water	Recycled Water		
Single Family Residential	$14,688,232		$10,330,420	**$25,018,652**
Multi-Family Residential	$11,567,253		$3,086,399	**$14,653,652**
Non-Residential	$13,073,974		$7,335,955	**$20,409,929**
Recycled Water		$268,937	$120,276	**$389,213**
TOTAL:	**$39,329,459**	**$268,937**	**$20,873,051**	**$60,471,446**

Step 4 - Sewer

For the Sewer Enterprise, the Account Costs are distributed across customer classes by the proportional number of accounts served by the Sewer Enterprise and Utility Costs are allocated by the percent of the overall adjusted (as explained below) EMs in each customer class (Table 3-14 and Table 3-15).

While an EM is a good proxy for the capacity demand of an account on a water utility, the size of the meter is only an indirect measure for sewer use since not all water use returns to the sewer in the same proportion for different types of sewer customers. To account for this difference in sewer usage, a "return-to-sewer" factor is applied to the EM calculation for each customer class (provided by City staff based on their understanding of their customer's water usage). This adjusted EM calculation allows for costs to be allocated to each customer class, respective to their relative demand they may put on the sewer collection system.

Table 3-14: Sewer Customer Class units of service

Customer Class	Accounts	Percent of Accounts	Water EMs	Return-to-Sewer Factor	Adjusted EMs	Percent of Adjusted Sewer EMs
Single Family	35,915	80.8%	41,886	50.0%	20,943	39.1%
Multi-Family	3,712	8.3%	12,537	80.0%	10,030	18.7%
Non-Residential	4,848	10.9%	25,159	90.0%	22,643	42.2%
	44,475		**54,423**		**53,616**	

Table 3-15: Sewer revenue requirement allocation to each customer class

Customer Class	Utility Costs	Account Costs	Total
Single Family	$2,340,428	$407,194	**$2,747,622**
Multi-Family	$1,120,879	$42,090	**$1,162,969**
Non-Residential	$2,530,452	$54,960	**$2,585,412**
Total:	**$5,991,759**	**$504,244**	**$6,496,003**

The manner in which the Cost Groups are used in the rate design will be described in Section 4.

4. RATE STRUCTURE

Upon completion of the COSA, rate structure analyses were performed to evaluate rate structure modifications and calculate specific water, recycled water, and sewer rate schedules for implementation in FY 2019/20.

The rate structures proposed by this Report are designed to:

- Fairly and equitably recover costs through rates;
- Conform to accepted industry practice and legal requirements; and
- Provide fiscal stability and recovery of system fixed costs.

Revenue requirements allocated to the Cost Groups discussed in Section 3.1.4 were allocated to the customer classes and rate components based on the units of service.

The following sub-sections describe the basis for the recommended rate structure and a specific 5-year rate schedule for implementation on January 1, 2020 (for FY 2019/20) and adjusted every July 1st thereafter. The recommended rate schedules are designed to ensure each customer pays its proportionate share of the cost to provide service.

4.1 CURRENT RATES

The current water, recycled water, and sewer rates follow a common industry practice with a two-part structure that are comprised of a fixed service charge and a consumption-based rate.

Water Rates

The fixed portion of the current water rates (currently referred to by the City as the “Basic Water Service Charge”) is based on the meter size for all customer classes, except for Multi-Family customers which are charged on a per dwelling unit basis (see Table 4-1). The fixed charges currently recover approximately 16% of rate revenues.

Table 4-1: Current Fixed Charges

Meter Size	Monthly Rate
5/8" x 3/4"	$6.95
3/4"	$15.10
1"	$28.65
1 1/2"	$44.93
2"	$82.90
3"	$137.15
4"	$272.78
6"	$435.53
Multi-Family Residential Charge Per Unit: $4.75	

The current consumption-based rate (currently referred to by the City as the "Metered Water Rate") is a tiered rate assessed based on actual water usage. All retail customers pay the same tiered rate while recycled water customers are charged a lower uniform rate (Table 4-2). All water customers received an allocation of 22 CCF of Tier 1 water per month, with exception of Multi-Family accounts which received an allocation of 22 CCF for each dwelling unit.

Table 4-2: Current Consumption-Based Rate

Tier	Retail Rate (Per CCF)	Monthly Tier Usage Allocation	Recycled Water Rate (Per CCF)
1	$3.02	22 CCF	$2.42
2	$3.59	(not applicable)	(not applicable)

The consumption-based rates posted here have been shaped over time by "pass-through adjustments" based on increases (or theoretical decreases) in the cost of water supply obtained from OCWD and MWD.

Sewer Rates

The sewer rates have a two-part fixed charge (currently referred to as the "Sewer Service Charge") which is the same for all customers; a Capital Recovery Charge and a Lateral Repair Program Charge. An additional (fixed) FOG Program Charge is applied to restaurants and other food service accounts. The current fixed charges currently recover approximately 13% of sewer rate revenues.

Table 4-3: Current Fixed Sewer Charges

Charge	Bi-Monthly Rate
Capital Recovery Charge	$1.40
Lateral Repair Program	$1.96
FOG Program	$48.76

A sewer "Commodity Charge" of $0.426 per CCF is assessed based on actual water usage. A single uniform rate is used for all retail customers.

4.2 PROPOSED RATE STRUCTURE CHANGES

This Study recommends implementing the following changes to the water rate structure.

1. Refer to the fixed water charge as the Water Utility Charge (replacing “Basic Water Service Charge”);
2. Refer to the consumption-based rate as the Water Usage Charge (replacing “Metered Water Rate”);
3. Establish three distinct retail customer classes:
    a. Single Family Residential
    b. Multi-Family Residential
    c. Non-Residential
4. Identify specific costs that are designated to be recovered through fixed Water Utility Charge revenue vs. variable Water Usage charge revenue (see Section 4.3);
5. Scale the Water Utility Charges based on an updated meter equivalency schedule (see Section 3.1.4);
6. Reflect the cost of the Water Enterprise’s water supply costs through the tiered Water Usage Charges (see Section 4.5); and
7. Update the formula used to calculate the annual pass-through cost adjustments (see Section 4.7).

This Study recommends implementing the following changes to the City’s sewer rate structure.

1. Establish three distinct retail customer classes:
    a. Single Family Residential
    b. Multi-Family Residential
    c. Non-Residential
2. Shift all cost recovery to a fixed Sewer Utility Charge (thereby eliminating the sewer Commodity Charge);
3. Scale the Sewer Utility Charges based on an updated meter equivalency schedule;

4.3 RATE STRUCTURE COST CATEGORIES

Water Rates

As will be explained in detail in the following sections, the proposed water rate structure is divided into components based on two cost categories: the utility’s Commodity Costs and Utility Costs. The Commodity Costs will be recovered through the Water Usage Charge (based on water usage) and the

Utility Costs will be recovered through the Water Utility Charge. The details of this rate structure are presented in Figure 4-1.

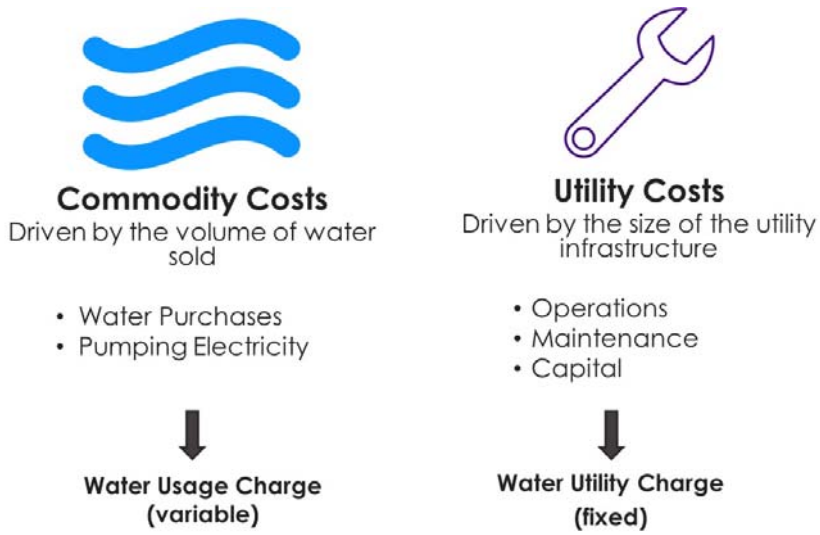

Figure 4-1: Water Rate Structure Cost Categories

Sewer Rates

The proposed sewer rate structure is a single fixed Sewer Utility Charge, which is comprised of an Account Cost component and a Utility Cost component. This recommendation is being made to reflect the fact that nearly 100% of the Sewer Enterprise expenses are fixed. The details of this rate structure are presented in Figure 4-2.

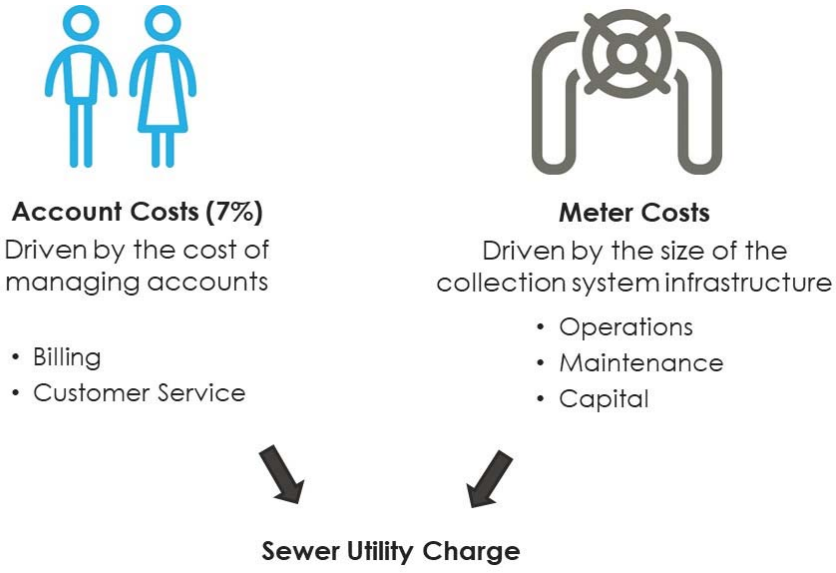

Figure 4-2: Sewer Rate Structure Cost Categories

4.4 CALCULATION OF FIXED UTILITY CHARGES

Water Rates

As summarized in Section 3.1.2, the COSA allocated costs to the Cost Groups of Potable Water Commodity Costs, Recycled Water Commodity Costs, and Utility Costs. Of those groups, the Utility Costs are fixed; therefore, those costs are proposed to be collected through the fixed Water Utility Charge. The total Utility Costs from all customer classes make up for 34% of the revenue requirement, yielding a significant increase from the current percentage of fixed revenue (approximately 16%). The remaining 66% of costs are variable and are proposed to be collected through the Water Usage Charge.

4.4.1 Water Utility Costs

As discussed in Section 3, the Utility Costs are made up of expenses such as capital spending, salaries, maintenance, and other fixed operating costs. These costs are driven by the size (i.e. capacity) of the utility. As such, these costs are allocated to customers based on the demands that they place on the system, which is measured based on the size of the customer's meter.

As summarized in Section 3.1.4, the revenue requirement designated as Utility Costs, after non-rate revenue was discounted, totaled $10,330,420 for Single Family Residential. Given the meter equivalency schedule described in Section 3.1.1, there are 41,979 equivalent meters in the system which yields a charge of $20.51[1] per equivalent meter per month for each customer class. Since the Utility costs were allocated to customer classes on an Equivalent Meter basis, the Utility Cost is the same for all customer classes. Table 4-4 provides the scaled Utility Cost by meter size which makes up the fixed Water Utility Charge. The proposed schedules of Water Utility Charges for the planning horizon are presented in Schedule 13 through Schedule 17 of Appendix E.

Table 4-4: Monthly Water Utility Charge (FY 2019/20)

Meter Size	Meter Equivalence Factor	Water Utility Charge
5/8" x 3/4"	1.00	$20.51
3/4"	1.50	$30.76
1"	2.50	$51.27
1 1/2"	5.00	$102.53
2"	8.00	$164.04
3"	17.50	$358.84
4"	31.50	$645.91
6"	65.00	$1,332.83
8"	120.00	$2,460.60

[1] Minor variations may exist due to rounding

Sewer Rates

As summarized in Section 3.1.3, the COSA allocated costs to the Cost Groups of "Account" and "Utility," both of which are fixed costs and will be collected through a fixed Utility Charge. The sum of these two groups accounts for 100% of the revenue requirement, yielding a significant increase from the current percentage of fixed revenue (approximately 17%).

4.4.2 Sewer Account Costs

Account Costs include costs such as billing, customer service, and account management. These costs are proportionate to the number of accounts in the system regardless of the size of the account. As such, the $407,194 allocated to Single Family accounts are divided by the utility's 35,915 accounts (and divided by 12 months) to give a per account charge of $0.94 per month. Similar to the Water Utility costs, Sewer Account Costs were allocated to customer classes on an Account basis, as such the Account Cost is the same for all customer classes.

4.4.3 Sewer Utility Costs

As discussed in Section 3, the Utility Costs are made up of expenses such as capital spending, salaries, maintenance, and other fixed operating costs. These costs are driven by the size (i.e. capacity) of the utility. As such, this Study recommends that these costs be allocated to customers based on the demands that they place on the system, which is measured based on the size of the customer's meter.

As summarized in Section, the revenue requirement designated as Utility Costs, after non-rate revenue was discounted, totaled $2,340,428 for Single Family Residential Customers. Given the meter equivalency schedule described in Section 3.1.1, there are 41,886 equivalent meters in the system for Single Family Residential Customers. Dividing the revenue requirement by the equivalent meters and again by 12 yields a monthly base charge of $4.66 per equivalent meter for Single Family customers. The difference in the fixed charges for each customer class is due to the return-to-sewer factors assigned to each customer class (see Table 3-14).

Table 4-5 provides the scaled Utility Cost by meter size which, combined with the account charge makes up the fixed Sewer Utility Charge. The full schedules of Sewer Utility Charges for the planning horizon are presented in Schedule 18 through Schedule 22.

Table 4-5: Monthly Sewer Utility Charge (FY 2019/20)

Meter Size	Single Family	Multi-Family Residential	Non-Residential
5/8" x 3/4"	$5.60	$8.40	$9.33
3/4"	$7.93	$12.12	$13.52
1"	$12.59	$19.57	$21.90
1 1/2"	$24.23	$38.20	$42.85
2"	$38.20	$60.55	$68.00
3"	$82.43	$131.32	$147.62
4"	$147.62	$235.63	$264.96
6"	$303.61	$485.21	$545.74
8"	$559.71	$894.97	$1,006.73
10”	$885.66	$1,416.49	$1,593.43

4.5 CALCULATION OF VARIABLE WATER USAGE CHARGE

The following section explains how the proposed Water Usage Charges were developed based on the cost of water supply.

4.5.1 Purchased Water Costs

The $39,329,459 in Potable Water revenue requirements (see Section 3.1.3) is largely made up of water purchase costs, and to a lesser extent water production electricity and treatment. The City has two potable water sources:

1. **Groundwater Supply:** The City pays OCWD for the right to pump groundwater, which makes up approximately 75% of the City’s water supply. Between the payments to OCWD and pumping energy costs, this groundwater composes approximately 56% of the City’s water supply costs.
2. **Imported Water:** Water purchased from MWD makes up the remaining 25% of the City’s water supply and accounts for 44% of the City’s water supply costs.

A final element of the City’s water portfolio is the revenue requirement for Recycled Water ($268,937 per Section 3.1.3) which the City purchases from OCWD and provides to its 25 recycled water customers.

4.5.2 Water Usage Charges

The potable water rates that are proposed in Year 1 (FY 2019/20) for single family residential, multi-family residential, and non-residential accounts are designed to be recovered through two tiers by assigning the proportionate share of supply volume and supply costs to each tiered allocation and rate, respectively. The Tier 1 rate is designed to recover the cost of OCWD rates for groundwater extraction, the electrical costs of water production, the electrical costs of distributing that volume of water, a portion of the CIP, and a portion of the G&A costs. The Tier 2 rate is designed to recover the costs of purchasing imported water from MWD, the electrical costs for distributing that volume of water, a portion of the CIP, and a portion of the G&A costs. The allocation of water in each tier is based on the amount of water supply that is available from each respective source. As previously stated in Section 1.1, 75% of the Water Enterprise's water supply comes from groundwater.

Tier Width Allocations

For single family residential accounts, 75% of the water usage by that customer class occurs below the water consumption level of 10.7 CCF per EM per month. As such the recommended Tier 1 threshold for single family residential customers is set at 10.7 CCF per EM per month. However, due to limitations in the City's billing software, the City currently bills in whole CCF on a bi-monthly basis. To account for this, the tier thresholds is rounded to the nearest CCF. Tier 1 will drop down from 10.7 CCF to 10.5 CCF per month. The remaining water consumption (above 10.5 CCF per month) is designated as MWD purchased water costs. The same approach was utilized for non-residential customers yielding 31.1 CCF per month (rounded down to 31 CCF).

Tier width allocation for the multi-family customer class used the same methodology as was used for single family and non-residential customer classes; however, the allocation was based off of the number of dwelling units rather than meter equivalence. 75% of the water usage by that customer class occurs below 8.4 CCF (rounded up to 8.5 CCF) per dwelling unit per month. As such, this level of consumption became the Tier 1 allocation threshold for this customer class, with the remaining consumption above 8.5 CCF per unit per month charged at Tier 2 rates.

Recycled water customers only have one source of supply, as such all of the consumption will be charged in one tier.

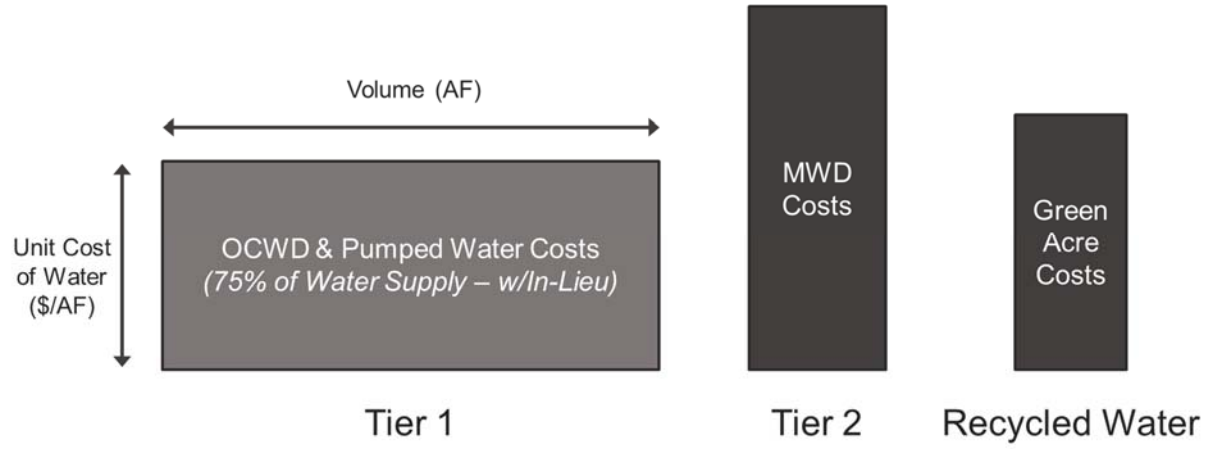

Figure 4-3: Tiered Rate Cost and Flow Allocations

Water Usage Charge Calculation

The cost recovery target for each customer class shown in Table 3-13, was allocated between tiers 1 and 2 for potable water use based on the percentage of the source of supply costs for each tier. OCWD and pumped water costs total 55.9% of the source of supply cost, with MWD costs making up the remaining 44.1%. The unit cost per CCF was calculated by dividing the revenue requirement by the volume of water consumed in each tier for each customer class.

Table 4-6 shows how these steps and the resulting unit rate for each tier for each customer class.

Table 4-6: Tier Unit Rate Calculation (FY 2020/21)

Customer Class and Tier	Revenue Recovery Requirement	Percent Allocation	Water Allocation (CCF)	Percent Allocation	Calculated Unit Rate*
Single Family	**$14,688,232**		**5,406,506**		
Tier 1	$8,210,722	55.9%	4,053,677	75.0%	$2.03
Tier 2	$6,477,510	44.1%	1,352,829	25.0%	$4.79
Multi-Family	**$11,567,253**		**4,257,723**		
Tier 1	$6,466,094	55.9%	3,190,058	75.0%	$2.03
Tier 2	$5,101,159	44.1%	1,067,665	25.0%	$4.79
Non-Residential	**$13,073,974**		**4,812,323**		
Tier 1	$7,308,351	55.9%	3,608,602	75.0%	$2.03
Tier 2	$5,765,622	44.1%	1,203,721	25.0%	$4.79
Recycled Water	$268,937	100%	124,997	100%	$2.15

* The calculated unit rate is developed using the non-rounded recommended tier allocations discussed above

The Water Usage Charges for the planning horizon are presented in Appendix E (Schedule 13 through Schedule 17).

4.6 PASS-THROUGH ADJUSTMENT POLICY

In addition to the recommended increases in revenues shown in Section 2.3, this Study proposes to modify the existing Pass-Through Adjustment Policy in order to offset any changes in water supply costs through changes to the Water Usage Charges. The pass-through calculation does not apply to FY 2019/20 because revenue requirements and cost recovery were calculated based on the projected FY 2019/20 water supply costs.

As illustrated in Figure 4-4, tiered rates are adjusted based on the unit price increase corresponding to the water source allocated to each tier. Tier 1 rates are increased (or decreased perhaps) by the change in the unit cost of the groundwater supply cost. This is calculated by adding the OCWD water purchase costs and dividing that cost by the volume of groundwater (in CCF) used by the Water Enterprise.

Tier 2 rates are increased (or decreased) by the change in the unit cost charged by MWD (see OCWD example above).

Tiered Rates

$$Tier\ 1\ Rate\ Adjustment\left(\frac{\$}{CCF}\right) = Change\ in\ OCWD\ Unit\ Costs\left(\frac{\$}{CCF}\right)$$

$$Tier\ 2\ Rate\ Adjustment\left(\frac{\$}{CCF}\right) = Change\ in\ MWD\ Unit\ Costs\left(\frac{\$}{CCF}\right)$$

Recycled Water Rates

$$Tier\ 2\ Rate\ Adjustment\left(\frac{\$}{CCF}\right) = Change\ in\ OCWD\ Green\ Acres\ Unit\ Costs\left(\frac{\$}{CCF}\right)$$

Figure 4-4: Pass-Through Adjustment Formulas

Rate Adjustment Notification and Publication - This report advises the City that, pursuant to Government Code 53756, the City must give notice to ratepayers of any pass-through adjustment to water rates at least 30 days prior to the effective date of the adjustment. This can be done on the ratepayer's invoice (for example in the "notes" section of the invoice). It is also important to note that, due to the Pass-Through Adjustment Policy, the Water Usage Charges that are charged by the City in FY 2020/21 through FY 2023/24 are likely to be different from rates shown in Schedule 13 through Schedule 17 (for those same years). Each year, the actual rate schedule will be a function of the pass-through adjustments effectuated in the prior years. As such, the Study recommends that the City continue with its existing practice of posting rate schedules at the time that they are effective (as adjusted per the Pass-Through Adjustment Policy), while meeting the 30-day notification requirements stated above. This recommendation is preferred to posting Schedules 13 through Schedule 17 as they are shown in this report, due to the dynamic nature of the annual pass-through adjustments (which may create confusion for rate payers).

4.7 FOG CHARGE

The Sewer Enterprise has a Fats, Oils & Grease (FOG) Program in order to manage the sewer accounts whose discharges are the most problematic for sewer collection system clogging (which are predominantly food preparation establishments). The calculation of this charge is simply based on the cost of the program divided evenly amount the FOG accounts. This study has found that the annual consulting costs are $400,000 and Sewer Enterprise staff time (2 FTEs of Water Quality Inspectors) is approximately $273,000. There currently are 1,372 FOG accounts, which results in a charge of $40.92 per month ($673,000 divided by 1,372 divided by 12 months). The FOG Charge will increase at the same percent rate increases as the sewer service rates (see **Appendix F**).

5. SUMMARY OF PROPOSED RATES

This Report used methodologies that are aligned with industry standard practices for rate setting as promulgated by AWWA, WEF, and all applicable laws, including California's Proposition 218. The proposed annual adjustments to the rates will allow the City to continue to provide reliable service to customers while addressing critical infrastructure deficiencies. The modifications to the rate structure will provide revenue stability, improve the defensibility of the water rates, and continue to equitably and proportionately recover costs from the customers. The complete schedules of rates over the planning period are summarized in Appendix E (Schedule 13 through Schedule 17) for the Water Enterprise and Appendix F (Schedule 18 through Schedule 22) for the Sewer Enterprise.

It is important to note that, while in Year 1 rate revenues across all customer classes will increase on average by 7.0% and 3.0% for water and sewer respectively, the proposed rate structure adjustments (discussed further below) will result in single-family residential accounts with average water usage experiencing an increase of $4.46 per month (or just under ten percent) in their water bill and a decrease of $1.51 per month (or twenty one percent) in their sewer bill. Results will vary among different customers due to the proposed rate structure adjustments. To be clear, some customers' bills will increase by more than the average rate revenue adjustment for Year 1, while other customers' bills will increase by less. Starting in Year 2 (FY 2020/21) and thereafter, all customers will experience the same uniform percentage change to their bill.

Disclaimer

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Additionally, the purpose of this document is to summarize Stantec's analysis and findings related to this project, and it is not intended to address all aspects that may surround the subject area. Therefore, this document may have limitations, assumptions, or reliance on data that are not readily apparent on the face of it. Moreover, the reader should understand that Stantec was called on to provide judgments on a variety of critical factors which are incapable of precise measurement. As such, the use of this document and its findings by the City of Santa Ana should only occur after consultation with Stantec, and any use of this document and findings by any other person is done so entirely at their own risk.

Appendix A: Water Financial Plan Schedules

Schedule 1 Beginning Balances

Schedule 2 Capital Improvement Plan

Schedule 3 Projection of Cash Inflows

Schedule 4 Projection of Cash Outflows

Schedule 5 Forecast of Net Revenues and Debt Service Coverage for Water Enterprise Fund

Appendix B: Sewer Financial Plan Schedules

Appendix C: Water Cost of Service Schedules

Schedule 11 Water System Revenue Requirements

Appendix D: Sewer Cost of Service Schedules

Schedule 12 Sewer System Revenue Requirements

Appendix E: Water Rate Design Schedules

Appendix F: Sewer Rate Design Schedules

Water Enterprise FY 2019 Beginning Balances — Schedule 1

FUND BALANCES:	Total Cash Assets	Restricted Reserves
FUND 60 - Water O&M		
Cash and Cash Equivalents	$33,440,786	
Misc.	$16,039	
Account Receivable-Utility Sys Only	$4,414,761	
Water Customer Deposits		$823,935
FUND 66 - Water Capital		
Cash and Cash Equivalents	$6,288,983	
Bond Proceeds	$95,169	
TOTAL ASSETS	**$44,255,737**	**$823,935**
FUND 60 - Water O&M		
Accounts and Contracts Payable	-$345,408	
Accrued Compensated Absences	-$195,615	
FUND 66 - Water Capital		
Accounts and Contracts Payable	-$142,601	
Prior Year Carry Forward	-$2,293,949	
TOTAL LIABILIITIES	**-$2,977,573**	**$0**
REVENUE FUND BALANCE	**$41,278,164**	**$823,935**

Water Enterprise Projection of Cash Inflows

Schedule 2

		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
1	**Rate Revenue Growth Assumptions:**												
2	Growth in Water Accounts	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
3	Growth in Water Usage	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Assumed Rate Revenue Increases:												
4	Assumed Water Rate Increase	N/A	**7.00%**	**7.00%**	**6.50%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**
5	**Rate Revenue**												
6	Retail Fixed Rate Revenue	$ 8,967,000	$ 9,371,922	$ 10,472,672	$ 11,264,929	$ 11,605,130	$ 11,955,605	$ 12,316,664	$ 12,688,627	$ 13,071,824	$ 13,466,593	$ 13,873,284	$ 14,292,257
7	Retail Variable Rate Revenue	$ 46,225,915	$ 48,796,464	$ 54,527,701	$ 58,652,722	$ 60,424,034	$ 62,248,840	$ 64,128,755	$ 66,065,443	$ 68,060,620	$ 70,116,050	$ 72,233,555	$ 74,415,008
8	Recycled Water Base Rate Revenue	$ 73,500	$ 73,500	$ 81,563	$ 86,865	$ 91,772	$ 93,607	$ 98,777	$ 100,752	$ 106,199	$ 108,323	$ 114,059	$ 116,340
9	Recycled Water Variable Rate Revenue	$ 251,400	$ 251,400	$ 278,978	$ 297,112	$ 313,896	$ 320,174	$ 337,857	$ 344,615	$ 363,242	$ 370,507	$ 390,127	$ 397,929
10	**Total Revenue**	**$ 55,517,815**	**$ 58,493,285**	**$ 65,360,914**	**$ 70,301,628**	**$ 72,434,832**	**$ 74,618,226**	**$ 76,882,053**	**$ 79,199,438**	**$ 81,601,884**	**$ 84,061,473**	**$ 86,611,025**	**$ 89,221,535**
	Other Revenue:												
11	Other Operating Income	$ 664,430	$ 664,430	$ 664,430	$ 664,430	$ 664,430	$ 664,430	$ 664,430	$ 664,430	$ 664,430	$ 664,430	$ 664,430	$ 664,430
12	Interest Income	$ 587,770	$ 522,023	$ 395,404	$ 327,411	$ 311,311	$ 348,636	$ 366,652	$ 370,933	$ 392,564	$ 412,858	$ 434,059	$ 461,552
13	Non-Operating Income	$ 975,925	$ 975,925	$ 975,925	$ 975,925	$ 975,925	$ 975,925	$ 975,925	$ 975,925	$ 975,925	$ 975,925	$ 975,925	$ 975,925
14	Pass Through Revenue	$ -	$ -	$ 1,044,335	$ 2,088,670	$ 3,546,156	$ 4,904,156	$ 6,262,157	$ 7,620,158	$ 8,978,158	$ 10,336,159	$ 11,694,160	$ 13,052,161
15	**Total Other Revenue**	**$ 2,228,125**	**$ 2,162,378**	**$ 3,080,094**	**$ 4,056,437**	**$ 5,497,822**	**$ 6,893,147**	**$ 8,269,164**	**$ 9,631,446**	**$ 11,011,077**	**$ 12,389,373**	**$ 13,768,574**	**$ 15,154,068**
16	**TOTAL REVENUE**	**$ 57,745,940**	**$ 60,655,663**	**$ 68,441,008**	**$ 74,358,064**	**$ 77,932,654**	**$ 81,511,373**	**$ 85,151,217**	**$ 88,830,883**	**$ 92,612,962**	**$ 96,450,846**	**$ 100,379,599**	**$ 104,375,603**

Water Enterprise Projection of Cash Outflows

Schedule 3

		FY 2018 Actuals	FY 2019 Actuals	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast	FY 2026 Forecast	FY 2027 Forecast	FY 2028 Forecast	FY 2029 Forecast	FY 2030 Forecast
1	Salaries Regular	$ 649,639	$ 649,639	$ 665,880	$ 682,527	$ 699,590	$ 717,080	$ 735,007	$ 753,382	$ 772,217	$ 791,522	$ 811,310	$ 831,593	$ 852,383
2	Salaries Part-Time	$ 53,032	$ 53,032	$ 54,357	$ 55,716	$ 57,109	$ 58,537	$ 60,000	$ 61,500	$ 63,038	$ 64,614	$ 66,229	$ 67,885	$ 69,582
3	Salaries Overtime	$ 164,471	$ 164,471	$ 168,582	$ 172,797	$ 177,117	$ 181,545	$ 186,083	$ 190,735	$ 195,504	$ 200,391	$ 205,401	$ 210,536	$ 215,800
4	Accrual Compensated Absences	$ (142,644)	$ (142,644)	$ (142,644)	$ (146,210)	$ (149,865)	$ (153,612)	$ (157,452)	$ (161,388)	$ (165,423)	$ (169,559)	$ (173,797)	$ (178,142)	$ (182,596)
5	Retirement-Employer Normal Cost	$ 161,578	$ 183,714	$ 208,883	$ 237,500	$ 270,038	$ 307,033	$ 349,096	$ 356,777	$ 364,626	$ 372,647	$ 380,846	$ 389,224	$ 397,787
6	Medicare Insurance	$ 12,088	$ 12,572	$ 13,075	$ 13,598	$ 14,142	$ 14,707	$ 15,296	$ 15,908	$ 16,544	$ 17,206	$ 17,894	$ 18,610	$ 19,354
7	Health Insurance	$ 102,292	$ 106,384	$ 110,639	$ 115,065	$ 119,668	$ 124,454	$ 129,432	$ 134,610	$ 139,994	$ 145,594	$ 151,418	$ 157,474	$ 163,773
8	Worker Compensation Insurance	$ 61,042	$ 62,384	$ 63,757	$ 65,160	$ 66,593	$ 68,058	$ 69,555	$ 71,086	$ 72,649	$ 74,248	$ 75,881	$ 77,551	$ 79,257
9	Utilities	$ 1,621,274	$ 1,621,274	$ 1,687,746	$ 1,756,944	$ 1,828,979	$ 1,903,967	$ 1,982,029	$ 2,063,293	$ 2,147,888	$ 2,235,951	$ 2,327,625	$ 2,423,058	$ 2,522,403
10	Communications	$ 45,978	$ 46,990	$ 48,023	$ 49,080	$ 50,160	$ 51,263	$ 52,391	$ 53,543	$ 54,721	$ 55,925	$ 57,156	$ 58,413	$ 59,698
11	Training, Transportation, Meeting	$ 41,730	$ 42,648	$ 43,587	$ 44,545	$ 45,525	$ 46,527	$ 47,551	$ 48,597	$ 49,666	$ 50,758	$ 51,875	$ 53,016	$ 54,183
12	Membership, Subscription & Dues	$ 141,910	$ 145,032	$ 148,222	$ 151,483	$ 154,816	$ 158,222	$ 161,703	$ 165,260	$ 168,896	$ 172,612	$ 176,409	$ 180,290	$ 184,256
13	Contract Services-Professional	$1,635,461	$ 1,671,441	$ 1,708,213	$ 1,745,794	$ 1,784,201	$ 1,823,454	$ 1,863,570	$ 1,904,568	$ 1,946,469	$ 1,989,291	$ 2,033,056	$ 2,077,783	$ 2,123,494
14	OCWD Purchases	$11,440,995	$ 12,611,116	$ 13,620,270	$ 14,351,055	$ 15,586,435	$ 16,729,134	$ 17,955,609	$ 19,272,001	$ 20,684,903	$ 22,201,389	$ 23,829,055	$ 25,576,051	$ 27,451,126
15	Maintenance & Repair Buildings & Ground	$ 39,428	$ 40,295	$ 41,182	$ 42,088	$ 43,014	$ 43,960	$ 44,927	$ 45,915	$ 46,925	$ 47,958	$ 49,013	$ 50,091	$ 51,193
16	Maintenance & Repair Improvement	$ 8,710	$ 8,901	$ 9,097	$ 9,297	$ 9,502	$ 9,711	$ 9,924	$ 10,143	$ 10,366	$ 10,594	$ 10,827	$ 11,065	$ 11,309
17	Maintenance & Repair Machinery & Equipmen	$ 20,793	$ 21,250	$ 21,718	$ 22,195	$ 22,684	$ 23,183	$ 23,693	$ 24,214	$ 24,747	$ 25,291	$ 25,848	$ 26,416	$ 26,997
18	Miscellaneous Operating Expenses	$ 421,375	$ 430,645	$ 440,119	$ 449,802	$ 459,697	$ 469,811	$ 480,147	$ 490,710	$ 501,506	$ 512,539	$ 523,814	$ 535,338	$ 547,116
19	MWD - Water Purchase	$ 10,368,212	$ 10,330,867	$ 10,815,371	$ 11,284,742	$ 11,747,059	$ 12,228,315	$ 12,729,288	$ 13,250,784	$ 13,793,646	$ 14,358,747	$ 14,947,000	$ 15,559,353	$ 16,196,792
20	Gas & Diesel	$ 21,199	$ 21,835	$ 22,490	$ 23,165	$ 23,860	$ 24,576	$ 25,313	$ 26,073	$ 26,855	$ 27,660	$ 28,490	$ 29,345	$ 30,225
21	Rental City Equipment	$ 45,576	$ 46,579	$ 47,603	$ 48,651	$ 49,721	$ 50,815	$ 51,933	$ 53,075	$ 54,243	$ 55,436	$ 56,656	$ 57,902	$ 59,176
22	Equipment Replacement Charges	$ 41,944	$ 42,867	$ 43,810	$ 44,774	$ 45,759	$ 46,765	$ 47,794	$ 48,846	$ 49,920	$ 51,019	$ 52,141	$ 53,288	$ 54,460
23	Accident Repair & Replacement	$ 3,720	$ 3,802	$ 3,885	$ 3,971	$ 4,058	$ 4,148	$ 4,239	$ 4,332	$ 4,427	$ 4,525	$ 4,624	$ 4,726	$ 4,830
24	IS Strategic Plan	$ 517,480	$ 528,865	$ 540,500	$ 552,391	$ 564,543	$ 576,963	$ 589,656	$ 602,629	$ 615,887	$ 629,436	$ 643,284	$ 657,436	$ 671,900
25	Insurance Charges	$ 401,550	$ 410,384	$ 419,413	$ 428,640	$ 438,070	$ 447,707	$ 457,557	$ 467,623	$ 477,911	$ 488,425	$ 499,170	$ 510,152	$ 521,375
26	Indirect Costs	$ 72,571	$ 74,168	$ 75,799	$ 77,467	$ 79,171	$ 80,913	$ 82,693	$ 84,512	$ 86,372	$ 88,272	$ 90,214	$ 92,199	$ 94,227
27	Machinery & Equipment	$ 174,460	$ 178,298	$ 182,221	$ 186,229	$ 190,326	$ 194,514	$ 198,793	$ 203,166	$ 207,636	$ 212,204	$ 216,872	$ 221,644	$ 226,520
28	Salaries Regular	$ 997,322	$ 997,322	$ 1,022,255	$ 1,047,811	$ 1,074,006	$ 1,100,857	$ 1,128,378	$ 1,156,587	$ 1,185,502	$ 1,215,140	$ 1,245,518	$ 1,276,656	$ 1,308,572
29	Salaries Part-Time	$ 20,130	$ 20,130	$ 20,633	$ 21,149	$ 21,678	$ 22,220	$ 22,775	$ 23,345	$ 23,928	$ 24,526	$ 25,140	$ 25,768	$ 26,412
30	Salaries Overtime	$ 174,391	$ 174,391	$ 178,751	$ 183,220	$ 187,800	$ 192,495	$ 197,308	$ 202,240	$ 207,296	$ 212,479	$ 217,791	$ 223,236	$ 228,816
31	Accrual Compensated Absences	$ 107,482	$ 107,482	$ 110,169	$ 112,923	$ 115,746	$ 118,640	$ 121,606	$ 124,646	$ 127,762	$ 130,956	$ 134,230	$ 137,586	$ 141,026
32	Retirement-Employer Normal Cost	$ 269,701	$ 306,649	$ 348,660	$ 396,427	$ 450,737	$ 512,488	$ 582,699	$ 595,519	$ 608,620	$ 622,010	$ 635,694	$ 649,679	$ 663,972
33	Medicare Insurance	$ 17,277	$ 17,968	$ 18,686	$ 19,434	$ 20,211	$ 21,020	$ 21,860	$ 22,735	$ 23,644	$ 24,590	$ 25,573	$ 26,596	$ 27,660
34	Health Insurance	$ 244,938	$ 254,735	$ 264,925	$ 275,522	$ 286,543	$ 298,004	$ 309,924	$ 322,321	$ 335,214	$ 348,623	$ 362,568	$ 377,070	$ 392,153
35	Worker Compensation Insurance	$ 115,414	$ 117,953	$ 120,548	$ 123,200	$ 125,911	$ 128,681	$ 131,512	$ 134,405	$ 137,362	$ 140,384	$ 143,472	$ 146,629	$ 149,854
36	Communications	$ 16,134	$ 16,488	$ 16,851	$ 17,222	$ 17,601	$ 17,988	$ 18,384	$ 18,788	$ 19,202	$ 19,624	$ 20,056	$ 20,497	$ 20,948
37	Training, Transportation, Meeting	$ 27,494	$ 28,099	$ 28,717	$ 29,349	$ 29,995	$ 30,654	$ 31,329	$ 32,018	$ 32,722	$ 33,442	$ 34,178	$ 34,930	$ 35,698
38	Membership, Subscription & Dues	$ 10,973	$ 11,214	$ 11,461	$ 11,713	$ 11,970	$ 12,234	$ 12,503	$ 12,778	$ 13,059	$ 13,346	$ 13,640	$ 13,940	$ 14,247
39	Contract Services-Professional	$ 731,044	$ 747,127	$ 763,563	$ 780,362	$ 797,530	$ 815,075	$ 833,007	$ 851,333	$ 870,063	$ 889,204	$ 908,766	$ 928,759	$ 949,192
40	Maintenance & Repair Buildings & Ground	$ -	$ 100,000	$ 102,200	$ 104,448	$ 106,746	$ 109,095	$ 111,495	$ 113,948	$ 116,454	$ 119,016	$ 121,635	$ 124,311	$ 127,046
41	Maintenance & Repair Machinery & Equipmen	$ 1,346	$ 1,376	$ 1,406	$ 1,437	$ 1,469	$ 1,501	$ 1,534	$ 1,568	$ 1,602	$ 1,638	$ 1,674	$ 1,711	$ 1,748
42	Miscellaneous Operating Expenses	$ 598,107	$ 611,265	$ 624,713	$ 638,457	$ 652,503	$ 666,858	$ 681,529	$ 696,522	$ 711,846	$ 727,506	$ 743,511	$ 759,869	$ 776,586
43	Gas & Diesel	$ 57,677	$ 59,407	$ 61,189	$ 63,025	$ 64,915	$ 66,863	$ 68,869	$ 70,935	$ 73,063	$ 75,255	$ 77,512	$ 79,838	$ 82,233
44	Rental City Equipment	$ 273,997	$ 280,025	$ 286,185	$ 292,482	$ 298,916	$ 305,492	$ 312,213	$ 319,082	$ 326,102	$ 333,276	$ 340,608	$ 348,101	$ 355,760
45	Equipment Replacement Charges	$ 119,517	$ 122,146	$ 124,834	$ 127,580	$ 130,387	$ 133,255	$ 136,187	$ 139,183	$ 142,245	$ 145,374	$ 148,573	$ 151,841	$ 155,182
46	Accident Repair & Replacement	$ 4,444	$ 4,542	$ 4,642	$ 4,744	$ 4,848	$ 4,955	$ 5,064	$ 5,175	$ 5,289	$ 5,405	$ 5,524	$ 5,646	$ 5,770
47	City Yard Rental	$ 208,015	$ 212,591	$ 217,268	$ 222,048	$ 226,933	$ 231,926	$ 237,028	$ 242,243	$ 247,572	$ 253,019	$ 258,585	$ 264,274	$ 270,088
48	IS Strategic Plan	$ 129,200	$ 132,042	$ 134,947	$ 137,916	$ 140,950	$ 144,051	$ 147,220	$ 150,459	$ 153,769	$ 157,152	$ 160,610	$ 164,143	$ 167,754
49	Insurance Charges	$ 211,530	$ 216,184	$ 220,940	$ 225,800	$ 230,768	$ 235,845	$ 241,033	$ 246,336	$ 251,756	$ 257,294	$ 262,955	$ 268,740	$ 274,652
50	Indirect Costs	$ 99,750	$ 101,944	$ 104,187	$ 106,479	$ 108,822	$ 111,216	$ 113,663	$ 116,163	$ 118,719	$ 121,331	$ 124,000	$ 126,728	$ 129,516
51	Machinery & Equipment	$ 379,305	$ 387,649	$ 396,178	$ 404,893	$ 413,801	$ 422,905	$ 432,209	$ 441,717	$ 451,435	$ 461,367	$ 471,517	$ 481,890	$ 492,492
52	Other Agency Services	$ 10,078	$ 10,300	$ 10,526	$ 10,758	$ 10,995	$ 11,236	$ 11,484	$ 11,736	$ 11,995	$ 12,258	$ 12,528	$ 12,804	$ 13,085
53	Computer Services Charge	$ 298,425	$ 304,990	$ 311,700	$ 318,558	$ 325,566	$ 332,728	$ 340,048	$ 347,529	$ 355,175	$ 362,989	$ 370,975	$ 379,136	$ 387,477
54	IS Strategic Plan	$ -	$ 298,425	$ 304,990	$ 311,700	$ 318,558	$ 325,566	$ 332,728	$ 340,048	$ 347,529	$ 355,175	$ 362,989	$ 370,975	$ 379,136
55	Treasury Services Charges	$ 1,954,545	$ 1,997,545	$ 2,041,491	$ 2,086,404	$ 2,132,305	$ 2,179,215	$ 2,227,158	$ 2,276,156	$ 2,326,231	$ 2,377,408	$ 2,429,711	$ 2,483,165	$ 2,537,794
56	General Fund Overhead	$ 4,537,918	$ 4,537,918	$ 4,537,918	$ 4,537,918	$ 4,537,918	$ 4,537,918	$ 4,537,918	$ 4,537,918	$ 4,537,918	$ 4,537,918	$ 4,537,918	$ 4,537,918	$ 4,537,918
57	Salaries Regular	$ 628,720	$ 628,720	$ 644,438	$ 660,549	$ 677,063	$ 693,989	$ 711,339	$ 729,122	$ 747,351	$ 766,034	$ 785,185	$ 804,815	$ 824,935
58	Salaries Part-Time	$ 70,440	$ 70,440	$ 72,201	$ 74,006	$ 75,856	$ 77,753	$ 79,696	$ 81,689	$ 83,731	$ 85,824	$ 87,970	$ 90,169	$ 92,423
59	Salaries Overtime	$ 99,094	$ 99,094	$ 101,571	$ 104,110	$ 106,713	$ 109,381	$ 112,115	$ 114,918	$ 117,791	$ 120,736	$ 123,755	$ 126,848	$ 130,020
60	Retirement-Employer Normal Cost	$ 164,686	$ 187,248	$ 212,901	$ 242,069	$ 275,232	$ 312,939	$ 355,811	$ 363,639	$ 371,639	$ 379,815	$ 388,171	$ 396,711	$ 405,439
61	Medicare Insurance	$ 9,782	$ 10,173	$ 10,580	$ 11,003	$ 11,443	$ 11,901	$ 12,377	$ 12,872	$ 13,387	$ 13,923	$ 14,480	$ 15,059	$ 15,661

Water Enterprise Projection of Cash Outflows

Schedule 3

		FY 2018 Actuals	FY 2019 Actuals	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast	FY 2026 Forecast	FY 2027 Forecast	FY 2028 Forecast	FY 2029 Forecast	FY 2030 Forecast
62	Health Insurance	$ 108,949	$ 113,307	$ 117,839	$ 122,552	$ 127,454	$ 132,553	$ 137,855	$ 143,369	$ 149,104	$ 155,068	$ 161,271	$ 167,721	$ 174,430
63	Worker Compensation Insurance	$ 81,997	$ 83,801	$ 85,645	$ 87,529	$ 89,454	$ 91,422	$ 93,434	$ 95,489	$ 97,590	$ 99,737	$ 101,931	$ 104,174	$ 106,465
64	Communications	$ 9,387	$ 9,594	$ 9,805	$ 10,021	$ 10,241	$ 10,466	$ 10,697	$ 10,932	$ 11,173	$ 11,418	$ 11,670	$ 11,926	$ 12,189
65	Training, Transportation, Meeting	$ 15,795	$ 16,142	$ 16,497	$ 16,860	$ 17,231	$ 17,610	$ 17,998	$ 18,394	$ 18,798	$ 19,212	$ 19,634	$ 20,066	$ 20,508
66	Membership, Subscription & Dues	$ 17,406	$ 17,789	$ 18,181	$ 18,581	$ 18,989	$ 19,407	$ 19,834	$ 20,270	$ 20,716	$ 21,172	$ 21,638	$ 22,114	$ 22,600
67	Contract Services-Professional	$ 504,304	$ 504,304	$ 516,912	$ 529,834	$ 543,080	$ 556,657	$ 570,574	$ 584,838	$ 599,459	$ 614,445	$ 629,807	$ 645,552	$ 661,691
68	OCWD - Green Acres	$ 262,354	$ 272,071	$ 272,071	$ 281,788	$ 281,788	$ 291,505	$ 291,505	$ 291,505	$ 291,505	$ 291,505	$ 291,505	$ 291,505	$ 291,505
69	Miscellaneous Operating Expenses	$ 456,611	$ 466,656	$ 476,923	$ 487,415	$ 498,138	$ 509,097	$ 520,297	$ 531,744	$ 543,442	$ 555,398	$ 567,617	$ 580,104	$ 592,866
70	Gas & Diesel	$ 15,826	$ 16,300	$ 16,789	$ 17,293	$ 17,812	$ 18,346	$ 18,897	$ 19,464	$ 20,047	$ 20,649	$ 21,268	$ 21,906	$ 22,564
71	Rental City Equipment	$ 34,408	$ 35,165	$ 35,939	$ 36,729	$ 37,537	$ 38,363	$ 39,207	$ 40,070	$ 40,951	$ 41,852	$ 42,773	$ 43,714	$ 44,676
72	Equipment Replacement Charges	$ 30,096	$ 30,758	$ 31,435	$ 32,126	$ 32,833	$ 33,555	$ 34,294	$ 35,048	$ 35,819	$ 36,607	$ 37,413	$ 38,236	$ 39,077
73	Accident Repair & Replacement	$ 3,024	$ 3,091	$ 3,159	$ 3,228	$ 3,299	$ 3,372	$ 3,446	$ 3,522	$ 3,599	$ 3,678	$ 3,759	$ 3,842	$ 3,926
74	IS Strategic Plan	$ 45,675	$ 46,680	$ 47,707	$ 48,756	$ 49,829	$ 50,925	$ 52,046	$ 53,191	$ 54,361	$ 55,557	$ 56,779	$ 58,028	$ 59,305
75	Insurance Charges	$ 52,910	$ 54,074	$ 55,264	$ 56,479	$ 57,722	$ 58,992	$ 60,290	$ 61,616	$ 62,972	$ 64,357	$ 65,773	$ 67,220	$ 68,699
76	Indirect Costs	$ 66,814	$ 68,284	$ 69,786	$ 71,321	$ 72,890	$ 74,494	$ 76,133	$ 77,808	$ 79,520	$ 81,269	$ 83,057	$ 84,884	$ 86,752
77	Machinery & Equipment	$ -	$ 307,413	$ 314,176	$ 321,088	$ 328,152	$ 335,372	$ 342,750	$ 350,290	$ 357,997	$ 365,873	$ 373,922	$ 382,148	$ 390,555
78	Salaries Regular	$ 676,770	$ 676,770	$ 693,689	$ 711,032	$ 728,807	$ 747,028	$ 765,703	$ 784,846	$ 804,467	$ 824,579	$ 845,193	$ 866,323	$ 887,981
79	Salaries Part-Time	$ 50,231	$ 50,231	$ 51,487	$ 52,774	$ 54,094	$ 55,446	$ 56,832	$ 58,253	$ 59,709	$ 61,202	$ 62,732	$ 64,301	$ 65,908
80	Salaries Overtime	$ 12,761	$ 12,761	$ 13,080	$ 13,407	$ 13,742	$ 14,086	$ 14,438	$ 14,799	$ 15,169	$ 15,548	$ 15,937	$ 16,335	$ 16,743
81	Accrual Compensated Absences	$ 180,369	$ 180,369	$ 184,879	$ 189,501	$ 194,238	$ 199,094	$ 204,071	$ 209,173	$ 214,402	$ 219,763	$ 225,257	$ 230,888	$ 236,660
82	Retirement-Employer Normal Cost	$ 193,484	$ 219,991	$ 250,130	$ 284,398	$ 323,360	$ 367,661	$ 418,030	$ 427,227	$ 436,626	$ 446,231	$ 456,048	$ 466,082	$ 476,335
83	Medicare Insurance	$ 10,535	$ 10,956	$ 11,395	$ 11,851	$ 12,325	$ 12,818	$ 13,330	$ 13,863	$ 14,418	$ 14,995	$ 15,594	$ 16,218	$ 16,867
84	Health Insurance	$ 103,143	$ 107,269	$ 111,560	$ 116,022	$ 120,663	$ 125,490	$ 130,509	$ 135,730	$ 141,159	$ 146,805	$ 152,677	$ 158,784	$ 165,136
85	Worker Compensation Insurance	$ 15,046	$ 15,377	$ 15,715	$ 16,061	$ 16,414	$ 16,775	$ 17,144	$ 17,521	$ 17,907	$ 18,301	$ 18,703	$ 19,115	$ 19,535
86	Communications	$ 9,021	$ 9,220	$ 9,422	$ 9,630	$ 9,841	$ 10,058	$ 10,279	$ 10,505	$ 10,737	$ 10,973	$ 11,214	$ 11,461	$ 11,713
87	Training, Transportation, Meeting	$ 8,207	$ 8,387	$ 8,572	$ 8,760	$ 8,953	$ 9,150	$ 9,351	$ 9,557	$ 9,767	$ 9,982	$ 10,202	$ 10,426	$ 10,656
88	Membership, Subscription & Dues	$ 13,416	$ 13,711	$ 14,012	$ 14,321	$ 14,636	$ 14,958	$ 15,287	$ 15,623	$ 15,967	$ 16,318	$ 16,677	$ 17,044	$ 17,419
89	Contract Services-Professional	$ 876,320	$ 895,599	$ 915,302	$ 935,439	$ 956,018	$ 977,051	$ 998,546	$ 1,020,514	$ 1,042,965	$ 1,065,910	$ 1,089,361	$ 1,113,326	$ 1,137,820
90	Maintenance & Repair Machinery & Equipmen	$ -	$ 8,500	$ 8,687	$ 8,878	$ 9,073	$ 9,273	$ 9,477	$ 9,686	$ 9,899	$ 10,116	$ 10,339	$ 10,566	$ 10,799
91	Miscellaneous Operating Expenses	$ 66,006	$ 67,458	$ 68,942	$ 70,459	$ 72,009	$ 73,593	$ 75,212	$ 76,866	$ 78,558	$ 80,286	$ 82,052	$ 83,857	$ 85,702
92	Gas & Diesel	$ 5,042	$ 5,194	$ 5,350	$ 5,510	$ 5,675	$ 5,846	$ 6,021	$ 6,202	$ 6,388	$ 6,579	$ 6,777	$ 6,980	$ 7,189
93	Rental City Equipment	$ 14,398	$ 14,715	$ 15,038	$ 15,369	$ 15,707	$ 16,053	$ 16,406	$ 16,767	$ 17,136	$ 17,513	$ 17,898	$ 18,292	$ 18,694
94	Equipment Replacement Charges	$ 9,442	$ 9,650	$ 9,862	$ 10,079	$ 10,301	$ 10,527	$ 10,759	$ 10,996	$ 11,238	$ 11,485	$ 11,737	$ 11,996	$ 12,260
95	Accident Repair & Replacement	$ 1,288	$ 1,316	$ 1,345	$ 1,375	$ 1,405	$ 1,436	$ 1,468	$ 1,500	$ 1,533	$ 1,567	$ 1,601	$ 1,636	$ 1,672
96	IS Strategic Plan	$ 81,780	$ 83,579	$ 85,418	$ 87,297	$ 89,218	$ 91,180	$ 93,186	$ 95,236	$ 97,332	$ 99,473	$ 101,661	$ 103,898	$ 106,184
97	Insurance Charges	$ 78,215	$ 79,936	$ 81,694	$ 83,492	$ 85,328	$ 87,206	$ 89,124	$ 91,085	$ 93,089	$ 95,137	$ 97,230	$ 99,369	$ 101,555
98	Public Works Administrative Charges	$ 1,484,895	$ 1,517,563	$ 1,550,949	$ 1,585,070	$ 1,619,941	$ 1,655,580	$ 1,692,003	$ 1,729,227	$ 1,767,270	$ 1,806,150	$ 1,845,885	$ 1,886,495	$ 1,927,998
99	Indirect Costs	$ 61,916	$ 63,278	$ 64,671	$ 66,093	$ 67,547	$ 69,033	$ 70,552	$ 72,104	$ 73,691	$ 75,312	$ 76,969	$ 78,662	$ 80,393
100	Machinery & Equipment	$ 50,757	$ 51,873	$ 53,014	$ 54,181	$ 55,373	$ 56,591	$ 57,836	$ 59,108	$ 60,409	$ 61,738	$ 63,096	$ 64,484	$ 65,903
101	Internal Departments Personnel Charges	$ 788,683	$ 788,683	$ 808,400	$ 828,610	$ 849,325	$ 870,558	$ 892,322	$ 914,630	$ 937,496	$ 960,934	$ 984,957	$ 1,009,581	$ 1,034,820
102	Land	$ 1,289,264	$ -	$ 1,289,264	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
103	Additional FTE to Execute CIP	$ -	$ -	$ 1,519,132	$ 1,519,132	$ 1,557,110	$ 1,596,038	$ 1,635,939	$ 1,676,837	$ 1,718,758	$ 1,761,727	$ 1,805,771	$ 1,850,915	$ 1,897,188
104	Water Masterplan Operations Projects	$ -	$ 982,000	$ 4,180,000	$ 3,000,000	$ 2,350,000	$ 1,640,000	$ 1,230,000	$ 560,000	$ 830,000	$ 500,000	$ 2,000,000	$ 1,150,000	$ 1,650,000
105	**Sub-Total Operations & Maintenance Expenses**	**$ 54,910,041**	**$ 50,408,931**	**$ 58,551,885**	**$ 57,960,964**	**$ 59,748,091**	**$ 61,448,139**	**$ 63,582,313**	**$ 65,414,960**	**$ 68,322,779**	**$ 70,774,203**	**$ 75,208,230**	**$ 77,454,470**	**$ 81,223,185**
106	O&M Execution Percentage	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
107	**Total Operations & Maintenance Expenses**	**$ 54,910,041**	**$ 50,408,931**	**58,551,885**	**57,960,964**	**59,748,091**	**61,448,139**	**63,582,313**	**65,414,960**	**68,322,779**	**70,774,203**	**75,208,230**	**77,454,470**	**81,223,185**
108	**Long-Term Debt Service Payments:**													
109	Existing Debt Service	$ 1,361,525	$ 1,355,075	$ 1,353,700	$ 1,355,450	$ 1,350,325	$ 1,353,200	$ 1,355,737	$ 1,351,400	$ 1,348,275	$ 1,352,950	$ 1,345,375	$ 1,345,250	$ 1,342,375
110	Cumulative New Debt Service	-	-	-	435,874	567,085	1,150,292	1,325,854	1,325,854	1,325,854	1,325,854	1,325,854	1,325,854	1,325,854
111	**Total Long-Term Debt Service Payments**	**$ 1,361,525**	**$ 1,355,075**	**1,353,700**	**1,791,324**	**1,917,410**	**2,503,492**	**2,681,591**	**2,677,254**	**2,674,129**	**2,678,804**	**2,671,229**	**2,671,104**	**2,668,229**
112	**Other Below the Line Expenses:**													
113	Transfers Out	$ 1,347,355	$ 1,378,510	$ 1,379,195	$ 1,379,895	$ 1,380,611	$ 1,381,343	$ 1,382,091	$ 1,382,855	$ 1,383,636	$ 1,384,434	$ 1,385,250	$ 1,386,084	$ 1,386,936
114	**Total Other Below the Line Expenses**	**$ 1,347,355**	**$ 1,378,510**	**1,379,195**	**1,379,895**	**1,380,611**	**1,381,343**	**1,382,091**	**1,382,855**	**1,383,636**	**1,384,434**	**1,385,250**	**1,386,084**	**1,386,936**
115	**TOTAL CASH OUTFLOWS**	**$ 57,618,920**	**$ 53,142,516**	**$ 61,284,780**	**$ 61,132,183**	**$ 63,046,112**	**$ 65,332,974**	**$ 67,645,995**	**$ 69,475,069**	**$ 72,380,544**	**$ 74,837,441**	**$ 79,264,709**	**$ 81,511,658**	**$ 85,278,350**

Water Enterprise Capital Improvement Plan

Schedule 4

		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
	DRILL NEW WELLS												
1	Well 32 Rehabilitation	$ -	$ 650,000	$ 2,900,000	$ 2,950,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	Well 29 Rehab and Equip New Well	$ -	$ 260,000	$ 1,690,000	$ 1,690,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3	Well 22 - Drill and Equip New Well	$ -	$ -	$ -	$ -	$ 340,000	$ 2,210,000	$ 2,210,000	$ -	$ -	$ -	$ -	$ -
4	Future Well#1 Drill and Equip	$ -	$ -	$ 420,000	$ 2,730,000	$ 2,730,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Well 24 - Drill and Equip New Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 350,000	$ 2,270,000	$ 2,280,000	$ -
6	Well 16 - Drill and Equip New Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 360,000	$ 2,340,000
7	Well 18 - Drill and Equip New Well	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 340,000
8	Well 31 R&R P/M/VFD/MCC&SD	$ 140,000	$ 1,820,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	Well 39 R&R P/M/MCC (20 yrs)	$ -	$ 70,000	$ 910,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	Well 27 R&R P/M/MCC wires/panel	$ -	$ -	$ 100,000	$ 1,300,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Well 28 R&R P/M/MCC/SCE	$ -	$ -	$ -	$ 120,000	$ 1,560,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	Well 28 R&R VFD (15 yrs)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 40,000	$ 520,000	$ -
13	Well 36 R&R P/M/MCC (20 yrs)	$ -	$ -	$ -	$ -	$ 70,000	$ 910,000	$ -	$ -	$ -	$ -	$ -	$ -
14	Well 37 R&R P/M/MCC/VFD (20 yrs)	$ -	$ -	$ -	$ -	$ -	$ 110,000	$ 1,430,000	$ -	$ -	$ -	$ -	$ -
15	Well 35 R&R P/M/MCC/VFD (20 yrs)	$ -	$ -	$ -	$ -	$ -	$ -	$ 110,000	$ 1,430,000	$ -	$ -	$ -	$ -
16	Well 30 R&R P/M/MCC/SCE, encl	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 110,000	$ 1,430,000	$ -	$ -	$ -
17	Well 34 R&R P/M/MCC (20 yrs)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 70,000	$ 910,000	$ -	$ -
18	Well 33 R&R P/M/MCC/fiber (20 yrs)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 80,000	$ 1,040,000	$ -
19	Well 20 R&R P/M/MCC (20 yrs)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 60,000	$ 780,000
20	Well 21 R&R P/M/MCC & SCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 110,000
21	Well 38 R&R P/M/VFD/encl/PLC (20)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 130,000
22	Well 41 Rehab (every 7/10 years)	$ -	$ -	$ -	$ 40,000	$ 520,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
21	**PUMP STATIONS**												
23	Walnut R&R VFD (15 yrs)	$ -	$ -	$ -	$ -	$ -	$ 60,000	$ 780,000	$ -	$ -	$ -	$ -	$ -
24	Crooke R&R P/M/MCC/new VFD Elect	$ 120,000	$ 1,560,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	Garthe R&R P/M/MCC/VFD/Eng (20)	$ -	$ -	$ 200,000	$ 2,600,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
26	Cambridge CIP Improvements	$ -	$ -	$ -	$ -	$ 80,000	$ 1,040,000	$ -	$ -	$ -	$ -	$ -	$ -
27	East CIP Improvements	$ -	$ -	$ -	$ -	$ -	$ 160,000	$ 2,080,000	$ -	$ -	$ -	$ -	$ -
28	South R&R P/M/MCC/VFD (15 yrs)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 100,000	$ 1,300,000	$ -	$ -	$ -
29	West R&R P/M/MCC/VFD (15 yrs)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 200,000	$ 2,600,000	$ -
	Total CIP Budget (Current $)	**$ 981,000**	**$ 13,388,000**	**$ 14,898,360**	**$ 19,027,533**	**$ 15,786,533**	**$ 12,816,285**	**$ 13,980,000**	**$ 12,816,285**	**$ 12,816,285**	**$ 12,816,285**	**$ 12,816,285**	**$ 12,816,285**
	Annual Adjustment for Compounded Cost Escalation [2]	$ 981,000	$ 13,388,000	$ 15,345,311	$ 20,186,310	$ 17,250,371	$ 14,424,842	$ 16,206,652	$ 15,303,315	$ 15,762,414	$ 16,235,287	$ 16,722,345	$ 17,224,016

10-Year Cash Flow Proforma and Financial Projections for the Water Enterprise Fund

Schedule 5

		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2030
1	**Proposed Rate Revenue Increase**	**0.00%**	**7.00%**	**7.00%**	**6.50%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**	**2.00%**
	Revenues											
2	Rate Revenue Before Adjustments	$ 55,517,815	$ 56,536,626	$ 61,084,967	$ 66,010,918	$ 71,014,541	$ 73,155,123	$ 75,374,562	$ 77,646,507	$ 80,001,847	$ 82,413,209	$ 84,912,769
3	Additional Rate Revenue From Rate Adjustment	-	1,956,660	4,275,948	4,290,710	1,420,291	1,463,102	1,507,491	1,552,930	1,600,037	1,648,264	1,698,255
4	Other Operating Revenues	664,430	664,430	664,430	664,430	664,430	664,430	664,430	664,430	664,430	664,430	664,430
5	Interest Income	587,770	522,023	395,404	327,411	311,311	348,636	366,652	370,933	392,564	412,858	434,059
6	Other Non-Operating Revenue	975,925	975,925	975,925	975,925	975,925	975,925	975,925	975,925	975,925	975,925	975,925
7	Pass Through Revenue	-	-	1,044,335	2,088,670	3,546,156	4,904,156	6,262,157	7,620,158	8,978,158	10,336,159	11,694,160
8	**Total Revenues**	**$ 57,745,940**	**$ 60,655,663**	**$ 68,441,008**	**$ 74,358,064**	**$ 77,932,654**	**$ 81,511,373**	**$ 85,151,217**	**$ 88,830,883**	**$ 92,612,962**	**$ 96,450,846**	**$ 100,379,599**
	Operating Expenses											
9	Salaries and Benefits	$ 6,290,096	$ 6,556,542	$ 6,843,784	$ 7,154,242	$ 7,490,659	$ 7,856,139	$ 8,058,049	$ 8,265,336	$ 8,478,151	$ 8,696,646	$ 9,151,322
10	Purchased Water and Electricity	$ 24,835,328	26,395,459	27,674,530	29,444,260	31,152,921	32,958,431	34,877,583	36,917,941	39,087,593	41,395,185	46,461,826
11	Other Variable O&M	430,645	440,119	449,802	459,697	469,811	480,147	490,710	501,506	512,539	523,814	547,116
12	Fixed Operations & Maintenance Costs	9,214,803	10,938,996	11,148,630	11,400,919	11,658,937	11,922,817	12,192,691	12,468,697	12,750,974	13,039,665	13,636,879
13	Capital Outlay	982,000	5,469,264	3,000,000	2,350,000	1,640,000	1,230,000	560,000	830,000	500,000	2,000,000	1,650,000
14	Central Services	8,656,058	8,746,657	8,839,249	8,933,879	9,030,590	9,129,429	9,230,442	9,333,677	9,439,184	9,547,012	9,769,836
15	**Total Operating Expenses**	**$ 50,408,931**	**$ 58,547,037**	**$ 57,955,995**	**$ 59,742,997**	**$ 61,442,918**	**$ 63,576,962**	**$ 65,409,475**	**$ 68,317,157**	**$ 70,768,440**	**$ 75,202,323**	**$ 81,216,980**
16	**Net Revenues**	**$ 7,337,009**	**$ 2,108,626**	**$ 10,485,014**	**$ 14,615,067**	**$ 16,489,735**	**$ 17,934,411**	**$ 19,741,742**	**$ 20,513,726**	**$ 21,844,522**	**$ 21,248,523**	**$ 19,162,619**
17	Existing Debt Service	$ 1,355,075	$ 1,353,700	$ 1,355,450	$ 1,350,325	$ 1,353,200	$ 1,355,737	$ 1,351,400	$ 1,348,275	$ 1,352,950	$ 1,345,375	$ 1,342,375
18	New Debt Service	-	-	435,874	567,085	1,150,292	1,325,854	1,325,854	1,325,854	1,325,854	1,325,854	1,325,854
19	Total Capital Spending	981,000	13,388,000	15,345,311	20,186,310	17,250,371	14,424,842	16,206,652	15,303,315	15,762,414	16,235,287	16,722,345
20	Cash-funded with Rate Revenue	981,000	13,388,000	11,572,050	15,983,519	10,298,952	10,704,172	16,206,652	15,303,315	15,762,414	16,235,287	16,722,345
21	Cash-funded with Capital Facility Charges	-	-	-	-	-	-	-	-	-	-	-
22	Cash-funded with Other Funds	-	-	-	-	-	-	-	-	-	-	-
23	Capital Projects Paid with Debt Proceeds	-	-	3,773,261	4,202,790	6,951,419	3,720,670	-	-	-	-	-
24	Balance of Transfer (In)/Out	(1,378,510)	(1,379,195)	(1,379,895)	(1,380,611)	(1,381,343)	(1,382,091)	(1,382,855)	(1,383,636)	(1,384,434)	(1,385,250)	(1,386,084)
25	**Revenues Over (Under) Expenses**	**$ 3,622,424**	**$ (14,012,269)**	**$ (4,258,256)**	**$ (4,666,474)**	**$ 2,305,948**	**$ 3,166,557**	**$ (525,018)**	**$ 1,152,646**	**$ 2,018,869**	**$ 956,757**	**$ (1,614,039)**
26	Operating Fund - Beginning Balance	$ 41,278,164	$ 44,900,588	$ 30,888,319	$ 25,585,728	$ 20,919,253	$ 23,225,202	$ 26,391,759	$ 25,866,741	$ 27,019,387	$ 29,038,256	$ 29,995,014
27	**Operating Fund - Ending Balance**	**44,900,588**	**30,888,319**	**26,630,063**	**20,919,253**	**23,225,202**	**26,391,759**	**25,866,741**	**27,019,387**	**29,038,256**	**29,995,014**	**28,380,975**
28	Operating Fund - Target Reserves	$ 16,356,733	$ 17,357,443	$ 17,916,935	$ 18,618,100	$ 19,314,517	$ 20,046,531	$ 20,770,275	$ 21,529,969	$ 22,327,770	$ 23,165,975	$ 24,047,037
29	Debt Service Coverage (1.2 Req.)	6.14	5.60	6.94	8.85	7.24	7.15	7.58	7.98	8.34	8.70	9.02

Sewer Enterprise FY 2019 Beginning Balances — Schedule 6

FUND BALANCES:	Unrestricted Cash Assets	Sewer Connection Fees
FUND 54 - Sewer Capital Recovery		
Cash and Cash Equivalents	$1,526,620	
Account Receivable-Utility Sys Only	$346,448	
FUND 55 - Sewer Connection Fee		
Cash and Cash Equivalents		$9,848,639
FUND 56- Sanitary Sewer Service		
Cash and Cash Equivalents	$6,701,561	
Misc.	$1,700	
Account Receivable-Utility Sys Only	$222,632	
Restricted Cash and Cash Equivalents	**$8,798,961**	**$9,848,639**
FUND 56- Sanitary Sewer Service		
Accounts and Contracts Payable	-$22,958	
Prior Year Carry Over	$0	
Accrued Compensated Absences	-$71,801	
TOTAL LIABILIITIES	**-$94,759**	**$0**
REVENUE FUND BALANCE	**$8,704,202**	**$9,848,639**

Sewer Enterprise Projection of Cash Inflows

Schedule 7

		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
1	**Rate Revenue Growth Assumptions:**												
2	Growth in Water Accounts		1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
3	Growth in Water Usage		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
4	**Assumed Rate Revenue Increases:**												
5	Assumed Water Rate Increase		**3.00%**	**5.00%**	**9.00%**	**9.00%**	**9.00%**	**9.00%**	**9.00%**	**9.00%**	**9.00%**	**3.00%**	**3.00%**
6	**Rate Revenue**												
7	Fixed Rate Revenue	$ 1,142,263	$ 1,170,897	$ 1,260,188	$ 1,387,341	$ 1,527,324	$ 1,681,431	$ 1,851,087	$ 2,037,862	$ 2,243,482	$ 2,469,850	$ 2,569,385	$ 2,672,931
8	Variable Rate Revenue	$ 5,749,667	$ 5,893,795	$ 6,343,252	$ 6,983,286	$ 7,687,900	$ 8,463,609	$ 9,317,587	$ 10,257,731	$ 11,292,736	$ 12,432,173	$ 12,933,190	$ 13,454,398
9	**Total Revenue**	**$ 6,891,930**	**$ 7,064,692**	**$ 7,603,440**	**$ 8,370,627**	**$ 9,215,224**	**$ 10,145,040**	**$ 11,168,674**	**$ 12,295,593**	**$ 13,536,219**	**$ 14,902,023**	**$ 15,502,575**	**$ 16,127,329**
10	**Other Revenue:**												
11	Other Operating Income	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500	$ 500
12	Interest Income	$ 491,068	$ 767,778	$ 653,434	$ 444,035	$ 304,315	$ 242,402	$ 194,675	$ 163,602	$ 151,935	$ 162,747	$ 188,761	$ 221,324
13	Non-Operating Income	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	**Other Revenue**	**$ 491,568**	**$ 768,278**	**$ 653,934**	**$ 444,535**	**$ 304,815**	**$ 242,902**	**$ 195,175**	**$ 164,102**	**$ 152,435**	**$ 163,247**	**$ 189,261**	**$ 221,824**
15	**Restricted Revenue**												
16	Connection Fees	$ 499,208	$ 504,200	$ 509,242	$ 514,335	$ 519,478	$ 524,673	$ 529,920	$ 535,219	$ 540,571	$ 545,977	$ 551,437	$ 556,951
17	**Total Restricted Revenue**	**$ 499,208**	**$ 504,200**	**$ 509,242**	**$ 514,335**	**$ 519,478**	**$ 524,673**	**$ 529,920**	**$ 535,219**	**$ 540,571**	**$ 545,977**	**$ 551,437**	**$ 556,951**
18	**TOTAL REVENUE**	**$ 7,882,706**	**$ 8,337,170**	**$ 8,766,616**	**$ 9,329,497**	**$ 10,039,516**	**$ 10,912,614**	**$ 11,893,769**	**$ 12,994,914**	**$ 14,229,225**	**$ 15,611,247**	**$ 16,243,273**	**$ 16,906,103**

Sewer Enterprise Projection of Cash Outflows

Schedule 8

		FY 2019 Estimate	FY 2020 Forecast	FY 2021 Forecast	FY 2022 Forecast	FY 2023 Forecast	FY 2024 Forecast	FY 2025 Forecast	FY 2026 Forecast	FY 2027 Forecast	FY 2028 Forecast	FY 2029 Forecast	FY 2030 Forecast
1	Improvements Other Than Building	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	Reserve Appropriation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3	Salaries Regular	$ 1,097,203	$ 1,124,633	$ 1,152,749	$ 1,181,568	$ 1,211,107	$ 1,241,385	$ 1,272,419	$ 1,304,230	$ 1,336,836	$ 1,370,257	$ 1,404,513	$ 1,439,626
4	Salaries Cash Out/Separation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Salaries Part-Time	$ 21,896	$ 22,443	$ 23,004	$ 23,579	$ 24,169	$ 24,773	$ 25,392	$ 26,027	$ 26,678	$ 27,345	$ 28,028	$ 28,729
6	Salaries Overtime	$ 89,091	$ 91,318	$ 93,601	$ 95,941	$ 98,339	$ 100,798	$ 103,318	$ 105,901	$ 108,548	$ 111,262	$ 114,043	$ 116,895
7	Accrual Compensated Absences	$ (57,407)	$ (58,842)	$ (60,313)	$ (61,821)	$ (63,366)	$ (64,950)	$ (66,574)	$ (68,239)	$ (69,944)	$ (71,693)	$ (73,485)	$ (75,323)
8	Retirement-Employer Normal Cost	$ 309,103	$ 351,450	$ 399,599	$ 454,344	$ 516,589	$ 527,954	$ 539,569	$ 551,439	$ 563,571	$ 575,970	$ 588,641	$ 601,591
9	Retirement - Employer Unfunded Liability	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	Part-Time Retirement	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Medicare Insurance	$ 18,090	$ 18,814	$ 19,566	$ 20,349	$ 21,163	$ 22,009	$ 22,890	$ 23,805	$ 24,757	$ 25,748	$ 26,778	$ 27,849
12	Health Insurance	$ 240,057	$ 249,659	$ 259,645	$ 270,031	$ 280,832	$ 292,066	$ 303,748	$ 315,898	$ 328,534	$ 341,676	$ 355,343	$ 369,556
13	Retiree Health Benefits	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	Worker Compensation Insurance	$ 128,286	$ 131,108	$ 133,992	$ 136,940	$ 139,953	$ 143,032	$ 146,178	$ 149,394	$ 152,681	$ 156,040	$ 159,473	$ 162,981
15	Communications	$ 2,151	$ 2,198	$ 2,246	$ 2,296	$ 2,346	$ 2,398	$ 2,451	$ 2,504	$ 2,560	$ 2,616	$ 2,673	$ 2,732
16	Training, Transportation, Meeting	$ 22,776	$ 23,277	$ 23,789	$ 24,313	$ 24,848	$ 25,394	$ 25,953	$ 26,524	$ 27,108	$ 27,704	$ 28,313	$ 28,936
17	Membership, Subscription & Dues	$ 18,877	$ 19,292	$ 19,717	$ 20,151	$ 20,594	$ 21,047	$ 21,510	$ 21,983	$ 22,467	$ 22,961	$ 23,466	$ 23,983
18	Contract Services-Professional	$ 1,792,628	$ 1,832,066	$ 1,872,372	$ 1,913,564	$ 1,955,662	$ 1,998,687	$ 2,042,658	$ 2,087,596	$ 2,133,523	$ 2,180,461	$ 2,228,431	$ 2,277,456
19	Maintenance & Repair Machinery & Equipm	$ 1,000	$ 1,000	$ 1,022	$ 1,044	$ 1,067	$ 1,091	$ 1,115	$ 1,139	$ 1,165	$ 1,190	$ 1,216	$ 1,243
20	Miscellaneous Operating Expenses	$ 317,134	$ 324,111	$ 331,241	$ 338,528	$ 345,976	$ 353,587	$ 361,366	$ 369,316	$ 377,441	$ 385,745	$ 394,231	$ 402,905
21	Gas & Diesel	$ 28,623	$ 29,052	$ 29,488	$ 29,931	$ 30,380	$ 30,835	$ 31,298	$ 31,767	$ 32,244	$ 32,727	$ 33,218	$ 33,717
22	Rental City Equipment	$ 151,603	$ 154,939	$ 158,347	$ 161,831	$ 165,391	$ 169,030	$ 172,749	$ 176,549	$ 180,433	$ 184,403	$ 188,460	$ 192,606
23	Equipment Replacement Charges	$ 108,442	$ 110,828	$ 113,266	$ 115,758	$ 118,305	$ 120,908	$ 123,568	$ 126,286	$ 129,064	$ 131,904	$ 134,806	$ 137,771
24	Accident Repair & Replacement	$ 2,793	$ 2,855	$ 2,917	$ 2,982	$ 3,047	$ 3,114	$ 3,183	$ 3,253	$ 3,324	$ 3,397	$ 3,472	$ 3,549
25	Public Works Administrative Charges	$ 428,029	$ 437,446	$ 447,069	$ 456,905	$ 466,957	$ 477,230	$ 487,729	$ 498,459	$ 509,425	$ 520,632	$ 532,086	$ 543,792
26	Indirect Costs	$ 102,661	$ 104,919	$ 107,228	$ 109,587	$ 111,998	$ 114,462	$ 116,980	$ 119,553	$ 122,183	$ 124,871	$ 127,619	$ 130,426
27	Improvements Other Than Building	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
28	Machinery & Equipment	$ 187,606	$ 191,734	$ 195,952	$ 200,263	$ 204,669	$ 209,171	$ 213,773	$ 218,476	$ 223,283	$ 228,195	$ 233,215	$ 238,346
29	Transfer to Fund 059	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
30	Transfer to Fund 085	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
31	Additional Staff	$ -	$ 189,336	$ 378,671	$ 568,007	$ 568,007	$ 568,007	$ 568,007	$ 568,007	$ 568,007	$ 568,007	$ 568,007	$ 568,007
32	**Sub-Total Operations & Maintenance Expen**	**$ 5,010,642**	**$ 5,353,636**	**$ 5,705,171**	**$ 6,066,090**	**$ 6,248,032**	**$ 6,382,027**	**$ 6,519,279**	**$ 6,659,871**	**$ 6,803,888**	**$ 6,951,417**	**$ 7,102,548**	**$ 7,257,373**
33	O&M Execution Percentage	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
34	**Total Operations & Maintenance Expenses**	**$ 5,010,642**	**5,353,636**	**5,705,171**	**6,066,090**	**6,248,032**	**6,382,027**	**6,519,279**	**6,659,871**	**6,803,888**	**6,951,417**	**7,102,548**	**7,257,373**
35	**Long-Term Debt Service Payments:**												
36	Existing Debt Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
37	Cumulative New Debt Service	-	-	-	-	-	-	-	-	-	-	-	-
38	**Total Long-Term Debt Service Payments**	**$ -**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
39	**Other Below the Line Expenses:**												
40	Transfers Out	$ 281,120	$ 281,805	$ 282,506	$ 283,222	$ 283,953	$ 284,701	$ 285,465	$ 286,246	$ 287,045	$ 287,860	$ 288,694	$ 289,546
41	**Total Other Below the Line Expenses**	**$ 281,120**	**281,805**	**282,506**	**283,222**	**283,953**	**284,701**	**285,465**	**286,246**	**287,045**	**287,860**	**288,694**	**289,546**
42	**TOTAL CASH OUTFLOWS**	**$ 5,291,762**	**$ 5,635,441**	**$ 5,987,676**	**$ 6,349,311**	**$ 6,531,986**	**$ 6,666,728**	**$ 6,804,744**	**$ 6,946,117**	**$ 7,090,932**	**$ 7,239,277**	**$ 7,391,242**	**$ 7,546,919**

Sewer Enterprise Capital Improvement Plan

Schedule 9

		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030
1	**FY19 CIP**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2	Bristol Street Sewer Main Improvement Phase 3A - Civic Center to Washington	$ 150,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3	Santa Ana Memorial Neighborhood Sewer Main Improvements	$ 175,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	Warner Garnsey Sewer Main Diversion Improvements	$ 200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Willard Neighborhood Sewer Main Improvements	$ 50,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	**Ongoing CIP**	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7	Miles replaced Approach	$ -	$ 3,000,000	$ 10,500,000	$ 10,500,000	$ 5,250,000	$ 5,250,000	$ 5,250,000	$ 5,250,000	$ 5,250,000	$ 5,250,000	$ 5,250,000	$ 5,250,000
8	San Lorenzo Pump Station	$ -	$ 7,000,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Total CIP Budget (Current $)	**$ 575,000**	**$10,000,000**	**$10,500,000**	**$10,500,000**	**$ 5,250,000**	**$ 5,250,000**	**$ 5,250,000**	**$ 5,250,000**	**$ 5,250,000**	**$ 5,250,000**	**$ 5,250,000**	**$ 5,250,000**
	Annual Adjustment for Compounded Cost Escalation [2]	$ 575,000	$ 10,300,000	$ 11,139,450	$ 11,473,634	$ 5,908,921	$ 6,086,189	$ 6,268,775	$ 6,456,838	$ 6,650,543	$ 6,850,059	$ 7,055,561	$ 7,267,228

10-Year Cash Flow Proforma and Financial Projections for the Sewer Enterprise

Schedule 10

		FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2030
1	**Rate Revenue Increase**	**3.00%**	**5.00%**	**9.00%**	**9.00%**	**9.00%**	**9.00%**	**9.00%**	**9.00%**	**9.00%**	**3.00%**
2	**Revenues**										
3	Rate Revenue Before Adjustments	$ 6,960,849	$ 7,241,372	$ 7,679,475	$ 8,454,334	$ 9,307,376	$ 10,246,490	$ 11,280,361	$ 12,418,549	$ 13,671,581	$ 15,051,044
4	Additional Rate Revenue From Rate Adjustment	103,842	362,069	691,153	760,890	837,664	922,184	1,015,232	1,117,669	1,230,442	451,531
5	Other Operating Revenues	500	500	500	500	500	500	500	500	500	500
6	Interest Income	767,778	653,434	444,035	304,315	242,402	194,675	163,602	151,935	162,747	188,761
7	Other Non-Operating Revenue	-	-	-	-	-	-	-	-	-	-
8	**Total Revenues**	**$ 7,832,970**	**$ 8,257,374**	**$ 8,815,162**	**$ 9,520,038**	**$ 10,387,941**	**$ 11,363,850**	**$ 12,459,695**	**$ 13,688,654**	**$ 15,065,270**	**$ 15,691,836**
9	**Operating Expenses**										
10	Salaries and Benefits	$ 2,119,919	$ 2,400,515	$ 2,688,938	$ 2,796,793	$ 2,855,073	$ 2,914,948	$ 2,976,463	$ 3,039,668	$ 3,104,610	$ 3,239,911
11	Variable Operations & Maintenance Costs	-	-	-	-	-	-	-	-	-	-
12	Fixed Operations & Maintenance Costs	3,041,983	3,108,704	3,176,889	3,246,571	3,317,783	3,390,558	3,464,931	3,540,937	3,618,612	3,779,116
13	Capital Outlay	191,734	195,952	200,263	204,669	209,171	213,773	218,476	223,283	228,195	238,346
14	**Total Operating Expenses**	**$ 5,353,636**	**$ 5,705,171**	**$ 6,066,090**	**$ 6,248,032**	**$ 6,382,027**	**$ 6,519,279**	**$ 6,659,871**	**$ 6,803,888**	**$ 6,951,417**	**$ 7,257,373**
15	**Net Revenues**	**$ 2,479,334**	**$ 2,552,203**	**$ 2,749,072**	**$ 3,272,006**	**$ 4,005,915**	**$ 4,844,571**	**$ 5,799,825**	**$ 6,884,766**	**$ 8,113,853**	**$ 8,434,463**
16	Existing Debt Service	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
17	New Debt Service	-	-	-	-	-	-	-	-	-	-
18	Total Capital Spending	10,300,000	11,139,450	11,473,634	5,908,921	6,086,189	6,268,775	6,456,838	6,650,543	6,850,059	7,055,561
19	Cash-funded with Rate Revenue	3,090,000	11,139,450	11,473,634	5,908,921	6,086,189	6,268,775	6,456,838	6,650,543	6,850,059	7,055,561
20	Cash-funded with Capital Facility Charges	7,210,000	-	-	-	-	-	-	-	-	-
21	Cash-funded with Other Funds	-	-	-	-	-	-	-	-	-	-
21	Capital Projects Paid with Debt Proceeds	-	-	-	-	-	-	-	-	-	-
22	Balance of Transfer (In)/Out	(281,805)	(282,506)	(283,222)	(283,953)	(284,701)	(285,465)	(286,246)	(287,045)	(287,860)	(288,694)
23	**Revenues Over (Under) Expenses**	**$ (892,471)**	**$ (8,869,753)**	**$ (9,007,783)**	**$ (2,920,869)**	**$ (2,364,975)**	**$ (1,709,669)**	**$ (943,260)**	**$ (52,822)**	**$ 975,934**	**$ 1,090,208**
24	Operating Fund - Beginning Balance	$ 33,220,938	$ 32,328,467	$ 23,458,714	$ 14,450,931	$ 11,530,062	$ 9,165,087	$ 7,455,418	$ 6,512,158	$ 6,459,337	$ 7,435,271
25	**Operating Fund - Ending Balance**	**32,328,467**	**23,458,714**	**14,450,931**	**11,530,062**	**9,165,087**	**7,455,418**	**6,512,158**	**6,459,337**	**7,435,271**	**8,525,479**
26	Operating Fund - Target Reserves	$ 2,290,475	$ 5,377,305	$ 5,554,457	$ 5,688,777	$ 5,813,064	$ 5,940,164	$ 6,070,139	$ 6,203,057	$ 6,338,985	$ 6,477,993
27	Debt Service Coverage (1.2 Req.)	na	na	na	na	na	na	na	na	na	na

Water System Cost Allocation to Functional Components

Schedule 11

	Test Year Budget	Water Purchase	Production and Supply	Pumping Electricity	Treatment - Chemicals	Treatment	Transmission & Distribution	Meters & Services	Storage	General & Administrative	Recycled Water
		$ Allocation									
O&M EXPENSE ALLOCATIONS		**$24,435,641**	**$4,394,347**	**$1,687,746**	**$0**	**$2,757,481**	**$5,183,909**	**$0**	**$0**	**$19,815,841**	**$272,071**
Production and Supply											
Salaries Regular	$ 665,880	$ -	$ 665,880	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Salaries Part-Time	$ 54,357	$ -	$ 54,357	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Salaries Overtime	$ 168,582	$ -	$ 168,582	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Accrual Compensated Absences	$ (146,210)	$ -	$ (146,210)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Retirement-Employer Normal Cost	$ 208,883	$ -	$ 208,883	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Medicare Insurance	$ 13,075	$ -	$ 13,075	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Health Insurance	$ 110,639	$ -	$ 110,639	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Worker Compensation Insurance	$ 63,757	$ -	$ 63,757	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Utilities	$ 1,687,746	$ -	$ -	$ 1,687,746	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Communications	$ 48,023	$ -	$ 48,023	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Training, Transportation, Meeting	$ 43,587	$ -	$ 43,587	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Membership, Subscription & Dues	$ 148,222	$ -	$ 148,222	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Contract Services-Professional	$ 1,708,213	$ -	$ 1,708,213	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
OCWD Purchases	$ 13,620,270	$ 13,620,270	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance & Repair Buildings & Ground	$ 41,182	$ -	$ 41,182	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance & Repair Improvement	$ 9,097	$ -	$ 9,097	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Maintenance & Repair Machinery & Equipr	$ 21,718	$ -	$ 21,718	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Miscellaneous Operating Expenses	$ 440,119	$ -	$ 440,119	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
MWD Water Purchases	$ 10,815,371	$ 10,815,371	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Gas & Diesel	$ 22,490	$ -	$ 22,490	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rental City Equipment	$ 47,603	$ -	$ 47,603	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Equipment Replacement Charges	$ 43,810	$ -	$ 43,810	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Accident Repair & Replacement	$ 3,885	$ -	$ 3,885	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
IS Strategic Plan	$ 540,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 540,500	$ -
Insurance Charges	$ 419,413	$ -	$ 419,413	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Indirect Costs	$ 75,799	$ -	$ 75,799	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Machinery & Equipment	$ 182,221	$ -	$ 182,221	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water System Maintenance	-	-	-	-	-	-	-	-	-	-	-
Salaries Regular	$ 1,022,255	$ -	$ -	$ -	$ -	$ -	$ 1,022,255	$ -	$ -	$ -	$ -
Salaries Part-Time	$ 20,633	$ -	$ -	$ -	$ -	$ -	$ 20,633	$ -	$ -	$ -	$ -
Salaries Overtime	$ 178,751	$ -	$ -	$ -	$ -	$ -	$ 178,751	$ -	$ -	$ -	$ -
Accrual Compensated Absences	$ 110,169	$ -	$ -	$ -	$ -	$ -	$ 110,169	$ -	$ -	$ -	$ -
Retirement-Employer Normal Cost	$ 348,660	$ -	$ -	$ -	$ -	$ -	$ 348,660	$ -	$ -	$ -	$ -
Medicare Insurance	$ 18,686	$ -	$ -	$ -	$ -	$ -	$ 18,686	$ -	$ -	$ -	$ -
Health Insurance	$ 264,925	$ -	$ -	$ -	$ -	$ -	$ 264,925	$ -	$ -	$ -	$ -
Worker Compensation Insurance	$ 120,548	$ -	$ -	$ -	$ -	$ -	$ 120,548	$ -	$ -	$ -	$ -
Communications	$ 16,851	$ -	$ -	$ -	$ -	$ -	$ 16,851	$ -	$ -	$ -	$ -
Training, Transportation, Meeting	$ 28,717	$ -	$ -	$ -	$ -	$ -	$ 28,717	$ -	$ -	$ -	$ -
Membership, Subscription & Dues	$ 11,461	$ -	$ -	$ -	$ -	$ -	$ 11,461	$ -	$ -	$ -	$ -
Contract Services-Professional	$ 763,563	$ -	$ -	$ -	$ -	$ -	$ 763,563	$ -	$ -	$ -	$ -
Maintenance & Repair Buildings & Ground	$ 102,200	$ -	$ -	$ -	$ -	$ -	$ 102,200	$ -	$ -	$ -	$ -
Maintenance & Repair Machinery & Equipr	$ 1,406	$ -	$ -	$ -	$ -	$ -	$ 1,406	$ -	$ -	$ -	$ -
Miscellaneous Operating Expenses	$ 624,713	$ -	$ -	$ -	$ -	$ -	$ 624,713	$ -	$ -	$ -	$ -
Gas & Diesel	$ 61,189	$ -	$ -	$ -	$ -	$ -	$ 61,189	$ -	$ -	$ -	$ -
Rental City Equipment	$ 286,185	$ -	$ -	$ -	$ -	$ -	$ 286,185	$ -	$ -	$ -	$ -
Equipment Replacement Charges	$ 124,834	$ -	$ -	$ -	$ -	$ -	$ 124,834	$ -	$ -	$ -	$ -
Accident Repair & Replacement	$ 4,642	$ -	$ -	$ -	$ -	$ -	$ 4,642	$ -	$ -	$ -	$ -
City Yard Rental	$ 217,268	$ -	$ -	$ -	$ -	$ -	$ 217,268	$ -	$ -	$ -	$ -

Water System Cost Allocation to Functional Components

Schedule 11

	Test Year Budget	Water Purchase	Production and Supply	Pumping Electricity	Treatment - Chemicals	Treatment	Transmission & Distribution	Meters & Services	Storage	General & Administrative	Recycled Water
		$ Allocation									
O&M EXPENSE ALLOCATIONS		**$24,435,641**	**$4,394,347**	**$1,687,746**	**$0**	**$2,757,481**	**$5,183,909**	**$0**	**$0**	**$19,815,841**	**$272,071**
IS Strategic Plan	$ 134,947	$ -	$ -	$ -	$ -	$ -	$ 134,947	$ -	$ -	$ -	$ -
Insurance Charges	$ 220,940	$ -	$ -	$ -	$ -	$ -	$ 220,940	$ -	$ -	$ -	$ -
Indirect Costs	$ 104,187	$ -	$ -	$ -	$ -	$ -	$ 104,187	$ -	$ -	$ -	$ -
Machinery & Equipment	$ 396,178	$ -	$ -	$ -	$ -	$ -	$ 396,178	$ -	$ -	$ -	$ -
Miscellaneous Expenses	-	-	-	-	-	-	-	-	-	-	-
Utilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other Agency Services	$ 10,526	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,526	$ -
Computer Services Charge	$ 311,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 311,700	$ -
IS Strategic Plan	$ 304,990	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 304,990	$ -
Treasury Services Charges	$ 2,041,491	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,041,491	$ -
General Fund Overhead	$ 4,537,918	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,537,918	$ -
Water Quality	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Salaries Regular	$ 644,438	$ -	$ -	$ -	$ -	$ 644,438	$ -	$ -	$ -	$ -	$ -
Salaries Part-Time	$ 72,201	$ -	$ -	$ -	$ -	$ 72,201	$ -	$ -	$ -	$ -	$ -
Salaries Overtime	$ 101,571	$ -	$ -	$ -	$ -	$ 101,571	$ -	$ -	$ -	$ -	$ -
Accrual Compensated Absences	$ (52,559)	$ -	$ -	$ -	$ -	$ (52,559)	$ -	$ -	$ -	$ -	$ -
Retirement-Employer Normal Cost	$ 212,901	$ -	$ -	$ -	$ -	$ 212,901	$ -	$ -	$ -	$ -	$ -
Medicare Insurance	$ 10,580	$ -	$ -	$ -	$ -	$ 10,580	$ -	$ -	$ -	$ -	$ -
Health Insurance	$ 117,839	$ -	$ -	$ -	$ -	$ 117,839	$ -	$ -	$ -	$ -	$ -
Worker Compensation Insurance	$ 85,645	$ -	$ -	$ -	$ -	$ 85,645	$ -	$ -	$ -	$ -	$ -
Communications	$ 9,805	$ -	$ -	$ -	$ -	$ 9,805	$ -	$ -	$ -	$ -	$ -
Training, Transportation, Meeting	$ 16,497	$ -	$ -	$ -	$ -	$ 16,497	$ -	$ -	$ -	$ -	$ -
Membership, Subscription & Dues	$ 18,181	$ -	$ -	$ -	$ -	$ 18,181	$ -	$ -	$ -	$ -	$ -
Contract Services-Professional	$ 516,912	$ -	$ -	$ -	$ -	$ 516,912	$ -	$ -	$ -	$ -	$ -
OCWD - Green Acres	$ 272,071	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 272,071
Maintenance & Repair Machinery & Equipr	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Miscellaneous Operating Expenses	$ 476,923	$ -	$ -	$ -	$ -	$ 476,923	$ -	$ -	$ -	$ -	$ -
Gas & Diesel	$ 16,789	$ -	$ -	$ -	$ -	$ 16,789	$ -	$ -	$ -	$ -	$ -
Rental City Equipment	$ 35,939	$ -	$ -	$ -	$ -	$ 35,939	$ -	$ -	$ -	$ -	$ -
Equipment Replacement Charges	$ 31,435	$ -	$ -	$ -	$ -	$ 31,435	$ -	$ -	$ -	$ -	$ -
Accident Repair & Replacement	$ 3,159	$ -	$ -	$ -	$ -	$ 3,159	$ -	$ -	$ -	$ -	$ -
IS Strategic Plan	$ 47,707	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 47,707	$ -
Insurance Charges	$ 55,264	$ -	$ -	$ -	$ -	$ 55,264	$ -	$ -	$ -	$ -	$ -
Indirect Costs	$ 69,786	$ -	$ -	$ -	$ -	$ 69,786	$ -	$ -	$ -	$ -	$ -
Machinery & Equipment	$ 314,176	$ -	$ -	$ -	$ -	$ 314,176	$ -	$ -	$ -	$ -	$ -
Administrative/Engineering	-	-	-	-	-	-	-	-	-	-	-
Salaries Regular	$ 693,689	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 693,689	$ -
Salaries Part-Time	$ 51,487	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 51,487	$ -
Salaries Overtime	$ 13,080	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,080	$ -
Accrual Compensated Absences	$ 184,879	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 184,879	$ -
Retirement-Employer Normal Cost	$ 250,130	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 250,130	$ -
Medicare Insurance	$ 11,395	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 11,395	$ -
Health Insurance	$ 111,560	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 111,560	$ -
Worker Compensation Insurance	$ 15,715	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,715	$ -
Communications	$ 9,422	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,422	$ -
Training, Transportation, Meeting	$ 8,572	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,572	$ -
Membership, Subscription & Dues	$ 14,012	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 14,012	$ -
Contract Services-Professional	$ 915,302	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 915,302	$ -
Maintenance & Repair Machinery & Equipr	$ 8,687	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,687	$ -

Water System Cost Allocation to Functional Components

Schedule 11

	Test Year Budget	Water Purchase	Production and Supply	Pumping Electricity	Treatment - Chemicals	Treatment	Transmission & Distribution	Meters & Services	Storage	General & Administrative	Recycled Water
		$ Allocation									
O&M EXPENSE ALLOCATIONS		**$24,435,641**	**$4,394,347**	**$1,687,746**	**$0**	**$2,757,481**	**$5,183,909**	**$0**	**$0**	**$19,815,841**	**$272,071**
Miscellaneous Operating Expenses	$ 68,942	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 68,942	$ -
Gas & Diesel	$ 5,350	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,350	$ -
Rental City Equipment	$ 15,038	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,038	$ -
Equipment Replacement Charges	$ 9,862	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,862	$ -
Accident Repair & Replacement	$ 1,345	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,345	$ -
IS Strategic Plan	$ 85,418	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 85,418	$ -
Insurance Charges	$ 81,694	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 81,694	$ -
Public Works Administrative Charges	$ 1,550,949	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,550,949	$ -
Indirect Costs	$ 64,671	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 64,671	$ -
Machinery & Equipment	$ 53,014	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 53,014	$ -
Water Masterplan Operations Projects	$ 4,180,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,180,000	$ -
Capital Projects	-	-	-	-	-	-	-	-	-	-	-
Internal Departments Personnel Charges	$ 808,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 808,400	$ -
Land	$ 1,289,264	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,289,264	$ -
Additional FTE to Execute CIP	$ 1,519,132	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,519,132	$ -
TOTAL O&M EXPENDITURES	**$ 58,547,037**	**$ 24,435,641**	**$ 4,394,347**	**$ 1,687,746**	**$ -**	**$ 2,757,481**	**$ 5,183,909**	**$ -**	**$ -**	**$ 19,815,841**	**$ 272,071**
CAPITAL COST ALLOCATIONS											
Debt Service Payments	$ 1,353,700	$ 67,377	$ 4,432	$ -	$ 708	$ 2,188	$ 911,115	$ 51,987	$ 248,431	$ 64,207	$ 3,255
Cash Funded Capital	$ 13,388,000	$ 666,350	$ 43,836	$ -	$ 6,999	$ 21,637	$ 9,010,866	$ 514,145	$ 2,456,968	$ 635,007	$ 32,193
CAPITAL COSTS	$ 14,741,700	$ 733,726	$ 48,268	$ -	$ 7,707	$ 23,825	$ 9,921,981	$ 566,132	$ 2,705,399	$ 699,214	$ 35,448
Net Interfund Loans/Payments	**$ 1,379,195**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,379,195**	**$ -**
Change in Fund Balance	**$ (12,020,523)**	**$ (598,287)**	**$ (39,359)**	**$ -**	**$ (6,284)**	**$ (19,427)**	**$ (8,090,478)**	**$ (461,630)**	**$ (2,206,008)**	**$ (570,146)**	**$ (28,904)**
	$ 4,100,372	**$ 135,439**	**$ 8,910**	**$ -**	**$ 1,423**	**$ 4,398**	**$ 1,831,503**	**$ 104,503**	**$ 499,391**	**$ 1,508,263**	**$ 6,543**
% of Expenditures	***100.0%***	***3.3%***	***0.2%***	***0.0%***	***0.0%***	***0.1%***	***44.7%***	***2.5%***	***12.2%***	***36.8%***	***0.2%***
TOTAL COSTS	**$ 52,006,080**	**$ 23,972,793**	**$ 4,363,898**	**$ 1,687,746**	**$ (4,862)**	**$ 2,742,452**	**$ (1,075,066)**	**$ (357,127)**	**$ (1,706,617)**	**$ 22,133,154**	**$ 249,710**

Sewer System Cost Allocation to Functional Components — Schedule 12

	Test Year Budget	Utility $ Allocation	Account $ Allocation
O&M EXPENSE ALLOCATIONS		**$4,849,392**	**$504,244**
Salaries Regular	$1,124,633	$1,012,170	$112,463
Salaries Part-Time	$22,443	$20,199	$2,244
Salaries Overtime	$91,318	$82,186	$9,132
Accrual Compensated Absences	-$58,842	-$52,958	-$5,884
Retirement-Employer Normal Cost	$351,450	$316,305	$35,145
Medicare Insurance	$18,814	$16,932	$1,881
Health Insurance	$249,659	$224,693	$24,966
Worker Compensation Insurance	$131,108	$117,997	$13,111
Communications	$2,198	$1,978	$220
Training, Transportation, Meeting	$23,277	$20,950	$2,328
Membership, Subscription & Dues	$19,292	$17,363	$1,929
Contract Services-Professional	$1,832,066	$1,648,859	$183,207
Maintenance & Repair Machinery & Equipment	$1,000	$900	$100
Miscellaneous Operating Expenses	$324,111	$291,700	$32,411
Gas & Diesel	$29,052	$26,147	$2,905
Rental City Equipment	$154,939	$154,939	$0
Equipment Replacement Charges	$110,828	$110,828	$0
Accident Repair & Replacement	$2,855	$2,855	$0
Public Works Administrative Charges	$437,446	$396,238	$41,207
Indirect Costs	$104,919	$95,036	$9,883
Machinery & Equipment	$191,734	$173,672	$18,061
Additional Staff	$189,336	$170,402	$18,934
TOTAL O&M EXPENDITURES	**$5,353,636**	**$4,849,392**	**$504,244**
% Allocation		***90.6%***	***9.4%***
CAPITAL COST ALLOCATIONS			
Capital Costs			
Cash Funded Capital	$3,090,000	$3,090,000	$0
Transfers	$281,805	$281,805	$0
Change in Fund Balance	-$786,244	-$786,244	$0
TOTAL CAPITAL COSTS	**$2,585,562**	**$2,585,562**	**$0**
% Allocation		***100.0%***	***0.0%***
TOTAL ALLOCATION	**$7,939,197**	**$7,434,954**	**$504,244**
% Allocation		***93.6%***	***6.4%***

Proposed Water Rates Effective January 1, 2020 — Schedule 13

Monthly Water Utility Charge

Meter Size	Charge
5/8" X 3/4"	$20.51
3/4"	$30.76
1"	$51.27
1 1/2"	$102.53
2"	$164.04
3"	$358.84
4"	$645.91
6"	$1,332.83
8"	$2,460.60

Tier 1 Water Usage Allocation per Month (CCF)

Meter Size	Single Family	Non-Residential	Multi-Family
5/8" X 3/4"	10.50	31.00	Multi-Family Accounts are allocated 8.5 CCF per dwelling unit per month.
3/4"	16.00	46.50	
1"	26.00	77.50	
1 1/2"	52.50	155.00	
2"	84.00	248.00	
3"	184.00	542.50	
4"	331.00	976.50	
6"	682.50	2,015.00	
8"	1,260.00	3,720.00	

Water Usage Charge

	Rate Per CCF
Tier 1:	$2.03
Tier 2:	$4.79
Recycled Water:	$2.15

Proposed Water Rates Effective July 1, 2020 — Schedule 14

Monthly Water Utility Charge

Meter Size	Charge
5/8" X 3/4"	$21.94
3/4"	$32.91
1"	$54.85
1 1/2"	$109.70
2"	$175.52
3"	$383.96
4"	$691.12
6"	$1,426.12
8"	$2,632.84

Tier 1 Water Usage Allocation per Month (CCF)

Meter Size	Single Family	Non-Residential	Multi-Family
5/8" X 3/4"	10.5	31.0	Multi-Family Accounts are allocated 8.5 CCF per dwelling unit per month.
3/4"	16.0	46.5	
1"	26.0	77.5	
1 1/2"	52.5	155.0	
2"	84.0	248.0	
3"	184.0	542.5	
4"	331.0	976.5	
6"	682.5	2,015.0	
8"	1,260.0	3,720.0	

Water Usage Charge

	Rate Per CCF
Tier 1:	$2.17
Tier 2:	$5.13
Recycled Water:	$2.30

Proposed Water Rates Effective July 1, 2021 — Schedule 15

Monthly Water Utility Charge

Meter Size	Charge
5/8" X 3/4"	$23.37
3/4"	$35.05
1"	$58.42
1 1/2"	$116.83
2"	$186.93
3"	$408.92
4"	$736.04
6"	$1,518.82
8"	$2,803.97

Tier 1 Water Usage Allocation per Month (CCF)

Meter Size	Single Family	Non-Residential	Multi-Family
5/8" X 3/4"	10.5	31.0	
3/4"	16.0	46.5	
1"	26.0	77.5	Multi-Family Accounts are allocated 8.5 CCF per dwelling unit per month.
1 1/2"	52.5	155.0	
2"	84.0	248.0	
3"	184.0	542.5	
4"	331.0	976.5	
6"	682.5	2,015.0	
8"	1,260.0	3,720.0	

Water Usage Charge

	Rate Per CCF
Tier 1:	$2.31
Tier 2:	$5.46
Recycled Water:	$2.45

Proposed Water Rates Effective July 1, 2022 — Schedule 16

Monthly Water Utility Charge

Meter Size	Charge
5/8" X 3/4"	$23.84
3/4"	$35.75
1"	$59.59
1 1/2"	$119.17
2"	$190.67
3"	$417.10
4"	$750.76
6"	$1,549.20
8"	$2,860.05

Tier 1 Water Usage Allocation per Month (CCF)

Meter Size	Single Family	Non-Residential	Multi-Family
5/8" X 3/4"	10.5	31.0	
3/4"	16.0	46.5	
1"	26.0	77.5	Multi-Family Accounts are allocated 8.5 CCF per dwelling unit per month.
1 1/2"	52.5	155.0	
2"	84.0	248.0	
3"	184.0	542.5	
4"	331.0	976.5	
6"	682.5	2,015.0	
8"	1,260.0	3,720.0	

Water Usage Charge

Rate Per CCF	
Tier 1:	$2.36
Tier 2:	$5.57
Recycled Water:	$2.50

Proposed Water Rates Effective July 1, 2023 — Schedule 17

Monthly Water Utility Charge

Meter Size	Charge
5/8" X 3/4"	$24.31
3/4"	$36.47
1"	$60.78
1 1/2"	$121.55
2"	$194.48
3"	$425.44
4"	$765.78
6"	$1,580.18
8"	$2,917.25

Tier 1 Water Usage Allocation per Month (CCF)

Meter Size	Single Family	Non-Residential	Multi-Family
5/8" X 3/4"	10.5	31.0	Multi-Family Accounts are allocated 8.4 CCF per dwelling unit per month.
3/4"	16.0	46.5	
1"	26.0	77.5	
1 1/2"	52.5	155.0	
2"	84.0	248.0	
3"	184.0	542.5	
4"	331.0	976.5	
6"	682.5	2,015.0	
8"	1,260.0	3,720.0	

Water Usage Charge

Rate Per CCF	
Tier 1:	$2.41
Tier 2:	$5.68
Recycled Water:	$2.55

Proposed Monthly Sewer Utility Charge Effective January 1, 2020 Schedule 18

Monthly Meter Charge

Meter Size	Single Family	Multi-Family Residential	Non-Residential
5/8" X 3/4"	$5.60	$8.40	$9.33
3/4"	$7.93	$12.12	$13.52
1"	$12.59	$19.57	$21.90
1 1/2"	$24.23	$38.20	$42.85
2"	$38.20	$60.55	$68.00
3"	$82.43	$131.32	$147.62
4"	$147.62	$235.63	$264.96
6"	$303.61	$485.21	$545.74
8"	$559.71	$894.97	$1,006.73
10"	$885.66	$1,416.49	$1,593.43

Monthly FOG Charge: $40.92

Proposed Monthly Sewer Utility Charge Effective July 1, 2020 Schedule 19

Monthly Meter Charge

Meter Size	Single Family	Multi-Family Residential	Non-Residential
5/8" X 3/4"	$5.88	$8.82	$9.80
3/4"	$8.33	$12.73	$14.20
1"	$13.22	$20.55	$23.00
1 1/2"	$25.44	$40.11	$44.99
2"	$40.11	$63.58	$71.40
3"	$86.55	$137.89	$155.00
4"	$155.00	$247.41	$278.21
6"	$318.79	$509.47	$573.03
8"	$587.70	$939.72	$1,057.07
10"	$929.94	$1,487.31	$1,673.10

Monthly FOG Charge: $42.97

Proposed Monthly Sewer Utility Charge Effective July 1, 2021 Schedule 20

Monthly Meter Charge

Meter Size	Single Family	Multi-Family Residential	Non-Residential
5/8" X 3/4"	$6.41	$9.61	$10.68
3/4"	$9.08	$13.88	$15.48
1"	$14.41	$22.40	$25.07
1 1/2"	$27.73	$43.72	$49.04
2"	$43.72	$69.30	$77.83
3"	$94.34	$150.30	$168.95
4"	$168.95	$269.68	$303.25
6"	$347.48	$555.32	$624.60
8"	$640.59	$1,024.29	$1,152.21
10"	$1,013.63	$1,621.17	$1,823.68

Monthly FOG Charge: $46.84

Proposed Monthly Sewer Utility Charge Effective July 1, 2022 Schedule 21

Monthly Meter Charge

Meter Size	Single Family	Multi-Family Residential	Non-Residential
5/8" X 3/4"	$6.99	$10.47	$11.64
3/4"	$9.90	$15.13	$16.87
1"	$15.71	$24.42	$27.33
1 1/2"	$30.23	$47.65	$53.45
2"	$47.65	$75.54	$84.83
3"	$102.83	$163.83	$184.16
4"	$184.16	$293.95	$330.54
6"	$378.75	$605.30	$680.81
8"	$698.24	$1,116.48	$1,255.91
10"	$1,104.86	$1,767.08	$1,987.81

Monthly FOG Charge: $51.06

Proposed Monthly Sewer Utility Charge Effective July 1, 2023 Schedule 22

Monthly Meter Charge

Meter Size	Single Family	Multi-Family Residential	Non-Residential
5/8" X 3/4"	$7.62	$11.41	$12.69
3/4"	$10.79	$16.49	$18.39
1"	$17.12	$26.62	$29.79
1 1/2"	$32.95	$51.94	$58.26
2"	$51.94	$82.34	$92.46
3"	$112.08	$178.57	$200.73
4"	$200.73	$320.41	$360.29
6"	$412.84	$659.78	$742.08
8"	$761.08	$1,216.96	$1,368.94
10"	$1,204.30	$1,926.12	$2,166.71

Monthly FOG Charge: $55.66