Report on Town Sewer System

Wastewater Rate Study

For:

Nipomo Community Services District

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Submitted By:

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April 2021

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April 28, 2021

Mr. Mario Iglesias
General Manager
Nipomo Community Services District
148 South Wilson Street
Nipomo, CA 93444

Dear Mr. Iglesias:

I am pleased to present this report on the Wastewater Rate Study (Study) for the Nipomo Community Services District (District) Town Sewer System. The wastewater rates presented in this report have been developed based on cost of service principles and industry methods that result in fair and equitable rates for the users of the wastewater system in accordance with Proposition 218.

The Study included a review and analysis of the Town wastewater enterprise funds, user classifications, and current rate structure. The major objectives of the Study include the following.

- Generate positive levels of income in the Study period
- Maintain 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 water and wastewater rates and charges

From the analyses, it is recommended that the District implement wastewater rates that achieve overall revenue increases of 3.8 percent annually beginning August 1, 2021 and annually July 1, 2022 through July 1, 2025 to fund future obligations of the wastewater system and meet debt coverage requirements. Tables and figures throughout the report are provided to demonstrate the calculations.

It has been a pleasure to work with District staff during the performance of this Study. If there are any questions, please contact me at (949) 760-9454.

Very Truly Yours,

TUCKFIELD & ASSOCIATES

G. Clayton Tuckfield
President/Project Consultant

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Town Sewer System Wastewater Rate Study

Nipomo Community Services District

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Executive Summary

Introduction

The Nipomo Community Services District (District) engaged Tuckfield & Associates in January of 2021 to conduct a comprehensive Wastewater Rate Study (Study) for the District's Town Wastewater System (System). The District provides wastewater collection, treatment, and disposal service to two separate service areas with independent wastewater systems. The focus of this Wastewater Rate Study (Study) is for the Town Sewer System (System).

The Town collection system consists of 10 lift stations and about 38 miles of gravity sewer pipe ranging in size from 6 to 24 inches and about 5 miles of force main ranging in size between 4 to 8 inches. The wastewater collected is treated at the District owned and operated Southland Wastewater Treatment Facility (Southland WWTF). The treatment facility was upgraded in 2014 with several improvements following a phased implementation plan of upgrades and improvements identified in the NCSD Southland WWTF Master Plan Amendment #1. Improvements related to Phase 1 have been completed and the treatment capacity provided by the plant is currently 0.9 mgd.

The current wastewater rate structure consists of fixed and variable charges to residential, non-residential. and mixed use customers. Residential customers are charged a bi-monthly fixed charge. Non-residential customers are charged a fixed bi-monthly charge by meter size and a volume charge for low, medium, or high wastewater strength of the customer using their metered water sales volume. Mixed use customers are placed into one of nine strength categories and are charged a bi-monthly fixed charge by meter size and a volume charge based on the percentage of high strength of the wastewater discharged. Wastewater rates are listed in Table ES-1.

Customers of the System are predominately residential (single-family and multi-family) representing over 98 percent of the number of accounts. Non-residential customers are separated by strength category (low, medium and high) with low-strength being the largest non-residential group. Mixed use is a new classification created within the last 5 years with customers classified by the percentage of high strength of their wastewater. The number of wastewater single-family residential (SFR) customers are projected to increase at an annual rate of 0.5 percent.

Financial Plan

A forward-looking financial plan was prepared for the wastewater enterprise that projected the revenue and revenue requirements of the System. Annual costs of the System include operation and maintenance expense (O&M), annual routine capital outlay, replacement capital, other major capital improvements, and debt service. Projected O&M expenses include the District's FY 2020-21 Budget expenses for the first year, and projection of future years' expenses through application of inflation factors while recognizing any operational changes. Appendix A presents the historical and projected O&M expense detail of the System.

An analysis was performed that compared the projected revenue using the District's current wastewater rates with projected revenue requirements (costs) of the System. The analysis indicated that the current level of revenue being received should be increased. Revenue increases of 3.8 percent annually are recommended to

adequately meet future obligations, debt coverage requirements, and financial planning criteria. The wastewater financial plan is presented in Table 7.

Proposed Wastewater Rates

The proposed wastewater rates keep the current rate structure for existing customers and are updated to reflect current cost of service. For the first rate increase August 1, 2021, wastewater rates are adjusted to bring user classifications back to cost of service levels. For future rate adjustments, the wastewater rates are increased at 3.8 percent annually, following the increases in the financial plan. Table ES-1 presents the proposed wastewater rates to System customers.

Table ES-1
Proposed Wastewater Rates

		Date of Increase				
Description	Current	Aug 1, 2021	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025
Residential Bi-monthly Fixed Charges						
Single Family	$100.87	$104.54	$108.51	$112.64	$116.92	$121.36
Multi-family	$84.14	$87.15	$90.46	$93.90	$97.47	$101.17
Non-Residential Bi-monthly Meter Charges by Size						
Up to 1 inch	$39.83	$54.88	$56.97	$59.13	$61.38	$63.71
1.5 inch	$115.63	$158.04	$164.05	$170.28	$176.75	$183.47
2 inch	$183.84	$250.88	$260.41	$270.31	$280.58	$291.24
3 inch	$343.01	$467.51	$485.28	$503.72	$522.86	$542.73
4 inch	$570.39	$776.98	$806.51	$837.15	$868.96	$901.99
6 inch	$1,138.85	$1,550.66	$1,609.58	$1,670.75	$1,734.23	$1,800.13
8 inch	$1,820.99	$2,479.07	$2,573.27	$2,671.06	$2,772.56	$2,877.91
Non-Residential Usage Rates ($ per HCF)						
Low Strength	$3.89	$3.87	$4.02	$4.17	$4.33	$4.49
Medium Strength	$4.32	$4.27	$4.43	$4.60	$4.77	$4.95
High Strength	$5.59	$5.47	$5.68	$5.89	$6.12	$6.35
Mixed Use Usage Rates ($ per HCF)						
Standard Comm with 10% High Strength	$4.08	$4.03	$4.18	$4.34	$4.51	$4.68
Standard Comm with 20% High Strength	$4.25	$4.19	$4.35	$4.51	$4.69	$4.86
Standard Comm with 30% High Strength	$4.42	$4.35	$4.52	$4.69	$4.86	$5.05
Standard Comm with 40% High Strength	$4.61	$4.51	$4.68	$4.86	$5.04	$5.24
Standard Comm with 50% High Strength	$4.78	$4.67	$4.85	$5.03	$5.22	$5.42
Standard Comm with 60% High Strength	$4.96	$4.83	$5.01	$5.20	$5.40	$5.61
Standard Comm with 70% High Strength	$5.13	$4.99	$5.18	$5.38	$5.58	$5.79
Standard Comm with 80% High Strength	$5.30	$5.15	$5.35	$5.55	$5.76	$5.98
Standard Comm with 90% High Strength	$5.48	$5.31	$5.51	$5.72	$5.94	$6.16

Customer Bill Impacts

Table ES-2 presents the impacts to residential bills for the proposed August 1, 2021 wastewater rates. The table shows that the single-family residential customer's bi-monthly bill will increase from $100.87 to $104.54, an

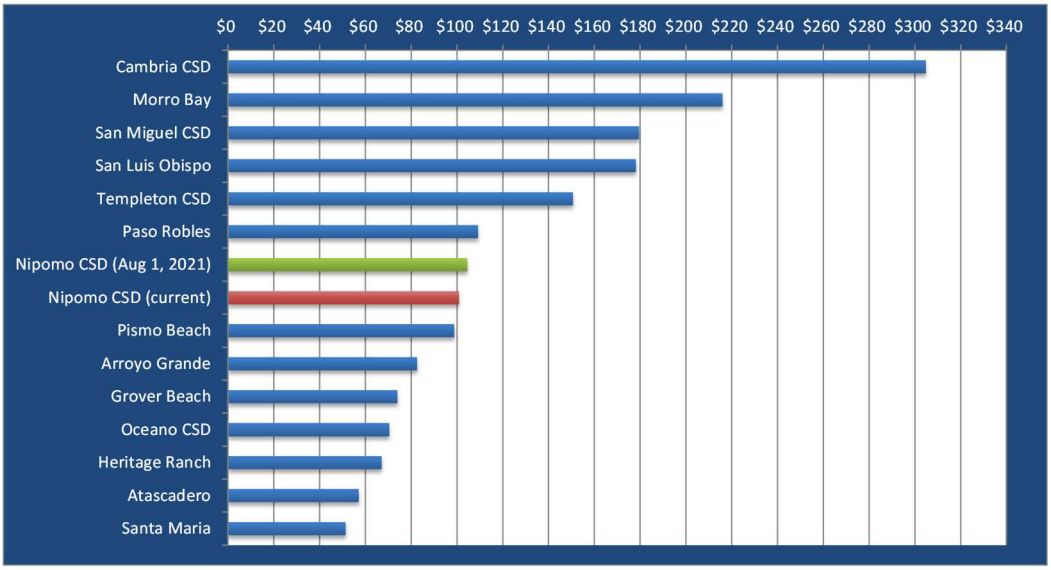
increase of $3.67, or 3.6 percent. For multi-family residential, the bi-monthly bill will increase from $84.14 to $87.15 an increase of $3.01 or 3.6 percent.

Table ES-2
Bill Impacts with Proposed Wastewater Rates

Classification	Current Bill	Aug 1, 2021 Proposed Bill	Percent Change
Residential			
Single Family	$100.87	$104.54	3.6%
Multi-family	$84.14	$87.15	3.6%

Chart ES-1 has been prepared to compare the District's SFR wastewater bill with those of other communities at the same consumption. The chart indicates that comparing the District's August 2021 charges to other communities, a SFR customer will experience a bill that is in the mid-range of the communities listed.

Chart ES-1
Comparison of Single-family Residential Bi-Monthly Wastewater Bills
For Rates in Effect February 2021



Note: Above table uses wastewater rates in effect February 2021. Chart does not include any other charges than those published on each agency's website. Arroyo Grande, Grover Beach, and Oceano CSD include wastewater treatment charge from South San Luis Obispo County Sanitation District. Arroyo Grande and Cambria CSD assume 40 HCF bi-monthly. San Luis Obispo assumes 16 HCF bi-monthly. Paso Robles assumes 14 HCF bi-monthly. NCSD's August 2021 bill is based on the wastewater service charges in Table ES-1.

Introduction

The Nipomo Community Services District (District) engaged Tuckfield & Associates in January of 2021 to conduct a comprehensive Wastewater Rate Study (Study) for the District's Town Wastewater System (System). This Study includes development of a pro forma statement of revenues and expenses of the Town wastewater enterprise, analyses to determine the cost of service of each customer class, and design of new wastewater rates and charges.

Background

The District was formed in 1965 and covers an area of approximately 4,650 acres. The District is located in the central coastal region of the state of California in San Luis Obispo County, north of Los Angeles by approximately 175 miles. The District provides wastewater service to the Town and Blacklake service areas, each served by independent wastewater systems. Revenues and revenue requirements are accounted for in enterprise funds of the District and each relies upon user charges to meet all financial obligations.

The System consists of wastewater collection, treatment, and disposal facilities to approximately 2,700 service connections. The collection system consists of 10 lift stations and about 38 miles of gravity sewer pipe ranging in size from 6 to 24 inches and about 5 miles of force main ranging in size between 4 to 8 inches. The wastewater collected is treated at the District owned and operated Southland Wastewater Treatment Facility (Southland WWTF. The treatment capacity provided by the plant is currently 0.9 mgd.

Objectives

The objectives of this Study are to (1) review the current and future financial status of the Town wastewater enterprise funds, (2) make any adjustments to the revenue being received to ensure that the financial obligations are being met now and in the future, including adequate reserves and debt service coverage, and (3) design rates that generate the required revenue while being fair and equitable for its customers. Within these broad objectives, the Study further sought to provide the following.

- Revenue sufficiency to fund operating and capital needs
- Appropriate levels of operating, capital, emergency, and rate stabilization reserves
- Cost of service allocations following appropriate standards, regulations, and guidelines
- Rates that are consistent with industry practice
- Stable revenue stream similar to existing rate structure
- Ease of understanding and administration

Scope of the Study

This Study includes the results of analyzing the wastewater enterprise funds related to the System. Historical trends were analyzed from data supplied by the District showing the number of customers, water consumption volumes, revenue, and revenue requirements.

Revenue requirements of the System include operation and maintenance expense, routine capital outlays, replacement transfers, debt service, and additions to reserves. Changing conditions such as additional facilities,

system growth, employee additions/reductions, and non-recurring maintenance expenditures are recognized. Inflation for ongoing expenditures is included to reflect cost escalation.

The financial plan and rates developed herein are based on funding of the capital improvement plan as stated as well as estimates of operation and maintenance expenses developed from information provided by the District. Deviation from the financial plans, construction cost estimates and funding requirements, major operational changes, or other financial policy changes that were not foreseen, may result in the need for lower or higher revenue than anticipated. It is suggested that the District conduct an update to the Study at least every three years for prudent rate planning.

Financial Planning

Financial planning for the wastewater enterprise includes identifying and projecting revenues and revenue requirements of the System for a five-year planning period. Estimates of revenue from various sources are compared with the projected revenue requirements. This comparison allows the review of the adequacy of existing revenue to meet annual System obligations and provide the basis for rate adjustments. New wastewater rates and charges are created to recover all of the District's annual operating and capital costs associated with the System. This section discusses District reserves, current wastewater rates, user classifications, revenues and revenue requirements, planned capital improvement expenditures and financing sources, and proposed revenue adjustments.

Assumptions

Several assumptions were used to conduct the Study for the period FY 2020-21 to FY 2025-26. The assumptions included growth rates in customer accounts, interest earnings on fund reserves, and expense inflation factors. The financial planning factors are provided in Table 1.

Table 1
Assumptions and Planning Factors

Description	Value
Residential Annual Account & Demand growth [1]	0.5%
Interest earnings on fund reserves (annual)	1.00%
Expense Escalation	
Personnel Services [annual, 2]	3.0%
Electrical Power	3.0%
Chemicals	3.0%
All Other Operations and Maintenance	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 are three percent annually.

Reserve Policy

The District's reserve policy goals provide a means to meet unanticipated reductions in revenues, meet changes in the costs of providing services, provide for fixed asset repair and replacement, natural disaster needs, and other issues. The reserves also provide guidelines to maintain the financial health and stability of the wastewater enterprise. The reserve types and the dollar amount of reserves used in this Study are discussed below.

Operating Reserve

The purpose of the Operating Reserve is to provide working capital to meet cash flow needs during normal operations and support the operation, maintenance and administration of the utility. This reserve ensures that operations can continue should there be significant events that impact cash flows. The target balance to be maintained is 180 days (50 percent) of the current annual operating expense budget.

Capital Replacement Reserve

The purpose of the Replacement Capital Reserve is to fund future replacement of assets and CIP projects. The Capital reserves are used to fund the construction of the projects as the projects progress and the funds are expended. A reserve amount equal to the ten-year average of annual CIP spending has been used for this Study.

Rate Stabilization Reserve

The purpose of the Rate Stabilization Reserve is to serve as a buffer to wastewater rates during any period where there are unexpected increases in operating costs or decreases in revenue and absorb revenue losses. The reserve may be drawn into Fund 130 to stabilize wastewater rates and may provide level increases to wastewater rates. The target reserve is established at $300,000 plus interest that has accrued on the reserves.

All of the reserves listed above are used in developing the financial plan for the wastewater enterprise. The reserve amounts as of June 30, 2020 serve as the initial cash position to meet future obligations of the financial plan.

Current Wastewater Rates

Residential customers are charged a fixed bi-monthly charge while non-residential and mixed-use customers are charged a fixed bi-monthly charge by meter size and volume charges for their respective wastewater strength classification. The current wastewater rates are presented in Table 2.

Table 2
Current Wastewater Rates

Description	Current Jan 2020
Residential Bi-monthly Fixed Charges	
Single Family	$100.87
Multi-family	$84.14
Non-Residential Bi-monthly Fixed Meter Charges by Size	
Up to 1 inch	$39.83
1 1/2	$115.63
2	$183.84
3	$343.01
4	$570.39
6	$1,138.85
8	$1,820.99
Non-Residential Usage Rates ($ per HCF)	
Low Strength	$3.89
Medium Strength	$4.32
High Strength	$5.59
Mixed Use Usage Rates ($ per HCF)	
Mixed Use - 0% High Strength	$3.89
Mixed Use - 10% High Strength	$4.08
Mixed Use - 20% High Strength	$4.25
Mixed Use - 30% High Strength	$4.42
Mixed Use - 40% High Strength	$4.61
Mixed Use - 50% High Strength	$4.78
Mixed Use - 60% High Strength	$4.96
Mixed Use - 70% High Strength	$5.13
Mixed Use - 80% High Strength	$5.30
Mixed Use - 90% High Strength	$5.48

Wastewater User Classification

Existing User Classification

The District currently classifies customers as residential, non-residential, and mixed-use. Residential is further classified as single-family residential (SFR) or multi-family residential MFR), and non-residential customers are further classified according to their discharge strength of low, medium, and high and mixed-use. Mixed use is classified into one of nine categories that reflect increasing strength of the wastewater. Table 3 shows the current number of dwelling units for SFR and MFR customers and the number of accounts for non-residential customers. For purposes of this Study, one dwelling unit is considered to be one account. The table illustrates that about 98 percent of the District's customers are residential (SFR and MFR).

Table 3
Historical and Projected Wastewater Accounts by Classification

	Historical	Estimated	Projected [1]				
Customer Class	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Residential							
Single Family [2]	2,783	2,797	2,811	2,825	2,839	2,853	2,867
Multi-family [2]	656	659	662	665	668	671	674
Non-Residential							
Commercial - Low Strength	30	30	30	30	30	30	30
Commercial - Medium Strength	8	8	8	8	8	8	8
Commercial - High Strength	11	11	11	11	11	11	11
Mixed Use							
Mixed Use - 0% High Strength	11	11	11	11	11	11	11
Mixed Use - 10% High Strength	1	1	1	1	1	1	1
Mixed Use - 20% High Strength	3	3	3	3	3	3	3
Mixed Use - 30% High Strength	2	2	2	2	2	2	2
Mixed Use - 40% High Strength	2	2	2	2	2	2	2
Mixed Use - 50% High Strength	1	1	1	1	1	1	1
Mixed Use - 60% High Strength	0	0	0	0	0	0	0
Mixed Use - 70% High Strength	1	1	1	1	1	1	1
Mixed Use - 80% High Strength	0	0	0	0	0	0	0
Mixed Use - 90% High Strength	0	0	0	0	0	0	0
Total Accounts/Dwelling Unit	3,508	3,526	3,543	3,560	3,577	3,594	3,611

[1] Accounts and dwelling units are forecast to increase based on the assumed growth rate of 0.5% annually.
[2] Number of dwelling units.

Growth Assumptions

Historical growth in the number of single-family customers between FY 2013-14 to FY 2018-19 indicates an average annual growth rate of about 0.8 percent annually with multifamily growth at about 0.4 percent. Commercial customer growth has had a growth rate of about 0.8 percent annually though has remained constant the last 3 years. Based on the review, the increase in the number of single-family and multifamily residential customers is projected at 0.5 percent annually with no increase in commercial customers.

Wastewater Financial Plan

The District accounts for the revenue and revenue requirements of the System in three funds. Fund 130 accounts for the operations of the System while Fund 710 and Fund 810 relate to capital expansion and replacement respectively.

Wastewater Revenues

The District receives operating and capital revenue from several sources. Operating revenue is received into Fund 130 from rates and charges for wastewater service, interest income, and miscellaneous sources. Capital revenue sources include sewer capacity charges received into Fund 710.

Table 4 presents the projected revenue from current wastewater rates for the System. The revenue is projected by applying the current wastewater rates from Table 3 to the projected number of dwelling units or accounts and commercial volume.

Table 4
Projected Wastewater Revenues Using Current Rates

	Forecast					
Customer Classification	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Residential						
Single Family	$1,692,800	$1,701,273	$1,709,747	$1,718,220	$1,726,693	$1,735,166
Multi-family	$332,690	$334,204	$335,719	$337,233	$338,748	$340,262
Non-Residential						
Commercial - Low Strength	67,302	67,302	67,302	67,302	67,302	67,302
Commercial - Medium Strength	20,499	20,499	20,499	20,499	20,499	20,499
Commercial - High Strength	43,051	43,051	43,051	43,051	43,051	43,051
Mixed Use						
Mixed Use - 0% High Strength	13,408	13,408	13,408	13,408	13,408	13,408
Mixed Use - 10% High Strength	2,821	2,821	2,821	2,821	2,821	2,821
Mixed Use - 20% High Strength	5,974	5,974	5,974	5,974	5,974	5,974
Mixed Use - 30% High Strength	3,607	3,607	3,607	3,607	3,607	3,607
Mixed Use - 40% High Strength	3,883	3,883	3,883	3,883	3,883	3,883
Mixed Use - 50% High Strength	21,017	21,017	21,017	21,017	21,017	21,017
Mixed Use - 60% High Strength	0	0	0	0	0	0
Mixed Use - 70% High Strength	639	639	639	639	639	639
Mixed Use - 80% High Strength	0	0	0	0	0	0
Mixed Use - 90% High Strength	0	0	0	0	0	0
Total Projected Revenue	$2,207,691	$2,217,678	$2,227,666	$2,237,653	$2,247,641	$2,257,629

Wastewater Revenue Requirements

Revenue requirements of the System include operation and maintenance expense and capital outlay, replacement capital, capital improvement program spending, and annual debt service.

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 personnel, operating, and material costs to operate and maintain the wastewater collection, treatment, and disposal facilities. Costs also include technical services, laboratory services, and other general and administrative expenses.

O&M has been projected recognizing the major expense categories of personnel services, electrical power, chemicals, and all other expenses. A review of historical expenses and expectations for future expenses indicates that annual increases of 3 percent in theses major categories are reasonable. Table 5 provides the detailed projections of future O&M expense. Appendix A-1 provides additional detail.

Table 5
Historical and Projected Operation and Maintenance Expense

	Historical	Budget	Projected				
Description	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
OPERATION AND MAINTENANCE							
Personnel Services	$579,867	$688,300	$708,800	$730,400	$752,800	$775,600	$799,200
Electricity - Pumps and Blowers	166,131	172,000	177,200	182,500	188,000	193,600	199,400
Chemicals	19,281	19,000	19,600	20,200	20,800	21,400	22,000
Lab Tests and Sampling	27,022	30,000	30,900	31,800	32,800	33,800	34,800
Operating Supplies	66,640	90,000	92,700	95,500	98,400	101,400	104,400
Outside Services	90,912	76,000	78,300	80,600	83,000	85,500	88,100
Permits and Operating Fees	14,362	12,000	12,400	12,800	13,200	13,600	14,000
Repairs and Maintenance	103,495	125,000	128,800	132,700	136,700	140,800	145,000
Other Operations and Maintenance Exp	16,789	16,500	16,900	17,300	17,700	18,100	18,500
Total O&M Expense	**$1,084,500**	**$1,228,800**	**$1,265,600**	**$1,303,800**	**$1,343,400**	**$1,383,800**	**$1,425,400**
GENERAL AND ADMINISTRATIVE							
Personnel Services	$102,866	$82,130	$84,800	$87,300	$89,800	$92,500	$95,200
Computer Expense	23,415	34,000	35,000	36,100	37,200	38,300	39,400
Newsletters and Mailers	0	680	700	700	700	700	700
Postage	5,252	5,500	5,700	5,900	6,100	6,300	6,500
Other General and Administrative	47,893	97,010	100,200	103,300	106,500	109,800	113,100
Transfers - Administration	93,972	124,359	128,100	131,900	135,900	140,000	144,200
Total G&A Expenses	**$273,398**	**$343,679**	**$354,500**	**$365,200**	**$376,200**	**$387,600**	**$399,100**
Total O&M Expenses	**$1,357,898**	**$1,572,479**	**$1,620,100**	**$1,669,000**	**$1,719,600**	**$1,771,400**	**$1,824,500**

Capital Outlay

The District provides for capital outlay annually for equipment, small hand tools, and other miscellaneous routine capital. The District budgeted capital outlay of about $25,000 in FY 2020-21. This amount is projected to be the average of the previous 5 years for FY 2021-22 and then increases by 3 percent annually.

Replacement Capital

The District provides for capital replacement annually in the amount of $395,000. This amount is spent towards capital improvements or is accumulated in Fund 810.

Wastewater Capital Improvement Program

The District has prepared a wastewater capital improvement program (CIP) spending plan for years FY 2020-21 through FY 2025-26 shown in Table 6. The CIP includes those improvements at the Southland WWTF and improvements to lift stations. All of the improvements are funded by District revenues and reserves. The Southland Sewer System Pipeline Replacement project construction is subject to funding and/or contribution in aid of construction by developer(s).

Table 6
Capital Improvement Program

Description	Budget FY 2020-21	Fiscal Year FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Current Capital Improvement Projects (CIP) [1]						
Nipomo Palms Lift Station-Fund #810	$0	$1,250,000	$0	$0	$0	$0
Southland WWTF Biosolids Dewatering-Fund #810	450,000	801,000	-	-	-	-
Southland WWTF Influent Pump Station-Fund #810	-	150,000	-	-	-	-
Manhole Rehabilitation-Fund #810	-	150,000	154,500	159,135	163,909	168,826
Southland Sewer System Pipeline Replacement [2]	-	200,000	1,600,000	-	-	-
Lift Station Pump Replacements-Fund #810	-	40,000	41,200	42,436	43,709	45,020
Lift Station Rehabilitation - Tejas Fund #810	-	-	-	-	-	250,000
Sewer System Master Plan-Fund #710	-	-	160,000	-	-	-
Southland WWTF Improvements-Fund #710	-	-	-	-	-	300,000
Southland WWTF Blower-Fund #710	300,000	-	-	-	-	-
Total	**$750,000**	**$2,591,000**	**$1,955,700**	**$201,571**	**$207,618**	**$763,846**

[1] CIP Source: FY 2020-21 Budget provided by the District.
[2] Project construction subject to funding and/or contribution in aid of construction by developer(s).

Debt Service Requirements

The District has outstanding debt related to the Series 2012 Certificates of Participation (COPs) debt issue. The COPs issued in 2012 financed upgrades to the Southland WWTF and have a term of 30 years. The 2012 COPs have an annual debt service payment of about $553,800 in FY 2020-21 and increasing to $595,000 for years thereafter. The 2012 COPs will be retired in June 2042.

Wastewater Financial Plan

A wastewater financial plan has been prepared that includes revenues and revenue requirements identified for System operations. The financial plan includes all revenue and expenses from Fund 130, Fund 135, Fund 710, and Fund 810. Additionally, the statement incorporates specific financial planning criteria to provide guidance to maintain the health of the fund on an on-going basis. The criteria include maintaining an operating reserve balance and maintaining required debt service coverage ratios required by the Series 2012 COPs debt covenants.

Proposed Revenue Adjustments

To meet the annual obligations and the financial planning criteria set for the financial plan, it is proposed that revenue be increased by 3.8 percent annually beginning August 1, 2021 and then each July 1 of the Study period. The financial plan for the System is presented in Table 7.

Table 7
Wastewater Financial Plan
Includes Fund 130, Fund 135, Fund, 710, and Fund 810

Description	Projected					
	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Proposed Rate Increase (Aug 1)		**3.8%**				
Proposed Rate Increase (July 1)			**3.8%**	**3.8%**	**3.8%**	**3.8%**
Revenues						
Sewer Revenues, Existing Rates [1]	$2,207,700	$2,217,700	$2,227,700	$2,237,700	$2,247,600	$2,257,600
Total Additional Sewer Rate Revenue	0	70,200	165,200	257,300	353,700	454,400
Interest Earnings [2]	54,800	39,100	18,000	25,200	25,700	24,000
Miscellaneous Revenues	500	500	500	500	500	500
Total Revenues	$2,263,000	$2,327,500	$2,411,400	$2,520,700	$2,627,500	$2,736,500
Revenue Requirements						
Operation and Maintenance Expense	$1,572,479	$1,620,100	$1,669,000	$1,719,600	$1,771,400	$1,824,500
Replacement Capital	395,000	395,000	395,000	395,000	395,000	395,000
Capital Outlay	25,410	29,500	30,400	31,300	32,200	33,200
Existing Debt Service [3]	553,800	595,200	594,600	596,400	597,100	596,800
Total Revenue Requirements	$2,546,689	$2,639,800	$2,689,000	$2,742,300	$2,795,700	$2,849,500
Net Funds Available Before Capital	**($283,689)**	**($312,300)**	**($277,600)**	**($221,600)**	**($168,200)**	**($113,000)**
Wastewater Capital						
Capital Sources of Funds						
Replacement Capital	$395,000	$395,000	$395,000	$395,000	$395,000	$395,000
Capacity Charges [4]	0	58,000	1,658,000	58,000	58,000	58,000
Total Uses of Funds	$395,000	$453,000	$2,053,000	$453,000	$453,000	$453,000
Capital Uses of Funds						
Capital Improvement Plan [5]	$750,000	$2,591,000	$1,955,700	$201,571	$207,618	$763,846
Total Uses of Funds	$750,000	$2,591,000	$1,955,700	$201,571	$207,618	$763,846
Net Capital Spending	($355,000)	($2,138,000)	$97,300	$251,429	$245,382	($310,846)
Net Funds Available After Capital	**($638,689)**	**($2,450,300)**	**($180,300)**	**$29,829**	**$77,182**	**($423,846)**
Available Reserves (including capital funds)						
FY beginning available cash [6]	$5,803,459	$5,164,770	$2,714,470	$2,534,170	$2,563,999	$2,641,181
Additions (reductions)	($638,689)	($2,450,300)	($180,300)	$29,829	$77,182	($423,846)
FY ending available reserves	**$5,164,770**	**$2,714,470**	**$2,534,170**	**$2,563,999**	**$2,641,181**	**$2,217,335**
Target Reserves [7]	$2,080,000	$2,100,000	$2,140,000	$2,170,000	$2,190,000	$2,230,000
Above (below) Target	$3,084,770	$614,470	$394,170	$393,999	$451,181	($12,665)
Debt Service Coverage						
Net Revenues [8]	$665,111	$735,900	$2,370,000	$827,800	$881,900	$936,800
Annual Debt Service [9]	$553,800	$595,200	$594,600	$596,400	$597,100	$596,800
Coverage	120%	124%	399%	139%	148%	157%

[1] Projected using the existing rates. Changes in rate based revenues is due to customer and demand growth.
[2] Interest earnings on the average fund balance calculated at 1.00%.
[3] Debt service on the 2012 Certificates of Participation.
[4] Assumes $1,600,000 in funding or contributions in aid of construction from developer(s) in FY 2022-23.
[5] From Table 6.
[6] The available FY 2020-21 cash balance includes Fund 130, Fund 135, Fund 710, and Fund 810.
[7] Target reserve includes Operating, Capital Replacement, and Rate Stabilization reserves.
[8] Includes capacity charge revenue and interest income on all wastewater funds less O&M and capital outlay.
[9] Includes 2012 COPs.

A graphical depiction of the financial plan is presented in Figure 1 below, expanded for a 10-year period. The figure shows that capital spending exceeds revenue in some years and there is a corresponding draw down in cash as shown in Figure 2. However, with the proposed revenue increases the cash reserves return to their target level at the end of the 10-year period.

Figure 1
Wastewater Financial Plan

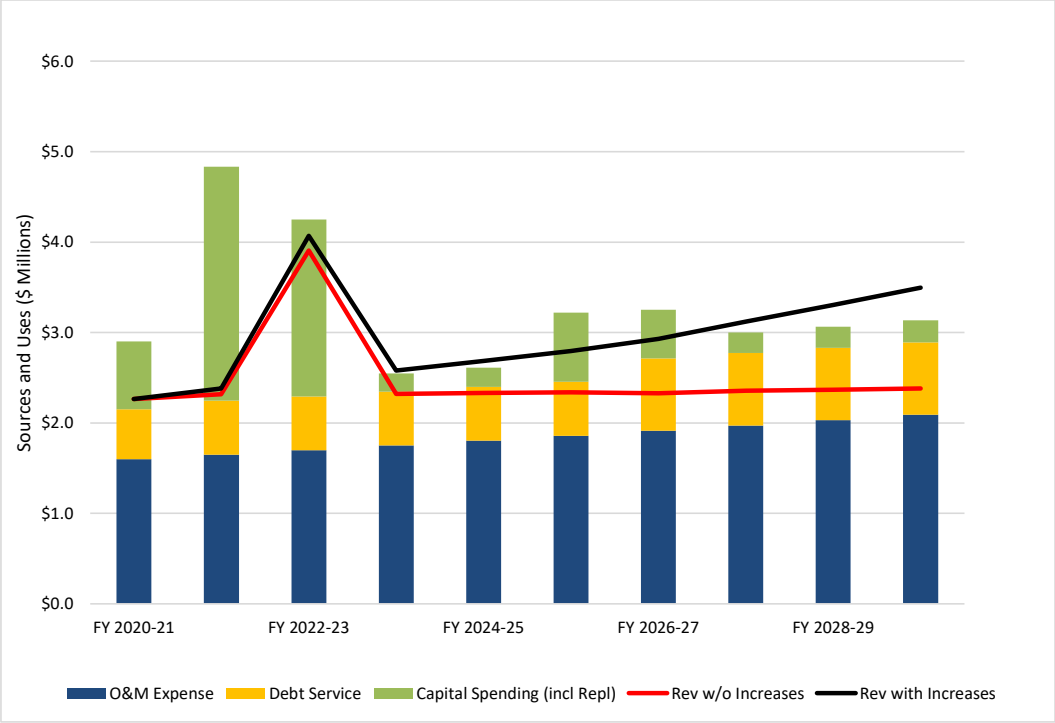
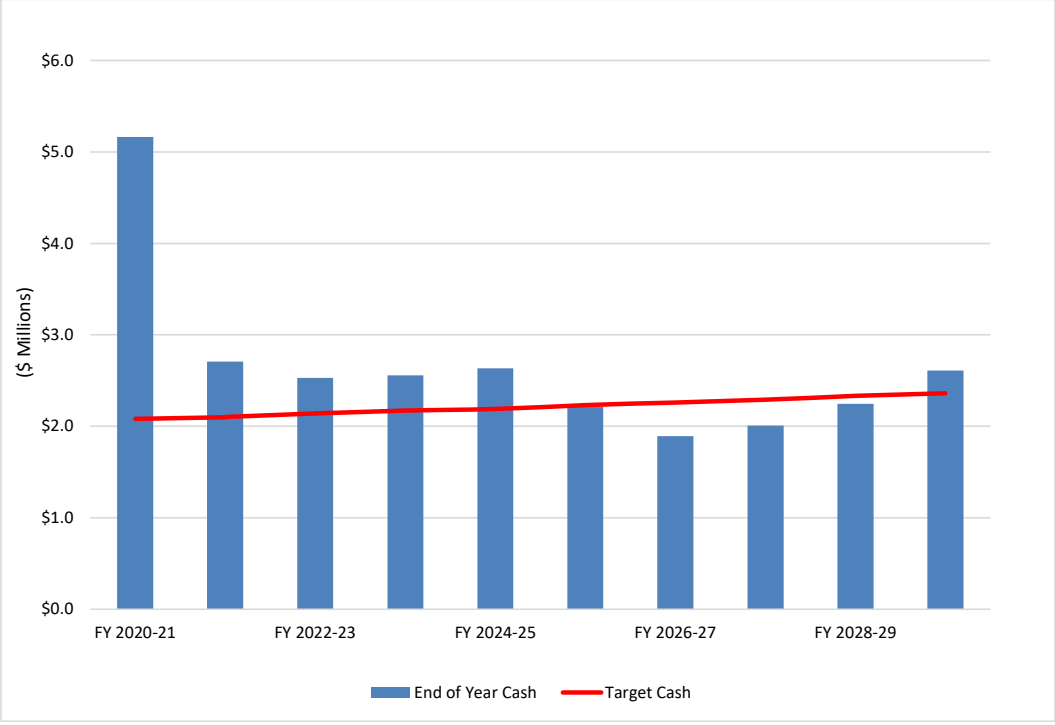


Figure 2
Wastewater Cash Reserves versus Target Reserves



Cost of Service

This section of the report discusses the allocation of the System's operating and capital costs to the users of the wastewater system. Once cost responsibility is assigned to each customer classification, the current revenue received from each classification can be compared with its cost of service to evaluate any inequities of the current rate structure and rates, which provides the basis for proposed rate adjustments.

Costs of Service to be Allocated

The annual revenue requirement for a representative year in the Study period is called the Test Year, and the annual costs for this year are defined as the cost of providing service. For this Study the Test Year is FY 2021-22, and the annual costs of the wastewater system for this year will be used to evaluate the fairness and equity of the current wastewater rates and will form the basis for the proposed rates.

The cost of service consists of O&M expense, costs associated with annual replacement, and other capital costs. To allocate the costs of providing service to the users of the wastewater system, costs need to first be allocated to wastewater parameters.

Cost Allocation to Wastewater Parameters

The cost allocation parameters for wastewater service are wastewater flow, BOD (bio-chemical oxygen demand), and SS (suspended solids), capacity, customer, and collection costs. Test Year operating and capital costs are assigned to each parameter based on the functional operation and design of the facilities.

The total cost to be recovered in FY 2021-22 from the users of the wastewater system is presented in Table 8. The annual revenue requirement for FY 2021-22 is allocated to each wastewater parameter based on the percentage of annual costs allocated to each parameter from a detailed review of expenses. The allocation of Test Year revenue requirement is used in calculating the unit costs of service. Appendix A-2 provides additional detail for the FY 21-22 total revenue requirement.

Table 8
Summary of Revenue Requirement Allocation

			Strength				
Description	Total	Flow	BOD	SS	Capacity	Customer	Collection
Revenue Requirement Allocation	100.0%	4.7%	4.5%	4.5%	48.6%	3.1%	34.5%
FY 2021-22	$2,302,000	$107,900	$104,726	$104,726	$1,119,478	$70,247	$794,923

Unit Costs of Service

Each customer classification's responsibility for a portion of cost of service is established through developing unit costs of service for each of the wastewater parameters identified above. Costs of service are then distributed to

each user classification by identifying how each group uses the wastewater system. Use of the wastewater system by each customer classification is determined by developing units of service.

The units of service for each customer classification are provided in Table 9 below. The units of service for wastewater flow were projected from an analysis of the wastewater treatment plant influent flow information for FY 2019-20. The table does not describe any responsibility for infiltration/inflow (I/I) because the AECOM Southland Wastewater Treatment Master Plan Amendment #1 found that there was no indication of significant I/I influence on the WWTF flows.

Table 9
FY 2021-22 Units of Service

Customer Class	Water Consumption	Return Factor	Contributed Volume	BOD	SS	BOD	SS	Capacity [1]	Cutomer [2]	Collection
		%	HCF	mg/l	mg/l	lbs	lbs	Eq. Meters	Eq. Bills	HCF/Day
Residential										
Single Family	688,262	27%	185,708	380	280	430,143	316,948	2,811	16,866	509
Multi-family	52,217	53%	27,720	380	280	73,548	54,193	662	3,972	76
Non-Residential										
Commercial - Low Strength	13,728	86%	11,737	380	280	27,842	20,515	60	180	32
Commercial - Medium Strength	3,892	86%	3,328	600	440	12,463	9,140	16	48	9
Commercial - High Strength	6,678	86%	5,710	1,500	770	53,463	27,444	25	66	16
Mixed Use										
Mixed Use - 0% High Strength	2,315	86%	1,979	380	280	4,695	3,460	19	66	5
Mixed Use - 10% High Strength	421	86%	360	492	329	1,106	739	5	6	1
Mixed Use - 20% High Strength	1,023	86%	875	604	378	3,298	2,064	7	18	2
Mixed Use - 30% High Strength	605	86%	517	716	427	2,312	1,379	4	12	1
Mixed Use - 40% High Strength	640	86%	547	828	476	2,828	1,626	4	12	1
Mixed Use - 50% High Strength	4,166	86%	3,562	940	525	20,901	11,673	5	6	10
Mixed Use - 60% High Strength	0	n/a	0	1,052	574	0	0	0	0	0
Mixed Use - 70% High Strength	78	86%	67	1,164	623	485	259	1	6	0
Mixed Use - 80% High Strength	0	n/a	0	1,276	672	0	0	0	0	0
Mixed Use - 90% High Strength	0	n/a	0	1,388	721	0	0	0	0	0
Total System	774,025		242,111			633,084	449,441	3,617	21,258	663

[1] Appendix A-3 provides detail on the calculation of Equivalent Meters.
[2] Number of accounts from Table 3 multiplied by 6 bills per year.

Table 10 presents the unit costs of providing service for the System. Unit costs are determined by taking the operating and capital costs allocated to each parameter from Table 8 and dividing those costs by the units of service from Table 9.

Table 10
FY 2021-22 Development of Unit Costs

Description	Total	Flow	Strength		Capacity	Customer	Collection
			BOD	SS			
Total Costs of Service	$2,302,000	$107,900	$104,726	$104,726	$1,119,478	$70,247	$794,923
Units of Service		242,111	633,084	449,441	3,617	21,258	663
Unit Costs of Service		$0.4457	$0.1654	$0.2330	$309.47	$3.30	$1,198.41
Units of Measure		HCF	lbs	lbs	Eq. Meters	Eq. Bills	HCF/Day

User Class Costs

The unit costs from Table 10 are applied to each customer classifications' flow, strength, and customer units of service from Table 9 to establish user class costs. The cost responsibility of each class is summarized in Table 11 below. A detailed cost assignment is provided in Appendix A-3.

Table 11
Comparison of FY 2021-22 Cost of Service with Projected Revenue Using Current Rates

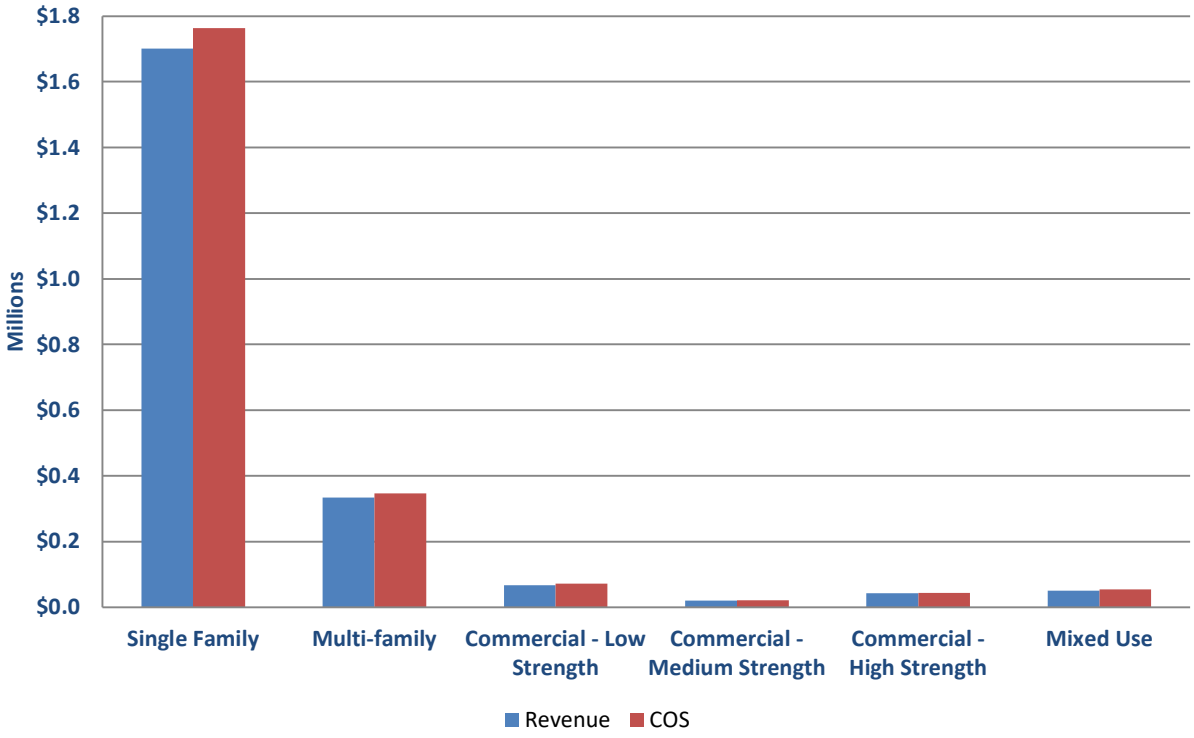
Customer Class	COS Allocation	Projected Revenue [1]	Indicated Revenue Increase	Percent Revenue Increase
Residential				
Single Family	$1,763,164	$1,701,300	$61,864	3.6%
Multi-family	$346,158	$334,200	$11,958	3.6%
Non-Residential				
Commercial - Low Strength	$72,194	$67,300	$4,894	7.3%
Commercial - Medium Strength	$21,648	$20,500	$1,148	5.6%
Commercial - High Strength	$44,361	$43,100	$1,261	2.9%
Mixed Use				
Mixed Use - 0% High Strength	$15,000	$13,400	$1,600	11.9%
Mixed Use - 10% High Strength	$3,203	$2,800	$403	14.4%
Mixed Use - 20% High Strength	$6,514	$6,000	$514	8.6%
Mixed Use - 30% High Strength	$3,910	$3,600	$310	8.6%
Mixed Use - 40% High Strength	$4,165	$3,900	$265	6.8%
Mixed Use - 50% High Strength	$20,965	$21,000	($35)	-0.2%
Mixed Use - 60% High Strength	$0	$0	$0	0.0%
Mixed Use - 70% High Strength	$719	$600	$119	19.8%
Mixed Use - 80% High Strength	$0	$0	$0	0.0%
Mixed Use - 90% High Strength	$0	$0	$0	0.0%
Total System	$2,302,000	$2,217,700	$84,300	3.8%

[1] Projected revenue using the existing rates.

From inspection of Table 11, the residential classifications have the largest assignment of costs and are responsible for about 92 percent of the total cost of service. Additionally, the table shows the overall increase in revenue required of 3.8 percent, to be derived from the user classes in varying percentages.

Figure 3 compares the current revenue received from each user class with the allocated cost of service from Table 11. As shown in the figure, residential customers dominate the responsibility for the cost of providing service. The difference in the column heights between revenue and cost of service (blue vs. red) indicates how well a user classification's current rates are recovering the cost of service.

Figure 3
Comparison of Projected Revenue Using the Current Rates with Allocated FY 2021-22 Test Year Cost of Service



Rate Design

The cost of service analyses described in the previous section provides the basis for wastewater rate design. The emphasis on the design of rates is to achieve fairness, and 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.

The inequities in the current wastewater rates, shown in Table 11, are corrected with the design of the proposed wastewater rates. This section describes how wastewater rates and charges are designed and also includes the proposed schedule of wastewater rates for implementation.

Residential Customers

The current rate structure for single-family and multi-family customers is bi-monthly flat charges. This rate structure provides a stable revenue stream for the wastewater enterprise. As noted in the cost of service analyses, the residential classes are responsible for about 92 percent of the cost of service.

The proposed wastewater rates for residential customers maintain the current rate structure and are designed as bi-monthly flat rates charged to each dwelling unit. Table 12 provides the calculations of the bi-monthly fixed

charge for the Test Year cost of service. The total cost of service of each residential class is divided by the number of projected dwelling units for FY 2021-22.

Table 12
Design of Residential Bi-monthly Fixed Charge
FY 2021-22

Customer Classification	Total Cost of Service	Number of Dwelling Units	Bi-monthly Fixed Charge
Single Family	$1,763,164	2,811	**$104.54**
Multi-family	$346,158	662	**$87.15**

Non-residential Customers

The current non-residential rate structures consists of bi-monthly fixed charges by meter size and uniform volume rates by strength category. The design of proposed non-residential wastewater rates follows similar rate setting practices as the current rate structure.

The proposed fixed charges recover the capacity and customer costs of service. Capacity costs are recovered based on the demand placed on the System from non-residential customers, which is reflected by the meter size installed at the customer location. Customer costs are recovered based on the number of bills issued. Table 13 presents the design of the proposed bi-monthly fixed charges for non-residential customers for FY 2021-22.

Non-residential volume rates are designed to recover the costs of service related to flow, BOD, SS, and collection wastewater parameters. These costs of service are recovered through a uniform volume charge unique to each strength category. The costs are divided by the projected FY 2021-22 water sales volume (billable volume) of each classification to yield a charge per hundred cubic feet ($/HCF). The volume charges increase with higher strength user classes because the cost to treat wastewater from those customers is greater due to their higher strength loadings, defined in Table 9. The design of the proposed non-residential volume rates for FY 2021-22 are presented in Table 14.

Table 13
Design of Bi-monthly Non-Residential Fixed Charges
FY 2021-22

Meter Size	Bi-monthly Capacity Charge [1]	Meter Capacity Ratio	Bi-monthly Meter Charge	Bi-monthly Customer Charge [1]	Total Bi-monthly Charge
inches					
Up to 1 inch	$51.58	1.0	$51.58	$3.30	$54.88
1.5	$51.58	3.0	$154.74	$3.30	$158.04
2.0	$51.58	4.8	$247.58	$3.30	$250.88
3.0	$51.58	9.0	$464.21	$3.30	$467.51
4.0	$51.58	15.0	$773.68	$3.30	$776.98
6.0	$51.58	30.0	$1,547.35	$3.30	$1,550.66
8.0	$51.58	48.0	$2,475.76	$3.30	$2,479.07

[1] From Table 10.

Table 14
Design of Non-Residential Volume Rates
FY 2021-22

Customer Classification	Flow, BOD SS, & Coll Costs	Billable Volume	Commodity Rate
		HCF	$/HCF
Non-Residential			
Commercial - Low Strength	$53,155	13,728	**$3.87**
Commercial - Medium Strength	$16,600	3,892	**$4.27**
Commercial - High Strength	$36,530	6,678	**$5.47**

Mixed Use Customers

All non-residential users of the System are billed based upon their proportional use of the wastewater system as measured by their metered water use and strength category as determined by the District Engineer. Where residential and commercial users share a water meter and a common sewer connection, the connection is classified as a Mixed Use customer. The Mixed Use customer has wastewater flows and strengths that are a combination of the residential and commercial customers using the common sewer. The Mixed Use rate was developed for the District in the previous rate study to better reflect the cost of serving these mixed use connections.

The wastewater from a Mixed Use customer has strengths that range from standard commercial strength (Low Strength, similar to residential strengths) to strength concentrations reflecting restaurants and bakeries (High

Strength). The Strength Factor accounts for the proportion of the commercial square footage that is occupied by a High Strength customer as a percentage of the total square footage being served by the sewer connection.

Table 15 below presents the proposed Mixed Use customer volume rates. A Mixed Use customer is charged a rate per HCF for the water consumption read through the meter plus the bi-monthly fixed charge based on the meter size.

Table 15
Mixed Use Customer Wastewater Rates FY 2021-22

Mixed Use Customer Classification (Definition)			Mixed Use Strength Factor	Mixed Use Rate per HCF of Water Use
				$/HCF
Standard Commercial with	10.0%	High Strength Square Footage	1.15	$4.03
Standard Commercial with	20.0%	High Strength Square Footage	1.30	$4.19
Standard Commercial with	30.0%	High Strength Square Footage	1.45	$4.35
Standard Commercial with	40.0%	High Strength Square Footage	1.60	$4.51
Standard Commercial with	50.0%	High Strength Square Footage	1.75	$4.67
Standard Commercial with	60.0%	High Strength Square Footage	1.90	$4.83
Standard Commercial with	70.0%	High Strength Square Footage	2.05	$4.99
Standard Commercial with	80.0%	High Strength Square Footage	2.20	$5.15
Standard Commercial with	90.0%	High Strength Square Footage	2.35	$5.31

Note: District Engineer to estimate the percentage of square footage that is occupied by the High Strength customer(s).

Example Mixed Use Commercial Calculation

An example calculation of a bi-monthly charge for a 2-inch meter Mixed Use connection is provided below.

Characteristics: Mixed Use Commercial, 2-inch meter, 100 HCF bi-monthly water consumption

Commercial Customer A - Professional Office, 3,000 sf
Commercial Customer B - Bakery, 2,000 sf
Percent High Strength = 2,000 sf / 5,000 sf = 40%
Mixed Use Bi-monthly Charge = 100 HCF * $4.51/HCF + $250.88 (2-inch meter charge) = $701.88 bi-monthly

Strength Factor

Where there are questions regarding the percentage of the commercial square footage that is occupied by a High Strength customer(s), the District Engineer may make a direct calculation of the Strength Factor and the associated Mixed Use rate. However, it is preferred that once the calculation is made that the Mixed Use customer will be assigned to a classification provided in Table 15. Table 16 below provides the method to directly perform the calculation, however the Overall Strength Factor should not be less than 1.0.

Table 16
Example Direct Calculation of Strength Factor and Mixed Use Customer Wastewater Rate FY 2021-22

Tenant Mix (Description)	Sq. Ft. Allocation	Strength Factor [1]	Assigned BOD	Assigned SS
			mg/l	mg/l
Multifamily Units	50%	1.00	**380**	**280**
Chamber of Commerce	10%	0.61	**195**	**88**
Bakery	20%	2.42	**1,500**	**660**
General Office	20%	0.61	**195**	**88**
Total Building Use	100%			
Standard Strength			380	280
Overall Strength Factor [2]		**1.17**		

	Flow	BOD	SS
Cost Allocation to Parameter [3]	34.0%	33.0%	33.0%

	Mixed Use Strength Factor	Standard Rate per HCF of Water Use	Customer Charge	Mixed Use Rate per HCF of Water Use
		$/HCF [4]	$/HCF [5]	$/HCF [6]
Mixed Use Rate	1.17	$ 1.06	$ 2.81	**$4.05**

[1] Flow % + BOD% * Assigned BOD/Standard BOD + SS% * Assigned SS/Standard SS.

[2] Weighted average of square footage allocation multiplied by Strength Factor.

[3] From Table 8 of Wastewater Rate Study for Flow, BOD, and SS only.

[4] Rate per HCF using standard BOD and SS strengths adjusted to charge on water use.

[5] Unit Customer cost from Table 10 of Wastewater Rate Study adjusted to charge on water use.

[6] Strength Factor * Standard Rate per HCF of Water Use + Customer Charge.

Proposed Wastewater Rates

Table 17 presents the proposed wastewater rates for the System for the next five years. The table presents the current rates, the cost of service rates for implementation August 1, 2021, and future rates that escalate by the percentages identified in Table 7 of 3.8 percent annually.

Table 17
Proposed Wastewater Rates

Description	Current	Date of Increase				
		Aug 1, 2021	July 1, 2022	July 1, 2023	July 1, 2024	July 1, 2025
Residential Bi-monthly Fixed Charges						
Single Family	$100.87	$104.54	$108.51	$112.64	$116.92	$121.36
Multi-family	$84.14	$87.15	$90.46	$93.90	$97.47	$101.17
Non-Residential Bi-monthly Meter Charges by Size						
Up to 1 inch	$39.83	$54.88	$56.97	$59.13	$61.38	$63.71
1.5 inch	$115.63	$158.04	$164.05	$170.28	$176.75	$183.47
2 inch	$183.84	$250.88	$260.41	$270.31	$280.58	$291.24
3 inch	$343.01	$467.51	$485.28	$503.72	$522.86	$542.73
4 inch	$570.39	$776.98	$806.51	$837.15	$868.96	$901.99
6 inch	$1,138.85	$1,550.66	$1,609.58	$1,670.75	$1,734.23	$1,800.13
8 inch	$1,820.99	$2,479.07	$2,573.27	$2,671.06	$2,772.56	$2,877.91
Non-Residential Usage Rates ($ per HCF)						
Low Strength	$3.89	$3.87	$4.02	$4.17	$4.33	$4.49
Medium Strength	$4.32	$4.27	$4.43	$4.60	$4.77	$4.95
High Strength	$5.59	$5.47	$5.68	$5.89	$6.12	$6.35
Mixed Use Usage Rates ($ per HCF)						
Standard Comm with 10% High Strength	$4.08	$4.03	$4.18	$4.34	$4.51	$4.68
Standard Comm with 20% High Strength	$4.25	$4.19	$4.35	$4.51	$4.69	$4.86
Standard Comm with 30% High Strength	$4.42	$4.35	$4.52	$4.69	$4.86	$5.05
Standard Comm with 40% High Strength	$4.61	$4.51	$4.68	$4.86	$5.04	$5.24
Standard Comm with 50% High Strength	$4.78	$4.67	$4.85	$5.03	$5.22	$5.42
Standard Comm with 60% High Strength	$4.96	$4.83	$5.01	$5.20	$5.40	$5.61
Standard Comm with 70% High Strength	$5.13	$4.99	$5.18	$5.38	$5.58	$5.79
Standard Comm with 80% High Strength	$5.30	$5.15	$5.35	$5.55	$5.76	$5.98
Standard Comm with 90% High Strength	$5.48	$5.31	$5.51	$5.72	$5.94	$6.16

Table 18 demonstrates that if the proposed rates for FY 2021-22 were applied to the projected number of dwelling units, customers, and water sales volume, that 100 percent cost recovery would be achieved.

Table 18
Comparison of FY 2021-22 Cost of Service with Revenue Using Proposed Rates

Customer Class	COS Allocation	Proposed Rates		Units of Service			Total Revenue	Percent Cost Recovery
		Fixed [1] Charge	Volume Charge	Dwelling Units	Equiv. Customer	Billable Volume		
Residential			$/HCF			HCF		
Single Family	$1,763,164	$104.54		2,811			$1,763,164	100.0%
Multi-family	$346,158	$87.15		662			$346,158	100.0%
Non-Residential								
Commercial - Low Strength	$72,194	$54.88	$3.87		346.9	13,728	$72,194	100.0%
Commercial - Medium Strength	$21,648	$54.88	$4.27		92.0	3,892	$21,648	100.0%
Commercial - High Strength	$44,361	$54.88	$5.47		142.7	6,678	$44,361	100.0%
Mixed Use								
Mixed Use - 10% High Strength	$3,203	$54.88	$4.03		27.4	421	$3,202	100.0%
Mixed Use - 20% High Strength	$6,514	$54.88	$4.19		40.6	1,023	$6,513	100.0%
Mixed Use - 30% High Strength	$3,910	$54.88	$4.35		23.3	605	$3,909	100.0%
Mixed Use - 40% High Strength	$4,165	$54.88	$4.51		23.3	640	$4,164	100.0%
Mixed Use - 50% High Strength	$20,965	$54.88	$4.67		27.4	4,166	$20,961	100.0%
Mixed Use - 60% High Strength	$0	$54.88	$4.83		0.0	0	$0	na
Mixed Use - 70% High Strength	$719	$54.88	$4.99		6.0	78	$719	100.0%
Mixed Use - 80% High Strength	$0	$54.88	$5.15		0.0	0	$0	na
Mixed Use - 90% High Strength	$0	$54.88	$5.31		0.0	0	$0	na
Total System	$2,302,000						$2,301,988	

[1] Charge is bi-monthly.

Impact Analysis

An impact analysis was performed to evaluate the change in customer bills that would occur from the implementation of the proposed August 1, 2021 wastewater rates. The impact to bills of each customer classification is provided in Table 19. For residential customers, the bills shown in Table 19 are readily identified from the schedule of proposed wastewater rates because they are flat rates. For the first increase of August 1, 2021, both the single-family customer bill and multifamily residential bi-monthly bills will increase by 3.6 percent.

The impact to non-residential bills depends upon the meter size and strength category. Using the average water consumption of each meter size, the bi-monthly bills were calculated as shown in Table 19. For the first increase of August 1, 2021, the change in non-residential customer bills range from an increase of 3.4 percent for a 1 inch meter medium-strength customer to an increase of 10.7 percent for a 3.0 inch low-strength customer. Appendix B provides additional example non-residential bill calculations at various consumption levels for 1 inch and 2 inch meter sizes, with 1 inch being the most common.

Table 19
Bill Impacts with Proposed Wastewater Rates

		Current Bill			Aug 1, 2021 Proposed Bill			
Classification	Average Bi-monthly Water Use	Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	Percent Change
Residential	HCF							
Single Family				$100.87			$104.54	3.6%
Multi-family				$84.14			$87.15	3.6%
Non-Residential - 1" Meter								
Commercial - Low Strength	50	$39.83	$194.50	$234.33	$54.88	$193.50	$248.38	6.0%
Commercial - Medium Strength	70	$39.83	$302.40	$342.23	$54.88	$298.90	$353.78	3.4%
Commercial - High Strength	35	$39.83	$195.65	$235.48	$54.88	$191.45	$246.33	4.6%
Non-Residential - 1.5" Meter								
Commercial - Low Strength	80	$115.63	$311.20	$426.83	$158.04	$309.60	$467.64	9.6%
Commercial - Medium Strength	65	$115.63	$280.80	$396.43	$158.04	$277.55	$435.59	9.9%
Commercial - High Strength	200	$115.63	$1,118.00	$1,233.63	$158.04	$1,094.00	$1,252.04	1.5%
Non-Residential - 2" Meter								
Commercial - Low Strength	170	$183.84	$661.30	$845.14	$250.88	$657.90	$908.78	7.5%
Commercial - Medium Strength	100	$183.84	$432.00	$615.84	$250.88	$427.00	$677.88	10.1%
Commercial - High Strength	200	$183.84	$1,118.00	$1,301.84	$250.88	$1,094.00	$1,344.88	3.3%
Non-Residential - 3" Meter								
Commercial - Low Strength	200	$343.01	$778.00	$1,121.01	$467.51	$774.00	$1,241.51	10.7%

Chart 1 has been prepared to compare the District's SFR wastewater bill with those of other communities at the same consumption. The chart indicates that comparing the District's August 2021 charges to other communities, a SFR customer will experience a bill that is in the mid-range of the communities listed.

Chart 1
Comparison of Single-family Residential Bi-Monthly Wastewater Bills
For Rates in Effect February 2021

Note: Above table uses wastewater rates in effect February 2021. Chart does not include any other charges than those published on each agency's website. Arroyo Grande, Grover Beach, and Oceano CSD include wastewater treatment charge from South San Luis Obispo County Sanitation District. Arroyo Grande and Cambria CSD assume 40 HCF bi-monthly. San Luis Obispo assumes 16 HCF bi-monthly. Paso Robles assumes 14 HCF bi-monthly. NCSD's August 2021 bill is based on the wastewater service charges in Table 17.

Appendix A

Technical Appendix

Detailed O&M projections and Cost of Service Allocation tables are provided in Appendix A.

Appendix A-1
Historical and Projected Operation and Maintenance Expense

Description	Historical	Budget	Projected								
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27	FY 2027-28	FY 2028-29	FY 2029-30
OPERATION AND MAINTENANCE											
Personnel Services	$579,867	$688,300	$708,800	$730,400	$752,800	$775,600	$799,200	$823,600	$848,400	$874,000	$900,000
Electricity - Pumps and Blowers	166,131	172,000	177,200	182,500	188,000	193,600	199,400	205,400	211,600	217,900	224,400
Chemicals	19,281	19,000	19,600	20,200	20,800	21,400	22,000	22,700	23,400	24,100	24,800
Lab Tests and Sampling	27,022	30,000	30,900	31,800	32,800	33,800	34,800	35,800	36,900	38,000	39,100
Operating Supplies	66,640	90,000	92,700	95,500	98,400	101,400	104,400	107,500	110,700	114,000	117,400
Outside Services	90,912	76,000	78,300	80,600	83,000	85,500	88,100	90,700	93,400	96,200	99,100
Permits and Operating Fees	14,362	12,000	12,400	12,800	13,200	13,600	14,000	14,400	14,800	15,200	15,700
Repairs and Maintenance	103,495	125,000	128,800	132,700	136,700	140,800	145,000	149,400	153,900	158,500	163,300
Other Operations and Maintenance Exp	16,789	16,500	16,900	17,300	17,700	18,100	18,500	18,900	19,500	20,100	20,700
Total O&M Expense	**$1,084,500**	**$1,228,800**	**$1,265,600**	**$1,303,800**	**$1,343,400**	**$1,383,800**	**$1,425,400**	**$1,468,400**	**$1,512,600**	**$1,558,000**	**$1,604,500**
GENERAL AND ADMINISTRATIVE											
Personnel Services	$102,866	$82,130	$84,800	$87,300	$89,800	$92,500	$95,200	$97,900	$101,000	$103,900	$107,200
Computer Expense	23,415	34,000	35,000	36,100	37,200	38,300	39,400	40,600	41,800	43,100	44,400
Newsletters and Mailers	0	680	700	700	700	700	700	700	700	700	700
Postage	5,252	5,500	5,700	5,900	6,100	6,300	6,500	6,700	6,900	7,100	7,300
Other General and Administrative	47,893	97,010	100,200	103,300	106,500	109,800	113,100	116,400	119,900	123,400	126,900
Transfers - Administration	93,972	124,359	128,100	131,900	135,900	140,000	144,200	148,500	153,000	157,600	162,300
Total G&A Expenses	**$273,398**	**$343,679**	**$354,500**	**$365,200**	**$376,200**	**$387,600**	**$399,100**	**$410,800**	**$423,300**	**$435,800**	**$448,800**
Total O&M Expenses	**$1,357,898**	**$1,572,479**	**$1,620,100**	**$1,669,000**	**$1,719,600**	**$1,771,400**	**$1,824,500**	**$1,879,200**	**$1,935,900**	**$1,993,800**	**$2,053,300**

Appendix A-2

Costs to be Recovered From Rates for FY 2021-22

Description	Total Cost
Revenue Requirements	
Operation and Maintenance Expense	$1,620,100
Replacement Capital	395,000
Existing Debt	595,200
Capital Outlay	29,500
Subtotal	$2,639,800
Less Revenue Requirements Met From Other Sources	
Interest Earnings	($39,100)
Miscellaneous Revenues	(500)
Replacement Capital	(395,000)
Capacity Charges	(58,000)
Subtotal	($492,600)
Adjustments	
Adjustments for Annual Cash Balance	($2,457,300)
Capital Improvement Funding	2,591,000
Adjustments to Annualize Rate Increase	21,100
Subtotal	$154,800
Total Costs to be Recovered	$2,302,000

Appendix A-3
Calculation of Equivalent Meters

Customer Classification	Meter Size 1	1 1/2	2	3	Total Meters	Equivalent Meters [1]
Residential						
Single Family	2,811	-	-	-	2,811	2,811.00
Multi-family	662	-	-	-	662	662.00
Non-Residential						
Commercial - Low Strength	23	3	2	2	30	59.60
Commercial - Medium Strength	5	2	1	-	8	15.80
Commercial - High Strength	6	3	2	-	11	24.60
Mixed Use						
Mixed Use - 0% High Strength	8	2	1	-	11	18.80
Mixed Use - 10% High Strength	-	-	1	-	1	4.80
Mixed Use - 20% High Strength	1	2	-	-	3	7.00
Mixed Use - 30% High Strength	1	1	-	-	2	4.00
Mixed Use - 40% High Strength	1	1	-	-	2	4.00
Mixed Use - 50% High Strength	-	-	1	-	1	4.80
Mixed Use - 60% High Strength	-	-	-	-	-	-
Mixed Use - 70% High Strength	1	-	-	-	1	1.00
Mixed Use - 80% High Strength	-	-	-	-	-	-
Mixed Use - 90% High Strength	-	-	-	-	-	-
Total Accounts/Dwelling Units	3,519	14	8	2	3,543	3,617.40
Meter Capacity Ratios	1.0	3.0	4.8	9.0		

[1] Sum of number of meters by size multiplied by respective meter size capacity ratio.

Appendix A-4
Allocation of FY 2021-22 Costs to Customer Classes

Description	Allocated Total Cost	Flow	Strength BOD	Strength SS	Capacity	Customer	Collection
Unit Costs of Service		$0.4457	$0.1654	$0.2330	$309.47	$3.30	$1,198.41
Units of Measure		HCF	lbs	lbs	Eq. Meters	Eq. Bills	HCF/Day
Residential							
Single Family							
Units of Service		185,708	430,143	316,948	2,811	16,866	509
Allocated Cost of Service	$1,763,164	$82,764	$71,155	$73,853	$869,921	$55,734	$609,737
Multi-family							
Units of Service		27,720	73,548	54,193	662	3,972	76
Allocated Cost of Service	$346,158	$12,354	$12,166	$12,628	$204,869	$13,125	$91,015
Non-Residential							
Commercial - Low Strength							
Units of Service		11,737	27,842	20,515	60	180	32
Allocated Cost of Service	$72,194	$5,231	$4,606	$4,780	$18,444	$595	$38,538
Commercial - Medium Strength							
Units of Service		3,328	12,463	9,140	16	48	9
Allocated Cost of Service	$21,648	$1,483	$2,062	$2,130	$4,890	$159	$10,926
Commercial - High Strength							
Units of Service		5,710	53,463	27,444	25	66	16
Allocated Cost of Service	$44,361	$2,545	$8,844	$6,395	$7,613	$218	$18,747
Mixed Use							
Mixed Use - 0% High Strength							
Units of Service		1,979	4,695	3,460	19	66	5
Allocated Cost of Service	$15,000	$882	$777	$806	$5,818	$218	$6,499
Mixed Use - 10% High Strength							
Units of Service		360	1,106	739	5	6	1
Allocated Cost of Service	$3,203	$160	$183	$172	$1,485	$20	$1,182
Mixed Use - 20% High Strength							
Units of Service		875	3,298	2,064	7	18	2
Allocated Cost of Service	$6,514	$390	$546	$481	$2,166	$59	$2,872
Mixed Use - 30% High Strength							
Units of Service		517	2,312	1,379	4	12	1
Allocated Cost of Service	$3,910	$231	$382	$321	$1,238	$40	$1,698
Mixed Use - 40% High Strength							
Units of Service		547	2,828	1,626	4	12	1
Allocated Cost of Service	$4,165	$244	$468	$379	$1,238	$40	$1,797
Mixed Use - 50% High Strength							
Units of Service		3,562	20,901	11,673	5	6	10
Allocated Cost of Service	$20,965	$1,587	$3,457	$2,720	$1,485	$20	$11,695
Mixed Use - 70% High Strength							
Units of Service		67	485	259	1	6	0
Allocated Cost of Service	$719	$30	$80	$60	$309	$20	$219
Total Costs of Service	$2,302,000	$107,900	$104,726	$104,726	$1,119,478	$70,247	$794,923

Appendix B

Non-residential Bill Impacts

This section provides additional calculations of Non-residential customer bills at various water volumes.

Appendix B-1
Non-Residential Customer Bill Impacts - 1" Meter

Description	Current	Aug 1, 2021	Percent Increase	July 1, 2022	Percent Increase
Low Strength with 1"meter					
25% of Avg Bill: 10 HCF	$78.73	$93.58	18.9%	$97.17	3.8%
50% of Avg Bill: 30 HCF	$156.53	$170.98	9.2%	$177.57	3.9%
Avg Bill: 50 HCF	**$234.33**	**$248.38**	**6.0%**	**$257.97**	**3.9%**
125% of Avg Bill: 60 HCF	$273.23	$287.08	5.1%	$298.17	3.9%
150% of Avg Bill: 80 HCF	$351.03	$364.48	3.8%	$378.57	3.9%
Medium Strength with 1"meter					
25% of Avg Bill: 20 HCF	$126.23	$140.28	11.1%	$145.57	3.8%
50% of Avg Bill: 40 HCF	$212.63	$225.68	6.1%	$234.17	3.8%
Avg Bill: 70 HCF	**$342.23**	**$353.78**	**3.4%**	**$367.07**	**3.8%**
125% of Avg Bill: 90 HCF	$428.63	$439.18	2.5%	$455.67	3.8%
150% of Avg Bill: 110 HCF	$515.03	$524.58	1.9%	$544.27	3.8%
High Strength with 1"meter					
25% of Avg Bill: 10 HCF	$95.73	$109.58	14.5%	$113.77	3.8%
50% of Avg Bill: 20 HCF	$151.63	$164.28	8.3%	$170.57	3.8%
Avg Bill: 35 HCF	**$235.48**	**$246.33**	**4.6%**	**$255.77**	**3.8%**
125% of Avg Bill: 40 HCF	$263.43	$273.68	3.9%	$284.17	3.8%
150% of Avg Bill: 50 HCF	$319.33	$328.38	2.8%	$340.97	3.8%

Appendix B-2
Non-Residential Customer Bill Impacts - 2" Meter

Description	Current	Aug 1, 2021	Percent Increase	July 1, 2022	Percent Increase
Low Strength with 2"meter					
25% of Avg Bill: 40 HCF	$339.44	$405.68	19.5%	$421.18	3.8%
50% of Avg Bill: 90 HCF	$533.94	$599.18	12.2%	$622.14	3.8%
Avg Bill: 170 HCF	**$845.14**	**$908.78**	**7.5%**	**$943.67**	**3.8%**
125% of Avg Bill: 210 HCF	$1,000.74	$1,063.58	6.3%	$1,104.43	3.8%
150% of Avg Bill: 260 HCF	$1,195.24	$1,257.08	5.2%	$1,305.39	3.8%
Medium Strength with 2"meter					
25% of Avg Bill: 30 HCF	$313.44	$378.98	20.9%	$393.31	3.8%
50% of Avg Bill: 50 HCF	$399.84	$464.38	16.1%	$481.91	3.8%
Avg Bill: 100 HCF	**$615.84**	**$677.88**	**10.1%**	**$703.41**	**3.8%**
125% of Avg Bill: 130 HCF	$745.44	$805.98	8.1%	$836.31	3.8%
150% of Avg Bill: 150 HCF	$831.84	$891.38	7.2%	$924.91	3.8%
High Strength with 2"meter					
25% of Avg Bill: 50 HCF	$463.34	$524.38	13.2%	$544.41	3.8%
50% of Avg Bill: 100 HCF	$742.84	$797.88	7.4%	$828.41	3.8%
Avg Bill: 200 HCF	**$1,301.84**	**$1,344.88**	**3.3%**	**$1,396.41**	**3.8%**
125% of Avg Bill: 250 HCF	$1,581.34	$1,618.38	2.3%	$1,680.41	3.8%
150% of Avg Bill: 300 HCF	$1,860.84	$1,891.88	1.7%	$1,964.41	3.8%