



Nipomo Community Services District

Report on Town Sewer System

Wastewater Rate Study

For:

Nipomo Community Services District

148 South Wilson Street
Nipomo, CA 93444
(805) 929-1133

Submitted By:

Tuckfield & Associates

2549 Eastbluff Dr, #450B
Newport Beach, CA 92660
(949) 760-9454

www.tuckfieldassociates.com

FINANCIAL CONSULTING
**TUCKFIELD &
ASSOCIATES**
MANAGEMENT CONSULTING

August 2015

[This Page Intentionally Left Blank for Two-sided Printing]

Tuckfield & Associates

2549 Eastbluff Drive, Suite 450B, Newport Beach, CA 92660
Phone (949) 760-9454 Fax (949) 760-2725
Email ctuckfield@tuckfieldassociates.com

August 29, 2015

Mr. Michael LeBrun
General Manager
Nipomo Community Services District
148 South Wilson Street
Nipomo, CA 93444

Dear Mr. LeBrun:

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.

The Study included a review and analysis of the Town wastewater enterprise funds, user classifications, and current rate structure. From the analyses, it is recommended that the District implement wastewater rates that achieve overall revenue increases of 3.5 percent annually on each January 1 of FY 2015-16 through FY 2019-20 to fund future obligations of the wastewater system and meet debt coverage requirements.

For the first increase, wastewater rates have been priced to bring the user classifications back to cost of service to ensure equitable rates. After this, wastewater rates increase at 3.5 percent as determined in the financial plan. 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

A handwritten signature in black ink, appearing to read "G. Clayton Tuckfield". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

G. Clayton Tuckfield
President/Project Consultant

[This Page Intentionally Left Blank for Two-sided Printing]

Town Sewer System
Wastewater Rate Study
NIPOMO COMMUNITY SERVICES DISTRICT

Table of Contents

	<u>Page</u>
Executive Summary	1
System Background.....	1
Financial Plan	1
Proposed Wastewater Rates	2
Customer Bill Impacts	2
Introduction.....	4
Background	4
Objectives	4
Scope of Study	5
Information Used in the Study.....	5
Financial Planning.....	6
Existing Wastewater Rates	6
Wastewater User Classification	7
Existing User Classification.....	7
Growth Assumptions.....	7
Wastewater Financial Plan	7
Wastewater Revenues.....	8
Wastewater Obligations.....	8
Operation and Maintenance Expense.....	8
Wastewater Capital Improvement Program	9
Debt Service Requirements.....	9

Town Sewer System
Wastewater Rate Study
NIPOMO COMMUNITY SERVICES DISTRICT

Table of Contents (continued)

	<u>Page</u>
Wastewater Financial Plan	10
Reserves	10
Proposed Revenue Adjustments	10
Cost of Service	13
Costs of Service to be Allocated	13
Cost Allocation to Wastewater Parameters.....	13
Unit Costs of Service	13
User Class Costs	14
Rate Design.....	16
Residential Customers.....	16
Non-residential Customers	17
Mixed Use Customers	18
Strength Factor	20
Proposed Wastewater Rates	21
Impact Analysis	22

List of Tables

Table ES-1	Proposed Wastewater Rates.....	2
Table ES-2	Bill Impacts with Proposed Wastewater Rates	3
Table 1	Historical and Current Bi-monthly Wastewater Rates.....	6
Table 2	Projected Wastewater Revenue Using Existing Rates	8
Table 3	Capital Improvement Program with Sources and Uses of Funds	10

Town Sewer System
Wastewater Rate Study
NIPOMO COMMUNITY SERVICES DISTRICT

Table of Contents (continued)

	<u>Page</u>
Table 4	Wastewater Financial Plan 11
Table 5	Summary of Revenue Requirement Allocation 13
Table 6	FY 2015-16 Units of Service 14
Table 7	Development of Unit Costs 14
Table 8	Comparison of FY 2015-16 Cost of Service with Projected Revenue Using Current Rates 15
Table 9	Design of Residential Bi-monthly Fixed Charge 17
Table 10	Design of Bi-monthly Non-residential Fixed Charges 18
Table 11	Design of Non-residential Volume Rates 18
Table 12	Mixed Use Customer Wastewater Rates FY 2015-16 19
Table 13	Example Direct Calculation of Strength Factor and Mixed Use Customer Wastewater Rate FY 2015-16 20
Table 14	Proposed Wastewater Rates 21
Table 15	Comparison of FY 2015-16 Cost of Service with Revenue Using Proposed Rates 22
Table 16	Bill Impacts with Proposed Wastewater Rates 23

List of Figures

Figure 1	FY 2013-14 Number of Customers by Classification 7
Figure 2	FY 2015-16 Projected Town Sewer System O&M 9
Figure 3	Wastewater Financial Plan 12
Figure 4	Comparison of Projected Revenue Using Current Rates with Allocated FY 2015-16 Cost of Service 16

Town Sewer System
Wastewater Rate Study
NIPOMO COMMUNITY SERVICES DISTRICT

Table of Contents (continued)

Page

List of Appendices

Appendix A	Detailed O&M Projection and Cost of Service Allocations	24
Appendix B	Non-residential Customer Bills	27
Appendix C	Finance & Audit Committee Rates Option	30

Executive Summary

System Background

The Nipomo Community Services District (District) provides wastewater collection, treatment, and disposal service to two separate service areas with independent wastewater systems. The independent systems are known as the Town Sewer System and the Blacklake Sewer System. 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 35 miles of gravity sewer pipe ranging in size from 6 to 24 inches and 3 miles of force main ranging in size between 4 to 8 inches. The wastewater collected is treated at the Southland Wastewater Treatment Facility (Southland WWTF). The Southland WWTF has recently been upgraded and has a capacity of 0.9 mgd.

The current wastewater rate structure consists of fixed bi-monthly charges to Residential customers. Non-residential customers are charged a fixed bi-monthly charge by meter size and a volume charge for wastewater strength based on their metered water sales volume.

Customers of the System are predominately Residential (single-family and multi-family) representing over 97 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. Future wastewater customers are projected to grow at annual rate of 0.5 percent.

Financial Plan

The revenue and revenue requirements of the System were identified and projected to create a forward looking financial plan of the wastewater enterprise. Annual costs of the System include operation and maintenance expense (O&M), fixed asset purchases, transfer for annual capital replacement, and debt service. O&M expenses include the District's FY 2015-16 Budget expenses for the first year, then projecting future years' expenses through application of inflation factors and recognizing employee additions and other operational changes. Appendix A presents the historical and projected O&M expense detail of the System.

While the District has prepared a five-year capital improvement program (CIP) spending plan, the expenditures are paid from Fund 810 (replacement fund) and Fund 710 (capacity fund). Therefore, there is no impact to Fund 130, System operations, other than the consistent annual capital replacement transfer out of Fund 130 to Fund 810.

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 is not sufficient to meet future obligations of the System during the Study period. Revenue increases of 3.5 percent annually are recommended to adequately meet future obligations, debt coverage requirements, and financial planning criteria. The wastewater financial plan is presented in Table 4.

Proposed Wastewater Rates

The proposed wastewater rates keep the current rate structure for existing customers and are updated to reflect current cost of service. In addition, a new customer group is proposed classified as Mixed Use. A discussion of the Mixed Use classification can be found on page 19.

For the first rate increase January 1, 2016, wastewater rates are adjusted to bring user classifications back to cost of service levels. For future rate adjustments, the wastewater rates are increased at 3.5 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

		Forecast [1]				
Description	Current	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Residential Fixed Charges						
Single Family	\$88.32	\$89.19	\$92.31	\$95.54	\$98.89	\$102.35
Multi-family	\$67.33	\$74.39	\$77.00	\$79.69	\$82.48	\$85.37
Non-Residential Meter Charges						
Up to 1 inch	\$34.07	\$35.22	\$36.45	\$37.73	\$39.05	\$40.41
1.5	\$98.59	\$102.24	\$105.82	\$109.52	\$113.35	\$117.32
2	\$156.66	\$162.55	\$168.24	\$174.13	\$180.23	\$186.53
3	\$292.16	\$303.29	\$313.91	\$324.89	\$336.26	\$348.03
4	\$485.72	\$504.34	\$522.00	\$540.27	\$559.18	\$578.75
6	\$969.64	\$1,006.98	\$1,042.22	\$1,078.70	\$1,116.45	\$1,155.53
8	\$1,550.34	\$1,610.14	\$1,666.49	\$1,724.82	\$1,785.19	\$1,847.67
Non-Residential Usage Rates (\$ per HCF)						
Low Strength	\$2.89	\$3.44	\$3.56	\$3.69	\$3.82	\$3.95
Medium Strength	\$3.20	\$3.82	\$3.96	\$4.09	\$4.24	\$4.39
High Strength	\$4.14	\$4.95	\$5.12	\$5.30	\$5.48	\$5.68
Mixed Use Usage Rates (\$ per HCF)						
Standard Comm with 10% High Strength		\$3.61	\$3.74	\$3.87	\$4.00	\$4.14
Standard Comm with 20% High Strength		\$3.76	\$3.89	\$4.03	\$4.17	\$4.31
Standard Comm with 30% High Strength		\$3.92	\$4.06	\$4.20	\$4.35	\$4.50
Standard Comm with 40% High Strength		\$4.07	\$4.21	\$4.36	\$4.51	\$4.67
Standard Comm with 50% High Strength		\$4.22	\$4.37	\$4.52	\$4.68	\$4.84
Standard Comm with 60% High Strength		\$4.38	\$4.53	\$4.69	\$4.86	\$5.03
Standard Comm with 70% High Strength		\$4.53	\$4.69	\$4.85	\$5.02	\$5.20
Standard Comm with 80% High Strength		\$4.69	\$4.85	\$5.02	\$5.20	\$5.38
Standard Comm with 90% High Strength		\$4.84	\$5.01	\$5.18	\$5.37	\$5.55

[1] Rates effective Jan 1 of fiscal year.

Customer Bill Impacts

Table ES-2 presents the impacts to Residential bills for the proposed January 1, 2016 wastewater rates. The table shows that the single-family residential customer's bill will increase from \$88.32 to \$89.19, an increase of \$0.87,

or 1.0 percent. For multi-family residential, the bill will increase from \$67.33 to \$74.39, an increase of \$7.06 or 10.5 percent.

Table ES-2
Bill Impacts with Proposed Wastewater Rates

Classification	Current Bill	Jan 1, 2016	Percent Change
		Proposed Bill	
Single Family	\$88.32	\$89.19	1.0%
Multi-family	\$67.33	\$74.39	10.5%

Introduction

The Nipomo Community Services District (District) engaged Tuckfield & Associates in April of 2015 to conduct a comprehensive Wastewater Rate Study (Study). The District's wastewater facilities include two independent wastewater systems; one system serving the Town area and the other serving the Blacklake community known as the Town Sewer System and the Blacklake Sewer System respectively. The focus of this Study is for the wastewater system identified as the Town Sewer 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 obligations of each wastewater system are accounted in separate 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 35 miles of gravity sewer pipe ranging in size from 6 to 24 inches and 3 miles of force main ranging in size between 4 to 8 inches.

Wastewater treatment is provided by the District's Southland Wastewater Treatment Facility (Southland WWTF). The treatment facility has recently been upgraded with several improvements following a phased implementation plan of upgrades and improvements identified in the NCSO 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 last rate study for the System was conducted in 2007. Since the last study, the District has upgraded the Southland WWTF and constructed a 24 inch trunk sewer along Frontage Road. The Southland WWTF upgrades were financed with a \$9,795,000 2012 Series Certificates of Participation (COPs) debt issue whereas the trunk sewer was financed from District funds.

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, and emergency 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.

Information Used in the Study

The information used in the Study includes the following.

1. Wastewater system accounts, meter sizes, and water sales volumes of wastewater customers from the District's billing information system.
2. Historical wastewater expenses and FY 2015-16 Budget revenues, expenses, and capital spending from District documents.
3. Southland WWTF influent flow and strength information for the last five years provided by the District.
4. Current wastewater rates obtained from resolutions of the District.
5. Outstanding debt service schedules of the System provided by the District.
6. Meter capacity ratios to establish Non-residential wastewater bi-monthly fixed charges from previous System rate studies.

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 the current wastewater rates, user classifications, revenues and revenue requirements, planned capital improvement expenditures and financing sources, and proposed revenue adjustments.

Existing Wastewater Rates

The current wastewater rates consist of fixed and variable charges to Residential and Non-residential customer groups. Residential customers are charged a fixed bi-monthly charge while Non-residential customers are charged a fixed bi-monthly charges by meter size and volume charges for their wastewater strength classification. The historical and current water rates are presented in Table 1.

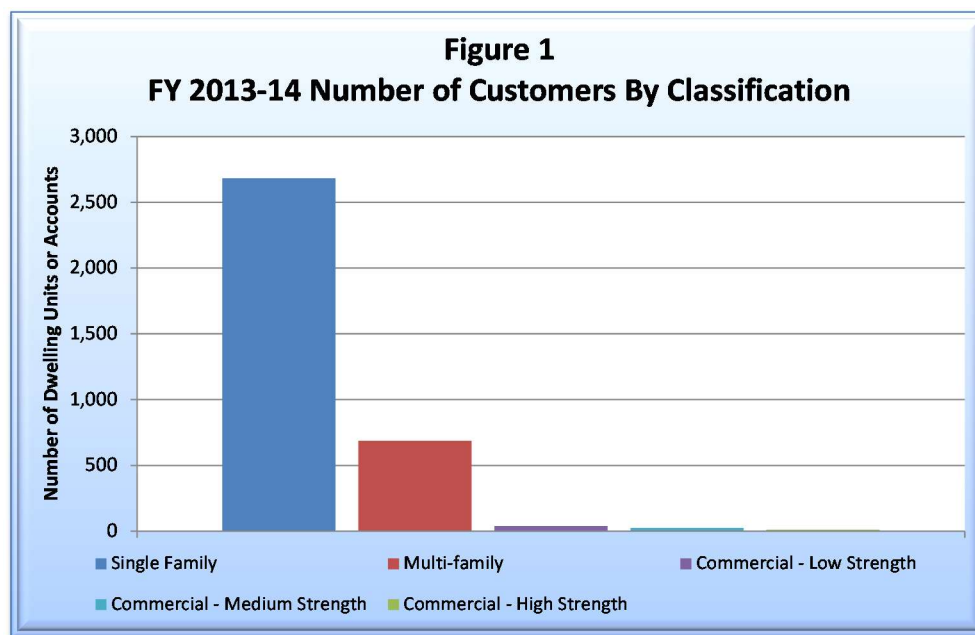
Table 1
Historical and Current Bi-monthly Wastewater Rates

Description	Jan 2007	April 2008	Jan 2009	Current Jan 2010
Residential Fixed Charges				
Single Family	\$45.00	\$56.53	\$70.66	\$88.32
Multi-family	\$34.80	\$43.09	\$53.86	\$67.33
Non-Residential Fixed Charges				
Up to 1 inch	\$17.39	\$21.80	\$27.25	\$34.07
1 1/2	\$49.77	\$63.10	\$78.87	\$98.59
2	\$78.95	\$100.26	\$125.33	\$156.66
3	\$147.09	\$186.98	\$233.73	\$292.16
4	\$244.41	\$310.86	\$388.58	\$485.72
6	\$487.50	\$620.57	\$775.71	\$969.64
8	\$779.32	\$992.22	\$1,240.27	\$1,550.34
Non-Residential Usage Rates (\$ per HCF)				
Low Strength	\$1.32	\$1.85	\$2.31	\$2.89
Medium Strength	\$1.46	\$2.05	\$2.56	\$3.20
High Strength	\$1.89	\$2.65	\$3.31	\$4.14

Wastewater User Classification

Existing User Classification

The District currently classifies customers as Residential and Non-residential. Residential is further classified as single-family or multi-family and Non-residential customers are further classified according to their discharge strength of low, medium, and high. Figure 1 shows the current number of customers by classification and also illustrates that Residential customers account for more than 97 percent of the total customers served by the System.



Growth Assumptions

Historical growth in the number of single-family customers between FY 2009-10 to FY 2013-14 indicates an overall growth rate of about 1 percent annually, with a similar growth rate occurring in the number of multi-family dwelling units. Commercial customer growth has been confined to the low-strength classification, reflecting a growth rate of about 0.5 percent annually. Based on the review, the increase in the number of Residential and Non-residential customer is projected a 0.5 percent annually to provide a conservative approach.

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 2 presents the projected revenue from current wastewater rates for the System. The revenue is projected by applying the current wastewater rates from Table 1 to the projected number of dwelling units or accounts and commercial volume.

Table 2
Projected Wastewater Revenues Using Existing Rates

Line		Forecast				
No.	Customer Classification	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	Residential					
1	Single Family	\$1,435,023	\$1,442,442	\$1,449,861	\$1,457,280	\$1,464,699
2	Multi-family	\$279,958	\$281,170	\$282,382	\$283,594	\$285,210
	Non-Residential					
3	Commercial - Low Strength	63,549	63,549	63,549	63,549	63,549
4	Commercial - Medium Strength	43,986	43,986	43,986	43,986	43,986
5	Commercial - High Strength	25,301	25,301	25,301	25,301	25,301
6	Total Projected Revenue	\$1,847,817	\$1,856,448	\$1,865,079	\$1,873,710	\$1,882,745

Wastewater Obligations

Revenue requirements of the System include operation and maintenance expense, Transfer to Fund 810 for replacement, and annual debt service.

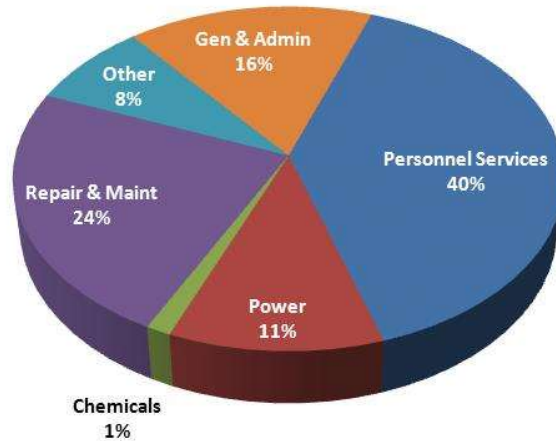
Operation and Maintenance Expense

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 cost 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 these major categories are reasonable. Appendix A provides the detailed projections of future O&M expense.

Figure 2 shows the percentage breakdown of O&M expense from each expense category for FY 2015-16.

Figure 2
FY 2015-16 Projected Town Sewer System O&M



Wastewater Capital Improvement Program

The District has prepared a wastewater capital improvement program (CIP) spending plan for years FY 2015-16 through FY 2019-20 shown in Table 3. The CIP includes those improvements that are related to System expansion and others that replace or rehabilitate existing System assets. The Sewer Collection System Master Plan and the Division Street sewer line are partially related to System expansion, and are funded 25% from Fund 710 (capacity) and 75% from Fund 810 (replacement). The Southland WWTF improvement and the Prohibition Zone Sewer Extensions are both funded 100% from Fund 710.

Debt Service Requirements

The District has outstanding debt related to the System from two State Revolving Fund (SRF) loans issued in 2000 and in 2001, and a Series 2012 Certificates of Participation (COPs) debt issue. The SRF loans have terms of 20 years and the proceeds were used to finance certain treatment plant facilities necessary in those years. The COPs issued in 2012 financed upgrades to the Southland WWTF.

Annual debt service for the 2000 and 2001 SRF loans includes \$34,868 and \$42,180, respectively. The debt service for both SRF loans is paid from Fund 710. The 2012 COPs have an annual debt service payment that varies around \$517,000 with a term of 30 years and a retirement date in June 2042. Debt service on the 2012 COPs is an obligation of the System; however the debt service is currently paid by a transfer from Fund 880 to Fund 130 equal to the required payment. Fund 880 will be depleted in FY 2017-18 and Fund 130 will then be required to meet future payment obligations.

Table 3
Capital Improvement Program With Sources and Uses of Funds

Line		Budget	Forecast			
No.	Description	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Current Capital Improvement Projects (CIP) [1]						
1	Manhole Rehabilitation	\$90,000	\$90,000	\$90,000	\$90,000	\$0
2	Lift Station Rehabilitation	100,000	100,000	100,000	100,000	-
3	Prohibition Zone Sewer Extensions	-	-	50,000	-	-
4	Division Street, Beverly to Frontage	-	-	390,000	-	-
5	Southland WWTF Improvement	100,000	-	-	-	-
6	Sewer Collection System Master Plan	-	200,000	-	-	-
7	Diffuser Replacement	-	-	-	-	150,000
8	Proposed Asset Replacement Projects [2]	-	-	-	-	190,000
9	Total	\$290,000	\$390,000	\$630,000	\$190,000	\$340,000
Sources and Uses of Capital Funds						
10	Transfer In from Fund 810	\$190,000	\$340,000	\$482,500	\$190,000	\$340,000
11	Transfer In from Fund 710	100,000	50,000	147,500	-	-
12	Capital Improvement Expansion Projects	(100,000)	(50,000)	(147,500)	-	-
13	Replacement Project Expenditures	(\$190,000)	(\$340,000)	(\$482,500)	(\$190,000)	(\$340,000)
14	Sources Less Uses	\$0	\$0	\$0	\$0	\$0

[1] CIP Source: FY 2015-16 Budget provided by the District.

[2] Assumed annual replacement equal to 5-year average.

Wastewater Financial Plan

A pro forma flow of funds statement has been prepared that includes revenues and revenue requirements that were identified for System operations (Fund 130). 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 includes maintaining an operating reserve balance, making an on-going replacement transfer, and maintaining required debt service coverage ratios required by the SRF loans and the Series 2012 COPs debt covenants.

Reserves

The target amount to be maintained as an operating reserve is expressed as a percentage, or as the number of days of operation and maintenance expense (O&M) of the enterprise. The District's policy is to maintain an operating reserve of 180 days of annual O&M expense. The operating reserve target should assist the District to maintain quality credit ratings from credit rating agencies which have provided better credit ratings to those agencies that have such reserve targets in light of recent economic conditions.

Proposed Revenue Adjustments

The pro forma statement for the System is presented in Table 4. To meet the annual obligations and the financial planning criteria set for the financial plan, it is proposed that revenue be increased by 3.5 percent annually each January 1 of the Study period beginning January 1, 2016.

Table 4
Wastewater Financial Plan
Projected Sources and Uses of Funds

Line				Forecast				
No.	Description			FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Sources of Funds								
1	Sewer Revenues, Existing Rates [1]			\$1,847,800	\$1,856,400	\$1,865,100	\$1,873,700	\$1,882,700
	Additional Sewer Rate Revenue							
	Annualized							
	Revenue	Date of						
	Increase	Increase	Fiscal Year					
2	3.5%	Jan 1	FY 2015-16	\$32,300	\$65,000	\$65,300	\$65,600	\$65,900
3	3.5%	Jan 1	FY 2016-17		\$33,600	\$67,600	\$67,900	\$68,200
4	3.5%	Jan 1	FY 2017-18			\$35,000	\$70,300	\$70,600
5	3.5%	Jan 1	FY 2018-19				\$36,400	\$73,100
6	3.5%	Jan 1	FY 2019-20					\$37,800
7	Total Additional Sewer Rate Revenue			\$32,300	\$98,600	\$167,900	\$240,200	\$315,600
8	Interest Earnings [2]			\$2,800	\$4,000	\$4,700	\$4,500	\$4,100
9	Transfer In from Fund 880 [3]			\$517,000	\$517,500	\$198,500	\$0	\$0
10	Miscellaneous Revenues			\$500	\$500	\$500	\$500	\$500
11	Total Sources of Funds			\$2,400,400	\$2,477,000	\$2,236,700	\$2,118,900	\$2,202,900
Uses of Funds								
12	Operation and Maintenance Expense			\$1,225,600	\$1,172,000	\$1,262,900	\$1,300,500	\$1,339,900
13	Replacement Capital Transfer to Fund 810			\$395,000	\$395,000	\$395,000	\$395,000	\$395,000
14	Capital Outlay			\$157,700	\$29,500	\$30,400	\$31,300	\$32,200
15	Existing Debt Service [4]			\$517,000	\$517,500	\$517,600	\$517,400	\$520,800
16	Total Uses of Funds			\$2,295,300	\$2,114,000	\$2,205,900	\$2,244,200	\$2,287,900
17	Additions (reductions) to cash			\$105,100	\$363,000	\$30,800	(\$125,300)	(\$85,000)
Available Reserves (including capital funds)								
18	FY beginning available cash [5]			\$850,000	\$955,100	\$1,318,100	\$1,348,900	\$1,223,600
19	Additions (reductions)			\$105,100	\$363,000	\$30,800	(\$125,300)	(\$85,000)
20	FY ending available reserves			\$955,100	\$1,318,100	\$1,348,900	\$1,223,600	\$1,138,600
21	Target Reserves [6]			\$690,000	\$600,000	\$650,000	\$670,000	\$690,000
22	Above (below) Target			\$265,100	\$718,100	\$698,900	\$553,600	\$448,600
Debt Service Coverage								
23	Net Revenues [7]			\$1,310,960	\$1,057,302	\$843,802	\$886,002	\$930,302
24	Annual Debt Service [8]			\$594,049	\$594,549	\$594,649	\$594,449	\$597,849
25	Coverage			221%	178%	142%	149%	156%

[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 0.35%.

[3] Sinking fund transfer from Fund 880 used to pay for 2012 COPs until the funds are depleted.

[4] Debt service on the 2012 Certificates of Participation only.

[5] The available FY 2015-16 cash balance from the current District Budget.

[6] Target reserve estimated at 180 days of annual O&M expense including capital outlay.

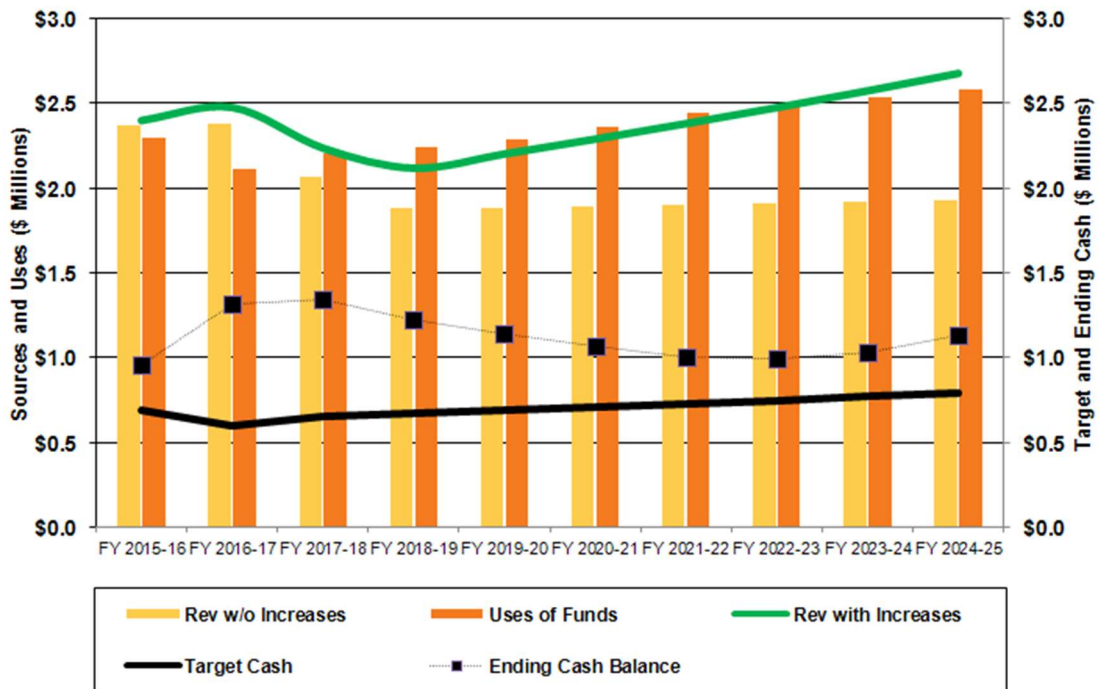
[7] Includes capacity charges and interest income on all wastewater funds less O&M and capital outlay.

[8] Includes 2012 COPs and SRF debt service paid from Fund 710 - Sewer Capacity Fund.

A graphical depiction of the financial plan is presented in Figure 3 below, expanded for a 10-year period. The figure shows that current revenues (without increases) are sufficient initially to meet annual obligations due to

the transfer from Fund 880 to pay for the 2012 COPs debt service. However, once the funds from Fund 880 are depleted, the 3.5 percent revenue increases are required to meet the obligations of the fund. With the revenue increases, the fund meets the planning criteria near the end of the 10-year period.

Figure 3
Wastewater Financial Plan



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 ultimately 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 2015-16, 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 2015-16 from the users of the wastewater system is presented in Table 5. The annual revenue requirement for FY 2015-16 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.

Table 5
Summary of Revenue Requirement Allocation

Line No.	Description	Total	Flow	Strength		Capacity	Customer	Collection
				BOD	SS			
1	Revenue Requirement Allocation	100.0%	5.9%	5.7%	5.7%	37.3%	1.9%	43.5%
	<u>Annual Revenue Requirement</u>							
2	FY 2015-16	\$1,912,500	\$113,095	\$109,770	\$109,770	\$712,614	\$35,642	\$831,608

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 6 below. The units of service for wastewater flow were projected from an analysis of the wastewater treatment plant influent flow information for FY 2013-14. 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 6
FY 2015-16 Units of Service

Line		Water	Return	Contributed	Strength						
No.	Customer Class	Consumption	Factor	Volume	BOD	SS	BOD	SS	Capacity	Customer	Collection
		HCF	%	HCF	mg/l	mg/l	lbs	lbs	Eq. Meters	Eq. Bills	HCF/Day
	Residential										
1	Single Family	439,950	49%	217,048	410	410	555,507	555,507	2,708	16,248	595
2	Multi-family	52,782	76%	40,318	410	410	103,188	103,188	693	4,158	110
	Non-Residential										
3	Commercial - Low Strength	16,739	85%	14,268	410	410	36,516	36,516	76	234	39
4	Commercial - Medium Strength	10,676	85%	9,100	660	660	37,491	37,491	49	144	25
5	Commercial - High Strength	5,253	85%	4,477	1,650	1,160	46,118	32,422	18	60	12
6	Total System	525,400		285,211			778,819	765,124	3,544	20,844	781

Table 7 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 5 and dividing those costs by the units of service from Table 6.

Table 7
FY 2015-16 Development of Unit Costs

Line No.	Description	Total	Flow	Strength		Capacity	Customer	Collection
				BOD	SS			
1	Total Cost of Service	\$1,912,500	\$113,095	\$109,770	\$109,770	\$712,614	\$35,642	\$831,608
2	Units of Service		285,211	778,819	765,124	3,544	20,844	781
3	Unit Costs of Service		\$0.3965	\$0.1409	\$0.1435	\$201.05	\$1.71	\$1,064.25
	Units of Measure		HCF	lbs	lbs	Eq. Meters	Eq. Bills	HCF/Day

User Class Costs

The unit costs from Table 7 are applied to each customer classifications' flow, strength, and customer units of service from Table 6 to establish user class costs. The cost responsibility of each class is summarized in Table 8 below, with detailed cost assignment provided in Appendix A.

Table 8
Comparison of FY 2015-16 Cost of Service with
Projected Revenue Using Current Rates

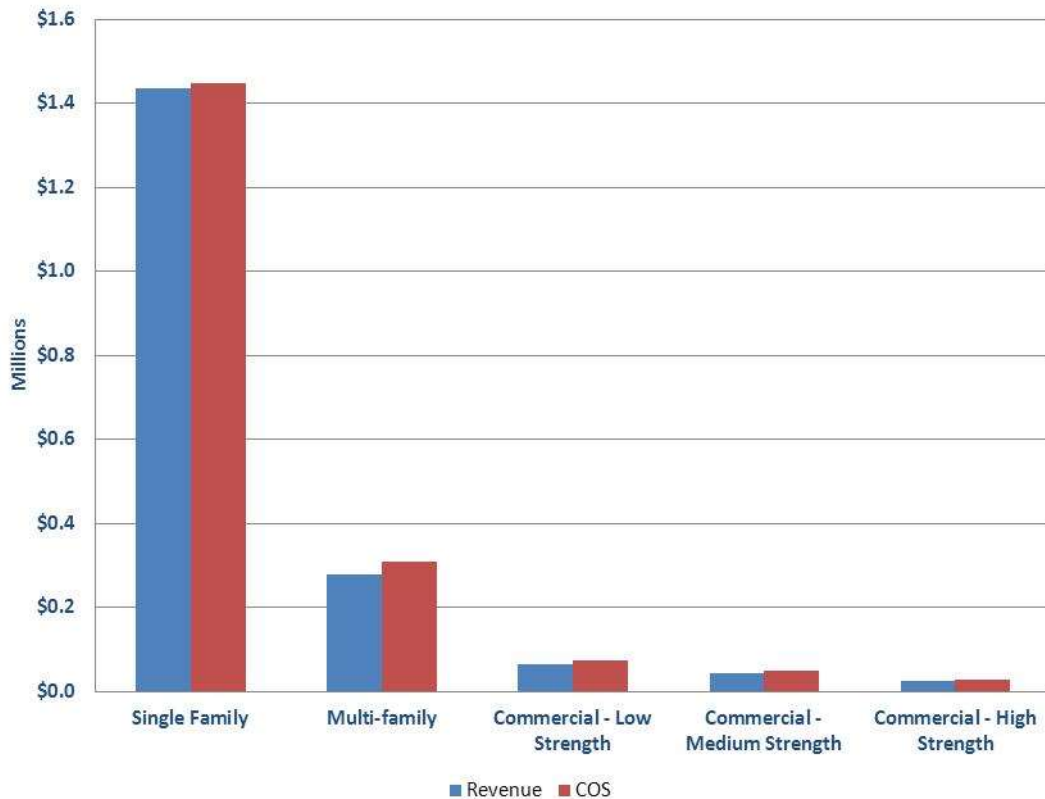
Line No.	Customer Class	COS Allocation	Projected Revenue ^[1]	Indicated Revenue Increase	Percent Revenue Increase
Residential					
1	Single Family	\$1,449,157	\$1,435,000	\$14,157	1.0%
2	Multi-family	\$309,332	\$280,000	\$29,332	10.5%
Non-Residential					
3	Commercial - Low Strength	\$73,365	\$63,500	\$9,865	15.5%
4	Commercial - Medium Strength	\$50,983	\$44,000	\$6,983	15.9%
5	Commercial - High Strength	\$29,664	\$25,300	\$4,364	17.2%
6	Total System	\$1,912,500	\$1,847,800	\$64,700	3.5%

^[1] Projected revenue using the existing rates.

From inspection of Table 8, the Residential classifications have the largest assignment of costs and are responsible for 92 percent of the total cost of service. Additionally, the table shows the overall increase in revenue required of 3.5 percent, to be derived from the user classes in varying percentages.

Figure 4 compares the current revenue received from each user class with the allocated cost of service from Table 8. 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 4
Comparison of Projected Revenue Using the Current Rates
with Allocated FY 2015-16 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 8, 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 utility at a time when water sales and discharge volumes are uncertain for the District. 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 9 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 2015-16.

Table 9
Design of Residential Bi-monthly Fixed Charge
FY 2015-16

Customer Classification	Total Cost of Service	Number of Dwelling Units	Bi-monthly Fixed Charge
Single Family	\$1,449,157	2,708	\$89.19
Multi-family	\$309,332	693	\$74.39

Non-residential Customers

The current Non-residential rate structure 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 10 below presents the design of the proposed bi-monthly fixed charges for Non-residential customers for FY 2015-16.

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 2015-16 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 6. The design of the proposed Non-residential volume rates for FY 2015-16 are presented in Table 11.

Table 10
Design of Bi-monthly Non-Residential Fixed Charges
 FY 2015-16

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	\$33.51	1.0	\$33.51	\$1.71	\$35.22
1.5	\$33.51	3.0	\$100.53	\$1.71	\$102.24
2.0	\$33.51	4.8	\$160.84	\$1.71	\$162.55
3.0	\$33.51	9.0	\$301.58	\$1.71	\$303.29
4.0	\$33.51	15.0	\$502.63	\$1.71	\$504.34
6.0	\$33.51	30.0	\$1,005.27	\$1.71	\$1,006.98
8.0	\$33.51	48.0	\$1,608.43	\$1.71	\$1,610.14

^[1] From Table 7.

Table 11
Design of Non-Residential Volume Rates
 FY 2015-16

Customer Classification	Flow, BOD SS, & Coll Costs	Billable Volume HCF	Commodity Rate \$/HCF
Commercial - Low Strength	\$57,645	16,739	\$3.44
Commercial - Medium Strength	\$40,804	10,676	\$3.82
Commercial - High Strength	\$25,982	5,253	\$4.95

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, a new wastewater user category is proposed where 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. To better reflect the cost of serving these mixed use connections, a Mixed Use rate has been developed for implementation by the District.

The wastewater from a Mixed Use customer will have strengths that could range from standard commercial strength (Low Strength, similar to residential strengths) to strength concentrations reflecting restaurants and bakeries (High Strength). A Strength Factor is proposed to account 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 12 below presents the proposed Mixed Use customer volume rates. A Mixed Use customer will be charged the rate per HCF for the water consumption read through the meter plus the bi-monthly fixed charge based on the meter size.

Table 12
Mixed Use Customer Wastewater Rates FY 2015-16

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	1.16	\$3.61
Standard Commercial with	20.0%	High Strength Square Footage	1.32	\$3.76
Standard Commercial with	30.0%	High Strength Square Footage	1.48	\$3.92
Standard Commercial with	40.0%	High Strength Square Footage	1.64	\$4.07
Standard Commercial with	50.0%	High Strength Square Footage	1.80	\$4.22
Standard Commercial with	60.0%	High Strength Square Footage	1.96	\$4.38
Standard Commercial with	70.0%	High Strength Square Footage	2.12	\$4.53
Standard Commercial with	80.0%	High Strength Square Footage	2.28	\$4.69
Standard Commercial with	90.0%	High Strength Square Footage	2.44	\$4.84

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 * \$4.07/HCF + \$162.55 (2-inch meter charge)

= \$569.55 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 12. Table 13 below provides the method to directly perform the calculation, however the Overall Strength Factor should not be less than 1.0.

Table 13
Example Direct Calculation of Strength Factor and
Mixed Use Customer Wastewater Rate FY 2015-16

Tenant Mix (Description)	Sq. Ft. Allocation	Strength Factor ^[1]	Assigned BOD mg/l	Assigned SS mg/l
Multifamily Units	50%	1.00	410	410
Chamber of Commerce	10%	0.62	215	132
Bakery	20%	2.46	1,650	990
General Office	20%	0.62	215	132
Total Building Use	100%			
Standard Strength			410	410
Overall Strength Factor ^[2]		1.18		
Cost Allocation to Parameter [3]		Flow	BOD	SS
		34.0%	33.0%	33.0%
	Mixed Use Strength Factor	Standard Rate per HCF of Water Use \$/HCF [4]	Customer Charge \$/HCF [5]	Mixed Use Rate per HCF of Water Use \$/HCF [6]
Mixed Use Rate	1.18	\$ 0.96	\$ 2.49	\$3.63

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

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

[3] From Table 5 of Wastewater Rate Study.

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

[5] Unit Customer cost from Table 7 of Wastewater Rate Study adjusted to charge on water use.

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

Currently the District has a single Mixed Use customer. However, more such customer types are expected to be connecting to the System in the future.

Proposed Wastewater Rates

Table 14 presents the proposed wastewater rates for the System for the next five years. The table presents the current rates, the costs of service rates for implementation January 1, 2016, and future rates that escalate from FY 2015-16 by the percentages identified in Table 4 of 3.5 percent annually.

Table 14
Proposed Wastewater Rates

		Forecast [1]				
Description	Current	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Residential Fixed Charges						
Single Family	\$88.32	\$89.19	\$92.31	\$95.54	\$98.89	\$102.35
Multi-family	\$67.33	\$74.39	\$77.00	\$79.69	\$82.48	\$85.37
Non-Residential Meter Charges						
Up to 1 inch	\$34.07	\$35.22	\$36.45	\$37.73	\$39.05	\$40.41
1.5	\$98.59	\$102.24	\$105.82	\$109.52	\$113.35	\$117.32
2	\$156.66	\$162.55	\$168.24	\$174.13	\$180.23	\$186.53
3	\$292.16	\$303.29	\$313.91	\$324.89	\$336.26	\$348.03
4	\$485.72	\$504.34	\$522.00	\$540.27	\$559.18	\$578.75
6	\$969.64	\$1,006.98	\$1,042.22	\$1,078.70	\$1,116.45	\$1,155.53
8	\$1,550.34	\$1,610.14	\$1,666.49	\$1,724.82	\$1,785.19	\$1,847.67
Non-Residential Usage Rates (\$ per HCF)						
Low Strength	\$2.89	\$3.44	\$3.56	\$3.69	\$3.82	\$3.95
Medium Strength	\$3.20	\$3.82	\$3.96	\$4.09	\$4.24	\$4.39
High Strength	\$4.14	\$4.95	\$5.12	\$5.30	\$5.48	\$5.68
Mixed Use Usage Rates (\$ per HCF)						
Standard Comm with 10% High Strength		\$3.61	\$3.74	\$3.87	\$4.00	\$4.14
Standard Comm with 20% High Strength		\$3.76	\$3.89	\$4.03	\$4.17	\$4.31
Standard Comm with 30% High Strength		\$3.92	\$4.06	\$4.20	\$4.35	\$4.50
Standard Comm with 40% High Strength		\$4.07	\$4.21	\$4.36	\$4.51	\$4.67
Standard Comm with 50% High Strength		\$4.22	\$4.37	\$4.52	\$4.68	\$4.84
Standard Comm with 60% High Strength		\$4.38	\$4.53	\$4.69	\$4.86	\$5.03
Standard Comm with 70% High Strength		\$4.53	\$4.69	\$4.85	\$5.02	\$5.20
Standard Comm with 80% High Strength		\$4.69	\$4.85	\$5.02	\$5.20	\$5.38
Standard Comm with 90% High Strength		\$4.84	\$5.01	\$5.18	\$5.37	\$5.55

[1] Rates effective Jan 1 of fiscal year.

Table 15 demonstrates that if the proposed rates for FY 2015-16 were applied to the projected number of dwelling units, customers, and water sales volume, that 100 percent cost recovery would be achieved.

Table 15

Comparison of FY 2015-16 Cost of Service with Revenue Using Proposed Rates

Line No.	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				
1	Single Family	\$1,449,157	\$89.19		2,708			\$1,449,157	100.0%
2	Multi-family	\$309,332	\$74.39		693			\$309,332	100.0%
	Non-Residential								
3	Commercial - Low Strength	\$73,365	\$35.22	\$3.44		446.4	16,739	\$73,365	100.0%
4	Commercial - Medium Strength	\$50,983	\$35.22	\$3.82		289.0	10,676	\$50,983	100.0%
5	Commercial - High Strength	\$29,664	\$35.22	\$4.95		104.5	5,253	\$29,664	100.0%
6	Total System	\$1,912,500							

^[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 January 1, 2016 wastewater rates. The impact to bills of each customer classification is provided in Table 16. For Residential customers, the bills shown in Table 16 are also readily identified from the schedule of proposed wastewater rates because they are flat rates. For the first increase of January 1, 2016, the single-family customer bill will increase by 1.0 percent whereas the multi-family customer bill will increase by 10.5 percent. Bills increase at 3.5 percent after the first increase.

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 16. For the first increase of January 1, 2016, the change in Non-residential customer bills range from an increase of 14.0 percent for a 3 inch meter low-strength customer to an increase of 17.8 percent for a 1.5 inch high-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 16
Bill Impacts with Proposed Wastewater Rates

Classification	Average Bi-monthly Water Use	Current Bill			Jan 1 FY 2015-16 Proposed Bill			Percent Change
		Service Charge	Volume Charge	Current Bill	Service Charge	Volume Charge	Proposed Bill	
Residential	HCF							
Single Family				\$88.32			\$89.19	1.0%
Multi-family				\$67.33			\$74.39	10.5%
Non-Residential - 1" Meter								
Commercial - Low Strength	50	\$34.07	\$144.50	\$178.57	\$35.22	\$172.19	\$207.41	16.1%
Commercial - Medium Strength	70	\$34.07	\$224.00	\$258.07	\$35.22	\$267.54	\$302.76	17.3%
Commercial - High Strength	35	\$34.07	\$144.90	\$178.97	\$35.22	\$173.12	\$208.34	16.4%
Non-Residential - 1.5" Meter								
Commercial - Low Strength	80	\$98.59	\$231.20	\$329.79	\$102.24	\$275.50	\$377.74	14.5%
Commercial - Medium Strength	65	\$98.59	\$208.00	\$306.59	\$102.24	\$248.43	\$350.67	14.4%
Commercial - High Strength	200	\$98.59	\$828.00	\$926.59	\$102.24	\$989.24	\$1,091.47	17.8%
Non-Residential - 2" Meter								
Commercial - Low Strength	170	\$156.66	\$491.30	\$647.96	\$162.55	\$585.44	\$747.99	15.4%
Commercial - Medium Strength	100	\$156.66	\$320.00	\$476.66	\$162.55	\$382.21	\$544.76	14.3%
Commercial - High Strength	200	\$156.66	\$828.00	\$984.66	\$162.55	\$989.24	\$1,151.79	17.0%
Non-Residential - 3" Meter								
Commercial - Low Strength	200	\$292.16	\$578.00	\$870.16	\$303.29	\$688.75	\$992.04	14.0%

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, Replacement and Capital Outlay

Description	Historical				Estimated	Budget	Forecast			
	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
OPERATION AND MAINTENANCE										
Personnel Services [1]	\$133,531	\$140,860	\$148,543	\$223,313	\$303,500	\$403,400	\$427,700	\$496,400	\$511,200	\$526,800
Electricity - Pumps and Blowers	125,160	128,616	100,177	131,872	124,500	130,000	133,900	137,900	142,000	146,300
Chemicals	\$5,523	\$7,958	\$8,977	\$0	\$3,000	\$15,000	\$15,500	\$16,000	\$16,500	\$17,000
Lab Tests and Sampling	29,840	36,527	32,899	34,948	32,000	35,000	36,100	37,200	38,300	39,400
Operating Supplies	\$25,129	\$21,565	\$15,741	\$18,231	\$35,000	\$40,000	\$41,200	\$42,400	\$43,700	\$45,000
Outside Services	1,279	1,497	2,128	26,694	60,000	33,000	34,000	35,000	36,100	37,200
Permits and Operating Fees	\$5,468	\$12,015	\$9,044	\$10,342	\$13,000	\$13,000	\$13,400	\$13,800	\$14,200	\$14,600
Repairs and Maintenance	84,859	68,198	53,052	42,234	40,000	275,000	180,300	185,700	191,300	197,000
Other Operations and Maintenance Exp	\$48,766	\$46,484	\$39,899	\$27,023	\$26,900	\$31,470	\$32,600	\$33,700	\$34,800	\$35,900
Total O&M Expense	\$459,555	\$463,720	\$410,460	\$514,657	\$637,900	\$975,870	\$914,700	\$998,100	\$1,028,100	\$1,059,200
GENERAL AND ADMINISTRATIVE										
Personnel Services	\$141,559	\$150,296	\$148,816	\$89,261	\$57,765	\$58,175	\$59,900	\$61,700	\$63,400	\$65,600
Computer Expense	11,742	10,062	13,354	15,834	13,000	15,300	15,800	16,300	16,800	17,300
Newsletters and Mailers	\$0	\$0	\$1,215	\$623	\$1,000	\$2,520	\$2,600	\$2,700	\$2,800	\$2,900
Postage	4,768	5,281	5,875	6,783	6,700	6,870	7,100	7,300	7,500	7,700
Public Notices	\$0	\$0	\$825	\$92	\$0	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000
Other General and Administrative	35,256	34,940	30,340	31,934	64,411	64,395	66,300	68,100	70,000	72,000
Transfers - Administration	\$90,005	\$92,814	\$80,644	\$86,265	\$78,949	\$101,513	\$104,600	\$107,700	\$110,900	\$114,200
Total G&A Expenses	\$283,330	\$293,393	\$281,069	\$230,792	\$221,825	\$249,773	\$257,300	\$264,800	\$272,400	\$280,700
Total O&M Expenses	\$742,885	\$757,113	\$691,529	\$745,449	\$859,725	\$1,225,643	\$1,172,000	\$1,262,900	\$1,300,500	\$1,339,900
Replacement Capital Transfer to Fund 810	383,500	395,000	395,000	395,000	395,000	395,000	395,000	395,000	395,000	395,000
Capital Outlay	0	0	22,666	32,500	33,200	157,700	29,500	30,400	31,300	32,200
Total O&M and Capital Expenses	\$1,126,385	\$1,152,113	\$1,109,195	\$1,172,949	\$1,287,925	\$1,778,343	\$1,596,500	\$1,688,300	\$1,726,800	\$1,767,100

[1] Includes a Utility Worker upgrade to Utility Operator in FY 2016-17 and a new Utility Worker in FY 2017-18.

Appendix A-2

Allocation of FY 2015-16 Costs to Customer Classes

Line No.	Description	Allocated Total Cost	Flow	Strength		Capacity	Customer	Collection
				BOD	SS			
1	Unit Costs of Service Units of Measure		\$0.3965 HCF	\$0.1409 lbs	\$0.1435 lbs	\$201.05 Eq. Meters	\$1.71 Eq. Bills	\$1,064.25 HCF/Day
	Single Family							
2	Units of Service		217,048	555,507	555,507	2,708	16,248	595
3	Allocated Cost of Service	\$1,449,157	\$86,067	\$78,296	\$79,697	\$544,453	\$27,783	\$632,862
	Multi-family							
4	Units of Service		40,318	103,188	103,188	693	4,158	110
5	Allocated Cost of Service	\$309,332	\$15,987	\$14,544	\$14,804	\$139,330	\$7,110	\$117,557
	Commercial - Low Strength							
6	Units of Service		14,268	36,516	36,516	76	234	39
7	Allocated Cost of Service	\$73,365	\$5,658	\$5,147	\$5,239	\$15,320	\$400	\$41,601
	Commercial - Medium Strength							
8	Units of Service		9,100	37,491	37,491	49	144	25
9	Allocated Cost of Service	\$50,983	\$3,608	\$5,284	\$5,379	\$9,932	\$246	\$26,533
	Commercial - High Strength							
10	Units of Service		4,477	46,118	32,422	18	60	12
11	Allocated Cost of Service	\$29,664	\$1,775	\$6,500	\$4,652	\$3,579	\$103	\$13,055
12	Total Costs of Service	\$1,912,500	\$113,095	\$109,770	\$109,770	\$712,614	\$35,642	\$831,608

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	Jan 1 FY 2015-16	Percent Increase	Jan 1 FY 2016-17	Percent Increase
Low Strength with 1"meter					
25% of Avg Bill: 10 HCF	\$62.97	\$69.66	10.6%	\$72.09	3.5%
50% of Avg Bill: 30 HCF	\$120.77	\$138.53	14.7%	\$143.38	3.5%
Avg Bill: 50 HCF	\$178.57	\$207.41	16.1%	\$214.66	3.5%
125% of Avg Bill: 60 HCF	\$207.47	\$241.84	16.6%	\$250.31	3.5%
150% of Avg Bill: 80 HCF	\$265.27	\$310.72	17.1%	\$321.59	3.5%
Medium Strength with 1"meter					
25% of Avg Bill: 20 HCF	\$98.07	\$111.66	13.9%	\$115.57	3.5%
50% of Avg Bill: 40 HCF	\$162.07	\$188.10	16.1%	\$194.68	3.5%
Avg Bill: 70 HCF	\$258.07	\$302.76	17.3%	\$313.36	3.5%
125% of Avg Bill: 90 HCF	\$322.07	\$379.20	17.7%	\$392.48	3.5%
150% of Avg Bill: 110 HCF	\$386.07	\$455.65	18.0%	\$471.59	3.5%
High Strength with 1"meter					
25% of Avg Bill: 10 HCF	\$75.47	\$84.68	12.2%	\$87.64	3.5%
50% of Avg Bill: 20 HCF	\$116.87	\$134.14	14.8%	\$138.84	3.5%
Avg Bill: 35 HCF	\$178.97	\$208.34	16.4%	\$215.63	3.5%
125% of Avg Bill: 40 HCF	\$199.67	\$233.07	16.7%	\$241.22	3.5%
150% of Avg Bill: 50 HCF	\$241.07	\$282.53	17.2%	\$292.42	3.5%

a. New rates effective Jan 1 of fiscal year.

Appendix B-2

Non-Residential Customer Bill Impacts - 2" Meter

Description	Current	Jan 1 FY 2015-16	Percent Increase	Jan 1 FY 2016-17	Percent Increase
Low Strength with 2"meter					
25% of Avg Bill: 40 HCF	\$272.26	\$300.30	10.3%	\$310.81	3.5%
50% of Avg Bill: 90 HCF	\$416.76	\$472.49	13.4%	\$489.03	3.5%
Avg Bill: 170 HCF	\$647.96	\$747.99	15.4%	\$774.17	3.5%
125% of Avg Bill: 210 HCF	\$763.56	\$885.74	16.0%	\$916.74	3.5%
150% of Avg Bill: 260 HCF	\$908.06	\$1,057.92	16.5%	\$1,094.95	3.5%
Medium Strength with 2"meter					
25% of Avg Bill: 30 HCF	\$252.66	\$277.21	9.7%	\$286.92	3.5%
50% of Avg Bill: 50 HCF	\$316.66	\$353.66	11.7%	\$366.03	3.5%
Avg Bill: 100 HCF	\$476.66	\$544.76	14.3%	\$563.83	3.5%
125% of Avg Bill: 130 HCF	\$572.66	\$659.42	15.2%	\$682.50	3.5%
150% of Avg Bill: 150 HCF	\$636.66	\$735.86	15.6%	\$761.62	3.5%
High Strength with 2"meter					
25% of Avg Bill: 50 HCF	\$363.66	\$409.86	12.7%	\$424.21	3.5%
50% of Avg Bill: 100 HCF	\$570.66	\$657.17	15.2%	\$680.17	3.5%
Avg Bill: 200 HCF	\$984.66	\$1,151.79	17.0%	\$1,192.10	3.5%
125% of Avg Bill: 250 HCF	\$1,191.66	\$1,399.10	17.4%	\$1,448.07	3.5%
150% of Avg Bill: 300 HCF	\$1,398.66	\$1,646.41	17.7%	\$1,704.03	3.5%

a. New rates effective Jan 1 of fiscal year.

Appendix C

Finance & Audit Committee Rates Option

This section discusses the conclusion of the Nipomo Community Services District Finance & Audit Committee review of the Wastewater Rate Study.

Alternative Wastewater Rates Option

The Nipomo Community Services District Finance and Audit (F&A) Committee met to review and discuss the results and findings of the Wastewater Rate Study. The conclusion of the meeting was to request an additional wastewater rates option for presentation to the Board of Directors at the time that the Wastewater Rate Study report is presented. The alternative wastewater rates option is provided in this Appendix C.

The option includes revising Table 4 of this report to allow 3.2 percent annual revenue increases instead of the 3.5 percent increases included in the Study. The impact of this change is presented in the following tables and figures in Appendix C and includes Table 4a, Figure 3a, and an alternative five-year wastewater rate schedule Table 14a. Results of this alternative are discussed in the bullet points below.

- Table 4a indicates that the fund balance available in Fund 130 (line 20) would be nearly equal to the District Policy Target Fund Balance of 180 days of annual O&M expense (line 21) in FY 2022-23 through FY 2024-25 though the fund balance is less than the target in the last two years.
- Figure 3a graphically indicates that the projected fund balance (dotted black line) declines until it reaches the Target Fund Balance (solid black line) near the end of the ten year period.
- Table 14a provides the schedule of Proposed Wastewater Rates for a 3.2 percent revenue increase scenario.

Table 4a
Wastewater Financial Plan
Projected Sources and Uses of Funds

Line		Forecast									
No.	Description	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Sources of Funds											
1	Sewer Revenues, Existing Rates [1]	\$1,847,800	\$1,856,400	\$1,865,100	\$1,873,700	\$1,882,700	\$1,891,800	\$1,900,800	\$1,909,800	\$1,918,900	\$1,927,900
	Additional Sewer Sales Revenue										
	Annualized										
	Revenue Increase										
	Date of Increase										
	Fiscal Year										
2	3.2% Jan 1 FY 2015-16	\$29,600	\$59,400	\$59,700	\$60,000	\$60,200	\$60,500	\$60,800	\$61,100	\$61,400	\$61,700
3	3.2% Jan 1 FY 2016-17		\$30,700	\$61,600	\$61,900	\$62,200	\$62,500	\$62,800	\$63,100	\$63,400	\$63,700
4	3.2% Jan 1 FY 2017-18			\$31,800	\$63,900	\$64,200	\$64,500	\$64,800	\$65,100	\$65,400	\$65,700
5	3.2% Jan 1 FY 2018-19				\$33,000	\$66,200	\$66,500	\$66,900	\$67,200	\$67,500	\$67,800
6	3.2% Jan 1 FY 2019-20					\$34,200	\$68,700	\$69,000	\$69,300	\$69,700	\$70,000
	3.2% Jan 1 FY 2020-21						\$35,400	\$71,200	\$71,500	\$71,900	\$72,200
	3.2% Jan 1 FY 2021-22							\$36,700	\$73,800	\$74,200	\$74,500
	3.2% Jan 1 FY 2022-23								\$38,100	\$76,600	\$76,900
	3.2% Jan 1 FY 2023-24									\$39,500	\$79,400
	3.2% Jan 1 FY 2024-25										\$41,000
7	Total Additional Sewer Rate Revenue	\$29,600	\$90,100	\$153,100	\$218,800	\$287,000	\$358,100	\$432,200	\$509,200	\$589,600	\$672,900
8	Interest Earnings [2]	\$2,800	\$4,000	\$4,600	\$4,400	\$3,900	\$3,500	\$3,200	\$2,800	\$2,700	\$2,700
9	Transfer In from Fund 880 [3]	\$517,000	\$517,500	\$198,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0
10	Miscellaneous Revenues	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500	\$500
11	Total Sources of Funds	\$2,397,700	\$2,468,500	\$2,221,800	\$2,097,400	\$2,174,100	\$2,253,900	\$2,336,700	\$2,422,300	\$2,511,700	\$2,604,000
Uses of Funds											
12	Operation and Maintenance Expense	\$1,225,600	\$1,172,000	\$1,262,900	\$1,300,500	\$1,339,900	\$1,379,600	\$1,420,200	\$1,463,200	\$1,506,700	\$1,552,100
13	Replacement Capital Transfer to Fund 810	\$395,000	\$395,000	\$395,000	\$395,000	\$395,000	\$395,000	\$395,000	\$395,000	\$395,000	\$395,000
14	Capital Outlay	\$157,700	\$29,500	\$30,400	\$31,300	\$32,200	\$33,200	\$34,200	\$35,200	\$36,300	\$37,400
15	Existing Debt Service [4]	\$517,000	\$517,500	\$517,600	\$517,400	\$520,800	\$553,800	\$595,200	\$594,600	\$596,400	\$597,100
16	Total Uses of Funds	\$2,295,300	\$2,114,000	\$2,205,900	\$2,244,200	\$2,287,900	\$2,361,600	\$2,444,600	\$2,488,000	\$2,534,400	\$2,581,600
17	Additions (reductions) to cash	\$102,400	\$354,500	\$15,900	(\$146,800)	(\$113,800)	(\$107,700)	(\$107,900)	(\$65,700)	(\$22,700)	\$22,400
Available Reserves (including capital funds)											
18	FY beginning available cash [5]	\$850,000	\$952,400	\$1,306,900	\$1,322,800	\$1,176,000	\$1,062,200	\$954,500	\$846,600	\$780,900	\$758,200
19	Additions (reductions)	\$102,400	\$354,500	\$15,900	(\$146,800)	(\$113,800)	(\$107,700)	(\$107,900)	(\$65,700)	(\$22,700)	\$22,400
20	FY ending available reserves	\$952,400	\$1,306,900	\$1,322,800	\$1,176,000	\$1,062,200	\$954,500	\$846,600	\$780,900	\$758,200	\$780,600
21	Target Reserves [6]	\$690,000	\$600,000	\$650,000	\$670,000	\$690,000	\$710,000	\$730,000	\$750,000	\$770,000	\$790,000
22	Above (below) Target	\$262,400	\$706,900	\$672,800	\$506,000	\$372,200	\$244,500	\$116,600	\$30,900	(\$11,800)	(\$9,400)
Debt Service Coverage											
23	Net Revenues [7]	\$1,308,260	\$1,048,802	\$828,902	\$864,502	\$901,502	\$941,202	\$983,202	\$1,025,902	\$1,080,084	\$1,126,984
24	Annual Debt Service [8]	\$594,049	\$594,549	\$594,649	\$594,449	\$597,849	\$595,980	\$637,380	\$594,600	\$596,400	\$597,100
25	Coverage	220%	176%	139%	145%	151%	158%	154%	173%	181%	189%

[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 0.35%.

[3] Sinking fund transfer from Fund 880 used to pay for 2012 COPs until the funds are depleted.

[4] Debt service on the 2012 Certificates of Participation only.

[5] The available FY 2015-16 cash balance from the current District Budget.

[6] Target reserve estimated at 180 days of annual O&M expense including capital outlay.

[7] Includes capacity charges and interest income on all wastewater funds less O&M and capital outlay.

[8] Includes 2012 COPs and SRF debt service paid from Fund 710 - Sewer Capacity Fund.

Figure 3a
Wastewater Financial Plan with 3.2 Percent Revenue Increases

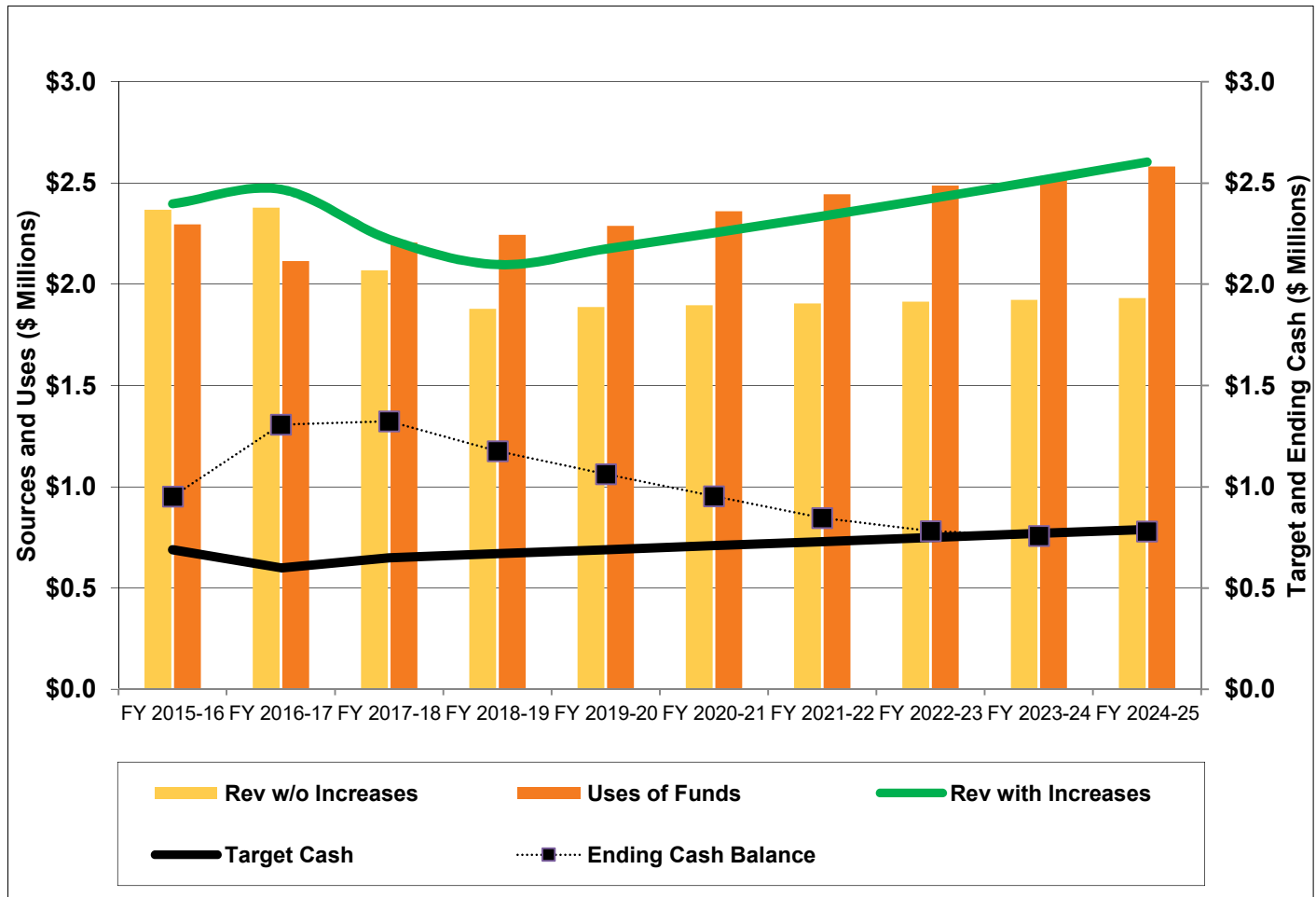


Table 14a
Proposed Wastewater Rates

Description	Current	Forecast [1]				
		FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Residential Fixed Charges						
Single Family	\$88.32	\$88.93	\$91.77	\$94.71	\$97.74	\$100.87
Multi-family	\$67.33	\$74.18	\$76.55	\$79.00	\$81.53	\$84.14
Non-Residential Meter Charges						
Up to 1 inch	\$34.07	\$35.12	\$36.24	\$37.40	\$38.60	\$39.83
1.5	\$98.59	\$101.94	\$105.20	\$108.57	\$112.04	\$115.63
2	\$156.66	\$162.08	\$167.26	\$172.62	\$178.14	\$183.84
3	\$292.16	\$302.40	\$312.08	\$322.07	\$332.37	\$343.01
4	\$485.72	\$502.87	\$518.96	\$535.57	\$552.70	\$570.39
6	\$969.64	\$1,004.03	\$1,036.16	\$1,069.31	\$1,103.53	\$1,138.85
8	\$1,550.34	\$1,605.42	\$1,656.80	\$1,709.81	\$1,764.53	\$1,820.99
Non-Residential Usage Rates (\$ per HCF)						
Low Strength	\$2.89	\$3.43	\$3.54	\$3.66	\$3.77	\$3.89
Medium Strength	\$3.20	\$3.81	\$3.93	\$4.06	\$4.19	\$4.32
High Strength	\$4.14	\$4.93	\$5.09	\$5.25	\$5.42	\$5.59
Mixed Use Usage Rates (\$ per HCF)						
Standard Comm with 10% High Strength		\$3.60	\$3.72	\$3.83	\$3.96	\$4.08
Standard Comm with 20% High Strength		\$3.75	\$3.87	\$3.99	\$4.12	\$4.25
Standard Comm with 30% High Strength		\$3.90	\$4.02	\$4.15	\$4.29	\$4.42
Standard Comm with 40% High Strength		\$4.06	\$4.19	\$4.32	\$4.46	\$4.61
Standard Comm with 50% High Strength		\$4.21	\$4.34	\$4.48	\$4.63	\$4.78
Standard Comm with 60% High Strength		\$4.37	\$4.51	\$4.65	\$4.80	\$4.96
Standard Comm with 70% High Strength		\$4.52	\$4.66	\$4.81	\$4.97	\$5.13
Standard Comm with 80% High Strength		\$4.67	\$4.82	\$4.97	\$5.13	\$5.30
Standard Comm with 90% High Strength		\$4.83	\$4.98	\$5.14	\$5.31	\$5.48

[1] Rates effective Jan 1 of fiscal year.