Stantec

Whittier Utility Authority

Water Rate and Fee Study - Final Report

May 16, 2019

Stantec

May 16, 2019

Mr. David Schickling
Public Works Director
City of Whittier
13230 Penn Street
Whittier, CA 90602

Re: Water Rate and Fee Study - Final Report

Dear Mr. Schickling,

Stantec is pleased to present this Final Report on the Water Rate and Fee Study (Study) that was conducted for the Whittier Utility Authority (WUA) and the City of Whittier. We appreciate the professional assistance provided by you and all of the members of the WUA and City staff who participated in the study.

If you or others at the City have any questions, please do not hesitate to call us at (202) 585-6391 or email me at David.Hyder@stantec.com. We appreciate the opportunity to be of service to City of Whittier, and we look forward to the possibility of doing so again in the near future.

Sincerely,

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Principal

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Enclosure

Table of Contents

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

EXECUTIVE SUMMARY

This Executive Summary presents an overview of the results of the Water Cost of Service and Rate Study (Study) that was conducted for the Whittier Utility Authority (WUA) and by extension the City of Whittier (City) and collectively referred to as "the Utility" by Stantec Consulting Services Inc.

This Report and summary of findings were presented to the Whittier City Council on February 26, 2019. Two options were presented to the City Council for their consideration and direction was given to move forward with Option 2. Both options are discussed in this Executive Summary and in the body of the report.

ES.1 BACKGROUND

The water rates charged by the Utility include two primary components, a fixed service charge and a commodity charge that varies with customer water use. Prior to 2011, the distribution between the fixed and variable components of the water rate was weighted more heavily to the variable component. This distribution was negatively impacting the Utility, as water conservation had been increasing over time and therefore, customers were using less water resulting in declining rate revenues.

In 2011, the City restructured water rates with the intention of better reflecting the distribution between the fixed and variable costs associated with system operations. This restructure shifted the rates to a higher fixed charge as the majority of the Utility's operational costs are fixed. In addition, there was an increasing recognition of the need to prioritize funding and implementation of an infrastructure replacement program, as the Utility's assets were largely constructed in the 1950s.

While the updated rates provided greater revenue stability, the water customers with the lowest water use saw a significant percentage increase to their bills. To minimize this impact, the City Council adopted a modified rate structure, with a two-year phase in of the rate increase.

While the 2011 rate changes helped to provide increased revenue stability, in terms of the fixed versus the variable charge, the increases did not fully address the need for a more robust capital improvement program. In 2013, the Council agreed in concept to replacing the ageing water infrastructure over a 40-year period with funding provided by rate increases. Rate increases were adopted in 2013 that allowed for capital improvements, based on costs from the 2008 Water Master Plan. However, these rate increases did not consider future water supply or operation and maintenance cost increases.

Since implementation of the 2013 rate schedule, the Utility has updated its Water Master Plan and has a more current estimate of capital improvement project needs and costs. As such, the Utility wished to revisit the basis of the water rates and charges to ensure that rates and charges were in alignment with the cost of providing service to customers and were equitable among customer classes.

This Study evaluates the impact of the increased costs, both capital and ongoing operations and maintenance, on the revenue requirements of the water utility over the next 10 years. It also examines

the Cost of Service implications from the projected revenue requirements and updates the rates needed to generate revenue to meet the demands of operating the water system. In addition to updating the monthly rates and charges for water customers, this Study also provides an update to the water connection fee charged to new development for capital infrastructure.

ES.2 STUDY OBJECTIVES AND APPROACH

Stantec was engaged to provide a full cost of service analysis and recommend updated rates and charges, for which the results and findings are presented herein. The primary objectives of this Study were to:

i. Develop a multi-year financial management plan that integrates the Utility's capital funding needs;

ii. Identify future rate adjustments to water rates that will ensure adequate revenues to meet the Utility's ongoing financial requirements;

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

iv. Recommend specific rate structures that equitably recover the cost of service while promoting affordability and comporting with industry practices and legal requirements;

v. Develop System Connection Fee schedule.

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

The principal components of the Water Rate and Fee Study are as follows:

Revenue Sufficiency Analysis (RSA) – Develop and populate a multi-year forecasting model for the Utility that will determine the level of annual rate revenue required to satisfy projected annual operating costs, debt service expenses, and capital cost requirements as well as maintain adequate reserves.

Cost-of-Service Analysis (COSA) – Utilize industry standards and principles outlined in the AWWA Principles of Water Rates, Fees, and Charges, M1 manual, including the developed test year revenue requirements from the revenue sufficiency analysis, assessing system billing determinants, allocating revenue requirements to the water system's functional cost components, and identifying costs allocable to the Utility's rate components.

Rate Structure Analysis – Evaluate the Utility's current user rate structure and based on the recommended rate adjustments identified in the financial plan and subsequent cost of service analysis, develop recommended schedules of rates to meet the revenue requirements, goals, and objectives of the WUA and the City.

Water System Connection Fee – Develop recommended schedules of fees to be charged to new customers to recover the proportional cost of water system infrastructure that will benefit new water users.

Based on the completion of the scope of work, Stantec has developed several conclusions and recommendations for the Utility's consideration. The key conclusions and recommendations are outlined herein.

ES.3 REVENUE SUFFICIENCY ANALYSIS

In the RSA, Stantec evaluated the sufficiency of the Utility's rate revenues to meet all of its current and projected financial requirements over a 10-year projection period and determined the level of rate revenue increases necessary in the next 5 years to provide sufficient revenues to fund cost requirements. With Utility staff, we thoroughly discussed the base data and assumptions of the analysis and reviewed several alternative capital spending scenarios.

The proposed financial plan and associated rate revenue adjustments are based upon the revenue and expense information, beginning balances, and other assumptions as described in the full report. A significant portion of the analysis focused on the funding of capital projects, as this is a key priority for the Utility and is estimated to cost approximately $60.7 million through FY 2028.

This Report includes two alternative capital improvement program (CIP) funding plans for consideration. The first, **Option 1**, assumes a combination of cash "pay-as-you-go" funding and bond financing. Specifically, it assumes that the Greenleaf/Hoover Storage Replacement and the College Hills Reservoir Replacement Projects would be financed through borrowing in the later years of the 10-year projection period.

The second scenario, **Option 2**, assumes that all projects are cash-funded. In comparing these two options, it was determined that the combination of cash and debt financing (Option 1) would have less of an impact on user rates in the near term than a funding program that was 100% cash-funded (Option 2). However, Option 2 is less costly in the long term, by reducing the overall cost of capital spending.

The revenue sufficiency analysis determined that for both Option 1 and 2, the current revenue generated from rates and fees will not be sufficient to fund the revenue requirements of the Utility over the projection period. However, Option 2 results in a more significant revenue requirement, and therefore higher rate increases, as it requires a greater buildup of cash reserves in order to fund all projects on a pay-as-you-go basis over the projection period.

Without additional revenue generated by rate increases, the Utility will not be able to fund both ongoing operating and maintenance (O&M) functions and the CIP, which could jeopardize the long-term viability of the Utility.

Table ES-1 shows the 5-year rate revenue adjustment plan for Option 1. It is important to note that, while rate revenues will increase by 3% to 3.5% as a whole, some customers' bills may go up or go down based on the recommended rate structure adjustments identified in the cost of service and rate design phases of the Study. Table ES-2 presents similar information for Option 2.

Table ES-1: Proposed Plan of Water Rate Revenue Increases[1]

Assumed Implementation Date	Rate Adjustment
July 1, 2019	3.5%
July 1, 2020	3.5%
July 1, 2021	3.5%
July 1, 2022	3.0%
July 1, 2023	3.0%

Tables ES-2: Option 2 Plan of Water Rate Revenue Increases, assuming full Cash Funding of CIP projects

Assumed Implementation Date	Rate Adjustment
July 1, 2019	5.00%
July 1, 2020	5.00%
July 1, 2021	5.00%
July 1, 2022	5.00%
July 1, 2023	5.00%

ES.4 COST-OF-SERVICE ANALYSIS

The Cost-of-Service Allocation (COSA) analysis is intended to evaluate the cost of providing water service and to allocate those costs to customer classes and rate structure components to ensure the proposed rate structure is aligned with costs to provide service. This is done in order to be equitable among the Utility'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 and other accepted industry standards.

The COSA method employed in this Study was the "base-extra capacity" method promulgated in *AWWA's Manual M1: Principles of Water Rates, Fees, and Charges* (M1) for the water system. Under this method, costs are first allocated to individual functions or activities and then the cost of each function is distributed to appropriate system parameters to calculate unit costs. The unit costs are then used to distribute system costs to each Customer Class based on their usage characteristics.

Figures ES-1 and ES-2 show the allocation of the revenue requirement by customer class based on the existing rates and as calculated in the COSA analysis for Options 1 and 2, respectively. Under Option 1, it shows that cost allocation should be higher for the multi-family, non-residential (commercial) and landscape customers as would otherwise be indicated by the current structure. Or, in other words, the cost allocation burden on residential customers is currently too high relative to the other customer

[1] Rate adjustments shown in this table reflect the increase in rate revenue required each fiscal year. FY 2020 rate adjustments will be different for each customer class due to updates to the rate structure. Starting in FY 2021, rates will increase by the percent amount shown in this table.

classes, and a portion of those costs need to be re-allocated to the other customer classes based on their cost of service.

These same findings hold true for Option 2, however the overall cost burden is higher, in general, for all customer classes as the revenue requirement under Option 2 is greater than under Option 1.

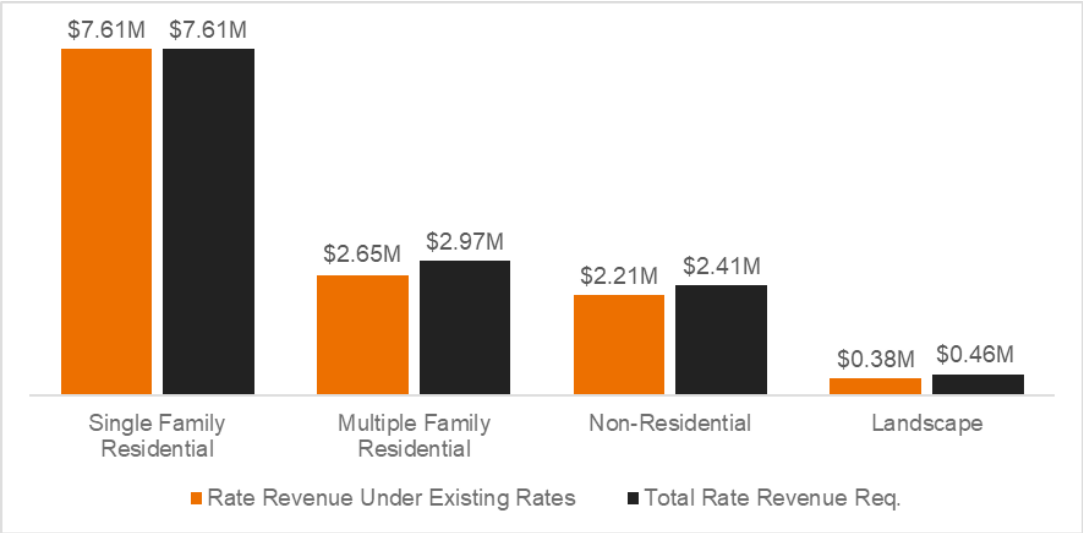

Figure ES-1: Summary of Rate Revenue Required by Customer Class, Option 1

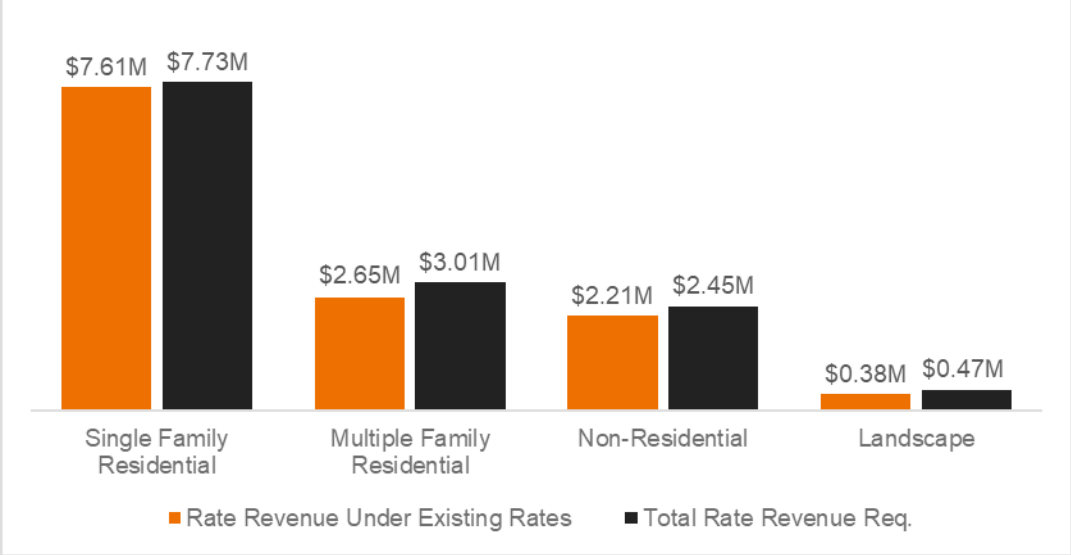

Figure ES-2: Summary of Rate Revenue Required by Customer Class, Option 2

ES.5 RATE STRUCTURE RECOMMENDATION

A rate structure analysis was performed to identify potential rate structure modifications and specific rate schedules that would:

i. Fairly and equitably recover the cost of providing service and revenue requirements for each Customer Class;

ii. Conform to accepted industry practice and legal requirements; and

iii. Provide fiscal stability and recovery of fixed costs of the system.

Current water rates are made up of Fixed Service Charges, as well as a Commodity (consumption-based) Rate. The Single Family Residential and Landscape customer classes are charged Commodity Rates with two tiers with the water allocation within each tier increasing with meter size. The bi-monthly tier allocations for the smallest meter size (¾" meters) are 0 to 40 hundred cubic feet, or centum cubic feet (CCF), and greater than 40 CCF, respectively. All other customers have Commodity Rates charged at a single tier.

Based on the review of the current rates, several modifications to the rate structure were recommended that are intended to improve rate equity and reflect best industry practices. The first is a recommendation is to establish an Account Service Charge that would be uniform among all customers and would be imbedded within the Fixed Service Charges. The Account Service Charge reflects the costs related to account administration and billing services, which are fixed costs that do not vary by customer based on the size of the meter. The Account Service Charge is calculated at $1.88 per bi-monthly period for both options.

This study also recommends that the tiered commodity rates be limited to Single Family Residential customers and to have the Tier 1 water allocation be decreased from 40 CCF to 22 CCF. This lower Tier 1 allocation aligns with the indoor water needs of most single-family homes while also providing the benefit of giving all accounts access to more affordable water. All other customer classes will be billed at a single rate that is based on the cost to serve each unique customer class.

Rates were also calculated for private fire service. The Utility currently manually bills these customers based on actual usage, which varies by customer. This Study recommends a consistent and fixed bi-monthly charge, which varies by meter size, that is more similar to a stand-by charge, as the Utility must ensure that water for fire service is available, whether used or not by the customer. The costs allocated to the fire service charge are based on the Utility's estimated costs for providing private fire protection service. The calculated private fire service charges are shown in the next section in Table ES-7.

ES.6 RATE SCHEDULES

Tables ES-3 and ES-4 show the proposed rates for FY 2020 for Option 1 and Tables ES-5 and ES-6 show rates for Option 2. Table ES-7 shows the proposed private fire service rates under Option 1 and Option 2. The complete list of rate schedule through FY 2024 for Option 1 are provided in the main body of this report and similar tables for Option 2 are provided in Appendix C.

Table ES-3: Proposed Commodity Rate Option 1, Effective July 1, 2019

Tier Level (per CCF)	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.06	$2.09	$2.13	$2.46	$1.76
Tier 2	$3.35	N/A	N/A	N/A	N/A

Table ES-4: Proposed Bi-Monthly Service Charge Option 1, Effective July 1, 2019

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$64.90	$87.69	$76.76	$92.14
1 inch	$106.92	$144.91	$121.68	$152.32
1 ½ inch	$211.97	$287.94	$241.48	$302.76
2 inch	$338.02	$459.57	$385.24	$483.29
3 inch	$674.17	$917.27	$768.61	$964.70
4 inch	$1,052.33	$1,432.18	$1,199.89	$1,506.29
6 inch	$2,102.78	$2,862.49	$2,397.91	$3,010.70
8 inch	$3,363.33	$4,578.85	$3,835.53	$4,815.99
10 inch	$5,044.05	$6,867.34	$5,752.36	$7,223.05

Note: all charges included a $1.88 Account charge

Table ES-5: Proposed Commodity Rate Option 2, Effective July 1, 2019

Tier Level (per CCF)	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.08	$2.12	$2.16	$2.50	$1.76
Tier 2	$3.41	N/A	N/A	N/A	N/A

Table ES-6: Proposed Bi-Monthly Service Charge Option 2, Effective July 1, 2019

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$65.84	$88.83	$74.72	$93.48
1 inch	$108.48	$146.80	$123.27	$154.55
1 ½ inch	$215.09	$291.72	$244.67	$307.22
2 inch	$343.02	$465.62	$390.34	$490.42
3 inch	$684.16	$929.36	$778.81	$978.96
4 inch	$1,067.95	$1,451.07	$1,215.83	$1,528.57
6 inch	$2,134.01	$2,900.26	$2,429.79	$3,055.26
8 inch	$3,413.30	$4,639.29	$3,886.53	$4,887.28
10 inch	$5,119.01	$6,958.00	$5,828.86	$7,329.99

Note: all charges included a $1.88 Account charge

Table ES-7: Proposed Private Fire Water Rates Option 1 and Option 2, Effective July 1, 2019

Connection/Meter Size	Proposed Bi-Monthly Charge, per Account	
	Option 1	Option 2
¾ inch	$0.79	$0.80
1 inch	$1.67	$1.71
1 ½ inch	$10.37	$10.61
2 inch	$30.11	$30.81
3 inch	$64.16	$65.66
4 inch	$186.38	$190.72
6 inch	$397.18	$406.42
8 inch	$714.28	$730.89
10 inch	$1,153.75	$1,180.58

ES.7 SYSTEM CONNECTION FEES

A system connection fee is a one-time charge paid by a new customer to recover a portion or all of the cost of constructing water system capacity that would benefit new customers. In general, water system connection fees are based upon the costs of utility infrastructure including, but not limited to, water supply facilities, treatment facilities, transmission mains, and distribution mains. System connection fees serve as the mechanism by which growth can "pay its own way" and minimize the extent to which existing customers must bear the cost of facilities that will be used to serve new customers.

Based on the analysis conducted as part of this study it was determined that the current water system connection fees exceed the cost of providing capacity in the water system. As a result, Stantec recommends the Utility adopt water system connection fees as shown in Table ES-8. It is also recommended that the Utility review it's connection fees at least every five years to ensure that they remain fair and equitable and continue to reflect the current cost of capacity.

Table ES-8: Current and Proposed Water System Connection Fees

Meter Size	Current Fee	Calculated Fee	Difference
¾ inch	$2,571	$2,861	$290
1 inch	$4,284	$4,778	$494
1 ½ inch	$8,572	$9,527	$955
2 inch	$17,140	$15,249	$(1,891)
3 inch	$41,140	$28,610	$(12,530)
4 inch	$71,995	$47,693	$(24,302)
6 inch	$157,702	$95,357	$(62,345)
8 inch	$274,263	$152,577	$(121,686)

ES.8 BENCHMARKING AND CUSTOMER IMPACTS

As part of the Study, benchmarking of comparable rates and fees and resulting average customer water bill impacts were completed. The following findings and conclusions are provided based on the comparisons:

- Figure ES-3 presents the bi-monthly bill amount charged to single-family customers with a ¾" meter, under the current and proposed (Option 1) rate structure for FY 2020, which includes the identified revenues increases from the RSA. Customers with lower water use, up to about 32.5 units of water, which represents about 76.2% of this customer group, will likely see a decrease in their bi-monthly bill. The remaining approximately 23.8% of these customers, those that use more than 32.5 water units a billing period, are likely to see an increase in their bill. Overall, the proposed rate structure should improve water affordability for low volume and average single-family customers.

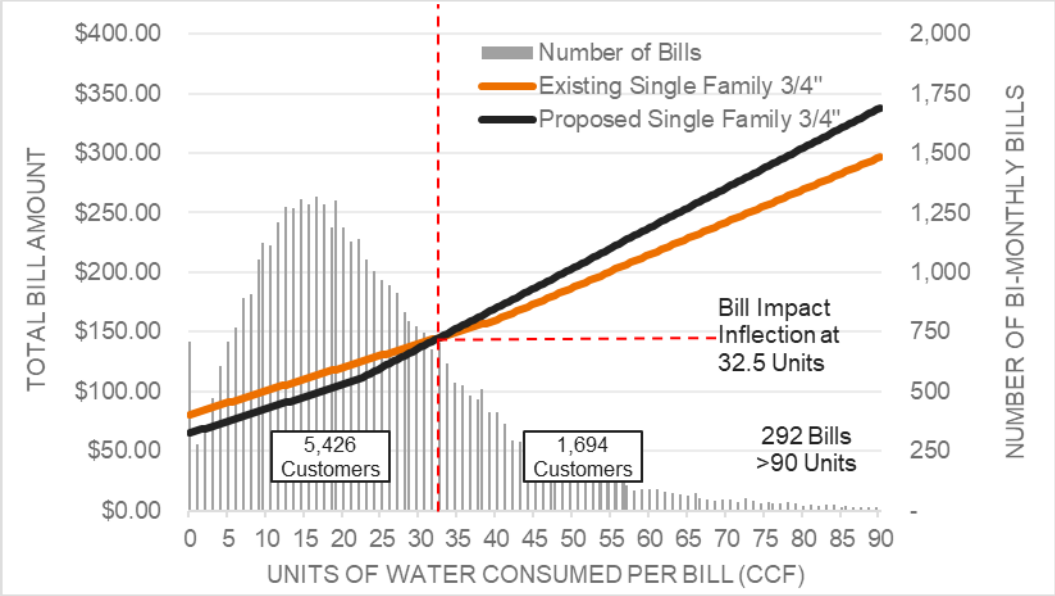

Figure ES-3: Bi-Monthly Bill Impact Summary Chart for ¾" Single-Family Residential Customers, Option 1

- Figure ES-4 presents the bi-monthly bill amount charged to single-family customers with a ¾" meter, under the current and proposed (Option 2) rate structure for FY 2020, which includes the identified revenues increases from the RSA. Customers with lower water use, up to about 30.5 units of water, which represents about 72.9% of this customer group, will likely see a decrease in their bi-monthly bill. The remaining approximately 27.1% of these customers, those that use more than 30.5 water units a billing period, are likely to see an increase in their bill. Overall, the proposed rate structure should improve water affordability for low volume and average single-family customers.

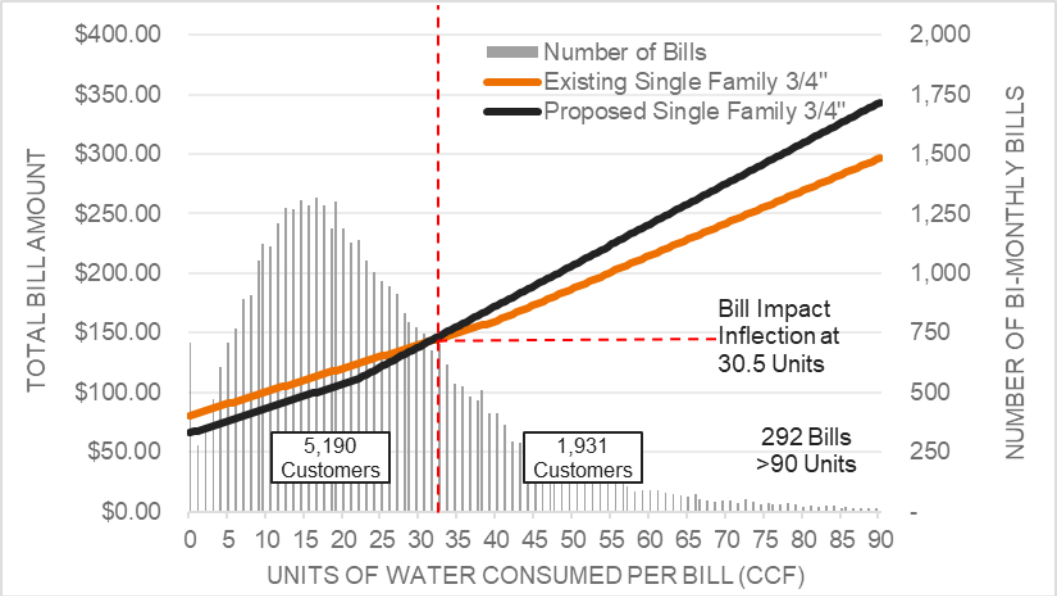

Figure ES-4: Bi-Monthly Bill Impact Summary Chart for ¾" Single-Family Residential Customers, Option 2

- Figure ES-5 shows a comparison of the Utility's single-family ¾" water bill (in monthly dollars) with those of neighboring communities. The figure shows the current water bill as well as the proposed calculated bill for Option 2 assuming monthly water consumption of 13 CCF, which represents the median water use for this customer group. As might be expected, based on the previous finding, the estimated bills under Option 2 are lower than the current estimated bill for the Utility and overall the Utility's bills are in the middle of the comparable communities.

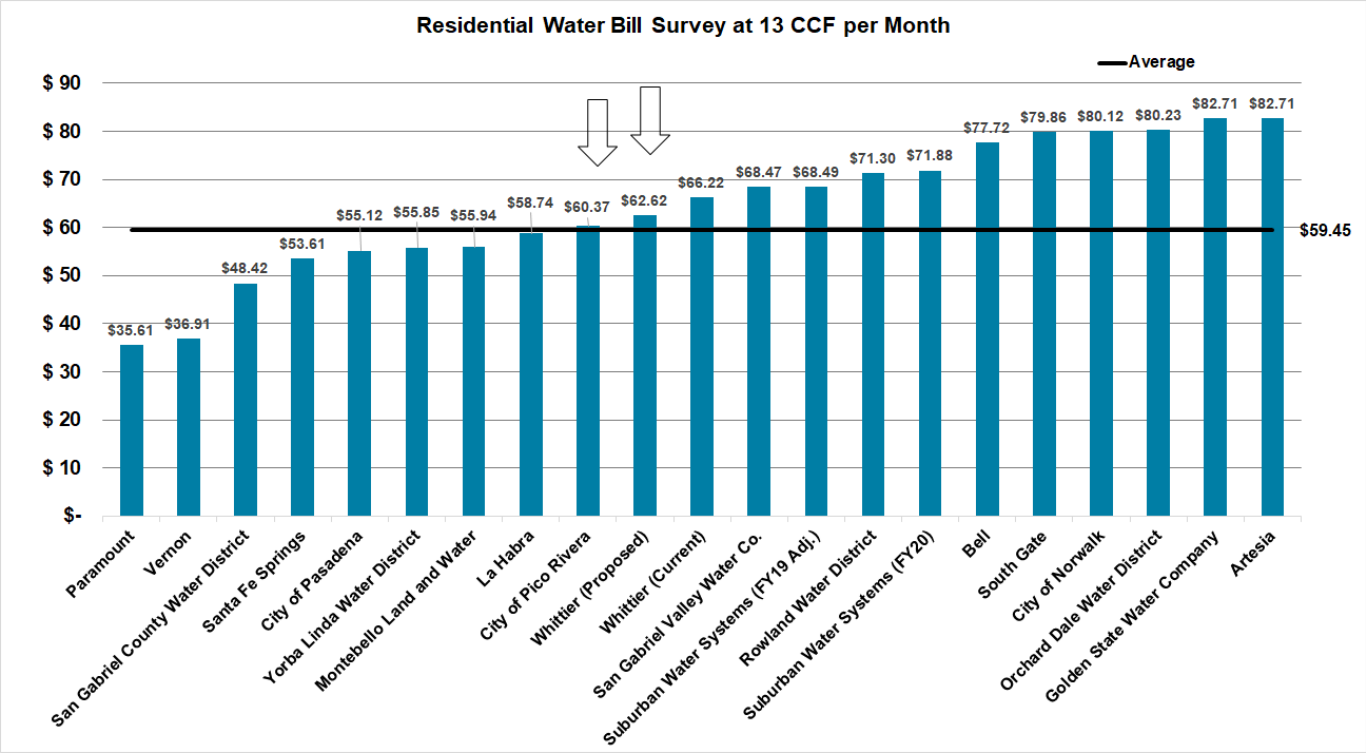

Figure ES-5: Residential Water Bill Survey for Single Family Residential Customers with ¾" Meter

- Figure ES-6 provides a similar comparison for the current and proposed water system connection fee. The Utility's water connection fee is compared with neighboring jurisdictions that also charge a water connection fee and as shown in the figure, the Utility's fees rank in the middle of the comparison.

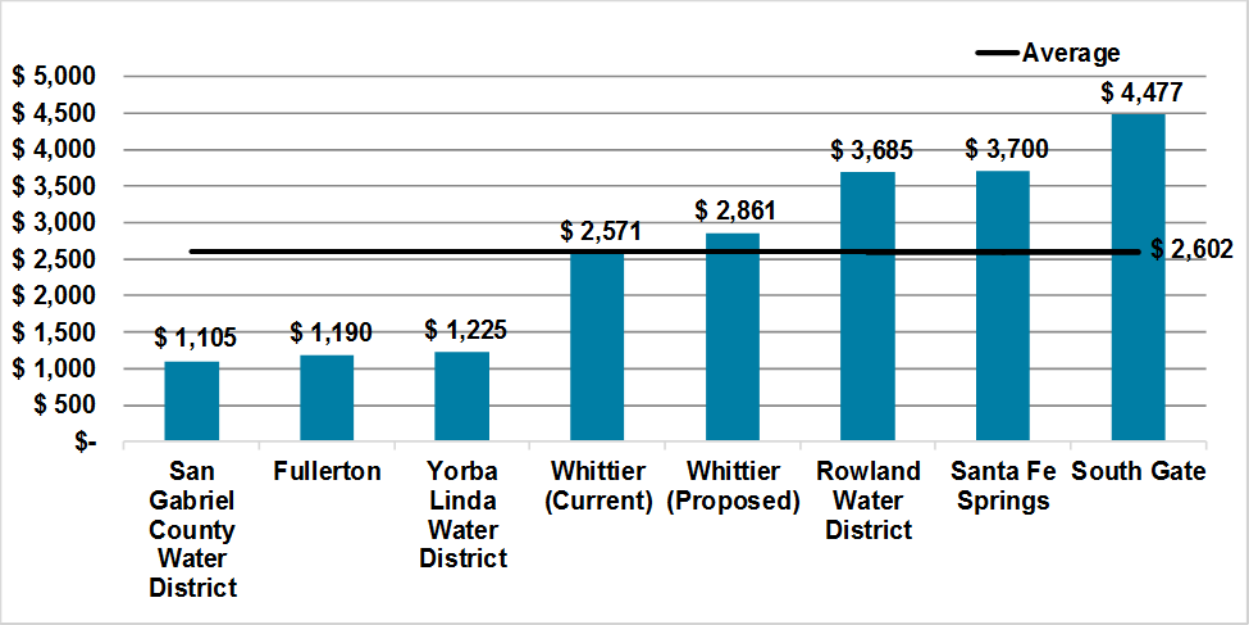

Figure ES-6: Water System Connection Fee Comparison, Single Family ¾" Meter

Abbreviations

AF	Acre-feet
AWWA	American Water Works Association
CAFR	Certified Annual Financial Report
CIP	Capital improvement program
COSA	Cost of service analysis
CPI	Consumer Price Index
DCR	Debt service coverage ratio
ENR	Engineering News-Record
ERU	Equivalent residential unit
FAMS-XL	Financial Analysis and Management System Model
FTE	Full time equivalent (employee)
FY	Fiscal Year
GPD	Gallons per day
gpm	Gallons per minute
CCF	Hundred cubic feet
JPA	Joint powers authority
Mgd	Millions of gallons per day
PERS	Public Employees Retirement System
RSA	Revenue sufficiency analysis
WUA	Whittier Utility Authority

1. INTRODUCTION

Stantec Consulting Services Inc. (Stantec) has conducted a comprehensive cost of service and rate study (Study) for the water system of the City of Whittier (City) and the Whittier Utility Authority (WUA) and collectively referred to as "the Utility". This report presents the objectives, approach, methodologies, source data, assumptions, as well as the findings and recommendations of the Study.

1.1 BACKGROUND

Whittier Utility Authority was formed in 2002, as a joint powers agency (JPA) with the City of Whittier, and both are located in Los Angeles County, about 12 miles southeast of the City of Los Angeles. The JPA was formed to enable WUA to continue to make lease payments to the City for the provision of the utility services in compliance with legal requirements. However, the City Council is the governing board for the Authority and the City continues to hold ownership and responsibility for the operation and maintenance of the water system. The City covers 14.8 square miles and has an estimated population of 87,369 as of January 2018; however, WUA only provides water service to about 52% of the residents and businesses within the City boundary, all other parts of the City receive their water service from either Suburban Water Company, California Domestic Water Company, or the San Gabriel Valley Water Company. There are approximately 11,566 water accounts, of which 76% are Single Family residential, 15% are Multi-Family Residential, and 9% are Non-Residential.

The City's water system obtains one hundred percent of its water supply from groundwater wells located in the Main San Gabriel Basin and Central Basin. The City has five wells located in the Main San Gabriel Basin and two wells located in the Central Basin. The City has also recently assumed ownership of the Water Quality Protection Plan (WQPP) Treatment facility, although it has been operated by the City since 2009. The WQPP Treatment Plant consists of two wells, which will be added to the City's well inventory in the Central Basin and the treatment facility which treats the water from these two Central Basin wells. The San Gabriel Basin well water supply is pumped to the Marshall R. Bowen Pumping Plan, also known as Pumping Plant 2 (PP2), where it is chlorinated and blended before being pumped into the transmission system. In addition to providing retail water service to their rate payers, the City, through its system interties, can provide water to the Cities of Pico Rivera, Santa Fe Springs, and Suburban Water System.

WUA bills its water customers on a bi-monthly basis. The current rate structure includes a usage charge per hundred cubic feet, or centum cubic feet (CCF) of water used (commodity or volumetric charge) and a monthly service fee charged per meter. The volumetric rate includes two tiers for Single Family Residential and Landscape customers with tier width allocations that scale with meter size, all other customers are charged the Tier 1 rate only. The monthly service fee is a uniform rate for each meter size (uniform rate for all customers at that meter size) that increases with the size of the meter. In addition to potable water services, the City also charges for recycled water service, water use for construction purposes, and a flat bi-monthly fee for private fire protection if domestic water service is not provided. This study reviewed the domestic water service, recycled water service and private fire protection charges.

In 2011, the water rates were restructured with the intention of better reflecting the distribution between the fixed and variable costs associated with system operations and with the recognized need to prioritize funding and implementation of an infrastructure replacement program. As a result, customer rates in general had a higher fixed rate meter charge and lower commodity or usage rate, which impacted the lowest water users who saw a significant percentage increase to their bills. To minimize this impact, the Council went back and adopted a lower two-year increase with the plan of gradually getting to the originally proposed structure and funding level.

In 2013, the Council agreed in concept to replacing the water infrastructure over a 40-year period with rate increases to reach the targeted funding level for the program. The program targeted funding repair and replacement of the water distribution system (pipelines), of which many are nearing the end of their useful life as a significant portion of the water infrastructure was built in the 1950s. Projected program costs were based on estimates from the 2008 Water Master Plan and simple calculations based on the amount of linear feet of pipe that needed to be replaced using estimated asset longevity. The 2013 discussions included acknowledgement that the funding target would need to be adjusted as the cost of labor and materials increased over time, consumption changes, and information gained by doing several infrastructure replacement projects. However, the 2013 rates did not look at or allow for updated assumptions regarding the daily operation and maintenance (O&M) of the water utility, such as increased staffing costs or inflationary increases in O&M and water supply cost increases.

Since implementation of the 2013 rate schedule, the City has made great strides improving the condition of assets and purchasing new critical infrastructure. Approximately 30% of the current assets owned and operated by the Water Fund have been installed in the last 5 years (Figure 1-1)[2]. The replacement value is calculated by escalating the original cost of the asset by a the construction cost CPI from ENR to the present day. However, the existing records demonstrate that over the next 30 years a significant portion of the current assets will reach their designed useful life. It should be noted that the useful life estimates of existing assets are theoretical values, as evidenced by the fact that a many of the City's assets that are beyond their useful life are still functioning. However, these older assets should still be considered a liability because at some point they will fail and may result in significant service interruptions and the need for emergency repairs and/or replacements.

[2] Based on an analysis of water assets in present day dollars as part of the Water Connection Fee Analysis.

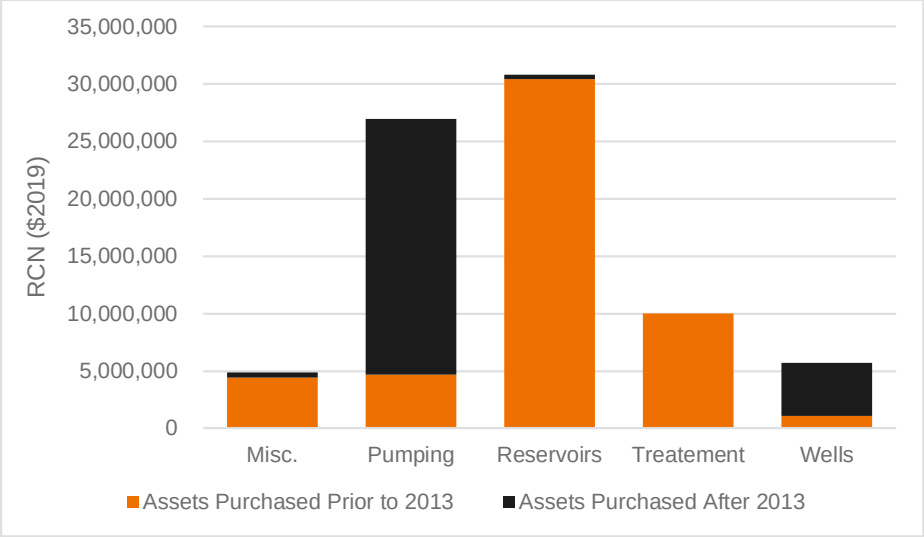

Figure 1-1: Replacement cost in current dollar amounts for all current assets and assets acquired after 2013.

To address the issue of aging infrastructure, the Utility has completed approximately of $26.5 million of infrastructure rehabilitation and replacement, which includes a new main booster station (PP2), well rehabilitation (Well 17), Rideout booster pump station electrical upgrade, 34,466 feet of new water pipeline and updated its Water Master Plan.

The updated Water Master Plan identified additional capital improvement program (CIP) needs and estimated costs. As a result of this update as well as a desire to make sure that water rates and charges are in alignment with the cost of providing service and are equitable among customer classes, the Utility decided to revisit the basis of the rates and charges with a water rates analysis. As part of this current rate analysis, the City desires a comprehensive cost of service analysis that takes into consideration all of the costs of providing service to its water customers, including on-going operations of the utility as well as a long-term capital improvement program. To the extent feasible, the City plans to repair and or replace pipeline and other water infrastructure on a cash funded basis (pay-as-you-go).

In summary, this Study has been prompted by the completion of the Water Master Plan Update, which has provided an updated list of Capital Improvement Projects needed by the City, as well as allowing for increased O&M and water supply costs. This Study evaluates the impact of the increased costs on the revenue requirements of the WUA, the resulting Cost of Service implications, and finally the rates required to generate the revenue to meet the demands of operating the water system. In addition to updating the monthly rates and charges for water customers, this Study also provides an update to the water connection fee charged to new development for capital infrastructure.

1.2 OBJECTIVES

With this Study, the Utility desired to update its financial projections with a revenue sufficiency analysis (RSA) based on a full assessment of historical revenues and expenditure needs of the Utility. The RSA

was conducted to establish a financial plan incorporating projections of O&M costs, CIP project schedules, and the maintenance of both operating and capital reserves. The RSA was then used to develop a full cost-of-service analysis based on test year revenue requirements to allocate costs of providing water service to each customer class, ensuring cost recovery adhered to principles of inter- and intra-class equity.

Finally, this Study examined the existing rate structure and evaluated potential adjustments to the structure. Updated rates were generated for a five-year period. This Study employed cost-of-service and rate design methodologies that are aligned with industry standard practices for rate setting as promulgated by the American Water Works Association (AWWA) and all applicable law, including California Constitution Article XIII D, Section 6(b), commonly referred to as Proposition 218.

1.3 METHODOLOGY

The methodology followed during the Study was completed in the four phases as follows:

Revenue Sufficiency Analysis (RSA) – An RSA was completed through the use of a multi-year forecasting models for the Utility's water system to determine the level of annual revenue required to satisfy the projected annual operating, debt service, and capital cost requirements while maintaining adequate reserves levels. This portion of the Study was conducted using the revenue sufficiency and financial planning module of Stantec's Financial Analysis and Management System (FAMS-XL) modeling system. The RSA includes a ten-year financial plan covering fiscal years (FY) 2019 through FY 2028.

Cost of Service Analysis (COSA) – Using the revenue requirements from the RSA for FY 2020, a detailed COSA was completed based upon principles outlined in the manuals Principles of Water Rates, Fees, and Charges, M1 (American Water Works Association's (AWWA)), 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 services so that the revenue requirements of the utility may be equitably collected through rates. The COSA included the following steps:

- Step 1: Allocate costs to the appropriate activities/functions
- Step 2: Allocate the costs of each function to specific system parameters
- Step 3: Calculate unit costs
- Step 4: Determine Customer Classes
- Step 5: Quantify Units of Service by Customer Classes
- Step 6: Distribute Service Cost to Customer Classes
- Step 7: Credit non-rate revenue to unit costs

Rate Structure Analysis – A rate structure analysis was carried out to evaluate the Utility's current user rate structure. The Study developed specific rate schedules to recover the identified

level of required rate revenue 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;
- Provide fiscal stability and recovery of fixed costs of the system; and
- Promote affordability for customers minimizing their usage.

Water System Connection Fee Analysis – The Utility's connection fee charged to new users connecting to the water system were updated for water related infrastructure based on the current level of service provided to water customers.

1.4 REPORT ORGANIZATION

This Report is organized into seven sections and tracks the analysis used for Option 2. Following this introduction, Chapter 2 discusses the revenue sufficiency analysis for the water fund. Chapter 3 details the cost of service analysis and Chapter 4 presents the rate design and results. Chapter 5 provides the water connection fee summary analysis. Chapter 6 presents a summary of the recommended rates and fees for Option 2. Chapter 7 presents a summary of the bill impacts and a comparison of Whittier's current and proposed rates to those of other regional water providers. Detailed tables for the revenue sufficiency analysis and cost of service analysis are presented in Appendix A and B, respectively. Appendix C includes the full schedule of calculated rates for Options 1 and 2, as well as other recommended fees. Appendix D includes detailed tables for the water system connection fee analysis. Appendix E includes data sources for the water rate and fee benchmarking comparisons.

2. REVENUE SUFFICIENCY ANALYSIS

2.1 DESCRIPTION

This section of the Report presents the financial management plan and corresponding plan of water rate revenue adjustments developed in the revenue sufficiency analysis (RSA) phase of the Study. The following sub-sections present a description of the source data, assumptions, and results of the RSA and Appendix A provides detailed supporting schedules for the Utility financial management plan.

The RSA phase of the Study included evaluation of several multi-year planning scenarios through interactive work sessions with the Utility staff. The focus of this scenario analysis was on the water rate revenue increases resulting from adjusted levels of capital spending, in addition to other sensitivity analyses, to determine reasonable level of spending and rate revenue increases. This process ensured staff input was incorporated in the development of the recommended Utility financial management plan and the resulting water rate revenue adjustments presented in this report. The result is a financial plan that uses the most current data to develop a multi-year projection, meeting key financial performance objectives while minimizing rate adjustments to the extent possible.

Stantec obtained the Utility's historical and budgeted financial information regarding the operation of its water system, as well as historical customer counts and volume data by class of customer. Utility staff also provided a multi-year capital improvement program (CIP) and documented WUA's current debt service obligations and covenants, or promises made to lenders, relative to net income coverage requirements, and reserves. Stantec also counseled with the Utility staff regarding other assumptions and policies that would affect the performance of the Utility, such as trends in demands, expected customer growth, capital funding sources, earnings on invested funds, escalation rates for operating costs, and targeted key performance indicators (KPI) such as debt coverage and fund reserve levels.

The information was entered into the financial module of Stantec's Financial Analysis and Management System (FAMS-XL) interactive modeling system. This produced a ten-year projection of the sufficiency of current water rate revenue to meet current and projected financial requirements. The FAMS-XL tool also aided in determining the level of rate revenue increases necessary in each year of the projection period to satisfy the system's annual financial requirements.

The revenue sufficiency and financial planning model utilizes all projected available funds in each year of the projection period to pay for capital projects. The model is set up to reflect the rules of cash application as defined and applied by the Utility staff, and it produces a detailed summary of the funding sources to be used for each project in the CIP. To the extent current revenues and unrestricted reserves are not adequate to fund all capital projects in any year of the projection period, the model identifies a borrowing requirement to fund those projects or portions thereof are determined to be eligible for borrowing. In this way, the FAMS-XL model is used to develop a borrowing program that includes the required borrowing amount by year and the resultant annual debt service requirements for each year in the projection period.

2.2 SOURCE DATA

The following presents the key source data relied upon in conducting the RSA:

2.2.1 Beginning Fund Balances

Utility staff provided FY 2018 beginning fund balances for the water system as reported in the 2017 Comprehensive Annual Financial Report (CAFR). Schedule 2 of Appendix A provide the beginning balances in detail.

2.2.2 Revenues

The Utility's water fund projected revenues were developed based on an analysis of historical budget and actual revenues collected. The revised FY 2018 Budget, and the FY 2019 Budget served as the basis for projections. Revenues consist of rate revenue (water sales and water meter service charges), sales to Santa Fe Springs, Pico Rivera (FY 2018 only), Suburban Water Company (FY 2018 only), and CBMWD reimbursements (FY 2018 only), rental income, interest income, and other minor revenue from miscellaneous service charges.

Projected rate revenue is based upon the FY 2019 budgeted revenue (the portion of the rate revenue that is allocated to the Facility Replacement Fund [Fund 450] was originally budgeted to match the FY 2018 budget amount) however, the City implemented a volumetric rate increase in FY 2019. The FY 2019 assumed revenue has been re-calculated to reflect the 4.96% of the fixed and volumetric rate revenue as directed by staff.

As mentioned above, WUA also provides water to the City of Santa Fe Springs on a wholesale basis. Santa Fe Springs water sales were calculated assuming 3,000 AFY of consumption, evenly distributed across the calendar year, at starting rate of $275/AF, escalating with CPI each year starting January 1st each year. The actual FY 2018 revenue and the FY 2019 Budget were used to project all other revenues amounts, excluding interest income (which was calculated annually based upon projected average fund balances and assumed interest rates).

Other non-water sales revenue sources include rental income derived from leased space at the corporation yard. It is worth noting that the "rental income" and "rental income from the yard" revenue line items have been increased to $500,000 and $105,000 for FY 2019, respectively, and are escalated with CPI based on direction from staff. Schedule 4 in Appendix A provides a summary of projected revenues over the projection period.

2.2.3 Operating Expenses & Existing Debt

The Utility's water operating expenses include all operating and maintenance (O&M) expenses and capital outlays. O&M expenses were projected by the Utility's individual expense categories as outlined in the actual FY 2018 expenses and FY 2019 Budgets adjusted annually thereafter based upon assumed cost escalation factors which reflect certain historical industry indices and the staff expectations (discussed in Section 2.3.1). The City's variable operating expenses have historically been lower than

budgeted, to account for this, these expenses will be forecast based on 80% of the budgeted amount starting in FY2020. Additionally, Taxes & Assessments, which are comprised of water purchase expenses from Central Basin, San Gabriel Basin and LA county, have a known unit rate schedule that has been used in place of the cost escalation factor. The Utility's existing annual principal and interest debt service payments reflect the repayment schedules of each outstanding debt issuance provided by staff. Budgeted operating expense categories for FY 2019 are depicted in Figure 2-1[3].

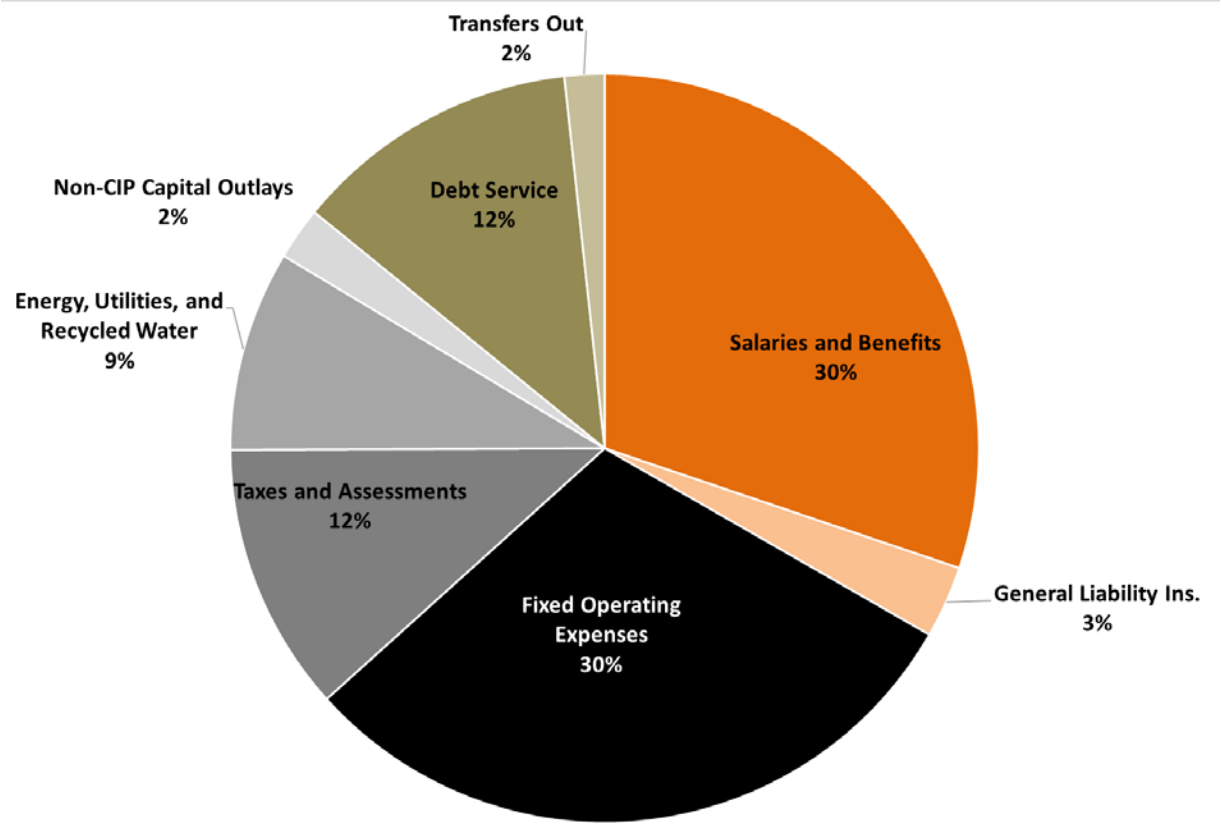

Figure 2-1: Budgeted Operating Expense Categories, FY 2019

2.2.4 Transfers

The Utility makes annual transfers out of the Operating Fund to the General Fund and Street Repair Fund (Fund 715) totaling approximately $172,000.

Schedule 5 in Appendix A provides a summary of projected operating expenses, debt service, and transfers over the projection period.

[3] CIP excluded from summary of budgeted annual expenses due to variability in annual capital expenditures and distinct approaches to annual capital budgeting.

2.2.5 Capital Improvement Program

The Utility staff provided the CIP that was developed as part of the Water Master Plan Update which was completed in April 2018. Based on discussions with Utility staff, the delivery timeline of projected CIP projects identified in the Master Plan were modified in order to minimize rate impacts to customers. In total, the revised CIP from FY 2018 through FY 2028 is approximately $60.7 million, averaging $5.5 million in capital spending per year. It was also assumed that up to 15% of all pipeline replacement projects are for system expansion and are eligible for use of water system connection fees to partially finance these projects. A list of projects and costs by year is included on Schedule 6 of Appendix A.

2.3 ASSUMPTIONS

The following presents the key assumptions utilized in the development of the financial plan which are provided on Schedules 1 and 3 of Appendix A.

2.3.1 Cost Escalation

Annual cost escalation factors for the various types of categories of O&M expenses were developed based upon discussions with the Utility staff, a review of historical trends, and published projections of general inflation from the Philadelphia Federal Reserve (see Schedule 3). Additionally, a cost escalation of 3.0% was applied to CIP costs for projects scheduled from FY 2020 through the end of the modeling period.

2.3.2 Interest Earnings

The RSA reflects assumed interest earning rates on fund balances of 1.0% throughout the projection period (FY 2020 - FY 2028). This level of interest rate is representative of recent historical interest received relative to the midpoint of the Utility's beginning and ending cash balances.

2.3.3 Customer Growth & Volume Forecast

It is assumed that the City of Whittier is nearly built out and that there will be limited new connections added to the system. Projections of account growth and changes in billed volume are based upon the anticipated number of new service connections to the system and recent trends in water demands. The projection in the current modeling period includes the growth associated with completion of a 700-unit development over the next 10 years, yielding approximately 70 new accounts per year.

2.3.4 Minimum Reserve Recommendations

Utilities' reserve balances are funds set aside for a specific cash flow requirement, financial need, project/task, or legal covenant. These balances are maintained to meet short-term cash flow requirements, minimize the risk associated with financial obligations, and cover operational and capital needs under adverse conditions. The level of reserves maintained by a utility is an important component and consideration of developing a utility system multi-year financial management plan.

Most utilities, rating agencies, and the investment community place a significant emphasis on having sufficient reserves and designations. The rationale related to the maintenance of adequate reserves and designations is twofold. First, it helps to ensure a utility will have adequate funds available to meet its financial obligations during unusual periods (i.e. when revenues are unusually low and/or expenses are unusually high). Second, it provides funds that can be used for emergency repairs or replacements to the system that can occur as a result of natural disasters or unanticipated system failures.

Moreover, a utility should review the approach used to establish reserve and designated balances periodically given debt levels and capital infrastructure activity can vary over time, which would have an effect on the appropriate level of the reserve and designated balances. This type of review allows for the philosophy of establishing reserve and designated targets to be modified to better reflect existing conditions and issues.

Stantec recommends the development of both an Operational and a Capital Reserve. The operational reserve should be set to cover three months of operational expenses, starting at $1.9M, growing to $3.1M by FY 2028 as expenses escalate. The Capital Reserve target is recommended at $2.5M over the next ten years, which represents approximately 46% of the funding for projected annual CIP expenses and approximately 8% of annual depreciation. Allowing for this Capital Reserve in the rate requirement will help ensure the City has cash on hand to fund emergency repairs above and beyond those anticipated in the 10-year CIP plan.

Overall, these levels of reserves are very consistent with 1) our industry experience for similar systems, and 2) a healthy level of reserves for a municipal utility system per the evaluation criteria published by the municipal utility rating agencies (Fitch, Moody's, and Standard & Poor's). The financial plan in this Study ensures reserves are maintained at or above these minimum targets. Schedule 8 in Appendix A provides beginning and ending projected fund balance (rows 28 and 29).

2.3.5 Future Borrowing & Capital Funding

This Study has analyzed the impacts of funding projected annual CIP projects on either a cash (pay-as-you-go) basis or a combination of cash and debt funding. The rates and charges presented in this Report reflect two funding options including Option 1 which assumes a combination of cash and debt funding and Option 2 which assumes the full cash funded option. This Report presents the full results for Option 2 with detailed schedules and results included in Appendix C.

For Option 1 it was assumed that certain projects, primarily reservoir replacement projects, would be funded through a revenue bond issuance in the latter years of projection period (2025-2028). These projects are the Greenleaf/Hoover Storage Replacement and the College Hills Reservoir Replacement Projects. It is assumed these projects would be funded through borrowing in the later years of the 10-year projection period. All other projects are assumed to be paid on a pay-as-you-go or cash basis. Revenue bond assumptions included in this Study assume a 20-year term at an interest rate starting at 3.50% in FY 2018 increasing by a half percent each year to 5.0% by FY 2021 and remaining there for the rest of the projection period.

Ultimately, the Utility's financing and funding decisions will reflect actual future conditions and presumably, broader financing objectives. The projections in the financial plan reflect a ten-year CIP which demonstrates a concentrated effort on rehabilitating the water system while minimizing projected future rate impacts.

Complete schedules of assumed future borrowing can be found on Schedule 7 Appendix A. In addition, Schedule 8 of Appendix A provides a detailed summary of the capital funding plan (rows 22 – 25).

2.4 RESULTS

Based upon the data, assumptions, and policies presented herein, the Utility's current water rates will not provide sufficient revenue to meet its ongoing debt service, capital, operating, and reserve requirements over a multi-year projection period (Schedule 10). Without adjustments to existing rates and the current assumptions, the Utility's cash reserves will fall below the reserve target by FY 2024 and would be completed exhausted by FY 2025. As such, the RSA developed a financial management plan and corresponding plan of water rate revenue increases to meet the Utility's current and projected cost requirements under the assumed and projected conditions described in this report. Those revenue increases are presented in Table 2-1 and Table 2-2.

Table 2-1: Proposed Plan of Water Rate Revenue Increases, Option 1[4]

Assumed Implementation Date	Rate Adjustment
July 1, 2019	3.5%
July 1, 2020	3.5%
July 1, 2021	3.5%
July 1, 2022	3.0%
July 1, 2023	3.0%

Table 2-2: Plan of Water Rate Revenue Increases, assuming full Cash Funding of CIP projects, Option 2

Assumed Implementation Date	Rate Adjustment
July 1, 2019	5.00%
July 1, 2020	5.00%
July 1, 2021	5.00%
July 1, 2022	5.00%
July 1, 2023	5.00%

It is important to note that the projections of future conditions underlying this analysis are not intended to be predictions. Applicable to many water and wastewater utility systems, there are multiple factors

[4] Rate adjustments shown in this table reflect the increase in rate revenue required each fiscal year. FY 2020 rate adjustments will be different for each customer class due to updates to the rate structure. Starting in FY 2021, rates will increase by the percent amount shown in this table.

beyond the Utility's control, such as i) weather, ii) regulatory changes, iii) national, regional, and local economic conditions, iv) the rate of growth in new customers, v) customer reaction to rate adjustments, vi) operating and capital cost inflation, and vii) changes in the timing and composition of the Utility's CIP, that will have material impacts on the future financial condition. These sources of uncertainty will yield differences between forecasted and actual results, some of which may be material. While Stantec bears no responsibility to update this report for unforeseen events and circumstances occurring after the date of this report, future management actions must be informed by, and adjusted to reflect, future outcomes as they occur. These comments are provided to emphasize the importance of active management informed by the reality of future operations by the Utility. It is Stantec's understanding that the Utility staff intends to use these models and update them to evaluate future projected rate increases annually based upon the most current available data at that time.

Appendix A includes detailed schedules presenting all components of the financial management plan developed for the Utility.

3. COST OF SERVICE ANALYSIS

The purpose of a Cost-of-Service Allocation (COSA) is to determine the cost of providing water service to customer classes so that the proposed rate structure is aligned with those costs. This Study employed well-established industry practices for these types of studies as recognized by the American Water Works Association (AWWA) and other accepted industry practices. The following section presents a detailed description of the COSA methodology and corresponding results.

This Study employed the "base-extra capacity" cost-of-service method promulgated in AWWA's Manual M1: Principles of Water Rates, Fees, and Charges (M1) for the water system, whereby costs are first allocated to individual functions or activities - Source of Supply, Treatment, Transmission & Distribution, Storage, Customer Service, Meters & Services, and Recycled Water. Once allocated to the functions or activities, costs included in each function are distributed to appropriate system parameters - Base Capacity (average day demands), Extra Capacity (maximum day demands and peak hour demands[5]), Customer costs, Meter costs, and fire protection, in order to calculate unit costs. The unit costs are then used to distribute the system costs to the various components of the rate structure, thereby ensuring that the costs allocated to each customer class are proportional and based on the relative impact each have on the system.

In addition to retail water rates, this Study includes recycled water use, and private fire protection charges.

3.1 PROCESS

The COSA was based upon the Utility's projected FY 2020 annualized expenditure and revenue requirements per the RSA, and included the following steps as shown in Figure 3-1 below.

[5] For this Study, billing data was used to directly measure average day and maximum month demands. The Whittier Water Master Plan Update identifies a Max-Day Coincident Peaking of 2.0 times the Average Day and a Max Hour peaking factor of 3.04.

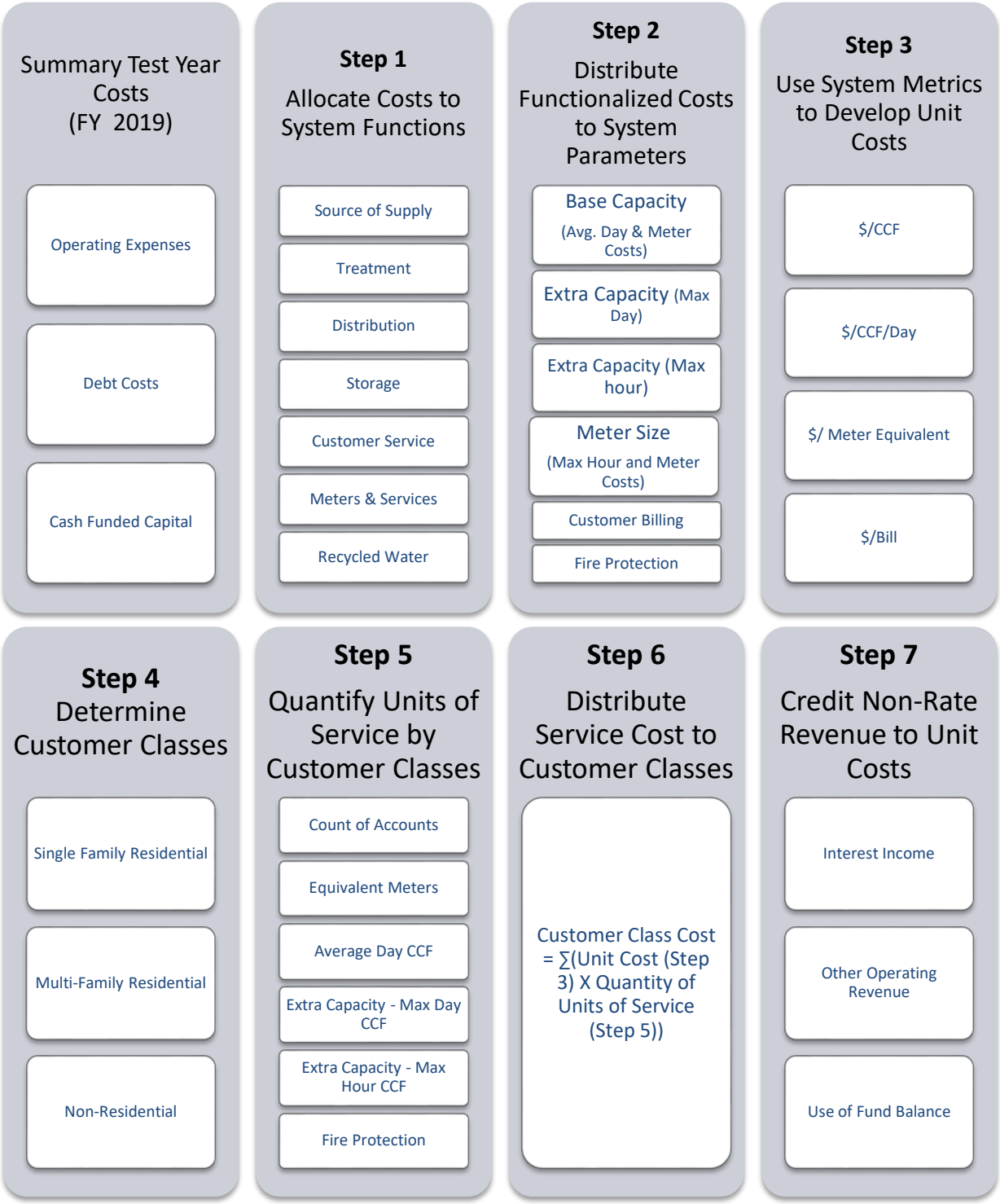

Figure 3-1: Schematic of Cost Allocation Steps

The following sub-sections give a detailed description of the COSA methodology and high-level results, while Appendix B includes detailed schedules of those results.

3.1.1 Step 1: Allocate Cost to System Functions

The operating expenses, debt service, and cash-funded capital requirements within the water system were distributed to specific activities or functional components of service.

Industry best practices provide a framework for assigning operating and capital expenses to system functions, but because the reality of each utility's cost causation and design can vary, the specific knowledge and insight of Utility staff was relied upon to functionalize all the line item costs to the respective functional components identified above. A summary of cost functionalization is presented in Table 3-1**.** The Fixed Asset percentages were assigned based on the net value of existing assets, the CIP percentages were assigned based on the percent value of capital projects in each cost category, and the Indirect percentages were based off of the percent value of operating expenses directly allocated to other cost categories.

The detailed summary of all cost allocations to functional components is presented in Schedule 12 of Appendix B.

Table 3-1: Percent Allocation of Cost Categories to Functional Components

Allocation	Source of Supply	Treatment	Pumping	Storage	Transmission	Distribution	Meters & Services	Customer Billing	General & Administrative	Fire Protection
Source of Supply	100.0%	-	-	-	-	-	-	-	-	-
Treatment	-	100.0%	-	-	-	-	-	-	-	-
Pumping	-	-	100.0%	-	-	-	-	-	-	-
Storage	-	-	-	100.0%	-	-	-	-	-	-
Transmission	-	-	-	-	100.0%	-	-	-	-	-
Distribution	-	-	-	-	-	100.0%	-	-	-	-
Meters & Services	-	-	-	-	-	-	100.0%	-	-	-
Cust. Billing	-	-	-	-	-	-	-	100.0%	-	-
General & Administrative	-	-	-	-	-	-	-	-	100.0%	-
Fire Protection	-	-	-	-	-	-	-	-	-	100.0%
CIP	1.6%	-	8.1%	27.2%	9.6%	52.0%	0.27%	-	1.2%	-
Rec. Water	100.0%	-	-	-	-	-	-	-	-	-
Indirect	21.6%	0.43%	7.8%	-	-	1.9%	1.3%	0.5%	66.6%	-
Fixed Assets	4.2%	0.1%	44.0%	3.7%	22.8%	20.4%	-	0.1%	4.8%	0.02%

3.1.2 Step 2: Distribute Functionalized Costs to System Parameters

Next the costs of each functional component are distributed to system parameters based on water system demand and operational metrics. Assigning costs to each functional component not only allows us to allocate costs to specific customer classes but is also foundational to developing a rate structure that is aligned with the cost to provide service (as required by Proposition 218).

For the most part, the system parameters are direct counterparts to the functional components already discussed. For example (and as shown in Table 3-2), **Customer Service** costs are allocated to the customer parameter, **Meters & Services** are allocated to the meters and service parameter, and the **Fire Protection** costs are allocated to the Fire Protection parameter. Similarly, **Source of Supply** costs are allocated to the system's Base Capacity parameter, which is a measure of the system's average daily usage.

Treatment costs are split between the Base Capacity and Extra Capacity-Max Day parameter. Base capacity represents the costs that would be incurred in delivering water service if the volumes were required at a uniform rate (or flow). The Extra Capacity-Max Day reflects the costs of treating water volumes at rates above the average (i.e. Base Demand)[6]. This Base Capacity portion is calculated as the ratio of the Max Day System Water Demands and the Average Day System Water Demands (see Figure 3-2 and Table 3-3).

$$Base\ Demand = \frac{Average\ Day}{Max\ Day} = \frac{4{,}401\ GPM}{8{,}803\ GPM} = 50\%$$
$$Extra\ Demand = \ 100\% - Base\ Capacity = 50\%$$

Figure 3-2: Relative Base Demand vs. Extra Demand (Max Day) for Treatment Costs

Transmission & Distribution and **Storage** costs are split three ways between the system's Base Capacity (average demand), Extra Capacity – Max Day, and Extra Capacity – Max-Hour (Figure 3-3). The calculation of the Base Capacity, Extra Capacity (Max Day), and Extra Capacity (Max Hour) follows the same logic used to calculate the system parameter ratios for Treatment; however, a Max-Hour factor is used to reflect the different system requirements when designing transition and distribution systems[7].

[6] Average Day use was calculated using customer billing data. The Whittier Water Master Plan Update identifies a Max-Day Coincident Peaking of 2.0 times the Average Day

[7] The Whittier Water Master Plan Update identifies a Max Hour peaking factor of 3.04 times the average day flow rate.

$$Base\ Demand\ Costs\ = \frac{Average\ Day}{Max\ Hour} = \frac{4{,}401\ GPM}{13{,}380\ GPM} = 32.9\%$$

$$Extra\ Demand\ (Max\ Day) = \frac{Max\ Day - Average\ Day}{Max\ Hour} = \frac{8{,}803\ GPM - 4{,}401\ HCF/Day}{13{,}380\ HCF/Day} = 32.9\%$$

$$Max\ Demand\ (Max\ Hour) = \frac{Max\ Hour - Max\ Day}{Max\ Hour} = \frac{13{,}380\ GPM - 8{,}803\ GPM}{13{,}380} = 34.2\%$$

Figure 3-3: Relative Base Demand vs. Extra Demand (Max Day and Max Hour) for Transmission & Distribution and Storage

Table 3-2 presents the resulting mapping of the function components to the system parameters and demonstrates the volumetric relationship between average day, maximum month, maximum day, and maximum hour. All expenses allocated to General & Administrative function are distributed among the system parameters using the indirect cost allocation method[8].

Table 3-2: Mapping Functional Components to System Parameters

Functional Costs	Base Demand - Avg Day	Extra Demand - Max Day	Extra Demand - Max Hour	Meters & Services	Customer Billing	Fire Protection
Source of Supply	100.0%					
Treatment	50.0%	50.0%				
Pumping	32.9%	32.9%	34.2%			
Storage	32.9%	32.9%	34.2%			
Transmission	50.0%	50.0%				
Distribution	32.9%	32.9%	34.2%			
Meters & Services				100.0%		
Customer Billing					100.0%	
General & Administrative	74.7%	10.1%	9.9%	3.8%	1.5%	0.0%
Fire Protection						100.0%

[8] The indirect cost allocation method is used distribute General & Administrative costs to each System Parameter based on the proportional allocation of all other operating expenses to these categories. For example 74.7% of all operating expenses have been allocated to Base Demand, so 74.7% of General & Administrative costs have been allocated to Base Demand as well.

Table 3-3: Water System Peaking Profile[9]

	Average Day (GPM)	Max Month (GPM)	Max Day (Coincident[10]) (GPM)	Max Hour (Full Day) (GPM)
Water System Demands	4,401	6,152	8,803	13,380
Water System Peaking Factors	N/A	1.40	2.00	3.04

3.1.3 Step 3: Use System Metrics to develop Unit Costs

Next the functionalized costs for operating, debt service and capital spending from **Step 1** are allocated to system parameters based on the values shown in Table 3-2. The System Parameter costs are then converted to a Unit Cost of Service based on the appropriate system metrics. The results are summarized in Schedule 13 in Appendix B.

3.1.4 Step 4: Determine Customer Classes

A Customer Class consists of a group of customers, with similar characteristics, who share responsibility for certain costs incurred by the Utility. Joint costs are shared among all customers in the system proportionately based on their service requirements that drive costs; some specific costs are borne by specific classes based on the characteristics of that group alone.

The Utility currently maintains one rate structure for all customer (with the exception of the two-tier structure for Single Family and Landscape Customers). The study proposes the following Retail Customer Classes based upon consideration of the characteristics, service patterns, and existing classifications of the City:

- Single Family Residential
- Multi-family Residential
- Non-Residential

3.1.5 Step 5: Quantify Units of Service by Customer Class

Once system costs are functionalized, distributed to parameters, and unit costs are developed, the costs are then allocated among Customer Classes based on their respective service requirements, as measured by units of service for each respective system parameter (see Table 3-6). The number of accounts, number of bills, and average day water usage has been directly measured based on customer billing data. The Max Day and Max Hour by Customer Class has been computed based on total system peaking (Table 3-4) as well as daily and hourly "compression factors", based on industry experience and City staff's understanding of typical customer behavior. These compression factors are necessary to

[9] Water System Demands are from Table 5-5 of the Whittier Water Master Plan Update
[10] Coincident Max Day Demand refers to the peak day use by customers as compared to Non-Coincident Max Day Demand which reflects a hypothetical peak demand if all customers peaked at the same time.

estimate max day and max hour demands for each customer class, due to the fact that actual maximum day and maximum hour demand data is not available for individual customer classes.

Table 3-4: Extra Demand Factors by Customer Class

Description	Single Family Residential	Multiple Family Residential	Non-Residential	Landscape
Average Daily Consumption (CCF/d)	7,762	4,306	3,468	440
Max Month (CCF/d)	9,764	5,378	5,239	659
Ratio of Max Month/Avg. Day	1.26	1.25	1.51	1.50
System Max Day/Max Month Ratio	1.58	1.58	1.58	1.58
Weekly Usage Adjustment	1.75	1.17	1.00	1.40
Input Max Day Peaking Factor	**3.50**	**2.30**	**2.40**	**3.30**
Peak Hour Usage Adjustment	1.50	1.50	1.50	1.50
Input Peak Hour Peaking Factor	**5.25**	**3.45**	**3.60**	**4.95**

For the daily compression factor, it was assumed that the water usage for Single Family Residential peaks 4 days a week based on irrigation limitations, where Multi-Family Residential with limited outdoor irrigation has a more consistent water use demand over most of the week, and Non-Residential customers do not peak at all across the week. For the hourly compression factor, it was assumed that all customers focus most of their usage over the course of 16 hours.

The meter equivalency metric allows us to express all meter sizes in terms of multiples of a ¾" meter and then calculate the number of "equivalent meters" (EM) by Customer Class. Equivalent Meters are an industry-standard factor used to represent the proportional demand that a connection places on the system based on the design capacity necessary to serve it. The meter equivalency table adopted by this Study, including sources, is shown in Table 3-5.

Table 3-5: Meter Equivalencies

Meter Size	GPM	Meter Equivalence [(a)]
3/4"	30	1.00
1"	50	1.67
1 1/2"	100	3.33
2"	160	5.33
3"	320	10.67
4"	500	16.67
6"	1,000	33.33
8"	1,600	53.33

(a) Source: Table B-1, Appendix B, AWWA M1 Manual, 6th Ed.

The units of service utilized for this analysis by Customer Class are summarized in Table 3-6. For each customer class the average day use is derived by taking the total use for each customer class from the billing data and dividing it by 365. Max Day Extra Demand is calculated by multiplying the average demand by the calculated peaking factors (Table 3-4) and then subtracting the Average Demand. Similarly, the Max Hour Extra Demand is calculated as the difference between the Total Max Hour and Total Max Day Demand.

Table 3-6: System Units of Service by Customer Class

Units of Service Summary	Base Demand - Avg Day (CCF/d)	Extra Demand - Max Day (per CCF/d)	Extra Demand - Max Hour (per CCF/d)	Meters & Services (per ERU)	Customer Billing (per Bill)	Fire Protection (per Bill)
Single Family Residential	3,951	9,878	6,914	10,214	52,956	52,956
Multiple Family Residential	1,892	2,459	2,176	2,924	10,710	10,710
Non-Residential	1,508	2,111	1,810	2,855	5,040	5,040
Landscape	252	580	416	435	690	690
TOTAL	**7,603**	**15,028**	**11,316**	**16,428**	**69,396**	**69,396**

3.1.6 Step 6: Distribute Service Costs to Customer Classes

Next system parameter costs are distributed to each Customer Class based on the respective units of service shown in Step 5 and the unit costs calculated in Step 3. Results are shown in Table 3-7.

Table 3-7: Customer Class Cost Allocation by System Parameter

Revenue Requirements	Total	Single Family Residential	Multiple Family Residential	Non-Residential
Base Demand - Avg Day	$9,430,344	$4,900,582	$2,346,549	$2,183,212
Extra Demand - Max Day	$2,940,437	$1,932,650	$481,214	$526,573
Extra Demand - Max Hour	$2,612,872	$1,596,562	$502,375	$513,935
Meters & Services	$387,461	$240,902	$68,964	$77,596
Customer Billing	$147,904	$112,866	$22,826	$12,212
Fire Protection	$246	$188	$38	$20
Total	**$15,519,265**	**$8,783,750**	**$3,421,966**	**$3,313,549**

3.1.7 Step 7: Credit Non-Rate Revenue

Non-rate revenue is used to offset the annual cost of service that would otherwise need to be recovered in rates or service charges. Non-rate revenue includes interest income and other operating revenue

(such as miscellaneous fees). Non-rate revenues are allocated equitability among customers using the same proportions calculated in previous cost allocations.

The non-rate revenue is credited as shown in below in Table 3-8 and Table 3-9 yields the total rate revenue requirement. Notice that the Total Costs in Table 3-9 matches the total costs from Schedule 13 (row 11).

Table 3-8: Total Rate Revenue Requirement

Revenues and Expenses	Amount
Operating Expenses	$9,542,248
Debt Service Payments	$1,344,762
Cash Funded Capital	$1,785,867
Transfers Out	$186,537
Change In Fund Balance	$2,659,851
Total Expenses	**$15,519,265**
Interest and Non-Operating Revenue	$763,179
Other Operating Revenue	$872,628
Recycled Water Revenue	$47,812
Rate Revenue Requirement	**$13,835,646**
Private Fire Rate Revenue	$182,397
Retail Rate Revenue	**$13,653,249**

Finally, the rate revenue requirement is expressed in terms of System Parameters and by customer class. The costs are allocated to each of the customer classes based on their respective use of the system (total water usage, peak water usage, and number of equivalent meters). The manner in which the allocated system parameter costs are used in the rate design will be described in Section 4.2 Proposed Rate Structure.

Figure 3-4 and Figure 3-5 show the allocation of the revenue requirement by customer class based on the existing rates and as calculated in the COSA analysis for Options 1 and 2, respectively. Under Option 1, it shows that cost allocation should be higher for the multi-family, non-residential (commercial) and landscape customers as would otherwise be indicated by the current structure. Or, in other words, the cost allocation burden on residential customers is currently too high relative to the other customer classes, and a portion of those costs need to be re-allocated to the other customer classes based on their cost of service.

These same findings hold true for Option 2, however the overall cost burden is higher, in general, for all customer classes as the revenue requirement under Option 2 is greater than under Option 1.

Table 3-9: Total Rate Revenue Requirement by System Parameter

Revenue Requirements	Total	Single Family Residential	Multiple Family Residential	Non-Residential	Landscape
Base Demand - Avg Day	$9,430,344	$4,900,582	$2,346,549	$1,870,376	$312,836
Extra Demand - Max Day	$2,940,437	$1,932,650	$481,214	$413,069	$113,504
Extra Demand - Max Hour	$2,612,872	$1,596,562	$502,375	$417,840	$96,095
Meters & Services	$387,461	$240,902	$68,964	$67,336	$10,260
Customer Billing	$147,904	$112,866	$22,826	$10,742	$1,471
Fire Protection	$246	$188	$38	$18	$2
Total Revenue Requirements	**$15,519,265**	**$8,783,750**	**$3,421,966**	**$2,779,381**	**$534,168**
Less: Other Revenue	($1,866,016)	($1,056,147)	($411,453)	($334,189)	($64,228)
Rate Revenue Requirement	**$13,653,249**	**$7,727,603**	**$3,010,514**	**$2,445,192**	**$469,940**

Table 3-10: Total Rate Revenue Requirement by Customer Class, less Other Revenue Offset

	Base Demand - Avg Day	Extra Demand - Max Day	Extra Demand - Max Hour	Meters & Services	Customer Billing	Fire Protect.	Total
Single Family Residential	$4,311,343	$1,700,271	$1,404,594	$211,936	$99,295	$165	$7,727,603
Multiple Family Residential	$2,064,403	$423,354	$441,970	$60,672	$20,082	$33	$3,010,514
Non-Residential	$1,645,484	$363,402	$367,600	$59,240	$9,450	$16	$2,445,192
Landscape	$275,221	$99,856	$84,541	$9,026	$1,294	$2	$469,940
Total	**$8,296,452**	**$2,586,883**	**$2,298,704**	**$340,874**	**$130,120**	**$217**	**$13,653,249**

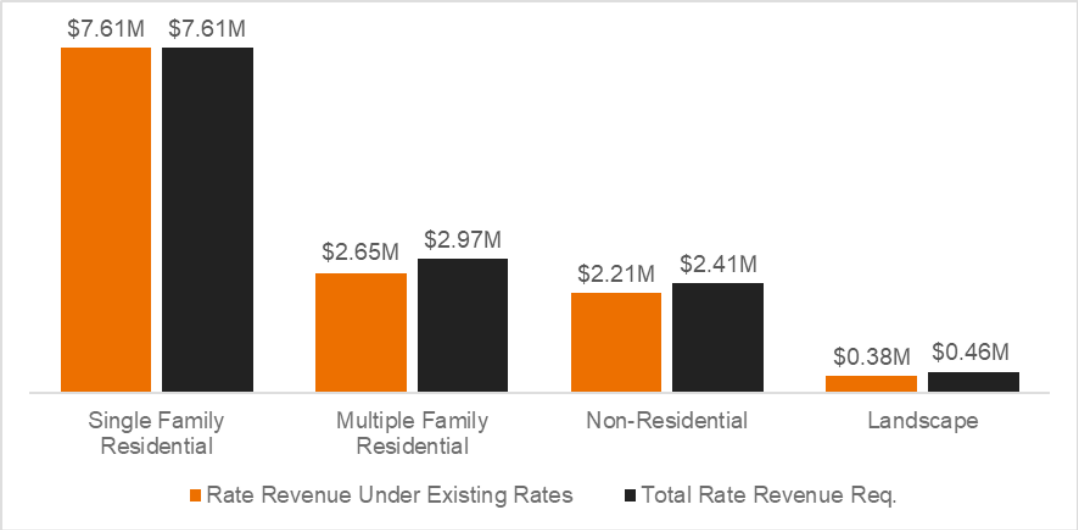

Figure 3-4: Summary of Rate Revenue Required by Customer Class, Option 1

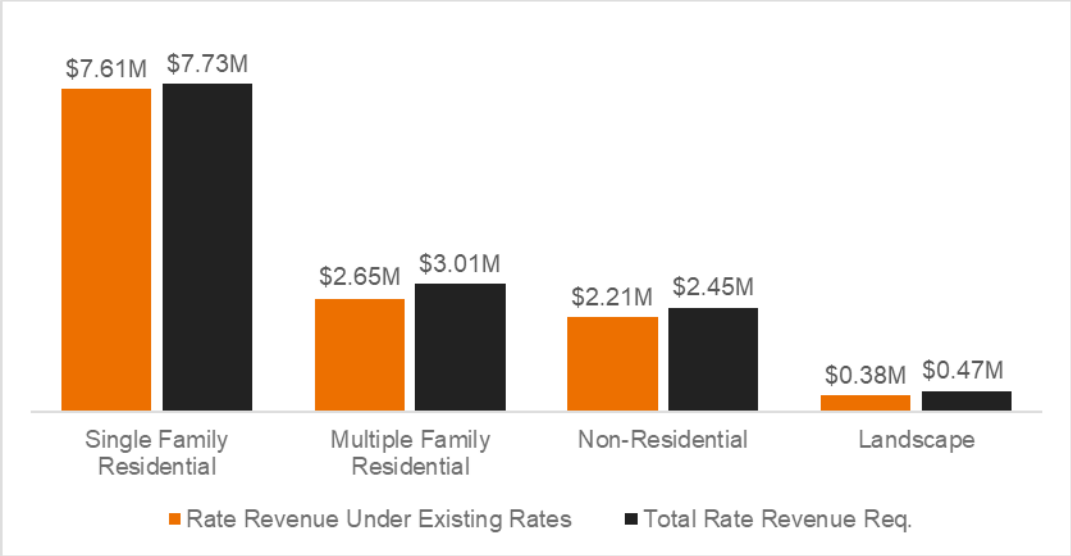

Figure 3-5: Summary of Rate Revenue Required by Customer Class, Option 2

4. PROPOSED RATE STRUCTURE AND RATE SCHEDULE

Upon completion of the COSA, a rate structure analysis was performed to identify potential rate structure modifications and specific rate schedules for implementation in FY 2020 that would:

- 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 following sub-sections present a description of the basis of the recommended rate structure and specific rate schedules for a 5-year period starting on July 1, 2019. The recommended rate schedules are designed such that each customer class pays its own proportionate share of the cost of services provided by the Utility.

4.1 CURRENT RATES AND RATE STRUCTURE REVIEW

The Utility follows a common industry practice with a two-part rate structure that is comprised of a fixed service fee and a commodity (consumption-based) rate. Generally accepted practice recovers a portion of the costs of the system in a fixed service charge, recognizing that utilities have substantial investments in capacity-related costs and other fixed costs that are incurred year-round to maintain a state of readiness to meet peak demands when they occur. The amount of cost recovery in fixed versus volumetric charges is unique to each utility's need for fiscal stability, philosophy regarding cost recovery, and level of fixed costs.

The Utility's current fixed service fee is assessed based on meter size (Table 4-1). The fixed charge currently recovers approximately 58.8% of rate revenue (based on FY 18 actual revenue), which is a portion of the fixed costs of providing water service.

Table 4-1: Current Service Fee Schedule

Meter Size	Service Fee
¾ inch	$80.70
1 inch	$120.52
1 ½ inch	$268.22
2 inch	$363.58
3 inch	$781.46
4 inch	$1,060.28
6 inch	$1,660.84
8 inch	$1,736.78

Commodity Rates are designed to recover the remainder of the water system's fixed costs as well as its variable costs. The Commodity rates for Single Family Residential and Landscape customers have two

tiers with the water allocation within each tier increasing with meter size (Table 4-2). The monthly tier allocations for the smallest meter size (¾" meters) are 0 to 40 CCF and greater than 40 CCF, respectively. All other customer classes are charged the Tier 1 rate for all metered quantities of water, except for Recycled Water customers which has a unique usage rate.

Table 4-2: Current Usage Rate Schedule

Tier	Rate (per CCF)
Tier 1	$1.99
Tier 2	$2.73
Recycled Water	$1.72

4.2 PROPOSED RATE STRUCTURE

Stantec proposes preserving the existing rate structure with some key modifications that will bring the rates into compliance with the most recent Proposition 218 case law[11]. The proposed rate structure updates both the fixed Water Service Fee and the commodity/variable rate charged based on actual water use. The sections below outline the recommended updates to the rate structure and the rational for these changes.

4.2.1 Meter Equivalency

The meter equivalency metric is an industry-standard factor used to represent the proportional demand that different sized meters place on the system based on the design capacity necessary to serve it. A meter equivalency schedule allows us to express all meter sizes in terms of multiples of the lowest common denominator (in this case a ¾" meter). There is not a record of the basis of the existing meter equivalency schedule used by the Utility, so this Study recommends the adoption of a new rate scheduled based on industry standard meter capacity, shown in Table 3-5.

4.2.2 Proposed Fixed Service Fee for Retail Customers

The proposed fee updates both the structure of the fee, and the calculation for each of the customer classes, rather than one fee structure for all customers, to bring the fees in line with the cost of serving each customer class.

First, Stantec proposes the addition of an account charge/fee to the service fee. The Account Charge is assessed on a *per account* basis as the cost of providing account related services (primarily billing and admin) typically do not vary between customers based on meter size. The charge has been calculated based on the sum of retail Customer revenue requirements ($130,120, see Table 3-10) divided by the

[11] The proposed rates seek to enhance the defensibility of the City of Whittier's Tiered rate structure to bring them into compliance with the Capistrano ruling. The April 2015 District Court of appeal ruling in the Capistrano Taxpayers Association, In. v. City of San Juan Capistrano explained that "water rates must reflect the cost of the service attributable to a given parcel," and that tiered rates are only consistent with Proposition 218 if the tiers "correspond to the actual cost of providing service at a given level of usage."

number of retail bills (69,396), yielding a bi-monthly account charge of $1.88[12]. This fee does not add new costs to customer, it simply re-allocates existing costs more equitably.

The remainder of the costs included in the meter-based portion of the service fee, on the other hand, do typically increase based on the level of water consumed. Relative water consumption among customers can be related back to the meter size, as discussed above. The Water Service Meter Charge for each customer class is calculated adding 100% of the Meter revenue requirements, 50% of the Base Capacity revenue requirements, and 50% of the Extra Capacity revenue requirements (both Peak Day and Peak Hour). This value is divided by the sum of the meter equivalencies for all customers within the customer class and again by the number of bills per year. The meter portion of the service charge for larger meters is increased in accordance with the meter equivalency schedule shown on Table 3-5. A summary of the meter charge calculation for all customer classes is shown on Table 4-3 and Table 4-4.

Table 4-3: Meter Charge Cost Recovery Calculation

	Account	Meter	Base	Max-Day	Max-Hour	Fire Protect.	Total
Single Family Residential	$99,295	$211,936	$4,311,343	$1,700,271	$1,404,594	$165	$7,727,603
Multiple Family Residential	$20,082	$60,672	$2,064,403	$423,354	$441,970	$33	$3,010,514
Non-Residential	$9,450	$59,240	$1,645,484	$363,402	$367,600	$16	$2,445,192
Landscape	$1,294	$9,026	$275,221	$99,856	$84,541	$2	$469,940
Meter Cost Recovery Calculation							
Percent Meter	0%	100%	50%	50%	50%	0%	
Single Family	$-	$211,936	$2,155,671	$850,135	$702,297	$-	$3,920,040
Multi-Family	$-	$60,672	$1,032,202	$211,677	$220,985	$-	$1,525,535
Non-Residential	$-	$59,240	$822,742	$181,701	$183,800	$-	$1,247,483
Landscape	$-	$9,026	$137,611	$49,928	$42,270	$-	$238,835

Table 4-4: Meter Charge Calculation

Customer Class	Recovery Amount	Equivalent Meters	Number of Bills Per Year	Equivalent Meter Charge Per Bill
Single Family	$3,920,040	10,214	6	$63.96
Multi-Family	$1,525,535	2,924	6	$86.95
Non-Residential	$1,247,483	2,854	6	$72.84
Landscape	$238,835	435	6	$91.60

[12] Rounding may result in minor discrepancies.

Together the two components of the fixed service charge add up to represent the total fixed charge by customer class as shown in Table 4-5.

Table 4-5: Proposed Fixed Charge

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$65.84	$88.83	$74.72	$93.48
1 inch	$108.48	$146.80	$123.27	$154.55
1 ½ inch	$215.09	$291.72	$244.67	$307.22
2 inch	$343.02	$465.62	$390.34	$490.42
3 inch	$684.16	$929.36	$778.81	$978.96
4 inch	$1,067.95	$1,451.07	$1,215.83	$1,528.57
6 inch	$2,134.01	$2,900.26	$2,429.79	$3,055.26
8 inch	$3,413.30	$4,639.29	$3,886.53	$4,887.28
10 inch	$5,119.01	$6,958.00	$5,828.86	$7,329.99

These proposed rates will modestly reduce the relative amount of revenue collected from the Fixed Service Charge to approximately 51.7%, which will maintain the Utility's high level of financial stability while increasing rate equity and allowing for Utility's customers to have greater control over the cost of their bills.

4.2.3 Commodity Rates

The following describes the basis for the proposed commodity rates for each customer class. A recommendation from this study is to maintain the two-tier rate structure for Single Family Residential customers, move to a single tier for Landscape customers, and maintain single tier for Multi-Family and Non-Residential customers. The two-tier rate structure for Single Family Residential customers reflects the higher cost of maintaining larger infrastructure required to serve the customers with higher peaking behavior as is discussed in more detail below.

4.2.3.1 Tiered Water Allocations for Single Family Residential Customers

The following describes the basis for the proposed tier allocations (i.e. the volume of water available at each respective tier price) and the tier prices (based on the cost to provide that water).

Table 4-6 summarizes the proposed tier thresholds for Single Family Residential customers and are based on the following:

- The 22 CCF of water in Tier 1(per billing period) is based on the State targeted indoor water needs for the average single-family home (equal to 55 gallons per persons per day[13], assuming 5.0 people per household[14]);
- The second tier begins after the first tier and has no upper limit. The Tier 1 threshold results in about 36.7% of the Utility's water to be sold at Tier 2 rates which is appropriate in terms of financial stability (too much water sold in Tier 2 can result in volatile rate revenue patterns).
- Following this logic, it is recommended that the Utility set the tier one threshold for all residential meter sizes, as larger meters are typically installed in homes to meet large outdoor water demands.

Table 4-6: Proposed Retail Tier Thresholds for Single Family Residential Customers

Tier	Tier Threshold
Tier 1	22 CCF
Tier 2	>22 CCF

4.2.3.2 Single Family Residential Tiered Rate Calculation

Following the establishment of the tier for Single Family Residential customers the rates for each tier are calculated based on the cost of service results. The specific costs allocated to each tier including the following:

- Tier 1 – Remaining Base Capacity and Extra capacity (Max Day) costs
- Tier 2 – Tier 1 costs + Extra capacity (Peak Hour) costs

More specifically, and expressed as formulas, the two tiers are calculated as follows:

$$Tier\ 1\ Rate = \frac{(50\%\ of\ Base\ Capacity + 50\%\ of\ Extra\ Capacity\ (Max\ Day) * \frac{Tier\ 1\ Water\ Usage}{Total\ Water\ Usage}}{Tier\ 1\ Water\ Usage}$$

$$Tier\ 2\ Rate = \ Tier\ 1\ + \frac{50\%\ of\ Extra\ Capacity\ (Max\ Hour)\ * \frac{Tier\ 2\ Water\ Usage}{Tier\ 2\ Water\ Usage}}{Tier\ 2\ Water\ Usage}$$

Figure 4-1: Single Family Residential Usage Rate Calculation for Tiers 1 and 2

The above methodology for designing the tiered rates is depicted in Figure 4-2.

[13] SB 606 and AB 1668 establish guidelines for efficient water use and restrict indoor water use statewide to 55 gallons per capita per day (GPCD) starting in 2022 through 2025 where the restrictions will be ratcheted up to 52.5 GPCD. https://www.gov.ca.gov/2018/05/31/governor-brown-signs-legislation-establishing-statewide-water-efficiency-goals/

[14] The Whittier Water Master Plan Update.

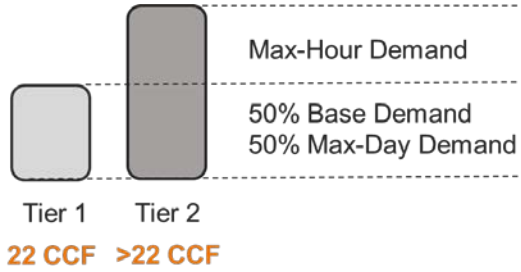

Figure 4-2: Schematic of Rate Design Cost Recovery

4.2.3.3 Commodity Rate Calculation for Non-Single Family Residential Customers

The commodity rates for all non-single family residential customer are calculated based on the cost of service results using a similar methodology as the calculation of the Single Family Residential rates. The rates are made up of the remaining base capacity and Extra Capacity (both Max Day and Max Hour) costs. Due to the diversity of use within the non-residential customer classes, it is difficult to establish clear tier allocations based on usage characteristics, so it is recommended that one tier be utilized for these customer classes.

More specifically, and expressed as formulas, the commodity rate for the non-residential customer classes are calculated as follows:

$$Commodity\ Rate = \frac{(50\%\ of\ Base\ Capacity + 50\%\ of\ Extra\ Capacity\ (Max\ Day\ and\ Max\ Hour)}{Total\ Water\ Usage}$$

Figure 4-3: Non-Single Family Residential Usage Rate Calculation

4.2.3.4 Commodity Rate Summary

The resulting commodity rates by customer class per CCF are as depicted in Table 4-7.

Table 4-7: Summary of Proposed Commodity Rates for All Customer Classes, per CCF

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.08	$2.12	$2.16	$2.50	$1.76
Tier 2	$3.41	N/A	N/A	N/A	N/A

4.2.4 Recycled Water Rates

The Utility currently provides Recycled Water services and charges a Service Fee per meter using the same schedule as all retail customers and a Usage Rate of $1.72 per CCF.

4.2.4.1 Current Rate Update

The current rates have been updated as part of this study using the following methodology:

- Like other water customers, recycled water customers should be charged the Non-Residential Service Fee that corresponds with their Meter Size to cover a portion of the fixed costs associated with providing service and allow for enhanced revenue stability to the recycled water fund;
- The Usage Rate is calculated as the difference between the projected recycled water costs minus the total service fee revenue, *divided* by the total recycled water demand. A summary of the calculated proposed rate is provided in
- Table 4-8.

Table 4-8: Proposed Recycled Water Usage Rate Calculation

Item	Amount
FY 20 Expense Forecast	$58,527
Meter Charge Revenue	$5,476
Commodity Revenue Requirement	$53,051
FY 20 Forecast Usage (CCF)	30,200
Proposed Rate ($/CCF)	**$1.76**

4.2.5 Private Fire Rates

The Utility currently bills customers with private fire meters (accounts that have a dedicated service line for fire protection) on a periodic basis based on actual use. This requires additional Utility staff time for tracking and billing as it is not incorporated in the Utility's normal business practices. It also fails to capture the benefit of having fire service available even if not utilized, as the Utility needs to keep water supply at levels necessary to provide fire service at all time. Therefore, it is recommended that the Utility alter its billing practice for these customers and implement a fixed monthly charge that reflects the "standby "nature of this service.

When calculating the rates for private fire services, this Study first calculated the total cost of fire protection within the Utility's entire water system (public and private service). This was accomplished by calculating the peak capacity requirements of the water system[15]. The total cost allocated to fire protection (both public and private) was $1.27 million.

After the total cost of fire protection is determined, the costs are split between the public fire system and the private fire systems. This was done by allocating the costs based on the relative number of equivalent connections for each system. The public fire system is made up of 974 hydrants while there

[15] Based on the assumption that the system was designed to be able to fight a fire in the same pressure zone at a total flow rate of 3,000 gallons per minutes and for a total duration of 3 hours.

are 136 private connections of different sizes. The size equivalency was calculated using a Demand Factor[16] for different connection sizes (much like the meter equivalency factor described in Section 4.2.1). The equivalent connections for the public system are 108,417 (85.9%) and for the private connections are 17,743 (14.1%), which allocates $178,252 to the private connections. Table 4-9 show the proposed monthly Private Fire Charge schedule.

Table 4-9: Private Fire Charges

Size of Connection	Demand Factor (1)	Number of Customers	Proposed Bi-Monthly Charge
¾ inch	0.47	0	$0.80
1 inch	1.00	0	$1.71
2 inch	6.19	2	$10.61
3 inch	17.98	0	$30.81
4 inch	38.32	47	$65.66
6 inch	111.31	47	$190.72
8 inch	237.21	35	$406.42
10 inch	426.58	4	$730.89
12 inch	689.04	1	$1,180.58

(1) Based on AWWA's practice of estimating the relative flow through pressure conduits as the diameter raised to power of 2.63.

[16] The Demand Factors are based on AWWA's practice of estimating the relative flow through pressure conduits as the diameter raised to power of 2.63.

5. WATER SYSTEM CONNECTION FEES

This section of the Report has been prepared to establish the water system connection fee (Water Fee) for the Whittier Utility Authority and the City of Whittier in accordance with the procedural guidelines established in AB1600 which is codified in California Government Section 66000 *et seq*. These code sections set for the procedural requirements for establishing and collecting the Fee. These procedures require that a "reasonable" relationship or nexus must exist between a governmental exaction and the purpose of the condition. Specifically, each local agency imposing a fee must:

- Identify the purpose of the fee;
- Identify how the fee is to be used;
- Determine how a reasonable relationship exists between the fee's use and the type of development project on which the fee is imposed;
- Determine how a reasonable relationship exists between the need for the public facility and the type of development project on which the fee is imposed; and,
- Demonstrate a reasonable relationship between the amount of the fee and the cost of public facility or portion of the public facility attributable to the development on which the fee is imposed.

These findings are made in Section 5.5, AB1600 Nexus Findings below. In general, a system connection fee is a one-time charge paid by a new customer to recover a portion or all of the cost of constructing infrastructure system capacity, in this case for water, for which they derive benefit. The fees are assessed to new customers requiring system capacity and serve as the mechanism by which growth can "pay its own way," and minimize the extent to which existing customers must bear the cost of facilities that will be used to serve new customers.

The system connection fee to be collected for water service by new development is calculated based on their proportionate share of the water infrastructure costs, for which they derive benefit. The water system infrastructure includes, but not limited to, water supply facilities, treatment facilities, and transmission mains. It is recommended that the Utility consider creating a separate fund to manage connection fees. Any interest earned on the connection fees will remain in this fund, and not transferred to any other fund. Use of the connection fees shall be limited to finance water system growth. Water connection fees that are collected but remain unused by the Utility within 5 years, the fee balance must either be reviewed and the nexus findings re-established, or the funds should be refunded to customers.

5.1 GENERAL METHODOLOGY

There are three primary approaches to the calculation of development fees, each of the approaches are discussed below.

Buy-In Method

This approach determines the system connection fees solely on the existing utility system assets. Specifically, the replacement cost of each system's major functional components serve as the cost basis for the system connection fee calculation. This approach is most appropriate for a system with considerable excess capacity, such that most new connections to the system will be served by that existing excess capacity and the customers are effectively "buying-in" to the existing system.

Incremental/Marginal Cost Method

The second approach is to use the portion of each system's multi-year capital improvement program (CIP) associated with the provision of additional system capacity by functional system component as the cost basis for the development fee calculation. This approach is most appropriate where 1) the existing system has limited or no excess capacity to accommodate growth, and 2) the CIP contains a significant number of projects that provide additional system capacity for each functional system component representative of the cost of capacity for the entire system.

Combined Cost Method

The third approach is a combination of the two approaches described above. This approach is most appropriate when 1) there is excess capacity in the current system that will accommodate some growth, but additional capacity is needed in the short-term as reflected in each system's CIP, and 2) the CIP includes a significant amount of projects that will provide additional system capacity, but does not necessarily have a sufficient number of projects in each functional area to be reflective of a total system.

Table 5-1 summarizes each of the three methodologies and their typical application.

Table 5-1: Description of Methodologies

Methodology / Approach:	Description:	Often Used by Systems with:
Buy-In Method	New development shares in **capital costs previously incurred** which provided capacity for demand arriving with new development needs.	Excess capacity.
Incremental / Marginal Cost	New development share in **capital costs to be incurred in the future** which will provide capacity for demand arriving with new development needs.	Limited or no excess capacity and a CIP which will provide significant additional capacity.
Combined Cost	Combination of Buy-In and Incremental / Marginal Cost methods	Some excess capacity but short-term additional capacity is needed and identified in the CIP.

Given that the Utility has some excess capacity in its current water system, and at least a portion of the capital spending planned over the next 10 years includes growth related projects, the methodology chosen for the calculation of the system development fee for the water and sewer systems in this Study is the Combined Method.

5.2 BASIS OF ANALYSIS

The first step in calculating connection fees is to determine the cost basis or value for the system. The net system value for use in the determination of the system development fees is calculated using the following approach.

1. The existing system assets are analyzed to determine the replacement cost new less depreciation (RCNLD) of the Utility's existing major water system components.
2. Any donated assets and/or assets not funded by the Utility (funded by grants, developers, etc.) are removed from the system assets.
3. The assets are further reduced by any outstanding principal on debt for each system.
4. The resulting net system value is used in the determination of the fee.

The following section outlines the details of the analysis completed during the Study to calculate the water and sewer system development fees.

5.2.1 Total System Value

The Utility provided a detailed asset inventory list which included an asset identification number, a description of the asset, cost center, asset type, year placed in service, original cost, net book value and useful life for each water system asset through FY 2018. These assets were classified by each major system function, and a replacement cost new less depreciation was calculated for each asset record using the data provided by the Utility and the Engineering News Record Construction Cost Index. Schedule 22 in the Appendix D shows the RCNLD for the Utility's existing water system, administration and general assets based upon the asset records provided by Utility staff.

The Utility also provided a detailed 10-year capital improvements plan (CIP), which included the project description, annual spending, and an indication of whether the project was designated for expansion or rehabilitation. Review of the CIP revealed that 15% of distribution system improvements included investments in system expansion with remainder of the projects addressing system rehabilitation and repairs.

5.2.2 Credits

It is industry standard for system connection fee calculations to include provisions for credits against the value of the system to account for assets that were not funded by the municipality and for assets with outstanding debt liabilities. The credits included in Study are discussed below.

Principal on Outstanding Debt.

Typically, a credit is given in the form of the principal on outstanding debt, which is usually recovered in usage rates after new customers connect to the water and/or sewer systems.

Contributed and Grant Funded Assets

System assets that were donated to the utility or funded with grants are also excluded from the system connection fee calculation. If the Utility did not incur the cost of purchasing and/or constructing the asset, they cannot legitimately include the costs in the system value used to determine the system connection fee.

Table 5-2: Credits by System

	Principal Outstanding	Contributed Assets	Total Credits	Net System Value
Amount	$8,200,000	$3,344	$8,203,344	$57,631,772

5.3 CAPACITIES

Once the system values were determined and allocated to each system and its functional components, the next step was to determine the system capacities by functional cost component as stated in terms of equivalent residential units (ERUs). Expressing the system capacities in terms of ERUs allows for the development of the unit pricing of capacity which is essential for the determination of system development fees. The total system capacity (treatment capacity in million gallons per day for each system) divided by the level of service in gallons per day is equal to the total number of ERUs the Utility can serve with the existing system capacity as illustrated in Figure 5-1.

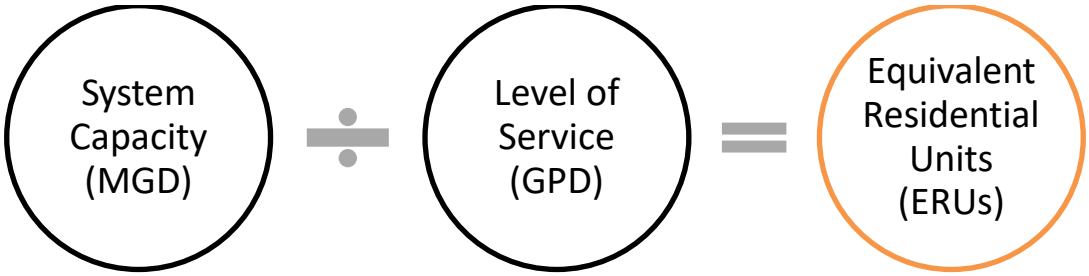

Figure 5-1: Illustration of ERU Determination for System Connection Fees

5.3.1 System Capacity

The Utility's water system consists of numerous functional components such as water treatment, source of supply, transmission/distribution, and storage. Each of the functional components have a physical or

regulatory permitted capacity. For this analysis, the Utility's source of water supply and transmission/distribution are the primary factors used for determining overall system capacity. Treatment and storage assets values have been incorporated with the transmission/distribution category (treatment occurs at PP2 and the storage reservoirs are distributed across the system to facilitate peak demands, as such the capacity of these systems are tied to the transmission/distribution capacity). For the Utility's water transmission system PP2 is the limiting transmission/distribution element and it has a peak day design capacity of 13,700 GPM or 19.73 MGD. The water supply is based on the design capacity of the water sources, or wells. The source of supply capacity is based on the combined design capacity of the City's ground water wells of 28,265 GPM, or 40.75 MGD per the Water Master Plan. Table 5-3 summarizes the capacity by function used in the fee calculation for the Utility.

Table 5-3: System Capacity by Function

	Water Capacity (MGD)	
	Source of Supply/ Treatment	**Transmission/ Distribution**
Current Capacity	40.75	19.73

5.3.2 Level of Service Standards

In the evaluation of the capital facility needs for providing water utility services, it is critical that a Level of Service (LOS) standard be developed. The LOS is an indicator of the extent or degrees of service provided by, or proposed to be provided by a facility, based on and related to the operational characteristics of the facility. Level of service indicates the capacity per unit of demand for each public facility or service. Level of service standards are established to ensure that adequate facility capacity will be provided for future development and for purposes of issuing development orders or permits.

For water service, the level of service that is commonly used in the industry is the amount of capacity allocable to an equivalent residential unit, or ERU, expressed as the amount of usage in gallons on an average day, maximum month or peak day basis. This allocation would generally represent the amount of capacity allowable to an ERU, whether or not such capacity is actually used on an average day basis. For the Utility, we calculated the level of service using the 2018 monthly usage per ERU for the water system to determine the average water use per billing period in gallons per day per ERU, shown in Table 5-4 below.

Table 5-4: ERU Level of Service by System Component

Water	
Source of Supply / Treatment	**Transmission / Pumping**
1,009 GPD	1,009 GPD

5.4 RESULTS

This section summarizes the results of the water connection fee analysis, the existing and calculated system development fees, a comparison of current and calculated fees to those of surrounding areas and conclusions and recommendations.

5.4.1 Existing Water Connection Fees

The Utility currently charges water system connection fees by meter size for the water system. The tables below summarize the Utility's existing fees:

Table 5-5: Existing Water Fees

Meter Size	Existing Water Fee
¾ inch	$2,571
1 inch	$4,284
1.5 inch	$8,572
2 inch	$17,140
3 inch	$41,140
4 inch	$71,995
6 inch	$157,702
8 inch	$274,263

5.4.2 Updated System Development Fee Amounts

To calculate the water system connection fee, the net system value described in Section 5.2 for each functional component was divided by the capacity for each functional component stated in ERUs to determine the capacity cost per ERU. The Utility currently defines an ERU as a single family residential customer with a 3/4" meter size connection. The unit cost per ERU or system development fee per a 3/4" meter connection is then scaled by meter size to develop the system connection fee schedule for all applicable meter sizes. Schedule 25 in the Appendix D provide a summary of the calculated system connection fees.

Table 5-6 provides a schedule of the existing and calculated water connection fees based upon the cost and capacity information discussed herein by meter size.

Table 5-6: Water System Connection Fee Schedule

Meter Size	Current Fee	Calculated Fee	Difference
¾ inch	$2,571	$2,861	$290
1 inch	$4,284	$4,778	$494
1.5 inch	$8,572	$9,527	$955
2 inch	$17,140	$15,249	$(1,891)
3 inch	$41,140	$28,610	$(12,530)
4 inch	$71,995	$47,693	$(24,302)
6 inch	$157,702	$95,357	$(62,345)
8 inch	$274,263	$152,577	$(121,686)

It is important to note that the Utility has discretion regarding the percentage of cost recovery utilized in the establishment of the system connection fees. The system development fees can recover any amount up to, but not in excess of, the full cost recovery amounts identified herein.

Based upon the analysis presented herein, we have developed the following conclusions and recommendations:

1) We recommend that the Utility adopt water system connection fees based on the combined approach and scaling the fees by meter size as demonstrated in Table 5-6.
2) We recommend that the Utility review its connection fees at least every five years to ensure that they remain fair and equitable and continue to reflect its current cost of capacity. As the Utility continues to expand its facilities, future changes in technology, demands, development patterns, or other factors may necessitate additional adjustments to its development fees.
3) We recommend that as part of any system connection fee update, the Utility also evaluates the most appropriate accepted methodology for calculating its system unit cost of capacity as system capacity may change over time.

5.5 AB1600 NEXUS FINDINGS

The following describes the justification or Nexus findings for purposes of establishing the fees by the City as required by AB1600.

5.5.1 Purpose of the Fees

The Water Fee will help maintain adequate levels of water service within the City of Whittier. New development in the City will increase the demand for these services and may require the City to expand its capital facilities for water. The Water Fee will fund construction of water system facilities necessary to accommodate new residential and commercial development.

5.5.2 Use of the Fees

The Water Fee will fund the construction of water infrastructure facilities, which primarily include water supply and water transmission facilities.

5.5.3 Relationship Between Use of Fees and Type of Development

New development will increase the demand for water service. The extension of existing facilities through construction of water supply, water transmission and water distribution related capital projects will ensure that new development is adequately serviced for water.

5.5.4 Relationship Between Need for Facility and Type of Project

Each new development project will add to the incremental need for water service. Water infrastructure projects as identified in the Water Master Plan Update, as well as an allocation of cost of the existing infrastructure based on replacement costs values minus depreciation, will be needed to maintain the current level of service and this Water Fee will facilitate funding and construction of these projects.

5.5.5 Relationship Between Amount of Fees and Cost of or Portion of Facility Attributed to development Upon Which Fee is Imposed

The methodology used to determine the Water is described in Sections 5.2 through 5.4 above. The fee is based on a proportional share of the facility costs, which were developed based on the Utility's projected water CIP projects over the next ten years as well as portion of the replacement value of existing facilities minus depreciation. The portion of costs that was allocated to new development and included in the fee calculation is based both on the excess capacity in its current water system and the level of service currently provided to existing customers. This approach ensures that new development is charged a fee that does not exceed current levels of service and is proportional with the benefit received.

6. SUMMARY OF PROPOSED RATES AND FEES

This Report used methodologies that are aligned with industry standard practices for rate setting as promulgated by AWWA and all applicable law, including Proposition 218. The proposed adjustments to the rates will provide revenue stability and continue to equitably and proportionately recover costs from the appropriate customers.

Based on the methodologies described above, the following tables summarize the proposed rate schedules that are assumed to be effective as of July 1, 2019. A complete schedule of rates over the 5-year planning period are summarized for both for both Options 1 and 2 in Appendix C.

Table 6-1: Proposed Commodity Rates, Effective July 1, 2019, Option 2

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1 (per CCF)	$2.08	$2.12	$2.16	$2.50	$1.75
Tier 2 (per CCF)	$3.41	N/A	N/A	N/A	N/A

Table 6-2: Proposed Fixed Charges, Effective July 1, 2019, Option 2

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$65.84	$88.83	$74.72	$93.48
1 inch	$108.48	$146.80	$123.27	$154.55
1 ½ inch	$215.09	$291.72	$244.67	$307.22
2 inch	$343.02	$465.62	$390.34	$490.42
3 inch	$684.16	$929.36	$778.81	$978.96
4 inch	$1,067.95	$1,451.07	$1,215.83	$1,528.57
6 inch	$2,134.01	$2,900.26	$2,429.79	$3,055.26
8 inch	$3,413.30	$4,639.29	$3,886.53	$4,887.28
10 inch	$5,119.01	$6,958.00	$5,828.86	$7,329.99

Table 6-3: Proposed Private Fire Charges, Effective July 1, 2019

Size of Connection	Demand Factor (1)	Number of Customers	Proposed Bi-Monthly Charge
¾ inch	0.47	0	$0.80
1 inch	1.00	0	$1.71
2 inch	6.19	2	$10.61
3 inch	17.98	0	$30.81
4 inch	38.32	47	$65.66
6 inch	111.31	47	$190.72
8 inch	237.21	35	$406.42
10 inch	426.58	4	$730.89
12 inch	689.04	1	$1,180.58

(1) Based on AWWA's practice of estimating the relative flow through pressure conduits as the diameter raised to power of 2.63.

Table 6-4: Proposed Recycled Water Usage Rates, Effective July 1, 2019

Item	Amount
FY 20 Expense Forecast	$58,527
Meter Charge Revenue	5,476
Commodity Revenue Requirement	$53,051
FY 20 Forecast Usage (CCF)	30,200
Proposed Rate ($/CCF)	**$1.76**

Table 6-5 Proposed Water System Connection Fees, Effective July 1, 2019

Meter Size	Calculated Fee
¾ inch	$2,861
1 inch	$4,778
1 ½ inch	$9,527
2 inch	$15,249
3 inch	$28,610
4 inch	$47,693
6 inch	$95,357
8 inch	$152,577

7. BENCHMARKING AND CUSTOMER IMPACTS

The recommended changes to the water rates will have an impact on customers of the Whittier Utility Authority. This section of the report provides a summary of the bill impacts to ¾" single-family residential customers as well a comparison of the water bill for the median customer served by comparable and/or local utilities with in the region. A comparison of availability charges for new customers joining the system are presented as well.

7.1 WATER USER RATE BILL IMPACTS

Figure 7-1 presents the bi-monthly bill amount charged to single-family residential customers with a ¾" meter, under the current rate structure and Option 1 for FY 2020, which includes the identified revenue increases from the RSA. The space between the line reflects the magnitude of the bill impact for a quantity of water. Approximately 76.2% of single-family customers (5,426) that use less than 32.5 units of water per billing period will see a decrease in their billed amount, while the remaining 23.8% (1,694) of customers will see an increase in their bill. This demonstrates that the proposed rate structure will improve the affordability for low volume and average single-family Residential users. Figure 7-2 presents the same summary for Option 2. The higher fixed fee and steeper commodity rate result in a slightly lower number of single-family Residential rate payers receiving rate decrease, approximately 72.9%, with the remaining 27.1% seeing a rate increase.

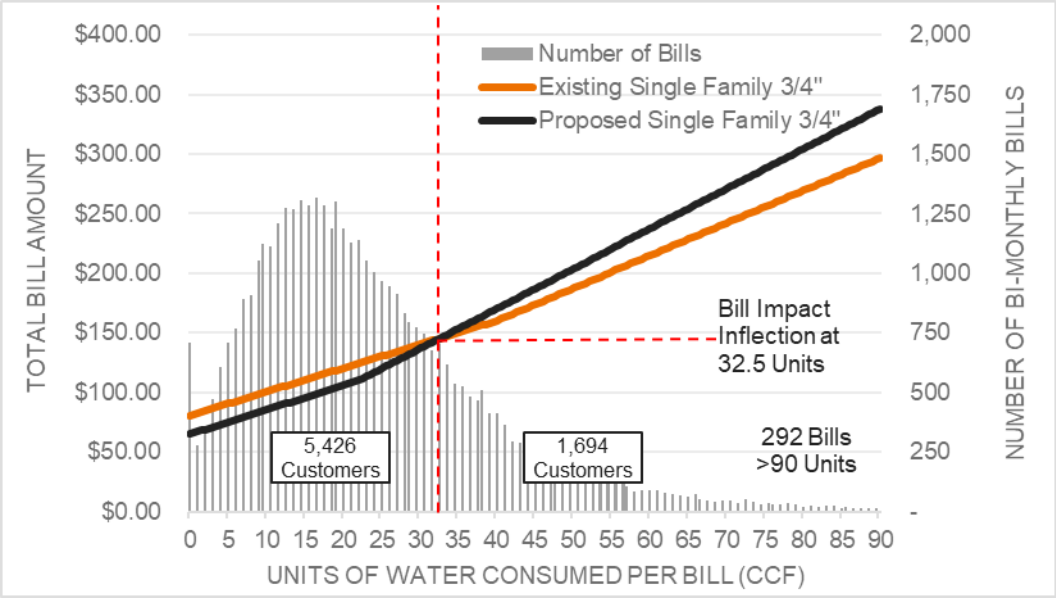

Figure 7-1: Bi-Monthly Bill Impact Summary chart for 3/4" Single-Family Residential Customers, Option 1

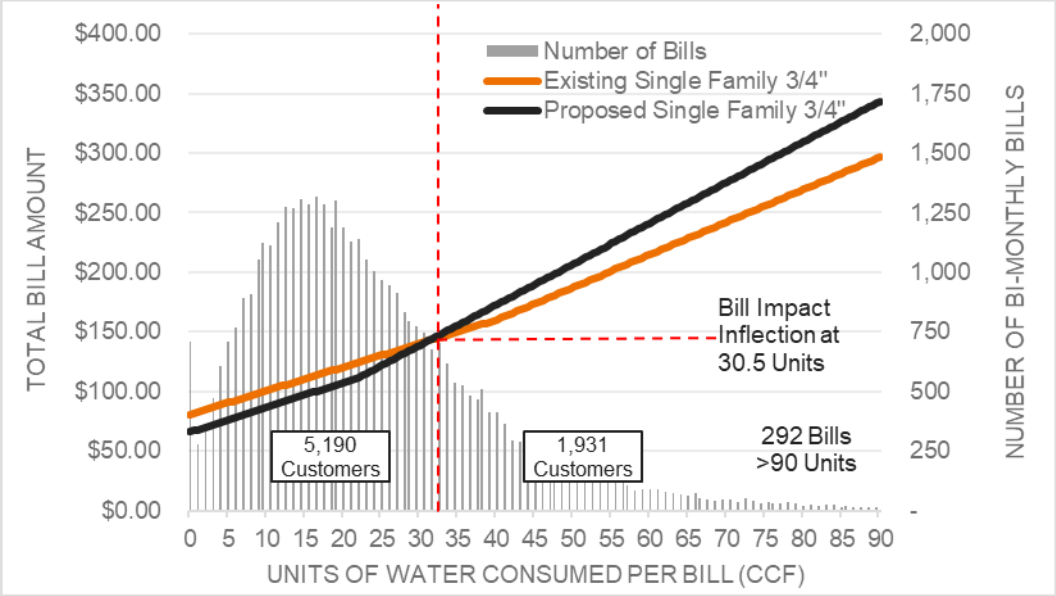

Figure 7-2: Bi-Monthly Bill Impact Summary chart for 3/4" Single-Family Residential Customers, Option 2

7.2 WATER BILL COMPARISON SURVEY

To provide perspective on how the calculated water bills for the Authority compare with neighboring communities, a bill comparison survey was developed of peer utilities. Figure 7-3 below shows a comparison of the Utility's water bill (in monthly dollars) with those of

neighboring utilities. The figure shows the current water bills for and the bills under the recommended rate adjustments for 2020. As can be seen in the figure, the Utility's bills are in the middle of the neighboring utilities. It should be noted that the bills for most of the comparison utilities represent current bills and do not include likely future annual increases which are not yet publicly available. Source data for this rate survey is included in Appendix E.

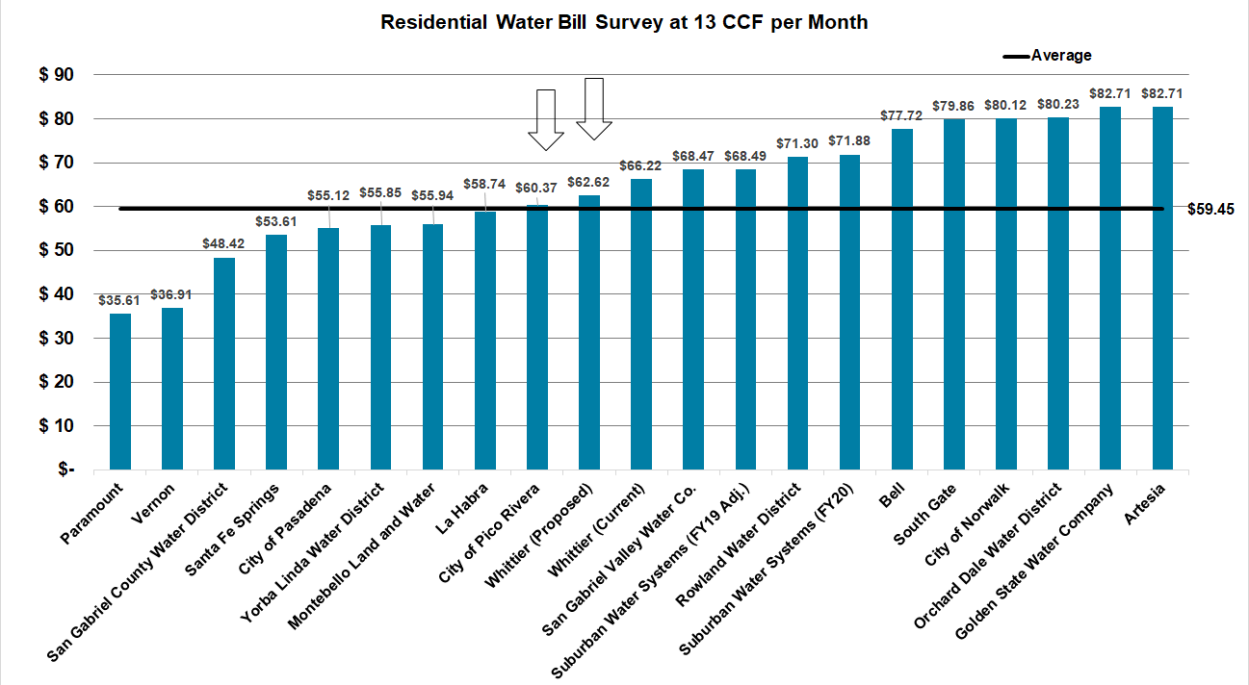

Figure 7-3: Residential Water Bill Survey for Single Family Residential Customers with a 3/4" Meter[17]

It is important to note that while bill comparisons can be informative, there are a number of factors that determine water rates within a community at a given time. Factors such as level of system reinvestment, support from the general fund or other sources and rate structure will all have a significant influence on the bills and must be taken into account. Therefore, bill comparisons should be taken as one data point for consideration, but the needs of each community are unique, and the rates may be based on different variables.

7.3 WATER SYSTEM CONNECTION FEE COMPARISON

Figure 7-4 presents a comparison of water system connection fees for the Utility, existing and proposed, as well as surrounding jurisdictions. The Utility's water connection fee, both current and proposed fall in the middle of those charged by neighboring communities.

[17] Suburban Water System plans to issue a water rate increase as early as April 2019.

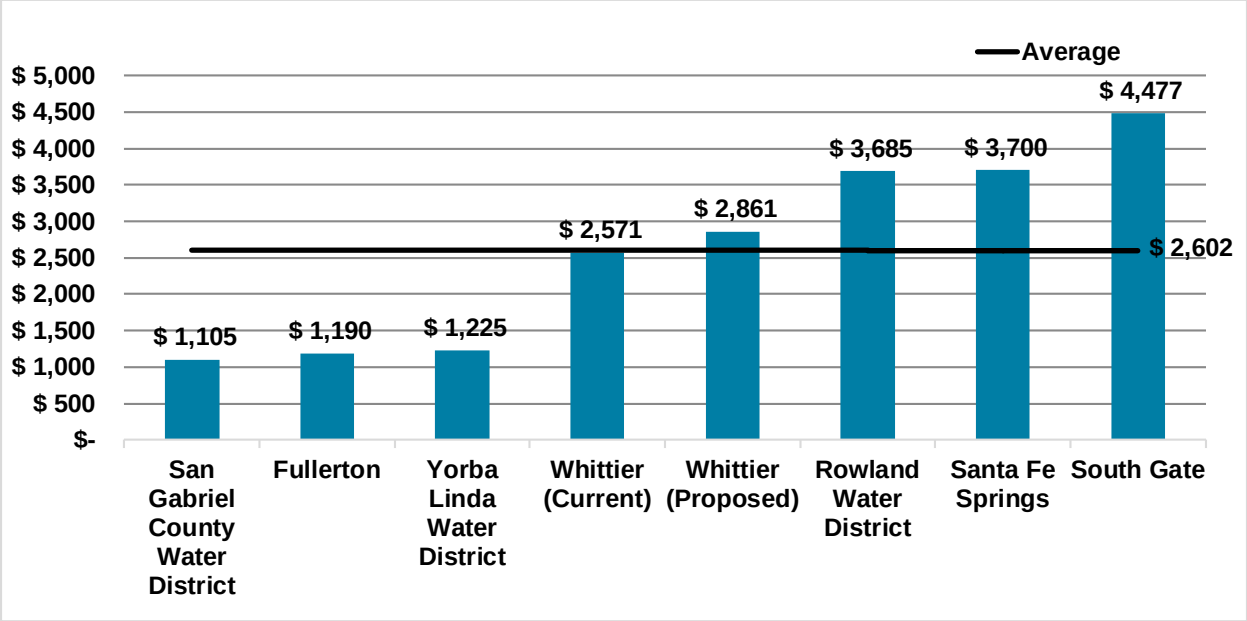

Figure 7-4: Water System Connection Fee Comparison, Single Family ¾" Meter

DISCLAIMER

This document was produced by Stantec Consulting Services, Inc. ("Stantec") for the Whittier Utility Authority ("Utility") and is based on a specific scope agreed upon by both parties. In preparing this report, Stantec utilized information and data obtained from the District or public and/or industry sources. Stantec has relied on the information and data without independent verification, except only to the extent such verification is expressly described in this document. Any projections of future conditions presented in the document are not intended as predictions, as there may be differences between forecasted and actual results, and those differences may be material.

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 reliances 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 Utility 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: RSA SCHEDULES

Schedule 1: Assumptions

Schedule 2: Beginning Fund Balances

Schedule 3: Cost Escalation Factors

Schedule 4: Cash Inflows

Schedule 5: Cash Outflows

Schedule 6: Capital Improvement Program

Schedule 7: Long-Term Borrowing Projections

Schedule 8: Cash Flow Proforma

Schedule 9: Funding Summary by Fund

Schedule 10: FAMS Control Panel – Recommended Rate Increase

Schedule 11: FAMS Control Panel – No Rate Increase Scenario

Assumptions

Schedule 1

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Annual Water System Growth:											
Beginning Number of ERUs	16,167	16,167	16,237	16,307	16,377	16,447	16,517	16,587	16,657	16,727	16,797
Account Growth	20	0	70	70	70	70	70	70	70	70	70
% Increase in EDUs	0.13%	0.00%	0.43%	0.43%	0.43%	0.43%	0.43%	0.42%	0.42%	0.42%	0.42%
% Increase in Water Use	0.00%	0.00%	0.43%	0.43%	0.43%	0.43%	0.43%	0.42%	0.42%	0.42%	0.42%
Operating Budget Reserve:[1]	3	3	3	3	3	3	3	3	3	3	3
Operating Budget Execution Percentage											
PS Execution	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
OMV Execution	100%	100%	80%	80%	80%	80%	80%	80%	80%	80%	80%
OMF Execution	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
CO Execution	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Rate Increase Effective Date:	N/A	7/1/2018	7/1/2019	7/1/2020	7/1/2021	7/1/2022	7/1/2023	7/1/2024	7/1/2025	7/1/2026	7/1/2027
Capital Spending:											
Annual Capital Spending Execution %	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
CIP Escalation %	0%	6%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Connection Fees:											
Water	$2,571	2,571	2,571	2,571	2,571	2,571	2,571	2,571	2,571	2,571	2,571
Average Annual Interest Earnings Rate:											
Water Enterprise Fund	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Operating Expense Cost Escalation:											
Weighted Average Cost Escalation	N/A	22.82%	2.61%	4.27%	3.15%	3.22%	3.28%	3.62%	3.35%	3.38%	3.42%
Reserves:											
Emergeny Operating Reserve Target (months)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Emergeny Operating Reserve Target($)	$1,892,891	$2,324,846	$2,385,562	$2,487,516	$2,565,925	$2,648,480	$2,735,469	$2,834,565	$2,929,425	$3,028,537	$3,132,127
Capital Improvement Reserve Target ($)	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000

[1]The Operating Reserve reflects the equivalent of three months of total expenses, including operations & maintenance expenses, personal service expenses, transfers out, debt service, and cash-funded capital.

Beginning Balances as of June 30, 2017 — Schedule 2

	Operating Fund (420)	Water Impact Fees	Water Bond (470)
CURRENT UNRESTRICTED ASSETS			
Cash and Cash Equivalents	$ 7,842,229	39,954	-
Restricted Cash and Cash Equivalents	-	-	-
Accounts	2,912,573	-	-
Interest	24,223	-	-
Due from Other Governments	52,462	-	-
Contractual Obligation Receivable	-	-	-
Due from Other Funds	-	-	-
Prepaid Items	-	-	-
Inventories	-	-	-
TOTAL CURRENT UNRESTRICTED ASSETS	**$ 10,831,487**	**39,954**	**-**
CURRENT LIABILITIES			
Accounts and Contracts Payable	$ (1,280,340)	-	-
Other Accrued Liabilities	(77,372)	-	-
Interest Payable	(62,363)	-	-
Accrued Compensated Absences	(23,008)	-	-
TOTAL CURRENT LIABILITIES	**$ (1,443,083)**	**-**	**-**
UNRESTRICTED WORKING CAPITAL	**$ 9,388,404**	**39,954**	**-**

Source: FY 2017 - Summary Trial Balance

Operating Cost Escalation Factors

Schedule 3

		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	Personal Services	N/A	0.00%	0.00%	0.00%	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
2	Fixed Operations & Maintenance Costs	N/A	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
3	Contract Repair & Maintenance	N/A	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
4	Fuel, Utilities, Chemicals	N/A	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%
5	Health Insurance	N/A	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
6	Other Insurance	N/A	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
7	Repair & Maintenance	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
8	Admin Services	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
9	Pensions	N/A	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
10	Recycled Water	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
11	City Staff	N/A	0.00%	0.00%	0.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
12	Consumer Price Index - Los Angeles Region	N/A	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%	3.90%

Projection of Cash Inflows

Schedule 4

			FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
	Rate Revenue Growth Assumptions:												
	Growth in Water Accounts		N/A	0.13%	0.00%	0.43%	0.43%	0.43%	0.43%	0.43%	0.42%	0.42%	0.42%
	Growth in Water Usage		N/A	0.00%	0.00%	0.43%	0.43%	0.43%	0.43%	0.43%	0.42%	0.42%	0.42%
	Assumed Rate Revenue Increases:												
	Assumed Water Rate Increase		N/A	**0.00%**	**3.50%**	**3.50%**	**3.50%**	**3.00%**	**3.00%**	**3.00%**	**3.00%**	**3.00%**	**3.35%**
	Rate Revenue:												
1	Water Rate Revenue												
2	Base Facility Charges	$	7,548,876	7,557,120	7,855,485	8,165,477	8,487,546	8,779,539	9,081,412	9,393,495	9,716,131	10,049,670	10,429,552
3	Usage Charges		5,298,624	5,562,880	5,782,510	6,010,699	6,247,777	6,462,716	6,684,928	6,914,656	7,152,152	7,397,674	7,677,309
4	**Total Rate Revenue**	**$**	**12,847,500**	**13,120,000**	**13,637,994**	**14,176,176**	**14,735,324**	**15,242,255**	**15,766,340**	**16,308,152**	**16,868,283**	**17,447,344**	**18,106,861**
	Other Operating Revenue:												
5	WQPP SFS WATER SALES	$	303,584	834,075	852,425	871,178	890,344	909,931	929,950	950,409	971,318	992,687	1,014,526
6	WTR-ADM SALES-PLANS & SPECS		-	200	200	200	200	200	200	200	200	200	200
7	WTR-ADM SWS WATER SALES		37,382	-	-	-	-	-	-	-	-	-	-
8	WTR-ADM PICO RIVERA WTR SLS		191,424	-	-	-	-	-	-	-	-	-	-
9	WTR-ADM RECLAIMED WATER		47,812	47,812	47,812	47,812	47,812	47,812	47,812	47,812	47,812	47,812	47,812
10	WTR-ADM CENTRAL BASIN SALES		356,759	-	-	-	-	-	-	-	-	-	-
11	WTR-ADM WATER TURN-ON-FEE		6,245	-	-	-	-	-	-	-	-	-	-
12	WTR-ADM CBMWD REIMB		54,720	-	-	-	-	-	-	-	-	-	-
13	WTR-ADM OTHER MISC FEES		113,597	20,003	20,003	20,003	20,003	20,003	20,003	20,003	20,003	20,003	20,003
14	**Total Other Operating Revenue**	**$**	**1,111,523**	**902,090**	**920,440**	**939,193**	**958,359**	**977,947**	**997,965**	**1,018,424**	**1,039,333**	**1,060,702**	**1,082,541**
	Non-Operating Revenue:												
15	WTR-ADM SALE-SCRAP & JUNK	$	5,196	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
16	WTR-ADM MISC REVENUE		504	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
17	WTR-ADM DONATN IN AID/CONST		7,600	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
18	WTR-ADM N RENTAL INCOME		255,673	500,000	500,000	511,000	522,242	533,731	545,473	557,474	569,738	582,272	595,082
19	WTR-ADM N RENTAL INC-YARD		103,385	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000	105,000
20	WTR-ADM REIMBURSEMENT		1,398	-	-	-	-	-	-	-	-	-	-
21	**Total Non-Operating Revenue**	**$**	**373,755**	**627,000**	**627,000**	**638,000**	**649,242**	**660,731**	**672,473**	**684,474**	**696,738**	**709,272**	**722,082**
	Interest Income:												
22	Interest Income	$	181,416	121,205	135,185	143,492	137,784	137,610	127,048	101,284	92,799	76,633	55,803
23	Interest Income - Restricted		-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-
24	**Total Interest Income**	**$**	**181,416**	**121,205**	**135,185**	**143,492**	**137,784**	**137,610**	**127,048**	**101,284**	**92,799**	**76,633**	**55,803**
	Transfers In:												
25	Transfers In	$	130,142	-	-	-	-	-	-	-	-	-	-
26	**Total Interest Income**	**$**	**130,142**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
27	**Restricted Revenue**												
28	Water Impact Fees	$	173,052	-	179,970	179,970	179,970	179,970	179,970	179,970	179,970	179,970	179,970
29	**Total Ristricted Revenue**	**$**	**173,052**	**-**	**179,970**	**179,970**	**179,970**	**179,970**	**179,970**	**179,970**	**179,970**	**179,970**	**179,970**
30	**TOTAL CASH INFLOWS**	**$**	**14,817,388**	**14,770,296**	**15,500,590**	**16,076,831**	**16,660,679**	**17,198,513**	**17,743,796**	**18,292,303**	**18,877,123**	**19,473,922**	**20,147,258**

Projection of Cash Outflows

Schedule 5

					FY 2018 Budget	FY 2019 Forecast	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
	WQPP														
1	WQPP REG FULL TIME WAGES	420−30−341−840−2 511000	PS	$	1,414	68,970	68,970	68,970	70,695	72,462	74,273	76,130	78,034	79,984	81,984
2	WQPP FT−LBR CHG/DIST	420−30−341−840−2 537000	PS		2,959	-	-	-	-	-	-	-	-	-	-
3	WQPP OH−LBR CHG/DIST	420−30−341−840−2 537040	PS		1,905	-	-	-	-	-	-	-	-	-	-
4	551000 WQPP PENSION-PERS	420−30−341−840−2 551000	PS		-	12,270	12,884	13,528	14,205	14,915	15,660	16,444	17,266	18,129	19,035
5	WQPP GROUP INSURANCE	420−30−341−840−2 553000	PS		-	17,870	18,763	19,701	20,686	21,721	22,807	23,947	25,144	26,402	27,722
6	WQPP MEDICARE INS−FTE	420−30−341−840−2 556000	PS		-	890	934	981	1,030	1,081	1,135	1,192	1,252	1,314	1,380
7	WQPP OTHER PROF SVCS	420−30−341−840−2 619000	PS		2,036	40,456	40,456	40,456	40,456	41,265	42,090	42,932	43,791	44,667	45,560
8	WQPP ELECTRICAL SERVICE	420−30−341−840−2 621000	OMF	$	32,690	150,252	152,506	154,793	157,115	159,472	161,864	164,292	166,756	169,258	171,797
9	WQPP IMPRVMNT REP MNT	420−30−341−840−2 652000	OMF		-	50,000	50,750	51,511	52,284	53,068	53,864	54,672	55,492	56,325	57,169
10	WQPP EQUIP−REP & MAINT	420−30−341−840−2 654000	OMF		408	-	-	-	-	-	-	-	-	-	-
11	WQPP FUNCTIONAL SUPPLIES	420−30−341−840−2 670030	OMF		63	33,312	33,812	34,319	34,834	35,356	35,886	36,425	36,971	37,526	38,089
12	**ADMINISTRATIVE**														
13	WTR−ADM REG FULL TIME WAGES	420−30−341−841−2 511000	PS	$	1,404,786	1,834,809	1,834,809	1,834,809	1,880,679	1,927,696	1,975,888	2,025,285	2,075,918	2,127,815	2,181,011
14	WTR−ADM WUA BOARD COMP	420−30−341−841−2 512000	PS		23,598	24,840	24,840	24,840	24,840	25,337	25,844	26,360	26,888	27,425	27,974
15	WTR−ADM TEMP EXTRA HELP	420−30−341−841−2 513000	PS		104,755	140,494	140,494	140,494	140,494	143,304	146,170	149,093	152,075	155,117	158,219
16	WTR−ADM OVERTIME WAGES	420−30−341−841−2 514000	PS		175,048	129,355	129,355	129,355	132,589	135,904	139,301	142,784	146,353	150,012	153,762
17	WTR−ADM VACATION PAY	420−30−341−841−2 521000	PS	$	82,582	-	-	-	-	-	-	-	-	-	-
18	WTR−ADM VACATION TAKEN	420−30−341−841−2 521100	PS		(39,247)	-	-	-	-	-	-	-	-	-	-
19	WTR−ADM SICK LEAVE PAY	420−30−341−841−2 522000	PS		21,535	-	-	-	-	-	-	-	-	-	-
20	WTR−ADM VESTED SICK TAKEN	420−30−341−841−2 522100	PS		(14,969)	-	-	-	-	-	-	-	-	-	-
21	WTR−ADM LEAVE PAYOFF	420−30−341−841−2 523000	PS		7,927	-	-	-	-	-	-	-	-	-	-
22	WTR−ADM LEAVE PAYOFF−CONTRA	420−30−341−841−2 523009	PS		(7,927)	-	-	-	-	-	-	-	-	-	-
23	WTR−ADM COMPENSATORY O/T	420−30−341−841−2 526000	PS		11,346	10,764	10,764	10,764	11,033	11,309	11,592	11,881	12,178	12,483	12,795
24	WTR−ADM COMP TIME TAKEN	420−30−341−841−2 526100	PS		(11,249)	-	-	-	-	-	-	-	-	-	-
25	WTR−ADM COMPENSATED ABSENCES	420−30−341−841−2 528000	PS		-	13,954	13,954	13,954	14,303	14,660	15,027	15,403	15,788	16,182	16,587
26	WTR−ADM LAB CHG−CONTRLR JV	420−30−341−841−2 536000	PS	$	416,974	314,781	314,781	314,781	322,651	330,717	338,985	347,459	356,146	365,049	374,176
27	WTR−ADM LAB CHG−EXEC ADM JV	420−30−341−841−2 536001	PS	$	67,938	76,375	76,375	76,375	78,284	80,241	82,248	84,304	86,411	88,572	90,786
28	WTR−ADM FT−LBR CHG/DIST	420−30−341−841−2 537000	PS		1,683	1,683	1,683	1,683	1,725	1,768	1,812	1,858	1,904	1,952	2,000
29	WTR−ADM OH−LBR CHG/DIST	420−30−341−841−2 537040	PS		1,075	4,345	4,345	4,345	4,454	4,565	4,679	4,796	4,916	5,039	5,165
30	WTR−ADM LAB CR − JV	420−30−341−841−2 546000	PS		(287,117)	(294,186)	(294,186)	(294,186)	(301,541)	(309,079)	(316,806)	(324,726)	(332,844)	(341,166)	(349,695)
31	WTR−ADM FT−LBR CR/DIST	420−30−341−841−2 547000	PS	$	(158,904)	(84,177)	(84,177)	(84,177)	(86,281)	(88,438)	(90,649)	(92,916)	(95,239)	(97,620)	(100,060)
32	WTR−ADM PT−LBR CR/DIST	420−30−341−841−2 547030	PS	$	(14,733)	(10,703)	(10,703)	(10,703)	(10,971)	(11,245)	(11,526)	(11,814)	(12,109)	(12,412)	(12,723)
33	WTR−ADM OH−LBR CR/DIST	420−30−341−841−2 547040	PS		(82,571)	(43,979)	(43,979)	(43,979)	(45,078)	(46,205)	(47,361)	(48,545)	(49,758)	(51,002)	(52,277)
34	WTR−ADM PENSION−PERS	420−30−341−841−2 551000	PS		145,813	366,961	385,310	404,575	424,804	446,044	468,346	491,763	516,352	542,169	569,278
35	WTR−ADM PERS−UAL	420−30−341−841−2 551200	PS		191,413	-	-	-	-	-	-	-	-	-	-
36	WTR−ADM DEFERRED COMP	420−30−341−841−2 551500	PS		6,754	6,433	6,433	6,433	6,433	6,561	6,693	6,826	6,963	7,102	7,244
37	WTR−ADM WORKERS COMP INS	420−30−341−841−2 552000	PS		164,704	169,504	177,979	186,878	196,222	206,033	216,335	227,152	238,509	250,435	262,956
38	WTR−ADM GROUP INSURANCE	420−30−341−841−2 553000	PS		308,958	371,630	390,211	409,722	430,208	451,718	474,304	498,019	522,920	549,066	576,520
39	WTR−ADM MGMT LIFE−DIS INS	420−30−341−841−2 553010	PS	$	455	725	761	799	839	881	925	972	1,020	1,071	1,125
40	WTR−ADM RETIREE HLTH INS	420−30−341−841−2 553030	PS	$	23,484	24,070	25,274	26,537	27,864	29,257	30,720	32,256	33,869	35,562	37,340
41	WTR−ADM PROF SVC HLTH INS	420−30−341−841−2 553040	PS		2,568	2,945	3,092	3,247	3,409	3,580	3,759	3,947	4,144	4,351	4,569
42	WTR−ADM MEDICARE INS−FTE	420−30−341−841−2 556000	PS		23,258	26,605	27,935	29,332	30,799	32,338	33,955	35,653	37,436	39,308	41,273
43	WTR−ADM MEDICARE−PTE & OT	420−30−341−841−2 556100	PS		-	5,132	5,389	5,658	5,941	6,238	6,550	6,877	7,221	7,582	7,961
44	WTR−ADM DUES & MEMBERSHIPS	420−30−341−841−2 560010	OMF		11,771	27,612	28,026	28,447	28,873	29,306	29,746	30,192	30,645	31,105	31,571
45	WTR−ADM PUBLICATIONS	420−30−341−841−2 560070	OMF	$	-	300	305	309	314	318	323	328	333	338	343
46	WTR−ADM SUBSCRIPTIONS−MISC	420−30−341−841−2 560200	OMF		250	250	254	258	261	265	269	273	277	282	286
47	WTR−ADM LIC−CERT'N FEE	420−30−341−841−2 560300	OMF		1,654	3,700	3,756	3,812	3,869	3,927	3,986	4,046	4,106	4,168	4,231
48	WTR−ADM RENTAL	420−30−341−841−2 581010	OMF		-	2,000	2,030	2,060	2,091	2,123	2,155	2,187	2,220	2,253	2,287
49	WTR−ADM LEASE PAYMENT	420−30−341−841−2 581190	OMF		934,629	934,629	948,648	962,878	977,321	991,981	1,006,861	1,021,964	1,037,293	1,052,853	1,068,645
	WTR−ADM TAXES & ASSESSMNTS	420−30−341−841−2 582100	OMF		-	-	-	-	-	-	-	-	-	-	-
	Central Basin Expenses		OMF		-	-	-	-	-	-	-	-	-	-	-
50	Water Replenishment District of Southern California (WRD)-Central Basin ($/AF)		OMF		284,610	303,405	322,200	337,415	350,840	361,580	376,043	391,085	406,728	422,997	439,917
51	Central Basin Watermaster-Water Rights Panel ($/AF of Allowed Pumping allocation- 895 AF)		OMF		806	761	895	895	895	895	895	895	895	895	895
52	Central Basin Watermaster-Administrative Body ($20 Flat Fee + proportional share of remaining administrative body budget) ($20 + 895 AF APA/Basin AF Total APA X Total $ Budget)-$/Annually		OMF		848	848	848	848	848	848	848	848	848	848	848
	San Gabriel Basin Expenses		OMF		-	-	-	-	-	-	-	-	-	-	-
53	Main San Gabriel Basin Watermaster-Administrative Assessment ($/AF)		OMF		95,934	97,575	102,454	107,576	112,955	118,603	124,533	130,760	137,298	144,163	151,371
54	San Gabriel Basin Watermaster-In-Lieu Water Assessment ($/AF)		OMF		63,956	65,050	68,303	71,718	75,304	79,069	83,022	87,173	91,532	96,108	100,914
55	San Gabriel Basin Watermaster-Water Resource Development Assessment-RDA ($/AF)		OMF		447,691	683,025	910,700	1,138,375	1,216,435	1,301,585	1,392,696	1,490,185	1,594,498	1,706,113	1,825,541
56	Main San Gabriel Basin Water Quality Authority ($/AF of prescriptive pumping rights of 8,271.380 AF)- This fee is independent of the actual water		OMF		82,714	82,714	107,528	107,528	107,528	107,528	107,528	140,613	140,613	140,613	140,613
57	LA County ($/Annually)		OMF		23,354	23,354	23,354	23,354	23,354	23,354	23,354	23,354	23,354	23,354	23,354

Projection of Cash Outflows

Schedule 5

				FY 2018 Budget	FY 2019 Forecast	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
58	WTR−ADM RECLAIMED WATER EXP	420−30−341−841−2 582110	OMV	32,990	-	-	-	-	-	-	-	-	-	-
59	New Recycled water expenses		OMV	-	56,822	58,527	60,283	62,091	63,954	65,873	67,849	69,884	71,981	74,140
60	WTR−ADM COLLECTION EXPENSE	420−30−341−841−2 583150	OMF	-	3,500	3,553	3,606	3,660	3,715	3,770	3,827	3,884	3,943	4,002
61	WTR−ADM INVENTORY GAIN/LOSS	420−30−341−841−2 589350	OMF	(84,410)	-	-	-	-	-	-	-	-	-	-
62	WTR−ADM WATER CONTAM ISSUES	420−30−341−841−2 589400	OMF	-	5,500	5,583	5,666	5,751	5,837	5,925	6,014	6,104	6,196	6,289
63	WTR−ADM LIABILITY INSURANCE		OMF	324,202	336,653	353,486	371,160	389,718	409,204	429,664	451,147	473,705	497,390	522,259
64	WTR−ADM PROPERTY/OTHER INS	420−30−341−841−2 592910	OMF	113,162	110,963	116,511	122,337	128,454	134,876	141,620	148,701	156,136	163,943	172,140
65	WTR−ADM ACCOUNT'G & AUDIT'G	420−30−341−841−2 611000	OMF	6,200	4,140	4,140	4,140	4,140	4,223	4,307	4,393	4,481	4,571	4,662
66	WTR−ADM ENGINEERG & DRAFTG	420−30−341−841−2 613000	OMF	459	10,000	10,000	10,000	10,000	10,200	10,404	10,612	10,824	11,041	11,262
67	WTR−ADM HEALTH SERVICES	420−30−341−841−2 614000	OMF	38,464	75,750	76,886	78,040	79,210	80,398	81,604	82,828	84,071	85,332	86,612
68	WTR−ADM LEGAL SERVICES	420−30−341−841−2 615000	OMF	4,510	5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717
69	WTR−ADM CR CARD PROCESS	420−30−341−841−2 615110	OMF	8,505	5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717
70	WTR−ADM OTHER PROF SVCS	420−30−341−841−2 619000	OMF	300,964	311,464	316,136	320,878	325,691	330,577	335,535	340,568	345,677	350,862	356,125
71	WTR−ADM CONT DISCLSR COST	420−30−341−841−2 619190	OMF	502	-	-	-	-	-	-	-	-	-	-
72	WTR−ADM SPEC PURP CONTRCTS	420−30−341−841−2 619210	OMF	7,395	18,000	18,270	18,544	18,822	19,105	19,391	19,682	19,977	20,277	20,581
73	WTR−ADM ELECTRICAL SERVICE	420−30−341−841−2 621000	OMV	255	181,720	188,807	196,171	203,821	211,770	220,029	228,610	237,526	246,790	256,415
74	WTR−ADM ELEC−PLANT 2	420−30−341−841−2 621010	OMV	372,029	386,538	401,613	417,276	433,550	450,458	468,026	486,279	505,244	524,948	545,421
75	WTR−ADM ELEC−BOOSTERS	420−30−341−841−2 621030	OMV	191,610	175,000	181,825	188,916	196,284	203,939	211,893	220,156	228,743	237,663	246,932
76	WTR−ADM ELECTRICITY−WELLS	420−30−341−841−2 621040	OMV	33,068	34,358	35,698	37,090	38,536	40,039	41,601	43,223	44,909	46,660	48,480
77	WTR−ADM ELEC−CITY YARD	420−30−341−841−2 621050	OMV	54,651	56,782	58,997	61,298	63,688	66,172	68,753	71,434	74,220	77,115	80,122
78	WTR−ADM NATURAL GAS−PLNT 2	420−30−341−841−2 622010	OMV	-	1,000	1,039	1,080	1,122	1,165	1,211	1,258	1,307	1,358	1,411
79	WTR−ADM NATURAL GAS−WELLS	420−30−341−841−2 622020	OMV	165	4,000	4,156	4,318	4,486	4,661	4,843	5,032	5,228	5,432	5,644
80	WTR−ADM NATURAL GAS CTY YRD	420−30−341−841−2 622030	OMV	1,977	8,400	8,728	9,068	9,422	9,789	10,171	10,568	10,980	11,408	11,853
81	WTR−ADM WATER SERVICE	420−30−341−841−2 623000	OMV	26,791	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500	23,500
82	WTR−ADM WATER−CITY YARD	420−30−341−841−2 623010	OMV	11,531	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
83	WTR−ADM SOLID WSTE DISPSAL	420−30−341−841−2 624000	OMF	1,718	1,744	1,770	1,796	1,823	1,851	1,878	1,907	1,935	1,964	1,994
84	WTR−ADM SANIT CHGS−PLNT 2	420−30−341−841−2 624010	OMF	-	1,200	1,218	1,236	1,255	1,274	1,293	1,312	1,332	1,352	1,372
85	WTR−ADM SANIT−CITY YARD	420−30−341−841−2 624050	OMF	3,768	3,225	3,273	3,322	3,372	3,423	3,474	3,526	3,579	3,633	3,687
86	WTR−ADM TELEPHONE	420−30−341−841−2 625000	OMF	24,246	20,700	21,010	21,326	21,646	21,970	22,300	22,634	22,974	23,318	23,668
87	WTR−ADM TELEPHONE−CTY YRD	420−30−341−841−2 625010	OMF	1,691	2,625	2,664	2,704	2,745	2,786	2,828	2,870	2,913	2,957	3,001
88	WTR−ADM MISC TRAVEL/MEETINGS	420−30−341−841−2 631000	OMF	103	2,500	2,538	2,576	2,614	2,653	2,693	2,734	2,775	2,816	2,858
89	WTR−ADM CONVENTION EXPENSE	420−30−341−841−2 632000	OMF	1,832	5,900	5,989	6,078	6,170	6,262	6,356	6,451	6,548	6,646	6,746
90	WTR−ADM MILEAGE REIMB	420−30−341−841−2 634000	OMF	-	300	305	309	314	318	323	328	333	338	343
91	WTR−ADM CELL PHONE ALLOWANCE	420−30−341−841−2 636000	OMF	-	2,400	2,436	2,473	2,510	2,547	2,585	2,624	2,664	2,704	2,744
92	WTR−ADM OFF−JOB TRAINING	420−30−341−841−2 643000	OMF	4,894	26,700	27,101	27,507	27,920	28,338	28,763	29,195	29,633	30,077	30,529
93	WTR−ADM MISC NON−PROF SERV	420−30−341−841−2 649000	OMF	18,124	29,706	30,152	30,604	31,063	31,529	32,002	32,482	32,969	33,464	33,966
94	WTR−ADM IMPRVMNT REP MNT	420−30−341−841−2 652000	OMF	10,096	2,700	2,741	2,782	2,823	2,866	2,909	2,952	2,997	3,042	3,087
95	WTR−ADM ASPHALT REPAIRS	420−30−341−841−2 652010	OMF	28,385	26,000	26,390	26,786	27,188	27,595	28,009	28,430	28,856	29,289	29,728
96	WTR−ADM SOFTWARE MAINT&LICEN	420−30−341−841−2 652011	OMF	10,289	9,000	9,135	9,272	9,411	9,552	9,696	9,841	9,989	10,138	10,291
97	WTR−ADM VALUE & MANHOLE ADJ	420−30−341−841−2 652040	OMF	-	15,000	15,225	15,453	15,685	15,920	16,159	16,402	16,648	16,897	17,151
98	WTR−ADM CONCRETE REPAIRS	420−30−341−841−2 652050	OMF	9,605	14,000	14,210	14,423	14,639	14,859	15,082	15,308	15,538	15,771	16,007
99	WTR−ADM NPDES	420−30−341−841−2 652190	OMF	-	3,000	3,045	3,091	3,137	3,184	3,232	3,280	3,330	3,379	3,430
100	WTR−ADM GRAFFITI REMOVAL	420−30−341−841−2 652400	OMF	15,000	15,000	15,225	15,453	15,685	15,920	16,159	16,402	16,648	16,897	17,151
101	WTR−ADM EQUIP−REP & MAINT	420−30−341−841−2 654000	OMF	35,372	31,800	32,277	32,761	33,253	33,751	34,258	34,771	35,293	35,822	36,360
102	WTR−ADM IT EQ MAINT CHGS	420−30−341−841−2 654090	OMF	51,191	51,191	51,959	52,738	53,529	54,332	55,147	55,974	56,814	57,666	58,531
103	WTR−ADM SMALL TOOLS	420−30−341−841−2 670010	OMF	4,267	5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717
104	WTR−ADM FUNCTIONAL SUPPLIES	420−30−341−841−2 670030	OMF	50,768	46,601	47,300	48,010	48,730	49,461	50,203	50,956	51,720	52,496	53,283
105	WTR−ADM JANITORIAL SUPPLIES	420−30−341−841−2 671010	OMF	516	500	508	515	523	531	539	547	555	563	572
106	WTR−ADM OFFICE SUPPLIES	420−30−341−841−2 671030	OMF	5,592	4,800	4,872	4,945	5,019	5,095	5,171	5,249	5,327	5,407	5,488
107	WTR−ADM WEARING APPAREL & ID	420−30−341−841−2 674000	OMF	14,934	14,000	14,210	14,423	14,639	14,859	15,082	15,308	15,538	15,771	16,007
108	WTR−ADM UNIF CLN−PERS	420−30−341−841−2 674010	OMF	-	1,313	1,333	1,353	1,373	1,394	1,415	1,436	1,458	1,479	1,502
109	WTR−ADM POSTAGE	420−30−341−841−2 675010	OMF	35,709	42,700	43,341	43,991	44,650	45,320	46,000	46,690	47,390	48,101	48,823
110	WTR−ADM PHOTOCOPIES	420−30−341−841−2 678010	OMF	2,905	3,000	3,045	3,091	3,137	3,184	3,232	3,280	3,330	3,379	3,430
111	WTR−ADM CONTR FOR GEN GOVT	420−30−341−841−2 687100	OMF	529,784	629,721	639,167	648,754	658,486	668,363	678,388	688,564	698,893	709,376	720,017
112	WTR−ADM MOBILE EQMT MAINT	420−30−341−841−2 691010	OMF	138,233	138,684	140,764	142,876	145,019	147,194	149,402	151,643	153,918	156,226	158,570
113	WTR−ADM MOBILE EQ−RENTAL CR	420−30−341−841−2 691050	OMF	-	(2,000)	(2,030)	(2,060)	(2,091)	(2,123)	(2,155)	(2,187)	(2,220)	(2,253)	(2,287)
114	WTR−ADM N ONLINE PERMITS	420−30−341−841−2 847070	OMF	1,242	-	-	-	-	-	-	-	-	-	-
115	**WELLS**													
116	WELLS BLDG REP & MAINT	420−30−341−842−2 651000	OMF	899	40,000	40,600	41,209	41,827	42,455	43,091	43,738	44,394	45,060	45,736
117	WELLS IMPRVMNT REP MNT	420−30−341−842−2 652000	OMF	-	13,600	13,804	14,011	14,221	14,435	14,651	14,871	15,094	15,320	15,550
118	WELLS EQUIP−REP & MAINT	420−30−341−842−2 654000	OMF	7,935	10,000	10,150	10,302	10,457	10,614	10,773	10,934	11,098	11,265	11,434
119	WELLS FUNCTIONAL SUPPLIES	420−30−341−842−2 670030	OMF	113	2,700	2,741	2,782	2,823	2,866	2,909	2,952	2,997	3,042	3,087
120	**PUMPING**													
121	PUMP PLT BLDG REP & MAINT	420−30−341−843−2 651000	OMF	1,517	20,000	20,300	20,605	20,914	21,227	21,546	21,869	22,197	22,530	22,868
122	PUMP PLT IMP REP MNT−PLNT 2	420−30−341−843−2 652200	OMF	10,899	10,000	10,150	10,302	10,457	10,614	10,773	10,934	11,098	11,265	11,434
123	PUMP PLT EQ REP−MNT PLANT 2	420−30−341−843−2 654010	OMF	39,021	50,000	50,750	51,511	52,284	53,068	53,864	54,672	55,492	56,325	57,169
124	PUMP PLT SMALL TOOLS	420−30−341−843−2 670010	OMF $	7,350	3,000	3,045	3,091	3,137	3,184	3,232	3,280	3,330	3,379	3,430
125	PUMP PLT SUPPLIES−PLANT 2−3	420−30−341−843−2 670050	OMF	62,091	40,000	40,600	41,209	41,827	42,455	43,091	43,738	44,394	45,060	45,736
126	**FACILITY MAINTENANCE**													
127	FAC MTN FT−LBR CHG/DIST	420−30−341−844−2 537000	PS	10,971	7,216	7,216	7,216	7,396	7,581	7,771	7,965	8,164	8,368	8,578
128	FAC MTN OH−LBR CHG/DIST	420−30−341−844−2 537040	PS	5,705	3,753	3,753	3,753	3,847	3,943	4,042	4,143	4,246	4,352	4,461
129	FAC MTN BLDG REP & MAINT	420−30−341−844−2 651000	OMF	41,212	45,000	45,675	46,360	47,056	47,761	48,478	49,205	49,943	50,692	51,453
130	FAC MTN IMPRVMNT REP MNT	420−30−341−844−2 652000	OMF	39,041	37,000	37,555	38,118	38,690	39,270	39,860	40,457	41,064	41,680	42,305
131	FAC MTN EQUIP−REP & MAINT	420−30−341−844−2 654000	OMF	45,523	20,000	20,300	20,605	20,914	21,227	21,546	21,869	22,197	22,530	22,868

				FY 2018 Budget	FY 2019 Forecast	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
132	FAC MTN EXTRAORDINARY RPRS	420−30−341−844−2 656000	OMF	39,038	51,498	52,270	53,055	53,850	54,658	55,478	56,310	57,155	58,012	58,882
133	FAC MTN FUNCTIONAL SUPPLIES	420−30−341−844−2 670030	OMF	3,267	1,000	1,015	1,030	1,046	1,061	1,077	1,093	1,110	1,126	1,143
134	FAC MTN WEARING APPAREL & ID	420−30−341−844−2 674000	OMF	3,486	-	-	-	-	-	-	-	-	-	-
135	**MAIN MAINTENANCE**													
136	MAIN MTN OVERTIME WAGES	420−30−341−845−2 514000	PS	192	-	-	-	-	-	-	-	-	-	-
137	MAIN MTN FT−LBR CHG/DIST	420−30−341−845−2 537000	PS	-	7,216	7,216	7,216	7,396	7,581	7,771	7,965	8,164	8,368	8,578
138	MAIN MTN OH−LBR CHG/DIST	420−30−341−845−2 537040	PS	-	3,753	3,753	3,753	3,847	3,943	4,042	4,143	4,246	4,352	4,461
139	MAIN MTN IMPRVMNT REP MNT	420−30−341−845−2 652000	OMF	93,949	100,000	101,500	103,023	104,568	106,136	107,728	109,344	110,984	112,649	114,339
140	MAIN MTN EQUIP−REP & MAINT	420−30−341−845−2 654000	OMF	$ 228	2,000	2,030	2,060	2,091	2,123	2,155	2,187	2,220	2,253	2,287
141	MAIN MTN FUNCTIONAL SUPPLIES	420−30−341−845−2 670030	OMF	32,956	6,200	6,293	6,387	6,483	6,580	6,679	6,779	6,881	6,984	7,089
142	**METER MAINTENANCE**													
143	MTR MTN FT−LBR CHG/DIST	420−30−341−846−2 537000	PS	-	288	288	288	295	303	310	318	326	334	342
144	MTR MTN OH−LBR CHG/DIST	420−30−341−846−2 537040	PS	-	151	151	151	155	159	163	167	171	175	179
145	MTR MTN IMP REP MNT−SVCS	420−30−341−846−2 652220	OMF	20,572	20,000	20,300	20,605	20,914	21,227	21,546	21,869	22,197	22,530	22,868
146	MTR MTN IMP REP MNT−METERS	420−30−341−846−2 652230	OMF	43,288	39,500	40,093	40,694	41,304	41,924	42,553	43,191	43,839	44,496	45,164
147	MTR MTN EQUIP−REP & MAINT	420−30−341−846−2 654000	OMF	1,402	1,500	1,523	1,545	1,569	1,592	1,616	1,640	1,665	1,690	1,715
148	MTR MTN FUNCTIONAL SUPPLIES	420−30−341−846−2 670030	OMF	$ 4,597	5,000	5,075	5,151	5,228	5,307	5,386	5,467	5,549	5,632	5,717
149	**WAREHOUSE**													
150	WAREHSE LAB CHG−CONTRLR JV	420−30−341−847−2 536000	OMF	51,404	54,006	54,816	55,638	56,473	57,320	58,180	59,052	59,938	60,837	61,750
151	WAREHSE FUNCTIONAL SUPPLIES	420−30−341−847−2 670030	OMF	-	300	305	309	314	318	323	328	333	338	343
152	**Sub-Total Operations & Maintenance Expenses**			**7,571,564**	**9,299,382**	**9,736,826**	**10,151,865**	**10,472,998**	**10,811,008**	**11,167,057**	**11,571,840**	**11,960,009**	**12,365,519**	**12,789,290**
153	Personal Services Execution			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
154	Variable Operating Cost Execution			100.0%	100.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
155	Fixed Operating Cost Execution			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
156	**Total Operations & Maintenance Expenses**			**$ 7,571,564**	**$ 9,299,382**	**$ 9,542,248**	**$ 9,950,065**	**$ 10,263,698**	**$ 10,593,918**	**$ 10,941,877**	**$ 11,338,258**	**$ 11,717,701**	**$ 12,114,148**	**$ 12,528,507**
	Long-Term Debt Service Payments:													
157	Existing Debt Service			$ 1,343,362	1,344,562	1,344,762	1,348,962	1,346,962	1,344,477	1,344,477	1,344,477	1,344,477	1,344,477	1,311,639
158	Cumulative New Debt Service			-	-	-	-	-	-	-	21,119	468,934	793,442	1,138,254
159	**Total Long-Term Debt Service Payments**			**$ 1,343,362**	**1,344,562**	**1,344,762**	**1,348,962**	**1,346,962**	**1,344,477**	**1,344,477**	**1,365,596**	**1,813,411**	**2,137,919**	**2,449,893**
	Other Below the Line Expenses:													
160	Transfers Out			$ 186,537	$ 186,537	$ 186,537	$ 186,537	$ 186,537	$ 186,537	$ 186,537	$ 186,537	$ 186,537	$ 186,537	$ 186,537
161	**Total Other Below the Line Expenses**			**$ 186,537**	**186,537**	**186,537**	**186,537**	**186,537**	**186,537**	**186,537**	**186,537**	**186,537**	**186,537**	**186,537**
162	**TOTAL CASH OUTFLOWS**			**$ 9,101,463**	**$ 10,830,481**	**$ 11,073,546**	**$ 11,485,564**	**$ 11,797,197**	**$ 12,124,932**	**$ 12,472,890**	**$ 12,890,390**	**$ 13,717,648**	**$ 14,438,604**	**$ 15,164,936**

Capital Improvement Program

Schedule 6

			FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	**Distribution System Improvements**	$	-	-	-	-	-	-	-	-	-	-	-
2	West Distribution System Improvements Group No. 1		-	3,250,000	1,200,000	1,600,000	-	-	-	-	-	-	-
3	West Distribution System Improvements Group No. 2		-	-	-	-	1,290,000	2,292,000	1,360,000	1,593,000	1,000,000	-	-
4	Central Distribution System Improvements Group No. 1		-	-	-	-	1,000,000	1,000,000	2,000,000	2,329,000	1,560,000	-	-
5	Central Distribution System Improvements Group No. 2		-	-	-	-	-	-	-	-	-	4,024,500	2,024,500
6	South Distribution System Improvements Group No. 1		-	-	-	-	-	-	-	-	-	2,221,000	1,000,000
7	South Distribution System Improvements Group No. 2		-	-	-	-	-	-	-	-	-	-	-
8	South Distribution System Improvements Group No. 3		-	-	-	-	-	-	-	-	-	-	-
9	**Water Facility Replacement**		-	-	-	-	-	-	-	-	-	-	-
10	Murphy West and East Reservoir Replacement		-	-	-	3,190,000	-	-	-	-	-	-	-
11	Washington Pump Station Replacement		-	-	-	-	-	-	2,393,000	-	-	-	-
12	Greenleaf/Hoover Storage Replacement		-	-	-	-	-	-	-	300,000	6,000,000	-	-
13	Murphy Hills Pump Station		-	-	-	-	-	-	-	2,000,000	-	-	-
14	Rideout Reservoir Replacement		-	-	-	-	2,000,000	-	-	-	-	-	-
15	Starlight Reservoir Redundancy		-	-	-	-	-	-	-	-	-	1,000,000	-
16	Hazzard Reservoir Replacement		-	-	-	-	-	-	-	-	-	-	-
17	College Hills Reservoir Replacement		-	-	-	-	-	-	-	-	-	-	4,000,000
18	Booster Station Repair		-	-	100,000	-	-	200,000	-	-	200,000	-	-
19	Oceanview Reservoir Improvements		-	-	-	-	-	-	-	-	-	-	-
20	**Pipeline Replacement Program**		-	-	-	-	-	-	-	-	-	-	-
21	Cylindrical Steel Pipeline Replacement Program		-	300,000	300,000	-	-	300,000	300,000	300,000	300,000	300,000	300,000
22	**Valve Replacement Program**		-	-	-	-	-	-	-	-	-	-	-
23	Large Valve Replacement Program		-	50,000	100,000	-	100,000	100,000	100,000	100,000	100,000	100,000	100,000
24	Valve Replacement Program		-	-	100,000	-	100,000	100,000	100,000	100,000	-	100,000	100,000
25	**Interconnection Improvements**		-	-	-	-	-	-	-	-	-	-	-
26	Santa Fe Springs Transmission Main		-	-	-	-	-	-	-	-	-	-	-
27	**Pipeline Replacement (combined)**		-	-	-	-	-	-	-	-	-	-	-
28	Non Master Plan Improvements		-	-	-	-	-	-	-	-	-	-	-
29	Well Rehab		-	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
30	City Yard Improvements		-	50,000	90,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
31	Emergency Water Main Repair		-	100,000	-	-	-	-	-	-	-	-	-
32	**FY 18 CIP ACTUALS**		-	-	-	-	-	-	-	-	-	-	-
33	WTR CIP WATER MAIN REPLACEME		2,601,414	-	-	-	-	-	-	-	-	-	-
34	WTR CIP 0910 PALM		7,675	-	-	-	-	-	-	-	-	-	-
35	WTR CIP 0910 LANDFILL		6,536	-	-	-	-	-	-	-	-	-	-
36	WTR CIP 0910 SO WIND DR		483	-	-	-	-	-	-	-	-	-	-
37	WTR CIP O WATER METER RPL PR		163,918	-	-	-	-	-	-	-	-	-	-
38	WTR CIP N TRF TO 100 GN FND		4,050	-	-	-	-	-	-	-	-	-	-
39	WTR CIP EMERGENCY REPAIRS		188,230	-	-	-	-	-	-	-	-	-	-
40	WTR CIP N CITY YARD IMPRVMNT		5,870	-	-	-	-	-	-	-	-	-	-
	Total CIP Budget (Current $)	**$**	**2,978,177**	**3,850,000**	**1,990,000**	**4,940,000**	**4,640,000**	**4,142,000**	**6,403,000**	**6,872,000**	**9,310,000**	**7,895,500**	**7,674,500**

(1) Reflects a forecasted CIP spending amount based on the average CIP spending in the final five years of the staff provided ten-year CIP.

Long-Term Borrowing Projections - Option 1

Schedule 7

			FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Term (Years)			20	20	20	20	20	20	20	20	20	20	20
Interest Rate			3.50%	4.00%	4.50%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Sources of Funds													
Total Sources (1)			-	-	-	-	-	-	-	422,370	8,700,833	1,227,452	6,153,809
Uses of Funds													
Proceeds													
Cost of Issuance	2.00%	of Par	-	-	-	-	-	-	-	380,031	7,828,639	1,104,409	5,536,935
Underwriter's Discount	-	per $1,000	-	-	-	-	-	-	-	8,447	174,017	24,549	123,076
Bond Insurance	0	times total Debt Service	-	-	-	-	-	-	-	-	-	-	-
Capitalized Interest	0	Years Interest	-	-	-	-	-	-	-	-	-	-	-
Debt Service Surety	0.00%	of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Debt Service Reserve	1	Years of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Other Costs			-	-	-	-	-	-	-	33,892	698,177	98,494	493,798
Total Uses			-	-	-	-	-	-	-	422,370	8,700,833	1,227,452	6,153,809
1 Year Interest			-	-	-	-	-	-	-	21,119	435,042	61,373	307,690
Annual Debt Service			-	-	-	-	-	-	-	33,892	698,177	98,494	493,798
Total Debt Service			-	-	-	-	-	-	-	677,841	13,963,547	1,969,878	9,875,951
Cumulative Annual New Debt Service [2]			**-**	**-**	**-**	**-**	**-**	**-**	**-**	**21,119**	**468,934**	**793,442**	**1,138,254**

(1) Debt service listed reflects total debt financed capital needed each year. Stantec recommends that the City bundle debt in two or three year bond issuances.
(2) Interest-only payment required in first year of issuance.

Long-Term Borrowing Projections - Option 2

Schedule 7

			FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
Term (Years)			20	20	20	20	20	20	20	20	20	20	20
Interest Rate			3.50%	4.00%	4.50%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Sources of Funds													
Total Sources (1)			-	-	-	-	-	-	-	-	-	-	-
Uses of Funds													
Proceeds													
Cost of Issuance	2.00%	of Par	-	-	-	-	-	-	-	-	-	-	-
Underwriter's Discount	-	per $1,000	-	-	-	-	-	-	-	-	-	-	-
Bond Insurance	0	times total Debt Service	-	-	-	-	-	-	-	-	-	-	-
Capitalized Interest	0	Years Interest	-	-	-	-	-	-	-	-	-	-	-
Debt Service Surety	0.00%	of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Debt Service Reserve	1	Years of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Other Costs			-	-	-	-	-	-	-	-	-	-	-
Total Uses			-	-	-	-	-	-	-	-	-	-	-
1 Year Interest			-	-	-	-	-	-	-	-	-	-	-
Annual Debt Service			-	-	-	-	-	-	-	-	-	-	-
Total Debt Service			-	-	-	-	-	-	-	-	-	-	-
Cumulative Annual New Debt Service [2]			-	-	-	-	-	-	-	-	-	-	-

(1) Debt service listed reflects total debt financed capital needed each year. Stantec recommends that the City bundle debt in two or three year bond issuances.
(2) Interest-only payment required in first year of issuance.

Cash Flow Proforma - Option 1

Schedule 8

		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	**Rate Revenue Increase**	**0.00%**	**0.00%**	**3.50%**	**3.50%**	**3.50%**	**3.00%**	**3.00%**	**3.00%**	**3.00%**	**3.00%**	**3.35%**
	Revenues											
2	Rate Revenue Before Adjustments	$ 12,848,000	$ 13,120,000	$ 13,120,000	$ 13,638,000	$ 14,176,000	$ 14,735,000	$ 15,242,000	$ 15,766,000	$ 16,308,000	$ 16,868,000	$ 17,447,000
3	Additional Rate Revenue From Growth	-	-	57,000	59,000	61,000	63,000	65,000	67,000	69,000	71,000	73,000
4	Additional Rate Revenue From Rate Adjustment	-	-	461,000	479,000	498,000	444,000	459,000	475,000	491,000	508,000	587,000
5	Other Operating Revenues	1,112,000	902,000	920,000	939,000	958,000	978,000	998,000	1,018,000	1,039,000	1,061,000	1,083,000
6	Interest Income	181,000	121,000	135,000	143,000	138,000	138,000	127,000	101,000	93,000	77,000	56,000
7	Other Non-Operating Revenue	374,000	627,000	627,000	638,000	649,000	661,000	672,000	684,000	697,000	709,000	722,000
8	**Total Revenues**	**$ 14,515,000**	**$ 14,770,000**	**$ 15,320,000**	**$ 15,896,000**	**$ 16,480,000**	**$ 17,019,000**	**$ 17,563,000**	**$ 18,111,000**	**$ 18,697,000**	**$ 19,294,000**	**$ 19,968,000**
	Operating Expenses											
10	Personnel Salaries	$ 1,830,000	$ 2,271,000	$ 2,271,000	$ 2,271,000	$ 2,323,000	$ 2,381,000	$ 2,439,000	$ 2,499,000	$ 2,561,000	$ 2,624,000	$ 2,689,000
11	Employee Benefits	861,000	999,000	1,049,000	1,101,000	1,156,000	1,214,000	1,274,000	1,338,000	1,405,000	1,475,000	1,549,000
12	Professional Services	303,000	352,000	357,000	361,000	366,000	372,000	378,000	384,000	389,000	396,000	402,000
13	Equipment	193,000	174,000	177,000	180,000	182,000	185,000	188,000	191,000	194,000	197,000	200,000
14	Energy, Utilities, and Recycled Water	725,000	938,000	778,000	807,000	837,000	868,000	901,000	934,000	969,000	1,005,000	1,043,000
15	Miscellaneous Operating Costs	2,661,000	3,309,000	3,375,000	3,442,000	3,510,000	3,581,000	3,653,000	3,727,000	3,804,000	3,882,000	3,963,000
16	Taxes and Assessments	1,000,000	1,257,000	1,536,000	1,788,000	1,888,000	1,993,000	2,109,000	2,265,000	2,396,000	2,535,000	2,683,000
18	**Total Operating Expenses**	**$ 7,573,000**	**$ 9,300,000**	**$ 9,543,000**	**$ 9,950,000**	**$ 10,262,000**	**$ 10,594,000**	**$ 10,942,000**	**$ 11,338,000**	**$ 11,718,000**	**$ 12,114,000**	**$ 12,529,000**
19	**Net Revenues**	**$ 6,942,000**	**$ 5,470,000**	**$ 5,777,000**	**$ 5,946,000**	**$ 6,218,000**	**$ 6,425,000**	**$ 6,621,000**	**$ 6,773,000**	**$ 6,979,000**	**$ 7,180,000**	**$ 7,439,000**
20	Existing Debt Service	$ 1,343,000	$ 1,345,000	$ 1,345,000	$ 1,349,000	$ 1,347,000	$ 1,344,000	$ 1,344,000	$ 1,344,000	$ 1,344,000	$ 1,344,000	$ 1,312,000
21	New Debt Service	-	-	-	-	-	-	-	21,000	469,000	793,000	1,138,000
22	Total Capital Spending	2,978,000	3,819,000	1,967,000	5,391,000	5,205,000	4,767,000	7,690,000	8,515,000	11,952,000	10,409,000	10,416,000
23	Cash-funded Capital (Rate Revenue)	2,978,000	3,605,000	1,786,000	5,211,000	5,025,000	4,587,000	7,510,000	7,955,000	3,943,000	9,125,000	4,699,000
24	Cash-funded Capital (Capacity Charges)	-	214,000	181,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000
25	Capital Projects Paid with Debt Proceeds	-	-	-	-	-	-	-	380,000	7,829,000	1,104,000	5,537,000
26	Balance of Transfer (In)/Out	56,000	187,000	187,000	187,000	187,000	187,000	187,000	187,000	187,000	187,000	187,000
27	**Revenues Over (Under) Expenses**	**$ 2,565,000**	**$ 333,000**	**$ 2,459,000**	**$ (801,000)**	**$ (341,000)**	**$ 307,000**	**$ (2,420,000)**	**$ (2,734,000)**	**$ 1,036,000**	**$ (4,269,000)**	**$ 103,000**
28	Operating Fund - Beginning Balance	$ 9,388,000	$ 11,953,000	$ 12,288,000	$ 14,749,000	$ 13,949,000	$ 13,608,000	$ 13,915,000	$ 11,495,000	$ 8,762,000	$ 9,798,000	$ 5,529,000
29	**Operating Fund - Ending Balance**	**11,953,000**	**12,286,000**	**14,747,000**	**13,948,000**	**13,608,000**	**13,915,000**	**11,495,000**	**8,761,000**	**9,798,000**	**5,529,000**	**5,632,000**
30	Total Target Reserves	$ 4,393,000	$ 4,825,000	$ 4,886,000	$ 4,988,000	$ 5,066,000	$ 5,148,000	$ 5,235,000	$ 5,335,000	$ 5,429,000	$ 5,529,000	$ 5,632,000
31	Operating Reserve	1,893,000	2,325,000	2,386,000	2,488,000	2,566,000	2,648,000	2,735,000	2,835,000	2,929,000	3,029,000	3,132,000
32	Capital Improvement/Replacement Reserve	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
33	Debt Service Coverage (1.5 Req.)	10.43	10.43	10.43	10.43	10.43	10.43	10.43	10.43	10.43	10.43	10.43
	Restricted Fund Balances											
	Water Impact Fee Fund	$ 214,271	1,071	5	0	0	0	0	0	0	0	0
	Debt Service Reserve Fund											

Cash Flow Proforma - Option 2

Schedule 8

		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	**Rate Revenue Increase**	**0.00%**	**0.00%**	**5.00%**	**5.00%**	**5.00%**	**5.00%**	**5.00%**	**5.00%**	**5.00%**	**3.75%**	**3.27%**
	Revenues											
2	Rate Revenue Before Adjustments	$ 12,847,500	$ 13,120,000	$ 13,120,000	$ 13,835,646	$ 14,590,057	$ 15,385,320	$ 16,223,634	$ 17,107,316	$ 18,038,807	$ 19,020,679	$ 19,816,883
3	Additional Rate Revenue From Growth	-	(0)	56,806	59,646	62,629	65,760	69,048	72,500	76,125	79,932	82,929
4	Additional Rate Revenue From Rate Adjustment	-	-	658,840	694,765	732,634	772,554	814,634	858,991	905,747	716,273	649,861
	Price Elasticity Adjustment	-	-	-	-	-	-	-	-	-	-	-
5	Other Operating Revenues	1,111,523	902,090	920,440	939,193	958,359	977,947	997,965	1,018,424	1,039,333	1,060,702	1,082,541
6	Interest Income	181,416	121,205	136,179	147,568	147,247	155,367	156,652	144,818	117,497	85,756	65,534
7	Other Non-Operating Revenue	373,755	627,000	627,000	638,000	649,242	660,731	672,473	684,474	696,738	709,272	722,082
8	**Total Revenues**	**$ 14,514,195**	**$ 14,770,296**	**$ 15,519,265**	**$ 16,314,819**	**$ 17,140,168**	**$ 18,017,679**	**$ 18,934,407**	**$ 19,886,523**	**$ 20,874,247**	**$ 21,672,614**	**$ 22,419,831**
	Operating Expenses											
10	Personal Services	$ 1,829,733	$ 2,270,817	$ 2,270,817	$ 2,270,817	$ 2,323,293	$ 2,380,516	$ 2,439,153	$ 2,499,238	$ 2,560,808	$ 2,623,899	$ 2,688,548
11	Variable Operations & Maintenance Costs	860,653	998,602	1,048,532	1,100,958	1,156,006	1,213,807	1,274,497	1,338,222	1,405,133	1,475,390	1,549,159
12	Fixed Operations & Maintenance Costs	303,000	351,920	356,592	361,334	366,147	371,842	377,626	383,500	389,468	395,529	401,685
13	Contract Repair & Maintenance	192,697	174,491	177,108	179,765	182,461	185,198	187,976	190,796	193,658	196,563	199,511
14	Energy, Utilities, and Recycled Water	725,067	938,120	778,311	807,199	837,200	868,359	900,719	934,328	969,233	1,005,485	1,043,135
15	Fuel, Utilities, Chemicals	2,660,504	3,308,702	3,374,607	3,442,284	3,510,432	3,580,735	3,652,986	3,727,260	3,803,635	3,882,192	3,963,016
16	Taxes and Assessments	999,911	1,256,731	1,536,281	1,787,709	1,888,158	1,993,462	2,108,919	2,264,913	2,395,766	2,535,092	2,683,453
18	**Total Operating Expenses**	**$ 7,571,564**	**$ 9,299,382**	**$ 9,542,248**	**$ 9,950,065**	**$ 10,263,698**	**$ 10,593,918**	**$ 10,941,877**	**$ 11,338,258**	**$ 11,717,701**	**$ 12,114,148**	**$ 12,528,507**
19	**Net Revenues**	**$ 6,942,631**	**$ 5,470,913**	**$ 5,977,017**	**$ 6,364,753**	**$ 6,876,470**	**$ 7,423,761**	**$ 7,992,530**	**$ 8,548,265**	**$ 9,156,546**	**$ 9,558,466**	**$ 9,891,324**
20	Existing Debt Service	$ 1,343,362	$ 1,344,562	$ 1,344,762	$ 1,348,962	$ 1,346,962	$ 1,344,477	$ 1,344,477	$ 1,344,477	$ 1,344,477	$ 1,344,477	$ 1,311,639
21	New Debt Service	-	-	-	-	-	-	-	-	-	-	-
22	Total Capital Spending	2,978,177	3,819,240	1,966,909	5,391,187	5,205,141	4,766,657	7,690,401	8,515,228	11,951,722	10,409,304	10,415,668
23	Cash-funded Capital (Rate Revenue)	2,978,177	3,604,969	1,785,867	5,211,212	5,025,171	4,586,687	7,510,431	8,335,258	11,771,752	10,229,334	10,235,698
24	Cash-funded Capital (Capacity Charges)	-	214,271	181,041	179,975	179,970	179,970	179,970	179,970	179,970	179,970	179,970
25	Capital Projects Paid with Debt Proceeds	-	-	-	-	-	-	-	-	-	-	-
26	Balance of Transfer (In)/Out	56,395	186,537	186,537	186,537	186,537	186,537	186,537	186,537	186,537	186,537	186,537
27	**Revenues Over (Under) Expenses**	**$ 2,564,697**	**$ 334,845**	**$ 2,659,851**	**$ (381,958)**	**$ 317,801**	**$ 1,306,060**	**$ (1,048,915)**	**$ (1,318,008)**	**$ (4,146,220)**	**$ (2,201,882)**	**$ (1,842,549)**
28	Operating Fund - Beginning Balance	$ 9,388,404	$ 11,953,101	$ 12,287,946	$ 14,947,797	$ 14,565,840	$ 14,883,641	$ 16,189,701	$ 15,140,786	$ 13,822,778	$ 9,676,558	$ 7,474,676
29	**Operating Fund - Ending Balance**	**11,953,101**	**12,287,946**	**14,947,797**	**14,565,840**	**14,883,641**	**16,189,701**	**15,140,786**	**13,822,778**	**9,676,558**	**7,474,676**	**5,632,127**
30	Total Target Reserves	$ 4,392,891	$ 4,824,846	$ 4,885,562	$ 4,987,516	$ 5,065,925	$ 5,148,480	$ 5,235,469	$ 5,334,565	$ 5,429,425	$ 5,528,537	$ 5,632,127
31	Operating Reserve	1,892,891.06	2,324,845.61	2,385,561.92	2,487,516.36	2,565,924.55	2,648,479.51	2,735,469.18	2,834,564.52	2,929,425.24	3,028,537.01	3,132,126.68
32	Capital Improvement/Replacement Reserve	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000
33	Debt Service Coverage (Req.)	10.43	10.43	10.43	10.43	10.43	10.43	10.43	10.43	10.43	10.43	10.43
	Restricted Fund Balances											
	Water Impact Fee Fund	$ 214,271	1,071	5	0	0	0	0	0	0	0	0
	Debt Service Reserve Fund											

Funding Summary by Fund

Schedule 9

		FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
1	**Water Impact Fees**											
2	Balance At Beginning Of Fiscal Year	$ 39,954	214,271	1,071	5	0	0	0	0	0	0	0
3	Annual Revenues	173,052	-	179,970	179,970	179,970	179,970	179,970	179,970	179,970	179,970	179,970
4	Less: Annual Expenses	-	-	-	-	-	-	-	-	-	-	-
5	Less: Payment Of Debt Service	-	-	-	-	-	-	-	-	-	-	-
6	Subtotal	$ 213,006	214,271	181,041	179,975	179,970	179,970	179,970	179,970	179,970	179,970	179,970
7	Less: Restricted Funds	-	-	-	-	-	-	-	-	-	-	-
8	Total Amount Available For Projects	$ 213,006	214,271	181,041	179,975	179,970	179,970	179,970	179,970	179,970	179,970	179,970
9	Amount Paid For Projects	-	(214,271)	(181,041)	(179,975)	(179,970)	(179,970)	(179,970)	(179,970)	(179,970)	(179,970)	(179,970)
10	Subtotal	$ 213,006	-	-	-	-	-	-	-	-	-	-
11	Add Back: Restricted Funds	-	-	-	-	-	-	-	-	-	-	-
12	Plus: Interest Earnings	1,265	1,071	5	0	0	0	0	0	0	0	0
13	Less: Interest Allocated To Cash Flow	-	-	-	-	-	-	-	-	-	-	-
14	Balance At End Of Fiscal Year	$ 214,271	1,071	5	0	0	0	0	0	0	0	0
15	**Operating Fund (420)**											
16	Balance At Beginning Of Fiscal Year	$ 9,388,404	11,953,101	12,287,946	14,749,152	13,949,237	13,607,578	13,914,503	11,495,007	8,761,722	9,798,114	5,528,537
17	Net Cash Flow	5,542,873	3,939,814	4,247,073	4,411,297	4,683,512	4,893,611	5,090,935	5,221,943	4,979,505	4,855,348	4,802,352
18	Less: Cash-Funded Capital Projects	-	-	-	-	-	-	-	-	-	(671,958)	(4,698,762)
19	Less: Payment Of Debt Service	-	-	-	-	-	-	-	-	-	-	-
20	Subtotal	$ 14,931,277	15,892,915	16,535,019	19,160,449	18,632,749	18,501,190	19,005,438	16,716,950	13,741,227	13,981,504	5,632,127
21	Less: Restricted Funds	(4,392,891)	(4,824,846)	(4,885,562)	(4,987,516)	(5,065,925)	(5,148,480)	(5,235,469)	(5,334,565)	(5,429,425)	(5,528,537)	(5,632,127)
22	Total Amount Available For Projects	$ 10,538,386	11,068,070	11,649,457	14,172,932	13,566,824	13,352,710	13,769,969	11,382,385	8,311,802	8,452,967	0
23	Amount Paid For Projects	(2,978,177)	(3,604,969)	(1,785,867)	(5,211,212)	(5,025,171)	(4,586,687)	(7,510,431)	(7,955,227)	(3,943,113)	(8,452,967)	-
24	Subtotal	$ 7,560,210	7,463,100	9,863,590	8,961,720	8,541,654	8,766,023	6,259,538	3,427,158	4,368,688	-	0
25	Add Back: Restricted Funds	4,392,891	4,824,846	4,885,562	4,987,516	5,065,925	5,148,480	5,235,469	5,334,565	5,429,425	5,528,537	5,632,127
26	Plus: Interest Earnings	106,708	121,205	135,185	143,492	137,784	137,610	127,048	101,284	92,799	76,633	55,803
27	Less: Interest Allocated To Cash Flow	(106,708)	(121,205)	(135,185)	(143,492)	(137,784)	(137,610)	(127,048)	(101,284)	(92,799)	(76,633)	(55,803)
28	Balance At End Of Fiscal Year	$ 11,953,101	12,287,946	14,749,152	13,949,237	13,607,578	13,914,503	11,495,007	8,761,722	9,798,114	5,528,537	5,632,127

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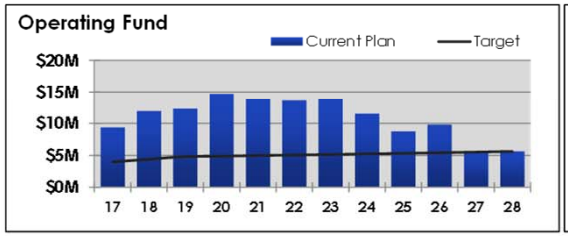
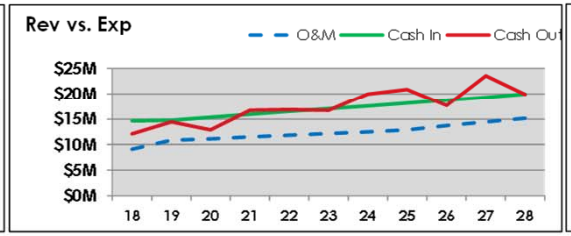
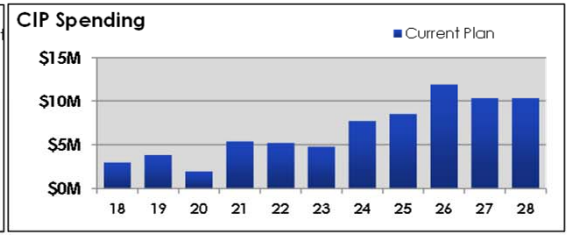
Whittier, CA

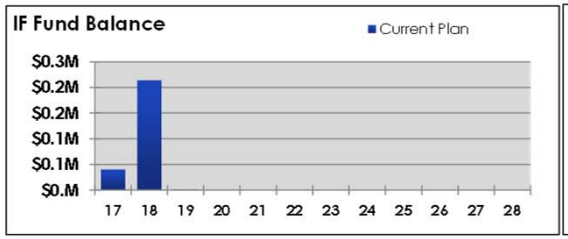
Stantec

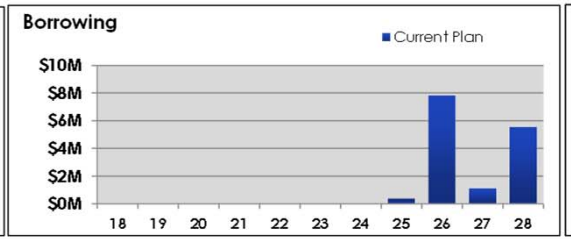
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2022 FY 2027 Cumulative
Override ▶	0.00%	0.00%	3.50%	3.50%	3.50%	3.00%	3.00%	3.00%	3.00%	3.00%		
Water Rate Plan	**0.00%**	**0.00%**	**3.50%**	**3.50%**	**3.50%**	**3.00%**	**3.00%**	**3.00%**	**3.00%**	**3.00%**	**3.35%**	
Senior-Lien DSC	**10.43**	**8.20**	**8.65**	**8.90**	**9.31**	**9.67**	**9.97**	**9.88**	**6.16**	**4.92**	**4.20**	
Water Bill	$126.18	$128.59	$133.09	$137.70	$142.41	$146.78	$151.22	$155.75	$160.37	$165.07	$170.71	
Avg Bill (18,000 gal)	**$126.18**	**$128.59**	**$133.09**	**$137.70**	**$142.41**	**$146.78**	**$151.22**	**$155.75**	**$160.37**	**$165.07**	**$170.71**	
Change $		*$2.41*	*$4.50*	*$4.61*	*$4.71*	*$4.37*	*$4.44*	*$4.53*	*$4.62*	*$4.70*	*$5.64*	Check -

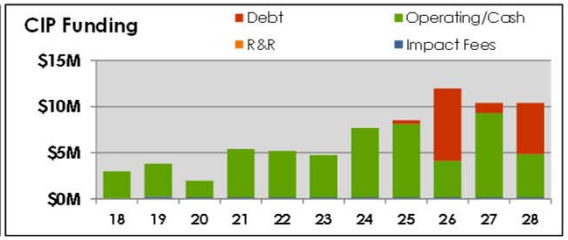












Note: The Operating Reserve reflects the equivalent of three months of total expenses, including operations & maintenance expenses, personal service expenses, transfers out, debt service, and cash-funded capital.

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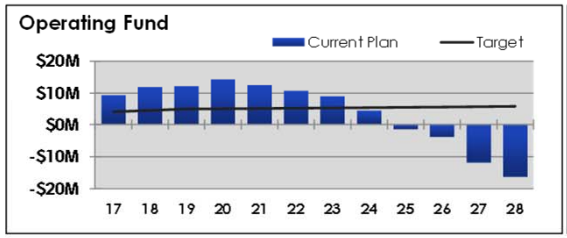
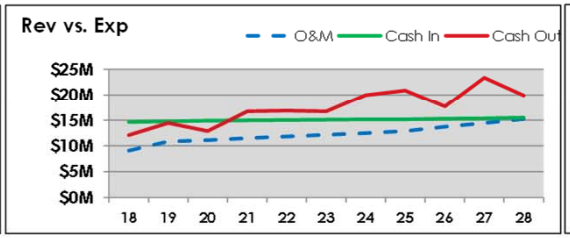
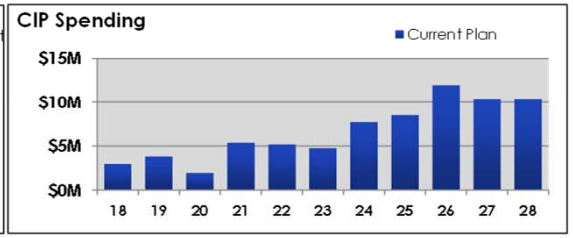
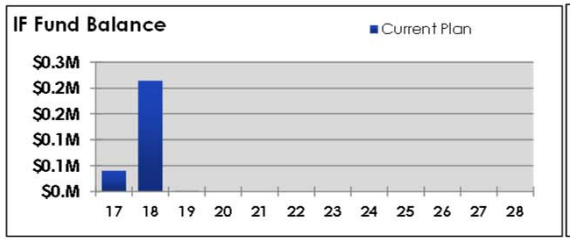
Stantec

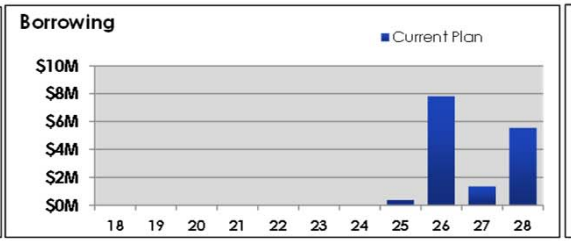
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2022 FY 2027 Cumulative
Override ▶	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
Water Rate Plan	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	
Senior-Lien DSC	**10.43**	**8.20**	**7.96**	**7.48**	**7.11**	**6.76**	**6.32**	**5.58**	**3.12**	**2.20**	**1.62**	
Water Bill	$126.18	$128.59	$128.59	$128.59	$128.59	$128.59	$128.59	$128.59	$128.59	$128.59	$128.59	
Avg Bill (18,000 gal)	**$126.18**	**$128.59**	**$128.59**	**$128.59**	**$128.59**	**$128.59**	**$128.59**	**$128.59**	**$128.59**	**$128.59**	**$128.59**	
Change $		*$2.41*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	*$0.00*	Check -

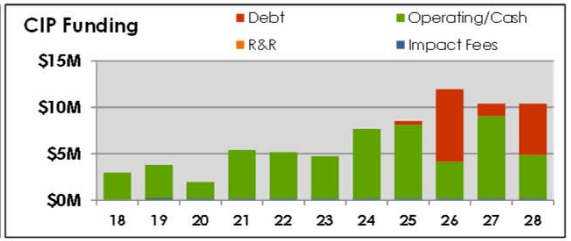












Note: The Operating Reserve reflects the equivalent of three months of total expenses, including operations & maintenance expenses, personal service expenses, transfers out, debt service, and cash-funded capital.

APPENDIX B: COST-OF-SERVICE SCHEDULES

Schedule 12: Allocation of Costs to Functional Components

Schedule 13: Allocation of Costs to System Parameters

SCHEDULE 12 Allocation of Costs to Functional Components

	Source of Supply	Treatment	Pumping	Storage	Transmission	Distribution	Meters & Services	Customer Billing	General & Administrative	Fire Protection	Recycled Water
Operating Costs											
WQPP	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WQPP REG FULL TIME WAGES	$ 68,970	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
551000 WQPP PENSION-PERS	$ 12,884	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WQPP GROUP INSURANCE	$ 18,763	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WQPP MEDICARE INS-FTE	$ 934	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WQPP OTHER PROF SVCS	$ 40,456	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WQPP SPEC PURP CONTRCTS	$ -	$ 40,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WQPP ELECTRICAL SERVICE	$ 152,506	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WQPP IMPRVMNT REP MNT	$ 50,750	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WQPP FUNCTIONAL SUPPLIES	$ 33,812	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WTR-ADM REG FULL TIME WAGES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,834,809	$ -	$ -
WTR-ADM WUA BOARD COMP	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 24,840	$ -	$ -
WTR-ADM TEMP EXTRA HELP	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 140,494	$ -	$ -
WTR-ADM OVERTIME WAGES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 129,355	$ -	$ -
WTR-ADM COMPENSATORY O/T	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,764	$ -	$ -
WTR-ADM COMPENSATED ABSENCES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 13,954	$ -	$ -
WTR-ADM LAB CHG-CONTRLR JV	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 314,781	$ -	$ -
WTR-ADM LAB CHG-EXEC ADM JV	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 76,375	$ -	$ -
WTR-ADM FT-LBR CHG/DIST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,683	$ -	$ -
WTR-ADM OH-LBR CHG/DIST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,345	$ -	$ -
WTR-ADM LAB CR - JV	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (294,186)	$ -	$ -
WTR-ADM FT-LBR CR/DIST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (84,177)	$ -	$ -
WTR-ADM PT-LBR CR/DIST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (10,703)	$ -	$ -
WTR-ADM OH-LBR CR/DIST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (43,979)	$ -	$ -
WTR-ADM PENSION-PERS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 385,310	$ -	$ -
WTR-ADM DEFERRED COMP	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,433	$ -	$ -
WTR-ADM WORKERS COMP INS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 177,979	$ -	$ -
WTR-ADM GROUP INSURANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 390,211	$ -	$ -
WTR-ADM MGMT LIFE-DIS INS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 761	$ -	$ -
WTR-ADM RETIREE HLTH INS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 25,274	$ -	$ -
WTR-ADM PROF SVC HLTH INS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,092	$ -	$ -
WTR-ADM MEDICARE INS-FTE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 27,935	$ -	$ -
WTR-ADM MEDICARE-PTE & OT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,389	$ -	$ -
WTR-ADM DUES & MEMBERSHIPS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 28,026	$ -	$ -
WTR-ADM PUBLICATIONS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 305	$ -	$ -
WTR-ADM SUBSCRIPTIONS-MISC	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 254	$ -	$ -
WTR-ADM LIC-CERT'N FEE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,756	$ -	$ -
WTR-ADM RENTAL	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,030	$ -	$ -
WTR-ADM LEASE PAYMENT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 948,648	$ -	$ -
WTR-ADM TAXES & ASSESSMNTS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Central Basin Expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Water Replenishment District of Southern Califo	$ 322,200	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Central Basin Watermaster-Water Rights Panel	$ 895	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Central Basin Watermaster-Administrative Body	$ 848	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
San Gabriel Basin Expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Main San Gabriel Basin Watermaster-Administr	$ 102,454	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
San Gabriel Basin Watermaster-In-Lieu Water A	$ 68,303	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
San Gabriel Basin Watermaster-Water Resourc	$ 910,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Main San Gabriel Basin Water Quality Authority	$ 107,528	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
LA County ($/Annually)	$ 23,354	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
New Recycled water expenses	$ 46,822	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WTR-ADM COLLECTION EXPENSE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,553	$ -	$ -	$ -
WTR-ADM WATER CONTAM ISSUES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,583	$ -	$ -
WTR-ADM LIABILITY INSURANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 353,486	$ -	$ -
WTR-ADM PROPERTY/OTHER INS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 116,511	$ -	$ -
WTR-ADM ACCOUNT'G & AUDIT'G	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,140	$ -	$ -
WTR-ADM ENGINEERG & DRAFTG	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 10,000	$ -	$ -
WTR-ADM HEALTH SERVICES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 76,886	$ -	$ -
WTR-ADM LEGAL SERVICES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,075	$ -	$ -
WTR-ADM CR CARD PROCESS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,075	$ -	$ -
WTR-ADM OTHER PROF SVCS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 316,136	$ -	$ -
WTR-ADM SPEC PURP CONTRCTS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 18,270	$ -	$ -
WTR-ADM ELECTRICAL SERVICE	$ -	$ -	$ 151,046	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WTR-ADM ELEC-PLANT 2	$ -	$ -	$ 321,290	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WTR-ADM ELEC-BOOSTERS	$ -	$ -	$ 145,460	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WTR-ADM ELECTRICITY-WELLS	$ 28,558	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WTR-ADM ELEC-CITY YARD	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 47,197	$ -	$ -
WTR-ADM NATURAL GAS-PLNT 2	$ -	$ -	$ 831	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WTR-ADM NATURAL GAS-WELLS	$ 3,325	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WTR-ADM NATURAL GAS CTY YRD	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,982	$ -	$ -
WTR-ADM WATER SERVICE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 18,800	$ -	$ -
WTR-ADM WATER-CITY YARD	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 8,000	$ -	$ -
WTR-ADM SOLID WSTE DISPSAL	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,770	$ -	$ -

	Source of Supply	Treatment	Pumping	Storage	Transmission	Distribution	Meters & Services	Customer Billing	General & Administrative	Fire Protection	Recycled Water
WTR-ADM SANIT CHGS-PLNT 2	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,218	$ -	$ -
WTR-ADM SANIT-CITY YARD	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,273	$ -	$ -
WTR-ADM TELEPHONE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 21,010	$ -	$ -
WTR-ADM TELEPHONE-CTY YRD	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,664	$ -	$ -
WTR-ADM MISC TRAVEL/MEETINGS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,538	$ -	$ -
WTR-ADM CONVENTION EXPENSE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,989	$ -	$ -
WTR-ADM MILEAGE REIMB	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 305	$ -	$ -
WTR-ADM CELL PHONE ALLOWANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,436	$ -	$ -
WTR-ADM OFF-JOB TRAINING	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 27,101	$ -	$ -
WTR-ADM MISC NON-PROF SERV	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,152	$ -	$ -
WTR-ADM IMPRVMNT REP MNT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,741	$ -	$ -
WTR-ADM ASPHALT REPAIRS	$ -	$ -	$ -	$ -	$ -	$ 26,390	$ -	$ -	$ -	$ -	$ -
WTR-ADM SOFTWARE MAINT&LICEN	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,135	$ -	$ -
WTR-ADM VALUE & MANHOLE ADJ	$ -	$ -	$ -	$ -	$ -	$ 15,225	$ -	$ -	$ -	$ -	$ -
WTR-ADM CONCRETE REPAIRS	$ -	$ -	$ -	$ -	$ -	$ 14,210	$ -	$ -	$ -	$ -	$ -
WTR-ADM NPDES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,045	$ -	$ -
WTR-ADM GRAFFITI REMOVAL	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,225	$ -	$ -
WTR-ADM EQUIP-REP & MAINT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 32,277	$ -	$ -
WTR-ADM IT EQ MAINT CHGS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 51,959	$ -	$ -
WTR-ADM SMALL TOOLS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,075	$ -	$ -
WTR-ADM FUNCTIONAL SUPPLIES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 47,300	$ -	$ -
WTR-ADM JANITORIAL SUPPLIES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 508	$ -	$ -
WTR-ADM OFFICE SUPPLIES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,872	$ -	$ -
WTR-ADM WEARING APPAREL & ID	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 14,210	$ -	$ -
WTR-ADM UNIF CLN-PERS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,333	$ -	$ -
WTR-ADM POSTAGE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 43,341	$ -	$ -	$ -
WTR-ADM PHOTOCOPIES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,045	$ -	$ -
WTR-ADM CONTR FOR GEN GOVT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 639,167	$ -	$ -
WTR-ADM MOBILE EQMT MAINT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 140,764	$ -	$ -
WTR-ADM MOBILE EQ-RENTAL CR	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (2,030)	$ -	$ -
WELLS BLDG REP & MAINT	$ 40,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WELLS IMPRVMNT REP MNT	$ 13,804	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WELLS EQUIP-REP & MAINT	$ 10,150	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
WELLS FUNCTIONAL SUPPLIES	$ 2,741	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
PUMP PLT BLDG REP & MAINT	$ -	$ -	$ 20,300	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
PUMP PLT IMP REP MNT-PLNT 2	$ -	$ -	$ 10,150	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
PUMP PLT EQ REP-MNT PLANT 2	$ -	$ -	$ 50,750	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
PUMP PLT SMALL TOOLS	$ -	$ -	$ 3,045	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
PUMP PLT SUPPLIES-PLANT 2~3	$ -	$ -	$ 40,600	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FAC MTN FT-LBR CHG/DIST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,216	$ -	$ -
FAC MTN OH-LBR CHG/DIST	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,753	$ -	$ -
FAC MTN BLDG REP & MAINT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 45,675	$ -	$ -
FAC MTN IMPRVMNT REP MNT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 37,555	$ -	$ -
FAC MTN EQUIP-REP & MAINT	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,300	$ -	$ -
FAC MTN EXTRAORDINARY RPRS	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 52,270	$ -	$ -
FAC MTN FUNCTIONAL SUPPLIES	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,015	$ -	$ -
MAIN MTN FT-LBR CHG/DIST	$ -	$ -	$ -	$ -	$ -	$ 7,216	$ -	$ -	$ -	$ -	$ -
MAIN MTN OH-LBR CHG/DIST	$ -	$ -	$ -	$ -	$ -	$ 3,753	$ -	$ -	$ -	$ -	$ -
MAIN MTN IMPRVMNT REP MNT	$ -	$ -	$ -	$ -	$ -	$ 101,500	$ -	$ -	$ -	$ -	$ -
MAIN MTN EQUIP-REP & MAINT	$ -	$ -	$ -	$ -	$ -	$ 2,030	$ -	$ -	$ -	$ -	$ -
MAIN MTN FUNCTIONAL SUPPLIES	$ -	$ -	$ -	$ -	$ -	$ 6,293	$ -	$ -	$ -	$ -	$ -
MTR MTN FT-LBR CHG/DIST	$ -	$ -	$ -	$ -	$ -	$ -	$ 288	$ -	$ -	$ -	$ -
MTR MTN OH-LBR CHG/DIST	$ -	$ -	$ -	$ -	$ -	$ -	$ 151	$ -	$ -	$ -	$ -
MTR MTN IMP REP MNT-SVCS	$ -	$ -	$ -	$ -	$ -	$ -	$ 20,300	$ -	$ -	$ -	$ -
MTR MTN IMP REP MNT-METERS	$ -	$ -	$ -	$ -	$ -	$ -	$ 40,093	$ -	$ -	$ -	$ -
MTR MTN EQUIP-REP & MAINT	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,523	$ -	$ -	$ -	$ -
MTR MTN FUNCTIONAL SUPPLIES	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,075	$ -	$ -	$ -	$ -
WAREHSE LAB CHG-CONTRLR JV	$ -	$ -	$ -	$ -	$ -	$ -	$ 54,816	$ -	$ -	$ -	$ -
WAREHSE FUNCTIONAL SUPPLIES	$ -	$ -	$ -	$ -	$ -	$ -	$ 305	$ -	$ -	$ -	$ -
TOTAL O&M EXPENDITURES	**$ 2,061,355**	**$ 40,600**	**$ 743,472**	**$ -**	**$ -**	**$ 176,617**	**$ 122,550**	**$ 46,893**	**$ 6,350,761**	**$ -**	**$ -**
CAPITAL COST ALLOCATIONS											
Capital Costs											
Debt Service Payments	$ 55,912	$ 1,747	$ 591,749	$ 50,026	$ 306,113	$ 273,746	$ -	$ 1,180	$ 64,042	$ 246	$ -
Debt Service Reserve Requirement	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rate Stabilization Reserve Requirement	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Cash Funded Capital	$ 29,424	$ -	$ 143,969	$ 485,194	$ 172,169	$ 928,569	$ 4,823	$ -	$ 21,719	$ -	$ -
Recurring Capital	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Net Interfund Loans/Payments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 186,537	$ -	$ -
Change in Fund Balance	$ 40,550	$ -	$ 198,412	$ 668,674	$ 237,276	$ 1,279,714	$ 6,647	$ -	$ 29,932	$ -	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
NON-EXPANSION CAPITAL COSTS	**$ 125,886**	**$ 1,747**	**$ 934,131**	**$ 1,203,895**	**$ 715,559**	**$ 2,482,028**	**$ 11,470**	**$ 1,180**	**$ 302,230**	**$ 246**	**$ -**

SCHEDULE 13 Allocation of Costs to System Parameters

		TY COS	Base Demand - Avg Day	Extra Demand - Max Day	Extra Demand - Max Hour	Meters & Services	Customer Billing	Fire Protection
			(HCF/d)	(per HCF/d)	(per HCF/d)	(per ERU)	(per Bill)	(per Bill)
1	**Test Year Cost of Service**	**Units →**	7,603	15,028	11,316	16,428	69,396	69,396
2	Operations & Maintenance	$ 9,542,248	$ 7,128,383	$ 964,436	$ 943,396	$ 363,879	$ 142,154	$ -
3	*Operations & Maintenance - Unit Cost*		*$ 937.55*	*$ 64.17*	*$ 83.37*	*$ 22.15*	*$ 2.05*	*$ -*
6	Debt Service Payments	$ 1,344,762	$ 558,888	$ 461,605	$ 319,448	$ 2,434	$ 2,141	$ 246
7	*Debt Service - Unit Cost*		*$ 73.51*	*$ 30.72*	*$ 28.23*	*$ 0.15*	*$ 0.03*	*$ 0.00*
8	Other Capital Costs	$ 4,433,610	$ 1,671,414	$ 1,447,571	$ 1,290,531	$ 20,521	$ 3,573	$ -
9	*Adjustments/Other - Unit Cost*		*$ 219.83*	*$ 96.32*	*$ 114.05*	*$ 1.25*	*$ 0.05*	*$ -*
10	**Total Cost**	**$ 15,320,620**	**$ 9,358,685**	**$ 2,873,612**	**$ 2,553,375**	**$ 386,833**	**$ 147,868**	**$ 246**
11	**Total Unit Cost**		***$ 1,230.89***	***$ 191.21***	***$ 225.65***	***$ 23.55***	***$ 2.13***	***$ 0.00***
12	**O&M Expenses**							
13	Source of Supply	$ 2,061,355	$ 2,061,355	$ -	$ -	$ -	$ -	$ -
14	Treatment	$ 40,600	$ 20,300	$ 20,300	$ -	$ -	$ -	$ -
15	Pumping	$ 743,472	$ 244,602	$ 244,602	$ 254,267	$ -	$ -	$ -
16	Storage	$ -	$ -	$ -	$ -	$ -	$ -	$ -
17	Transmission	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18	Distribution	$ 176,617	$ 58,107	$ 58,107	$ 60,403	$ -	$ -	$ -
19	Meters & Services	$ 122,550	$ -	$ -	$ -	$ 122,550	$ -	$ -
20	Customer Billing	$ 46,893	$ -	$ -	$ -	$ -	$ 46,893	$ -
21	General & Administrative	$ 6,350,761	$ 4,744,019	$ 641,427	$ 628,725	$ 241,329	$ 95,261	$ -
22	Fire Protection	$ -	$ -	$ -	$ -	$ -	$ -	$ -
23	Recycled Water	$ -	$ -	$ -	$ -	$ -	$ -	$ -
24	**Total Costs**	**$ 9,542,248**	**$ 7,128,383**	**$ 964,436**	**$ 943,396**	**$ 363,879**	**$ 142,154**	**$ -**
25	% Distribution	100.0%	74.7%	10.1%	9.9%	3.8%	1.5%	0.0%
26	Total System		7,603	15,028	11,316	16,428	69,396	69,396
27	(Unit of measure)		(HCF/d)	(per HCF/d)	(per HCF/d)	(per ERU)	(per Bill)	(per Bill)
29	**Unit Cost of Service**		**$937.55**	**$ 64.17**	**$ 83.37**	**$ 22.15**	**$ 2.05**	**$ -**
30	(Unit of measure)		(HCF/d)	(per HCF/d)	(per HCF/d)	(per ERU)	(per Bill)	(per Bill)
31	Source of Supply Cost		$ 271.12	$ -	$ -	$ -	$ -	$ -
32	Treatment Cost		$ 2.67	$ 1.35	$ -	$ -	$ -	$ -
33	Pumping Cost		$ 32.17	$ 16.28	$ 22.47	$ -	$ -	$ -
34	Storage Cost		$ -	$ -	$ -	$ -	$ -	$ -
35	Transmission Cost		$ -	$ -	$ -	$ -	$ -	$ -
36	Distribution Cost		$ 7.64	$ 3.87	$ 5.34	$ -	$ -	$ -
37	Meters & Services Cost		$ -	$ -	$ -	$ 7.46	$ -	$ -
38	Customer Billing Cost		$ -	$ -	$ -	$ -	$ 0.68	$ -
39	General & Administrative Cost		$ 623.95	$ 42.68	$ 55.56	$ 14.69	$ 1.37	$ -
40	Fire Protection Cost		$ -	$ -	$ -	$ -	$ -	$ -
41	Recycled Water Cost		$ -	$ -	$ -	$ -	$ -	$ -
	Debt Service Payments							
42	Source of Supply	$ 55,912	$ 55,912	$ -	$ -	$ -	$ -	$ -
43	Treatment	$ 1,747	$ 874	$ 874	$ -	$ -	$ -	$ -
44	Pumping	$ 591,749	$ 194,685	$ 194,685	$ 202,378	$ -	$ -	$ -
45	Storage	$ 50,026	$ 16,459	$ 16,459	$ 17,109	$ -	$ -	$ -
46	Transmission	$ 306,113	$ 153,057	$ 153,057	$ -	$ -	$ -	$ -
47	Distribution	$ 273,746	$ 90,062	$ 90,062	$ 93,621	$ -	$ -	$ -
48	Meters & Services	$ -	$ -	$ -	$ -	$ -	$ -	$ -
49	Customer Billing	$ 1,180	$ -	$ -	$ -	$ -	$ 1,180	$ -
50	**Total Costs**	**$ 1,344,762**	**$ 558,888**	**$ 461,605**	**$ 319,448**	**$ 2,434**	**$ 2,141**	**$ 246**
51	% Distribution	100.0%	41.6%	34.3%	23.8%	0.2%	0.2%	0.0%
52	**Unit Cost of Service**		**$73.51**	**$ 30.72**	**$ 28.23**	**$ 0.15**	**$ 0.03**	**$ 0.00**
53	(Unit of measure)		(HCF/d)	(per HCF/d)	(per HCF/d)	(per ERU)	(per Bill)	(per Bill)
54	Source of Supply Cost		$ 7.35	$ -	$ -	$ -	$ -	$ -
55	Treatment Cost		$ 0.11	$ 0.06	$ -	$ -	$ -	$ -
56	Pumping Cost		$ 25.61	$ 12.95	$ 17.88	$ -	$ -	$ -
57	Storage Cost		$ 2.16	$ 1.10	$ 1.51	$ -	$ -	$ -
58	Transmission Cost		$ 20.13	$ 10.18	$ -	$ -	$ -	$ -
59	Distribution Cost		$ 11.85	$ 5.99	$ 8.27	$ -	$ -	$ -
60	Meters & Services Cost		$ -	$ -	$ -	$ -	$ -	$ -
61	Customer Billing Cost		$ -	$ -	$ -	$ -	$ 0.02	$ -
62	General & Administrative Cost		$ 6.29	$ 0.43	$ 0.56	$ 0.15	$ 0.01	$ -
63	Fire Protection Cost		$ -	$ -	$ -	$ -	$ -	$ 0.00
64	Recycled Water Cost		$ -	$ -	$ -	$ -	$ -	$ -

		TY COS	Base Demand - Avg Day	Extra Demand - Max Day	Extra Demand - Max Hour	Meters & Services	Customer Billing	Fire Protection
65	**Other Capital Costs**							
66	Source of Supply	$ 69,974	$ 69,974	$ -	$ -	$ -	$ -	$ -
67	Treatment	$ -	$ -	$ -	$ -	$ -	$ -	$ -
68	Pumping	$ 342,382	$ 112,644	$ 112,644	$ 117,095	$ -	$ -	$ -
69	Storage	$ 1,153,868	$ 379,623	$ 379,623	$ 394,623	$ -	$ -	$ -
70	Transmission	$ 409,446	$ 204,723	$ 204,723	$ -	$ -	$ -	$ -
71	Distribution	$ 2,208,282	$ 726,525	$ 726,525	$ 755,233	$ -	$ -	$ -
72	Meters & Services	$ 11,470	$ -	$ -	$ -	$ 11,470	$ -	$ -
73	Customer Billing	$ -	$ -	$ -	$ -	$ -	$ -	$ -
74	General & Administrative	$ 238,188	$ 177,926	$ 24,057	$ 23,581	$ 9,051	$ 3,573	$ -
75	Fire Protection	$ -	$ -	$ -	$ -	$ -	$ -	$ -
76	Recycled Water	$ -	$ -	$ -	$ -	$ -	$ -	$ -
77	**Total Costs**	**$ 4,433,610**	**$ 1,671,414**	**$ 1,447,571**	**$ 1,290,531**	**$ 20,521**	**$ 3,573**	**$ -**
78	% Distribution	100.0%	37.7%	32.6%	29.1%	0.5%	0.1%	0.0%
79	**Unit Cost of Service**		**$219.83**	**$ 96.32**	**$ 114.05**	**$ 1.25**	**$ 0.05**	**$ -**
80	(Unit of measure)		(HCF/d)	(per HCF/d)	(per HCF/d)	(per ERU)	(per Bill)	(per Bill)
81	Source of Supply Cost		$ 9.20	$ -	$ -	$ -	$ -	$ -
82	Treatment Cost		$ -	$ -	$ -	$ -	$ -	$ -
83	Pumping Cost		$ 14.82	$ 7.50	$ 10.35	$ -	$ -	$ -
84	Storage Cost		$ 49.93	$ 25.26	$ 34.87	$ -	$ -	$ -
85	Transmission Cost		$ 26.93	$ 13.62	$ -	$ -	$ -	$ -
86	Distribution Cost		$ 95.56	$ 48.34	$ 66.74	$ -	$ -	$ -
87	Meters & Services Cost		$ -	$ -	$ -	$ 0.70	$ -	$ -
88	Customer Billing Cost		$ -	$ -	$ -	$ -	$ -	$ -
89	General & Administrative Cost		$ 23.40	$ 1.60	$ 2.08	$ 0.55	$ 0.05	$ -
90	Fire Protection Cost		$ -	$ -	$ -	$ -	$ -	$ -
91	Recycled Water Cost		$ -	$ -	$ -	$ -	$ -	$ -

APPENDIX C: RATE SCHEDULES

Schedule 14: Fiscal year 2020 – Option 1

Schedule 15: Fiscal year 2021 – Option 1

Schedule 16: Fiscal year 2022 – Option 1

Schedule 17: Fiscal year 2023 – Option 1

Schedule 18: Fiscal year 2024 – Option 1

Schedule 19: Fiscal year 2020 – Option 2

Schedule 20: Fiscal year 2021 – Option 2

Schedule 21: Fiscal year 2022 – Option 2

Schedule 22: Fiscal year 2023 – Option 2

Schedule 23: Fiscal year 2024 – Option 2

SCHEDULE 14 Fiscal year 2020 – Option 1

Fixed Fee (Account and Meter)

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$ 64.90	$ 87.69	$ 73.76	$ 92.14
1 inch	$ 106.92	$ 144.91	$ 121.68	$ 152.32
1 ½ inch	$ 211.97	$ 287.94	$ 241.48	$ 302.76
2 inch	$ 338.02	$ 459.57	$ 385.24	$ 483.29
3 inch	$ 674.17	$ 917.27	$ 768.61	$ 964.70
4 inch	$ 1,052.33	$ 1,432.18	$ 1,199.89	$ 1,506.29
6 inch	$ 2,102.78	$ 2,862.49	$ 2,397.91	$ 3,010.70
8 inch	$ 3,363.33	$ 4,578.85	$ 3,835.53	$ 4,815.99
10 inch	$ 5,044.05	$ 6,867.34	$ 5,752.36	$ 7,223.05

Recycled water customers will pay a non-residential Fixed-Fee

Commodity Rate

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.06	$2.09	$2.13	$2.46	$1.76
Tier 2	$3.35	N/A	N/A	N/A	N/A

Fire Protection

Size of Connection	Demand Factor (1)	Proposed Bi-Monthly Charge
¾ inch	0.47	$ 0.79
1 inch	1.00	$ 1.67
2 inch	6.19	$ 10.37
3 inch	17.98	$ 30.11
4 inch	38.32	$ 64.16
6 inch	111.31	$ 186.38
8 inch	237.21	$ 397.18
10 inch	426.58	$ 714.28
12 inch	689.04	$1,153.75

SCHEDULE 15 Fiscal year 2021 – Option 1

Fixed Fee (Account and Meter)

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$ 67.17	$ 90.76	$ 76.34	$ 95.36
1 inch	$ 110.66	$ 149.98	$ 125.94	$ 157.65
1 ½ inch	$ 219.38	$ 298.01	$ 249.93	$ 313.35
2 inch	$ 349.85	$ 475.66	$ 398.72	$ 500.20
3 inch	$ 697.76	$ 949.38	$ 795.51	$ 998.46
4 inch	$ 1,089.16	$ 1,482.31	$ 1,241.89	$ 1,559.01
6 inch	$ 2,176.38	$ 2,962.67	$ 2,481.84	$ 3,116.07
8 inch	$ 3,481.04	$ 4,739.11	$ 3,969.77	$ 4,984.55
10 inch	$ 5,220.60	$ 7,107.70	$ 5,953.69	$ 7,475.85

Recycled water customers will pay a non-residential Fixed-Fee

Commodity Rate

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.13	$2.17	$2.20	$2.54	$1.82
Tier 2	$3.47	N/A	N/A	N/A	N/A

Fire Protection

Size of Connection	Demand Factor (1)	Proposed Bi-Monthly Charge
¾ inch	0.47	$ 0.82
1 inch	1.00	$ 1.73
2 inch	6.19	$ 10.73
3 inch	17.98	$ 31.16
4 inch	38.32	$ 66.41
6 inch	111.31	$ 192.90
8 inch	237.21	$ 411.08
10 inch	426.58	$ 739.28
12 inch	689.04	$ 1,194.13

SCHEDULE 16 Fiscal year 2022 – Option 1

Fixed Fee (Account and Meter)

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$ 69.52	$ 93.94	$ 79.01	$ 98.70
1 inch	$ 114.54	$ 155.23	$ 130.34	$ 163.16
1 ½ inch	$ 227.06	$ 308.44	$ 258.68	$ 324.32
2 inch	$ 362.10	$ 492.31	$ 412.68	$ 517.71
3 inch	$ 722.18	$ 982.60	$ 823.35	$ 1,033.41
4 inch	$ 1,127.28	$ 1,534.19	$ 1,285.35	$ 1,613.57
6 inch	$ 2,252.55	$ 3,066.37	$ 2,568.70	$ 3,225.13
8 inch	$ 3,602.88	$ 4,904.98	$ 4,108.71	$ 5,159.01
10 inch	$ 5,403.32	$ 7,356.47	$ 6,162.07	$ 7,737.51

Recycled water customers will pay a non-residential Fixed-Fee

Commodity Rate

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.20	$2.24	$2.28	$2.63	$1.88
Tier 2	$3.59	N/A	N/A	N/A	N/A

Fire Protection

Size of Connection	Demand Factor (1)	Proposed Bi-Monthly Charge
¾ inch	0.47	$ 0.85
1 inch	1.00	$ 1.79
2 inch	6.19	$ 11.11
3 inch	17.98	$ 32.25
4 inch	38.32	$ 68.73
6 inch	111.31	$ 199.65
8 inch	237.21	$ 425.47
10 inch	426.58	$ 765.15
12 inch	689.04	$1,235.93

SCHEDULE 17 Fiscal year 2023 – Option 1

Fixed Fee (Account and Meter)

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$ 71.61	$ 96.76	$ 81.38	$ 101.66
1 inch	$ 117.97	$ 159.88	$ 134.25	$ 168.06
1 ½ inch	$ 233.87	$ 317.70	$ 266.44	$ 334.05
2 inch	$ 372.96	$ 507.08	$ 425.06	$ 533.24
3 inch	$ 743.85	$ 1,012.08	$ 848.05	$ 1,064.41
4 inch	$ 1,161.10	$ 1,580.21	$ 1,323.92	$ 1,661.98
6 inch	$ 2,320.13	$ 3,158.36	$ 2,645.76	$ 3,321.89
8 inch	$ 3,710.97	$ 5,052.13	$ 4,231.98	$ 5,313.78
10 inch	$ 5,565.42	$ 7,577.16	$ 6,346.93	$ 7,969.63

Recycled water customers will pay a non-residential Fixed-Fee

Commodity Rate

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.27	$2.31	$2.35	$2.71	$1.94
Tier 2	$3.70	N/A	N/A	N/A	N/A

Fire Protection

Size of Connection	Demand Factor (1)	Proposed Bi-Monthly Charge
¾ inch	0.47	$ 0.87
1 inch	1.00	$ 1.84
2 inch	6.19	$ 11.44
3 inch	17.98	$ 33.22
4 inch	38.32	$ 70.79
6 inch	111.31	$ 205.64
8 inch	237.21	$ 438.23
10 inch	426.58	$ 788.11
12 inch	689.04	$1,273.00

SCHEDULE 18 Fiscal year 2024 – Option 1

Fixed Fee (Account and Meter)

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$ 73.76	$ 99.66	$ 83.82	$ 104.71
1 inch	$ 121.51	$ 164.68	$ 138.28	$ 173.10
1 ½ inch	$ 240.89	$ 327.23	$ 274.43	$ 344.07
2 inch	$ 384.15	$ 522.29	$ 437.81	$ 549.24
3 inch	$ 766.16	$ 1,042.44	$ 873.49	$ 1,096.34
4 inch	$ 1,195.93	$ 1,627.62	$ 1,363.63	$ 1,711.84
6 inch	$ 2,389.73	$ 3,253.11	$ 2,725.13	$ 3,421.54
8 inch	$ 3,822.30	$ 5,203.69	$ 4,358.93	$ 5,473.19
10 inch	$ 5,732.38	$ 7,804.48	$ 6,537.34	$ 8,208.72

Recycled water customers will pay a non-residential Fixed-Fee

Commodity Rate

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.34	$2.38	$2.42	$2.79	$2.00
Tier 2	$3.81	N/A	N/A	N/A	N/A

Fire Protection

Size of Connection	Demand Factor (1)	Proposed Bi-Monthly Charge
¾ inch	0.47	$ 0.90
1 inch	1.00	$ 1.90
2 inch	6.19	$ 11.79
3 inch	17.98	$ 34.22
4 inch	38.32	$ 72.92
6 inch	111.31	$ 211.81
8 inch	237.21	$ 451.38
10 inch	426.58	$ 811.75
12 inch	689.04	$1,311.19

SCHEDULE 19 Fiscal year 2020 – Option 2

Fixed Fee (Account and Meter)

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$65.84	$88.83	$74.72	$93.48
1 inch	$108.48	$146.80	$123.27	$154.55
1 ½ inch	$215.09	$291.72	$244.67	$307.22
2 inch	$343.02	$465.62	$390.34	$490.42
3 inch	$684.16	$929.36	$778.81	$978.96
4 inch	$1,067.95	$1,451.07	$1,215.83	$1,528.57
6 inch	$2,134.01	$2,900.26	$2,429.79	$3,055.26
8 inch	$3,413.30	$4,639.29	$3,886.53	$4,887.28
10 inch	$5,119.01	$6,958.00	$5,828.86	$7,329.99

Recycled water customers will pay a non-residential Fixed-Fee

Commodity Rate

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.08	$2.12	$2.16	$2.50	$1.75
Tier 2	$3.41	N/A	N/A	N/A	N/A

Fire Protection

Size of Connection	Demand Factor (1)	Proposed Bi-Monthly Charge
¾ inch	0.47	$ 0.80
1 inch	1.00	$ 1.71
2 inch	6.19	$ 10.61
3 inch	17.98	$ 30.81
4 inch	38.32	$ 65.66
6 inch	111.31	$ 190.72
8 inch	237.21	$ 406.42
10 inch	426.58	$ 730.89
12 inch	689.04	$ 1,180.58

SCHEDULE 20 Fiscal year 2021 – Option 2

Fixed Fee (Account and Meter)

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$ 69.13	$ 93.27	$ 78.45	$ 98.15
1 inch	$ 113.91	$ 154.14	$ 129.44	$ 162.27
1 ½ inch	$ 225.85	$ 306.30	$ 256.90	$ 322.58
2 inch	$ 360.17	$ 488.90	$ 409.86	$ 514.94
3 inch	$ 718.37	$ 975.83	$ 817.75	$ 1,027.91
4 inch	$ 1,121.34	$ 1,523.62	$ 1,276.62	$ 1,605.00
6 inch	$ 2,240.72	$ 3,045.27	$ 2,551.28	$ 3,208.02
8 inch	$ 3,583.96	$ 4,871.26	$ 4,080.86	$ 5,131.65
10 inch	$ 5,374.96	$ 7,305.90	$ 6,120.30	$ 7,696.49

Recycled water customers will pay a non-residential Fixed-Fee

Commodity Rate

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.19	$2.23	$2.27	$2.62	$1.84
Tier 2	$3.58	N/A	N/A	N/A	N/A

Fire Protection

Size of Connection	Demand Factor (1)	Proposed Bi-Monthly Charge
¾ inch	0.47	$ 0.82
1 inch	1.00	$ 1.73
2 inch	6.19	$ 10.73
3 inch	17.98	$ 31.16
4 inch	38.32	$ 66.41
6 inch	111.31	$ 192.90
8 inch	237.21	$ 411.08
10 inch	426.58	$ 739.28
12 inch	689.04	$ 1,194.13

SCHEDULE 21 Fiscal year 2022 – Option 2

Fixed Fee (Account and Meter)

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$ 72.59	$ 97.94	$ 82.37	$ 103.06
1 inch	$ 119.60	$ 161.84	$ 135.91	$ 170.39
1 ½ inch	$ 237.14	$ 321.62	$ 269.75	$ 338.71
2 inch	$ 378.18	$ 513.35	$ 430.35	$ 540.69
3 inch	$ 754.29	$ 1,024.62	$ 858.64	$ 1,079.30
4 inch	$ 1,177.41	$ 1,599.80	$ 1,340.46	$ 1,685.25
6 inch	$ 2,352.75	$ 3,197.54	$ 2,678.84	$ 3,368.42
8 inch	$ 3,763.16	$ 5,114.82	$ 4,284.90	$ 5,388.23
10 inch	$ 5,643.70	$ 7,671.19	$ 6,426.31	$ 8,081.31

Recycled water customers will pay a non-residential Fixed-Fee

Commodity Rate

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.30	$2.34	$2.38	$2.75	$1.93
Tier 2	$3.76	N/A	N/A	N/A	N/A

Fire Protection

Size of Connection	Demand Factor (1)	Proposed Bi-Monthly Charge
¾ inch	0.47	$ 0.85
1 inch	1.00	$ 1.79
2 inch	6.19	$ 11.11
3 inch	17.98	$ 32.25
4 inch	38.32	$ 68.73
6 inch	111.31	$ 199.65
8 inch	237.21	$ 425.47
10 inch	426.58	$ 765.15
12 inch	689.04	$1,235.93

SCHEDULE 22 Fiscal year 2023 – Option 2

Fixed Fee (Account and Meter)

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$ 76.22	$ 102.83	$ 86.49	$ 108.21
1 inch	$ 125.58	$ 169.94	$ 142.71	$ 178.91
1 ½ inch	$ 249.00	$ 337.70	$ 283.24	$ 355.64
2 inch	$ 397.09	$ 539.01	$ 451.87	$ 567.72
3 inch	$ 792.00	$ 1,075.85	$ 901.57	$ 1,133.27
4 inch	$ 1,236.28	$ 1,679.80	$ 1,407.48	$ 1,769.51
6 inch	$ 2,470.39	$ 3,357.42	$ 2,812.78	$ 3,536.84
8 inch	$ 3,951.32	$ 5,370.56	$ 4,499.14	$ 5,657.64
10 inch	$ 5,925.89	$ 8,054.75	$ 6,747.63	$ 8,485.38

Recycled water customers will pay a non-residential Fixed-Fee

Commodity Rate

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.41	$2.46	$2.50	$2.89	$2.03
Tier 2	$3.95	N/A	N/A	N/A	N/A

Fire Protection

Size of Connection	Demand Factor (1)	Proposed Bi-Monthly Charge
¾ inch	0.47	$ 0.87
1 inch	1.00	$ 1.84
2 inch	6.19	$ 11.44
3 inch	17.98	$ 33.22
4 inch	38.32	$ 70.79
6 inch	111.31	$ 205.64
8 inch	237.21	$ 438.23
10 inch	426.58	$ 788.11
12 inch	689.04	$1,273.00

SCHEDULE 23 Fiscal year 2024 – Option 2

Fixed Fee (Account and Meter)

Meter Size	Single Family	Multi-Family	Non-Residential	Landscape
¾ inch	$ 80.03	$ 107.97	$ 90.82	$ 113.62
1 inch	$ 131.86	$ 178.43	$ 149.84	$ 187.85
1 ½ inch	$ 261.45	$ 354.58	$ 297.40	$ 373.42
2 inch	$ 416.94	$ 565.96	$ 474.47	$ 596.11
3 inch	$ 831.60	$ 1,129.64	$ 946.65	$ 1,189.93
4 inch	$ 1,298.10	$ 1,763.78	$ 1,477.85	$ 1,857.98
6 inch	$ 2,593.91	$ 3,525.29	$ 2,953.42	$ 3,713.68
8 inch	$ 4,148.88	$ 5,639.09	$ 4,724.10	$ 5,940.52
10 inch	$ 6,222.18	$ 8,457.49	$ 7,085.01	$ 8,909.65

Recycled water customers will pay a non-residential Fixed-Fee

Commodity Rate

	Single Family	Multi-Family	Non-Residential	Landscape	Recycled Water
Tier 1	$2.53	$2.58	$2.62	$3.03	$2.13
Tier 2	$4.15	N/A	N/A	N/A	N/A

Fire Protection

Size of Connection	Demand Factor (1)	Proposed Bi-Monthly Charge
¾ inch	0.47	$ 0.90
1 inch	1.00	$ 1.90
2 inch	6.19	$ 11.79
3 inch	17.98	$ 34.22
4 inch	38.32	$ 72.92
6 inch	111.31	$ 211.81
8 inch	237.21	$ 451.38
10 inch	426.58	$ 811.75
12 inch	689.04	$1,311.19

APPENDIX D: CONNECTION FEE SCHEDULES

Schedule 24: Summary of System Fixed Assets & Administration Cost Allocation

Schedule 25: Capital Improvement Summary

Schedule 26: Water System Value and Capacity Survey

Schedule 27: Water System Development Charge Calculation

SCHEDULE 24 Summary of System Fixed Assets & Administration Cost Allocation

Function		RCNLD	% of Total	Allocated Admin Costs	Function Costs + Allocated Admin
Water	**Source of Supply / Treatment**	$ 7,224,044	7.16%	$ 79,078	$ 7,303,122
Water	**Transmission / Distribution**	$ 53,333,240	52.85%	$ 583,810	$ 53,917,050
Sewer	**Collection**	$ 40,357,815	39.99%	$ 441,775	$ 40,799,590
Total Costs		**$ 100,915,099**		**$ 1,104,664**	**$ 102,019,762**
Donated/Contributed Assets		$ 9,509,973			$ 9,509,973
Total System		**$ 110,425,072**		**$ 1,104,664**	**$ 111,529,735**

SCHEDULE 25 Capital Improvement Summary

Function		Capital Improvement Costs	% of Total	Allocated Admin Cost	Function Costs + Allocated Admin
Water	**Source of Supply / Treatment**	$ -	0.00%	$ -	$ -
Water	**Transmission / Distribution**	$ 4,611,600	42.26%	$ -	$ 4,611,600
Sewer	**Collection**	$ 6,300,000	57.74%	$ -	$ 6,300,000
Total Expansion CIP		**$ 10,911,600**		**$ -**	**$ 10,911,600**
Excluded Non Expansion CIP					$ 82,892,103
Total System CIP					**$ 93,803,703**

Schedule 26 Water System Value and Capacity Survey

		System Value	Total Capacity (MGD)
Source of Supply / Treatment			
Plant-in-Service	$	7,303,122	40.75
Capital Improvements	$	-	0.00
Plant-in-Service	$	7,303,122	40.75
Capital Improvements	$	-	0.00
Total Source of Supply / Treatment	$	7,303,122	40.75
Transmission / Distribution			
Plant-in-Service	$	53,917,050	19.73
Capital Improvements	$	4,611,600	0.00
Plant-in-Service	$	53,917,050	19.73
Capital Improvements	$	4,611,600	0.00
Total Transmission / Distribution	$	58,528,650	19.73
Water			
Plant-in-Service	$	61,220,172	N/A
Capital Improvements	$	4,611,600	N/A
Total Water	$	65,831,772	N/A

Schedule 27 Water System Development Charge Calculation

Functional Component:		Source of Supply / Treatment	Transmission / Distribution	Total
Plant in Service Value		$7,303,122	$53,917,050	$61,220,172
Donated & Contributed Assets		$1,672	$1,672	$3,344
Capital Improvement Cost		$0	$4,611,600	$4,611,600
Total System Value (incl. CIP)		$7,304,793	$58,530,322	$65,835,115
Credits:				
Outstanding Principal		($909,838)	($7,290,162)	($8,200,000)
Donated & Contributed Assets		($1,672)	($1,672)	($3,344)
Grants				$0
Apply Additional Credit to Meet 25% Requirement?	No	$0	$0	$0
Net System Value		$6,393,283	$51,238,489	$57,631,772
Credit % Used in Fee Determination				12.5%
Fee Calculation:				
Capacity	Peak			
Million Gallons Per Day (MGD)		40.75	19.73	
Level of Service (gpd)		1,009	1,009	
Equivalent Residential Units (ERUs) @		40,406	19,561	
Calculated Cost per ERU		$181	$2,992	$3,173
Total Credits		-$23	-$373	-$395
Calculated Fee per ERU		$158	$2,619	$2,778
Reduction for Contingency	0.00%	$158	$2,619	$2,778
Percentage of Full Cost Recovery				100.00%
Escalation Factor to Effective Year				3.00%
Calculated Fee per ERU		$163	$2,698	$2,861
Current Fee per ERU				$2,571
Change				$290
Percent Change		0%	0%	11%

APPENDIX E: WATER RATE AND FEE BENCHMARKING INFORMATION SOURCES

Schedule 28: Water Rate and Fee Benchmarking Information Sources

Jurisdiction	Water & Sewer Rates	Connection Fees
Artesia	https://www.gswater.com/central-basin-east/download/rates_accountability/ME-1-R-Jul.pdf	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=2601
	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=13181	
Bell	https://www.gswater.com/central-basin-east/download/rates_accountability/ME-1-R-Jul.pdf	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=2601
	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=13181	
Cerritos	http://www.cerritos.us/main/water/brochure_protest_form_english.pdf	Called customer service; water and sewer division; water inspector
	http://www.cerritos.us/main/water/brochure_protest_form_english.pdf	
City of Norwalk	https://www.norwalk.org/home/showdocument?id=9347	(562) 929-5511 Left a voicemail; no reply
	https://www.norwalk.org/home/showdocument?id=20248	
City of Pasadena	https://ww5.cityofpasadena.net/water-and-power/wp-content/uploads/sites/54/2018/09/Summary-Rates-2018_09.pdf	https://library.municode.com/ca/pasadena/codes/code_of_ordinances?nodeId=TIT13UTSE_CH13.20WASERA
City of Pico Rivera	Called water billing @ (562) 801-4316 for rates - customer rep said they are not online	Called Water Supervisor (562) 755-0954 about system development/connection fees but no answer. Left a message
Fullerton	https://www.cityoffullerton.com/civicax/filebank/blobdload.aspx?blobid=5877	https://www.cityoffullerton.com/civicax/filebank/blobdload.aspx?BlobID=23219
	https://www.cityoffullerton.com/gov/departments/public_works/sewer_system/sewer_service_fee_faqs.asp	
Golden State Water Company	https://www.gswater.com/central-basin-east/download/rates_accountability/ME-1-R-Jul.pdf	
La Habra	http://www.lhcm.org/DocumentCenter/View/7296/2017-La-Habra-Water-Sewer-Rate-Noticepdf	http://lahabraca.gov/DocumentCenter/View/7826/Master-Schedule-of-Fees---Effective-July-1-2018
Montebello Land and Water	http://www.mtblw.com/Water-Rates-Sept-1-2018.pdf	*Called (323) 722-8654 - representative was unsure, took the message for superintendant and will get a call back -KM 1/16/19
Orchard Dale Water District	https://www.odwd.com/#Water_Service_Rates	Called (562) 941-0114 - they rarely have new development, rep said no set development/impact fee but they do charge meter installation and connection fees
Paramount	http://www.paramountcity.com/home/showdocument?id=1494	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=13181
Rowland Water District	https://www.rowlandwater.com/rates-fees/	http://www.rowlandwater.com/wp-content/uploads/2013/04/Resolution-No.-5.1-Adopting-Potable-Water-Capacity-Fee-SIGNED.pdf
San Gabriel County Water District	http://sgcwd.com/water-rates	http://sgcwd.com/water-rates
	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=13181	
San Gabriel Valley Water Co.	https://www.sgvwater.com/wp-content/uploads/2018/10/LA-1-10-1-18.pdf	https://www.sgvwater.com/rates-regulatory/tariff-book/
San Jose Hills Service Area	http://files.swwc.com/ca/tariff/Schedule-SJ1-Residential-Metered-Service.pdf	(626) 543-2640 Left voicemail and emailed customer service; no reply
Santa Clarita Valley Sanitation District	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=13199	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=5061
Santa Fe Springs	https://www.santafesprings.org/civicax/filebank/blobdload.aspx?blobid=9172	https://www.santafesprings.org/civicax/filebank/blobdload.aspx?blobid=9293
South Bay Cities Sanitation District	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=13200	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=3695
South Gate	https://www.cityofsouthgate.org/DocumentCenter/View/1458/Utilities-FY-2015-16-PDF?bidId=	
Suburban Water Systems - SouthWest Water Company	http://files.swwc.com/ca/tariff/Schedule-WLM1-Residential-Metered-Service.pdf	
Vernon	http://www.cityofvernon.org/images/community-services/water/Water_Rates_01-01-2018.pdf	http://www.cityofvernon.org/images/community-services/water/Water_Rates_01-01-2018.pdf
	https://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=13181	
Yorba Linda Water District	https://ylwd.com/your-water-service/water-rates-fees	https://ylwd.com/about-the-water-district/for-developers/development-fees
	https://ylwd.com/your-sewer-service/sewer-rates-fees	