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**Montecito Sanitary District
Wastewater Rate Study
Report**

March 2016

Montecito Sanitary District
1042 Monte Cristo Lane
Santa Barbara CA 93108

WC Project No. WC-016

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Section 1: Introduction

1.1 Background and Objectives

The Montecito Sanitary District (District) provides wastewater collection and treatment to approximately 10,000 people in an unincorporated area of Santa Barbara County. The District currently operates and maintains approximately 78 miles of sewers and a wastewater treatment plant with a capacity of 1.5 million gallons per day. To fund its operations, the District established its current rate structure in 2009 based on its last Wastewater Rate Study. The current rate structure has flat rates for residential customers. Commercial customers have a fixed charge and variable charge based on water consumption. Both the residential and commercial charges are collected on the Santa Barbara County property tax rolls.

Due to the prolonged drought, the District's commercial customers have responded to voluntary and mandatory water conservation measures by reducing their water consumption thereby reducing District revenues. New mandatory water reductions are expected to further reduce District revenues. Because residential customers have flat rates, District revenues from this customer class are steady. To address revenue shortfalls, the District desires to conduct an updated wastewater rate study and evaluate its rates and rate structure and adopt updated rates in accordance with Proposition 218.

1.2 Study Methodology

In order to recommend fair and equitable wastewater rates for the District, a rate setting process that conforms to industry standards and current legal requirements must be undertaken. Generally, the steps necessary to implement this process are:

1. **Compile historical and current financial information.** To assess the District's current financial condition and make realistic economic projections, several years of financial data and the District's current budget are compiled and evaluated. In addition, the historical characteristics of the District's customer classes are compiled and the District's current financial policies are summarized.
2. **Evaluate revenue requirements for the study period.** Based on the compiled financial and customer information and assumptions related to customer growth and cost escalation, the District's capital and operating costs over the study period are projected. From these projections the District's annual revenue requirements are established.
3. **Conduct cost of service analysis.** To assure that each customer class is allocated the appropriate proportion of the District's projected revenue requirements, a cost of service analysis is conducted. Cost allocations are based on establishing functional cost categories such as wastewater flow and strength characteristics as well as customer growth projections.
4. **Recommend updated wastewater rates.** Based on the cost of service analysis, the rate structure for each customer class is reviewed and updated as necessary. Appropriate wastewater rates for each customer class are recommended.

1.3 Scope of Services

To perform the evaluation described above, the following scope of services was utilized:

Task 1. Project Management and Communication

Task 2. Kick Off Meeting and Data Collection & Review

Task 3. Assess Revenue Requirements

Task 4. Update Wastewater System Cost of Service Analysis

Task 5. Develop Proposed Wastewater Rates

Task 6. Meetings, Draft/Final Reports

This report summarizes the results of the evaluation and recommends updated wastewater rates for the District.

Section 2: Historical and Current Financial Condition

The financial condition of the District's wastewater utility was reviewed and a summary of financial performance is presented in **Table 1** (Page 4). The information presented in this table was derived from the District's Comprehensive Annual Financial Reports (CAFRs), projections for FY¹ 2015-16, special evaluations provided by the District Administrator, and some minor adjustments to the cost categories from those utilized in the CAFR.

The financial condition of a utility is assessed by contrasting several financial parameters with the recorded financial performance. Foremost among these parameters are criteria for net operating revenues and an assessment of the utility's fund balance stability. The findings related to each of these elements are provided as follows.

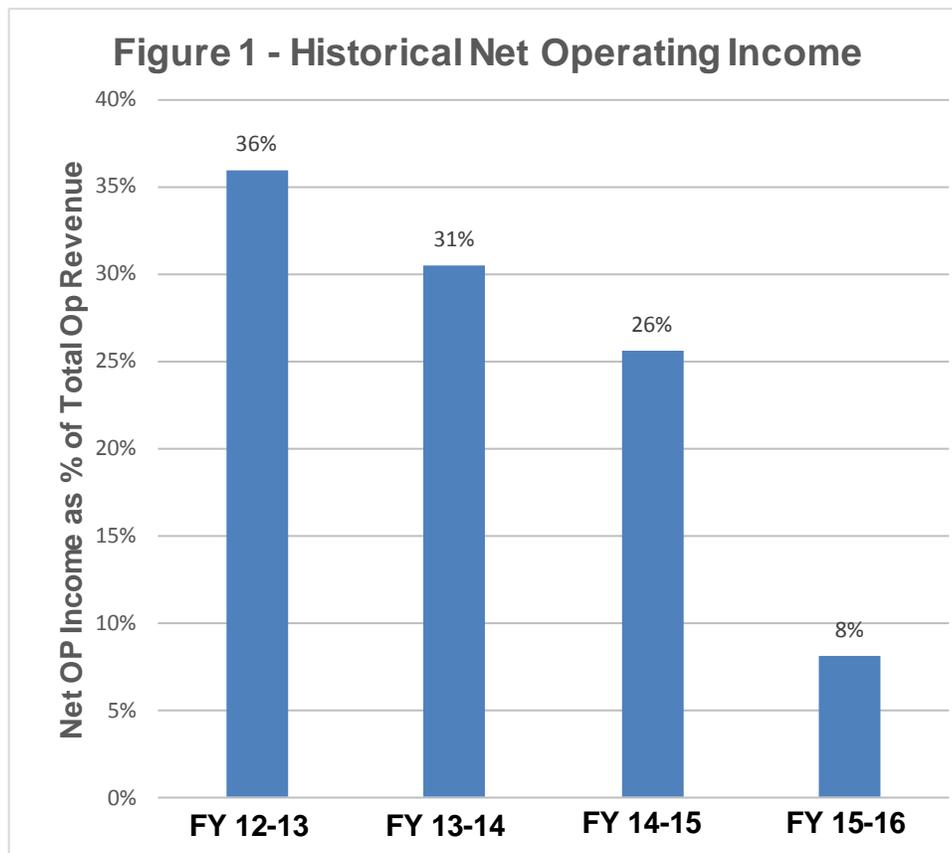
Net operating income is an important financial parameter of a utility's performance. This financial parameter is generally desired to be at least 20% of total operating revenues to generate adequate capital improvement funding for new and replacement (depreciation-based) assets. As shown in **Table 1** (Page 4), the net operating income of the District as a percentage of total operating revenues has been declining since its last rate adjustment and will rely on transfers from its unrestricted funds unless additional rate adjustments are implemented. This condition is due to both a decline in operating revenues from commercial customers due to reduced water consumption and increases in operating expenses.

¹ FY = fiscal year which runs from July 1st of each year through June 30th of the following year.

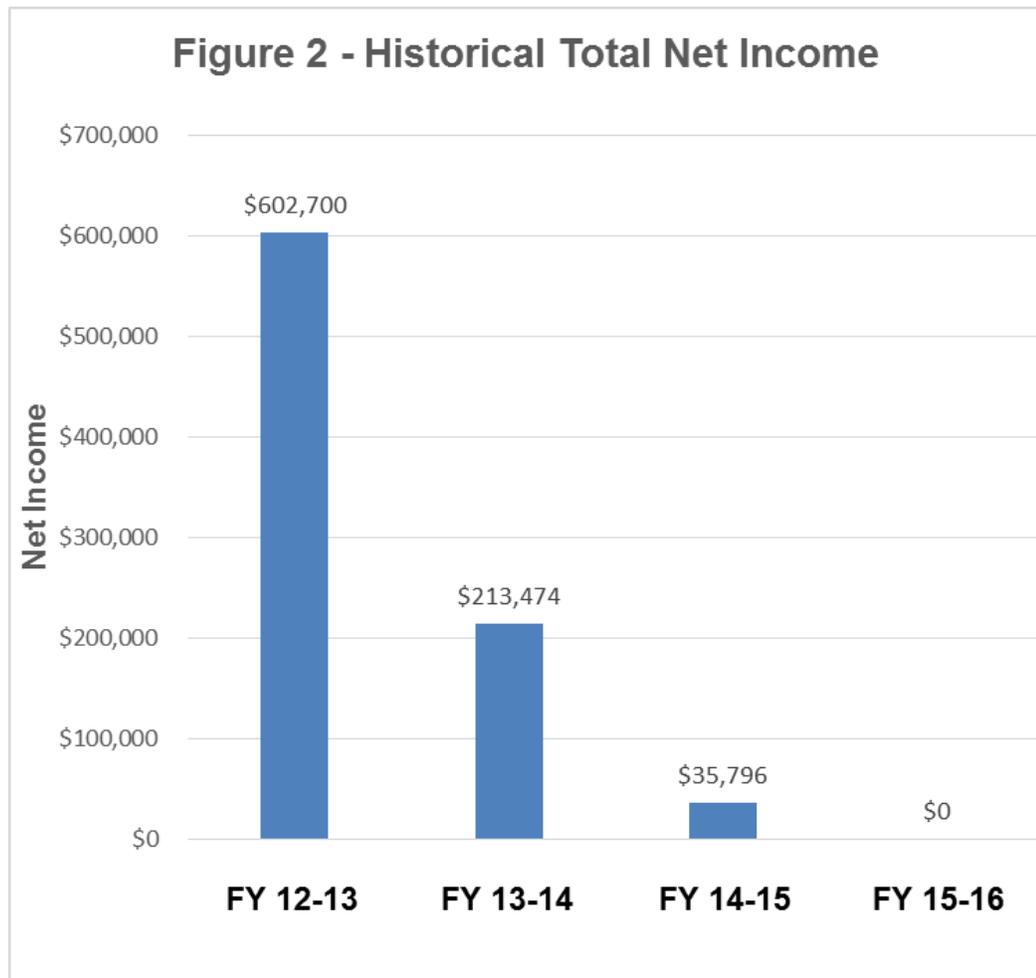
**TABLE 1
HISTORICAL OPERATING REVENUES AND EXPENSES**

Sources and Uses of Funds	Historical Financials			Projected
	FY 12-13	FY 13-14	FY 14-15	FY 15-16
Operating Revenues				
Sewer Service Charges	\$4,508,116	\$4,467,496	\$4,558,161	\$4,513,000
Other Services	\$84,318	\$36,425	\$48,019	\$11,000
Total Operating Revenues	\$4,592,434	\$4,503,921	\$4,606,180	\$4,524,000
Operating Expenses				
Salaries and Benefits	\$1,904,937	\$2,039,318	\$2,208,756	\$2,467,000
Insurance	\$59,280	\$59,711	\$60,459	\$68,500
Operating Supplies and Maintenance	\$238,414	\$204,799	\$171,835	\$353,000
NPDES Permit Expenses	\$74,940	\$89,621	\$104,181	\$67,000
Professional Services	\$88,129	\$93,174	\$92,718	\$196,000
Plant O&M Expenses	\$296,977	\$361,016	\$475,339	\$626,500
Utilities and Telephone	\$159,423	\$184,516	\$197,335	\$244,500
Supplies and Services	\$118,056	\$97,287	\$114,125	\$133,000
Total Operating Expenses	\$2,940,156	\$3,129,442	\$3,424,748	\$4,155,500
Net Operating Income (Loss)	\$1,652,278	\$1,374,479	\$1,181,432	\$368,500
Net Op Income as % of Total Op Revenue	36%	31%	26%	8%
Non-Operating Revenue				
Property Taxes	\$450,793	\$475,861	\$498,630	\$482,000
Investment Income	(\$3,060)	\$72,465	\$57,279	\$36,000
Connection Fees	\$300,324	\$226,979	\$199,935	\$15,000
Insurance Rebates	\$8,354	\$13,146	\$11,598	\$11,000
Other Revenues	(\$1,147)	\$16,945	(\$86,041)	\$0
Sewer Main Extension Fees	\$498,868	\$39,368	\$2,000	\$0
Transfers from Available Funds				
Transfers to/from Unrestricted Fund	\$0	\$0	\$500,000	\$1,149,640
Transfer for Capital Expenditures from Restricted COP Fund	\$1,499,000	\$1,453,000	\$222,000	\$1,677,289
Transfer for Capital Expenditures from Capital Replacement Fund	\$0	\$0	\$0	\$2,499,711
Total Non-Operating Revenues/Transfers	\$2,753,132	\$2,297,764	\$1,405,401	\$5,870,640
Non-Operating Expenses				
Depreciation	\$848,123	\$938,997	\$1,053,453	\$1,132,462
Debt Service	\$938,278	\$931,778	\$933,478	\$929,678
Capital Expenditures (net of proceeds)	\$2,016,309	\$1,587,994	\$564,106	\$4,177,000
Total Non-Operating Expenses	\$3,802,710	\$3,458,769	\$2,551,037	\$6,239,140
Net Income (Loss)	\$602,700	\$213,474	\$35,796	\$0
COP Fund				
Beginning Balance	\$5,766,537	\$4,282,269	\$2,837,007	\$2,621,360
Purchases	(\$1,499,000)	(\$1,453,000)	(\$222,000)	(\$1,677,289)
Interest Receivable	\$17,947	\$9,683	\$8,698	\$4,000
Transfer to COP Reserves	(\$3,215)	(\$1,945)	(\$2,345)	
Ending Balance	\$4,282,269	\$2,837,007	\$2,621,360	\$948,071
Capital Replacement Fund				
Beginning Balance	\$3,429,478	\$4,264,341	\$5,126,371	\$6,083,521
Annual Allocation	\$820,767	\$848,123	\$938,997	\$0
Purchases				(\$2,499,711)
Interest Receivable	\$14,096	\$13,907	\$18,153	\$19,683
Ending Balance	\$4,264,341	\$5,126,371	\$6,083,521	\$3,603,493
Unrestricted Funds Available for O&M				
Beginning Balance				\$4,309,932
Transfers to O&M				(\$1,149,640)
Net Income (Loss)				\$0
Ending Balance	\$4,424,703	\$4,502,296	\$4,309,932	\$3,160,292

During this period, Net Operating Income has ranged from a positive 36% in FY 12-13 to a projected 8% in FY 15-16 which is below the desired 20% minimum level. This trend is shown graphically on **Figure 1**. The decrease in Net Operating Income reflects the fact that the District currently may not be generating sufficient funds to provide for future capital expenditures and increased operating expenses.



At all times, the total net income (total operating and non-operating revenues, including transfers, in excess of total operating and non-operating expenses) should be positive. As shown on **Figure 2**, the District is projected to have no net income in FY 15-16.



Fund balance is an important financial consideration. In addition to a utility’s operational performance, the impact of non-operating revenues and capital expenditures can also have a significant impact on the District’s financial condition, specifically as it impacts fund balances.

The Certificates of Participation (COP) Fund contains the proceeds of the 2007 Certificates of Participation issued by the California Special Districts Association Finance Corporation to fund the District’s Mission Critical Capital Projects. This fund will be exhausted in FY 15-16 with the exception of a required reserve of approximately \$948,000. This reserve amounts to one year debt service payment, and will be retained as a reserve balance until 2037. As of the beginning of FY 15-16, a balance of approximately \$2.6 million, which includes the required reserve of \$948,000, was available.

The Capital Replacement Fund is funded by annual allocations from the District’s operating revenues. The Capital Replacement Fund is utilized for the District’s capital improvement and

replacement projects. As of the beginning of FY 15-16, a balance of approximately \$6.1 million was available in the Capital Replacement Fund.

Unrestricted funds are available for operations and maintenance expenses. At the beginning of FY 15-16, a balance of approximately \$4.3 million was available. Of this amount, \$1.6 million is the District's Board of Directors directed reserve not to be used for normal operating expenditures.

In consideration of these factors, as well as the integration of additional increases in projected operating and capital costs, additional revenues from wastewater rates are warranted to maintain the District's sound financial position. The following sections of this report provide the analyses to support the level, timing and cost allocation of the District's financial requirements.

2.1 Historical Number of Customer Accounts

The District's historical customer data was reviewed. As to be expected with the current economy, there has been very little change in growth-related account activity over the last several years. Consistent with the water use projections from the Montecito Water District, little change in new accounts and wastewater discharges is conservatively projected over the next 3 years. Reflected in this data is that approximately 67% of the wastewater discharge is generated by the residential customer classes.

Section 3: Future Revenue Requirements

The financial projections developed herein were produced to assess revenue and funding requirements, and included projections of operating revenue requirements. Future revenue requirements depend primarily on four specific elements:

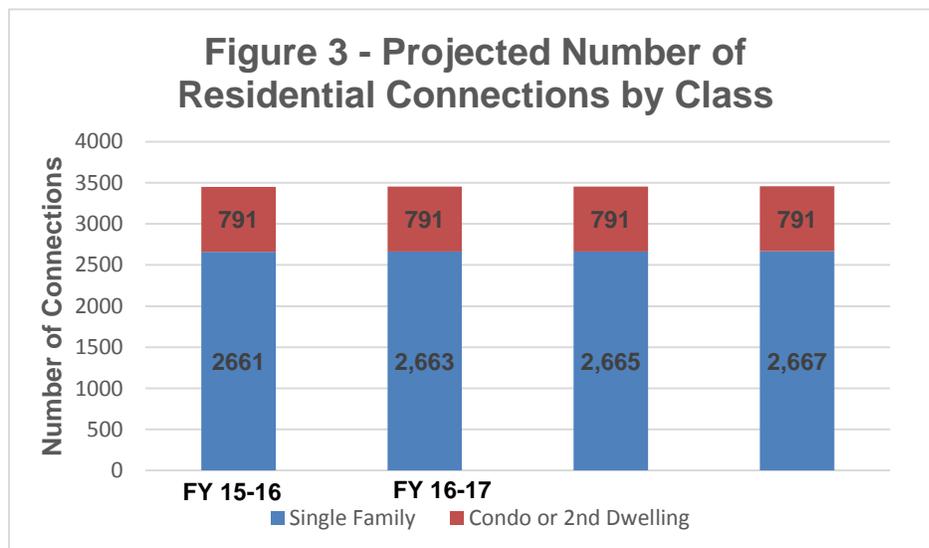
- Customer growth
- Wastewater operations and maintenance costs
- Necessary capital improvements and meeting debt obligations
- Meeting appropriate levels of fund and reserve targets.

This study examines future revenue requirements over the next three years, with a focus on the development of a three-year rate plan. As such, financial projections and rate recommendations for the next three years are reflected herein.

3.1 Projected Customer Growth

Customer growth affects the revenue requirements of the District in two ways. First, it increases the customer base that is paying for service, and second, it increases the level of those costs that vary with the quantity of wastewater discharged such as chemicals and pumping expenses.

Based on discussions with District staff, current economic factors suggest a minimal level of additional growth in the next several years. Based on the recent history, account growth is projected to be 2 single family accounts per year as shown on **Figure 3**. This account growth rate is expected to have a minimal effect on influent wastewater flows to the wastewater treatment plant. The number of commercial connections is not expected to grow, and is expected to remain constant at 49 accounts.



3.2 Budgeted/Projected Operating Expenses

Costs associated with the management, administration, and operations of the District are accounted for in eight basic categories. These are:

- Salaries and Benefits
- Insurance
- Operating Supplies and Maintenance
- National Pollutant Discharge Elimination System (NPDES) Permit
- Professional Services
- Plant Operation and Maintenance (O&M) Expenses
- Utilities and Telephone
- Supplies and Services

The historical and projected wastewater utility costs for these categories for the prior three years and the current fiscal year are shown in **Table 1** (Page 4).

The historical wastewater utility costs presented in **Table 1** (Page 4) form the basis for cost projections for the 3-year study period of this rate study. Generally, when an increasing cost trend is observed, the compound growth rate of the cost category between FY 12-13 and FY 14-15 was determined. When no cost trend was observed, the 3-year average of the cost category was determined and escalated by the Consumer Price Index of 1.5 percent (average from 2011-2014 for the Los Angeles region). Based on this evaluation, cost projections for FY 15-16 to FY 18-19 were developed. These cost projections represent realistic estimates of the District's current and future costs. For debt service requirements, the debt service schedule is utilized for projections.

Based on these assumptions, wastewater operating costs are projected to increase at a modest level over the next three years. An exception to the modest growth rates are the Treatment Plant Operation & Maintenance category which has a recent growth rate of over 10 percent per year. This is due to continuing plant maintenance and repair to the District's aging infrastructure, and increased costs in plant chemicals and electricity.

Another notable cost element in **Table 1** (Page 4) is depreciation. Providing reliable wastewater service is capital intensive. Depreciation is a non-operating expense that is recorded to represent the annual wear and tear of system assets. Funding depreciation means to set aside money for future capital requirements and replacement of aging infrastructure. Under the District's current policy of funding depreciation costs, the District allocates an amount equal to the prior year's audited depreciation amount to the Capital Replacement Fund. For expense projections utilized in this rate study, depreciation is assumed to be unfunded under the financial projections at current rates to provide a positive net income. Recommended revenues include the ability to fund the Capital Replacement Fund at adequate levels.

3.3 Projected Capital Improvement Program

To provide regulatory compliance and long range reliability, the District has identified mission critical capital improvement projects and issued Certificates of Participation to fund these improvements. The District also has a previously-established depreciation fund entitled the

Capital Replacement Fund which receives depreciation contributions allocated annually as directed by the District's Board of Directors.

The sewer service charges recommended herein are intended to maintain a sound District financial condition over the 3-year study period. Additional increases may be required thereafter. For FY15-16, a capital improvement expense of \$4,177,000 is utilized in the rate analysis. FY15-16 capital improvements included large expenditures for extensive sewer mainline rehabilitation. For the years FY 16-17 to FY18-19, it is assumed that capital expenditures will be equivalent to the historical 3-year (FY12-13 through FY14-15) average of approximately \$1,500,000.

3.4 Projected Revenue and Expenses at Current Rates

An annualized revenue plan has been prepared to assess the financial implications of the District's programs and costs. This plan integrates operating and capital costs, debt financing, and depreciation funding.

Based on the assumptions described in the preceding sections, the projected financial condition of the District for FY 16-17 to FY 18-19 was evaluated using the District's revenue model at current rates. This evaluation is presented in **Table 2** (Page 11).

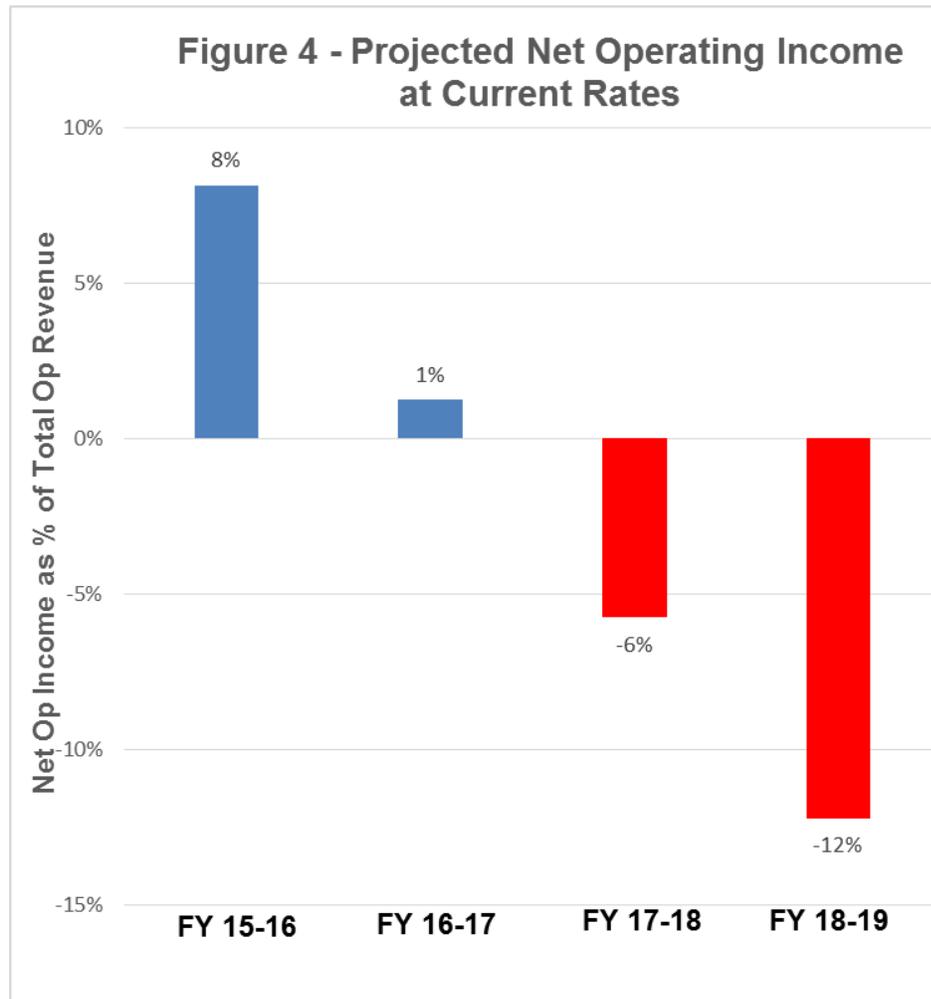
**TABLE 2
PROJECTED OPERATING REVENUES AND EXPENSES AT CURRENT RATES**

Sources and Uses of Funds	Projected Financials				
	FY 15-16	FY 16-17	FY 17-18	FY 18-19	
Operating Revenues					
Sewer Service Charges	\$4,513,000	\$4,437,000	\$4,383,000	\$4,375,000	see note 5
Other Services	\$11,000	\$11,000	\$11,000	\$11,000	see note 4
Total Operating Revenues	\$4,524,000	\$4,448,000	\$4,394,000	\$4,386,000	
Operating Expenses					
Salaries and Benefits	\$2,467,000	\$2,593,000	\$2,725,000	\$2,864,000	
Insurance	\$68,500	\$70,000	\$71,000	\$72,000	
Operating Supplies and Maintenance	\$353,000	\$358,000	\$363,000	\$368,000	
NPDES Permit Expenses	\$67,000	\$68,000	\$69,000	\$70,000	see note 1
Professional Services	\$196,000	\$199,000	\$202,000	\$205,000	
Plant O&M Expenses	\$626,500	\$710,000	\$804,000	\$911,000	
Utilities and Telephone	\$244,500	\$260,000	\$276,000	\$293,000	
Supplies and Services	\$133,000	\$135,000	\$137,000	\$139,000	
Total Operating Expenses	\$4,155,500	\$4,393,000	\$4,647,000	\$4,922,000	
Net Operating Income (Loss)	\$368,500	\$55,000	(\$253,000)	(\$536,000)	
Net Op Income as % of Total Op Revenue	8%	1%	-6%	-12%	
Non-Operating Revenue					
Property Taxes	\$482,000	\$489,000	\$496,000	\$503,000	see note 1
Investment Income	\$36,000	\$31,000	\$26,000	\$21,000	see note 1
Connection Fees	\$15,000	\$15,000	\$15,000	\$15,000	see note 4
Insurance Rebates	\$11,000	\$11,000	\$11,000	\$11,000	
Other Revenues	\$0	\$0	\$0	\$0	
Sewer Main Extension Fees	\$0	\$0	\$0	\$0	
Transfers from Available Funds					
Transfers to/from Unrestricted Fund	\$1,149,640	\$337,078	\$642,878	\$1,789,585	
Transfer for Capital Expenditures from Restricted COP Fund	\$1,677,289	\$0	\$0	\$0	see note 3
Transfer for Capital Expenditures from Capital Replacement Fund	\$2,499,711	\$1,500,000	\$1,500,000	\$633,493	see note 2
Total Non-Operating Revenues/Transfers	\$5,870,640	\$2,383,078	\$2,690,878	\$2,973,078	
Non-Operating Expenses					
Depreciation/Annual Allocation	\$1,132,462	\$0	\$0	\$0	
Debt Service	\$929,678	\$938,078	\$937,878	\$937,078	
Capital Expenditures	\$4,177,000	\$1,500,000	\$1,500,000	\$1,500,000	
Total Non-Operating Expenses	\$6,239,140	\$2,438,078	\$2,437,878	\$2,437,078	
Net Income (Loss)	\$0	\$0	\$0	\$0	
COP Fund					
Beginning Balance	\$2,621,360	\$948,071	\$948,071	\$948,071	
Purchases	(\$1,677,289)	\$0	\$0	\$0	
Interest Receivable	\$4,000	\$0	\$0	\$0	
Ending Balance	\$948,071	948,071	948,071	948,071	
Capital Replacement Fund					
Beginning Balance	\$6,083,521	\$3,603,493	\$2,118,493	\$628,493	
Annual Allocation	\$0	\$0	\$0	\$0	
Purchases	(\$2,499,711)	(\$1,500,000)	(\$1,500,000)	(\$633,493)	
Interest Receivable	\$19,683	\$15,000	\$10,000	\$5,000	
Ending Balance	\$3,603,493	\$2,118,493	\$628,493	\$0	
Unrestricted Funds Available for O&M					
Beginning Balance	\$4,309,932	\$3,160,292	\$2,823,214	\$2,180,336	
Transfers to/from O&M	(\$1,149,640)	(\$337,078)	(\$642,878)	(\$1,789,585)	
Net Cash Available for Unrestricted Reserves	\$0	\$0	\$0	\$0	
Ending Balance	\$3,160,292	\$2,823,214	\$2,180,336	\$390,751	

Notes

1. Average of FY 12-13 to FY 14-15 plus escalation except FY 15-16
2. Maximum available for transfer to produce positive net income
3. Equivalent to capital expenditures until fund balance is exhausted
4. Equivalent to 2 new Single Family Homes/ year
5. Projections provided by District

As shown in **Table 2** (Page 11) and on **Figure 4**, at current rates, net operating income declines from a projected 8 percent in FY 15-16 to negative 12 percent in FY 18-19. In addition, transfers from unrestricted reserves are necessary in each year from FY 16-17 to FY 18-19 to the extent they are available. At current rates, the Capital Replacement Fund is projected to be exhausted in FY 18-19 and unrestricted reserves will continuously decline during this period.



3.5 Revenue Requirements

As expected, additional revenues are needed to meet the obligations of the District. Accordingly, the revenue requirements to maintain financial performance were evaluated. This revenue plan is designed to produce net operating income of a no less than 20 percent in order to provide adequate funding for debt service and capital expenditures while maintaining stable fund balances. The recommended revenue levels are also projected to meet or exceed the District’s minimum debt service coverage ratio of 1.1.

The resulting revenue plan needed to fund District costs is shown in **Table 3** (Page 13). The focus of the financial plan is to maintain the financial stability of the District.

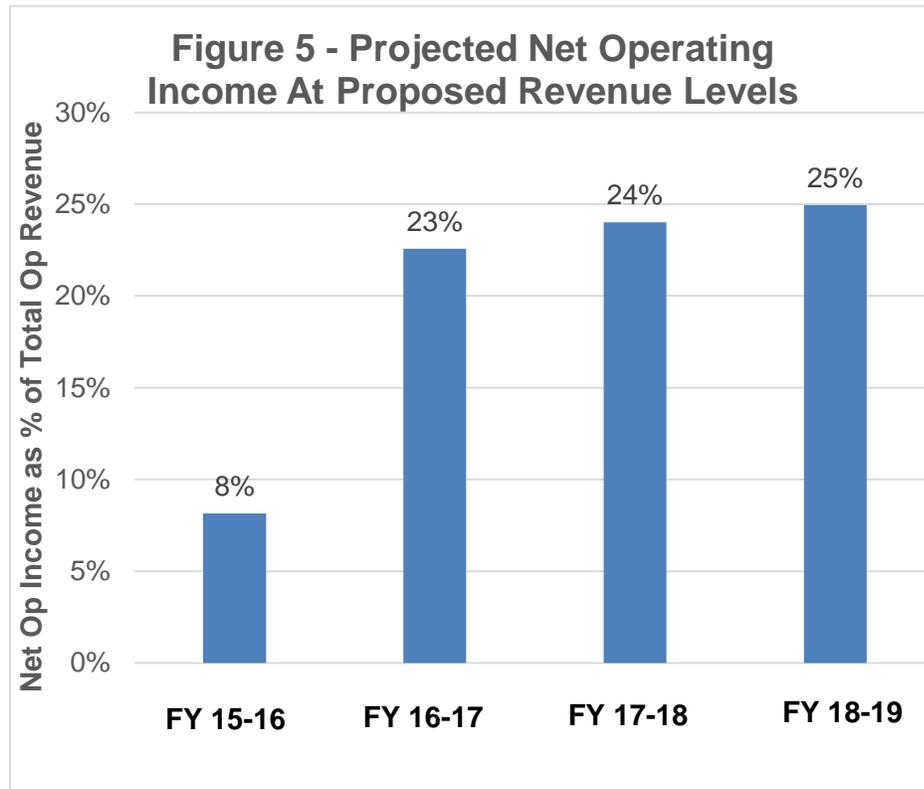
**TABLE 3
PROJECTED OPERATING REVENUES AND EXPENSES AT RECOMMENDED REVENUE LEVELS**

Sources and Uses of Funds	Projected Financials				
	FY 15-16	FY 16-17	FY 17-18	FY 18-19	
Operating Revenues					
Sewer Service Charges	\$4,513,000	\$5,662,720	\$6,105,120	\$6,547,520	see note 1
Other Services	\$11,000	\$11,000	\$11,000	\$11,000	
Total Operating Revenues	\$4,524,000	\$5,673,720	\$6,116,120	\$6,558,520	
Operating Expenses					
Salaries and Benefits	\$2,467,000	\$2,593,000	\$2,725,000	\$2,864,000	
Insurance	\$68,500	\$70,000	\$71,000	\$72,000	
Operating Supplies and Maintenance	\$353,000	\$358,000	\$363,000	\$368,000	
NPDES Permit Expenses	\$67,000	\$68,000	\$69,000	\$70,000	
Professional Services	\$196,000	\$199,000	\$202,000	\$205,000	
Plant O&M Expenses	\$626,500	\$710,000	\$804,000	\$911,000	
Utilities and Telephone	\$244,500	\$260,000	\$276,000	\$293,000	
Supplies and Services	\$133,000	\$135,000	\$137,000	\$139,000	
Total Operating Expenses	\$4,155,500	\$4,393,000	\$4,647,000	\$4,922,000	
Net Operating Income (Loss)	\$368,500	\$1,280,720	\$1,469,120	\$1,636,520	
Net Op Income as % of Total Op Revenue	8%	23%	24%	25%	
Non-Operating Revenue					
Property Taxes	\$482,000	\$489,000	\$496,000	\$503,000	
Investment Income	\$36,000	\$31,000	\$26,000	\$21,000	
Connection Fees	\$15,000	\$15,000	\$15,000	\$15,000	
Insurance Rebates	\$11,000	\$11,000	\$11,000	\$11,000	
Other Revenues	\$0	\$0	\$0	\$0	
Sewer Main Extension Fees	\$0	\$0	\$0	\$0	
Transfers from Available Funds					
Transfers to/from Unrestricted Fund	\$1,149,640	\$0	\$0	\$50,558	
Transfer for Capital Expenditures from Restricted COP Fund	\$1,677,289	\$0	\$0	\$0	
Transfer for Capital Expenditures from Capital Replacement Fund	\$2,499,711	\$1,500,000	\$1,500,000	\$1,500,000	
Total Non-Operating Revenues/Transfers	\$5,870,640	\$2,046,000	\$2,048,000	\$2,100,558	
Non-Operating Expenses					
Depreciation/Annual Allocation	\$1,132,462	\$750,000	\$1,000,000	\$1,300,000	
Debt Service	\$929,678	\$938,078	\$937,878	\$937,078	
Capital Expenditures	\$4,177,000	\$1,500,000	\$1,500,000	\$1,500,000	
Total Non-Operating Expenses	\$6,239,140	\$3,188,078	\$3,437,878	\$3,737,078	
Net Income (Net Cash Available for Unrestricted Reserves)	\$0	\$138,642	\$79,242	\$0	
COP Fund					
Beginning Balance	\$2,621,360	\$948,071	\$948,071	\$948,071	
Purchases	(\$1,677,289)	\$0	\$0	\$0	
Interest Receivable	\$4,000	\$0	\$0	\$0	
Ending Balance	\$948,071	\$948,071	\$948,071	\$948,071	see note 2
Capital Replacement Fund					
Beginning Balance	\$6,083,521	\$3,603,493	\$2,868,493	\$2,383,493	
Annual Allocation	\$0	\$750,000	\$1,000,000	\$1,300,000	
Purchases	(\$2,499,711)	(\$1,500,000)	(\$1,500,000)	(\$1,500,000)	
Interest Receivable	\$19,683	\$15,000	\$15,000	\$15,000	
Ending Balance	\$3,603,493	\$2,868,493	\$2,383,493	\$2,198,493	
Unrestricted Funds Available for O&M					
Beginning Balance	\$4,309,932	\$3,160,292	\$3,298,934	\$3,378,176	
Transfers to/from O&M	(\$1,149,640)	\$0	\$0	(\$50,558)	
Net Cash Available for Unrestricted Reserves	\$0	\$138,642	\$79,242	\$0	
Ending Balance	\$3,160,292	\$3,298,934	\$3,378,176	\$3,327,618	

Notes:

1. Sewer service charges necessary to balance revenues and expenses.
2. COP required reserve.

Recommended Revenue projections shown in **Table 3** (Page 13) result in Projected Net Operating Income levels are shown in **Figure 5**, which meet the target of no less than 20%.



Section 4: Current Sewer Service Charges

The District strives to provide cost-effective wastewater collection, treatment and disposal services for its customers, particularly with the low density of development within the District and its relatively small customer base.

4.1 Current Sewer Service Charges

The District last conducted a rate study in 2009. The rates adopted in 2009 were for FY 09-10 through FY 11-12. There were no rate increases in FY 12-13, FY 13-14, FY 14-15 and FY 15-16.

Residential Customers: The District's current residential sewer service charges consist of a fixed annual service charge for each single family dwelling and a lower fixed annual charge for each condo or second dwelling.

Commercial Customers: Commercial user classes are based on low, medium and high wastewater strength discharge categories, where the strength classification is defined in Resolution No. 2009-851 by a combined concentration of biochemical oxygen demand (BOD) and total suspended solids (TSS) or by the District if not specified in the rate resolution. Annual sewer service charges consist of a fixed capacity allocation charge which is based on the historical maximum annual water use and a variable charge which is based on the actual water use in the prior calendar year. To simplify the assignment of new and existing wastewater accounts to the appropriate user class, the District retains a list of business categories as defined by the North American Industry Classification System (NAICS) for each customer class. The District's current wastewater rates and rate structure are shown in **Table 4**.

TABLE 4

RESIDENTIAL ANNUAL SEWER SERVICE CHARGES FOR FY 2015-16

Residential Accounts	FY 2015-16
Single Family Dwelling	\$1,080
Condo or 2 nd Dwelling	\$510

COMMERCIAL ANNUAL SEWER SERVICE CHARGES FOR FY 2015-16

Total Annual Commercial Sewer Service Charge = Fixed Capacity Allocation Charge + Variable Charge

Fixed Capacity Allocation Charge (\$ per HCF Based on Historic Maximum Annual Water Use)	
Commercial Class	FY 2015-16
Low Strength Sewage	3.02
Medium Strength Sewage	5.49
High Strength Sewage	10.20

HCF = hundred cubic feet

Variable Charge (\$ per HCF Based on Prior Calendar Year Actual Water Use)	
Commercial Class	FY 2015-16
Low Strength Sewage	0.84
Medium Strength Sewage	1.70
High Strength Sewage	3.40

HCF = hundred cubic feet

4.2 Current Connection Fees

The District levies a connection fee on new development to recover the costs of new development's impact on the wastewater system. The District's connection fees, as well as several other fees were adopted in 2010 and became effective on January 1, 2011. Those fees are not included in the scope of this study.

Section 5: Cost of Service Evaluation

To allocate the required revenue requirements to the appropriate customer classifications, a cost of service evaluation was performed. A similar cost of service evaluation was performed for the 2009 Wastewater Rate Study and the methodology utilized in this evaluation closely follows the previous one.

5.1 Utility Expense Categories

Like the District's 2009 Wastewater Rate Study, the cost categories utilized to develop the District's cost of service are:

- Number of Customer Accounts
- Average Wastewater Flows
- Strength-related Biochemical Oxygen Demand (BOD) which is a measure of the biologically decomposability of wastewater
- Strength-related Total Suspended Solids (TSS) which is a measure of filterable solids in wastewater

To allocate the District's operating expenses into these categories, the allocations presented in the District's Comprehensive Annual Financial Reports (CAFRs) are utilized. The allocations presented in the FY 14-15 CAFR is the most recent allocation available and is utilized in this cost of service evaluation. The FY 14-15 CAFR allocates operating expenses into collection, treatment, disposal and administration categories. This allocation is presented in **Table 5**. In this table, the specific expenses have been aggregated into the same categories utilized to determine the District's revenue requirements.

TABLE 5
COST ALLOCATION OF FY 14-15 OPERATING EXPENSES

Expense Category	Collection	Treatment	Disposal	Administration	Total
Salaries and Benefits	\$815,203	\$818,933	\$0	\$574,620	\$2,208,756
Insurance	\$24,604	\$30,169	\$0	\$5,686	\$60,459
Operating Supplies and Maintenance	\$112,651	\$41,487	\$0	\$17,697	\$171,835
NPDES Permit Expenses	\$0	\$104,181	\$0	\$0	\$104,181
Professional Services	\$16,785	\$843	\$0	\$75,090	\$92,718
Plant O&M Expenses	\$0	\$431,974	\$43,365	\$0	\$475,339
Utilities and Telephone	\$39,490	\$145,864	\$0	\$11,981	\$197,335
Supplies and Services	\$22,399	\$45,160	\$0	\$46,566	\$114,125
Subtotal Operating Expenses	\$1,031,132	\$1,618,611	\$43,365	\$731,640	\$3,424,748
Depreciation	\$518,165	\$513,897	\$8,072	\$13,319	\$1,053,453
Total Operating Expenses plus Depreciation	\$1,549,297	\$2,132,508	\$51,437	\$744,959	\$4,478,201

These categories are then allocated in the account, flow, BOD and TSS categories. **Table 6** reallocates these expenditures to loading parameters of flow, strength, and service accounts. Note that these expenditure parameters are equivalent to the customer loading parameters, thus providing the cross-reference between customer loads and District costs. The result, as shown in **Table 6**, is that 48.4 percent of the District’s costs of utility services are flow based, 35 percent is associated with sewage strength (17.5 percent each for BOD and TSS), and 16.6 percent of the District’s costs is allocated based on the number of accounts.

**TABLE 6
COST OF SERVICE ALLOCATIONS***

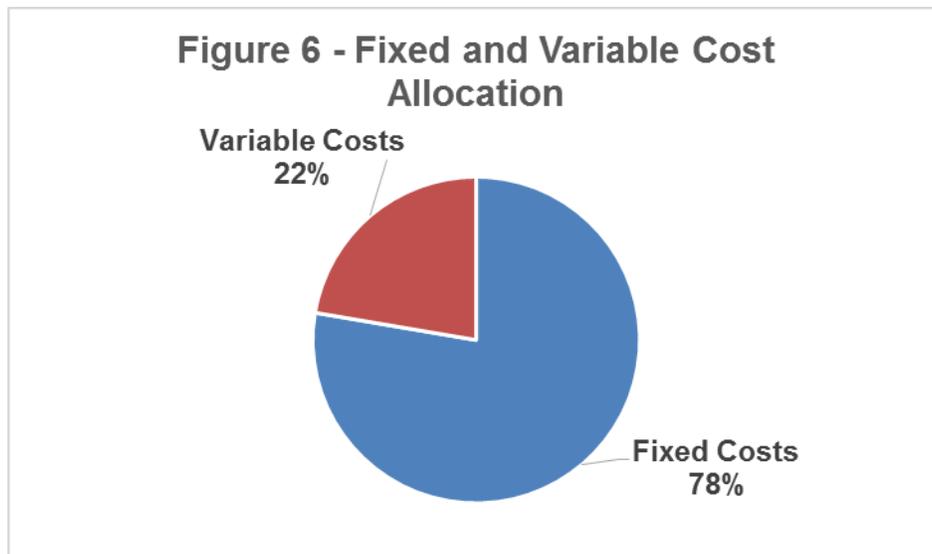
Allocation Parameter	Collection	Treatment	Disposal	Administration	Total	
					Percent	Allocation
Operating Expenses						
Flow	100%	30%			44.2%	\$1,516,715
BOD		35%	50%		17.2%	\$588,196
TSS		35%	50%		17.2%	\$588,196
Accounts				100%	21.4%	\$731,640
Total (%)	100%	100%	100%	100%	100.0%	
Total (\$)	\$1,031,132	\$1,618,611	\$43,365	\$731,640		\$3,424,748
Depreciation						
Flow	100%	26%			61.9%	\$651,778
BOD		37%	50%		18.4%	\$194,178
TSS		37%	50%		18.4%	\$194,178
Accounts				100%	1.3%	\$13,319
Total (%)	100%	100%	100%	100%	100.0%	
Total (\$)	\$518,165	\$513,897	\$8,072	\$13,319		\$1,053,453
Combined						
Flow	\$1,549,297	\$619,197	\$0	\$0	48.4%	\$2,168,494
BOD	\$0	\$756,656	\$25,719	\$0	17.5%	\$782,374
TSS	\$0	\$756,656	\$25,719	\$0	17.5%	\$782,374
Accounts	\$0	\$0	\$0	\$744,959	16.6%	\$744,959
Total (\$)	\$1,549,297	\$2,132,508	\$51,437	\$744,959	100.0%	\$4,478,201

*Allocations of FY 14-15 expenses are based on the March 1998 SWRCB Revenue Program Guidelines as presented in the District’s 2009 Wastewater Rate Study.

Table 7 (Page 19) identifies the fixed versus variable costs of operations. These ratios are developed based on the estimated variation of District’s expenditures with changes in flow. As shown in **Table 7** (Page 19) and **Figure 6** (Page 19), District operating expenditures are 78 percent fixed. For net revenue stability, customer service charges should be set at a similar level.

**TABLE 7
FIXED AND VARIABLE COST ALLOCATION**

<u>Cost Category</u>	<u>Fixed</u>	<u>Variable</u>	<u>FY 14-15 Cost</u>
Salaries and Benefits	80%	20%	\$2,208,756
Insurance	100%	0%	\$60,459
Operating Supplies and Maintenance	20%	80%	\$171,835
NPDES Permit Expenses	100%	0%	\$104,181
Professional Services	50%	50%	\$92,718
Plant O&M Expenses	80%	20%	\$475,339
Utilities and Telephone	30%	70%	\$197,335
Supplies and Services	0%	100%	\$114,125
Debt Service	100%	0%	\$933,478
Total	78%	22%	\$4,358,226



5.2 Water Demands and Sewage Strengths Summary

Table 8 (Page 20) provides the metered water usage for each commercial account for seven historical years from the Montecito Water District (MWD). The District accounts are cross-referenced to MWD records. To determine the maximum historical water use which forms the basis for the Maximum Allocated Capacity utilized to determine the service charge for commercial customers, it is the District’s current policy to utilize the potable water use of the previous calendar year and the 4 previous years. These capacities represent the level of service availability that the District must reserve for handling the potential discharges from each customer. Variable charges for commercial customers are based on the actual water use during the prior calendar year.

**TABLE 8
COMMERCIAL ACCOUNT STRENGTH AND FLOW ALLOCATION***

<u>Wastewater Customer</u>	<u>Water Usage (Hcf/year)</u>						
	<u>CY 2009</u>	<u>CY 2010</u>	<u>CY 2011</u>	<u>CY 2012</u>	<u>CY 2013</u>	<u>CY 2014</u>	<u>CY 2015</u>
<u>Low Strength</u>							
1	1547	1041	1684	1796	2154	1230	1214
2	1411	1017	919	891	1206	464	323
3	2991	2531	2260	3021	3444	2137	1859
4	135	85	148	191	158	199	145
5	138	111	61	28	157	89	60
6	30	29	11	10	21	14	19
7	66	130	103	73	420	195	131
8	409	357	630	405	402	320	214
9	481	1034	431	265	1364	364	202
10	94	67	96	62	77	76	48
11	264	204	192	194	189	209	148
12	277	338	1	163	729	933	933
13	333	431	8	0	1117	1839	183
14	1163	1119	917	1262	1084	664	472
15	111	63	129	152	142	93	34
16	1925	2231	2242	2458	2675	1318	696
17	2141	1971	2006	1536	1359	784	533
18	1746	1597	1350	1503	1142	731	658
19	4199	3298	2838	3067	3573	1818	954
20	11737	5810	4502	5185	5759	4444	3106
21	3143	3291	2970	3517	3382	1617	1577
22	2494	2725	1988	3043	3526	2058	936
23	1433	910	1391	1312	1827	1098	531
24	4121	3989	4237	4800	5000	3308	2635
25	2764	2725	2697	3693	2653	2069	1311
26	107	259	635	799	877	947	291
Subtotal-Low	45260	37363	34446	39426	44437	29018	19213
<u>Medium Strength</u>							
1	3089	2879	2321	2605	2278	1972	1676
2	1791	1733	1510	1649	1570	1367	1235
3	30819	30121	34251	34460	36418	35995	38112
4	6639	3645	7668	7785	7755	7036	5783
5	3482	3354	3758	3632	4150	2727	1820
6	44	25	14	117	25	182	36
7	568	520	404	514	495	294	174
8	12965	9020	15345	19175	24321	20217	17237
9	228	231	241	235	288	102	174
10	3682	4056	3946	4142	4288	2811	2310
11	27946	31109	19934	19247	23643	21185	15286
12	1632	154	1592	896	1187	1053	807
13	9630	7032	7400	8736	8786	5278	4476
14	5379	4977	5175	5730	6615	3565	2097
Subtotal-Medium	107894	98856	103559	108923	121819	103784	91223
<u>High Strength</u>							
1	505	472	521	480	453	412	351
2	1373	1311	1527	1244	1289	1216	1112
3	5514	5499	5644	5748	5715	5413	3538
Subtotal-High	7392	7282	7692	7472	7457	7041	5001
Total-Commercial	160546	143501	145697	155821	173713	137803	115437

*Does not include Commercial "Residential" Accounts

Table 9 provides a summary of the water usage for CY 2015 and estimated wastewater discharge in each of four commercial sewage strength classifications.

**TABLE 9
COMMERCIAL WATER USE SUMMARY**

<u>Customer Category</u>	<u>Billable Parcels</u>	<u>Water Use 2015</u>			<u>Estimated Wastewater Discharge</u>
		<u>Percent</u>	<u>Hcf/year</u>	<u>MGD</u>	<u>MGD</u>
Commercial					
Low Strength	26	16%	19213	0.04	0.036
Residential*	6	2%	2046	0.01	0.009
Medium Strength	14	78%	91223	0.19	0.171
High Strength	3	4%	5001	0.01	0.009
Total Accounts	49	100%	117483	0.25	0.225

* Based on 341 Hcf/year/customer derived from data from Montecito Water District's FY 14-15 Budget and customer classification data.

To allocate wastewater flow and strength to the customer classes, mass balance calculations were performed. A mass balance allocates a parameter (such as flow or strength) into its component parts so that costs can be equitably assigned to the appropriate customer class.

Consistent with industry standards during times of drought, a water return to sewer ratio of 90 percent is utilized to estimate the quantity of commercial wastewater flow into the treatment plant. This amount is deducted from the wastewater treatment plant total influent flow to calculate the discharges from the residential customer class. The wastewater flow mass balance calculations are shown in **Tables 10**.

**TABLE 10
WASTEWATER FLOW MASS BALANCE**

<u>Description</u>	<u>Share of Flows</u>	<u>FY 14-15</u>
<u>Total Sewage Discharge (mgd)</u>		
Residential SFD Sewage Discharges	67%	0.465
Commercial Account Water Usage (mgd)		0.25
Commercial Year-round Water Return to Sewer Ratio		90%
Commercial Sewage Discharges	33%	0.225
Subtotal Sewage Discharges	100%	0.69
Total WWTP Influent Flow (mgd)		0.69

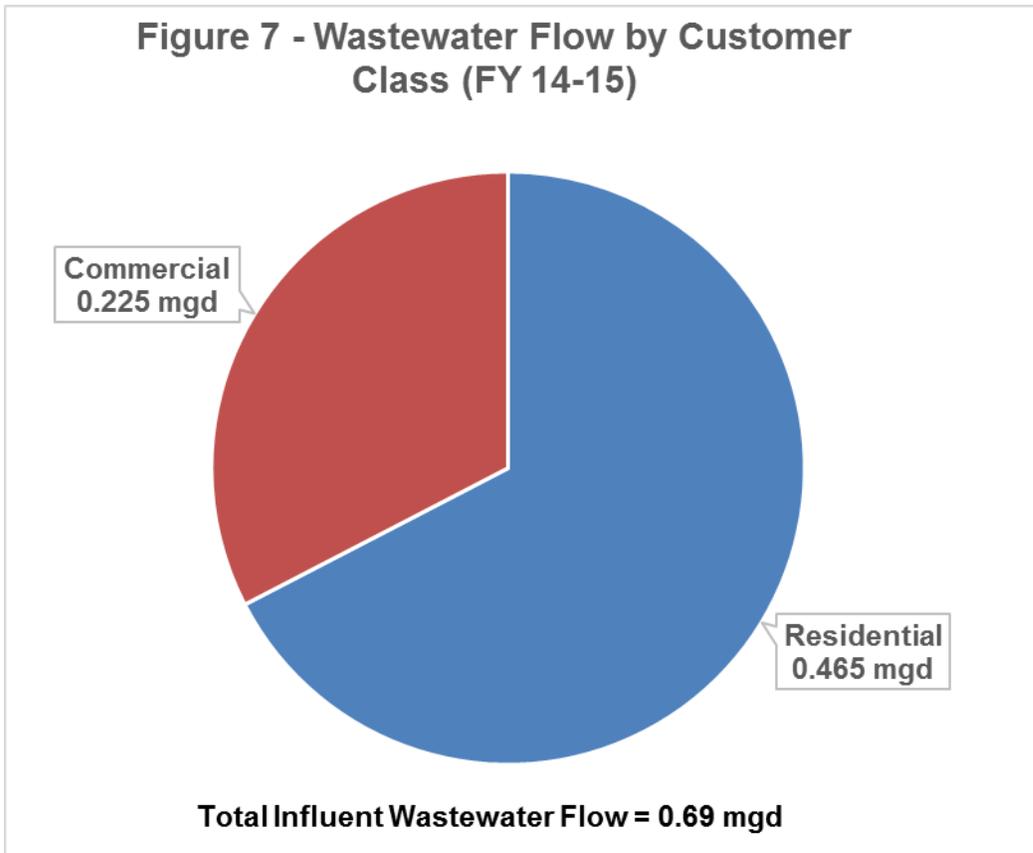
A similar analysis of wastewater strength mass balance, using biochemical oxygen demand (BOD) and total suspended solids (TSS) is presented in **Table 11**.

**TABLE 11
WASTEWATER STRENGTH MASS BALANCE (FY 14-15)**

Customer Class	BOD (mg/l)	TSS (mg/l)	Strength Ratio	
Sewage Concentrations				
Single Family Residential Discharges	230	320	1.0	
Commercial Discharges				
Low Strength Sewage	140	300	0.80	
Residential Strength Sewage	230	320	1.00	
Medium Strength Sewage	275	800	1.95	
High Strength Sewage	800	1,000	3.27	
Subtotal Commercial Discharges	273	709		
Total WWTP Influent	244	447		
FY 14-15 Monitoring Data	239	429		
	WW Flow (mgd)	BOD (ppd)	TSS (ppd)	Accounts
Sewage Discharge Loads				
Residential Sewage Discharges	0.47	892	1,241	3,443
Commercial Discharges				
Low Strength Sewage	0.04	42	90	26
Residential Strength Sewage	0.01	17	24	6
Medium Strength Sewage	0.17	392	1,141	14
High Strength Sewage	0.01	60	75	3
Subtotal Commercial Discharges	0.23	512	1,330	49
Total WWTP Influent Flow	0.69	1,403	2,571	3,492

Customer Class	BOD %	TSS %	Accounts %	Total %
Residential Sewage Discharges	64%	48%	99%	69%
Commercial Sewage Discharges				
Low Strength Sewage	3%	4%	1%	4%
Residential Strength Sewage	1%	1%	0%	1%
Medium Strength Sewage	28%	44%	0%	25%
High Strength Sewage	4%	3%	0%	2%
Cost Allocation (Table 6)	17.5%	17.5%	16.6%	31%
			<u>Cost Allocation (Table 6)</u>	
			Flow	48.4%
			BOD	17.5%
			TSS	17.5%
			Accounts	16.6%

The estimated wastewater discharge by customer class is shown on **Figure 7**.



5.3 Costs of Service and Unit Rates

The results of the mass balance are used in the calculations in this section to develop unit rates and billing equity findings. **Table 12** (Page 24) provides a summary of the cost of service loads for each of the user classifications, and the basic billing parameters for customer billing. As shown, the cost of service loads are based on Equivalent Residential Units (ERUs). The number of ERUs for the commercial customer classes are based on their relationship to the amount of wastewater per ERU attributed to residential customers and adjusted by the strength ratios shown in **Table 11** (Page 22).

**TABLE 12
COST OF SERVICE SUMMARY**

User Classification	Accounts		Cost of Service Total	
	Number	Allocation	Percent	ERUs
Residential Accounts				
Single Family			60%	2,661
Condo/Multi-Family			9%	372
Subtotal	3,443	99%	69%	3,033
Commercial Accounts				
Low Strength Sewage	26		3.8%	168
Residential Strength Sewage	6		1%	46
Medium Strength Sewage	14		24.7%	1,093
High Strength Sewage	3		1.9%	84
Subtotal	49	1%	31%	1,391
Total All Customers	3,492	100%	100%	4,425

ERU: Equivalent Residential Unit

*ERU is calculated by using the sumproduct of
 (% Flow per class, % BOD per class, % TSS per class, % Accounts per class)/% total Flow,
 % total BOD, % total TSS, % Total Accounts)
 See table 14 for detail

Section 6: Recommended Sewer Service Charge Rates

Proposed rates have been developed to meet the revenue requirements of the District. As indicated in Section 3, revenues generated from current wastewater rates are approximately \$4.5 million per year. Development of the recommended sewer service charge rates follows.

6.1 Current Rate Structure

The current rate structure for wastewater services is designed around the concept of an equivalent residential units (ERU), based on the system load and discharges of a single-family dwelling parcel. This ERU applies to all accounts, whether residential or commercial. A single-family residence is 1.0 ERUs. The number of residential ERUs was provided by the District. The number of commercial ERUs in each strength category are based on the wastewater flows from each strength category and adjusted by the strength ratios shown in **Table 11** (Page 22). The resulting number of ERUs in each commercial strength category is presented in **Table 12** (Page 24). Commercial rates are based on a combination of fixed capacity-based costs and variable water usage-based rates for each account. Water usage is based on the prior calendar year water demands, as reported by the Montecito Water District. The capacity-based charge is derived from the historical maximum usage based on the current year and 4 historical year's water usage. The advantage of this structure is that it incorporates actual water usage for every commercial account.

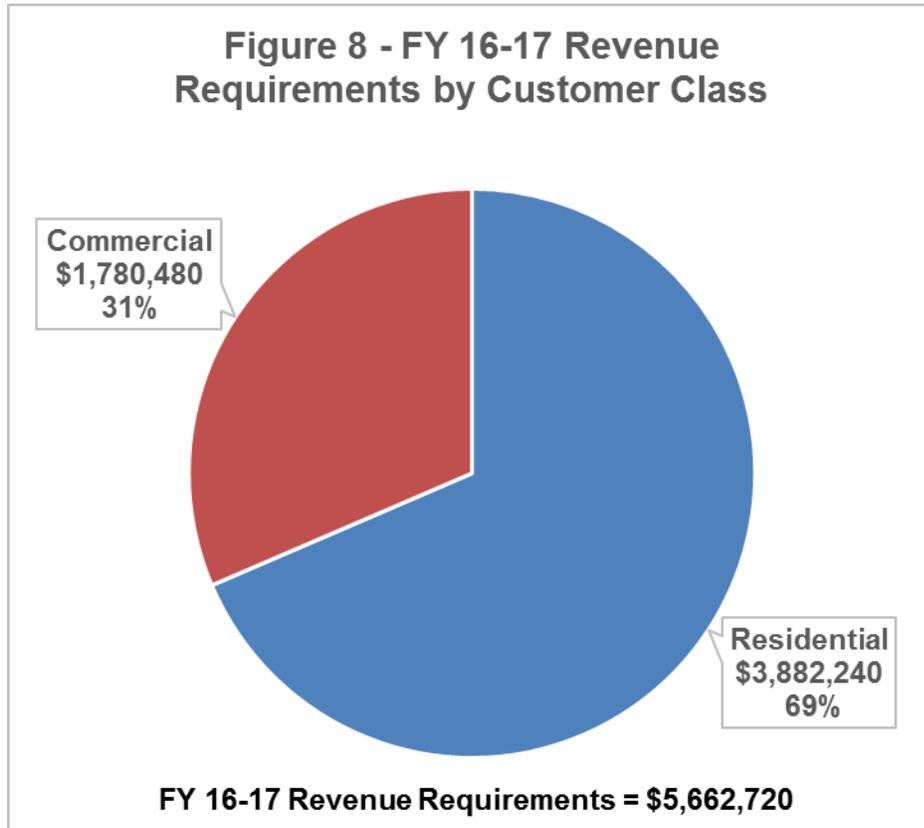
6.2 Recommended Rate Structure

Water Consultancy recommends that the District continue the current rate structure. Continuation of the current structure would also minimize any confusion by ratepayers. The current rate structure has adequately served the District's recent financial requirements. The current rate structure provides the financial stability that is necessary to fund the District's operating expenses which are 78 percent fixed.

6.3 Development of Sewer Service Charge Rates

To develop appropriate sewer service charge rates for each customer class, the revenue requirements for FY 16-17 to FY 18-19 developed in **Table 3** (Page 13) were allocated to the residential and commercial customer classes based on the ERUs for each class shown in **Table 12** (Page. 24).

The revenue requirements for residential and commercial customers for FY 16-17 are presented in **Figure 8**.



Based on the proportion of fixed and variable District costs determined in **Table 7** (Page 19), these allocations were divided into the fixed portion of the commercial rate which is based on the maximum allocated capacity and the variable portion of the commercial rate which is based on the customers prior year water use. Based on the Maximum Allocated Capacity and water use projections provided by the District, the unit rates for commercial customers were determined. This analysis is presented in **Table 13**.

**TABLE 13
REVENUE REQUIREMENTS FOR CUSTOMER CLASSES**

	Projected ERUs	FY 16-17	FY 17-18	FY 18-19	
District Revenue Requirements		<u>\$5,662,720</u>	<u>\$6,105,120</u>	<u>\$6,547,520</u>	
Residential	3033	\$3,882,240	\$4,185,540	\$4,488,840	
Commercial	1391	\$1,780,480	\$1,919,580	\$2,058,680	See Note 1
	<u>4424</u>				
Residential Revenue Requirements					
Single Family Dwelling	2661	\$3,406,080	\$3,672,180	\$3,938,280	
Condo or Second Dwelling	372	\$476,160	\$513,360	\$550,560	
Residential Charges					
Single family Dwelling	2661	\$1,280	\$1,380	\$1,480	
Condo or Second Dwelling	791	\$602	\$649	\$696	See Note 2
Commercial Revenue Requirements					
Low Strength	168	\$214,444	\$231,198	\$247,951	
Residential Strength	46	\$58,812	\$63,406	\$68,001	See Note 3
Medium Strength	1093	\$1,399,394	\$1,508,722	\$1,618,049	
High Strength	84	\$107,830	\$116,254	\$124,679	
Commercial Requirements per Hcf of Allocated Capacity	<u>Maximum Allocated Capacity (Hcf/year)</u>				
Low Strength	44437	\$3.75	\$4.04	\$4.33	
Medium Strength	121819	\$8.92	\$9.62	\$10.32	
High Strength	7692	\$10.89	\$11.74	\$12.59	
Commercial Requirements per Hcf of Prior Year Water Use	<u>(Hcf/year)</u>				See Note 4
Low Strength	19213	\$2.49	\$2.69	\$2.88	
Medium Strength	91223	\$3.42	\$3.69	\$3.96	
High Strength	5001	\$4.81	\$5.19	\$5.57	

Notes

1. Includes Residential Strength ERUs in the commercial customer class.
2. Each Condo or Second Dwelling represents 0.47 ERU.
3. Billed as Residential.
4. Data provided by the District based on the maximum use for the previous calendar year and 4 years back.

6.4 Recommended Annual Sewer Service Charge Rates

Based on the analysis described in the preceding section, the recommended sewer service charge rates for the District were developed. Water Consultancy recommends that the District adopt the rates summarized below.

**RECOMMENDED RESIDENTIAL ANNUAL SEWER SERVICE CHARGES
BEGINNING JULY 2016**

Residential Account	FY 2016-17	FY 2017-18	FY 2018-19
Single Family Dwelling	\$1280	\$1380	\$1480
Condo or 2 nd Dwelling	\$602	\$649	\$696

**RECOMMENDED COMMERCIAL ANNUAL SEWER SERVICE CHARGES
BEGINNING JULY 2016**

Total Annual Commercial Sewer Service Charge = Fixed Capacity Allocation Charge + Variable Charge

Fixed Capacity Allocation Charge (\$ per HCF Based on Historic Maximum Annual Water Use)			
Commercial Class	FY 2016-17	FY 2017-18	FY 2018-19
Low Strength Sewage	3.75	4.04	4.33
Medium Strength Sewage	8.92	9.62	10.32
High Strength Sewage	10.89	11.74	12.59

HCF = hundred cubic feet

Variable Charge (\$ per HCF Based on Prior Calendar Year Actual Water Use)			
Commercial Class	FY 2016-17	FY 2017-18	FY 2018-19
Low Strength Sewage	2.49	2.69	2.88
Medium Strength Sewage	3.42	3.69	3.96
High Strength Sewage	4.81	5.19	5.57

HCF = hundred cubic feet