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WATER AND WASTEWATER RATE STUDY REPORT

To: Mr. Bradley Hagemann, District Engineer, Avila Beach CSD

From: G. Clayton Tuckfield, PE Tuckfield & Associates

Subject: Water and Wastewater Rate Study Report

Date: March 3, 2020

Introduction

The Avila Beach Community Services District (District) engaged Tuckfield & Associates to conduct a comprehensive Water and Wastewater Rate Study (Study) for its water and wastewater enterprise systems. The major components of the Study consist of developing forward-looking financial plans for each enterprise, performing analyses to determine the cost of providing service, and designing updated water and wastewater rates for implementation.

Rate Study Process

Performing a rate study generally consists of four parts that include (1) financial planning, (2) determining the cost of providing the utility service, (3) designing utility rate structures and rates, and (4) rate implementation.

The financial planning process consists of projecting revenues and revenue requirements (financial obligations) of the utility enterprise for a future 5-year period. The financial plan provides the means to analyze whether revenue is sufficient to meet financial obligations and debt service coverage requirements in each year of the study period and whether revenue increases are necessary. The financial plan presents the financial stability of the enterprise by demonstrating the ability to pay operation and maintenance expense, capital improvement project funding, and debt service while providing the degree to which debt service is covered by net revenue. The financial plan will also show that the utility has been able to implement good management through maintenance of operating and capital reserves.

The objective of the cost of service process is to distribute the utility's costs fairly among the customers that use the utility systems. Annual costs for a representative year from the financial plan are allocated to customer classifications based on cost causative principles from the American Water Works Association (AWWA) Manual M1 for water systems and the Water Environment Federation (WEF) Manual of Practice No. 27 for wastewater systems. The allocation method that is used depends on several factors including the level of detail of the utility's accounting system, system operation, whether consumption is metered, and the treatment facility process that is used to provide service.

Rates structures and rates are designed to recover the allocated costs of providing service to the utility's customer classifications. Various types of structures can be employed that commonly include a fixed charge as

well as a consumption charge that may consist of a uniform volume rate, or rates by consumption block such as an inclining block rate structure when developing water conservation rates. The intent is to design rate structures and rates that stand alone as a separate revenue source that fairly recovers the cost of providing service to the utility's customer groups.

Utility rates need to comply with Proposition 218 requirements. Under Proposition 218, the revenue derived from the utility rates cannot exceed the cost to provide the service, the rates charged must be proportional to actual use, and additionally the revenue derived from the utility rates cannot be used for any other purpose than for which the rates are charged. The proposed rates are introduced to the public through a Proposition 218 Notice and a protest vote is tallied at a public hearing on the proposed rates.

Assumptions

Several assumptions were used to conduct the Study for the period FY 2019-20 to FY 2024-25. The assumptions included growth rates in customer accounts and annual consumption, interest earnings on reserve balances, and expense inflation factors used for making projections. The financial planning assumptions are provided below in Table 1.

Table 1
Assumptions and Planning Factors

Description	Value
Annual Account & Demand growth [1]	
Residential	2.0%
All Other	0.0%
Interest earnings on fund reserves (annual)	
	1.50%
Cost Escalation	
Personnel Services [2]	3.0%
Benefits	8.0%
Electrical Power	3.0%
Chemicals	3.0%
Purchased Water	3.0%
All Other Operations & Maintenance	2.0%
Capital	3.0%

[1] Annualized growth in water accounts is based on historical information provided by staff.

[2] Personnel Services growth in staffing, promotions, and inflation is 3.0% annually.

District Reserve Policy

A reserve policy sets forth goals for maintaining various reserves for water and wastewater operations and capital spending. The reserve policy provides guidelines to maintain the financial health and stability of the enterprise funds, allowing the enterprises to meet unanticipated reductions in revenues, changes in the costs of providing services, fixed asset repair and replacement needs, natural disasters, and other issues. The reserve

funds and reserve targets have been previously established by the District with Resolution No. 2017-09 (Reserve Policy).

District Beginning Balances and Reserve Targets

The reserve fund balances established through the Reserve Policy are used in developing the financial plans for the water and wastewater utilities. The District’s beginning fund balances are listed in Table 2 below as of June 30, 2019. Target Reserves are also stated in the table.

Table 2
June 30, 2019 Estimated Beginning Cash Balances and Reserve Targets

Reserve Type	Water		Wastewater	
	Reserve Balance	Reserve Target	Reserve Balance	Reserve Target
Operating Reserve	\$365,685	\$108,000	\$466,680	\$454,000
Capital Replacement Reserve	\$200,000	\$400,000	\$1,500,000	\$790,000
Emergency Reserve	\$55,000	\$61,000	\$155,000	\$154,000
Rate Stabilization Reserve	\$60,000	\$48,000	\$80,000	\$50,000
Total	\$680,685	\$617,000	\$2,201,680	\$1,448,000

Currently, the Districts total reserves have balances that are higher than the target reserves. However, the financial plans developed in this Study increase and/or maintain the various reserve types such that the reserve goals are achieved over a five-year planning period.

Water Rate Study

Revenues

The District receives revenue from several sources. Operating revenue is received from rates and charges for water service. Revenue from water rates is projected by applying the current water rates to the projected number of accounts and consumption volume shown in Appendices A-1 and A-2 respectively. Miscellaneous revenue is also received that includes property taxes, connection fee revenue, and interest income. Revenue from water rates and miscellaneous sources are shown below in Tables 3 and 4 respectively.

Table 3
 Projected Rate-based Water Revenue Using Existing Rates

Description	Projected					
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Water Service Revenues						
Fixed Charges ^[1]	\$255,816	\$259,920	\$264,708	\$269,496	\$274,284	\$279,072
Variable Charges ^[2]	226,879	227,581	228,413	229,245	230,081	230,914
Total Revenues From Current Rates	\$482,695	\$487,501	\$493,121	\$498,741	\$504,365	\$509,986

[1] FY 19-20 and forecast revenue calculated by multiplying current water service rate by the number of projected meters.

[2] FY 19-20 and forecast revenue calculated by multiplying projected water sales by the current variable rates.

Table 4
 Projected Water Miscellaneous Revenue

Description	Budget	Projected				
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Property Taxes	\$112,000	\$115,400	\$118,900	\$122,500	\$126,200	\$130,000
Chevron Agreement	15,240	15,240	15,240	15,240	15,240	15,240
Total Miscellaneous Revenues	\$127,240	\$130,640	\$134,140	\$137,740	\$141,440	\$145,240

Revenue Requirements

Revenue requirements of the water system include operation and maintenance expense, water supply expense, and capital improvement funding. Each of these items are discussed below.

Operation and Maintenance Expense

Operation and maintenance expenses (O&M) are an on-going obligation of the water system and such costs are normally met from water service revenue. O&M includes the cost to operate and maintain the water supply, reservoirs, and distribution system facilities. Costs also include technical services and other general and administrative expenses. O&M has been projected recognizing the major expense categories of personnel services, electric power expense, chemicals, all other expenses, and capital outlay at the escalation rates provided in Table 1. A summary of the water O&M expenses is provided below in Table 5. Appendix A-3 provides details of the water O&M expenses for the Study period.

Table 5
 Historical and Projected Water Operation and Maintenance Expense

Description	Historical	Budget	Projected				
	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Water Operations	\$120,736	\$144,400	\$147,288	\$150,233	\$153,240	\$156,304	\$159,429
State Water Supply	\$161,074	\$160,000	\$166,036	\$185,004	\$204,961	\$226,054	\$248,120
Lopez Water Supply	\$101,719	\$115,000	\$117,749	\$121,272	\$124,920	\$128,668	\$132,528
Total Water System O&M Expense	\$383,529	\$419,400	\$431,073	\$456,509	\$483,121	\$511,026	\$540,077

Lopez and State Water Supply

The District's water supply consists of Lopez and State water supply sources. The Lopez and State water supply expenses are included in this Study as budgeted for FY 2019-20. Future State water costs were projected

assuming 4 percent annual escalation rate in the unit cost per ac-ft whereas annual Lopez water supply expense was provided by San Luis Obispo County.

Capital Improvement Funding

The District plans to fund water capital improvement program (CIP) expenditures during the next five years from the water operating fund rate revenues. An annual amount from the water operating fund is used to fund these CIP expenditures. The amount is discussed below in the Water Capital Improvement Program section.

Water Capital Improvement Program

The District has developed a Capital Improvement Program (CIP) provided in Table 6 that lists capital expenditures for FY 2019-20 through FY 2024-25. Over this period the District projects that it will expend approximately \$1 million that includes inflation. The major CIP projects include the Re-Coat Water Tank #1 project, Water Tank #2 Maintenance, and the Water System Meters/Valve Replacement project.

Table 6
 Water Capital Improvement Program With Sources and Uses of Funds

Description	Budget		Projected			
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Current Capital Improvement Program (CIP) Projects [1]						
Water System Meter/Valve Replacement	\$100,000	\$77,300	\$53,000	\$0	\$0	\$0
Misc Water Line Replacement/Repair	25,000	25,800	26,500	27,300	28,100	-
Water Tank #2 Maintenance	-	154,500	79,600	-	-	-
Lopez Booster Pumps	-	51,500	79,600	-	-	-
Re-Coat Water Tank #1	-	-	106,100	163,900	-	-
Proposed Asset Replacement Projects [2]	-	-	-	-	-	220,300
Total Water CIP	\$125,000	\$309,100	\$344,800	\$191,200	\$28,100	\$220,300
Sources and Uses of Capital Funds						
Capital Replacement Transfer from Water Fund	\$125,000	\$309,100	\$344,800	\$191,200	\$28,100	\$220,300
Capital Improvement Replacement Projects (CIP)	(125,000)	(309,100)	(344,800)	(191,200)	(28,100)	(220,300)
Ending Balance	\$0	\$0	\$0	\$0	\$0	\$0

[1] CIP Source: FY 19-20 City CIP document. Includes 3.0% annual inflation to the year of expenditure.
 [2] Assumed annual replacement.

The CIP is funded through the annual capital improvement funding from the water operating fund. The sources and uses of funds to pay for the CIP are shown near the bottom of Table 6.

Water Financial Plan

A financial plan has been prepared that includes the revenues and revenue requirements that were identified for the water system and is presented in Table 7. The plan incorporates specific financial planning goals to provide guidance to maintain the health of the water utility on an on-going basis. The goals included the following.

- Generate positive levels of income in each year of the Study period
- Maintain the operating and capital reserves at or greater than target levels
- Maintain debt service coverage ratios at or greater than the minimum required
- Maintain the annual capital replacement transfer

Proposed Revenue Adjustments

The financial plan indicates that a 3.0 percent increase is recommended on July 1, 2020 and for each July 1 of the Study period. The increases are necessary to meet the planning criteria discussed above.

Table 7
 Water Financial Plan

Description	Projected					
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Proposed Revenue Increase (July 1)		3.0%	3.0%	3.0%	3.0%	3.0%
Revenue						
Revenues from Existing Water Rates [1]	\$482,695	\$487,501	\$493,121	\$498,741	\$504,365	\$509,986
Total Additional Water Sales Revenue [2]	0	14,625	30,031	46,246	63,302	81,228
Property Taxes	112,000	115,400	118,900	122,500	126,200	130,000
Miscellaneous Income	15,240	15,240	15,240	15,240	15,240	15,240
Interest Income [3]	10,783	10,629	8,890	8,000	9,468	10,715
Total Revenues	\$620,718	\$643,395	\$666,182	\$690,727	\$718,575	\$747,169
Revenue Requirements						
Operation and Maintenance Expense	\$144,400	\$147,288	\$150,233	\$153,240	\$156,304	\$159,429
State Water	160,000	166,036	185,004	204,961	226,054	248,120
Lopez Water	115,000	117,749	121,272	124,920	128,668	132,528
Capital Replacement Transfer	125,000	309,100	344,800	191,200	28,100	220,300
Total Revenue Requirements	\$544,400	\$740,173	\$801,309	\$674,321	\$539,126	\$760,377
Net Funds Available	\$76,318	(\$96,778)	(\$135,127)	\$16,406	\$179,449	(\$13,208)
Available Reserves						
Beginning available reserves [4]	\$680,685	\$757,003	\$660,225	\$525,098	\$541,504	\$720,953
Additions (reductions)	76,318	(96,778)	(135,127)	16,406	179,449	(13,208)
Ending available reserves	\$757,003	\$660,225	\$525,098	\$541,504	\$720,953	\$707,745
Target Reserves [5]	\$617,000	\$625,000	\$656,000	\$689,000	\$704,000	\$704,000
Above (below) Target	140,003	35,225	(130,902)	(147,496)	16,953	3,745

[1] Projected using the existing rates.

[2] Additional revenue from proposed rate adjustments.

[3] Interest earnings on the average fund balance calculated at 1.50%.

[4] The available beginning FY 19-20 cash balance includes operating, capital replacement, emergency, and rate stabilization reserves.

[5] Includes operating, capital replacement, emergency, and rate stabilization Target Reserves.

Cost of Service

This water system's operating and capital costs are allocated in a manner that follow industry practice to design water rates. Establishing rates in California requires that the agency responsible for imposing property-related fees create a nexus between the cost of providing service and the rates to be imposed.

Industry Methodology

This Study uses methodologies from the American Water Works Association (AWWA) to allocate costs in an appropriate manner. General principles are provided to assist agencies with the design of water rates such that the rates may be consistent with local requirements while also recognizing state laws and legal framework. The AWWA guidelines have been used to conduct this Study and have been used in the design of the District's water rates while also following Proposition 218 and the recent San Juan Capistrano court decision.

The annual costs of providing water service are allocated to cost components according to industry standards provided in the AWWA Manual M1. The methodology provides the basis to design rates to generate adequate revenue to meet estimated annual revenue requirements from the financial plan.

Costs of Service to be Allocated

The annual cost of providing service consists of O&M expenses and capital costs of the water system. O&M expenses include costs related to water supply, water distribution, maintenance of the facilities, and general and administrative costs. Capital costs include capital improvement funding discussed in the financial plan.

The cost allocation components for water service are Lopez Water Supply, State Water Supply, and Customer. FY 2020-21 operating and capital costs of the water system are assigned to each of these components. The total cost to be recovered from the users of the water system by cost component for FY 2020-21 is provided in Table 8.

Table 8
 Allocation of Water Revenue Requirements to Cost Component FY 20-21

Description	Total FY 20-21	Water Supply		
		Lopez	State	Customer
Operation and Maintenance Expense				
Water Operations	\$147,288	-	-	\$147,288
State Water O&M	166,036	-	166,036	-
Lopez Water Costs	117,749	117,749	-	-
Total Operation and Maintenance Expense	\$431,073	\$117,749	\$166,036	\$147,288
Total Capital Costs	\$309,100	-	-	\$309,100
Adjustments				
Revenue Offsets	(\$141,269)	-	-	(\$141,269)
Adjustments for Annual Cash Balance	(96,778)	-	-	(96,778)
Total Adjustments	(\$238,047)	\$0	\$0	(\$238,047)
Total Cost of Service	\$502,126	\$117,749	\$166,036	\$218,341

Water Rate Design

The cost of service analyses described in the previous section provides the basis for water rate design. The goal of the design of rates is to achieve fairness while ensuring that each customer class pays its fair share of costs. Rates should be simple to administer, easy to understand, and comply with regulatory requirements.

Proposed Rate Structure

The recommended water rates include modifying the current rate structure such that the customer fixed charge is retained, however the two-tier variable charge is modified such that customers will now pay for the water they actually use in the first tier as well as the second tier. The design of the fixed charges and variable charges are discussed below.

Proposed Fixed Charges

The proposed fixed charges recover the Customer costs of service identified from Table 8. Customer costs are recovered based on the number of bills issued. Table 9 below presents the design of the proposed monthly fixed charges for all water customers. The current fixed charges generate about 54 percent of revenue from water rates. The proposed fixed charges generate approximately 43 percent of the revenue from water rates.

Table 9
 Design of Fixed Charges

Customer Service Cost	FY 20-21
Customer Cost	\$218,341
Number of Bills	4,560
Customer Cost per Unit	\$47.88

Proposed Variable Charges

Variable charges are designed to recover the Lopez and State water supply costs from Table 8. Water Supply costs were allocated to each tier based on availability and the demand of each tier.

Tier Definitions. The following tier definitions and their applicability to customer classes are discussed below.

Tier 1 is defined as consumption to provide basic indoor water use and is based on 2.2 persons per household (pph) using 55 gallons per capita per day (gpcpd) resulting in a Tier 1 breakpoint of 5 HCF (2.2 pph x 55 gpcpd ÷ 748 gal/HCF x 365 days ÷ 12 monthly billing periods). Tier 2 is defined as consumption related to outdoor water use. The Tier 2 breakpoint is defined as the SFR summer peak demand. However, the analyses of the SFR demand showed that the summer peak did not vary significantly from the Tier 1 breakpoint of 5 HCF. Therefore, only two a two-tier rate structure is proposed with Tier 2 defined as all consumption over Tier 1. The rate structure is applicable to all customers.

Water Supply Costs. The District’s water supply sources consist of State water and Lopez water. The sources of water supply are allocated to each tier assuming the least expensive source of water is used first, followed by a blending of the two sources in order of cost to meet the demand. Table 10 provides the District’s demand by tier, the water supply source used to meet the demand in the tier, the costs associated with the water supply, and the resulting water supply rate in the tier.

Table 10
 Design of Water Supply Costs by Tier
 FY 20-21

Tier	Projected Consumption	Consumption Met From		Water Supply Costs	Water Supply Rates
		State	Lopez		
Tier 1 - 0 to 5 units	12,544		12,544	\$50,827	\$4.05
Tier 2 - Over 5 units	19,965	3,448	16,516	232,958	\$11.67
Total	32,509	3,448	29,060	\$283,785	

Proposed Water Rates

Table 11 presents the proposed fixed charges and variable charges for the water system for the next five years. Current rates are also provided in the table. Beginning with July 1, 2021 (FY 21-22), rates increase with the percentages identified in the financial plan.

Table 11
Proposed Water Fixed and Variable Charges

	Current Rate	July 1, FY 20-21	July 1, FY 21-22	July 1, FY 22-23	July 1, FY 23-24	July 1, FY 24-25
Fixed Charge (\$ per month)						
All Customers	\$57.00	\$47.88	\$49.32	\$50.80	\$52.33	\$53.90
Variable Charge (\$ per HCF)						
All Customers						
Tier 1 - 0 to 5 units	\$0.00	\$4.05	\$4.18	\$4.31	\$4.44	\$4.58
Tier 2 - Over 5 units	\$11.40	\$11.67	\$12.02	\$12.39	\$12.77	\$13.16

Water Bill Impact Analysis

The impacts to the SFR customer from the proposed water rates for July 1, 2020 rate structure is provided in Table 12 below. For an SFR customer using the average consumption of 3 hundred cubic feet (HCF) monthly, the bill will increase from \$57.00 to \$60.03, an increase of \$3.03 or 5.3 percent. The 5.3 percent increase is higher than the overall 3.0 percent revenue increase required due to the water rate structure change shown in Table 11.

Table 12
Comparison of Current Single-family Residential Monthly Water Bill with Proposed Bill Using July 1, 2020 Water Rates

Description	Use (HCF)	Current Bill			Proposed FY 20-21 Bill				
		Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
	0	\$57.00	\$0.00	\$57.00	\$47.88	\$0.00	\$47.88	(\$9.12)	-16.0%
	1	\$57.00	\$0.00	\$57.00	\$47.88	\$4.05	\$51.93	(\$5.07)	-8.9%
Median	2	\$57.00	\$0.00	\$57.00	\$47.88	\$8.10	\$55.98	(\$1.02)	-1.8%
Average	3	\$57.00	\$0.00	\$57.00	\$47.88	\$12.15	\$60.03	\$3.03	5.3%
	4	\$57.00	\$0.00	\$57.00	\$47.88	\$16.20	\$64.08	\$7.08	12.4%
	5	\$57.00	\$0.00	\$57.00	\$47.88	\$20.25	\$68.13	\$11.13	19.5%
	10	\$57.00	\$57.00	\$114.00	\$47.88	\$78.60	\$126.48	\$12.48	10.9%
	15	\$57.00	\$114.00	\$171.00	\$47.88	\$136.95	\$184.83	\$13.83	8.1%
	20	\$57.00	\$171.00	\$228.00	\$47.88	\$195.30	\$243.18	\$15.18	6.7%

Wastewater Rate Study

Design of wastewater rates for the wastewater enterprise includes identifying and projecting revenues and revenue requirements of the wastewater system to develop a 5-year financial plan, allocating costs to cost components following industry practice, and designing fixed and variable charges to recover those costs in an appropriate manner. Estimates of revenue are compared with the projected revenue requirements to determine the adequacy of existing revenue to meet annual obligations which provides the basis for revenue adjustments. New wastewater rates and charges are designed to recover the District’s annual operating and capital costs associated with the wastewater system.

Revenues

The District receives wastewater revenue from several sources. Operating revenue is received from rates and charges for wastewater service. Other revenue includes property taxes, connection fee revenue, Port San Luis Harbor charges, and interest income. The wastewater rate revenue is projected by applying the current wastewater rates to the projected number of accounts from Appendix B-1 and projected water consumption from Appendix B-2. Projected wastewater rate revenue and miscellaneous revenue are presented in Tables 13 and 14 respectively.

Table 13
 Projected Rate-based Wastewater Revenue Using Existing Rates

Description	Projected					
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Wastewater Service Revenues						
Fixed Charge Revenue [1]	\$271,948	\$276,436	\$280,141	\$284,629	\$289,075	\$294,304
Variable Consumption Revenue [2]	229,003	229,704	230,405	231,106	231,942	232,778
Total Revenues From Current Rates	\$500,951	\$506,140	\$510,546	\$515,735	\$521,017	\$527,082

[1] Current fixed charge by meter sizes multiplied by the number of meters.

[2] Current non-residential variable rates multiplied by projected non-residential water volumes.

Table 14
 Projected Wastewater Miscellaneous Revenue

Description	Budget		Projected			
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Property Taxes	\$175,000	\$200,000	\$204,000	\$208,100	\$212,300	\$216,500
Connection Fee Revenue	60,000	60,000	60,000	60,000	60,000	72,000
PSLHD O&M Contribution	50,000	71,100	66,800	68,300	69,800	71,300
PSLHD Treatment Plant Contribution	0	69,656	69,656	69,656	69,656	69,656
Total Miscellaneous Revenues	\$285,000	\$400,756	\$400,456	\$406,056	\$411,756	\$429,456

Revenue Requirements

Revenue requirements of the wastewater system include operation and maintenance expense, annual capital replacement transfer, and debt service. Each of these items are discussed below.

Operation and Maintenance Expense

Operation and maintenance expenses (O&M) are an on-going obligation of the wastewater system and such costs are normally met from wastewater service revenue. O&M includes the cost to operate and maintain the wastewater collection system. Costs also include technical services and other general and administrative expenses. O&M has been projected recognizing the major expense categories of salaries, benefits, electric power expense, chemicals expense, and other expenses. Table 15 provides a summary of the wastewater O&M expenses for the Study period.

Table 15
 Historical and Projected Wastewater Operation and Maintenance Expense

Description	Historical	Budget	Projected				
	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Wastewater Operations							
Contract Labor O&M	\$154,803	\$195,000	\$198,900	\$202,878	\$206,936	\$211,075	\$215,297
Contract Labor District	48,610	58,000	59,160	60,343	61,550	62,781	64,037
Chemicals	68,008	78,500	80,855	83,281	85,779	88,352	91,003
Critical Spare parts	14,199	8,000	8,160	8,323	8,489	8,659	8,832
Engineering	0	7,500	7,650	7,803	7,959	8,118	8,280
Equipment Repairs & Maintenance	75,357	45,000	45,900	46,818	47,754	48,709	49,683
Fats, Oil, Grease Program	3,957	5,000	5,100	5,202	5,306	5,412	5,520
Generator Maintenance	2,276	4,200	4,284	4,370	4,457	4,546	4,637
Insurance P/L	5,716	6,000	6,120	6,242	6,367	6,494	6,624
Lab Tests	46,473	45,000	45,900	46,818	47,754	48,709	49,683
Misc - Benthic Monitoring	0	48,000	0	0	0	0	48,000
Operating Supplies	1,879	3,500	3,570	3,641	3,714	3,788	3,864
Permits & Fees	7,168	8,500	8,670	8,843	9,020	9,200	9,384
Regulatory Permit Compliance	0	5,000	5,100	5,202	5,306	5,412	5,520
Solids Handling	36,435	40,000	40,800	41,616	42,448	43,297	44,163
Utilities	25,034	30,000	30,900	31,827	32,782	33,765	34,778
All Other	8,946	18,150	18,513	18,882	19,260	19,646	20,039
Total Wastewater O&M Expense	\$498,861	\$605,350	\$569,582	\$582,089	\$594,881	\$607,963	\$669,344

Capital Improvement Funding

The District plans to fund water capital improvement program (CIP) expenditures during the next five years from the sewer operating fund rate revenues. An annual amount from the sewer operating fund is used to fund these CIP expenditures. The amount is discussed below in the Wastewater Capital Improvement Program section.

Wastewater Capital Improvement Program

The District has developed a CIP that lists capital expenditures for FY 2019-20 through FY 2024-25, presented in Table 16. The CIP is funded from the sewer operating fund, contribution from Port San Luis Harbor, and a new loan as shown near the bottom of Table 16.

Table 16
 Wastewater Capital Improvement Program With Sources and Uses of Funds

Description	Fiscal Year					
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Current Capital Improvement Program (CIP) Projects [1]						
WWTP Secondary Treatment Redundancy	\$250,000	\$1,545,000	\$796,000	\$0	\$0	\$0
Brine Receiving Facilities	60,000	15,000	-	-	-	-
San Miguel Street Sewer Line Replacement	125,000	412,000	53,000	-	-	-
Wastewater Collection Line Repair	15,000	26,000	27,000	27,000	28,000	-
Miscellaneous Wastewater Projects	25,000	52,000	53,000	109,000	-	-
Chlorination System Improvements	-	52,000	-	-	-	-
First Street Sewer Line Replacement	-	-	53,000	219,000	-	-
Front Street Sewer Line Replacement	-	-	-	55,000	113,000	-
Proposed Asset Replacement Projects [2]	-	-	-	-	-	305,000
Total Wastewater CIP	\$475,000	\$2,102,000	\$982,000	\$410,000	\$141,000	\$305,000
Sources and Uses of Capital Funds						
Beginning Year Balance [2]	\$0	\$0	\$943,850	\$0	\$0	\$0
Replacement Transfer from Wastewater Fund	428,450	-	19,600	371,850	141,000	305,000
New Bond Proceeds (net of issuance costs)	-	3,000,000	-	-	-	-
Port San Luis Harbor Contribution	46,550	45,850	18,550	38,150	-	-
Capital Improvement Projects (CIP)	(475,000)	(2,102,000)	(982,000)	(410,000)	(141,000)	(305,000)
Ending Balance	\$0	\$943,850	\$0	\$0	\$0	\$0

[1] CIP Source: FY 19-20 City CIP document. Includes 3.0% annual inflation to the year of expenditure.
 [2] Assumed annual replacement.

Wastewater Financial Plan

A financial plan has been prepared for the wastewater utility that includes the revenues and revenue requirements that were identified for the wastewater system and is presented in Table 17. The plan incorporates specific financial planning goals to provide guidance to maintain the health of the wastewater utility on an on-going basis. The goals included the following.

- Generate positive levels of income in each year of the Study period
- Maintain the operating and capital reserves at or greater than target levels
- Maintain debt service coverage ratios at or greater than the minimum required
- Meet annual capital replacement spending from the annual replacement transfer and capital reserves

Proposed Revenue Adjustments

Analysis of the revenues and revenue requirements of the wastewater financial plan indicate that revenue increases are necessary. Revenue increases of 3.0 percent are required annually beginning July 1, 2020 and each July 1 thereafter for the Study to meet the financial planning criteria discussed above. Table 17 provides the wastewater financial plan with the proposed revenue increases.

Table 17
 Wastewater Financial Plan

Description	Projected					
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Proposed Revenue Increase (July 1)		3.0%	3.0%	3.0%	3.0%	3.0%
Revenue						
Rate-based Revenues, Existing Rates [1]	\$500,951	\$506,140	\$510,546	\$515,735	\$521,017	\$527,082
Total Additional Wastewater Revenue [2]	0	15,184	31,092	47,823	65,392	83,950
Property Taxes	175,000	200,000	204,000	208,100	212,300	216,500
PSLHD O&M Contribution	50,000	71,100	66,800	68,300	69,800	71,300
PSLHD Treatment Plant Contribution	-	69,656	69,656	69,656	69,656	69,656
Interest Income [3]	30,948	29,719	31,336	30,336	28,631	27,288
Total Revenue	\$756,899	\$891,799	\$913,430	\$939,950	\$966,796	\$995,776
Revenue Requirements						
Operation and Maintenance Expense	\$605,350	\$569,582	\$582,089	\$594,881	\$607,963	\$669,344
Capital Improvement Funding	428,450	-	19,600	371,850	141,000	305,000
New Bond Debt Service	-	209,178	209,178	209,178	209,178	209,178
Total Revenue Requirements	\$1,033,800	\$778,760	\$810,867	\$1,175,909	\$958,141	\$1,183,522
Net Funds Available	(\$276,901)	\$113,039	\$102,563	(\$235,959)	\$8,655	(\$187,746)
Available Reserves						
Beginning available reserves [4]	\$2,201,680	\$1,924,779	\$2,037,818	\$2,140,381	\$1,904,422	\$1,913,077
Additions (reductions)	(276,901)	113,039	102,563	(235,959)	8,655	(187,746)
Ending available reserves	\$1,924,779	\$2,037,818	\$2,140,381	\$1,904,422	\$1,913,077	\$1,725,331
Target Reserves [5]	\$1,448,000	\$1,527,000	\$1,586,000	\$1,617,000	\$1,634,000	\$1,696,000
Above (below) Target	\$476,779	\$510,818	\$554,381	\$287,422	\$279,077	\$29,331
Debt Service Coverage						
Net Revenues [6]	\$152,049	\$323,617	\$333,641	\$348,269	\$363,033	\$331,732
Annual Debt Service	\$0	\$209,178	\$209,178	\$209,178	\$209,178	\$209,178
Coverage [7]	0%	155%	160%	166%	174%	159%

[1] Projected using the existing rates.
 [2] Additional revenue from rate adjustments.
 [3] Interest earnings on the average fund balance calculated at 1.50%.
 [4] The available FY 19-20 cash balance includes Operation, Capital Replacement, Emergency, and Rate Stabilization reserves.
 [5] Target reserves include Operating, Capital Replacement, Emergency, and Rate Stabilization target reserves.
 [6] Includes rate revenue, capacity charge revenue, property tax revenue, and miscellaneous and interest income.
 [7] Minimum coverage is 125 percent.

Cost of Service

This section of the report discusses how the wastewater system’s operating and capital costs are allocated for use in designing rates. Establishing rates in California requires that the agency responsible for imposing property-related fees create a nexus between the cost of providing service and the rates to be imposed.

Industry Methodology

Methodology from the Water Environment Federation (WEF) is used in this Study to allocate wastewater costs in an appropriate manner. Similar to AWWA, WEF is an industry trade organization that provides guidance on operations, technical training, education, and management of wastewater utilities. General principles are provided to assist agencies with the design of wastewater rates and charges that are consistent with local requirements while also recognizing state laws and legal framework. For the approach used in this Study, the cost allocation components for wastewater service are Flow, BOD, SS, and Customer.

Costs of Service to be Allocated

The annual cost of providing service consists of O&M expenses and capital costs of the wastewater system. O&M expenses include costs related to wastewater collection, general and administrative costs, and advances repayment. Capital costs include annual capital spending discussed in the financial plan.

Wastewater rates are designed from an allocation of costs to cost components based on the operating characteristics and design of the wastewater system facilities. Operating and capital costs for FY 2020-21 of the wastewater system are assigned to each of the components of Flow, BOD, SS, and Customer. The total cost to be recovered from the users of the wastewater system by cost component for FY 2020-21 is presented in Table 18.

Table 18
 Allocation of Wastewater Revenue Requirements to Cost Component

Description	FY 20-21	Flow	Strength		Customer	General
			BOD	SS		
Operations and Maintenance Expense						
Dues and Subscriptions	\$510	\$0	\$0	\$0	\$510	\$0
Legal	10,200	-	-	-	10,200	-
Office Supplies & Postage	1,020	-	-	-	1,020	-
Travel	1,020	-	-	-	1,020	-
Chemicals	80,855	80,855	-	-	-	-
Contract Labor O&M	198,900	112,670	40,852	40,852	4,526	-
Contract Labor District	59,160	-	-	-	-	59,160
Critical Spare parts	8,160	4,622	1,676	1,676	186	-
Engineering	7,650	-	-	-	-	7,650
Equipment Repairs & Maintenance	45,900	26,001	9,427	9,427	1,045	-
Fats, Oil, Grease Program	5,100	2,890	1,047	1,047	116	-
Generator Maintenance	4,284	2,427	880	880	97	-
Insurance P/L	6,120	-	-	-	-	6,120
Lab Tests	45,900	-	-	-	45,900	-
Operating Supplies	3,570	2,023	733	733	81	-
Permits & Fees	8,670	4,911	1,781	1,781	197	-
Regulatory Permit Compliance	5,100	2,890	1,047	1,047	116	-
Safety Gear	663	376	136	136	15	-
Small Tools	510	288	105	105	12	-
Solids Handling	40,800	-	20,400	20,400	-	-
Telephone	4,590	-	-	-	4,590	-
Utilities	30,900	30,900	-	-	-	-
Subtotal O&M Expense	\$569,582	\$270,853	\$78,084	\$78,084	\$69,631	\$72,930
Allocation of General Expense	-	39,773	11,466	11,466	10,225	(72,930)
Total Operation and Maintenance Expense	\$569,582	\$310,626	\$89,550	\$89,550	\$79,856	\$0
Capital Costs						
New Bond Debt Service	209,178	69,726	69,726	69,726	0	0
Total Capital Costs	\$209,178	\$69,726	\$69,726	\$69,726	\$0	\$0
Adjustments						
Revenue Offsets	(\$370,475)	(\$202,042)	(\$58,246)	(\$58,246)	(\$51,941)	\$0
Adjustments for Annual Cash Balance	113,039	61,647	17,772	17,772	15,848	0
Total Adjustments	(\$257,436)	(\$140,395)	(\$40,474)	(\$40,474)	(\$36,093)	\$0
Total Cost of Service	\$521,324	\$239,957	\$118,802	\$118,802	\$43,763	\$0

Units Cost of Service

Costs for the Flow, BOD, SS, and Customer cost components are distributed to customer classes by identifying and quantifying the service demands associated with each cost component. For the Flow component, the allocated Flow cost is divided by the contributed wastewater volume discharged by customers. Because directly measuring wastewater volume is impractical for all but large industrial or wholesale customers, metered water

consumption is used to estimate customers class contributed wastewater volume. By performing a balance analysis, the contributed wastewater volume of each class was determined by assigning a portion of their water consumption as returning to the sewer. The balance analysis accounts for residential lawn irrigation, car washing, and other uses where water is not discharged to the wastewater system.

BOD and SS costs are divided by the total pounds (lb) of BOD or SS, respectively, received at the wastewater treatment plant. For the Customer component, the Customer cost is divided by the number of bills issued to all customers to determine the cost per bill to serve a customer. The units of service are provided in the Appendix B-3 while the unit costs of service are provided below in Table 19.

Table 19
 Development of Unit Costs

Description	FY 20-21		Strength		Customer
	Total Costs	Flow	BOD	SS	
Total Costs of Service	\$521,324	\$239,957	\$118,802	\$118,802	\$43,763
Units of Service		21,137.238	47,070.548	31,306.781	4,608
Unit Costs of Service		\$11.3523	\$2.5239	\$3.7948	\$9.4972
Units of Measure		HCF	lb	lb	Bills

User Class Costs

The unit costs from Table 19 are applied to each customer classifications' flow, BOD, SS, and customer units of service to establish user class costs. The cost of service responsibility of each class is provided in Table 20.

Table 20
 Distribution of Costs to Customer Classes FY 20-21

Description	Allocated Total Cost	Flow	Strength		Customer
			BOD	SS	
Unit Costs of Service		\$11.3523	\$2.5239	\$3.7948	\$9.4972
Units of Measure		HCF	lb	lb	Bills
Single-family					
Units of Service		7,678.303	9,586.146	9,586.146	3,228.000
Allocated Cost of Service	\$178,395	\$87,167	\$24,195	\$36,377	\$30,657
Multifamily					
Units of Service		1,452.835	1,813.823	1,813.823	732.000
Allocated Cost of Service	\$34,906	\$16,493	\$4,578	\$6,883	\$6,952
Commercial					
Units of Service		2,501.350	2,342.149	2,342.149	540.000
Allocated Cost of Service	\$48,324	\$28,396	\$5,911	\$8,888	\$5,128
Hotels					
Units of Service		5,931.800	11,478.812	4,443.411	48.000
Allocated Cost of Service	\$113,629	\$67,340	\$28,972	\$16,862	\$456
Restaurants					
Units of Service		3,489.350	21,781.776	13,069.066	36.000
Allocated Cost of Service	\$144,524	\$39,612	\$54,975	\$49,594	\$342
Industrial					
Units of Service		83.600	67.842	52.186	24.000
Allocated Cost of Service	\$1,546	\$949	\$171	\$198	\$228
Total Costs of Service	\$521,324	\$239,957	\$118,802	\$118,802	\$43,763

The unit Flow cost of service is multiplied by the wastewater contributed volume for each class to assign the Flow cost to each customer class. The process is similarly applied to the unit BOD, SS, and Customer costs of service. The sum of these costs are the costs of service for each customer class shown in Table 20.

Wastewater Rate Design

The goal of the design of rates is to achieve fairness while ensuring that each customer class pays its fair share of costs. Rates should be simple to administer, easy to understand, and comply with regulatory requirements. This section describes how wastewater rates and charges are designed and includes the proposed schedule of wastewater rates for implementation.

Proposed Wastewater Fixed Charge

Table 21 provides the design of the proposed wastewater monthly fixed charge. The proposed charge is designed as a fixed charge per month where the Customer costs from Table 20 are recovered based on the number of bills issued.

Table 21
 Design of Fixed Charge
 FY 20-21

Classification	Customer Cost [1]	Number of Bills	Fixed Charge
		Bills	\$/mo
Single-family	\$30,657	3,228	\$9.50
Multifamily	6,952	732	\$9.50
Commercial	5,128	540	\$9.50
Hotels	456	48	\$9.50
Restaurants	342	36	\$9.50
Industrial	228	24	\$9.50
Total	\$43,763	4,608	\$9.50

[1] From Table 20

Proposed Wastewater Variable Rates

The wastewater charges are determined from the Flow, BOD, and SS costs from Table 20. The costs are divided by the metered water consumption of each classification to determine the individual variable rate charged to each class. The wastewater variable rates are shown in Table 22.

Table 22
 Design of Wastewater Variable Rates
 FY20-21

Classification	Flow Cost [1]	BOD Cost [1]	SS Cost [1]	Total Costs	Water Sales Volume	Variable Charge
					HCF	\$/HCF
Single-family	\$87,167	\$24,195	\$36,377	\$147,738	10,978	\$13.46
Multifamily	16,493	4,578	6,883	27,954	2,139	\$13.07
Commercial	28,396	5,911	8,888	43,195	2,633	\$16.41
Hotels	67,340	28,972	16,862	113,173	6,244	\$18.13
Restaurants	39,612	54,975	49,594	144,182	3,673	\$39.25
Industrial	949	171	198	1,318	88	\$14.98
Total	\$239,957	\$118,802	\$118,802	\$477,561	25,755	

[1] From Table 20

Table 23 presents the proposed wastewater rates for the wastewater system for the next five years. The table includes the current fixed and variable charges and the fixed and variable charges proposed for July 1, 2020 and through the Study period. Beginning with July 1, 2021, rates increase with the percentages in Table 17.

Table 23
 Proposed Wastewater Fixed and Variable Charges

Classification	Current July 1, 2017	July 1, FY 20-21	July 1, FY 21-22	July 1, FY 22-23	July 1, FY 23-24	July 1, FY 24-25
Fixed Charge (\$ per month)						
All Customers	\$61.75	\$9.50	\$9.79	\$10.08	\$10.38	\$10.69
Variable Charge (\$ per HCF)						
Single-family						
0 to 5 HCF	\$0.00	\$13.46	\$13.86	\$14.28	\$14.71	\$15.15
Over 5 HCF	12.35	13.46	13.86	14.28	14.71	15.15
Multifamily						
0 to 5 HCF	0.00	13.07	13.46	13.86	14.28	14.71
Over 5 HCF	13.05	13.07	13.46	13.86	14.28	14.71
Commercial						
0 to 5 HCF	0.00	16.41	16.90	17.41	17.93	18.47
Over 5 HCF	16.64	16.41	16.90	17.41	17.93	18.47
Hotels						
0 to 5 HCF	0.00	18.13	18.67	19.23	19.81	20.40
Over 5 HCF	16.64	18.13	18.67	19.23	19.81	20.40
Restaurants						
0 to 5 HCF	0.00	39.25	40.43	41.64	42.89	44.18
Over 5 HCF	17.78	39.25	40.43	41.64	42.89	44.18
Industrial						
0 to 5 HCF	0.00	14.98	15.43	15.89	16.37	16.86
Over 5 HCF	\$18.98	\$14.98	\$15.43	\$15.89	\$16.37	\$16.86

Wastewater Bill Impacts

The impacts to the SFR customer from the proposed wastewater rates for the July 1, 2020 rate structure is provided in Table 24 below. For an SFR customer using the average consumption of 3 hundred cubic feet (HCF) monthly, the bill will decrease from \$61.75 to \$49.88, a decrease of \$11.87 or 19.2 percent. The decrease of 19.2 percent is lower than the overall 3.0 percent revenue increase required due to the wastewater rate structure change shown in Table 23.

Table 24
Comparison of Current Single-family Residential Monthly Wastewater Bill
with Proposed Bill Using July 1, 2020 Wastewater Rates

Water Use	Current Bill			Proposed FY 20-21 Bill				
	Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
0	\$61.75	\$0.00	\$61.75	\$9.50	\$0.00	\$9.50	(\$52.25)	-84.6%
1	\$61.75	\$0.00	\$61.75	\$9.50	\$13.46	\$22.96	(\$38.79)	-62.8%
2	\$61.75	\$0.00	\$61.75	\$9.50	\$26.92	\$36.42	(\$25.33)	-41.0%
3	\$61.75	\$0.00	\$61.75	\$9.50	\$40.38	\$49.88	(\$11.87)	-19.2%
4	\$61.75	\$0.00	\$61.75	\$9.50	\$53.84	\$63.34	\$1.59	2.6%
5	\$61.75	\$0.00	\$61.75	\$9.50	\$67.30	\$76.80	\$15.05	24.4%
10	\$61.75	\$61.75	\$123.50	\$9.50	\$134.60	\$144.10	\$20.60	16.7%
15	\$61.75	\$123.50	\$185.25	\$9.50	\$201.90	\$211.40	\$26.15	14.1%
20	\$61.75	\$185.25	\$247.00	\$9.50	\$269.20	\$278.70	\$31.70	12.8%

Combined Water and Wastewater Bill

Table 25 provides a comparison of the combined water and wastewater SFR monthly bill at various levels of consumption. For an SFR customer using the average consumption of 3 hundred cubic feet (HCF) monthly, the bill will decrease from \$118.75 to \$109.91, a decrease of \$8.84 or 7.4 percent.

Table 25
Combined Single-family Residential Monthly Water and Wastewater Bill
at Current and Proposed July 1, 2020 Water and Wastewater Rates

Water Use	Current Bill			Proposed FY 20-21 Bill				
	Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Dollar Difference	Percent Change
0	\$118.75	\$0.00	\$118.75	\$57.38	\$0.00	\$57.38	(\$61.37)	-51.7%
1	\$118.75	\$0.00	\$118.75	\$57.38	\$17.51	\$74.89	(\$43.86)	-36.9%
2	\$118.75	\$0.00	\$118.75	\$57.38	\$35.02	\$92.40	(\$26.35)	-22.2%
3	\$118.75	\$0.00	\$118.75	\$57.38	\$52.53	\$109.91	(\$8.84)	-7.4%
4	\$118.75	\$0.00	\$118.75	\$57.38	\$70.04	\$127.42	\$8.67	7.3%
5	\$118.75	\$0.00	\$118.75	\$57.38	\$87.55	\$144.93	\$26.18	22.0%
10	\$118.75	\$118.75	\$237.50	\$57.38	\$213.20	\$270.58	\$33.08	13.9%
15	\$118.75	\$237.50	\$356.25	\$57.38	\$338.85	\$396.23	\$39.98	11.2%
20	\$118.75	\$356.25	\$475.00	\$57.38	\$464.50	\$521.88	\$46.88	9.9%

I appreciate the opportunity to serve the District on this matter. If there are any questions regarding the analyses, please contact me at 949-760-9454.

Very Truly Yours,

TUCKFIELD & ASSOCIATES



G. Clayton Tuckfield
 Principal Consultant
 Tuckfield & Associates

Table A-1
Historical and Projected Water Customers by Classification

Customer Class	Historical	Projected					
	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Number of Accounts							
Single Family [1]	267	272	277	283	289	295	301
Multifamily [1]	29	30	31	32	33	34	35
Commercial	58	58	58	58	58	58	58
Landscape	14	14	14	14	14	14	14
Total Accounts	368	374	380	387	394	401	408
Number of Dwelling Units							
Single Family [1]	267	272	277	283	289	295	301
Multifamily [1]	59	60	61	62	63	64	65

[1] Residential accounts/units are forecast to increase based on the assumed growth rate of 2.0% annually.

Table A-2
Historical and Projected Water Consumption (in HCF)

Description	Historical	Projected ^[1]					
	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Single Family	11,001	11,207	11,413	11,660	11,907	12,155	12,402
Multifamily	2,083	2,118	2,154	2,189	2,224	2,260	2,295
Commercial	14,887	14,887	14,887	14,887	14,887	14,887	14,887
Landscape [2]	4,054	4,054	4,054	4,054	4,054	4,054	4,054
Total Projected Consumption	32,025	32,266	32,508	32,790	33,072	33,356	33,638

[1] Forecast assumes that the use per customer from FY 18-19 and applied to the number of customers.

Table A-3
Historical and Projected Water Operation and Maintenance Expense

Description	Historical	Budget	Projected				
	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Water Operations							
Contract Labor O&M	\$51,574	\$65,000	\$66,300	\$67,626	\$68,979	\$70,359	\$71,766
Contract Labor District	23,140	27,000	27,540	28,091	28,653	29,226	29,811
Critical Spare parts	-	4,500	4,590	4,682	4,776	4,872	4,969
Engineering	-	5,000	5,100	5,202	5,306	5,412	5,520
Equipment Repairs & Maintenance	27,661	15,000	15,300	15,606	15,918	16,236	16,561
Insurance P/L	5,080	5,500	5,610	5,722	5,836	5,953	6,072
Lab Tests	337	2,000	2,040	2,081	2,123	2,165	2,208
Operating Supplies	266	5,000	5,100	5,202	5,306	5,412	5,520
Permits & Fees	3,934	4,500	4,590	4,682	4,776	4,872	4,969
All Other	8,744	10,900	11,118	11,339	11,567	11,797	12,033
Subtotal	\$120,736	\$144,400	\$147,288	\$150,233	\$153,240	\$156,304	\$159,429
State Water Supply	\$161,074	\$160,000	\$166,036	\$185,004	\$204,961	\$226,054	\$248,120
Lopez Water Supply	\$101,719	\$115,000	\$117,749	\$121,272	\$124,920	\$128,668	\$132,528
Total Water System O&M Expense	\$383,529	\$419,400	\$431,073	\$456,509	\$483,121	\$511,026	\$540,077

Appendix B-1 Historical and Projected Wastewater Customers by Classification

Customer Class	Historical		Projected				
	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Number of Accounts							
Single-family [1]	259	264	269	274	279	285	291
Multifamily [1]	28	28	29	29	30	30	31
Commercial	45	45	45	45	45	45	45
Hotels	4	4	4	4	4	4	4
Restaurants	3	3	3	3	3	3	3
Industrial	2	2	2	2	2	2	2
Port San Luis Harbor	1	1	1	1	1	1	1
Total Accounts	342	347	353	358	364	370	377
Number of Dwelling Units							
Single-family [1]	259	264	269	274	279	285	291
Multifamily [1]	59	60	61	62	63	64	65

[1] Accounts/units are forecast to increase based on the assumed growth rate of 2.0% annually.

Appendix B-2 Historical and Projected Water Consumption of Wastewater Customers (HCF)

Description	Historical		Projected ^[1]				
	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
Single-family	10,570	10,774	10,978	11,182	11,386	11,631	11,876
Multifamily	2,069	2,104	2,139	2,174	2,209	2,244	2,279
Commercial	2,633	2,633	2,633	2,633	2,633	2,633	2,633
Hotels	6,244	6,244	6,244	6,244	6,244	6,244	6,244
Restaurants	3,673	3,673	3,673	3,673	3,673	3,673	3,673
Industrial	88	88	88	88	88	88	88
Port San Luis Harbor	3,574	3,574	3,574	3,574	3,574	3,574	3,574
Total Projected Consumption	28,851	29,090	29,329	29,568	29,807	30,087	30,367

[1] Forecast based on application of FY 18-19 use per customer to the number of customers.

Appendix B-3 FY 20-21 Wastewater Units of Service [1]

Customer Class	FY 20-21 Annual Use HCF	Overall	Contributed	Strength		Strength		Equivalent	
		Return	Wastewater	BOD	SS	BOD	SS	Meters	Bills
		Factor	Volume	mg/l	mg/l	lb	lb	Eq. Mtr	Bills
Single-family	10,978	70%	7,678	200	200	9,586	9,586	4,560	3,228
Multifamily	2,139	68%	1,453	200	200	1,814	1,814	504	732
Commercial	2,633	95%	2,501	150	150	2,342	2,342	726	540
Hotels	6,244	95%	5,932	310	120	11,479	4,443	216	48
Restaurants	3,673	95%	3,489	1,000	600	21,782	13,069	120	36
Industrial	88	95%	84	130	100	68	52	30	24
Total System	25,755		21,137			47,071	31,307	6,156	4,608

[1] Port San Luis Harbor District (PSLHD) not included in totals. District has separate contract with PSLHD.