

SAN LORENZO VALLEY WATER DISTRICT

FINAL Report for:

Focused Water Rate Study

(Includes Connection Fees & Sewer Rates)

June 2017

Welcome
TO
SAN LORENZO VALLEY
BOULDER CREEK · BROOKDALE · BEN LOMOND · FELTON

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TABLE OF CONTENTS

Section 1. Executive Summary	1
Background and Purpose	1
Key Findings.....	2
Study Recommendations	2
Section 2. Overview of the Rate Study Methodology	3
Rate Design Criteria.....	4
Rate Structure Terminology	4
Section 3. Water Rate Design	6
Developing the Recommended Water Rate Design Alternative.....	6
Water Utility Revenue Requirements	8
Characteristics of Water Customers by Class.....	9
Cost of Service Analysis – Water	11
Current vs. Proposed Water Rate Structures.....	12
Comparison of Current and Proposed Monthly Water Bills	14
Section 4. Sewer Rate Design.....	16
Developing the Recommended Sewer Rate Design Alternative.....	16
Cost of Service Analysis – Sewer	16
Current vs. Proposed Sewer Rates	17
Section 5. Water Connection Fee Study	18
Background and Purpose	18
General Connection Fee Requirements	18
Facility Standards, Level of Service, and Deficiencies	18
Mitigation Fee Act and Required Findings	19
Connection Fee Methodology.....	19
Existing Connections and Projected Future Growth	20
Existing and Planned Future Assets	21
Adjustments to the Cost Basis.....	22
Calculated Connection Fees	22
Fee Updates.....	23
Water Connection Fee Findings Statements.....	24
Section 6. Recommendations and Next Steps	25
Consultant Recommendations.....	25
Next Steps.....	25
Section 7. Appendix A – Abbreviations & Acronyms.....	27
Section 8. Appendix B – Water Revenue-stabilization Rates & Summary Tables	29
Section 9. Appendix C – Sewer Rate Summary Tables	30
Section 10. Appendix D – Water Connection Fee Summary Tables	31

TABLE OF FIGURES

Figure 1. Primary Components of a Rate Study	3
Figure 2. Water Consumption History.....	8
Figure 3. Summary of Water Revenue Requirements.....	9
Figure 4. Summary of Water Reserve Funds	9
Figure 5. Water Consumption by Customer Class	10
Figure 6. Peaking Factors by Customer Class	10
Figure 7. Number of Accounts by Customer Class	11
Figure 8. Summary of Fixed and Variable Rate Revenue Requirements.....	11
Figure 9. Summary of Adjusted Rate Revenue Requirements by Customer Class.....	12
Figure 10. Current and Proposed Water Rates Fiscal Year 2016/17 – 2021/22.....	13
Figure 11. Proposed Water Stabilization Rates Fiscal Year 2017/18 – 2021/22	13
Figure 12. Monthly Water Bill Comparison for Residential Customers.....	14
Figure 13. Monthly Water Bill Comparison for Commercial Users	15
Figure 14. Summary of Sewer Revenue Requirements.....	16
Figure 15. Current and Proposed Sewer Rates Fiscal Year 2016/17 – 2021/22.....	17
Figure 16. Monthly Single-Family Sewer Bill Comparison	17
Figure 17. Meter Equivalence – Water.....	20
Figure 18. Projected Customer Growth – Water.....	21
Figure 19. Summary of Cost Basis for Future Water Customers.....	22
Figure 20. Costs Allocated to Future Water Customers & New Connection fees	23
Figure 21. Updated Water Connection Fees	23

Section 1. EXECUTIVE SUMMARY

Background and Purpose

BACKGROUND

Water rates for the San Lorenzo Valley Water District (District) were last reviewed in 2013 as part of a Water and Wastewater Charges Study. In February 2016, the District retained NBS to prepare a cost-of-service study that included both water and sewer rates¹. The results of that study, which were primarily the projected annual rate revenue requirements by customer class for the next five years, provided the background for a subsequent rate-design study.

In February 2017, the District engaged NBS to complete the rate design portion of the rate study for both water and sewer utilities by evaluating alternative rate structures, which is the focus of this report. Water connection fees were also evaluated in this study.

The District provides water service in the San Lorenzo Valley to the communities of Boulder Creek, Brookdale, Ben Lomond, Lompico, Zayante, Scotts Valley, Manana Woods, and Felton. The District's service area is approximately 60 square miles and includes almost 7,900 water customers. The District also provides sewer service to 55 customers within Bear Creek Estates.

PURPOSE

The overall purpose of this study is to develop proposed water rates, connection fees and proposed sewer rates for the small number of customers served by the District's sewer utility. This required thoroughly reviewing and confirming the District's broader rate-related goals and objectives, including policies related to financial parameters, conservation goals, customer bill impacts, and ensuring the new rates will provide long-term revenue stability.

The rates and fees developed in this study are intended to meet the requirements of Proposition 218 (or Prop 218)², commonly referred to as the "right to vote on new taxes" act, and were developed in a manner that is consistent with industry standards. This report documents the study and is intended to assist the District in its effort to communicate transparently with the residents and businesses it serves.

In developing proposed utility rates and connection fees, NBS and District staff worked cooperatively, and the District Board provided direction during the study, to develop the recommended rate and fee alternatives. The final study results were presented to the District Board at a public workshop on May 24, 2017, which approved the water and sewer rates, and water connection fees and directed staff to prepare public notices pursuant to Prop 218.

¹ Final Report: Enterprise Wide Cost of Service Financial Study, November 2016. Adopted by the Board of Directors January 2017.

² California Constitutional Provision, Article XIII D, Section 6.

Key Findings

REVENUE REQUIREMENTS AND PROJECTED RATES

The District's water and sewer utilities both need to complete ongoing rehabilitation and replacement projects while at the same time building and maintaining adequate reserve funds. Maintaining the financial integrity of the water utility was a key consideration in developing the proposed water rates. Similarly, stabilizing the financial health of the sewer utility was also a key consideration in developing the proposed sewer rates. Significant annual rate increases over the next five years are recommended for both the water and sewer utilities³, as follows:

- Water – 37 percent in FY 2017/18 (Year 1); 7 percent in Year 2; 6 percent in Year 3; and 5 percent in Years 4 and 5.
- Sewer – 20 percent annually, from FY 2017/18 through FY 2021/22.

WATER AND SEWER RATES

Due to the source and cost of the District's water supply, which make it difficult to establish a defensible cost basis for multiple volumetric tiers, the District elected to adopt a uniform (single-tier) rate design rather than continue with a more conservation-promoting multi-tiered rate design. Fixed monthly charges will continue to be based on meter sizes.

The current sewer rate design, which includes a monthly fixed service charge by account, was retained.

CONNECTION FEES

Connection fees were calculated for the water utility. These fees are charged to new customers connecting to the District's water system and are designed to place new customers on equal financial footing with current utility customers. Calculated connection fees for water are more than double the current adopted fees, and represent the maximum connection fee that the District could adopt.

Study Recommendations

NBS recommends the District take the following actions:

- Adopt the water and sewer five-year financial plans presented below.
- Adopt the recommended water and sewer reserve fund target balances.
- Adopt the recommended fixed monthly and uniform volumetric water rates (vs tiered rates).
- Adopt the recommended water connection fees.
- Adopt the recommended sewer rates.
- Conduct a legal review of the proposed rates.
- Proceed with Prop 218 noticing requirements and 45-day protest period.
- Assuming a successful Prop 218 process (that is, there is not a majority protest of the rates), adopt the rates summarized in this report. Connection fees are not subject to the Prop 218 process.

The next section discusses the general rate study methodology, followed by sections for the water rate study (Section 3), the sewer rate study (Section 4), and connection fees (Section 5).

³ More specifically, these are increases in the total rate revenue; the rates increases for each customer class reflect cost allocation factors that result in some rates being more or less than the annual increases noted here.

Section 2. OVERVIEW OF THE RATE STUDY METHODOLOGY

Comprehensive rate studies, whether for water rates or sewer rates, typically include three components: (1) preparation of a financial plan, which identifies the net revenue requirements for the utility; (2) analysis of the cost-of-service each customer class; and (3) the rate structure design. These steps are shown in Figure 1 and are intended to follow industry standards and reflect the fundamental principles of cost-of-service ratemaking embodied in the American Water Works Association (AWWA) Principles of Water Rates, Fees, and Charges⁴, also referred to as Manual M1. This methodology also addresses requirements under Proposition 218 that rates not exceed the cost of providing the service and be proportionate to the cost of providing service for all customers. In terms of the chronology of the study, these three steps represent the order they were performed for both utilities.

FIGURE 1. PRIMARY COMPONENTS OF A RATE STUDY



The District performed an Enterprise Wide Cost of Service Financial Study, which essentially completed the first two components (the financial plan and cost-of-service analyses), the results of which were adopted by the Board in January 2017.

As a result of this focused rate design study, rate increases – or more accurately, increases in the total revenue collected from rates – are recommended for each utility. Because the cost-of-service analysis defines revenue requirements separately for each customer class, not all rates are increased by exactly the same overall annual rate increase in the first year (i.e., in FY 2017/18, commonly called the “test year”). The remaining years in the five-year period (i.e., FY 2018/19 through FY 2021/22) are then adjusted in an across-the-board manner so that all rates are increase by exactly the annual percentage rate adjustment.

The District provided NBS with the necessary data, including historical, current, and projected revenues, expenditures, customer accounts, and water consumption, along with other operational and capital cost data that were essential for conducting this study.

⁴ *Principles of Water Rates, Fees, and Charges, Manual of Water Supply Practices, M1, AWWA, seventh edition, 2017.*

Rate Design Criteria

It is important for utilities to send proper price signals to its customers about the actual cost of providing service. This objective is typically addressed through both the magnitude of the rates and the rate structure design. In other words, both the amount of revenue collected and the way in which it is collected from customers are important.

Several criteria are typically considered in setting rates and developing sound rate structures. The fundamentals of this process have been documented in a number of rate-setting manuals. For example, the foundation for evaluating rate structures is generally credited to James C. Bonbright in the *Principles of Public Utility Rates*⁵, which outlines pricing policies, theories, and economic concepts along with various rate designs. The other common industry standard is the aforementioned American Water Works Association's (AWWA) Manual M1.

The following is an abbreviated list of the rate structure objectives common to many utilities and their customers⁶, and which can be applied to water and sewer utilities:

- Rates should yield the necessary revenue in a stable and predictable manner.
- Rates should minimize unexpected changes to customer bills.
- Rates should discourage wasteful use and promote efficient uses.
- Rates should promote fairness and equity (i.e., cost based).
- Rates should avoid discrimination.
- Rates should maintain simplicity, certainty, convenience, feasibility, and freedom from controversy.
- Rates should comply with all applicable laws (in California, this specifically includes Prop 218).

Rate Structure Terminology

One of the most fundamental points in considering rate structures is the relationship between fixed and variable costs. The vast majority of water and sewer rate structures contain a fixed or minimum charge, and a volumetric charge.

The District's rate design criteria reflect the characteristics of the District's water and sewer utilities. Capital and operational reserve funding targets incorporated input from District staff and are intended to meet the utilities specific financial objectives. The following discussion describes general industry rate-study practices in California and principals that were reflected in the recommended rates.

FIXED CHARGES

Fixed charges can be called base charges, minimum monthly charges, fixed monthly meter charges, etc. Although fixed charges are typically a significant percentage of the utilities overall costs, utilities rarely collect 100 percent of their fixed costs through fixed charges. In general, customers prefer that charges include a volumetric component, as there is an inherent and widely recognized equity in a "pay-for-what-you-use" philosophy.

⁵ James C. Bonbright; Albert L. Danielsen and David R. Kamerschen, *Principles of Public Utility Rates*, (Arlington, VA: Public Utilities Report, Inc., Second Edition, 1988), p. 383-384.

⁶ M1 Manual, AWWA, seventh edition, 2017, p. 105.

For a water utility, fixed charges typically increase by meter size. This is because a large portion of water utilities' costs are typically related to meeting capacity requirements and therefore reflecting the capacity demands of each meter size is important in establishing equitable fixed charges for customers. For example, a customer with a 2" meter may have a fixed meter charge that is eight times greater than the 5/8" meter charge based on the meter's maximum flow rate.⁷

VARIABLE (CONSUMPTION-BASED) CHARGES

In contrast, variable costs such as the cost of purchased water, electricity used in pumping water, and chemicals used in the water treatment facilities tend to change with the quantity of water produced. For water utilities, variable charges are generally based on metered consumption and charged on a dollar-per-unit cost (per 100 cubic feet, or hcf, in the District's case).

There are significant variations in the basic philosophy of variable charge rate alternatives. Under a uniform (single tier) water rate structure, the cost per unit does not change with consumption, and provides a simple and straightforward approach from the perspective of customer understanding and rate administration/billing.

KEY FINANCIAL ASSUMPTIONS

The following are the key assumptions used in the water and sewer rate analyses:

- **Funding Capital Projects** – The analysis for both utilities assumes:
 - Capital costs attributable to existing customers are funded with rate revenue.
 - Capital costs attributable to growth or expansion-related costs will be funded through connection fee revenue to the extent those revenues are available.
 - All capital projects listed in the financial plans are District projections.
- **Reserve Targets for Water and Sewer** – Reserves for operations and capital needs are set at levels established by District staff and adopted by the District Board. Reserve targets used in the analysis are as follows:
 - Operating & Maintenance Reserve – 180 days of O&M costs for water and 90 days for sewer.
 - Capital Rehabilitation and Replacement Reserve – \$2 million for water and 3 percent of net asset values for sewer.
- **Inflation and Growth Projections** – District-provided inflation and growth projections were applied equally to the water and sewer utilities:
 - General inflation is 2.65 percent annually.
 - Customer growth is 0.00 percent annually.
 - Labor cost inflation is 2.69 percent annually.
 - Energy cost inflation is 4.40 percent annually.
 - Chemical cost inflation is 5.00 percent annually.

The next two sections discuss the water and sewer rate studies in further detail.

⁷ These are typically referred to as "hydraulic capacity factors" that represent the relative capacity required in the water system. See American Water Works Association, *Water Meters – Selection, Installation, Testing and Maintenance, M6 Manual, Table 5-3*.

Section 3. WATER RATE DESIGN

Developing the Recommended Water Rate Design Alternative

The broader water rate study, including the cost-of-service analysis, was undertaken with a few specific objectives in mind, including:

- Generating sufficient additional revenue needed to meet projected funding requirements, particularly the costs of capital improvement projects,
- Providing revenue stability,
- In light of recent impacts from the drought and conservation efforts, evaluating and incorporating projected water consumption levels.

Although the previous cost-of-service study developed financial plans, NBS re-evaluated those plans and developed multiple additional financial plan scenarios and corresponding water rate alternatives as requested by District staff as a part of this focused water rate study. Each financial plan scenario provided different levels of CIP funding and projected reserve fund balances. All rate structure alternatives were developed using general industry standards and cost-of-service principles.

The District's Board of Directors selected the rate alternative recommended in this report at the May 24, 2017 special board meeting, noting that it provided the most favorable mix of cost-of-service results and the current rate structure. The following are the basic components included in the cost-of-service and/or rate design analysis:

- **Developing Revenue Requirements:** The water revenue requirements were projected based on the current annual budget and input from District staff. Revenue requirements were developed in the cost-of-service study and re-evaluated in the focused rate design study.
- **Developing Cost Allocations:** The cost-of-service study used these projected water revenue requirements to "functionalized" them into three categories: (1) fixed capacity costs; (2) variable (or volume-based) costs; and (3) customer service costs. Each of these functional costs has a distinct allocation factor used to determine revenue requirements by customer class.
- **Determining Revenue Requirements by Customer Class⁸:** As the next step in the cost-of-service analysis, revenue requirements for each customer class were determined based on allocation factors such as water consumption, capacity peaking factors, and number of accounts by meter size. For example, volume-related costs are allocated based on the water consumption for each class, while customer costs are allocated based on number of accounts.
- **Rate Design and Fixed vs. Variable Costs:** These revenue requirements by class are used to evaluate rate-design alternatives, which include determining how much revenue to collect from fixed charges versus variable rates. Fixed costs, such as capacity-related costs, billing, and general administrative costs, are typically collected through a fixed monthly charge, while variable costs such as pumping and purchased water costs are typically collected through volumetric charges. While this study determined that the District's fixed and variable costs are approximately 61 percent fixed and 39 percent variable⁹, industry practices provide flexibility regarding the actual

⁸ In the District's case, meter sizes serve as customer classes for the water utility.

⁹ A more strict "accounting-based" approach determined fixed/variable costs were closer to 82%/18%, respectively.

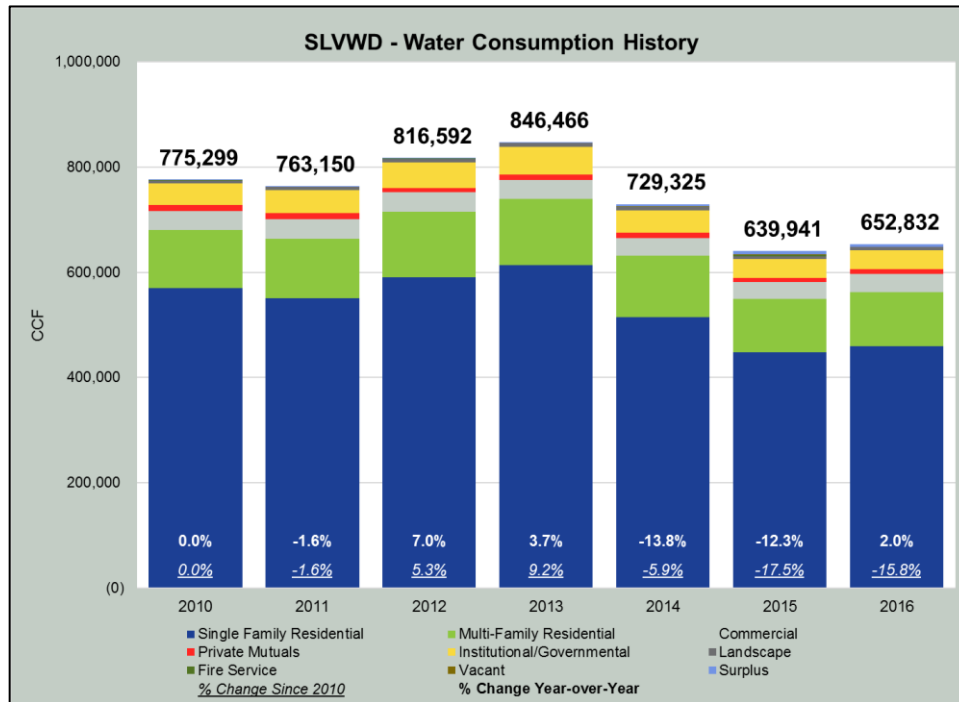
percentages collected from fixed vs. variable rates. After evaluating various combinations of fixed vs. variable costs, and based on direction from District staff and the District Board, a rate structure that recovers 30 percent from fixed charges and 70 percent from variable was selected¹⁰.

- **Elimination of the Drought Surcharge:** This study assumes the \$1.00/ccf drought charge currently in place will end when the proposed rates are implemented.
- **Revenue Stabilization Rates:** New revenue stabilization rates were developed as part of the study with the intent of stabilizing the District's variable rate revenue that may be effected by low water sales due to conservation or unusual weather patterns.
 - Once adopted through Prop 218, these rates can be implemented by Board of Directors on an as-needed basis.
 - Revenue Stabilization rates are reversible; when volumetric revenue losses subside, use of revenue stabilization rates would rescinded and the current volumetric rate (\$/CCF) would be used.
 - The District will provide adequate notice prior to implementation and rescission¹¹.
 - Although details are yet to be finalized, a key qualification for revenue stabilization rates to be implemented is the period and level of volumetric rate revenue losses (i.e., revenues below the expected revenue level). Higher volumetric rates, beginning with 10 percent increase would be implemented and, depending on the level of revenue losses, can be increased by additional increments of five percent but capped at 20 percent.
- **Water Conservation:** Minimal water conservation was included in projected water sales of 650,000 ccf for FY 2017/18, and is a consumption level the District is comfortable with for FY 2017/18. Figure 2 below shows the District's water consumption history for the last seven years.

¹⁰ The District's current revenue allocation is about 54 percent fixed and 46 percent variable.

¹¹ Details of proposed revenue stabilization rates and how they are implemented and rescinded are provided in Appendix B.

FIGURE 2. WATER CONSUMPTION HISTORY



Water Utility Revenue Requirements

It is important for municipal utilities to maintain reasonable reserves in order to handle emergencies, fund working capital, maintain a good credit rating, and generally follow sound financial management practices. Rate increases typically consider the need to meet several objectives:

- **Meeting Operating Costs:** For Fiscal Years 2017/18 through 2021/22, the net revenue requirement (i.e., total annual O&M expenses, debt service, and rate-funded capital costs less non-rate revenues) is estimated to be approximately \$9.7 mil to \$11.4 mil. If no rate increases are implemented, current revenue is expected to be insufficient to cover these operating costs.
- **Maintaining Adequate Bond Coverage:** The District is required by its bond covenants for its 2012 water bonds to maintain debt-service coverage ratios of at least 1.15. The benefit of maintaining a higher coverage ratio is that it strengthens the District's credit rating, which can help lower the interest rates for future debt-funded capital projects, and in turn reduce interest payments for future debt issuances. This analysis assumes that the District will not be incurring any new debt. It is projected that with the recommended rate increases, the District will meet or exceed the 1.15 debt coverage ratio for existing debt through Fiscal Year 2021/22.
- **Maintaining Reserve Funds:** If no rate increases are implemented, reserves will be insufficient to fund ongoing water utility operations. Annual rate increases are necessary to meet reserve fund target levels. Based on the need to be responsive to unforeseen emergencies, District staff chose the following reserve targets:
 - **Operating Reserves** equal to 50 percent of the utility's annual operating expenses. This reserve target builds up to a six-month (or 180-day) cash cushion for normal operations. For Fiscal Year 2017/18, this is estimated to be \$1.9 million.

- **Capital Reserves** of \$2 million or 3 percent of net assets serves as a starting point for addressing longer-term capital needs. For Fiscal Year 2017/18 and into the near future, this is equal to \$2 million.
- **Debt Reserves** have a required reserve fund balance of almost \$500,000. The utility will have debt service obligations for many years to come; however, several obligations should be completed within the next 10 to 15 years.

Figure 3 summarizes the sources and uses of funds and net revenue requirements for the next five years, and includes the recommended annual rate increases. Figure 4 summarizes the projected reserve fund balances and reserve targets. A summary of the water utility's proposed 10-year financial plan, which is included in Appendix B – Water Rate Study Summary Tables, includes revenue requirements, reserve funds, revenue sources, proposed rate increases, and the District's capital improvement program.

FIGURE 3. SUMMARY OF WATER REVENUE REQUIREMENTS

Cost of Service Summary	Budget	Projected				
	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Sources of Water Funds						
Rate Revenue Under Prevailing Rates	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640
Non-Rate Revenues	1,143,800	1,143,800	1,143,800	1,143,800	1,143,800	1,143,800
Interest Earnings	5,000	-	-	-	-	-
Total Sources of Funds	\$ 7,996,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440
Costs of Water Service						
Water Fund Expenses	\$ 7,567,612	\$ 7,969,789	\$ 8,282,159	\$ 8,502,813	\$ 8,729,059	\$ 8,961,692
Debt Service	1,000,751	1,000,751	899,339	797,926	395,840	291,041
Capital Expenses	1,678,988	1,862,385	1,918,257	2,116,934	2,180,442	3,299,649
Total	\$ 10,247,352	\$ 10,832,926	\$ 11,099,754	\$ 11,417,672	\$ 11,305,340	\$ 12,552,382
Surplus / (Deficiency)	\$ (2,250,912)	\$ (2,841,486)	\$ (3,108,314)	\$ (3,426,232)	\$ (3,313,900)	\$ (4,560,942)
Additional Revenue from Rate Increases (1)	-	2,533,627	3,190,315	3,792,593	4,324,604	4,883,217
Surplus (Deficiency) after Rate Increase	\$ (2,250,912)	\$ (307,859)	\$ 82,002	\$ 366,361	\$ 1,010,705	\$ 322,275
Projected Annual Rate Increase	0.00%	37.00%	7.00%	6.00%	5.00%	5.00%
Cumulative Rate Increases	0.00%	37.00%	46.59%	55.39%	63.15%	71.31%
Net Revenue Requirement (2)	\$ 9,098,552	\$ 9,689,126	\$ 9,955,954	\$ 10,273,872	\$ 10,161,540	\$ 11,408,582

1. Assumes new rates are implemented July 1, 2017.

2. Total Use of Funds less non-rate revenues and interest earnings. This is the annual amount needed from water rates.

FIGURE 4. SUMMARY OF WATER RESERVE FUNDS

Beginning Reserve Fund Balances and Recommended Reserve Targets	Budget	Projected				
	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Operating Reserve						
Ending Balance	\$ 407,815	\$ 759,703	\$ 1,451,579	\$ 2,126,000	\$ 2,182,000	\$ 2,808,482
<i>Recommended Minimum Target</i>	<i>1,892,000</i>	<i>1,992,000</i>	<i>2,071,000</i>	<i>2,126,000</i>	<i>2,182,000</i>	<i>2,987,000</i>
Capital Rehabilitation & Replacement Reserve						
Ending Balance	\$ -	\$ -	\$ -	\$ 242,096	\$ 1,794,566	\$ 1,825,971
<i>Recommended Minimum Target</i>	<i>2,000,000</i>	<i>2,000,000</i>	<i>2,000,000</i>	<i>2,000,000</i>	<i>2,000,000</i>	<i>2,000,000</i>
Debt Reserve						
Ending Balance	\$ 376,765	\$ 379,591	\$ 383,387	\$ 388,179	\$ 394,002	\$ 400,897
<i>Recommended Minimum Target</i>	<i>498,687</i>	<i>498,687</i>	<i>498,687</i>	<i>498,687</i>	<i>498,687</i>	<i>498,687</i>
Total Ending Balance	\$ 784,580	\$ 1,139,294	\$ 1,834,966	\$ 2,756,275	\$ 4,370,568	\$ 5,035,349
<i>Total Recommended Minimum Target</i>	<i>\$ 4,390,687</i>	<i>\$ 4,490,687</i>	<i>\$ 4,569,687</i>	<i>\$ 4,624,687</i>	<i>\$ 4,680,687</i>	<i>\$ 5,485,687</i>

Characteristics of Water Customers by Class

Water customer characteristics are used in the cost-of-service analysis for allocating costs to customer classes. The District's most recent customer class data includes the consumption data in Figure 5, peaking factors in Figure 6, and the total number of accounts in Figure 7.

FIGURE 5. WATER CONSUMPTION BY CUSTOMER CLASS

Development of the COMMODITY (Volumetric) Allocation Factor - Water Utility				
Customer Class	CY 2016 Volume (ccf) (1)	Conservation for Test Year (FY 2017/18)	Adjusted Volume with Conservation	Percent of Total Volume
Single Family Residential	459,680	0.4%	457,673	70.9%
Multi-Family Residential	102,921	0.4%	102,472	15.9%
Commercial	34,197	0.4%	34,047	5.3%
Private Mutuals	8,710	0.4%	8,671	1.3%
Institutional/Governmental	35,934	0.4%	35,777	5.5%
Landscape	6,901	0.4%	6,870	1.1%
Fire Service accounts	-	0.4%	-	0.0%
Vacant	382	0.4%	380	0.1%
Total	648,724	--	645,891	100%
Surplus Water accounts (2)	4,109	0.0%	4,109	0.6%
Grand Total	652,832	0.4%	650,000	101%

1. Consumption data is based on the SLVWD's billing data (February 2016 - January 2017).
2. Surplus water accounts shown here; revenue requirements will not be developed for these sporadic customers.

FIGURE 6. PEAKING FACTORS BY CUSTOMER CLASS

Development of the CAPACITY (MAX MONTH) Allocation Factor - Water Utility				
Customer Class	Average Monthly Use (ccf)	Peak Monthly Use (ccf) (1)	Peak Monthly Factor	Max Month Capacity Factor
Single Family Residential	38,307	53,529	1.40	69.4%
Multi-Family Residential	8,577	10,872	1.27	14.1%
Commercial	2,850	3,745	1.31	4.9%
Private Mutuals	726	1,368	1.88	1.8%
Institutional/Governmental	2,994	5,940	1.98	7.7%
Landscape	575	1,571	2.73	2.0%
Fire Service accounts	0	0	0.00	0.0%
Vacant	32	83	2.61	0.1%
Total	54,060	77,107	1.43	100%
Surplus Water accounts (2)	342	972	2.84	1.2%
Grand Total	54,403	78,079	1.44	101%

1. Based on peak monthly data (peak day data not available).
2. Surplus water accounts shown here; revenue requirements will not be developed for these sporadic customers.

FIGURE 7. NUMBER OF ACCOUNTS BY CUSTOMER CLASS

Development of the CUSTOMER Allocation Factor - Water Utility		
Customer Class	Number of Meters (1)	Percent of Total
Single Family Residential	7,102	89.4%
Multi-Family Residential	513	6.5%
Commercial	201	2.5%
Private Mutuals	6	0.1%
Institutional/Governmental	53	0.7%
Landscape	14	0.2%
Fire Service accounts	-	0.0%
Vacant	58	0.7%
Total	7,947	100.0%
Surplus Water accounts (2)	15	0.2%
Grand Total	7,962	100.2%

1. Meter Count data is based on the SLVWD's billing data for January 2017.

2. Surplus water accounts shown here; revenue requirements will not be developed for these sporadic customers.

Cost of Service Analysis – Water

The District's previous cost-of-service study resulted in a study report at the end of 2016. While those results are not repeated here, they are summarized in Figure 8, and more detailed fixed and variable allocations are shown in Appendix B. Figure 8 only shows the fixed/variable percentages for the recommended rate design; other alternatives included 50/50 and 30/70 percent fixed/variable options.

FIGURE 8. SUMMARY OF FIXED AND VARIABLE RATE REVENUE REQUIREMENTS

Classification Components (1)	Adjusted Net Revenue Requirements (2017/18)	
	(30% Fixed / 70% Variable)	
Commodity-Related Costs (Volumetric Share)	\$ 3,642,457	38.8%
Capacity-Related Costs (Volumetric Share)	2,924,429	31.2%
Capacity-Related Costs (Fixed Share)	2,135,597	22.8%
Customer-Related Costs	678,783	7.2%
Net Revenue Requirements	\$ 9,381,267	100%

1. Surplus Water Net Revenue Requirements are excluded from total; rates are developed separately.

Based on the 30% fixed/70% variable results of the cost allocation process, Figure 9 summarizes the revenue requirement from each type of customer, with a total revenue requirement of \$9.38 million.

FIGURE 9. SUMMARY OF ADJUSTED RATE REVENUE REQUIREMENTS BY CUSTOMER CLASS

<i>Recommended Rate Alternative - 30% Fixed / 70% Variable)</i>						
Customer Classes	Classification Components				Cost of Service Net Rev. Req'ts	% of COS Net Revenue Req'ts
	Commodity-Related Costs (Variable Portion)	Capacity-Related Costs (Variable Portion)	Capacity-Related Costs (Fixed Portion)	Customer-Related Costs		
Single Family Residential	\$ 2,581,016	\$ 2,030,191	\$ 1,482,569	\$ 606,609	\$ 6,700,385	71.4%
Multi-Family Residential	577,882	412,354	301,126	43,817	1,335,180	14.2%
Commercial	192,008	142,028	103,718	17,168	454,922	4.8%
Private Mutuals	48,902	51,869	37,878	512	139,161	1.5%
Institutional/Governmental	201,762	225,275	164,509	4,527	596,072	6.4%
Landscape	38,745	59,564	43,497	1,196	143,002	1.5%
Fire Service accounts	-	-	-	-	-	0.0%
Vacant	2,143	3,148	2,299	4,954	12,544	0.1%
Total Net Revenue Requirement	\$ 3,642,457	\$ 2,924,429	\$ 2,135,597	\$ 678,783	\$ 9,381,267	100%
<i>Total Net Revenue Requirement by Classification Component</i>	<u>VARIABLE</u> \$6,566,887		<u>FIXED</u> \$2,814,380		\$9,381,267	

Current vs. Proposed Water Rate Structures

Besides merely providing the mechanism for collecting rate revenue from individual customers, water rate design presents an opportunity to consider broader rate-design objectives and policies, including revenue stability and water conservation.

During the rate-design analysis, District staff and NBS developed several water rate structure alternatives.

- **Current Rate Design/Customer Classes** – Preserving the current rate structure that maintains fixed monthly service charges by meter size was important to the District to maintain administrative efficiency and ease of billing.
- **Fixed/Variable Rate Alternatives:**
 - Rate Alternative #1: 70% fixed/30% variable
 - Rate Alternative #2: 50% fixed/50% variable (the current rate design)
 - Rate Alternative #3: 30% fixed/70% variable
- **Variable Rates:** As previously noted, based on Proposition 218 requirements and recent court cases, adopting a uniform volumetric rate was determined to be the most defensible volumetric rate structure¹².
- **Revenue Stabilization Rates:** To help the District respond to losses in volumetric rate revenue due to extraordinary conservation or unusual weather patterns, “revenue-stabilization rates” were developed.
- **Surplus Water:** Bulk water is sold directly to customers from a dedicated connection at the District’s office; customers must provide their own containers to fill. While District counsel confirmed that surplus water rates are not governed by Prop 218, a revised rate was calculated as part of this study.

¹² Although tiered rates were considered, it was the opinion of NBS, District staff, and the District’s legal counsel that uniform rates were the most defensible option.

Figure 10 compares the current and recommended rates for FY 2016/17 through 2021/22 (including surplus water rates). Cost-of-service adjustments are reflected in the FY 2017/18 rates; thereafter rate increases are applied on an across-the-board basis. Figure 11 shows the recommended revenue stabilization rates for FY 2017/18 through 2021/22 at various levels. Appendix B provides more detail on the development of the proposed water rates.

FIGURE 10. CURRENT AND PROPOSED WATER RATES FISCAL YEAR 2016/17 – 2021/22

Water Rate Schedule		Current Rates	Proposed Rates - 30% Fixed / 70% Variable				
			FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Projected Increase in Rate Revenue per Financial Plan:			37.00%	7.00%	6.00%	5.00%	5.00%
Fixed Service Charge							
Monthly Fixed Service Charges:							
5/8 inch	per account	\$34.00	\$28.27	\$30.24	\$32.06	\$33.66	\$35.34
3/4 inch	per account	\$34.00	\$28.27	\$30.24	\$32.06	\$33.66	\$35.34
1 inch	per account	\$56.50	\$42.36	\$45.33	\$48.05	\$50.45	\$52.97
1 1/2 inch	per account	\$114.00	\$77.61	\$83.04	\$88.03	\$92.43	\$97.05
2 inch	per account	\$181.50	\$119.91	\$128.30	\$136.00	\$142.80	\$149.94
3 inch	per account	\$341.00	\$232.70	\$248.98	\$263.92	\$277.12	\$290.97
4 inch	per account	\$567.00	\$359.58	\$384.75	\$407.84	\$428.23	\$449.64
Surplus Water (1)	per account	\$114.00	\$77.61	\$83.04	\$88.03	\$92.43	\$97.05
Volumetric Charges for All Water Consumed							
Tier 1	0 - 4 ccf	\$3.81	--	--	--	--	--
Tier 2	5 - 15 ccf	\$4.97	--	--	--	--	--
Tier 3	16 - 50 ccf	\$5.96	--	--	--	--	--
Tier 4	51+ ccf	\$6.61	--	--	--	--	--
Drought Surcharge	per CCF	\$1.00	--	--	--	--	--
Flat Rate (Uniform Rate)	per CCF	\$4.64	\$10.12	\$10.83	\$11.48	\$12.06	\$12.66
Surplus Water	per CCF	\$10.00	\$14.39	\$15.40	\$16.32	\$17.14	\$17.99

1. Per District policy, Surplus water accounts are charged the 1 1/2 inch meter monthly fee.

FIGURE 11. PROPOSED WATER REVENUE STABILIZATION RATES FISCAL YEAR 2017/18 – 2021/22

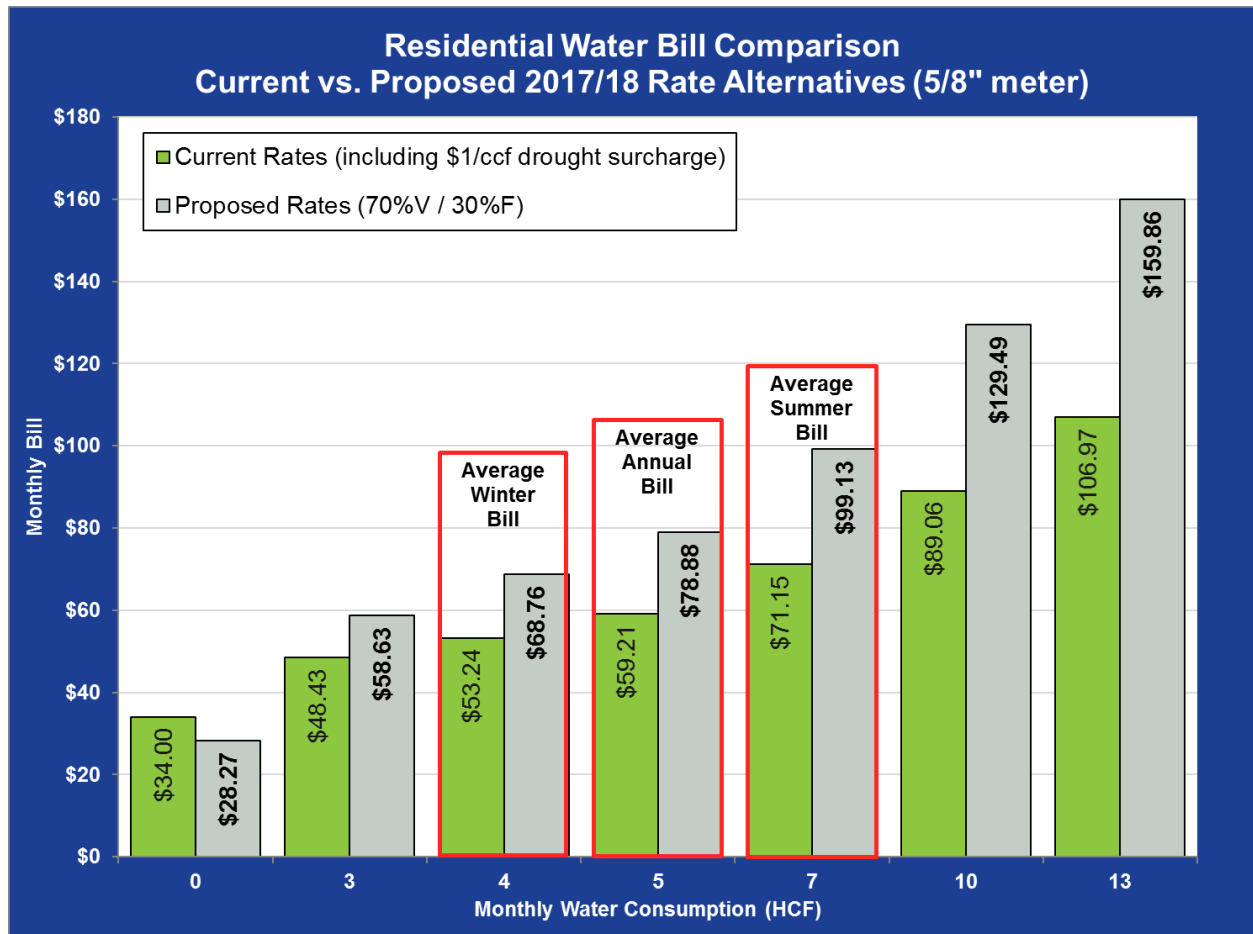
Water Rate Schedule	Proposed Revenue-Stabilization Volumetric Rates				
	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Volumetric Charges for All Water Consumed					
Flat Rate (Uniform Rate)	\$10.12	\$10.83	\$11.48	\$12.06	\$12.66
Revenue Stabilization Rates for All Water Consumed					
10%	\$11.14	\$11.91	\$12.63	\$13.26	\$13.92
15%	\$11.64	\$12.46	\$13.20	\$13.86	\$14.56
20%	\$12.15	\$13.00	\$13.78	\$14.47	\$15.19

Comparison of Current and Proposed Monthly Water Bills

SINGLE-FAMILY WATER CUSTOMERS

Figure 12 compares monthly water bills under the current and proposed FY 2017/18 rates for single-family customers for a 5/8" inch meter – the most common meter size.

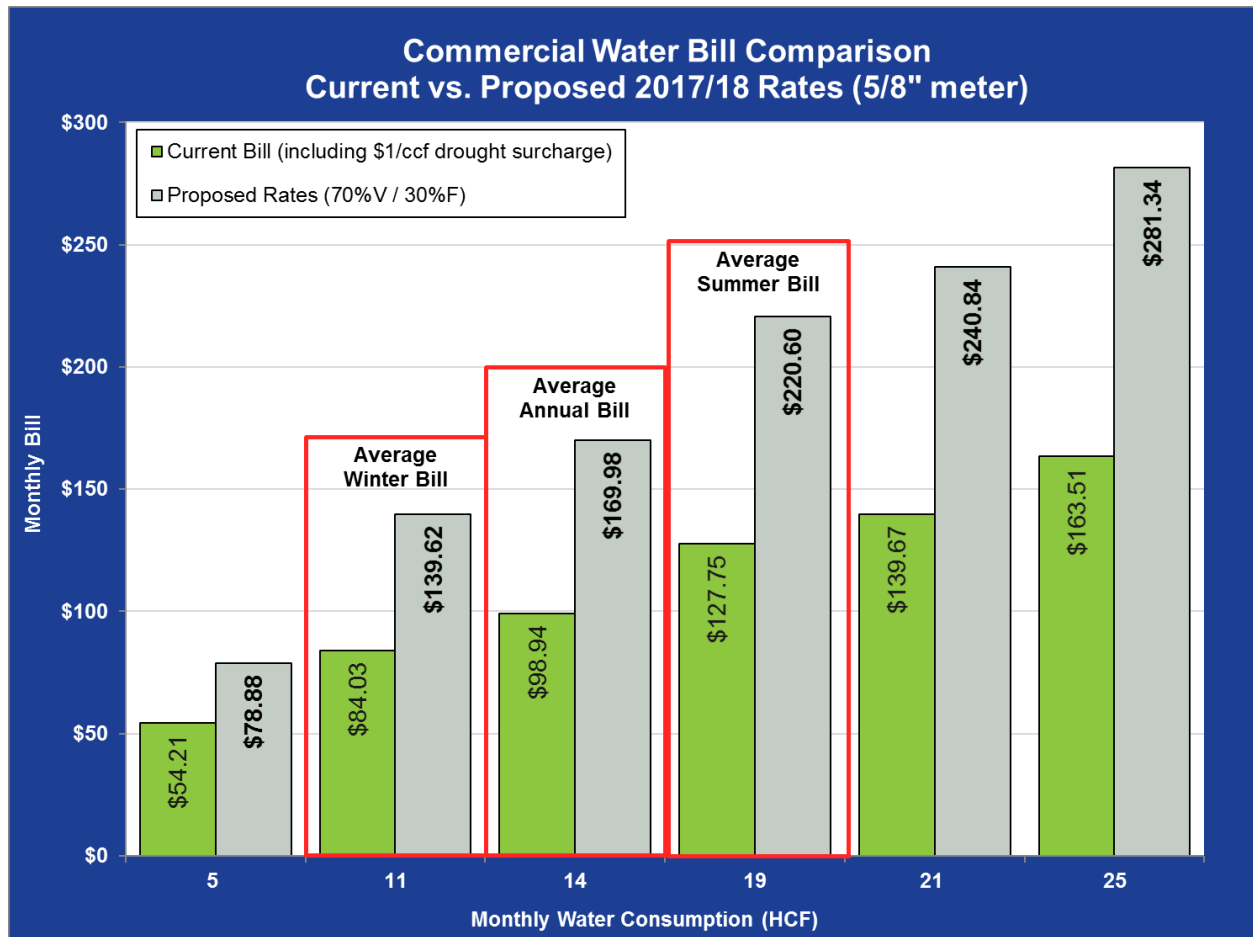
FIGURE 12. MONTHLY WATER BILL COMPARISON FOR RESIDENTIAL CUSTOMERS



COMMERCIAL WATER CUSTOMERS

Commercial customers are currently subject to the same fixed monthly charges by meter size and uniform volumetric rate as single-family customers; proposed rates follow the same rate structure. Figure 13 compares current and proposed FY 2017/18 monthly bills for commercial customers, also with a 5/8-inch meter at various levels of consumption.

FIGURE 13. MONTHLY WATER BILL COMPARISON FOR COMMERCIAL USERS



Section 4. SEWER RATE DESIGN

Developing the Recommended Sewer Rate Design Alternative

The District maintains a small wastewater system for a small residential area (55 total connections). Although the sewer rate study included objectives similar to those in the water rate study, the overriding concern was building and maintaining the financial health of the sewer utility.

The earlier cost-of-service study addressed sewer rate tasks were similar to those performed for the water rates, including developing a financial plan (revenue requirements), functional cost allocations, and revenue requirements by customer class. The rate design analysis then developed individual rates within customer classes. Detailed tables showing the systematic development of the analysis are presented in Appendix C – Sewer Rate Summary Tables.

Figure 14 summarizes the financial plan and net revenue requirements for the next five years, and indicates that annual net revenue requirements cannot be fully funded by current rate revenues. Although initial results indicated that the sewer utility needs a rate increase of 100 percent in FY 2017/18, 20-percent annual rate increases are recommended over the next five years to dampen the rate shock of a 100-percent increase.

FIGURE 14. SUMMARY OF SEWER REVENUE REQUIREMENTS

Summary of Sources and Uses of Funds and Net Revenue Requirements	Budget	Projected				
	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Sources of Sewer Funds						
Rate Revenue Under Prevailing Rates	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Non-Rate Revenues	-	-	-	-	-	-
Total Sources of Funds	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Uses of Sewer Funds						
Operating Expenses	\$ 127,016	\$ 130,429	\$ 133,932	\$ 137,528	\$ 141,219	\$ 145,010
Debt Service	-	-	-	-	-	-
Capital Expenses	63,880	65,796	67,770	69,803	71,898	74,054
Total Uses of Funds	\$ 190,896	\$ 196,226	\$ 201,703	\$ 207,332	\$ 213,116	\$ 219,064
Surplus / (Deficiency) before Rate Increases	\$ (90,896)	\$ (96,226)	\$ (101,703)	\$ (107,332)	\$ (113,116)	\$ (119,064)
Additional Revenue from Rate Increases (1)	-	20,000	44,000	72,800	107,360	148,832
Surplus (Deficiency) after Rate Increase	\$ (90,896)	\$ (76,226)	\$ (57,703)	\$ (34,532)	\$ (5,756)	\$ 29,768
Projected Annual Rate Increase	0.00%	20.00%	20.00%	20.00%	20.00%	20.00%
Cumulative Rate Increases	0.00%	20.00%	44.00%	72.80%	107.36%	148.83%
Net Revenue Requirement (2)	\$ 190,896	\$ 196,226	\$ 201,703	\$ 207,332	\$ 213,116	\$ 219,064

1. Assumes new rates are implemented July 1, 2017.

2. Total Use of Funds less non-rate revenues and interest earnings. This is the annual amount needed from sewer rates.

A summary of the entire 20-year financial plan, showing revenue requirements, revenues, and recommended rate increases is presented in Appendix C, along with a summary of the District's capital improvement program.

Cost of Service Analysis – Sewer

The 2016 Cost of Service Study performed by NBS developed the cost of service analysis that fairly and equitably allocates annual revenue requirements to customer classes, although the District's sewer customers are all residential customers.

Current vs. Proposed Sewer Rates

Currently, the District's sewer rates consist of a fixed monthly base charge per account (\$149.00 per month). Figure 15 shows the current and proposed sewer rates through FY 2021/22. The proposed rates maintain the existing rate structure with a fixed monthly base charge only (i.e. no volumetric component).

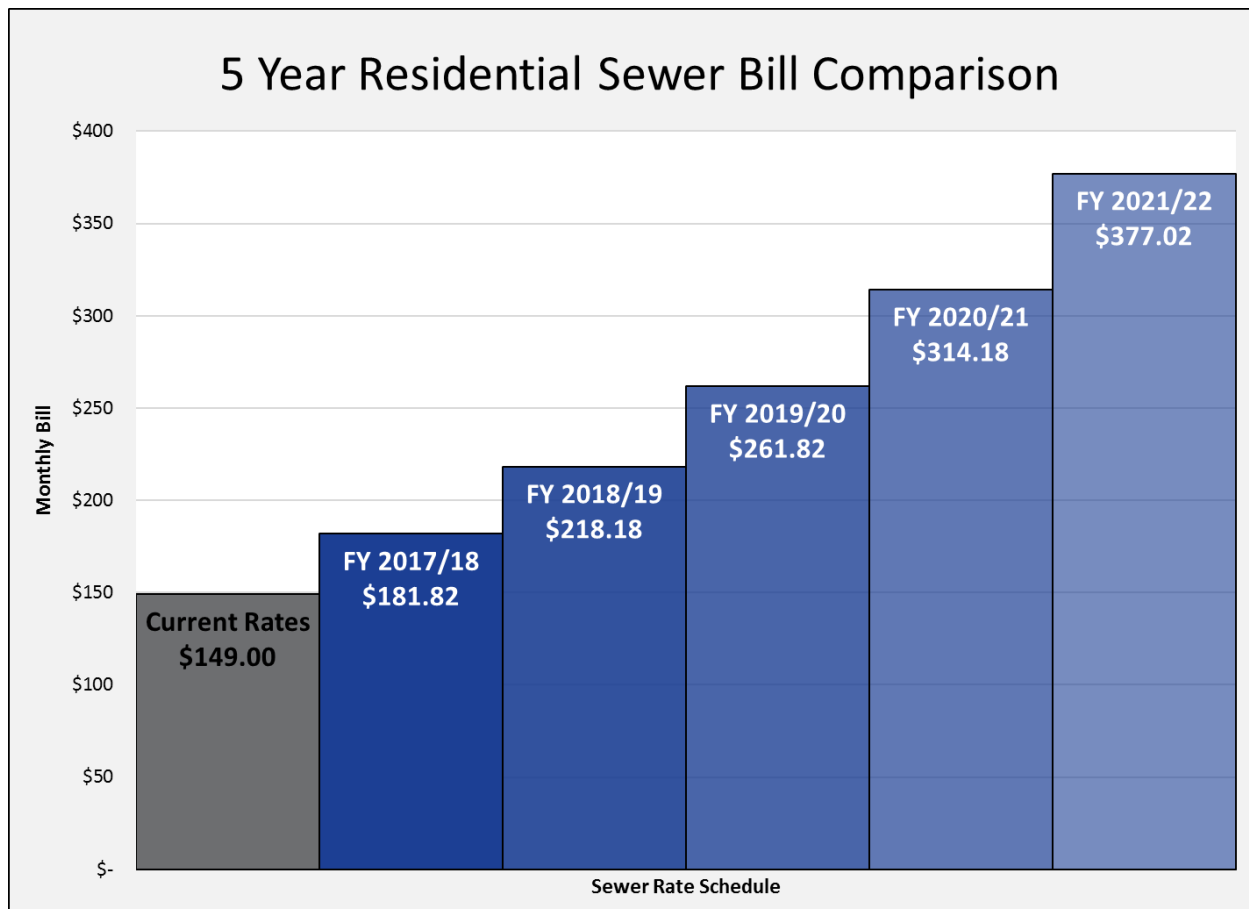
FIGURE 15. CURRENT AND PROPOSED SEWER RATES FISCAL YEAR 2016/17 – 2021/22

Sewer Rate Schedule	Current Rates	Proposed Rates				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Projected Increase in Rate Revenue per Financial Plan:		20.00%	20.00%	20.00%	20.00%	20.00%
Monthly Fixed Service Charges:						
All Customers	\$149.00	\$181.82	\$218.18	\$261.82	\$314.18	\$377.02

SINGLE-FAMILY SEWER CUSTOMERS

Figure 16 compares typical single-family monthly sewer bills in under the current and proposed rates for the next five years.

FIGURE 16. MONTHLY SINGLE-FAMILY SEWER BILL COMPARISON



Section 5. WATER CONNECTION FEE STUDY

Background and Purpose

Connection fees are one-time fees intended to reflect the cost of existing infrastructure and planned improvements available to new services, and place new utility customers on equal basis from a financial perspective with existing customers. Once new customers are added to the system, they then incur the obligation to pay the same service charges or water rates that existing customers pay.

The District is conducting a water connection fee study because the District's connection fees needed updating to comply with industry standards, and these fees need to reflect the cost of capital infrastructure required to serve new customers. The next few sections summarize the results of the analysis and presents the updated connection fees that are imposed on new or upsized connections.

General Connection Fee Requirements

Connection fees imposed by the District are subject to California's Mitigation Fee Act ("Act"), embodied in Government Code 66000 et seq., which the State Legislature passed, starting with Assembly Bill 1600 in 1989. The Act prescribes the means by which public agencies may impose development impact fees, including water connection fees. The connection fees presented herein are calculated with the intent of complying with the Act and are based on typical industry methodologies.

In its simplest form, connection fees (for utilities they are often also referred to as developer fees, capacity fees, or system development charges) are calculated by dividing the costs allocated to future development by the number of units of new development:

- Costs of planned future facilities and improvements required to serve new development are those that can reasonably be allocated to future development.
- The number of new units (i.e., growth) are those units projected to occur within the timeframe covered by the connection fee analysis.

Connection fee revenues may not be used for annual operations or maintenance of existing or new facilities. The cost of the public facilities analyzed do not include the operational costs of these facilities, which, over their useful life, may be quite substantial, and will be borne by customers connected to the system at the time of operation.

Another fundamental premise of connection fees is that the burden of the fees cannot exceed the actual cost of the public facilities needed to serve the development paying the fee, including costs associated with administering the fee program. In addition, fee revenues can only be used for their intended purposes and the Act has specific accounting and reporting requirements both annually and after every five-year period for the use of fee revenues.

Facility Standards, Level of Service, and Deficiencies

The words "standard" and "level of service" are used (at times interchangeably) to describe the level of investment in capital facilities that are needed to serve water and sewer customers. A standard is defined as the adopted policy, or benchmark, that the District currently provides or intends to achieve for any

particular facility. On the other hand, level of service (LOS) refers to the actual level of benefit that the current population experiences. Level of service may be different from the standard for a given facility. If the existing LOS is less than the standard, a deficiency exists for that facility.

New development alone cannot be required to improve the LOS provided by those facilities that serve both new and existing development¹³. State law limits connection fees to the cost of maintaining services for new development at the same LOS as existing development.

Mitigation Fee Act and Required Findings

The Mitigation Fee Act establishes requirements for imposing connection fees, including necessary funding for the ongoing administration of connection fee programs. It also requires local governments to document the following when adopting a connection fee:

- Identify the purpose of the fee.
- Identify the use of fee revenues.
- Determine a reasonable relationship exists between the fee's use and the type of development paying the fee.
- Determine a reasonable relationship exists between the need for the fee and the type of development paying the fee.
- Determine a reasonable relationship exists between the amount of the fee and the cost of the facility attributable to development paying the fee.

Together, these items constitute a “nexus study” when documented and presented in a report. This report provides the required documentation for the above findings and the determinations that establish the basis for the recommended fees. The following sections discuss the development of the water connection fees.

Connection Fee Methodology

Various methodologies have been and are currently used to calculate water connection fees. The most common are:

- The value of existing (historical) system assets, often called a “buy-in” methodology.
- The value of planned future improvements, also called the “incremental” or “system development” methodology.
- A combination of these two approaches.

This analysis uses the combination approach, which requires new customers to pay both their fair share of existing system assets as well as their share of the planned future capital improvements needed to provide them with capacity in the District’s water system. As a result, new customers connecting to the District’s water system would enter as equal participants with regard to their financial commitment and obligations to the utility.

In calculating the water connection fees, the replacement-cost-new-less-depreciation (RCNLD) value of existing system assets was used to calculate the buy-in component of the connection fee. The Handy

13 New development can, and often does fund facilities beyond those covered by connection fees through “developer agreements”, which are voluntarily and mutually agreed upon by new development and an individual utility. Developer agreements are outside the scope of this report, and not considered a part of the connection fee programs addressed herein.

Whitman Index of Public Utility Construction Costs¹⁴, which is a regionally specific construction cost index that tracks water utility construction costs, was used to estimate the replacement value of the existing system assets. We believe this is an accurate inflation index and appropriate for water utilities.

A detailed summary of the water utility's connection fee calculations is included in Appendix D – Water Connection Fee Study Summary Tables.

Existing Connections and Projected Future Growth

Larger meters have the potential to use more of the water system's capacity, compared to smaller meters. The potential capacity used is proportional to the maximum hydraulic flow through each meter size as established by the American Water Works Association (AWWA) hydraulic capacity ratios. The AWWA capacity ratios (also known as Flow Factors) used in this study are shown in the fourth column of Figure 17.

As an example, a 2-inch meter has a greater capacity, or potential peak demand than a 5/8-inch meter. A "hydraulic capacity factor" is calculated by dividing the maximum capacity or flow of large meters by the capacity of the base meter size, which is typically the most common residential meter size (in this case a 5/8-inch or 3/4-inch meter).

The flow factors shown in Figure 17 are the ratio of potential flow through each meter size compared to the flow through a 5/8-inch meter, which is the most common meter size for the District's water utility, and is used to compare the capacities of the larger meters. For example, the fourth column in Figure 17 shows the hydraulic capacity of a two-inch meter is 8 times that of a 5/8-inch meter. As a result, while there are currently 7,369 total water connections, there are 8,055 equivalent meter connections.

FIGURE 17. METER EQUIVALENCE – WATER

Meter Size	Existing Water Meters (1)	Meter Equivalence		Water Meter Equivalent Units
		Maximum Flow (gpm) (2)	Flow Factor for 5/8 or 3/4 inch Base Meter	
5/8 Inch	6,439	20	1.00	6,439
3/4 Inch	241	30	1.00	241
1 Inch	616	50	1.67	1,027
1 1/2 Inch	37	100	3.33	123
2 Inch	31	160	5.33	165
3 Inch	4	320	10.67	43
4 Inch	1	500	16.67	17
6 Inch	-	1,000	33.33	-
8 Inch	-	1,600	53.33	-
Total	7,369			8,055

1. Data is based on SLVWD billing data. Meter count is from February 2016.
2. Source: AWWA M1, Table B-2. Assumes displacement meters for 5/8" through 2" and Compound Class I for 3" through 8".

¹⁴ The Handy-Whitman Index of Public Utility Construction Costs. Baltimore, MD: Whitman, Requardt and Associates, 2017.

The actual number of meters by size is multiplied by the corresponding flow factor to calculate the total number of equivalent meters, which is used as a proxy for the potential demand that each customer can place on the water system. A significant portion of a water system's peak capacity, and in turn, the utility's fixed capital costs are related to meeting system capacity requirements. Therefore, the connection fee for a new service will be proportional to the service's meter equivalents.

The state now requires fire suppression systems in all new single-family home construction with a minimum meter size of 1-inch. Although the expected use within single-family homes does not change because of this requirement, the District has a policy of charging all new connection fees based on actual meter size.

The District's capital improvement plan has a 20-year outlook (through Fiscal Year 2034/35), which is the basis for defining the costs of planned future capital assets. Based on the District's customer growth projections, there will be approximately 1.19 percent annual growth in the water system over the next 20 years. The result, as shown in Figure 18, is that the District expects 2,027 new 5/8-inch equivalent meters over the next twenty years, equivalent to 2.01 percent total growth during the same time.

FIGURE 18. PROJECTED CUSTOMER GROWTH – WATER

Demographic Statistics	Existing Total	Projected Service Total	Allocation Factors		Cumulative Change	
			Existing Services	Future Services	Number of Units	% Increase
SFR Meter Equivalent Units	8,055	10,082	79.9%	20.1%	2,027	25.2%

Existing and Planned Future Assets

The water utility's capital assets include existing assets and planned capital improvements (i.e., the buy-in and incremental assets). Existing assets are often valued using "book value" (i.e., original cost less depreciation). However, replacement costs provide a more accurate estimate of these asset values. Ideally, replacement values would reflect the actual field condition of the assets (i.e., whether they are behind or ahead of the depreciation curve based on actual condition rather than just the remaining years of expected life). Unfortunately, this information was not available for this study, and the estimated replacement-cost-new-less-depreciation or RCNLD value was developed as the cost basis for the new connection fees. A field assessment was performed as part of the Cost of Service Study completed in November 2016; planned capital improvements are based on this assessment.

For the purpose of this analysis, assets that have exceeded their useful life (as defined in the District's asset records) were considered to have no remaining value. The resulting RCNLD value of existing assets are about \$52 million; see Appendix D for full details.

Most of the RCNLD costs were allocated to existing users based on the 79.9 percent allocation factor shown in Figure 18 (and 20.1 percent allocation factor for future users). The resulting allocation of existing system assets to existing and future users is summarized in Figure; future customers are allocated \$10,474,476 of existing water assets.

As noted earlier, the District's capital improvement plans extend through 2035. The estimated cost of planned future improvements (in 2017 dollars) used to calculate the system development component of the

connection fee are also summarized in Figure 19; based on the 20.1 percent allocation factor, future customers were allocated \$11,446,715 of these future capital project costs.

Adjustments to the Cost Basis

Before the connection fees are developed, two adjustments were applied to the cost basis to account for existing cash reserves and outstanding debt. Existing cash reserves are treated as an asset, since existing customers contributed them and they are available to pay for capital and/or operating costs of the water utility. The cash reserves are, in a sense, no different from any other system asset. The existing cash 20.1 percent allocation factor is from Figure 18. The allocation of cash reserves to future users is \$521,778.

There was also a credit to the cost basis related to outstanding bonds. This credit was included because some existing assets were at least partially funded with revenue bonds that will be paid in future years by the “existing customers” at that time. Since new connections pay their share of existing asset values, including the remaining outstanding debt on those same assets would be double counting the asset values in the connection fees. Therefore, a credit is given in the connection fee calculation for the value of future principal, to avoid double-charging new customers for bond-funded assets. Figure 19 summarizes the \$1,003,901 credit provided to future users in the connection fee development.

Calculated Connection Fees

The sum of the existing and planned asset values (that is, the system buy-in and system development costs), along with the adjustments for existing cash reserves and outstanding principal payments, defines the total cost basis allocated to future customers. Figure 19 summarizes how this cost basis is developed.

FIGURE 19. SUMMARY OF COST BASIS FOR FUTURE WATER CUSTOMERS

System Asset Values Allocated to Future Development	
System Asset Values Allocated to Future Development	
<i>System Asset Values Allocated to New Development</i>	
Existing System Buy-In (2)	\$ 10,474,476
Future System Expansion (3)	<u>11,446,715</u>
Total: Existing & Future System Costs	\$ 21,921,191
<i>Adjustments to Cost Basis:</i>	
Cash Reserves	\$ 521,778
Outstanding Long-Term Debt (Principal) Allocated to Future Users	<u>(1,003,901)</u>
Total: Adjustments to Cost Basis	\$ (482,123)
Total Adjusted Cost Basis for New Development	\$ 21,439,068

The total adjusted cost basis is then divided by the number of future customers, measured in 5/8-inch meter equivalents, expected to connect to the system (that is, the 2,027 meter equivalents shown in Figure 18). This calculation is shown in Figure 20.

FIGURE 20. COSTS ALLOCATED TO FUTURE WATER CUSTOMERS & NEW CONNECTION FEES

Summary of Costs Allocated to Connection Fees	Adjusted System Cost Basis	Planned Additional EDU's	Maximum Connection Fee
Maximum Water Connection Per 5/8-inch meter	\$ 21,439,068	2,027	\$ 10,577

Based on the combined system buy-in and incremental connection fee methodology, and the assumptions used in this analysis, NBS has calculated the new connection fees for each meter size, as shown in Figure 21. The updated connection fees represent the maximum fee that the District could charge for new connections.

FIGURE 21. UPDATED WATER CONNECTION FEES

Meter Size	Equivalency Factor		Maximum Unit Cost (\$/EDU)	Updated Maximum Connection Fee Per Meter
	Maximum Continuous Flow (gpm) (1)	Equivalency to 5/8 or 3/4-inch Base Meter Size		
5/8 Inch	20	1.00	\$10,577	\$10,577
3/4 Inch	30	1.00	\$10,577	\$10,577
1 Inch	50	1.67	\$10,577	\$17,629
1 1/2 Inch	100	3.33	\$10,577	\$35,257
2 Inch	160	5.33	\$10,577	\$56,412
3 Inch	320	10.67	\$10,577	\$112,824
4 Inch	500	16.67	\$10,577	\$176,287
6 Inch	1,000	33.33	\$10,577	\$352,575
8 Inch	1,600	53.33	\$10,577	\$564,120

1. Source: AWWA M1, Table B-2. Assumes displacement meters for 5/8" through 2", Compound Class I for 3" through 8", and Turbine Class II for 10" through 12" meters.

Fee Updates

This connection fee study and the recommended fees assume a given level of development activity over the study period based on the best available data. The development that actually occurs may result in both different impacts and fee revenues than those that are calculated in this study. For that reason, regular updates are recommended to adjust the connection fees to match the needs created by the rate of actual development.

Water Connection Fee Findings Statements

The new water connection fees calculated in this report are based on regulatory requirements and generally accepted industry standards, and are further documented in Appendix D. This study makes the following findings:

- The purpose of the District's water connection fee is to ensure that new and upsized connections reimburse and/or mitigate a reasonable portion of the District's planned capital investments. These investments benefit and/or are necessary to accommodate increased demand for water service.
- The District uses connection fee proceeds to fund capital investments in the water system, which include the future design and construction of planned facilities and partial payment of debt service related to capital improvements.
- All parcels seeking permission to connect to the District's water system are subject to the water connection fee, payment of which is a condition of connection approval. Figure 18 identifies the total number of projected future water customers.
- Connection fees for new water customers vary depending on the size of the water meter serving the connection. Meter size is generally proportionate to the demands a parcel places on the water utility system, specifically the peaking requirements related to the meter size.
- Figure 17 illustrates the equivalency factors differentiating meter sizes, based on their maximum continuous flow. Of the meters currently connected to the system, a majority are 5/8-inch or ¾-inch meters, representing an equivalency factor of 1.0, from which the number of equivalent meters for all larger meters is calculated.
- The District has made investments in water infrastructure, and plans to invest further in expanded and upgraded facilities. These investments make possible the availability and continued reliable provision of utility service of high quality water sufficient to meet demands of growth within the District's service area.
- Without capital investment in existing facilities, the water system capacity available to serve the needs of future connections would be uncertain. Without planned investments in future facilities, water service would not be sustainable at the level of service enjoyed by current users. The total value of planned water system assets that are attributable to serving future connections is identified in Figure 19.
- Connection fees are derived directly from the value of capital investments in existing and planned water facilities.
- Figure 20 identifies the water infrastructure cost per single-family equivalent dwelling unit (EDU) for a new connection, resulting in connection fee unit cost of \$10,577 per EDU.
- Upon payment of a connection fee, a new customer incurs the obligation to pay the same ongoing service rates as existing customers, regardless of the date of connection to the systems or the actual start of service. Connection fees ensure that, over time, ongoing service rates are not disproportionately burdened by the accommodation of system growth.

Section 6. RECOMMENDATIONS AND NEXT STEPS

Consultant Recommendations

This rate and connection fee study reflects input from District staff and the District Board and is intended to comply with general industry standards and State law, and specifically the requirements of Proposition 218 and the Mitigation Fee Act. Public hearings and protest balloting requirements are the next steps required to complete the adoption and implementation requirements for water and sewer rates. The District Board can directly adopt new connection fees, which are not subject to Proposition 218 requirements. As a part of this process, NBS recommends the District take the following actions:

- **Approve and Accept This Study Report:** NBS recommends the District Board formally approve and adopt this report and its recommendations. This will provide the documentation and administrative record necessary to adopt and implement these rates and connection fees.
- **Implement Recommended Levels of Rate Increases and Proposed Rates:** Based on successfully meeting the Proposition 218 balloting requirements, the District Board should proceed with implementing the rate increases and rate structures recommended in this report for both utilities for the next five years (see Figure 10, Figure 11, and Figure 15). These rate increases are necessary to ensure the continued financial health of the District's water and sewer utilities.
- **Implement New Connection Fees:** Based on the analysis presented in this report, the District Board should implement the new connection fees recommended in this report, which are \$10,577 per 5/8-inch meter equivalent.
- **Adopt Reserve Fund Targets:** NBS recommends the District Board adopt and strive to meet the recommended reserve fund targets described in this report for each utility.

Next Steps

ANNUALLY REVIEW RATES AND REVENUE

Any time an agency adopts new utility rates, particularly when facing significant future capital costs, those new rates should be closely monitored over the next several years to ensure the revenue generated is sufficient to meet the annual revenue requirements. Changing economic and water consumption patterns underscore the need for this review, as well as potential and unseen changing revenue requirements, particularly those related to capital improvement and repair and replacement costs that can significantly affect annual cash flows.

PRINCIPAL ASSUMPTIONS AND CONSIDERATIONS

In preparing this report and the recommendations included herein, NBS has relied on a number of principal assumptions and considerations with regard to financial matters, including the District's operating budgets, capital improvement plans, customer account data, water consumption records, and other conditions and events projected to occur in the future. This information and these assumptions were provided by sources we believe to be reliable, although NBS has not independently verified this data.

While we believe NBS' use of such information and assumptions is reasonable for the purpose of this report and its recommendations, some assumptions will invariably not materialize as stated herein or may

vary significantly due to unanticipated events and circumstances. Therefore, the actual results can be expected to vary from those projected to the extent that actual future conditions differ from those assumed by us or provided to us by others.

Section 7. APPENDIX A – ABBREVIATIONS & ACRONYMS¹⁵

AAF	Average Annual Flow
AF	Acre Foot, equal to 435.6 HCF/CCF or 325,851 gallons
Alt.	Alternative
Avg.	Average
AWWA	American Water Works Association
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
CA	Customer
CAP	Capacity
CCF	Hundred Cubic Feet (same as HCF); equal to 748 gallons
CCI	Construction Cost Index
COD	Chemical Oxygen Demand
COM	Commodity
Comm.	Commercial
COS	Cost of Service
COSA	Cost of Service Analysis
CPI	Consumer Price Index
CIP	Capital Improvement Program
DU	Dwelling Unit
Excl.	Exclude
ENR	Engineering News Record
EDU	Equivalent Dwelling Unit
Exp.	Expense
FP	Fire Protection
FY	Fiscal Year (e.g., July 1st to June 30th)
FY 2016/17	July 1, 2016 through June 30, 2017
GPD	Gallons per Day
GPM	Gallons per Minute
HCF	Hundred Cubic Feet; equal to 748 gallons or 1 CCF
Ind.	Industrial
Irr.	Irrigation
LAIF	Local Agency Investment Fund
Lbs.	Pounds
MFR	Multi-Family Residential
MGD	Million Gallons per Day
MG/L	Milligrams per Liter
Mo.	Month
Muni.	Municipal
NH3	Ammonia
NPV	Net Present Value
N/A	Not Available or Not Applicable
O&M	Operational & Maintenance Expenses
Prop 13	Proposition 13 (1978) – Article XIII A of the California Constitution which limits taxes on real property to 1 percent of the full cash value of such property.
Prop 218	Proposition 218 (1996) – State Constitutional amendment expanded restrictions of local government revenue collections.
Req't	Requirement

15 This appendix identifies abbreviations and acronyms that may be used in this report. This appendix has not been viewed, arranged, or edited by an attorney, nor should it be relied on as legal advice. The intent of this appendix is to support the recognition and analysis of this report. Any questions regarding clarification of this document should be directed to staff or an attorney specializing in this particular subject matter.

Appendix A, continued

Res.	Residential
Rev.	Revenue
RTS	Readiness-to-Serve
R&R	Rehabilitation & Replacement
SFR	Single Family Residential
SRF Loan	State Revolving Fund Loan
SWRCB	State Water Resources Control Board
TSS / SS	Total Suspended Solids
V. / Vs. /vs.	Versus
WWTP	Waste Water Treatment Plant

Section 8. APPENDIX B – WATER REVENUE-STABILIZATION RATES & SUMMARY TABLES

DETAILS OF HOW REVENUE STABILIZATION RATES ARE IMPLEMENTED

Revenue-Stabilization Rate Trigger and Board Notification:

1. For background/informational purposes, District Manager (DM) will provide the District Board with the average units of water sales (by month) for the rolling previous three years, which will serve as the “baseline” against which current annual sales to date will be compared. District will include a revenue stabilization rate schedule in each budget year (and Proposition 218 Notices) indicating the volumetric rate for increases of 10%, 15%, and 20%. This information will be provided as a part of the budget package each year.
2. If DM determines that annual water sales (in units) to date is more than 10% below expected year-to-date levels (based on monthly averages over the previous three-years), DM will inform the Board. When informing the Board, DM will include expense reduction measures for consideration by the Board that will match the revenue gap. DM will also update the Board on current reserve levels. DM will also provide staff analysis of why the water sales gap is occurring and a six-month projection of anticipated water sales.

Board Action to Implement: Once so informed by DM, Board may:

- Order DM to implement all or part of the proposed expense reductions,
- Order DM to utilize reserves to meet all or part of the revenue gap,
- Order DM to implement revenue stabilization rates from the revenue-stabilization rate schedule* provided by the DM corresponding to the level of volumetric water sales deficit (10%, 15%, or 20%).

**Technical Note: the Revenue-Stabilization rate schedule will be the current uniform volumetric rate that is 10%, 15%, and 20% higher.*

Board Action to Rescind: Once the Board is informed by DM that volumetric water sales revenue has returned to expected levels*, the rate stabilization rates will be automatically rescinded and return to the previous adopted uniform volumetric rate.

**Technical Note: The expected year-to-date volumetric rate revenue is the three-year rolling average monthly water sales (in units) times the currently adopted uniform volumetric water rate. This monthly revenue schedule should be proportionally adjusted to match your budgeted volumetric revenue number.*

Proposed Revenue Stabilization Rates (Previously Shown in Figure 11):

Water Rate Schedule	Proposed Revenue-Stabilization Volumetric Rates				
	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Volumetric Charges for All Water Consumed					
Flat Rate (Uniform Rate)	\$10.12	\$10.83	\$11.48	\$12.06	\$12.66
Revenue Stabilization Rates for All Water Consumed					
10%	\$11.14	\$11.91	\$12.63	\$13.26	\$13.92
15%	\$11.64	\$12.46	\$13.20	\$13.86	\$14.56
20%	\$12.15	\$13.00	\$13.78	\$14.47	\$15.19

Section 9. **APPENDIX C – SEWER RATE SUMMARY TABLES**

Section 10. **APPENDIX D – WATER CONNECTION FEE
SUMMARY TABLES**

TABLE 1
FINANCIAL PLAN AND SUMMARY OF WATER COST REQUIREMENTS

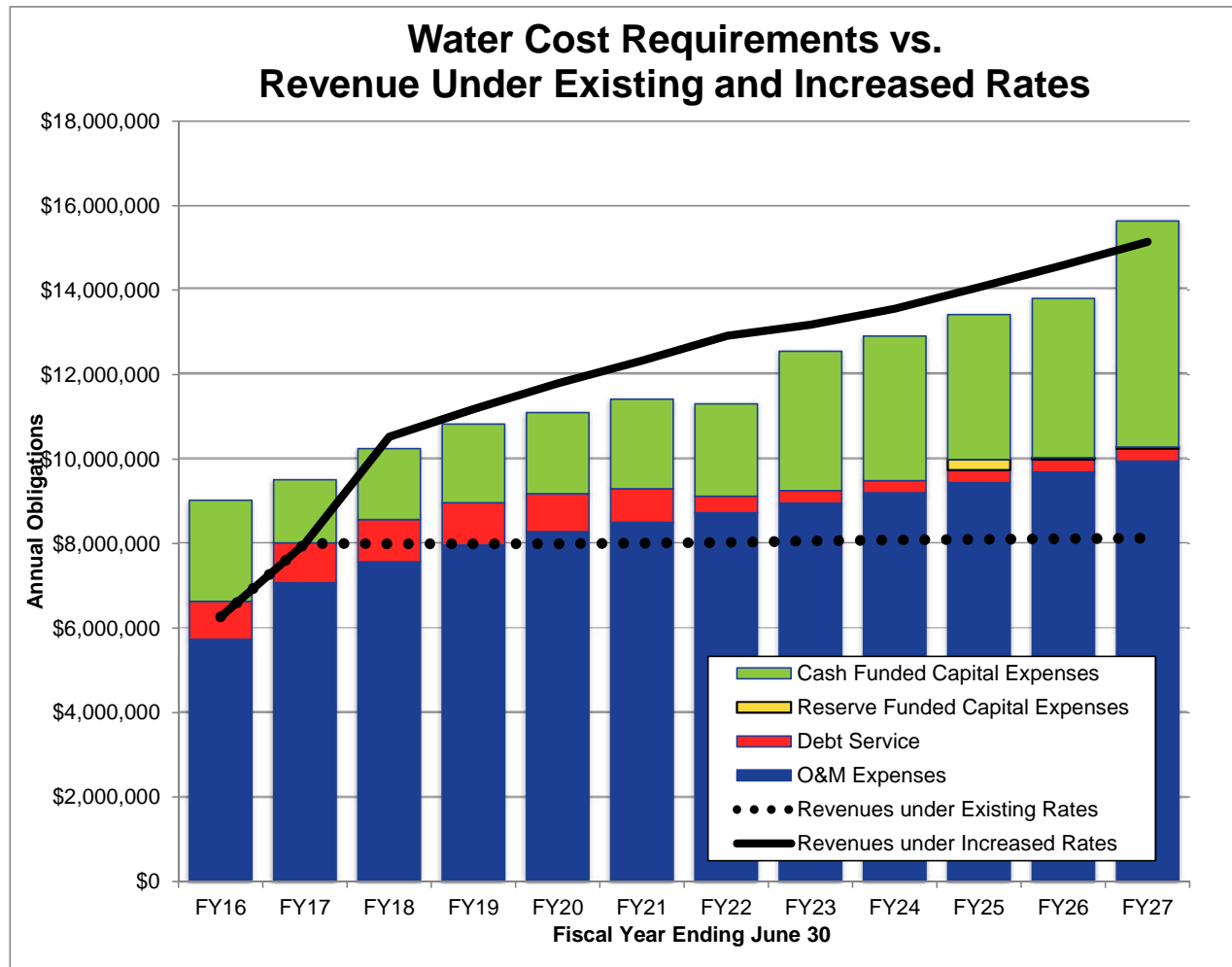
WATER REVENUE REQUIREMENTS SUMMARY	Actual	Projected								
	FY 2015/16	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	FY 2023/24	FY 2024/25
Sources of Funds										
Water Rate Revenue: (1)										
Service & Usage Fees	\$ 5,575,000	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640
Water Non-Rate Revenue:										
Property Taxes (2)	\$ 525,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000
Rental Revenue	32,500	51,800	51,800	51,800	51,800	51,800	51,800	51,800	51,800	51,800
Investment Earnings	2,500	5,000	-	-	-	-	-	-	-	-
Gain/Loss on Sale of Assets	-	-	-	-	-	-	-	-	-	-
Other Income	123,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000
Interest Income	7,699	5,699	647	3,059	7,597	18,145	35,521	69,590	92,689	106,408
Grand Total: Sources of Funds	\$ 6,265,699	\$ 8,002,139	\$ 7,992,087	\$ 7,994,499	\$ 7,999,037	\$ 8,009,585	\$ 8,026,961	\$ 8,061,030	\$ 8,084,129	\$ 8,097,848
Uses of Funds										
Water Fund Operating Expenses (3):										
Administration	\$ 878,273	\$ 1,016,359	\$ 1,043,312	\$ 1,071,089	\$ 1,099,359	\$ 1,128,613	\$ 1,158,459	\$ 1,189,092	\$ 1,220,514	\$ 1,253,019
Finance	709,176	807,048	928,600	1,153,500	1,284,400	1,318,600	1,353,900	1,390,100	1,427,300	1,465,400
Engineering	168,642	279,531	287,000	294,600	302,400	310,400	318,500	326,800	335,200	343,800
Operations/Distribution	1,918,473	2,204,499	2,363,600	2,426,800	2,491,700	2,558,400	2,626,700	2,696,900	2,769,100	2,843,300
Watershed	467,133	619,422	636,000	652,800	670,000	687,600	705,600	724,400	743,700	763,500
Operations/Supply & Treatment	1,592,866	2,151,707	2,309,100	2,371,000	2,434,300	2,499,200	2,565,900	2,634,400	2,704,800	2,777,100
Subtotal: Operating Expenditures	\$ 5,734,563	\$ 7,078,566	\$ 7,567,612	\$ 7,969,789	\$ 8,282,159	\$ 8,502,813	\$ 8,729,059	\$ 8,961,692	\$ 9,200,614	\$ 9,446,119
Other Expenditures:										
Existing Debt Service	\$ 896,508	\$ 936,526	\$ 1,000,751	\$ 1,000,751	\$ 899,339	\$ 797,926	\$ 395,840	\$ 291,041	\$ 291,041	\$ 291,041
New Debt Service	-	-	-	-	-	-	-	-	-	-
Rate-Funded Capital Expenses	2,397,525	1,500,000	1,678,988	1,862,385	1,918,257	2,116,934	2,180,442	3,299,649	3,419,826	3,427,845
Subtotal: Other Expenditures	\$ 3,294,033	\$ 2,436,526	\$ 2,679,740	\$ 2,863,137	\$ 2,817,595	\$ 2,914,859	\$ 2,576,281	\$ 3,590,690	\$ 3,710,867	\$ 3,718,886
Grand Total: Uses of Funds	\$ 9,028,596	\$ 9,515,093	\$ 10,247,352	\$ 10,832,926	\$ 11,099,754	\$ 11,417,672	\$ 11,305,340	\$ 12,552,382	\$ 12,911,481	\$ 13,165,004
plus: Revenue from Rate Increases (5)	-	-	2,533,627	3,190,315	3,792,593	4,324,604	4,883,217	5,117,834	5,476,798	5,969,776
Annual Surplus/(Deficit)	\$ (2,762,897)	\$ (1,512,954)	\$ 278,363	\$ 351,888	\$ 691,876	\$ 916,517	\$ 1,604,838	\$ 626,482	\$ 649,446	\$ 902,620
Water Net Revenue Requirements (Total Uses less Non-Rate Revenue)	\$ 8,337,897	\$ 8,360,594	\$ 9,102,904	\$ 9,686,067	\$ 9,948,357	\$ 10,255,727	\$ 10,126,018	\$ 11,338,992	\$ 11,674,992	\$ 11,914,796
Total Rate Revenue After Rate Increases	\$ 5,575,000	\$ 6,847,640	\$ 9,381,267	\$ 10,037,955	\$ 10,640,233	\$ 11,172,244	\$ 11,730,857	\$ 11,965,474	\$ 12,324,438	\$ 12,817,416
Projected Annual Rate Revenue Increase	0.00%	0.00%	37.00%	7.00%	6.00%	5.00%	5.00%	2.00%	3.00%	4.00%
Cumulative Increase from Annual Revenue Increases	0.00%	0.00%	37.00%	46.59%	55.39%	63.15%	71.31%	74.74%	79.98%	87.18%
Debt Coverage After Rate Increase	(0.18)	(0.25)	1.81	2.07	2.62	3.35	7.58	10.32	10.73	11.58

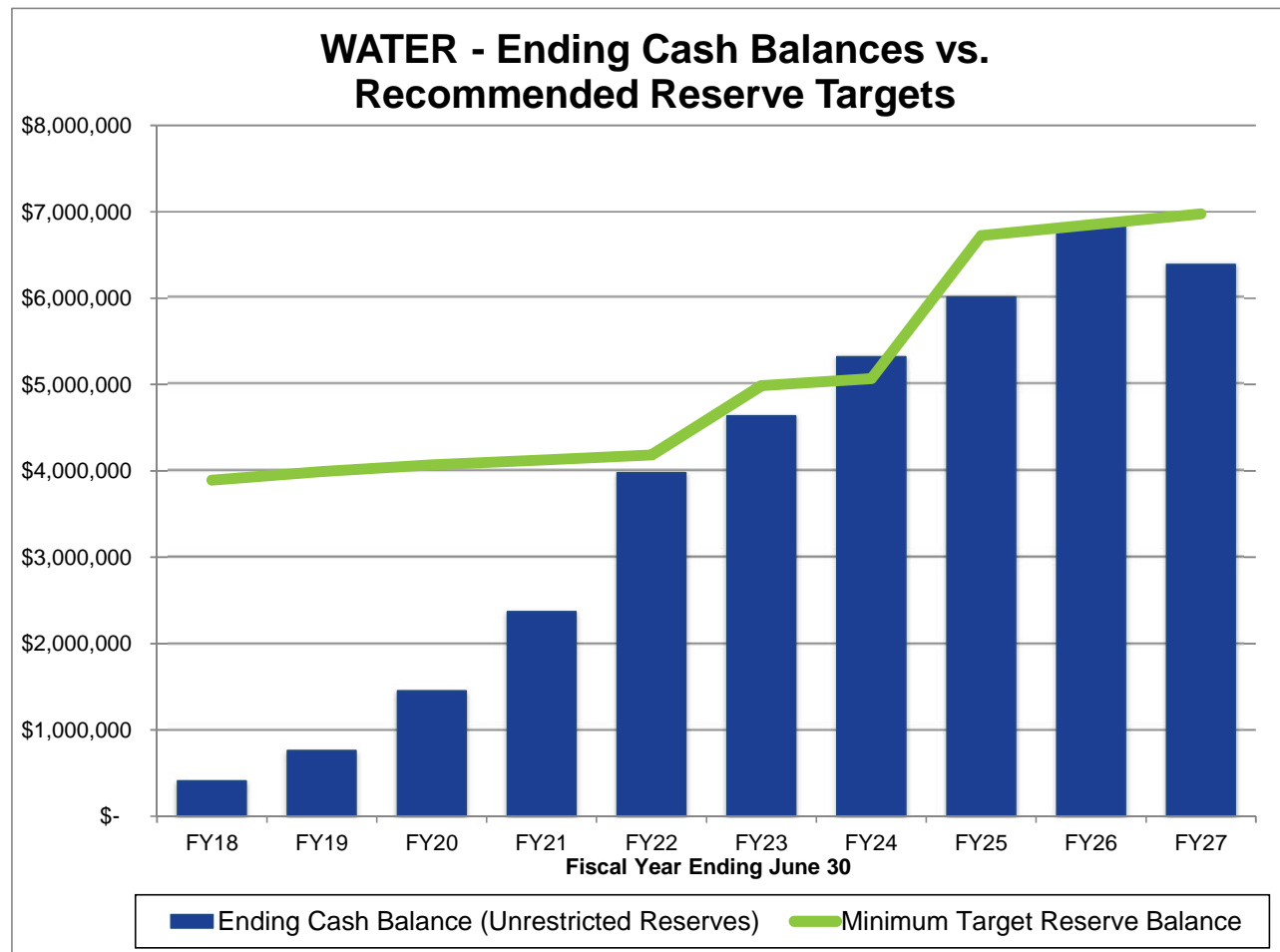
- Revenues are from the Final Trial Balance on June 30, 2015 from source file: SLVWD 2015 Working TB.xls and are actual revenues from FY 14/15.
- OLY Assessment (Property Tax) Revenue expected to increase after FY 2015/16.
- Expenses are from the FY 2015/16 Budget and from source file: FY1516 BUDGET FINAL.pdf. All projected expenses are rounded to the nearest \$100.
- Calculated as the Total Rate Revenue after Rate Increases less Total Uses of Funds and Non-Rate Revenues.
- Revenue from rate increases assumes an implementation date of July 1, 2017 for new rates.
For each year thereafter, the assumption is that new rates will be implemented on July 1st of each year.

TABLE 2
RESERVE FUND SUMMARY

SUMMARY OF CASH ACTIVITY UN-RESTRICTED RESERVES - WATER	Actual	Projected								
	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
Total Beginning Cash (1)	\$ 2,595,259	\$ 2,016,000								
Operational Reserve Fund										
Beginning Reserve Balance (2)	\$ 2,218,677	\$ 1,642,406	\$ 129,452	\$ 407,815	\$ 759,703	\$ 1,451,579	\$ 2,126,000	\$ 2,182,000	\$ 2,808,482	\$ 3,067,000
Plus: Net Cash Flow (After Rate Increases)	(2,762,897)	(1,512,954)	278,363	351,888	691,876	916,517	1,604,838	626,482	649,446	902,620
Plus: Transfer in from Debt Reserve Surpluses	4,294	-	-	-	-	-	-	-	-	-
Plus: Transfer in from Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-
Less: Transfer out to Capital Replacement Reserve	-	-	-	-	-	(242,096)	(1,548,838)	-	(390,928)	-
Ending Operating Reserve Balance	\$ (539,926)	\$ 129,452	\$ 407,815	\$ 759,703	\$ 1,451,579	\$ 2,126,000	\$ 2,182,000	\$ 2,808,482	\$ 3,067,000	\$ 3,969,620
Target Ending Balance (\$1.5M, then graduating to 6 months of O&M)	\$ 1,500,000	\$ 1,500,000	\$ 1,892,000	\$ 1,992,000	\$ 2,071,000	\$ 2,126,000	\$ 2,182,000	\$ 2,987,000	\$ 3,067,000	\$ 4,723,000
Capital Reserve Fund										
Beginning Reserve Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 242,096	\$ 1,794,566	\$ 1,825,971	\$ 2,253,418
Plus: Grant Proceeds	1,270,475	-	-	-	-	-	-	-	-	-
Plus: Transfer of Operating Reserve Surplus	-	-	-	-	-	242,096	1,548,838	-	390,928	-
Plus: Interest Earnings	-	-	-	-	-	-	3,631	31,405	36,519	45,068
Less: Use of Reserves for Capital Projects	(1,270,475)	-	-	-	-	-	-	-	-	(253,418)
Less: Use of Reserves for Operating Reserve	-	-	-	-	-	-	-	-	-	-
Ending Capital Replacement Reserve Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 242,096	\$ 1,794,566	\$ 1,825,971	\$ 2,253,418	\$ 2,045,068
Capital Replacement Reserve (\$2M or 3% of Net Assets)	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000
Ending Balance - Excl. Restricted Reserves	\$ (539,926)	\$ 129,452	\$ 407,815	\$ 759,703	\$ 1,451,579	\$ 2,368,096	\$ 3,976,566	\$ 4,634,452	\$ 5,320,418	\$ 6,014,688
Min. Target Ending Balance - Excl. Restricted Reserves	\$ 3,500,000	\$ 3,500,000	\$ 3,892,000	\$ 3,992,000	\$ 4,071,000	\$ 4,126,000	\$ 4,182,000	\$ 4,987,000	\$ 5,067,000	\$ 6,723,000
Ending Surplus/(Deficit) Compared to Reserve Targets	\$ (4,039,926)	\$ (3,370,548)	\$ (3,484,185)	\$ (3,232,297)	\$ (2,619,421)	\$ (1,757,904)	\$ (205,434)	\$ (352,548)	\$ 253,418	\$ (708,312)
Restricted Reserves:										
Debt Service Reserve Fund										
Beginning Reserve Balance (3)	\$ 376,582	\$ 373,594	\$ 374,891	\$ 376,765	\$ 379,591	\$ 383,387	\$ 388,179	\$ 394,002	\$ 400,897	\$ 408,915
Plus: Reserve Funding from New Debt Obligations	-	-	-	-	-	-	-	-	-	-
Plus: Interest Earnings	1,307	1,296	1,874	2,826	3,796	4,792	5,823	6,895	8,018	8,178
Less: Transfer of Surplus to Operating Reserve	(4,294)	-	-	-	-	-	-	-	-	-
Ending Debt Reserve Balance	\$ 373,594	\$ 374,891	\$ 376,765	\$ 379,591	\$ 383,387	\$ 388,179	\$ 394,002	\$ 400,897	\$ 408,915	\$ 417,093
Target Ending Balance	\$ 373,594	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687
Bond Project Fund										
Beginning Reserve Balance (3)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: SRF Loan Funding Proceeds	-	-	-	-	-	-	-	-	-	-
Plus: Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-
Less: Use of Bond & Loan Funds for Capital Projects	-	-	-	-	-	-	-	-	-	-
Ending Bond Project Fund Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Target Ending Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Annual Interest Earnings Rate (4)	0.35%	0.35%	0.50%	0.75%	1.00%	1.25%	1.50%	1.75%	2.00%	2.00%

1. The beginning Cash balance is from June 2016 Liquid Assets report for FY 2015/16; beginning cash balance for FY 2016/17 confirmed via email.
2. Operating Reserve is comprised of Cash and SC County Fund for SLV.
3. Debt Reserve Fund is comprised of the Liberty Savings, Morgan Stanley accounts, SC County Fund - Lompico, and LAIF funds.
4. Historical interest earning rates were referenced on the CA Treasurer's Office website for funds invested in LAIF. Future years earnings were conservatively estimated through 2024 and phase into the historical 10 year average interest earnings rate.





SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Operating Revenue and Expenses

EXHIBIT 1

WATER REVENUE FORECAST:

DESCRIPTION (1)	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
WATER FUND REVENUES:											
7101 Water Sales											
WATER SERVICE FEES	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
WATER USAGE FEES	1	-	-	-	-	-	-	-	-	-	-
BASIC SERVICE FEES	1	2,980,000	3,326,000	3,326,000	3,326,000	3,326,000	3,326,000	3,326,000	3,326,000	3,326,000	3,326,000
WATER USAGE FEES	1	2,595,000	3,521,640	3,521,640	3,521,640	3,521,640	3,521,640	3,521,640	3,521,640	3,521,640	3,521,640
Subtotal		\$ 5,575,000	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640
7501 Property Taxes											
PROPERTY TAXES	1	\$ 525,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000	\$ 600,000
ASSESSMENT REVENUE	1	-	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000
Subtotal		\$ 525,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000
7502 Rental Revenue											
MOBILE SERVICES LEASE FEES	1	\$ 15,500	\$ 15,800	\$ 15,800	\$ 15,800	\$ 15,800	\$ 15,800	\$ 15,800	\$ 15,800	\$ 15,800	\$ 15,800
JOHNSON PROPERTY RENTS	1	17,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000
Subtotal		\$ 32,500	\$ 51,800	\$ 51,800	\$ 51,800	\$ 51,800	\$ 51,800	\$ 51,800	\$ 51,800	\$ 51,800	\$ 51,800
7503 Investment Earnings											
LOMPICO LOAN - INTEREST	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
INTEREST - WATER	1	2,500	5,000	-	-	-	-	-	-	-	-
INTEREST - FELTON LOAN RESERVE	1	-	-	-	-	-	-	-	-	-	-
REALIZED G/L - MSDW	1	-	-	-	-	-	-	-	-	-	-
UNREALIZED GAINS/LOSS - MSDW	1	-	-	-	-	-	-	-	-	-	-
INTEREST DIVIDEND - MSDW	1	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 2,500	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7504 Gain/Loss on Sale of Assets											
SALE OF SURPLUS PROPERTY	1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
LOSS ON SALE/ABAND FIXED ASSET	1	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7505 Other Income											
ACCT. ESTAB. CHARGES & PENALTY	1	\$ 75,000	\$ 72,000	\$ 72,000	\$ 72,000	\$ 72,000	\$ 72,000	\$ 72,000	\$ 72,000	\$ 72,000	\$ 72,000
ASSESSMENT BOND - N.B.C.	1	-	-	-	-	-	-	-	-	-	-
SALE OF METERS	1	45,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
MISCELLANEOUS	1	-	-	-	-	-	-	-	-	-	-
REIMB. FOR MANANA WOODS	1	-	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
LOMPICO LOAN - PRINCIPAL	1	-	-	-	-	-	-	-	-	-	-
CSI - #34053 MANANA WOODS	1	-	-	-	-	-	-	-	-	-	-
CSI - # 34057 LYON WTP	1	-	-	-	-	-	-	-	-	-	-
CSI - #34058 KIRBY WTP	1	3,000	-	-	-	-	-	-	-	-	-
Subtotal		\$ 123,000	\$ 132,000	\$ 132,000	\$ 132,000	\$ 132,000	\$ 132,000	\$ 132,000	\$ 132,000	\$ 132,000	\$ 132,000
GRAND TOTAL: REVENUE		\$ 6,258,000	\$ 7,996,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440

WATER REVENUE SUMMARY:

WATER REVENUES:											
RATE REVENUE:											
7101 Water Sales		\$ 5,575,000	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640	\$ 6,847,640
OTHER REVENUE:											
7501 Property Taxes		\$ 525,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000	\$ 960,000
7502 Rental Revenue		32,500	51,800	51,800	51,800	51,800	51,800	51,800	51,800	51,800	51,800
7503 Investment Earnings		2,500	5,000	-	-	-	-	-	-	-	-
7504 Gain/Loss on Sale of Assets		-	-	-	-	-	-	-	-	-	-
7505 Other Income		123,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000	132,000
GRAND TOTAL: REVENUE		\$ 6,258,000	\$ 7,996,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440	\$ 7,991,440
		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Operating Revenue and Expenses

EXHIBIT 1

WATER FUND OPERATING EXPENSE FORECAST (2):

DEPARTMENT: ADMINISTRATION - 01	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PERSONNEL											
Salaries											
REGULAR SALARIES	3	\$ 243,062	\$ 257,045	\$ 263,900	\$ 271,000	\$ 278,300	\$ 285,800	\$ 293,500	\$ 301,400	\$ 309,500	\$ 317,800
DIRECTORS FEES	3	23,000	23,000	23,600	24,200	24,800	25,500	26,200	26,900	27,600	28,300
Subtotal		\$ 266,062	\$ 280,045	\$ 287,500	\$ 295,200	\$ 303,100	\$ 311,300	\$ 319,700	\$ 328,300	\$ 337,100	\$ 346,100
Benefits											
MEDICAL INSURANCE	3	\$ 47,074	\$ 29,915	\$ 30,700	\$ 31,500	\$ 32,300	\$ 33,200	\$ 34,100	\$ 35,000	\$ 35,900	\$ 36,900
DENTAL INSURANCE	3	5,800	3,159	3,200	3,300	3,400	3,500	3,600	3,700	3,800	3,900
VISION INSURANCE	3	481	590	600	600	600	600	600	600	600	600
LIFE INSURANCE	3	667	599	600	600	600	600	600	600	600	600
LONG TERM DISABILITY	3	1,258	1,285	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
PERS - RETIREMENT	3	17,520	1,465	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
FICA - SOCIAL SECURITY	3	10,506	126	100	100	100	100	100	100	100	100
WORKERS COMPENSATION	3	2,500	17,000	17,500	18,000	18,500	19,000	19,500	20,000	20,500	21,100
ASSISTANCE PROGRAM	3	38	33,014	33,900	34,800	35,700	36,700	37,700	38,700	39,700	40,800
OTHER PAYROLL CHARGES	3	1,217	10,512	10,800	11,100	11,400	11,700	12,000	12,300	12,600	12,900
MEDICARE RETIRED MEDICAL	3	3,593	3,227	3,300	3,400	3,500	3,600	3,700	3,800	3,900	4,000
RETIRED MEDICAL	3	11,974	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700	2,800
ANNUAL OPEB	3	35,000	40,000	41,100	42,200	43,300	44,500	45,700	46,900	48,200	49,500
Subtotal		\$ 137,628	\$ 142,892	\$ 146,700	\$ 150,600	\$ 154,500	\$ 158,700	\$ 162,900	\$ 167,100	\$ 171,400	\$ 176,000
TOTAL: PERSONNEL		\$ 403,690	\$ 422,937	\$ 434,200	\$ 445,800	\$ 457,600	\$ 470,000	\$ 482,600	\$ 495,400	\$ 508,500	\$ 522,100
MATERIALS & SERVICES											
CONTRACT/PROFESSIONAL SERVICES	2	\$ 140,000	\$ 285,200	\$ 292,800	\$ 300,600	\$ 308,600	\$ 316,800	\$ 325,200	\$ 333,800	\$ 342,600	\$ 351,700
LEGAL SERVICES	2	79,364	80,000	82,100	84,300	86,500	88,800	91,200	93,600	96,100	98,600
UTILITIES DISTRICT OFFICE	2	10,572	12,000	12,300	12,600	12,900	13,200	13,500	13,900	14,300	14,700
AUTO ALLOWANCE	2	4,200	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900	5,000
RENTALS/LEASES/PERMITS	2	754	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
FACILITIES MAINTENANCE	2	35,843	15,000	15,400	15,800	16,200	16,600	17,000	17,500	18,000	18,500
TELEPHONE/COMMUNICATIONS	2	24,177	18,000	18,500	19,000	19,500	20,000	20,500	21,000	21,600	22,200
OFFICE SUPPLIES (includes 5078)	2	8,224	10,000	10,300	10,600	10,900	11,200	11,500	11,800	12,100	12,400
WATER CONSERVATION PROGRAM	2	338	-	-	-	-	-	-	-	-	-
EDUCATION PROGRAM	2	6,200	-	-	-	-	-	-	-	-	-
EMPLOYEE RECOGNITION PROGRAM	2	54	-	-	-	-	-	-	-	-	-
POSTAGE	2	12,062	13,000	13,300	13,700	14,100	14,500	14,900	15,300	15,700	16,100
SUBSCRIPTIONS/BOOKS	2	652	500	500	500	500	500	500	500	500	500
ADVERTISING	2	5,270	5,000	5,100	5,200	5,300	5,400	5,500	5,600	5,700	5,900
TRAINING, CONFERENCES & MEETINGS	2	14,510	15,000	15,400	15,800	16,200	16,600	17,000	17,500	18,000	18,500
MEMBERSHIPS & DUES (includes 5085)	2	40,388	40,000	41,100	42,200	43,300	44,400	45,600	46,800	48,000	49,300
INSURANCE - PROPERTY (SDRMA)	2	105,350	110,000	112,900	115,900	119,000	122,200	125,400	128,700	132,100	135,600
LEGAL SETTLEMENTS	2	-	-	-	-	-	-	-	-	-	-
ELECTION FEES	2	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 487,958	\$ 608,900	\$ 625,000	\$ 641,600	\$ 658,500	\$ 675,800	\$ 693,500	\$ 711,800	\$ 730,600	\$ 750,000
TOTAL: MATERIALS & SERVICES		\$ 487,958	\$ 608,900	\$ 625,000	\$ 641,600	\$ 658,500	\$ 675,800	\$ 693,500	\$ 711,800	\$ 730,600	\$ 750,000
ADMINISTRATION OVERHEAD ALLOCATION TO SEWER (1.5%) (3)		(13,375)	(15,478)	(15,888)	(16,311)	(16,742)	(17,187)	(17,642)	(18,108)	(18,587)	(19,082)
TOTAL: ADMINISTRATION		\$ 878,273	\$ 1,016,359	\$ 1,043,312	\$ 1,071,089	\$ 1,099,359	\$ 1,128,613	\$ 1,158,459	\$ 1,189,092	\$ 1,220,514	\$ 1,253,019

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Operating Revenue and Expenses

EXHIBIT 1

WATER FUND OPERATING EXPENSE FORECAST (2):

DEPARTMENT: FINANCE - 02	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PERSONNEL											
Salaries											
REGULAR SALARIES	3	\$ 364,457	\$ 358,537	\$ 368,200	\$ 378,100	\$ 388,300	\$ 398,700	\$ 409,400	\$ 420,400	\$ 431,700	\$ 443,300
TEMPORARY SALARIES	3	-	-	-	-	-	-	-	-	-	-
OVERTIME WAGES	3	1,877	-	-	-	-	-	-	-	-	-
Subtotal		\$ 366,334	\$ 358,537	\$ 368,200	\$ 378,100	\$ 388,300	\$ 398,700	\$ 409,400	\$ 420,400	\$ 431,700	\$ 443,300
Benefits											
MEDICAL INSURANCE	3	\$ 66,000	\$ 68,945	\$ 70,800	\$ 72,700	\$ 74,700	\$ 76,700	\$ 78,800	\$ 80,900	\$ 83,100	\$ 85,300
DENTAL INSURANCE	3	9,452	6,859	7,000	7,200	7,400	7,600	7,800	8,000	8,200	8,400
VISION INSURANCE	3	963	1,180	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
LIFE INSURANCE	3	1,187	1,199	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
LONG TERM DISABILITY	3	1,940	1,793	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
PERS - RETIREMENT	3	24,213	4,087	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900
FICA - SOCIAL SECURITY	3	23,155	252	300	300	300	300	300	300	300	300
WORKERS COMPENSATION	3	2,600	24,468	25,100	25,800	26,500	27,200	27,900	28,600	29,400	30,200
ASSISTANCE PROGRAM	3	105	22,229	22,800	23,400	24,000	24,600	25,300	26,000	26,700	27,400
MEDICARE RETIRED MEDICAL	3	5,415	5,199	5,300	5,400	5,500	5,600	5,800	6,000	6,200	6,400
Subtotal		\$ 135,030	\$ 136,211	\$ 139,700	\$ 143,300	\$ 147,000	\$ 150,700	\$ 154,700	\$ 158,700	\$ 162,900	\$ 167,100
Additional Positions (4)											
Fully Loaded Cost of New Position #1	3	\$ -	\$ 100,000	\$ 102,700	\$ 105,500	\$ 108,300	\$ 111,200	\$ 114,200	\$ 117,300	\$ 120,400	\$ 123,600
Fully Loaded Cost of New Position #2	3	-	-	100,000	\$ 102,700	\$ 105,500	\$ 108,300	\$ 111,200	\$ 114,200	\$ 117,300	\$ 120,400
Fully Loaded Cost of New Position #3	3	-	-	-	100,000	\$ 102,700	\$ 105,500	\$ 108,300	\$ 111,200	\$ 114,200	\$ 117,300
Fully Loaded Cost of New Position #4	3	-	-	-	100,000	\$ 102,700	\$ 105,500	\$ 108,300	\$ 111,200	\$ 114,200	\$ 117,300
Fully Loaded Cost of New Position #5	3	-	-	-	-	100,000	102,700	105,500	108,300	111,200	114,200
Subtotal		\$ -	\$ 100,000	\$ 202,700	\$ 408,200	\$ 519,200	\$ 533,200	\$ 547,500	\$ 562,200	\$ 577,300	\$ 592,800
TOTAL: PERSONNEL		\$ 501,364	\$ 594,748	\$ 710,600	\$ 929,600	\$ 1,054,500	\$ 1,082,600	\$ 1,111,600	\$ 1,141,300	\$ 1,171,900	\$ 1,203,200
MATERIALS & SERVICES											
CONTRACT/PROFESSIONAL SERVICES	2	\$ 75,000	\$ 82,000	\$ 84,200	\$ 86,400	\$ 88,700	\$ 91,100	\$ 93,500	\$ 96,000	\$ 98,500	\$ 101,100
AUDIT SERVICES	2	20,000	24,000	24,600	25,300	26,000	26,700	27,400	28,100	28,800	29,600
EQUIP NON-CAP	2	2,929	-	-	-	-	-	-	-	-	-
OFFICE SUPPLIES (includes 5078)	2	14,410	12,000	12,300	12,600	12,900	13,200	13,500	13,900	14,300	14,700
POSTAGE	2	39,473	35,900	36,900	37,900	38,900	39,900	41,000	42,100	43,200	44,300
TRAINING, CONFERENCES & MEETINGS	2	-	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700	2,800
COLLECTION COSTS/BANK FEES	2	50,000	50,400	51,700	53,100	54,500	55,900	57,400	58,900	60,500	62,100
BAD DEBTS	2	6,000	6,000	6,200	6,400	6,600	6,800	7,000	7,200	7,400	7,600
Subtotal		\$ 207,812	\$ 212,300	\$ 218,000	\$ 223,900	\$ 229,900	\$ 236,000	\$ 242,300	\$ 248,800	\$ 255,400	\$ 262,200
TOTAL: MATERIALS & SERVICES		\$ 207,812	\$ 212,300	\$ 218,000	\$ 223,900	\$ 229,900	\$ 236,000	\$ 242,300	\$ 248,800	\$ 255,400	\$ 262,200
TOTAL: FINANCE		\$ 709,176	\$ 807,048	\$ 928,600	\$ 1,153,500	\$ 1,284,400	\$ 1,318,600	\$ 1,353,900	\$ 1,390,100	\$ 1,427,300	\$ 1,465,400

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Operating Revenue and Expenses

EXHIBIT 1

WATER FUND OPERATING EXPENSE FORECAST (2):

DEPARTMENT: ENGINEERING - 03	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PERSONNEL											
Salaries											
REGULAR SALARIES	2	\$ 117,871	\$ 106,553	\$ 109,400	\$ 112,300	\$ 115,300	\$ 118,400	\$ 121,500	\$ 124,700	\$ 128,000	\$ 131,400
OVERTIME WAGES	2	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 117,871	\$ 106,553	\$ 109,400	\$ 112,300	\$ 115,300	\$ 118,400	\$ 121,500	\$ 124,700	\$ 128,000	\$ 131,400
Benefits											
MEDICAL INSURANCE	2	\$ 15,812	\$ 16,681	\$ 17,100	\$ 17,600	\$ 18,100	\$ 18,600	\$ 19,100	\$ 19,600	\$ 20,100	\$ 20,600
DENTAL INSURANCE	2	1,517	1,365	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400
VISION INSURANCE	2	196	205	200	200	200	200	200	200	200	200
LIFE INSURANCE	2	233	200	200	200	200	200	200	200	200	200
LONG TERM DISABILITY	2	424	533	500	500	500	500	500	500	500	500
PERS - RETIREMENT	2	8,555	19,819	20,300	20,800	21,400	22,000	22,600	23,200	23,800	24,400
FICA - SOCIAL SECURITY	2	7,359	6,606	6,800	7,000	7,200	7,400	7,600	7,800	8,000	8,200
WORKERS COMPENSATION	2	700	607	600	600	600	600	600	600	600	600
ASSISTANCE PROGRAM	2	19	42	-	-	-	-	-	-	-	-
MEDICARE RETIRED MEDICAL	2	1,721	1,545	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600
SPECIAL CLOTHING	2	1,020	675	700	700	700	700	700	700	700	700
ANNUAL OPEB	2	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 37,556	\$ 48,278	\$ 49,400	\$ 50,600	\$ 51,900	\$ 53,200	\$ 54,500	\$ 55,800	\$ 57,100	\$ 58,400
Additional Positions (4)											
Fully Loaded Cost of New Position #6	3	-	100,000	102,700	105,500	108,300	111,200	114,200	117,300	120,400	123,600
Subtotal		\$ -	\$ 100,000	\$ 102,700	\$ 105,500	\$ 108,300	\$ 111,200	\$ 114,200	\$ 117,300	\$ 120,400	\$ 123,600
TOTAL: PERSONNEL		\$ 155,427	\$ 254,831	\$ 261,500	\$ 268,400	\$ 275,500	\$ 282,800	\$ 290,200	\$ 297,800	\$ 305,500	\$ 313,400
MATERIALS & SERVICES											
CONTRACT/PROFESSIONAL SERVICES	2	\$ 6,316	\$ 10,000	\$ 10,300	\$ 10,600	\$ 10,900	\$ 11,200	\$ 11,500	\$ 11,800	\$ 12,100	\$ 12,400
EQUIPMENT REPLACEMENT FUND	2	-	-	-	-	-	-	-	-	-	-
MAINT/OPERATIONS OF VEHICLES	2	1,910	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700	2,800
SMALL TOOLS/MAINT & REPAIRS	2	-	-	-	-	-	-	-	-	-	-
EQUIP. NON-CAP	2	-	6,000	6,200	6,400	6,600	6,800	7,000	7,200	7,400	7,600
COMMUNICATIONS	2	3,028	3,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800
OFFICE SUPPLIES	2	705	750	800	800	800	800	800	800	800	800
SUBSCRIPTIONS/BOOKS	2	-	250	300	300	300	300	300	300	300	300
TRAINING, CONFERENCES & MEETINGS	2	-	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
MEMBERSHIPS & DUES	2	1,256	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Subtotal		\$ 13,215	\$ 24,700	\$ 25,500	\$ 26,200	\$ 26,900	\$ 27,600	\$ 28,300	\$ 29,000	\$ 29,700	\$ 30,400
TOTAL: MATERIALS & SERVICES		\$ 13,215	\$ 24,700	\$ 25,500	\$ 26,200	\$ 26,900	\$ 27,600	\$ 28,300	\$ 29,000	\$ 29,700	\$ 30,400
TOTAL: ENGINEERING		\$ 168,642	\$ 279,531	\$ 287,000	\$ 294,600	\$ 302,400	\$ 310,400	\$ 318,500	\$ 326,800	\$ 335,200	\$ 343,800

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Operating Revenue and Expenses

EXHIBIT 1

WATER FUND OPERATING EXPENSE FORECAST (2):

DEPARTMENT: OPERATIONS/DISTRIBUTION - 04	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PERSONNEL											
Salaries											
REGULAR SALARIES	3	\$ 943,271	\$ 1,005,219	\$ 1,032,200	\$ 1,059,900	\$ 1,088,400	\$ 1,117,600	\$ 1,147,600	\$ 1,178,400	\$ 1,210,000	\$ 1,242,500
TEMPORARY SALARIES	3	-	-	-	-	-	-	-	-	-	-
OVERTIME WAGES	3	40,986	36,000	37,000	38,000	39,000	40,000	41,100	42,200	43,300	44,500
STANDBY WAGES	3	27,000	27,000	27,700	28,400	29,200	30,000	30,800	31,600	32,400	33,300
Subtotal		\$ 1,011,257	\$ 1,068,219	\$ 1,096,900	\$ 1,126,300	\$ 1,156,600	\$ 1,187,600	\$ 1,219,500	\$ 1,252,200	\$ 1,285,700	\$ 1,320,300
Benefits											
MEDICAL INSURANCE	3	\$ 210,860	\$ 205,918	\$ 211,400	\$ 217,100	\$ 222,900	\$ 228,900	\$ 235,000	\$ 241,300	\$ 247,800	\$ 254,500
DENTAL INSURANCE	3	24,671	21,612	22,200	22,800	23,400	24,000	24,600	25,300	26,000	26,700
VISION INSURANCE	3	3,326	3,752	3,900	4,000	4,100	4,200	4,300	4,400	4,500	4,600
LIFE INSURANCE	3	2,816	2,637	2,700	2,800	2,900	3,000	3,100	3,200	3,300	3,400
LONG TERM DISABILITY	3	4,456	4,981	5,100	5,200	5,300	5,400	5,500	5,600	5,800	6,000
PERS - RETIREMENT	3	65,025	135,291	138,900	142,600	146,400	150,300	154,300	158,400	162,700	167,100
FICA - SOCIAL SECURITY	3	58,224	61,483	63,100	64,800	66,500	68,300	70,100	72,000	73,900	75,900
WORKERS COMPENSATION	3	72,000	56,795	58,300	59,900	61,500	63,200	64,900	66,600	68,400	70,200
ASSISTANCE PROGRAM	3	233	575	600	600	600	600	600	600	600	600
MEDICARE RETIRED MEDICAL	3	14,374	14,576	15,000	15,400	15,800	16,200	16,600	17,000	17,500	18,000
SPECIAL CLOTHING	3	10,196	8,910	9,100	9,300	9,500	9,800	10,100	10,400	10,700	11,000
CERTIFICATIONS	3	460	750	800	800	800	800	800	800	800	800
Subtotal		\$ 466,641	\$ 517,280	\$ 531,100	\$ 545,300	\$ 559,700	\$ 574,700	\$ 589,900	\$ 605,600	\$ 622,000	\$ 638,800
Additional Positions (4)											
Fully Loaded Cost of New Position #7	3	-	100,000	102,700	105,500	108,300	111,200	114,200	117,300	120,400	123,600
Fully Loaded Cost of New Position #8	3	-	-	100,000	102,700	105,500	108,300	111,200	114,200	117,300	120,400
Subtotal		\$ -	\$ 100,000	\$ 202,700	\$ 208,200	\$ 213,800	\$ 219,500	\$ 225,400	\$ 231,500	\$ 237,700	\$ 244,000
TOTAL: PERSONNEL		\$ 1,477,898	\$ 1,685,499	\$ 1,830,700	\$ 1,879,800	\$ 1,930,100	\$ 1,981,800	\$ 2,034,800	\$ 2,089,300	\$ 2,145,400	\$ 2,203,100
MATERIALS & SERVICES											
CONTRACT/PROFESSIONAL SERVICES	2	\$ 81,217	\$ 120,000	\$ 123,200	\$ 126,500	\$ 129,900	\$ 133,300	\$ 136,800	\$ 140,400	\$ 144,100	\$ 147,900
EQUIPMENT REPLACEMENT FUND	2	-	-	-	-	-	-	-	-	-	-
UTILITIES	2	86,647	110,000	112,900	115,900	119,000	122,200	125,400	128,700	132,100	135,600
OPERATING SUPPLIES	2	70,463	90,000	92,400	94,800	97,300	99,900	102,500	105,200	108,000	110,900
MAINT & OPERATIONS OF VEHICLES	2	92,660	78,000	80,100	82,200	84,400	86,600	88,900	91,300	93,700	96,200
RENTAL/LEASES/PERMITS	2	7,701	10,000	10,300	10,600	10,900	11,200	11,500	11,800	12,100	12,400
SMALL TOOLS-MAINT & REPAIRS	2	5,873	12,500	12,800	13,100	13,400	13,800	14,200	14,600	15,000	15,400
EQUIPMENT NON-CAP	2	4,757	-	-	-	-	-	-	-	-	-
SAFETY EQUIPMENT - MAINTENANCE	2	2,880	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700	2,800
FACILITIES MAINTENANCE	2	8,311	16,000	16,400	16,800	17,200	17,700	18,200	18,700	19,200	19,700
COMMUNICATIONS & TELEMETERING	2	65,711	67,000	68,800	70,600	72,500	74,400	76,400	78,400	80,500	82,600
OFFICE SUPPLIES (included 5078)	2	7,346	6,500	6,700	6,900	7,100	7,300	7,500	7,700	7,900	8,100
SUBSCRIPTIONS/BOOKS	2	-	-	-	-	-	-	-	-	-	-
TRAINING, CONFERENCES & MEETINGS	2	7,009	7,000	7,200	7,400	7,600	7,800	8,000	8,200	8,400	8,600
SPECIAL PROJECTS	2	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 440,575	\$ 519,000	\$ 532,900	\$ 547,000	\$ 561,600	\$ 576,600	\$ 591,900	\$ 607,600	\$ 623,700	\$ 640,200
TOTAL: MATERIALS & SERVICES		\$ 440,575	\$ 519,000	\$ 532,900	\$ 547,000	\$ 561,600	\$ 576,600	\$ 591,900	\$ 607,600	\$ 623,700	\$ 640,200
TOTAL: OPERATIONS/DISTRIBUTION		\$ 1,918,473	\$ 2,204,499	\$ 2,363,600	\$ 2,426,800	\$ 2,491,700	\$ 2,558,400	\$ 2,626,700	\$ 2,696,900	\$ 2,769,100	\$ 2,843,300

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Operating Revenue and Expenses

EXHIBIT 1

WATER FUND OPERATING EXPENSE FORECAST (2):

DEPARTMENT: WATERSHED - 05	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PERSONNEL											
Salaries											
REGULAR SALARIES	3	\$ 96,042	\$ 133,988	\$ 137,600	\$ 141,300	\$ 145,100	\$ 149,000	\$ 153,000	\$ 157,100	\$ 161,300	\$ 165,600
TEMPORARY SALARIES	3	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 96,042	\$ 133,988	\$ 137,600	\$ 141,300	\$ 145,100	\$ 149,000	\$ 153,000	\$ 157,100	\$ 161,300	\$ 165,600
Benefits											
MEDICAL INSURANCE	3	\$ 19,832	\$ 25,043	\$ 25,700	\$ 26,400	\$ 27,100	\$ 27,800	\$ 28,500	\$ 29,300	\$ 30,100	\$ 30,900
DENTAL INSURANCE	3	830	2,979	3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800
VISION INSURANCE	3	98	458	500	500	500	500	500	500	500	500
LIFE INSURANCE	3	117	107	100	100	100	100	100	100	100	100
LONG TERM DISABILITY	3	271	670	700	700	700	700	700	700	700	700
PERS - RETIREMENT	3	7,998	17,988	18,500	19,000	19,500	20,000	20,500	21,100	21,700	22,300
FICA - SOCIAL SECURITY	3	5,609	8,307	8,500	8,700	8,900	9,100	9,300	9,500	9,800	10,100
WORKERS COMPENSATION	3	900	764	800	800	800	800	800	800	800	800
ASSISTANCE PROGRAM	3	19	42	-	-	-	-	-	-	-	-
MEDICARE	3	1,312	1,943	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700
SPECIAL CLOTHING	3	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 36,986	\$ 58,301	\$ 59,900	\$ 61,500	\$ 63,100	\$ 64,700	\$ 66,300	\$ 68,100	\$ 70,000	\$ 71,900
TOTAL: PERSONNEL		\$ 133,028	\$ 192,289	\$ 197,500	\$ 202,800	\$ 208,200	\$ 213,700	\$ 219,300	\$ 225,200	\$ 231,300	\$ 237,500
MATERIALS & SERVICES											
CONTRACT/PROFESSIONAL SERVICES	2	\$ 200,000	\$ 347,283	\$ 356,500	\$ 365,900	\$ 375,600	\$ 385,600	\$ 395,800	\$ 406,300	\$ 417,100	\$ 428,200
ROAD MAINTENANCE	2	5,000	15,000	15,400	15,800	16,200	16,600	17,000	17,500	18,000	18,500
OPERATING SUPPLIES	2	146	500	500	500	500	500	500	500	500	500
EQUIPMENT NON-CAP	2	-	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
COMMUNICATIONS & TELEMETERING	2	89	300	300	300	300	300	300	300	300	300
SUBSCRIPTIONS/BOOKS	2	-	300	300	300	300	300	300	300	300	300
TRAINING, CONFERENCES & MEETINGS	2	490	3,000	3,100	3,200	3,300	3,400	3,500	3,600	3,700	3,800
MEMBERSHIP & DUES	2	1,000	1,250	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
WATERSHED & DATA COLLECTION GRNTS	2	15,000	15,000	15,400	15,800	16,200	16,600	17,000	17,500	18,000	18,500
WATER CONSERVATION PROGRAM	2	97,080	26,000	26,700	27,400	28,100	28,800	29,600	30,400	31,200	32,000
EDUCATION GRANT PROGRAM	2	15,300	17,500	18,000	18,500	19,000	19,500	20,000	20,500	21,000	21,600
SPECIAL PROJECTS	2	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 334,105	\$ 427,133	\$ 438,500	\$ 450,000	\$ 461,800	\$ 473,900	\$ 486,300	\$ 499,200	\$ 512,400	\$ 526,000
TOTAL: MATERIALS & SERVICES		\$ 334,105	\$ 427,133	\$ 438,500	\$ 450,000	\$ 461,800	\$ 473,900	\$ 486,300	\$ 499,200	\$ 512,400	\$ 526,000
TOTAL: WATERSHED		\$ 467,133	\$ 619,422	\$ 636,000	\$ 652,800	\$ 670,000	\$ 687,600	\$ 705,600	\$ 724,400	\$ 743,700	\$ 763,500

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Operating Revenue and Expenses

EXHIBIT 1

WATER FUND OPERATING EXPENSE FORECAST (2):

DEPARTMENT: OPERATIONS/SUPPLY & TREATMENT -08	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PERSONNEL											
Salaries											
REGULAR SALARIES	3	\$ 670,578	\$ 815,280	\$ 837,200	\$ 859,700	\$ 882,800	\$ 906,500	\$ 930,800	\$ 955,800	\$ 981,500	\$ 1,007,900
TEMPORARY SALARIES	3	-	-	-	-	-	-	-	-	-	-
OVERTIME WAGES	3	48,909	30,000	30,800	31,600	32,400	33,300	34,200	35,100	36,000	37,000
STANDBY	3	4,000	4,000	4,100	4,200	4,300	4,400	4,500	4,600	4,700	4,800
Subtotal		\$ 723,487	\$ 849,280	\$ 872,100	\$ 895,500	\$ 919,500	\$ 944,200	\$ 969,500	\$ 995,500	\$ 1,022,200	\$ 1,049,700
Benefits											
MEDICAL INSURANCE	3	\$ 38,402	\$ 117,981	\$ 121,100	\$ 124,400	\$ 127,700	\$ 131,100	\$ 134,600	\$ 138,200	\$ 141,900	\$ 145,700
DENTAL INSURANCE	3	6,048	12,099	12,400	12,700	13,000	13,300	13,700	14,100	14,500	14,900
VISION INSURANCE	3	876	2,460	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200
LIFE INSURANCE	3	919	1,958	2,000	2,100	2,200	2,300	2,400	2,500	2,600	2,700
LONG TERM DISABILITY	3	1,665	4,083	4,200	4,300	4,400	4,500	4,600	4,700	4,800	4,900
PERS - RETIREMENT	3	45,623	120,171	123,400	126,700	130,100	133,600	137,200	140,900	144,700	148,600
FICA - SOCIAL SECURITY	3	43,222	52,343	53,700	55,100	56,600	58,100	59,700	61,300	62,900	64,600
WORKERS COMPENSATION	3	35,000	46,911	48,200	49,500	50,800	52,200	53,600	55,000	56,500	58,000
ASSISTANCE PROGRAM	3	82	433	400	400	400	400	400	400	400	400
MEDICARE RETIRED MEDICAL	3	10,661	12,373	12,700	13,000	13,300	13,700	14,100	14,500	14,900	15,300
SPECIAL CLOTHING	3	3,727	6,615	6,800	7,000	7,200	7,400	7,600	7,800	8,000	8,200
CERTIFICATIONS	3	2,910	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Subtotal		\$ 189,135	\$ 378,927	\$ 388,900	\$ 399,300	\$ 409,900	\$ 420,900	\$ 432,300	\$ 443,900	\$ 455,800	\$ 468,000
Additional Positions (4)											
Fully Loaded Cost of New Position #9	3	-	100,000	102,700	105,500	108,300	111,200	114,200	117,300	120,400	123,600
Fully Loaded Cost of New Position #10	3	-	-	100,000	102,700	105,500	108,300	111,200	114,200	117,300	120,400
Subtotal		\$ -	\$ 100,000	\$ 202,700	\$ 208,200	\$ 213,800	\$ 219,500	\$ 225,400	\$ 231,500	\$ 237,700	\$ 244,000
TOTAL: PERSONNEL		\$ 912,622	\$ 1,328,207	\$ 1,463,700	\$ 1,503,000	\$ 1,543,200	\$ 1,584,600	\$ 1,627,200	\$ 1,670,900	\$ 1,715,700	\$ 1,761,700
MATERIALS & SERVICES											
CONTRACT/PROFESSIONAL SERVICES	2	\$ 114,335	\$ 150,000	\$ 154,000	\$ 158,100	\$ 162,300	\$ 166,600	\$ 171,000	\$ 175,500	\$ 180,200	\$ 185,000
CONTRACT SERVICES MANANA WOODS	2	-	-	-	-	-	-	-	-	-	-
OUTSIDE WATER ANALYSIS	2	76,946	75,000	77,000	79,000	81,100	83,200	85,400	87,700	90,000	92,400
LAB SUPPLIES	2	8,465	24,500	25,100	25,800	26,500	27,200	27,900	28,600	29,400	30,200
EQUIPMENT REPLACEMENT	2	-	-	-	-	-	-	-	-	-	-
UTILITIES	2	242,913	275,000	282,300	289,800	297,500	305,400	313,500	321,800	330,300	339,100
CHEMICALS	2	28,579	35,000	35,900	36,900	37,900	38,900	39,900	41,000	42,100	43,200
OPERATING SUPPLIES	2	54,078	57,000	58,500	60,100	61,700	63,300	65,000	66,700	68,500	70,300
MAINTENANANCE/OPERATIONS OF VEHICLES	2	15,612	21,000	21,600	22,200	22,800	23,400	24,000	24,600	25,300	26,000
RENTAL/LEASES/PERMITS	2	100,000	110,000	112,900	115,900	119,000	122,200	125,400	128,700	132,100	135,600
SMALL TOOLS-MAINTENANCE & REPAIRS	2	13	6,000	6,200	6,400	6,600	6,800	7,000	7,200	7,400	7,600
EQUIPMENT NON-CAP	2	208	15,000	15,400	15,800	16,200	16,600	17,000	17,500	18,000	18,500
FACILITIES MAINTENANCE	2	261	7,500	7,700	7,900	8,100	8,300	8,500	8,700	8,900	9,100
COMMUNICATIONS & TELEMETERING	2	37,492	40,000	41,100	42,200	43,300	44,400	45,600	46,800	48,000	49,300
OFFICE SUPPLIES (included 5078)	2	1,089	3,500	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
SUBSCRIPTIONS/BOOKS	2	-	500	500	500	500	500	500	500	500	500
TRAINING, CONFERENCES & MEETINGS	2	253	3,500	3,600	3,700	3,800	3,900	4,000	4,100	4,200	4,300
OTHER HOUSEHOLD SUPPLIES	2	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 680,244	\$ 823,500	\$ 845,400	\$ 868,000	\$ 891,100	\$ 914,600	\$ 938,700	\$ 963,500	\$ 989,100	\$ 1,015,400
TOTAL: MATERIALS & SERVICES		\$ 680,244	\$ 823,500	\$ 845,400	\$ 868,000	\$ 891,100	\$ 914,600	\$ 938,700	\$ 963,500	\$ 989,100	\$ 1,015,400
TOTAL: OPERATIONS/SUPPLY & TREATMENT		\$ 1,592,866	\$ 2,151,707	\$ 2,309,100	\$ 2,371,000	\$ 2,434,300	\$ 2,499,200	\$ 2,565,900	\$ 2,634,400	\$ 2,704,800	\$ 2,777,100
GRAND TOTAL: WATER FUND OPERATING EXPENSES		\$ 5,734,563	\$ 7,078,566	\$ 7,567,612	\$ 7,969,789	\$ 8,282,159	\$ 8,502,813	\$ 8,729,059	\$ 8,961,692	\$ 9,200,614	\$ 9,446,119

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Operating Revenue and Expenses

EXHIBIT 1

NON-CASH ITEMS, EXCLUDED FROM ABOVE:

DESCRIPTION	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
DEPRECIATION											
DEPRECIATION TRANSPORTATION	1	\$ 880	\$ -	-	-	-	-	-	-	-	-
DEPRECIATION	1	1,084,474	1,504,000	1,504,000	1,504,000	1,504,000	1,504,000	1,504,000	1,504,000	1,504,000	1,504,000
DEPRECIATION-PUMPING	1	11,430	-	-	-	-	-	-	-	-	-
DEPRECIATION-MAINTENANCE	1	554	-	-	-	-	-	-	-	-	-
DEPRECIATION EXPENSE (Bear Creek)	1	41,773	-	-	-	-	-	-	-	-	-
SUBTOTAL: DEPRECIATION		\$ 1,139,110	\$ 1,504,000	\$ 1,504,000	\$ 1,504,000	\$ 1,504,000	\$ 1,504,000	\$ 1,504,000	\$ 1,504,000	\$ 1,504,000	\$ 1,504,000

FORECASTING ASSUMPTIONS, Shown for Reference Purposes Only

INFLATION FACTORS	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Customer Growth	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Cost Inflation (5)	2	2.65%	2.65%	2.65%	2.65%	2.65%	2.65%	2.65%	2.65%	2.65%	2.65%
Labor Cost Inflation (6)	3	2.69%	2.69%	2.69%	2.69%	2.69%	2.69%	2.69%	2.69%	2.69%	2.69%
Water Purchases	4	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Energy (7)	5	4.40%	4.40%	4.40%	4.40%	4.40%	4.40%	4.40%	4.40%	4.40%	4.40%
Chemicals (8)	6	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Fuel	7	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
No Escalation	8	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

1. Revenues are from the *Revenues.xls* and are estimated actual revenues for FY 2015/16, and FY 2016/17 Requested Budget amounts.
2. Expenses are from estimated actuals for FY 2015/16 and requested FY 2016/17 budget amounts from file: *WATER expenses.xls*.
3. 1.5 percent of Administration budget items are allocated to the sewer utility; per District staff, via email September 2016.
4. New Positions are recommendations found in the Staffing Study Report, prepared by DeLoach & Associates, Inc., August 2016.
5. Expected Inflation factors based on expense type from 5 year average from Bureau of Labor Statistics Data.
http://www.bls.gov/regions/west/news-release/consumerpriceindex_sanfrancisco.htm
6. Labor cost inflation is based on the 5-year average annual change in the Quarterly Census of Employment and Wages (San Jose area, CA).
http://www.bls.gov/regions/west/news-release/2016/employmentcostindex_sanjose_20161031.htm
7. Estimated energy cost inflation provided by a University of California Davis report:
The Future of Electricity Prices in California: Understanding Market Drivers and Forecasting Prices to 2040," by Johnathan Cook, Ph.D., page 31, Table 7.
8. Inflation factor recently used by other California water agencies (e.g., City of Sunnyvale, City of Eureka, Humboldt CSD).

CAPITAL FUNDING SUMMARY - WATER

CAPITAL FUNDING FORECAST - WATER										
Funding Sources:	Actual	Projected								
	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
Grants	\$ 1,270,475	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Use of Capacity Fee Reserves	-	-	-	-	-	-	-	-	-	-
SRF Loan Funding	-	-	-	-	-	-	-	-	-	-
Use of New Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-
Use of Capital Rehabilitation and Replacement Reserve	-	-	-	-	-	-	-	-	-	253,418
Rate Revenue	2,397,525	1,500,000	1,678,988	1,862,385	1,918,257	2,116,934	2,180,442	3,299,649	3,419,826	3,427,845
Total Sources of Capital Funds	\$ 3,668,000	\$ 1,500,000	\$ 1,678,988	\$ 1,862,385	\$ 1,918,257	\$ 2,116,934	\$ 2,180,442	\$ 3,299,649	\$ 3,419,826	\$ 3,681,263
Uses of Capital Funds:										
Total Project Costs	\$ 3,668,000	\$ 1,500,000	\$ 1,678,988	\$ 1,862,385	\$ 1,918,257	\$ 2,116,934	\$ 2,180,442	\$ 3,299,649	\$ 3,419,826	\$ 3,681,263
Capital Funding Surplus (Deficiency)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SRF Loan Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Revenue Bond Proceeds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

CAPITAL IMPROVEMENT PROGRAM FUNDING OPTIONS

CIP Funding Choice	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
1 Mid Flat Rate Increases (Limited CIP through Year 5; Reserves re	\$ 3,668,000	\$ 1,500,000	\$ 516,612	\$ 931,193	\$ 1,233,165	\$ 1,552,418	\$ 2,907,255	\$ 5,060,920	\$ 4,813,665	\$ 4,684,038
2 10-Year Phase In (CIP & Reserves at 100% by Year 10)	\$ 3,668,000	\$ 1,500,000	\$ 2,583,059	\$ 2,660,550	\$ 2,740,367	\$ 2,822,578	\$ 2,907,255	\$ 2,994,473	\$ 3,084,307	\$ 3,176,836
3 5-Year Phase In (CIP & Reserves at 100% by Year 5)	\$ 3,668,000	\$ 1,500,000	\$ 2,583,059	\$ 2,660,550	\$ 2,740,367	\$ 2,822,578	\$ 2,907,255	\$ 2,994,473	\$ 3,084,307	\$ 3,176,836
4 Rates with Phased-In CIP Spending (Reserves at 100% by Year 5)	\$ 3,668,000	\$ 1,500,000	\$ 1,678,988	\$ 1,862,385	\$ 1,918,257	\$ 2,116,934	\$ 2,180,442	\$ 3,299,649	\$ 3,419,826	\$ 3,681,263
5 Low Flat Rate Increases (Limited CIP through Year 5; with phased	\$ 3,668,000	\$ 1,500,000	\$ 129,153	\$ 266,055	\$ 411,055	\$ 423,387	\$ 436,088	\$ 3,202,524	\$ 3,936,649	\$ 4,711,939

CIP Funding Choice linked to choice made on <i>Assumptions</i> tab:	4
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1 Phased-In Funding Factors (Amounts foregone in any year are built back in over time, beginning in FY 2022/23.)	100.0%	100.0%	20.0%	35.0%	45.0%	55.0%	100.0%	100.0%	100.0%	100.0%
Remaining Annual CIP; added back in FY 2022/23 and beyond.			\$ 2,066,447	\$ 1,729,358	\$ 1,507,202	\$ 1,270,160	\$ -	\$ -	\$ -	\$ -
4 Phased-In Funding Factors (Amounts foregone in any year are built back in over time, beginning in FY 2022/23.)	100.0%	100.0%	65.0%	70.0%	70.0%	75.0%	75.0%	80.0%	85.0%	90.0%
Remaining Annual CIP; added back in FY 2022/23 and beyond.			\$ 904,071	\$ 798,165	\$ 822,110	\$ 705,645	\$ 726,814	\$ 598,895	\$ 462,646	\$ 317,684
5 Phased-In Funding Factors (Amounts foregone in any year are built back in over time, beginning in FY 2022/23.)	100.0%	100.0%	5.0%	10.0%	15.0%	15.0%	15.0%	25.0%	50.0%	75.0%
Remaining Annual CIP; added back in FY 2022/23 and beyond.			\$ 2,453,906	\$ 2,394,495	\$ 2,329,312	\$ 2,399,191	\$ 2,471,167	\$ 2,245,855	\$ 1,542,154	\$ 794,209

CAPITAL IMPROVEMENT PROGRAM - WATER

Water Capital Improvement Program Costs (in Current-Year Dollars) (1):

Project Description & ID	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Engineering: Other Capital Projects										
Interties 2, 3 & 4	\$ 2,855,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Fall Creek Fish Ladder Design	\$ 12,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Probation Tank Site Design	\$ 120,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Swim Tank Site Design	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Swim Tank Site Construction	\$ 324,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operations/Distribution: Water Meters & Registers										
5888-1736 Replacement Meters	\$ 35,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operations/Distribution: Other Capital Projects										
5890-9901 Replacement Pumps & Motors	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5890-1202 Felton Heights Mutual Consolidation Project	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operations/Supply & Treatment: Other Capital Projects										
5890-9906 Replacement Pumps & Motors	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SCADA Upgrade/Replacement Lyon	\$ 35,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lyon WTP Control Upgrade	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pasatiempo Well 6 Elect Upgrade	\$ 42,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Capital Expenditures										
Pipes	\$ -	\$ -	\$ 1,064,448	\$ 1,064,448	\$ 1,064,448	\$ 1,064,448	\$ 1,064,448	\$ 1,064,448	\$ 1,064,448	\$ 1,064,448
Tanks (including 10% volume contingency)	\$ -	\$ -	\$ 554,400	\$ 554,400	\$ 554,400	\$ 554,400	\$ 554,400	\$ 554,400	\$ 554,400	\$ 554,400
Pump Stations	\$ -	\$ -	\$ 620,000	\$ 620,000	\$ 620,000	\$ 620,000	\$ 620,000	\$ 620,000	\$ 620,000	\$ 620,000
Wells	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000	\$ 150,000
Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Diversions	\$ -	\$ -	\$ 37,500	\$ 37,500	\$ 37,500	\$ 37,500	\$ 37,500	\$ 37,500	\$ 37,500	\$ 37,500
Admin/Operations Building	\$ -	\$ -	\$ 81,476	\$ 81,476	\$ 81,476	\$ 81,476	\$ 81,476	\$ 81,476	\$ 81,476	\$ 81,476
Other	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: CIP Program Costs (Future-Year Dollars)	\$ 3,668,000	\$ 1,500,000	\$ 2,507,824	\$ 2,507,824	\$ 2,507,824	\$ 2,507,824	\$ 2,507,824	\$ 2,507,824	\$ 2,507,824	\$ 2,507,824

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Capital Improvement Plan Expenditures

EXHIBIT 2

Water Capital Improvement Program Costs (in Future-Year Dollars) (2):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Engineering: Other Capital Projects										
-- Interties 2, 3 & 4	\$ 2,855,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-- Fall Creek Fish Ladder Design	\$ 12,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-- Probation Tank Site Design	\$ 120,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-- Swim Tank Site Design	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-- Swim Tank Site Construction	\$ 324,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operations/Distribution: Water Meters & Registers										
5888-1736 Replacement Meters	\$ 35,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operations/Distribution: Other Capital Projects										
5890-9901 Replacement Pumps & Motors	\$ 5,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5890-1202 Felton Heights Mutual Consolidation Project	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Operations/Supply & Treatment: Other Capital Projects										
5890-9906 Replacement Pumps & Motors	\$ 30,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-- SCADA Upgrade/Replacement Lyon	\$ 35,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-- Lyon WTP Control Upgrade	\$ 150,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-- Pasatiempo Well 6 Elect Upgrade	\$ 42,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Capital Expenditures										
-- Pipes	\$ -	\$ -	\$ 1,096,381	\$ 1,129,273	\$ 1,163,151	\$ 1,198,046	\$ 1,233,987	\$ 1,271,007	\$ 1,309,137	\$ 1,348,411
-- Tanks (including 10% volume contingency)	\$ -	\$ -	\$ 571,032	\$ 588,163	\$ 605,808	\$ 623,982	\$ 642,702	\$ 661,983	\$ 681,842	\$ 702,297
-- Pump Stations	\$ -	\$ -	\$ 638,600	\$ 657,758	\$ 677,491	\$ 697,815	\$ 718,750	\$ 740,312	\$ 762,522	\$ 785,397
-- Wells	\$ -	\$ -	\$ 154,500	\$ 159,135	\$ 163,909	\$ 168,826	\$ 173,891	\$ 179,108	\$ 184,481	\$ 190,016
-- Treatment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
-- Diversions	\$ -	\$ -	\$ 38,625	\$ 39,784	\$ 40,977	\$ 42,207	\$ 43,473	\$ 44,777	\$ 46,120	\$ 47,504
-- Admin/Operations Building	\$ -	\$ -	\$ 83,920	\$ 86,438	\$ 89,031	\$ 91,702	\$ 94,453	\$ 97,287	\$ 100,205	\$ 103,211
-- Other	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: CIP Program Costs (Future-Year Dollars)	\$ 3,668,000	\$ 1,500,000	\$ 2,583,059	\$ 2,660,550	\$ 2,740,367	\$ 2,822,578	\$ 2,907,255	\$ 2,994,473	\$ 3,084,307	\$ 3,176,836

FORECASTING ASSUMPTIONS:

Economic Variables	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Annual Construction Cost Inflation, Per Engineering News Record (2)	0.00%	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2016	1.00	1.00	1.03	1.06	1.09	1.13	1.16	1.19	1.23	1.27

1. Capital project costs were provided by City Staff in source file: *VWHA_Capital_Asset_Cost_of_Service_9_02_16.pdf*.

2. For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2005-2015 (3.0%). Source: *Engineering News Record website (http://enr.construction.com)*.

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Debt Service

EXHIBIT 3

EXISTING DEBT OBLIGATIONS - WATER	Actual	Projected								
Annual Repayment Schedules:	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
2004 Refunding Water Revenue Bond, 2012 (1)										
Principal Payment	\$ 616,350	\$ 632,479	\$ 649,030	\$ 666,015	\$ 582,031	\$ 494,531	\$ 103,454	\$ -	\$ -	\$ -
Interest Payment	93,361	77,231	60,680	43,696	26,267	12,354	1,345	-	-	-
Subtotal: Annual Debt Service	\$ 709,710	\$ 709,710	\$ 709,710	\$ 709,710	\$ 608,298	\$ 506,885	\$ 104,799	\$ -	\$ -	\$ -
Coverage Requirement (\$-Amnt above annual payment) (2)	\$ 816,167	\$ 816,167	\$ 816,167	\$ 816,167	\$ 816,167	\$ 816,167	\$ 816,167	\$ -	\$ -	\$ -
Reserve Requirement (total fund balance) (2)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2008 Safe Drinking Water Loan (3)										
Principal Payment	\$ 139,174	\$ 142,556	\$ 146,026	\$ 149,577	\$ 153,215	\$ 156,938	\$ 160,758	\$ 164,668	\$ 168,673	\$ 172,772
Interest Payment	47,623	44,242	40,771	37,220	33,582	29,859	26,039	22,129	18,124	14,025
Subtotal: Annual Debt Service	\$ 186,797	\$ 186,797	\$ 186,797	\$ 186,797	\$ 186,797	\$ 186,797	\$ 186,797	\$ 186,797	\$ 186,797	\$ 186,797
Coverage Requirement (\$-Amnt above annual payment) (4)	\$ 214,817	\$ 214,817	\$ 214,817	\$ 214,817	\$ 214,817	\$ 214,817	\$ 214,817	\$ 214,817	\$ 214,817	\$ 214,817
Reserve Requirement (total fund balance) (4)	\$ 373,594	\$ 373,594	\$ 373,594	\$ 373,594	\$ 373,594	\$ 373,594	\$ 373,594	\$ 373,594	\$ 373,594	\$ 373,594
SWRCB State Revolving Fund Loan (5)										
Principal Payment	\$ -	\$ -	\$ 63,128	\$ 64,587	\$ 66,258	\$ 67,972	\$ 69,730	\$ 71,533	\$ 73,383	\$ 75,281
Interest Payment	-	40,019	41,116	39,657	37,986	36,272	34,514	32,711	30,860	28,962
Subtotal: Annual Debt Service	\$ -	\$ 40,019	\$ 104,244	\$ 104,244	\$ 104,244	\$ 104,244	\$ 104,244	\$ 104,244	\$ 104,244	\$ 104,244
Coverage Requirement (\$-Amnt above annual payment)	\$ -	\$ 44,021	\$ 114,668	\$ 114,668	\$ 114,668	\$ 114,668	\$ 114,668	\$ 114,668	\$ 114,668	\$ 114,668
Reserve Requirement (total fund balance)	\$ -	\$ 125,092	\$ 125,092	\$ 125,092	\$ 125,092	\$ 125,092	\$ 125,092	\$ 125,092	\$ 125,092	\$ 125,092

1. Source file: *2012 Water Revenue Refunding Bond Payment Schedule.pdf* was provided by staff.
2. Coverage requirement is set to 115% of the maximum annual debt service; Source file: *Revenue Refunding Bond Bank of Nevada.pdf*, page 19, Section 5.13(a)(2).
No reserve fund requirement for refunding bond; Source file: *Revenue Refunding Bond Bank of Nevada.pdf*, page 19, Section 5.13(a)(3).
3. Source file: *Felton WTP SDWBL Loan.pdf* was provided by staff.
4. Coverage requirement is set to 115% of the maximum annual debt service. Reserve requirement equal to two years of annual payments. Source file: *Felton WTP SDWBL Loan.pdf*; Article B-6.
5. Source file: *OLY 2014CX108_San Lorenzo Valley Water District_Schedule.pdf* was provided by staff. Coverage requirement set at 110% and reserve requirement set at 120% of annual payment.

Existing Annual Debt Obligations to be Satisfied by Water Rates:

Existing Annual Debt Service	\$ 896,508	\$ 936,526	\$ 1,000,751	\$ 1,000,751	\$ 899,339	\$ 797,926	\$ 395,840	\$ 291,041	\$ 291,041	\$ 291,041
Existing Annual Coverage Requirement	\$ 1,030,984	\$ 1,075,004	\$ 1,145,652	\$ 1,145,652	\$ 1,145,652	\$ 1,145,652	\$ 1,145,652	\$ 329,485	\$ 329,485	\$ 329,485
Existing Debt Reserve Target	\$ 373,594	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687

FUTURE DEBT FINANCING ASSUMPTIONS:

Long-Term Debt Terms	State Revolving Fund Loan	Revenue Bonds
Issuance Cost	0.00%	2.00%
Annual Interest Cost (%)	3.00%	5.50%
Term	30	30
Debt Reserve Funded?	Yes	Yes
Coverage Requirement (% above annual pmt)	20%	25%

FUTURE DEBT OBLIGATIONS:

Annual Repayment Schedules	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
SRF Loan Funding										
Principal Payment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Payment	-	-	-	-	-	-	-	-	-	-
Subtotal: Annual Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Revenue Bonds										
Principal Payment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Payment	-	-	-	-	-	-	-	-	-	-
Subtotal: Annual Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Total: Future Annual Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Total: Future Annual Coverage Requirement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Total: Future Debt Reserve Target	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

TOTAL DEBT SERVICE:

Annual Obligations	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Annual Debt Service	\$ 896,508	\$ 936,526	\$ 1,000,751	\$ 1,000,751	\$ 899,339	\$ 797,926	\$ 395,840	\$ 291,041	\$ 291,041	\$ 291,041
Annual Coverage Requirement	\$ 1,030,984	\$ 1,075,004	\$ 1,145,652	\$ 1,145,652	\$ 1,145,652	\$ 1,145,652	\$ 1,145,652	\$ 329,485	\$ 329,485	\$ 329,485
Total Debt Reserve Target	\$ 373,594	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687	\$ 498,687

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Existing Water Rate Schedule

EXHIBIT 4

Current Water Rate Schedule:

Fixed Charges	Current Monthly
<i>Standard Meters:</i>	
5/8 inch	\$34.00
3/4 inch	\$34.00
1 inch	\$56.50
1 1/2 inch	\$114.00
2 inch	\$181.50
3 inch	\$341.00
4 inch	\$567.00
Surplus Water	\$114.00

Volumetric Charges (1)	Tier Thresholds	Current Rates
		Volumetric Charge
Tier 1	0 - 4 ccf	\$3.81
Tier 2	5 - 15 ccf	\$4.97
Tier 3	16 - 50 ccf	\$5.96
Tier 4	51+ ccf	\$6.61
Drought Surcharge	per CCF	\$1.00
Flat Rate	per CCF	\$5.64
Surplus Water	per CCF	\$10.00

1. CCF = Hundred Cubic Feet or 748 gallons.

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis

Classification of Expenses - Water							
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2017/18	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
DEPARTMENT: ADMINISTRATION - 01							
PERSONNEL							
Salaries							
REGULAR SALARIES	\$ 263,900	\$ 105,560	\$ 131,950	\$ 26,390	40.0%	50.0%	10.0%
DIRECTORS FEES	\$ 23,600	\$ 9,440	\$ 11,800	\$ 2,360	40.0%	50.0%	10.0%
<i>Subtotal</i>	<i>\$ 287,500</i>	<i>\$ 115,000</i>	<i>\$ 143,750</i>	<i>\$ 28,750</i>	<i>40.0%</i>	<i>50.0%</i>	<i>10.0%</i>
Benefits							
MEDICAL INSURANCE	\$ 30,700	\$ 12,280	\$ 15,350	\$ 3,070	40.0%	50.0%	10.0%
DENTAL INSURANCE	\$ 3,200	\$ 1,280	\$ 1,600	\$ 320	40.0%	50.0%	10.0%
VISION INSURANCE	\$ 600	\$ 240	\$ 300	\$ 60	40.0%	50.0%	10.0%
LIFE INSURANCE	\$ 600	\$ 240	\$ 300	\$ 60	40.0%	50.0%	10.0%
LONG TERM DISABILITY	\$ 1,300	\$ 520	\$ 650	\$ 130	40.0%	50.0%	10.0%
PERS - RETIREMENT	\$ 1,500	\$ 600	\$ 750	\$ 150	40.0%	50.0%	10.0%
FICA - SOCIAL SECURITY	\$ 100	\$ 40	\$ 50	\$ 10	40.0%	50.0%	10.0%
WORKERS COMPENSATION	\$ 17,500	\$ 7,000	\$ 8,750	\$ 1,750	40.0%	50.0%	10.0%
ASSISTANCE PROGRAM	\$ 33,900	\$ 13,560	\$ 16,950	\$ 3,390	40.0%	50.0%	10.0%
OTHER PAYROLL CHARGES	\$ 10,800	\$ 4,320	\$ 5,400	\$ 1,080	40.0%	50.0%	10.0%
MEDICARE RETIRED MEDICAL	\$ 3,300	\$ 1,320	\$ 1,650	\$ 330	40.0%	50.0%	10.0%
RETIRED MEDICAL	\$ 2,100	\$ 840	\$ 1,050	\$ 210	40.0%	50.0%	10.0%
ANNUAL OPEB	\$ 41,100	\$ 16,440	\$ 20,550	\$ 4,110	40.0%	50.0%	10.0%
<i>Subtotal</i>	<i>\$ 146,700</i>	<i>\$ 58,680</i>	<i>\$ 73,350</i>	<i>\$ 14,670</i>	<i>40.0%</i>	<i>50.0%</i>	<i>10.0%</i>
TOTAL: PERSONNEL	\$ 434,200	\$ 173,680	\$ 217,100	\$ 43,420	40.0%	50.0%	10.0%
MATERIALS & SERVICES							
CONTRACT/PROFESSIONAL SERVICES	\$ 292,800	\$ 146,400	\$ 146,400	\$ -	50.0%	50.0%	0.0%
LEGAL SERVICES	\$ 82,100	\$ 41,050	\$ 41,050	\$ -	50.0%	50.0%	0.0%
UTILITIES DISTRICT OFFICE	\$ 12,300	\$ 6,150	\$ 6,150	\$ -	50.0%	50.0%	0.0%
AUTO ALLOWANCE	\$ 4,300	\$ 2,150	\$ 2,150	\$ -	50.0%	50.0%	0.0%
RENTALS/LEASES/PERMITS	\$ 1,000	\$ 500	\$ 500	\$ -	50.0%	50.0%	0.0%
FACILITIES MAINTENANCE	\$ 15,400	\$ 7,700	\$ 7,700	\$ -	50.0%	50.0%	0.0%
TELEPHONE/COMMUNICATIONS	\$ 18,500	\$ 9,250	\$ 9,250	\$ -	50.0%	50.0%	0.0%
OFFICE SUPPLIES (includes 5078)	\$ 10,300	\$ 5,150	\$ 5,150	\$ -	50.0%	50.0%	0.0%
POSTAGE	\$ 13,300	\$ 6,650	\$ 6,650	\$ -	50.0%	50.0%	0.0%
SUBSCRIPTIONS/BOOKS	\$ 500	\$ 250	\$ 250	\$ -	50.0%	50.0%	0.0%
ADVERTISING	\$ 5,100	\$ 2,550	\$ 2,550	\$ -	50.0%	50.0%	0.0%
TRAINING, CONFERENCES & MEETINGS	\$ 15,400	\$ 7,700	\$ 7,700	\$ -	50.0%	50.0%	0.0%
MEMBERSHIPS & DUES (includes 5085)	\$ 41,100	\$ 20,550	\$ 20,550	\$ -	50.0%	50.0%	0.0%
INSURANCE - PROPERTY (SDRMA)	\$ 112,900	\$ 56,450	\$ 56,450	\$ -	50.0%	50.0%	0.0%
LEGAL SETTLEMENTS	\$ -	\$ -	\$ -	\$ -	50.0%	50.0%	0.0%
ELECTION FEES	\$ -	\$ -	\$ -	\$ -	50.0%	50.0%	0.0%
<i>Subtotal</i>	<i>\$ 625,000</i>	<i>\$ 312,500</i>	<i>\$ 312,500</i>	<i>\$ -</i>	<i>50.0%</i>	<i>50.0%</i>	<i>0.0%</i>
ADMINISTRATION OVERHEAD ALLOCATION TO	\$ (15,888)	\$ (7,944)	\$ (7,944)	\$ -	50.0%	50.0%	0.0%
TOTAL: MATERIALS & SERVICES	\$ 609,112	\$ 304,556	\$ 304,556	\$ -	50.0%	50.0%	0.0%
TOTAL: ADMINISTRATION	\$ 1,043,312	\$ 478,236	\$ 521,656	\$ 43,420	45.8%	50.0%	4.2%

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis

Classification of Expenses - Water							
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2017/18	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
DEPARTMENT: FINANCE - 02							
PERSONNEL							
Salaries							
REGULAR SALARIES	\$ 368,200	\$ -	\$ 184,100	\$ 184,100	0.0%	50.0%	50.0%
TEMPORARY SALARIES	\$ -	\$ -	\$ -	\$ -	0.0%	50.0%	50.0%
OVERTIME WAGES	\$ -	\$ -	\$ -	\$ -	0.0%	50.0%	50.0%
<i>Subtotal</i>	\$ 368,200	\$ -	\$ 184,100	\$ 184,100	0.0%	50.0%	50.0%
Benefits							
MEDICAL INSURANCE	\$ 70,800	\$ -	\$ 35,400	\$ 35,400	0.0%	50.0%	50.0%
DENTAL INSURANCE	\$ 7,000	\$ -	\$ 3,500	\$ 3,500	0.0%	50.0%	50.0%
VISION INSURANCE	\$ 1,200	\$ -	\$ 600	\$ 600	0.0%	50.0%	50.0%
LIFE INSURANCE	\$ 1,200	\$ -	\$ 600	\$ 600	0.0%	50.0%	50.0%
LONG TERM DISABILITY	\$ 1,800	\$ -	\$ 900	\$ 900	0.0%	50.0%	50.0%
PERS - RETIREMENT	\$ 4,200	\$ -	\$ 2,100	\$ 2,100	0.0%	50.0%	50.0%
FICA - SOCIAL SECURITY	\$ 300	\$ -	\$ 150	\$ 150	0.0%	50.0%	50.0%
WORKERS COMPENSATION	\$ 25,100	\$ -	\$ 12,550	\$ 12,550	0.0%	50.0%	50.0%
ASSISTANCE PROGRAM	\$ 22,800	\$ -	\$ 11,400	\$ 11,400	0.0%	50.0%	50.0%
MEDICARE RETIRED MEDICAL	\$ 5,300	\$ -	\$ 2,650	\$ 2,650	0.0%	50.0%	50.0%
<i>Subtotal</i>	\$ 139,700	\$ -	\$ 69,850	\$ 69,850	0.0%	50.0%	50.0%
Additional Positions (4)							
Fully Loaded Cost of New Position #1	\$ 102,700	\$ -	\$ 51,350	\$ 51,350	0.0%	50.0%	50.0%
Fully Loaded Cost of New Position #2	\$ 100,000	\$ -	\$ 50,000	\$ 50,000	0.0%	50.0%	50.0%
Fully Loaded Cost of New Position #3	\$ -	\$ -	\$ -	\$ -	0.0%	50.0%	50.0%
Fully Loaded Cost of New Position #4	\$ -	\$ -	\$ -	\$ -	0.0%	50.0%	50.0%
Fully Loaded Cost of New Position #5	\$ -	\$ -	\$ -	\$ -	0.0%	50.0%	50.0%
<i>Subtotal</i>	\$ 202,700	\$ -	\$ 101,350	\$ 101,350	0.0%	50.0%	50.0%
TOTAL: PERSONNEL	\$ 710,600	\$ -	\$ 355,300	\$ 355,300	0.0%	50.0%	50.0%
MATERIALS & SERVICES							
CONTRACT/PROFESSIONAL SERVICES	\$ 84,200	\$ -	\$ 42,100	\$ 42,100	0.0%	50.0%	50.0%
AUDIT SERVICES	\$ 24,600	\$ -	\$ 12,300	\$ 12,300	0.0%	50.0%	50.0%
OFFICE SUPPLIES (includes 5078)	\$ 12,300	\$ -	\$ 6,150	\$ 6,150	0.0%	50.0%	50.0%
POSTAGE	\$ 36,900	\$ -	\$ 18,450	\$ 18,450	0.0%	50.0%	50.0%
TRAINING, CONFERENCES & MEETINGS	\$ 2,100	\$ -	\$ 1,050	\$ 1,050	0.0%	50.0%	50.0%
COLLECTION COSTS/BANK FEES	\$ 51,700	\$ -	\$ 25,850	\$ 25,850	0.0%	50.0%	50.0%
BAD DEBTS	\$ 6,200	\$ -	\$ 3,100	\$ 3,100	0.0%	50.0%	50.0%
<i>Subtotal</i>	\$ 218,000	\$ -	\$ 109,000	\$ 109,000	0.0%	50.0%	50.0%
TOTAL: MATERIALS & SERVICES	\$ 218,000	\$ -	\$ 109,000	\$ 109,000	0.0%	50.0%	50.0%
TOTAL: FINANCE	\$ 928,600	\$ -	\$ 464,300	\$ 464,300	0.0%	50.0%	50.0%

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis

Classification of Expenses - Water							
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2017/18	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
DEPARTMENT: ENGINEERING - 03							
PERSONNEL							
Salaries							
REGULAR SALARIES	\$ 109,400	\$ 49,230	\$ 54,700	\$ 5,470	45.0%	50.0%	5.0%
OVERTIME WAGES	\$ -	\$ -	\$ -	\$ -	45.0%	50.0%	5.0%
<i>Subtotal</i>	\$ 109,400	\$ 49,230	\$ 54,700	\$ 5,470	45.0%	50.0%	5.0%
Benefits							
MEDICAL INSURANCE	\$ 17,100	\$ 7,695	\$ 8,550	\$ 855	45.0%	50.0%	5.0%
DENTAL INSURANCE	\$ 1,400	\$ 630	\$ 700	\$ 70	45.0%	50.0%	5.0%
VISION INSURANCE	\$ 200	\$ 90	\$ 100	\$ 10	45.0%	50.0%	5.0%
LIFE INSURANCE	\$ 200	\$ 90	\$ 100	\$ 10	45.0%	50.0%	5.0%
LONG TERM DISABILITY	\$ 500	\$ 225	\$ 250	\$ 25	45.0%	50.0%	5.0%
PERS - RETIREMENT	\$ 20,300	\$ 9,135	\$ 10,150	\$ 1,015	45.0%	50.0%	5.0%
FICA - SOCIAL SECURITY	\$ 6,800	\$ 3,060	\$ 3,400	\$ 340	45.0%	50.0%	5.0%
WORKERS COMPENSATION	\$ 600	\$ 270	\$ 300	\$ 30	45.0%	50.0%	5.0%
ASSISTANCE PROGRAM	\$ -	\$ -	\$ -	\$ -	45.0%	50.0%	5.0%
MEDICARE RETIRED MEDICAL	\$ 1,600	\$ 720	\$ 800	\$ 80	45.0%	50.0%	5.0%
SPECIAL CLOTHING	\$ 700	\$ 315	\$ 350	\$ 35	45.0%	50.0%	5.0%
ANNUAL OPEB	\$ -	\$ -	\$ -	\$ -	45.0%	50.0%	5.0%
<i>Subtotal</i>	\$ 49,400	\$ 22,230	\$ 24,700	\$ 2,470	45.0%	50.0%	5.0%
Additional Positions (4)							
Fully Loaded Cost of New Position #6	\$ 102,700	\$ 46,215	\$ 51,350	\$ 5,135	45.0%	50.0%	5.0%
<i>Subtotal</i>	\$ 102,700	\$ 46,215	\$ 51,350	\$ 5,135	45.0%	50.0%	5.0%
TOTAL: PERSONNEL	\$ 261,500	\$ 117,675	\$ 130,750	\$ 13,075	45.0%	50.0%	5.0%
MATERIALS & SERVICES							
CONTRACT/PROFESSIONAL SERVICES	\$ 10,300	\$ 4,635	\$ 5,150	\$ 515	45.0%	50.0%	5.0%
EQUIPMENT REPLACEMENT FUND	\$ -	\$ -	\$ -	\$ -	45.0%	50.0%	5.0%
MAINT/OPERATIONS OF VEHICLES	\$ 2,100	\$ 945	\$ 1,050	\$ 105	45.0%	50.0%	5.0%
SMALL TOOLS/MAINT & REPAIRS	\$ -	\$ -	\$ -	\$ -	45.0%	50.0%	5.0%
EQUIP. NON-CAP	\$ 6,200	\$ 2,790	\$ 3,100	\$ 310	45.0%	50.0%	5.0%
COMMUNICATIONS	\$ 3,100	\$ 1,395	\$ 1,550	\$ 155	45.0%	50.0%	5.0%
OFFICE SUPPLIES	\$ 800	\$ 360	\$ 400	\$ 40	45.0%	50.0%	5.0%
SUBSCRIPTIONS/BOOKS	\$ 300	\$ 135	\$ 150	\$ 15	45.0%	50.0%	5.0%
TRAINING, CONFERENCES & MEETINGS	\$ 1,200	\$ 540	\$ 600	\$ 60	45.0%	50.0%	5.0%
MEMBERSHIPS & DUES	\$ 1,500	\$ 675	\$ 750	\$ 75	45.0%	50.0%	5.0%
<i>Subtotal</i>	\$ 25,500	\$ 11,475	\$ 12,750	\$ 1,275	45.0%	50.0%	5.0%
TOTAL: MATERIALS & SERVICES	\$ 25,500	\$ 11,475	\$ 12,750	\$ 1,275	45.0%	50.0%	5.0%
TOTAL: ENGINEERING	\$ 287,000	\$ 129,150	\$ 143,500	\$ 14,350	45.0%	50.0%	5.0%

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis

Classification of Expenses - Water							
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2017/18	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
DEPARTMENT: OPERATIONS/DISTRIBUTION - 04							
PERSONNEL							
Salaries							
REGULAR SALARIES	\$ 1,032,200	\$ 670,930	\$ 309,660	\$ 51,610	65.0%	30.0%	5.0%
TEMPORARY SALARIES	\$ -	\$ -	\$ -	\$ -	65.0%	30.0%	5.0%
OVERTIME WAGES	\$ 37,000	\$ 24,050	\$ 11,100	\$ 1,850	65.0%	30.0%	5.0%
STANDBY WAGES	\$ 27,700	\$ 18,005	\$ 8,310	\$ 1,385	65.0%	30.0%	5.0%
<i>Subtotal</i>	\$ 1,096,900	\$ 712,985	\$ 329,070	\$ 54,845	65.0%	30.0%	5.0%
Benefits							
MEDICAL INSURANCE	\$ 211,400	\$ 137,410	\$ 63,420	\$ 10,570	65.0%	30.0%	5.0%
DENTAL INSURANCE	\$ 22,200	\$ 14,430	\$ 6,660	\$ 1,110	65.0%	30.0%	5.0%
VISION INSURANCE	\$ 3,900	\$ 2,535	\$ 1,170	\$ 195	65.0%	30.0%	5.0%
LIFE INSURANCE	\$ 2,700	\$ 1,755	\$ 810	\$ 135	65.0%	30.0%	5.0%
LONG TERM DISABILITY	\$ 5,100	\$ 3,315	\$ 1,530	\$ 255	65.0%	30.0%	5.0%
PERS - RETIREMENT	\$ 138,900	\$ 90,285	\$ 41,670	\$ 6,945	65.0%	30.0%	5.0%
FICA - SOCIAL SECURITY	\$ 63,100	\$ 41,015	\$ 18,930	\$ 3,155	65.0%	30.0%	5.0%
WORKERS COMPENSATION	\$ 58,300	\$ 37,895	\$ 17,490	\$ 2,915	65.0%	30.0%	5.0%
ASSISTANCE PROGRAM	\$ 600	\$ 390	\$ 180	\$ 30	65.0%	30.0%	5.0%
MEDICARE RETIRED MEDICAL	\$ 15,000	\$ 9,750	\$ 4,500	\$ 750	65.0%	30.0%	5.0%
SPECIAL CLOTHING	\$ 9,100	\$ 5,915	\$ 2,730	\$ 455	65.0%	30.0%	5.0%
CERTIFICATIONS	\$ 800	\$ 520	\$ 240	\$ 40	65.0%	30.0%	5.0%
<i>Subtotal</i>	\$ 531,100	\$ 345,215	\$ 159,330	\$ 26,555	65.0%	30.0%	5.0%
Additional Positions (4)							
Fully Loaded Cost of New Position #7	\$ 102,700	\$ 66,755	\$ 30,810	\$ 5,135	65.0%	30.0%	5.0%
Fully Loaded Cost of New Position #8	\$ 100,000	\$ 65,000	\$ 30,000	\$ 5,000	65.0%	30.0%	5.0%
<i>Subtotal</i>	\$ 202,700	\$ 131,755	\$ 60,810	\$ 10,135	65.0%	30.0%	5.0%
TOTAL: PERSONNEL	\$ 1,830,700	\$ 1,189,955	\$ 549,210	\$ 91,535	65.0%	30.0%	5.0%
MATERIALS & SERVICES							
CONTRACT/PROFESSIONAL SERVICES	\$ 123,200	\$ 80,080	\$ 36,960	\$ 6,160	65.0%	30.0%	5.0%
EQUIPMENT REPLACEMENT FUND	\$ -	\$ -	\$ -	\$ -	65.0%	30.0%	5.0%
UTILITIES	\$ 112,900	\$ 73,385	\$ 33,870	\$ 5,645	65.0%	30.0%	5.0%
OPERATING SUPPLIES	\$ 92,400	\$ 60,060	\$ 27,720	\$ 4,620	65.0%	30.0%	5.0%
MAINT & OPERATIONS OF VEHICLES	\$ 80,100	\$ 52,065	\$ 24,030	\$ 4,005	65.0%	30.0%	5.0%
RENTAL/LEASES/PERMITS	\$ 10,300	\$ 6,695	\$ 3,090	\$ 515	65.0%	30.0%	5.0%
SMALL TOOLS-MAINT & REPAIRS	\$ 12,800	\$ 8,320	\$ 3,840	\$ 640	65.0%	30.0%	5.0%
EQUIPMENT NON-CAP	\$ -	\$ -	\$ -	\$ -	65.0%	30.0%	5.0%
SAFETY EQUIPMENT - MAINTENANCE	\$ 2,100	\$ 1,365	\$ 630	\$ 105	65.0%	30.0%	5.0%
FACILITIES MAINTENANCE	\$ 16,400	\$ 10,660	\$ 4,920	\$ 820	65.0%	30.0%	5.0%
COMMUNICATIONS & TELEMETERING	\$ 68,800	\$ 44,720	\$ 20,640	\$ 3,440	65.0%	30.0%	5.0%
OFFICE SUPPLIES (included 5078)	\$ 6,700	\$ 4,355	\$ 2,010	\$ 335	65.0%	30.0%	5.0%
SUBSCRIPTIONS/BOOKS	\$ -	\$ -	\$ -	\$ -	65.0%	30.0%	5.0%
TRAINING, CONFERENCES & MEETINGS	\$ 7,200	\$ 4,680	\$ 2,160	\$ 360	65.0%	30.0%	5.0%
SPECIAL PROJECTS	\$ -	\$ -	\$ -	\$ -	65.0%	30.0%	5.0%
<i>Subtotal</i>	\$ 532,900	\$ 346,385	\$ 159,870	\$ 26,645	65.0%	30.0%	5.0%
TOTAL: MATERIALS & SERVICES	\$ 532,900	\$ 346,385	\$ 159,870	\$ 26,645	65.0%	30.0%	5.0%
TOTAL: OPERATIONS/DISTRIBUTION	\$ 2,363,600	\$ 1,536,340	\$ 709,080	\$ 118,180	65.0%	30.0%	5.0%

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis

Classification of Expenses - Water							
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2017/18	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
DEPARTMENT: WATERSHED - 05							
PERSONNEL							
Salaries							
REGULAR SALARIES	\$ 137,600	\$ 61,920	\$ 68,800	\$ 6,880	45.0%	50.0%	5.0%
TEMPORARY SALARIES	\$ -	\$ -	\$ -	\$ -	45.0%	50.0%	5.0%
<i>Subtotal</i>	\$ 137,600	\$ 61,920	\$ 68,800	\$ 6,880	45.0%	50.0%	5.0%
Benefits							
MEDICAL INSURANCE	\$ 25,700	\$ 11,565	\$ 12,850	\$ 1,285	45.0%	50.0%	5.0%
DENTAL INSURANCE	\$ 3,100	\$ 1,395	\$ 1,550	\$ 155	45.0%	50.0%	5.0%
VISION INSURANCE	\$ 500	\$ 225	\$ 250	\$ 25	45.0%	50.0%	5.0%
LIFE INSURANCE	\$ 100	\$ 45	\$ 50	\$ 5	45.0%	50.0%	5.0%
LONG TERM DISABILITY	\$ 700	\$ 315	\$ 350	\$ 35	45.0%	50.0%	5.0%
PERS - RETIREMENT	\$ 18,500	\$ 8,325	\$ 9,250	\$ 925	45.0%	50.0%	5.0%
FICA - SOCIAL SECURITY	\$ 8,500	\$ 3,825	\$ 4,250	\$ 425	45.0%	50.0%	5.0%
WORKERS COMPENSATION	\$ 800	\$ 360	\$ 400	\$ 40	45.0%	50.0%	5.0%
ASSISTANCE PROGRAM	\$ -	\$ -	\$ -	\$ -	45.0%	50.0%	5.0%
MEDICARE	\$ 2,000	\$ 900	\$ 1,000	\$ 100	45.0%	50.0%	5.0%
SPECIAL CLOTHING	\$ -	\$ -	\$ -	\$ -	45.0%	50.0%	5.0%
<i>Subtotal</i>	\$ 59,900	\$ 26,955	\$ 29,950	\$ 2,995	45.0%	50.0%	5.0%
TOTAL: PERSONNEL	\$ 197,500	\$ 88,875	\$ 98,750	\$ 9,875	45.0%	50.0%	5.0%
MATERIALS & SERVICES							
CONTRACT/PROFESSIONAL SERVICES	\$ 356,500	\$ 160,425	\$ 178,250	\$ 17,825	45.0%	50.0%	5.0%
ROAD MAINTENANCE	\$ 15,400	\$ 6,930	\$ 7,700	\$ 770	45.0%	50.0%	5.0%
OPERATING SUPPLIES	\$ 500	\$ 225	\$ 250	\$ 25	45.0%	50.0%	5.0%
EQUIPMENT NON-CAP	\$ 1,000	\$ 450	\$ 500	\$ 50	45.0%	50.0%	5.0%
COMMUNICATIONS & TELEMETERING	\$ 300	\$ 135	\$ 150	\$ 15	45.0%	50.0%	5.0%
SUBSCRIPTIONS/BOOKS	\$ 300	\$ 135	\$ 150	\$ 15	45.0%	50.0%	5.0%
TRAINING, CONFERENCES & MEETINGS	\$ 3,100	\$ 1,395	\$ 1,550	\$ 155	45.0%	50.0%	5.0%
MEMBERSHIP & DUES	\$ 1,300	\$ 585	\$ 650	\$ 65	45.0%	50.0%	5.0%
WATERSHED & DATA COLLECTION GRNTS	\$ 15,400	\$ 6,930	\$ 7,700	\$ 770	45.0%	50.0%	5.0%
WATER CONSERVATION PROGRAM	\$ 26,700	\$ 26,700	\$ -	\$ -	100.0%	0.0%	0.0%
EDUCATION GRANT PROGRAM	\$ 18,000	\$ 8,100	\$ 9,000	\$ 900	45.0%	50.0%	5.0%
SPECIAL PROJECTS	\$ -	\$ -	\$ -	\$ -	45.0%	50.0%	5.0%
<i>Subtotal</i>	\$ 438,500	\$ 212,010	\$ 205,900	\$ 20,590	48.3%	47.0%	4.7%
TOTAL: MATERIALS & SERVICES	\$ 438,500	\$ 212,010	\$ 205,900	\$ 20,590	48.3%	47.0%	4.7%
TOTAL: WATERSHED	\$ 636,000	\$ 300,885	\$ 304,650	\$ 30,465	47.3%	47.9%	4.8%

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis

Classification of Expenses - Water							
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2017/18	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
DEPARTMENT: OPERATIONS/SUPPLY & TREATMENT -08							
PERSONNEL							
Salaries							
REGULAR SALARIES	\$ 837,200	\$ 418,600	\$ 418,600	\$ -	50.0%	50.0%	0.0%
TEMPORARY SALARIES	\$ -	\$ -	\$ -	\$ -	50.0%	50.0%	0.0%
OVERTIME WAGES	\$ 30,800	\$ 15,400	\$ 15,400	\$ -	50.0%	50.0%	0.0%
STANDBY	\$ 4,100	\$ 2,050	\$ 2,050	\$ -	50.0%	50.0%	0.0%
Subtotal	\$ 872,100	\$ 436,050	\$ 436,050	\$ -	50.0%	50.0%	0.0%
Benefits							
MEDICAL INSURANCE	\$ 121,100	\$ 60,550	\$ 60,550	\$ -	50.0%	50.0%	0.0%
DENTAL INSURANCE	\$ 12,400	\$ 6,200	\$ 6,200	\$ -	50.0%	50.0%	0.0%
VISION INSURANCE	\$ 2,500	\$ 1,250	\$ 1,250	\$ -	50.0%	50.0%	0.0%
LIFE INSURANCE	\$ 2,000	\$ 1,000	\$ 1,000	\$ -	50.0%	50.0%	0.0%
LONG TERM DISABILITY	\$ 4,200	\$ 2,100	\$ 2,100	\$ -	50.0%	50.0%	0.0%
PERS - RETIREMENT	\$ 123,400	\$ 61,700	\$ 61,700	\$ -	50.0%	50.0%	0.0%
FICA - SOCIAL SECURITY	\$ 53,700	\$ 26,850	\$ 26,850	\$ -	50.0%	50.0%	0.0%
WORKERS COMPENSATION	\$ 48,200	\$ 24,100	\$ 24,100	\$ -	50.0%	50.0%	0.0%
ASSISTANCE PROGRAM	\$ 400	\$ 200	\$ 200	\$ -	50.0%	50.0%	0.0%
MEDICARE RETIRED MEDICAL	\$ 12,700	\$ 6,350	\$ 6,350	\$ -	50.0%	50.0%	0.0%
SPECIAL CLOTHING	\$ 6,800	\$ 3,400	\$ 3,400	\$ -	50.0%	50.0%	0.0%
CERTIFICATIONS	\$ 1,500	\$ 750	\$ 750	\$ -	50.0%	50.0%	0.0%
Subtotal	\$ 388,900	\$ 194,450	\$ 194,450	\$ -	50.0%	50.0%	0.0%
Additional Positions (4)							
Fully Loaded Cost of New Position #9	\$ 102,700	\$ 51,350	\$ 51,350	\$ -	50.0%	50.0%	0.0%
Fully Loaded Cost of New Position #10	\$ 100,000	\$ 50,000	\$ 50,000	\$ -	50.0%	50.0%	0.0%
Subtotal	\$ 202,700	\$ 101,350	\$ 101,350	\$ -	50.0%	50.0%	0.0%
TOTAL: PERSONNEL	\$ 1,463,700	\$ 731,850	\$ 731,850	\$ -	50.0%	50.0%	0.0%
MATERIALS & SERVICES							
CONTRACT/PROFESSIONAL SERVICES	\$ 154,000	\$ 77,000	\$ 77,000	\$ -	50.0%	50.0%	0.0%
CONTRACT SERVICES MANANA WOODS	\$ -	\$ -	\$ -	\$ -	50.0%	50.0%	0.0%
OUTSIDE WATER ANALYSIS	\$ 77,000	\$ 38,500	\$ 38,500	\$ -	50.0%	50.0%	0.0%
LAB SUPPLIES	\$ 25,100	\$ 12,550	\$ 12,550	\$ -	50.0%	50.0%	0.0%
EQUIPMENT REPLACEMENT	\$ -	\$ -	\$ -	\$ -	50.0%	50.0%	0.0%
UTILITIES	\$ 282,300	\$ 141,150	\$ 141,150	\$ -	50.0%	50.0%	0.0%
CHEMICALS	\$ 35,900	\$ 17,950	\$ 17,950	\$ -	50.0%	50.0%	0.0%
OPERATING SUPPLIES	\$ 58,500	\$ 29,250	\$ 29,250	\$ -	50.0%	50.0%	0.0%
MAINTENANANCE/OPERATIONS OF VEHICLES	\$ 21,600	\$ 10,800	\$ 10,800	\$ -	50.0%	50.0%	0.0%
RENTAL/LEASES/PERMITS	\$ 112,900	\$ 56,450	\$ 56,450	\$ -	50.0%	50.0%	0.0%
SMALL TOOLS-MAINTENANCE & REPAIRS	\$ 6,200	\$ 3,100	\$ 3,100	\$ -	50.0%	50.0%	0.0%
EQUIPMENT NON-CAP	\$ 15,400	\$ 7,700	\$ 7,700	\$ -	50.0%	50.0%	0.0%
FACILITIES MAINTENANCE	\$ 7,700	\$ 3,850	\$ 3,850	\$ -	50.0%	50.0%	0.0%
COMMUNICATIONS & TELEMETERING	\$ 41,100	\$ 20,550	\$ 20,550	\$ -	50.0%	50.0%	0.0%
OFFICE SUPPLIES (included 5078)	\$ 3,600	\$ 1,800	\$ 1,800	\$ -	50.0%	50.0%	0.0%
SUBSCRIPTIONS/BOOKS	\$ 500	\$ 250	\$ 250	\$ -	50.0%	50.0%	0.0%
TRAINING, CONFERENCES & MEETINGS	\$ 3,600	\$ 1,800	\$ 1,800	\$ -	50.0%	50.0%	0.0%
OTHER HOUSEHOLD SUPPLIES	\$ -	\$ -	\$ -	\$ -	50.0%	50.0%	0.0%
Subtotal	\$ 845,400	\$ 422,700	\$ 422,700	\$ -	50.0%	50.0%	0.0%
TOTAL: MATERIALS & SERVICES	\$ 845,400	\$ 422,700	\$ 422,700	\$ -	50.0%	50.0%	0.0%
TOTAL: OPERATIONS/SUPPLY & TREATMENT	\$ 2,309,100	\$ 1,154,550	\$ 1,154,550	\$ -	50.0%	50.0%	0.0%
GRAND TOTAL: WATER FUND OPERATING EXP	\$ 7,567,612	\$ 3,599,161	\$ 3,297,736	\$ 670,715	47.6%	43.6%	8.9%

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis

Classification of Expenses - Water							
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer	Basis of Classification		
	FY 2017/18	(COM)	(CAP)	(CA)	(COM)	(CAP)	(CA)
Debt Service Payments							
2004 Refunding Water Revenue Bond, 2012 (1)	\$ 709,710	\$ -	\$ 709,710	\$ -	0.0%	100.0%	0.0%
2008 Safe Drinking Water Loan (3)	\$ 186,797	\$ -	\$ 186,797	\$ -	0.0%	100.0%	0.0%
SWRCB State Revolving Fund Loan (5)	\$ 104,244	\$ -	\$ 104,244	\$ -	0.0%	100.0%	0.0%
Future New Debt	\$ -	\$ -	\$ -	\$ -	0.0%	100.0%	0.0%
Total Debt Service Payments	\$ 1,000,751	\$ -	\$ 1,000,751	\$ -	0.0%	100.0%	0.0%
Capital Expenditures							
Rate Funded Capital Expenses	\$ 1,678,988	\$ -	\$ 1,678,988	\$ -	0.0%	100.0%	0.0%
TOTAL REVENUE REQUIREMENTS	\$ 10,247,352	\$ 3,599,161	\$ 5,977,476	\$ 670,715	35.1%	58.3%	6.5%
Less: Non-Rate Revenues							
7501 Property Taxes							
PROPERTY TAXES	\$ (600,000)	\$ -	\$ (600,000)	\$ -	0.0%	100.0%	0.0%
ASSESSMENT REVENUE	\$ (360,000)	\$ -	\$ (360,000)	\$ -	0.0%	100.0%	0.0%
7502 Rental Revenue							
MOBILE SERVICES LEASE FEES	\$ (15,800)	\$ (5,549)	\$ (9,216)	\$ (1,034)	35.1%	58.3%	6.5%
JOHNSON PROPERTY RENTS	\$ (36,000)	\$ (12,644)	\$ (20,999)	\$ (2,356)	35.1%	58.3%	6.5%
7503 Investment Earnings							
LOMPICO LOAN - INTEREST	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
INTEREST - WATER	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
INTEREST - FELTON LOAN RESERVE	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
REALIZED G/L - MSDW	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
UNREALIZED GAINS/LOSS - MSDW	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
INTEREST DIVIDEND - MSDW	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
7504 Gain/Loss on Sale of Assets							
SALE OF SURPLUS PROPERTY	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
LOSS ON SALE/ABAND FIXED ASSET	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
7505 Other Income							
ACCT. ESTAB. CHARGES & PENALTY	\$ (72,000)	\$ (25,288)	\$ (41,999)	\$ (4,713)	35.1%	58.3%	6.5%
ASSESSMENT BOND - N.B.C.	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
SALE OF METERS	\$ (25,000)	\$ (8,781)	\$ (14,583)	\$ (1,636)	35.1%	58.3%	6.5%
MISCELLANEOUS	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
REIMB. FOR MANANA WOODS	\$ (35,000)	\$ (12,293)	\$ (20,416)	\$ (2,291)	35.1%	58.3%	6.5%
LOMPICO LOAN - PRINCIPAL	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
CSI - #34053 MANANA WOODS	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
CSI - # 34057 LYON WTP	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
CSI - #34058 KIRBY WTP	\$ -	\$ -	\$ -	\$ -	35.1%	58.3%	6.5%
Interest Income (From Financial Plan)	\$ (647)	\$ (227)	\$ (378)	\$ (42)	35.1%	58.3%	6.5%
NET REVENUE REQUIREMENTS - WATER	\$ 9,102,904	\$ 3,534,378	\$ 4,909,884	\$ 658,642			
Allocation of Revenue Requirements	100.0%	38.8%	53.9%	7.2%			
<i>Net Revenue Req. Check from Financial Plan \$ -</i>							

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Cost of Service Analysis

Classification of Expenses - Water				
Budget Categories	Total Revenue Requirements	Commodity	Capacity	Customer
	FY 2017/18	(COM)	(CAP)	(CA)
Classification of Expenses - Water, continued				
Adjustments to Classification of Expenses				
Adjustment for Current Rate Level:	Total	(COM)	(CAP)	(CA)
Test Year (FY 2017/18) Target Rate Revenue	\$ 9,381,267			
Projected Rate Revenue at Current Rates	\$ 5,575,000			
Test Year (FY 2017/18) Projected Rate Adjustment	37%			
Adjusted Net Revenue Req'ts	\$ 9,381,267	\$ 3,642,457	\$ 5,060,026	\$ 678,783
Percent of Revenue	100.0%	38.8%	53.9%	7.2%

Recommended Rate Alternative Net Revenue Requirements Allocation of 30% Fixed / 70% Variable	Total Rate Revenue Requirements FY 2017/18	Variable Costs	Fixed Costs	
		Commodity Related Costs	Capacity Related Costs	Customer Related Costs
Rate-Design Adjustments to Fixed/Variable (%)	100.0%	70.0%	22.8%	7.2%
Rate-Design Adjustments to Fixed/Variable (\$)	\$9,381,267	\$6,566,887	\$2,135,597	\$678,783
		70%	30%	
Variable Charges (Volumetric Rates)		70.0%		
Fixed Charges		30.0%		

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Water Cost of Service Analysis

Development of the COMMODITY (Volumetric) Allocation Factor - Water Utility				
Customer Class	CY 2016 Volume (ccf) (1)	Conservation for Test Year (FY 2017/18)	Adjusted Volume with Conservation	Percent of Total Volume
Single Family Residential	459,680	0.4%	457,673	70.9%
Multi-Family Residential	102,921	0.4%	102,472	15.9%
Commercial	34,197	0.4%	34,047	5.3%
Private Mutuals	8,710	0.4%	8,671	1.3%
Institutional/Governmental	35,934	0.4%	35,777	5.5%
Landscape	6,901	0.4%	6,870	1.1%
Fire Service accounts	-	0.4%	-	0.0%
Vacant	382	0.4%	380	0.1%
Total	648,724	--	645,891	100%
Surplus Water accounts (2)	4,109	0.0%	4,109	0.6%
Grand Total	652,832	0.4%	650,000	101%

1. Consumption data is based on the SLVWD's billing data (February 2016 - January 2017).

2. Surplus water accounts shown here; revenue requirements will not be developed for these sporadic customers.

Commodity Related Costs: These costs are associated with the total consumption (flow) of water over a specified period of time (e.g. annual).

Development of the CAPACITY (MAX MONTH) Allocation Factor - Water Utility				
Customer Class	Average Monthly Use (ccf)	Peak Monthly Use (ccf) (1)	Peak Monthly Factor	Max Month Capacity Factor
Single Family Residential	38,307	53,529	1.40	69.4%
Multi-Family Residential	8,577	10,872	1.27	14.1%
Commercial	2,850	3,745	1.31	4.9%
Private Mutuals	726	1,368	1.88	1.8%
Institutional/Governmental	2,994	5,940	1.98	7.7%
Landscape	575	1,571	2.73	2.0%
Fire Service accounts	0	0	0.00	0.0%
Vacant	32	83	2.61	0.1%
Total	54,060	77,107	1.43	100%
Surplus Water accounts (2)	342	972	2.84	1.2%
Grand Total	54,403	78,079	1.44	101%

1. Based on peak monthly data (peak day data not available).

2. Surplus water accounts shown here; revenue requirements will not be developed for these sporadic customers.

Capacity Related Costs: Costs associated with the maximum demand required at one point in time or the maximum size of facilities required to meet this demand.

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Water Cost of Service Analysis

Development of the CUSTOMER Allocation Factor - Water Utility		
Customer Class	Number of Meters (1)	Percent of Total
Single Family Residential	7,102	89.4%
Multi-Family Residential	513	6.5%
Commercial	201	2.5%
Private Mutuals	6	0.1%
Institutional/Governmental	53	0.7%
Landscape	14	0.2%
Fire Service accounts	-	0.0%
Vacant	58	0.7%
Total	7,947	100.0%
Surplus Water accounts (2)	15	0.2%
Grand Total	7,962	100.2%

1. Meter Count data is based on the SLVWD's billing data for January 2017.

2. Surplus water accounts shown here; revenue requirements will not be developed for these sporadic customers.

Customer Related Costs : Costs associated with having a customer on the water system. These costs vary with the addition or deletion of customers on the system. Examples: Meter-reading, Postage and billing.

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Water Cost of Service Analysis

ALLOCATION OF WATER COST REQUIREMENTS:

Classification Components	Net Cost Requirements (2017/18)	
Commodity-Related Costs	\$ 3,642,457	38.8%
Capacity-Related Costs	5,060,026	53.9%
Customer-Related Costs	678,783	7.2%
Net Revenue Requirement	\$ 9,381,267	100%

Unadjusted Net Cost Req'ts.

Total variable: 39%

Total fixed: 61%

Total: 100%

Allocation of Net Cost Requirements (Water) By Customer Class - FY 2017/18					
Customer Class	Cost Classification Components			Net Cost of Service Requirements	% of Net Cost of Service Requirements
	Commodity (1)	Capacity (2)	Customer (3)		
Single Family Residential	\$ 2,581,016	\$ 3,512,760	\$ 606,609	\$ 6,700,385	71.4%
Multi-Family Residential	577,882	713,481	43,817	1,335,180	14.2%
Commercial	192,008	245,746	17,168	454,922	4.8%
Private Mutuals	48,902	89,747	512	139,161	1.5%
Institutional/Governmental	201,762	389,784	4,527	596,072	6.4%
Landscape	38,745	103,062	1,196	143,002	1.5%
Fire Service accounts	-	-	-	-	0.0%
Vacant	2,143	5,447	4,954	12,544	0.1%
Total	\$ 3,642,457	\$ 5,060,026	\$ 678,783	\$ 9,381,267	100.0%

1. Commodity Costs are allocated based upon percentage of expected consumption.

2. Capacity Costs are allocated based upon Max Month Capacity Factor.

3. Customer Costs are allocated based upon Percentage of Total Accounts.

Current Water Rate Revenue Comparison								
Customer Class	Rate Revenue (CY 2016)				Total	% of Total	% of Net Cost of Service Requirements	Difference
	Fixed	Variable	Drought Surcharges	Lompico Surcharges				
	<i>a</i>	<i>b</i>						<i>= b - a</i>
Single Family Residential	\$ 2,825,755	\$ 2,031,782	\$ 458,832	\$ 92,113	\$ 5,408,484	77.2%	71.4%	-5.8%
Multi-Family Residential	370,760	417,935	102,936	188	891,819	12.7%	14.2%	1.5%
Commercial	113,491	158,672	34,197	-	306,360	4.4%	4.8%	0.5%
Private Mutuals	9,138	42,086	8,710	-	59,933	0.9%	1.5%	0.6%
Institutional/Governmental	61,405	166,862	36,306	-	264,573	3.8%	6.4%	2.6%
Landscape	10,212	32,018	6,901	-	49,131	0.7%	1.5%	0.8%
Fire Service accounts	-	-	332	-	332	0.0%	0.0%	0.0%
Vacant	24,074	1,689	382	-	26,145	0.4%	0.1%	-0.2%
Total	\$ 3,414,836	\$ 2,851,045	\$ 648,595	\$ 92,301	\$ 7,006,778	100.0%	100.0%	0.0%
	49%	41%	9%	1%	100%			

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Fixed Rate Calculation

ALLOCATION OF WATER REVENUE REQUIREMENTS:

Classification Components (1)	Adjusted Net Revenue Requirements (2017/18)	
	(30% Fixed / 70% Variable)	
Commodity-Related Costs (Volumetric Share)	\$ 3,642,457	38.8%
Capacity-Related Costs (Volumetric Share)	2,924,429	31.2%
Commodity-Related Costs (Fixed Share)	-	0.0%
Capacity-Related Costs (Fixed Share)	2,135,597	22.8%
Customer-Related Costs	678,783	7.2%
Net Revenue Requirements	\$ 9,381,267	100%

1. Surplus Water Net Revenue Requirements are excluded from total; rates are developed separately.

Adjusted Net Rev. Req'ts.

70.0% total variable

30.0% total fixed

100%

58%

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Fixed Rate Calculation

Allocation of Adjusted Net Revenue Requirements - FY 2017/18:

Recommended Rate Alternative - 30% Fixed / 70% Variable

Customer Classes	Classification Components					Cost of Service Net Rev. Req'ts	% of COS Net Revenue Req'ts
	Commodity-Related Costs (Variable Portion)	Capacity-Related Costs (Variable Portion)	Commodity-Related Costs (Fixed Portion)	Capacity-Related Costs (Fixed Portion)	Customer-Related Costs		
Single Family Residential	\$ 2,581,016	\$ 2,030,191	\$ -	\$ 1,482,569	\$ 606,609	\$ 6,700,385	71.4%
Multi-Family Residential	577,882	412,354	-	301,126	43,817	1,335,180	14.2%
Commercial	192,008	142,028	-	103,718	17,168	454,922	4.8%
Private Mutuals	48,902	51,869	-	37,878	512	139,161	1.5%
Institutional/Governmental	201,762	225,275	-	164,509	4,527	596,072	6.4%
Landscape	38,745	59,564	-	43,497	1,196	143,002	1.5%
Fire Service accounts	-	-	-	-	-	-	0.0%
Vacant	2,143	3,148	-	2,299	4,954	12,544	0.1%
Total Net Revenue Requirement	\$ 3,642,457	\$ 2,924,429	\$ -	\$ 2,135,597	\$ 678,783	\$ 9,381,267	100%
<i>Total Net Revenue Requirement by Classification Component</i>	<i>VARIABLE</i> \$6,566,887		<i>FIXED</i> \$2,814,380			\$9,381,267	
	39%	31%	0%	23%	7%	100%	

Customer Class	Rate Revenue - CY 2016		Recommended Rate Alternative - 30% Fixed / 70% Variable		
	Rate Revenue	% of Revenue	COS Rev. Req't	% of COS Rev. Req't.	% of 2015/16 vs. 2017/18
Single Family Residential	\$ 5,408,484	77.2%	\$ 6,700,385	71.4%	-5.8%
Multi-Family Residential	\$ 891,819	12.7%	\$ 1,335,180	14.2%	1.5%
Commercial	\$ 306,360	4.4%	\$ 454,922	4.8%	0.5%
Private Mutuals	\$ 59,933	0.9%	\$ 139,161	1.5%	0.6%
Institutional/Governmental	\$ 264,573	3.8%	\$ 596,072	6.4%	2.6%
Landscape	\$ 49,131	0.7%	\$ 143,002	1.5%	0.8%
Fire Service accounts	\$ 332	0.0%	\$ -	0.0%	0.0%
Vacant	\$ 26,145	0.4%	\$ 12,544	0.1%	-0.2%
Total	\$ 7,006,778	100.0%	\$ 9,381,267	100%	0.0%

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Fixed Rate Calculation

Meter Equivalency Factors Used in Fixed Charges Calculations:

Meter Size	Standard Meters		Fire Meters	
	Meter Capacity (gpm) (1)	Equivalency to 5/8 inch	Meter Capacity (gpm) (2)	Equivalency to 5/8 inch
	<u>Displacement Meters</u>		<u>Displacement Meters</u>	
5/8 inch	20	1.00	20	1.00
3/4 inch	30	1.00	30	1.00
1 inch	50	1.67	50	1.67
1.5 inch	100	3.33	100	3.33
2 inch	160	5.33	160	5.33
	<u>Compound Class I Meters</u>		<u>Fire Service Type I & II Meters</u>	
3 inch	320	10.67	350	11.67
4 inch	500	16.67	700	23.33
6 inch	1,000	33.33	1,600	53.33
8 inch	1,600	53.33	2,800	93.33
	<u>Turbine Class II Meters</u>			
10 inch	4,200	140.00	4,400	146.67
12 inch	5,300	176.67	N/A	--

1. Per AWWA M-1, Table B-1.

2. Per AWWA M-6, Table 5-3.

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Fixed Rate Calculation

CALCULATION OF MONTHLY FIXED METER SERVICE CHARGES FOR FY 2017/18:

Number of Meters by Class and Size (1)	FY 2017/18									Total
	5/8 inch	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	8 inch	
Single Family Residential	6,622	242	234	2	2	-	-	-	-	7,102
Multi-Family Residential	430	4	63	7	8	1	-	-	-	513
Commercial	158	2	24	8	9	-	-	-	-	201
Private Mutuals	3	-	1	1	1	-	-	-	-	6
Institutional/Governmental	24	-	8	8	10	2	1	-	-	53
Landscape	8	-	3	2	1	-	-	-	-	14
Fire Service accounts	-	-	-	-	-	-	-	-	-	-
Vacant	52	3	3	-	-	-	-	-	-	58
Total Meters/Accounts	7,297	251	336	28	31	3	1	-	-	7,947
<i>Hydraulic Capacity Factor (2)</i>	<i>1.00</i>	<i>1.00</i>	<i>1.67</i>	<i>3.33</i>	<i>5.33</i>	<i>10.67</i>	<i>16.67</i>	<i>33.33</i>	<i>53.33</i>	
Total Equivalent Meters	7,297	251	560	93	165	32	17	-	-	8,415
Monthly Fixed Service Charges										
Customer Costs (\$/Acct/month) (3)	\$7.12	\$7.12	\$7.12	\$7.12	\$7.12	\$7.12	\$7.12	\$7.12	\$7.12	
Capacity Costs (\$/Acct/month) (4)	\$21.15	\$21.15	\$35.25	\$70.49	\$112.79	\$225.58	\$352.46	\$1,324.25	\$2,118.80	
Total Monthly Meter Charge	\$28.27	\$28.27	\$42.36	\$77.61	\$119.91	\$232.70	\$359.58	\$1,331.37	\$2,125.92	
Annual Fixed Costs Allocated to Monthly Meter Charges										
Customer Costs	\$ 678,783									
Capacity Costs	2,135,597									
Total Fixed Meter Costs	\$ 2,814,380									
Annual Revenue from Monthly Meter Charges										
Customer Charges	\$ 623,264	\$ 21,439	\$ 28,699	\$ 2,392	\$ 2,648	\$ 256	\$ 85	\$ -	\$ -	\$ 678,783
Capacity Charges	1,851,792	63,697	142,114	23,686	41,957	8,121	4,230	-	-	2,135,597
Total Revenue from Monthly Meter Charges	\$ 2,475,057	\$ 85,136	\$ 170,813	\$ 26,077	\$ 44,605	\$ 8,377	\$ 4,315	\$ -	\$ -	\$ 2,814,380

1. Meter by Class and Size are based on January 2017 customer billing data.
2. Source: AWWA Manual M1, "Principles of Water Rates, Fees, and Charges", Table B-2.
3. Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
4. Capacity costs are allocated by meter size and the hydraulic capacity of the meter.

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Revenue Check

Fixed Charges Revenue Check:

Number of Meters by Class and Size	FY 2017/18								Total
	5/8 inch	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	
Single Family Residential	6,622	242	234	2	2	-	-	-	7,102
Multi-Family Residential	430	4	63	7	8	1	-	-	513
Commercial	158	2	24	8	9	-	-	-	201
Private Mutuals	3	-	1	1	1	-	-	-	6
Institutional/Governmental	24	-	8	8	10	2	1	-	53
Landscape	8	-	3	2	1	-	-	-	14
Fire Service accounts	-	-	-	-	-	-	-	-	-
Vacant	52	3	3	-	-	-	-	-	58
Total Meters/Accounts	7,297	251	336	28	31	3	1	-	7,947

Fixed Charges Revenue Check:

Recommended Rate Alternative - 30% Fixed / 70% Variable

Projected Revenue From Fixed Charges by Customer Class	FY 2017/18								Total
	5/8 inch	3/4 inch	1 inch	1.5 inch	2 inch	3 inch	4 inch	6 inch	
Charges by Meter Size	\$28.27	\$28.27	\$42.36	\$77.61	\$119.91	\$232.70	\$359.58	\$1,331.37	
Revenue from Fixed Charges									
Single Family Residential	\$ 2,246,105	\$ 82,084	\$ 118,959	\$ 1,863	\$ 2,878	\$ -	\$ -	\$ -	\$ 2,451,887
Multi-Family Residential	\$ 145,851	\$ 1,357	\$ 32,027	\$ 6,519	\$ 11,511	\$ 2,792	\$ -	\$ -	\$ 200,058
Commercial	\$ 53,592	\$ 678	\$ 12,201	\$ 7,451	\$ 12,950	\$ -	\$ -	\$ -	\$ 86,872
Private Mutuals	\$ 1,018	\$ -	\$ 508	\$ 931	\$ 1,439	\$ -	\$ -	\$ -	\$ 3,896
Institutional/Governmental	\$ 8,141	\$ -	\$ 4,067	\$ 7,451	\$ 14,389	\$ 5,585	\$ 4,315	\$ -	\$ 43,947
Landscape	\$ 2,714	\$ -	\$ 1,525	\$ 1,863	\$ 1,439	\$ -	\$ -	\$ -	\$ 7,540
Fire Service accounts	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Vacant	\$ 17,638	\$ 1,018	\$ 1,525	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,180
Total Revenue - Fixed Charges									\$ 2,814,380

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Variable Rate Calculation

ALLOCATION OF WATER COST REQUIREMENTS:

Classification Components	Adjusted Net Revenue Requirements (2017/18)	
Commodity-Related Costs (Volumetric Share)	\$ 3,642,457	38.8%
Capacity-Related Costs (Volumetric Share)	2,924,429	31.2%
Commodity-Related Costs (Fixed Share)	-	0.0%
Capacity-Related Costs (Fixed Share)	2,135,597	22.8%
Customer-Related Costs	678,783	7.2%
Net Revenue Requirement	\$ 9,381,267	100%

PROPOSED VOLUMETRIC CHARGES FOR FY 2017/18:

Recommended Rate Alternative Net Revenue Requirements Allocation of 30% Fixed / 70% Variable

Customer Class	Number of Meters (1)	Water Consumption (ccf/yr) (1)	Commodity Assigned Costs	Capacity Assigned Costs	Total Target Rev. Req't from Vol. Charges	% of Total Rate Revenue	Uniform Commodity Rates (\$/ccf)	Proposed Rate Structure
Single Family Residential	7,102	459,680	\$ 2,581,016	\$ 2,030,191	\$ 4,611,207	49.2%	\$10.12	Uniform
Multi-Family Residential	513	102,921	577,882	412,354	990,236	10.6%		Uniform
Commercial	201	34,197	192,008	142,028	334,036	3.6%		Uniform
Private Mutuals	6	8,710	48,902	51,869	100,771	1.1%		Uniform
Institutional/Governmental	53	35,934	201,762	225,275	427,036	4.6%		Uniform
Landscape	14	6,901	38,745	59,564	98,309	1.0%		Uniform
Fire Service accounts	-	-	-	-	-	0.0%		Uniform
Vacant	58	382	2,143	3,148	5,291	0.1%		Uniform
Total	7,947	648,724	\$ 3,642,457	\$ 2,924,429	\$ 6,566,887	70.0%		

1. Consumption data and number of meters is based on the SLVWD's billing data.

**SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Stabilization Rate Calculations**

ALLOCATION OF WATER COST REQUIREMENTS:

Classification Components	Adjusted Net Revenue Requirements (2017/18)	
Commodity-Related Costs (Volumetric Share)	\$ 3,642,457	38.8%
Capacity-Related Costs (Volumetric Share)	2,924,429	31.2%
Commodity-Related Costs (Fixed Share)	-	0.0%
Capacity-Related Costs (Fixed Share)	2,135,597	22.8%
Customer-Related Costs	678,783	7.2%
Net Revenue Requirement	\$ 9,381,267	100%

AVERAGE MONTHLY CONSUMPTION AT VARIOUS LEVELS OF CONSERVATION

Customer Class	Water Consumption (ccf/yr)	Average Annual Consumption at Various Conservation Levels				
		10%	15%	20%	25%	30%
Single Family Residential	459,680	413,712	390,728	367,744	344,760	321,776
Multi-Family Residential	102,921	92,629	87,483	82,337	77,191	72,045
Commercial	34,197	30,777	29,067	27,357	25,648	23,938
Private Mutuals	8,710	7,839	7,403	6,968	6,532	6,097
Institutional/Governmental	35,934	32,340	30,544	28,747	26,950	25,154
Landscape	6,901	6,210	5,865	5,520	5,175	4,830
Fire Service accounts	-	-	-	-	-	-
Vacant	382	344	324	305	286	267
Total	648,724	583,851	551,415	518,979	486,543	454,107

PROPOSED RATE STABILIZATION VOLUMETRIC CHARGES FOR FY 2017/18:

Recommended Rate Alternative Net Revenue Requirements Allocation of 30% Fixed / 70% Variable		Variable Rate (\$/ccf) at Various Levels of Conservation				
Customer Class	Total Target Rev. Req't from Vol. Charges	10%	15%	20%	25%	30%
Single Family Residential	\$ 4,611,207	\$11.25	\$11.91	\$12.65	\$13.50	\$14.46
Multi-Family Residential	990,236					
Commercial	334,036					
Private Mutuals	100,771					
Institutional/Governmental	427,036					
Landscape	98,309					
Fire Service accounts	-					
Vacant	5,291					
Total	\$ 6,566,887					

1. Consumption data and number of meters is based on the SLVWD's billing data.

SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Surplus Water Rate Calculation

PROPOSED SURPLUS WATER CHARGES FOR FY 2017/18 - FY 2021/22:

Calculated Average Cost of Water for Surplus Water Rates	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
Total Target Rate Revenue	\$ 9,381,267	\$ 10,037,955	\$ 10,640,233	\$ 11,172,244	\$ 11,730,857
Estimated Water Consumption <i>(rounded down)</i>	652,000	652,000	652,000	652,000	652,000
Average Cost of Water (per CCF)	\$14.39	\$15.40	\$16.32	\$17.14	\$17.99

** Surplus water sales are not guaranteed. Rounded down to nearest 1,000.*

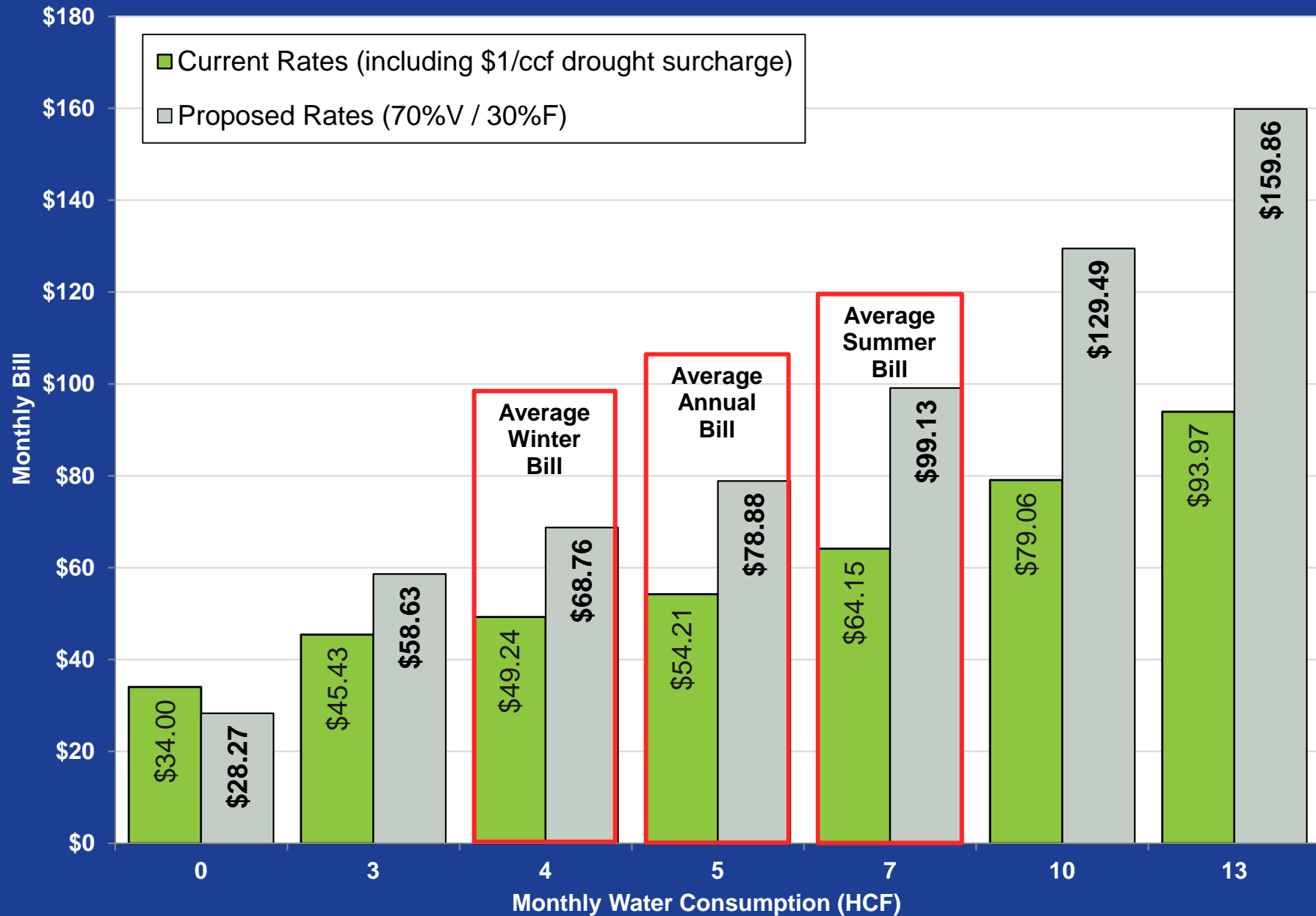
SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Proposed Rates

CURRENT VS. PROPOSED WATER RATES:

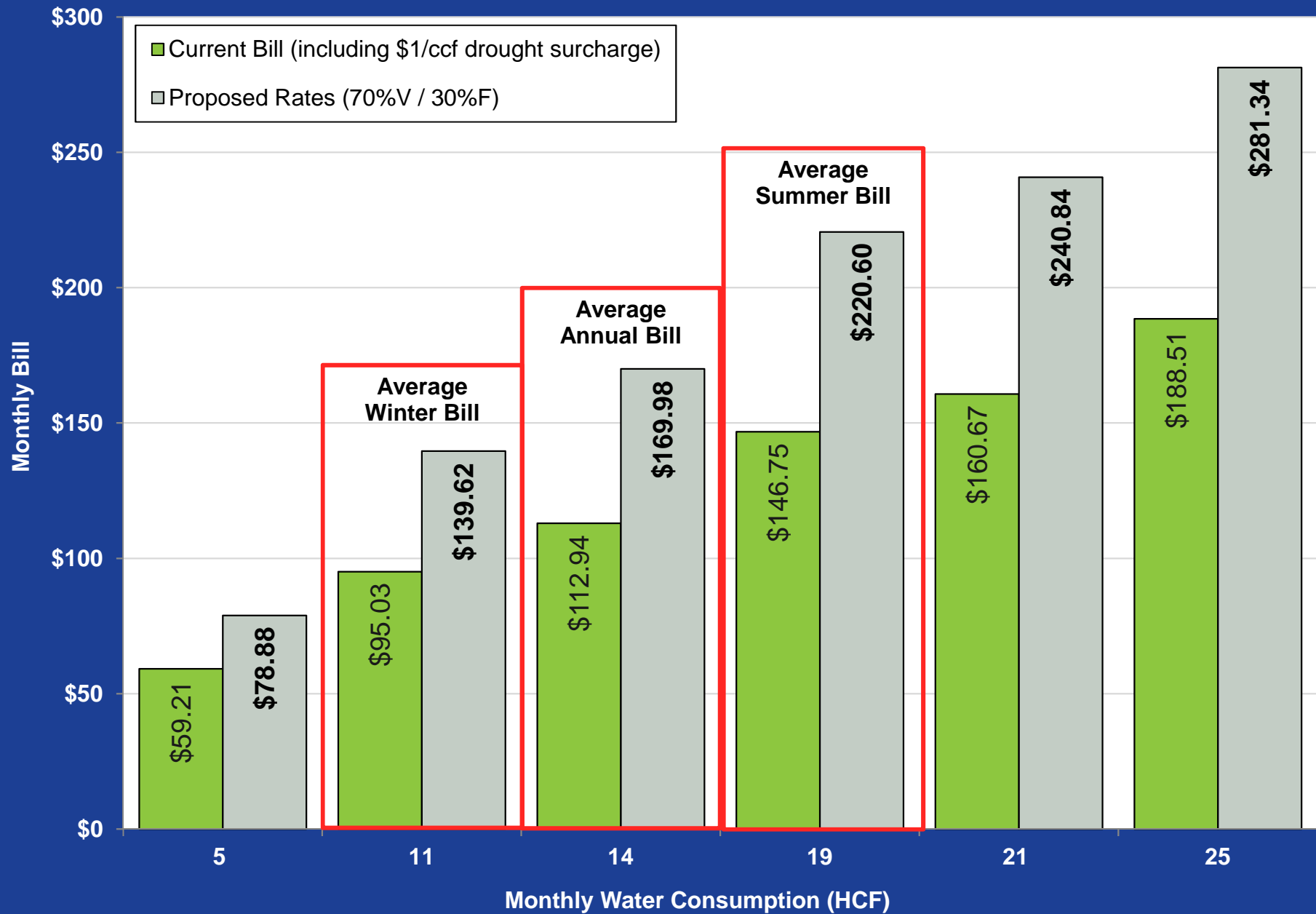
Water Rate Schedule		Current Rates		Proposed Rates - 30% Fixed / 70% Variable				
				FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
				37.00%	7.00%	6.00%	5.00%	5.00%
Fixed Service Charge								
Monthly Fixed Service Charges:								
5/8 inch	per account	\$34.00	\$28.27	\$30.24	\$32.06	\$33.66	\$35.34	
3/4 inch		\$34.00	\$28.27	\$30.24	\$32.06	\$33.66	\$35.34	
1 inch		\$56.50	\$42.36	\$45.33	\$48.05	\$50.45	\$52.97	
1 1/2 inch		\$114.00	\$77.61	\$83.04	\$88.03	\$92.43	\$97.05	
2 inch		\$181.50	\$119.91	\$128.30	\$136.00	\$142.80	\$149.94	
3 inch		\$341.00	\$232.70	\$248.98	\$263.92	\$277.12	\$290.97	
4 inch		\$567.00	\$359.58	\$384.75	\$407.84	\$428.23	\$449.64	
Surplus Water (1)		\$114.00	\$1,331.37	\$1,424.57	\$1,510.04	\$1,585.54	\$1,664.82	
Volumetric Charges for All Water Consumed								
Tier 1	0 - 4 ccf	\$3.81	--	--	--	--	--	
Tier 2	5 - 15 ccf	\$4.97	--	--	--	--	--	
Tier 3	16 - 50 ccf	\$5.96	--	--	--	--	--	
Tier 4	51+ ccf	\$6.61	--	--	--	--	--	
Drought Surcharge	per CCF	\$1.00	--	--	--	--	--	
Flat Rate (Uniform Rate)	per CCF	\$4.64	\$10.12	\$10.83	\$11.48	\$12.06	\$12.66	
Surplus Water	per CCF	\$10.00	\$14.39	\$15.40	\$16.32	\$17.14	\$17.99	
Rate Stabilization Rates for All Water Consumed								
10%	--	--	\$11.25	\$12.03	\$12.76	\$13.39	\$14.06	
15%	--	--	\$11.91	\$12.74	\$13.51	\$14.18	\$14.89	
20%	--	--	\$12.65	\$13.54	\$14.35	\$15.07	\$15.82	
25%	--	--	\$13.50	\$14.44	\$15.31	\$16.07	\$16.88	
30%	--	--	\$14.46	\$15.47	\$16.40	\$17.22	\$18.08	

1. Per District policy, Surplus water accounts are charged the 1 1/2 inch meter monthly fee.

Residential Water Bill Comparison Current vs. Proposed 2017/18 Rate Alternatives (5/8" meter)



Commercial Water Bill Comparison Current vs. Proposed 2017/18 Rates (5/8" meter)



SAN LORENZO VALLEY WATER DISTRICT
WATER RATE STUDY
Customer Data

Water Consumption Data used for Water Rate Study Rates:					
Summary of Consumption by Class	Consumption (ccf/year)	meters*	Avg. ccf by Month		
			Annual	Summer	Winter
Single Family Residential	459,680	7,102	5.39	7.23	3.97
Multi-Family Residential	102,921	513	16.72	21.19	13.30
Commercial	34,197	201	14.18	18.63	11.35
Private Mutuals	8,710	6	120.97	227.93	60.82
Institutional/Governmental	35,934	53	56.50	112.07	26.65
Surplus Water accounts	4,109	15	22.83	64.80	4.20
Landscape	6,901	14	41.07	112.18	1.25
Fire Service accounts	-	-	-	-	-
Vacant	382	58	0.55	1.43	0.12
Lompico Booster Intertie (now closed)**	3,993	-	-	-	-
Total	656,825	7,962			

* Number of meters is per SLVWD billing data. Meter count is from January 2017.

** Emergency water sales prior to annexation; this will be excluded from consumption, and is shown here for reference purposes only.

CY 2016 Approximate Rate Revenue from Water Rates (1)					
Revenue by Customer Class	Fixed Charges	Variable Charges	Drought Surcharges	Lompico Surcharges	TOTAL
Single Family Residential	\$ 2,825,755	\$ 2,031,782	\$ 458,832	\$ 92,113	\$ 5,408,484
Multi-Family Residential	370,760	417,935	102,936	188	891,819
Commercial	113,491	158,672	34,197		306,360
Private Mutuals	9,138	42,086	8,710		59,933
Institutional/Governmental	61,405	166,862	36,306		264,573
Surplus Water accounts	9,462	41,086	4,109		54,657
Landscape	10,212	32,018	6,901		49,131
Fire Service accounts			332		332
Vacant	24,074	1,689	382		26,145
Lompico Booster Intertie (no	456	18,528	3,993		22,977
Total	\$ 3,424,754	\$ 2,910,659	\$ 656,697	\$ 92,301	\$ 7,084,411
Fixed vs. Variable %	48%	41%	9%	1%	100%

1. Rate Revenue For February 2016 - January 2017 from SLVWD billing data.

TABLE 1
FINANCIAL PLAN AND SUMMARY OF SEWER COST REQUIREMENTS (1)

SEWER COST REQUIREMENTS SUMMARY	Budget	Projected								
	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										
SEWER REVENUES:										
Sewer Service Charge	100,088	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Other Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Sources of Funds	\$ 100,088	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Uses of Funds										
OPERATING EXPENSES (2):										
PERSONNEL	\$ 20,700	\$ 19,418	\$ 19,939	\$ 20,474	\$ 21,024	\$ 21,589	\$ 22,168	\$ 22,764	\$ 23,375	\$ 24,002
MATERIALS & SERVICES	112,770	107,598	110,490	113,458	116,504	119,630	122,842	126,142	129,526	133,006
Subtotal: Operating Expenses	\$ 133,470	\$ 127,016	\$ 130,429	\$ 133,932	\$ 137,528	\$ 141,219	\$ 145,010	\$ 148,905	\$ 152,901	\$ 157,009
OTHER EXPENDITURES:										
Existing Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Debt Service	-	-	-	-	-	-	-	-	-	-
Rate-Funded Capital Expenses (3)	-	63,880	65,796	67,770	69,803	71,898	74,054	76,276	78,564	80,921
Subtotal: Other Expenditures	\$ -	\$ 63,880	\$ 65,796	\$ 67,770	\$ 69,803	\$ 71,898	\$ 74,054	\$ 76,276	\$ 78,564	\$ 80,921
Total Uses of Water Funds	\$ 133,470	\$ 190,896	\$ 196,226	\$ 201,703	\$ 207,332	\$ 213,116	\$ 219,064	\$ 225,181	\$ 231,465	\$ 237,930
Plus: Revenue from Rate Increases (4)	-	-	20,000	44,000	72,800	107,360	148,832	156,297	163,986	171,905
Annual Surplus/(Deficit) - w/o Rate Increases	\$ (33,381)	\$ (90,896)	\$ (96,226)	\$ (101,703)	\$ (107,332)	\$ (113,116)	\$ (119,064)	\$ (125,181)	\$ (131,465)	\$ (137,930)
Annual Surplus/(Deficit) - w/ Rate Increases	\$ (33,381)	\$ (90,896)	\$ (76,226)	\$ (57,703)	\$ (34,532)	\$ (5,756)	\$ 29,768	\$ 31,116	\$ 32,521	\$ 33,975
Net Cost Requirement (Total Uses less Non-Rate Revenue)	\$ 133,470	\$ 190,896	\$ 196,226	\$ 201,703	\$ 207,332	\$ 213,116	\$ 219,064	\$ 225,181	\$ 231,465	\$ 237,930
Total Rate Revenue After Rate Increases	\$ 100,088	\$ 100,000	\$ 120,000	\$ 144,000	\$ 172,800	\$ 207,360	\$ 248,832	\$ 256,297	\$ 263,986	\$ 271,905
Projected Annual Rate Revenue Increase	0.00%	0.00%	20.00%	20.00%	20.00%	20.00%	20.00%	3.00%	3.00%	3.00%
Cumulative Increase from Annual Revenue Increases	0.00%	0.00%	20.00%	44.00%	72.80%	107.36%	148.83%	156.30%	163.99%	171.91%
Debt Coverage After Rate Increase	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1. Revenue and expenses for FY 2015/16 through FY 2020/21 were provided by City Staff. Source File: 2016 Sanitation Fund Rate Analysis-2.xlsx.

2. Assumes annual inflation of 4%, beyond FY 2020/21 (file: 2016 Sanitation Fund Rate Analysis.xls).

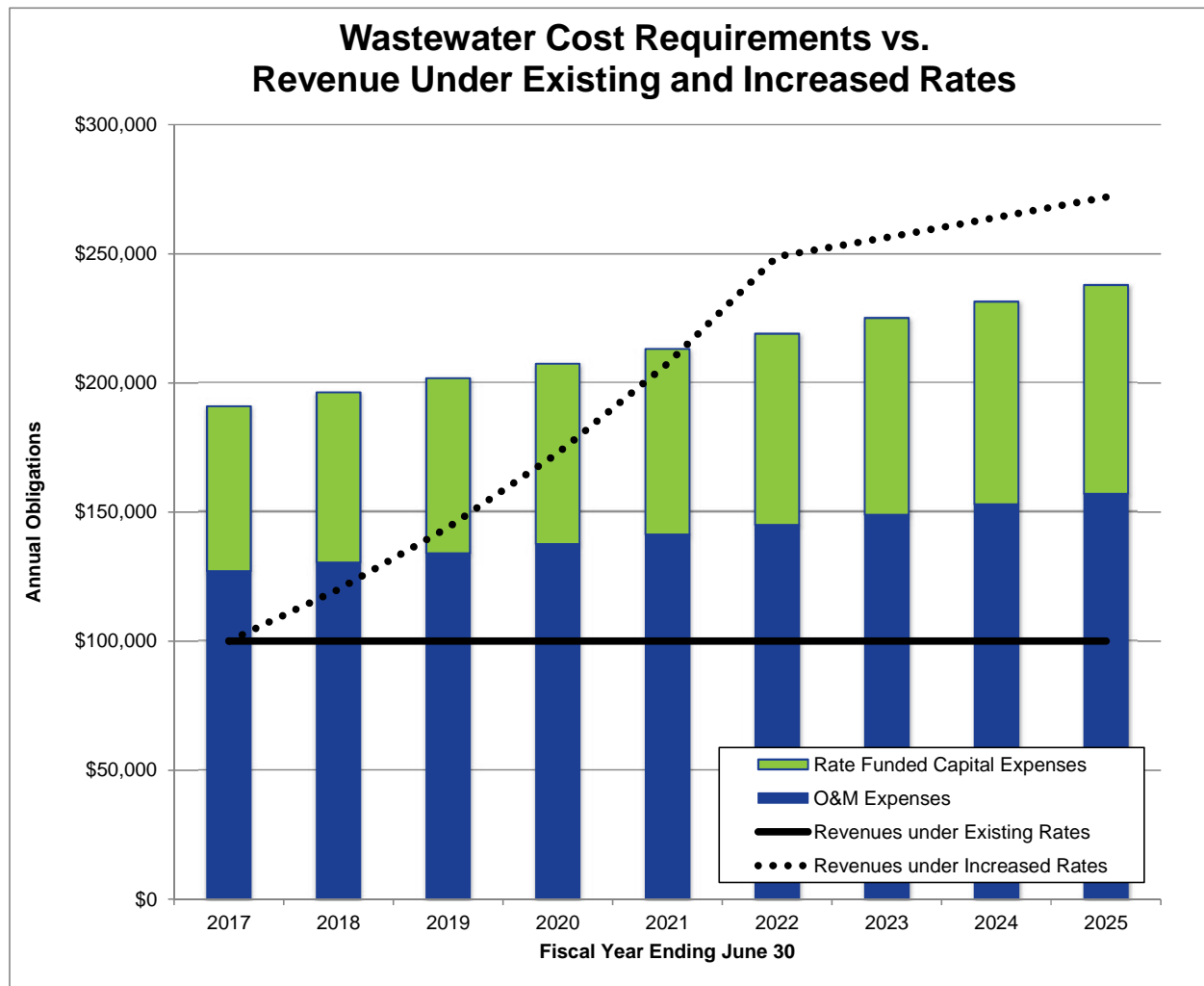
3. Assumes annual inflation of the 10 year average change in the Construction Cost Index for 2006-2015; applied to estimated future expenditures beyond FY 2020/21. Source: Engineering News Record website (<http://enr.construction.com>).

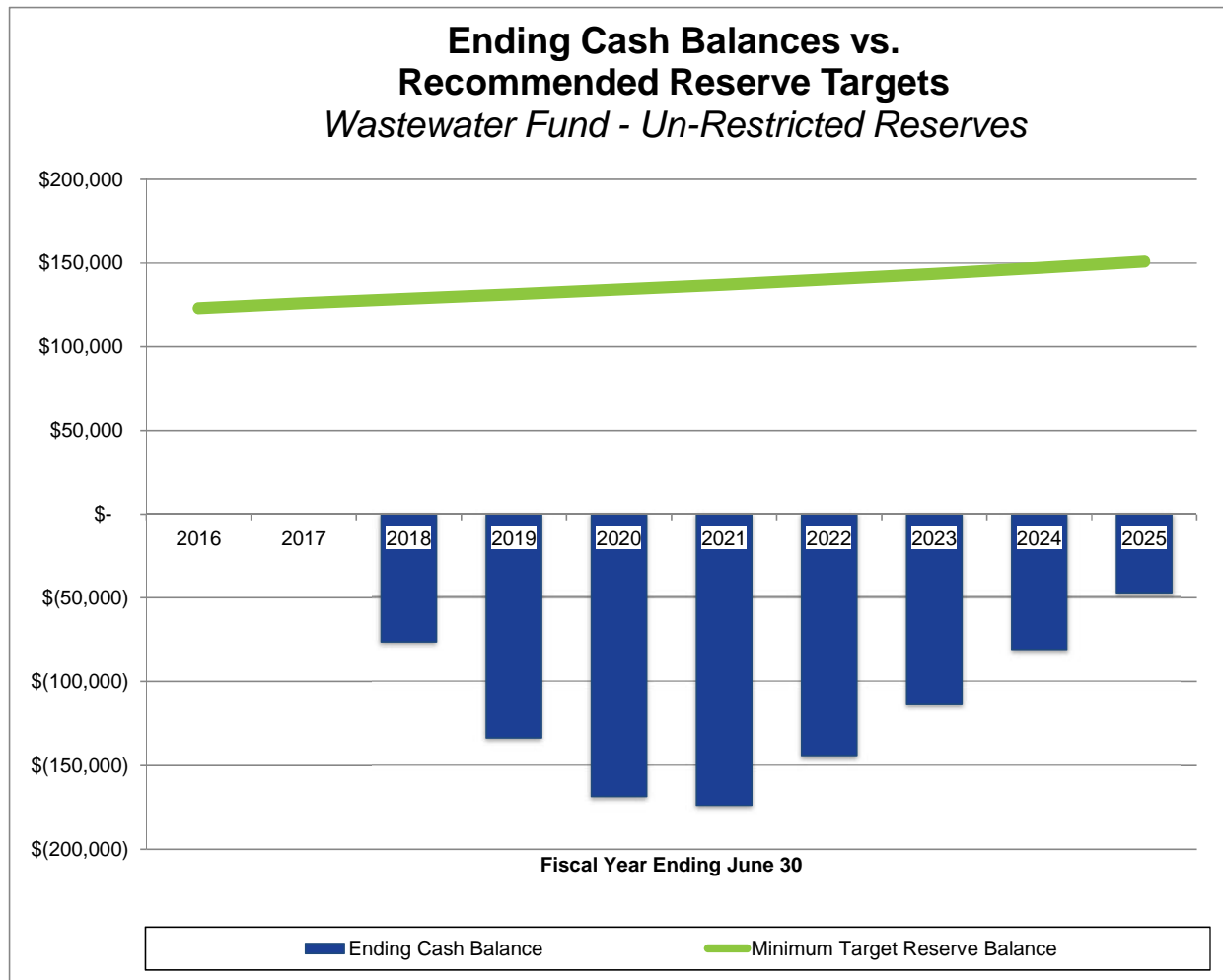
4. Assumes new rates are implemented July 1, 2017.

TABLE 2
SEWER RESERVE FUND SUMMARY, UN-RESTRICTED RESERVES

SUMMARY OF CASH ACTIVITY UN-RESTRICTED RESERVES - SEWER	Budget		Projected							
	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
Total Beginning Cash (1)	\$ 33,381	\$ -								
Un-Restricted Reserves:										
Operating Reserve										
Beginning Reserve Balance	\$ 33,381	\$ 90,896	\$ -	\$ (76,226)	\$ (133,929)	\$ (168,460)	\$ (174,217)	\$ (144,449)	\$ (113,333)	\$ (80,813)
Plus: Net Cash Flow (After Rate Increases)	(33,381)	(90,896)	(76,226)	(57,703)	(34,532)	(5,756)	29,768	31,116	32,521	33,975
Plus: Transfer of Debt Reserve Surplus	-	-	-	-	-	-	-	-	-	-
Less: Transfer Out to Capital Replacement Reserve	-	-	-	-	-	-	-	-	-	-
Ending Operating Reserve Balance	\$ -	\$ -	\$ (76,226)	\$ (133,929)	\$ (168,460)	\$ (174,217)	\$ (144,449)	\$ (113,333)	\$ (80,813)	\$ (46,837)
Target Ending Balance (90 days of O&M)	\$ 33,400	\$ 31,800	\$ 32,600	\$ 33,500	\$ 34,400	\$ 35,300	\$ 36,300	\$ 37,200	\$ 38,200	\$ 39,300
Capital Rehabilitation & Replacement Reserve										
Beginning Reserve Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Plus: Grant Proceeds	-	-	-	-	-	-	-	-	-	-
Plus: Transfer of Operating Reserve Surplus	-	-	-	-	-	-	-	-	-	-
Less: Use of Reserves for Capital Projects	-	-	-	-	-	-	-	-	-	-
Ending Capital Rehab & Replacement Reserve Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Target Ending Balance (2)	\$ 89,778	\$ 94,503	\$ 96,205	\$ 97,994	\$ 99,882	\$ 101,888	\$ 104,030	\$ 106,336	\$ 108,841	\$ 111,593
Ending Balance - Excl. Restricted Reserves	\$ -	\$ -	\$ (76,226)	\$ (133,929)	\$ (168,460)	\$ (174,217)	\$ (144,449)	\$ (113,333)	\$ (80,813)	\$ (46,837)
Min. Target Ending Balance - Excl. Restricted Reserves	\$ 123,178	\$ 126,303	\$ 128,805	\$ 131,494	\$ 134,282	\$ 137,188	\$ 140,330	\$ 143,536	\$ 147,041	\$ 150,893
Ending Surplus/(Deficit) Compared to Reserve Targets	\$ (123,178)	\$ (126,303)	\$ (205,031)	\$ (265,422)	\$ (302,743)	\$ (311,404)	\$ (284,779)	\$ (256,869)	\$ (227,853)	\$ (197,730)
Annual Interest Earnings Rate (3)	0.35%	0.35%	0.50%	0.75%	1.00%	1.25%	1.50%	1.75%	2.00%	2.00%

1. Total beginning cash is based on FY 2014/15 ending Fund Balance, as listed in Source File: 2016 Sanitation Fund Rate Analysis-2.xlsx.
2. The Capital Rehabilitation & Replacement Reserve target is set to the annual average of Capital Project expenditures (in future year dollars).
3. Historical interest earning rates were referenced on the CA Treasurer's Office website for funds invested in LAIF. Future years earnings were conservatively estimated through 2021 and phase into the historical 10 year average interest earnings rate.





**SAN LORENZO VALLEY WATER DISTRICT
SEWER RATE STUDY
Operating Revenue and Expenses**

EXHIBIT 1

SEWER REVENUE FORECAST:

DESCRIPTION (1)	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
SEWER REVENUE											
7102 Wastewater Service											
SEWER CHARGES	1	100,088	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
TOTAL: REVENUE		\$ 100,088	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000

SEWER REVENUE SUMMARY:

SEWER REVENUE											
Other Revenues		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer Service Charge		\$ 100,088	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
TOTAL: REVENUE		\$ 100,088	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000

SEWER FUND OPERATING EXPENSE FORECAST (2):

DESCRIPTION - SEWER	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PERSONNEL											
Salaries											
REGULAR SALARIES	3	\$ 15,000	\$ 15,000	\$ 15,403	\$ 15,816	\$ 16,241	\$ 16,677	\$ 17,125	\$ 17,585	\$ 18,057	\$ 18,542
OVERTIME WAGES	3	2,500	2,500	2,567	2,636	2,707	2,780	2,854	2,931	3,009	3,090
STANDBY WAGES	3	500	500	513	527	541	556	571	586	602	618
Subtotal		\$ 18,000	\$ 18,000	\$ 18,483	\$ 18,980	\$ 19,489	\$ 20,012	\$ 20,550	\$ 21,102	\$ 21,668	\$ 22,250
Benefits											
MEDICAL INSURANCE	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DENTAL INSURANCE	3	-	-	-	-	-	-	-	-	-	-
PERS - RETIREMENT	3	1,300	-	-	-	-	-	-	-	-	-
FICA - SOCIAL SECURITY	3	1,100	1,092	1,122	1,152	1,183	1,214	1,247	1,280	1,315	1,350
WORKERS COMPENSATION	3	-	-	-	-	-	-	-	-	-	-
MEDICARE RETIRED MEDICAL	3	300	325	334	343	352	362	372	381	392	402
SPECIAL CLOTHING	3	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 2,700	\$ 1,418	\$ 1,456	\$ 1,495	\$ 1,535	\$ 1,576	\$ 1,618	\$ 1,662	\$ 1,707	\$ 1,752
Additional Positions											
Fully Loaded Cost of New Position(s)	3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Subtotal		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTAL: PERSONNEL		\$ 20,700	\$ 19,418	\$ 19,939	\$ 20,474	\$ 21,024	\$ 21,589	\$ 22,168	\$ 22,764	\$ 23,375	\$ 24,002
MATERIALS & SERVICES											
ADMIN OVERHEAD ALLOCATION FROM WATER (3)	1	\$ 10,970	\$ 11,298	\$ 11,639	\$ 11,987	\$ 12,344	\$ 12,710	\$ 13,088	\$ 13,479	\$ 13,878	\$ 14,294
CONTRACT/PROFESSIONAL SERVICES	2	\$ 51,000	\$ 51,000	\$ 52,352	\$ 53,739	\$ 55,163	\$ 56,625	\$ 58,125	\$ 59,666	\$ 61,247	\$ 62,870
OUTSIDE WATER ANALYSIS	2	14,600	12,000	12,318	12,644	12,980	13,323	13,677	14,039	14,411	14,793
ADMINISTRATION OVERHEAD	2	4,000	-	-	-	-	-	-	-	-	-
EQUIPMENT REPLACEMENT FUND	2	-	-	-	-	-	-	-	-	-	-
UTILITIES	2	7,000	7,000	7,186	7,376	7,571	7,772	7,978	8,189	8,406	8,629
OPERATING SUPPLIES	2	6,000	6,500	6,672	6,849	7,031	7,217	7,408	7,604	7,806	8,013
MAINT & OPERATIONS OF VEHICLES	2	500	500	513	527	541	555	570	585	600	616
RENTAL/LEASES/PERMITS	2	15,000	15,000	15,398	15,806	16,224	16,654	17,096	17,549	18,014	18,491
FACILITIES MAINTENANCE	2	500	500	513	527	541	555	570	585	600	616
COMMUNICATIONS & TELEMETERING	2	3,200	3,800	3,901	4,004	4,110	4,219	4,331	4,446	4,563	4,684
OFFICE SUPPLIES (included 5078)	2	-	-	-	-	-	-	-	-	-	-
POSTAGE	2	-	-	-	-	-	-	-	-	-	-
Subtotal		\$ 112,770	\$ 107,598	\$ 110,490	\$ 113,458	\$ 116,504	\$ 119,630	\$ 122,842	\$ 126,142	\$ 129,526	\$ 133,006
TOTAL: MATERIALS & SERVICES		\$ 112,770	\$ 107,598	\$ 110,490	\$ 113,458	\$ 116,504	\$ 119,630	\$ 122,842	\$ 126,142	\$ 129,526	\$ 133,006
GRAND TOTAL: SEWER EXPENSES		\$ 133,470	\$ 127,016	\$ 130,429	\$ 133,932	\$ 137,528	\$ 141,219	\$ 145,010	\$ 148,905	\$ 152,901	\$ 157,009

**SAN LORENZO VALLEY WATER DISTRICT
SEWER RATE STUDY
Operating Revenue and Expenses**

EXHIBIT 1

NON-CASH ITEMS, EXCLUDED FROM ABOVE:

DESCRIPTION	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
DEPRECIATION											
Depreciation Expense	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SUBTOTAL: DEPRECIATION		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

FORECASTING ASSUMPTIONS:

COST INFLATION FACTORS	Basis	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Customer Growth	1	--	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
General Cost Inflation (4)	2	--	2.65%	2.65%	2.65%	2.65%	2.65%	2.65%	2.65%	2.65%	2.65%
Labor Cost Inflation (5)	3	--	2.69%	2.69%	2.69%	2.69%	2.69%	2.69%	2.69%	2.69%	2.69%
Water Purchases	4	--	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Energy (6)	5	--	4.40%	4.40%	4.40%	4.40%	4.40%	4.40%	4.40%	4.40%	4.40%
Chemicals (7)	6	--	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Fuel	7	--	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
No Escalation	8	--	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

1. Revenues are from the Final Trial Balance on June 30, 2015 from source file: *SLVWD 2015 Working TB.xls* and are actual revenues from FY 14/15.

2. Expenses are from the FY 2015/16 Budget and from source file: *FY1516 BUDGET FINAL.pdf*. FY 2017/18 Expenses are from file: *SEWER expenses.xls*. All projected expenses are rounded to the nearest \$100.

3. 1.5 percent of Administration budget items are allocated to the sewer utility; per District staff, via email September 2016.

4. Expected Inflation factors based on expense type from 5 year average from Bureau of Labor Statistics Data.

http://www.bls.gov/regions/west/news-release/consumerpriceindex_sanfrancisco.htm

5. Labor cost inflation is based on the 5-year average annual change in the Quarterly Census of Employment and Wages (San Jose area, CA).

http://www.bls.gov/regions/west/news-release/2016/employmentcostindex_sanjose_20161031.htm

6. Estimated energy cost inflation provided by a University of California Davis report:

The Future of Electricity Prices in California: Understanding Market Drivers and Forecasting Prices to 2040," by Johnathan Cook, Ph.D., page 31, Table 7.

7. Inflation factor recently used by other California water agencies (e.g., City of Sunnyvale, City of Eureka, Humboldt CSD).

SAN LORENZO VALLEY WATER DISTRICT
SEWER RATE STUDY
Capital Improvement Plan Expenditures

EXHIBIT 2

CAPITAL FUNDING SUMMARY - SEWER

CAPITAL FUNDING FORECAST	Budget	Projected								
Sewer Funding Sources:	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
Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Use of Capacity Fee Reserves	-	-	-	-	-	-	-	-	-	-
SRF Loan Funding	-	-	-	-	-	-	-	-	-	-
Use of Future Revenue Bond Proceeds	-	-	-	-	-	-	-	-	-	-
Use of Capital Rehabilitation and Replacement Reserve	-	-	-	-	-	-	-	-	-	-
Rate Revenue	-	63,880	65,796	67,770	69,803	71,898	74,054	76,276	78,564	80,921
Total Sources of Capital Funds	\$ -	\$ 63,880	\$ 65,796	\$ 67,770	\$ 69,803	\$ 71,898	\$ 74,054	\$ 76,276	\$ 78,564	\$ 80,921
Uses of Capital Funds:										
Total Project Costs	\$ -	63,880	65,796	67,770	69,803	71,898	74,054	76,276	78,564	80,921
Capital Funding Surplus (Deficiency)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
SRF Loan Funding	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Future Revenue Bond Proceeds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

CAPITAL IMPROVEMENT PROGRAM - SEWER

Sewer Capital Improvement Program Costs (1):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Pipes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tanks (including 10% volume contingency)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pump Stations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wells	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Treatment	\$ -	\$ 19,200	\$ 19,200	\$ 19,200	\$ 19,200	\$ 19,200	\$ 19,200	\$ 19,200	\$ 19,200	\$ 19,200
Diversions	\$ -	\$ 44,680	\$ 44,680	\$ 44,680	\$ 44,680	\$ 44,680	\$ 44,680	\$ 44,680	\$ 44,680	\$ 44,680
Admin/Operations Building	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<i>Placeholder for Future Year Capital Projects</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: CIP Program Costs	\$ -	\$ 63,880	\$ 63,880	\$ 63,880	\$ 63,880	\$ 63,880	\$ 63,880	\$ 63,880	\$ 63,880	\$ 63,880

Sewer Capital Improvement Program Costs (in Future-Year Dollars):

Project Description	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Pipes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Tanks (including 10% volume contingency)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Pump Stations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Wells	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Treatment	\$ -	\$ 19,200	\$ 19,776	\$ 20,369	\$ 20,980	\$ 21,610	\$ 22,258	\$ 22,926	\$ 23,614	\$ 24,322
Diversions	\$ -	\$ 44,680	\$ 46,020	\$ 47,401	\$ 48,823	\$ 50,288	\$ 51,796	\$ 53,350	\$ 54,951	\$ 56,599
Admin/Operations Building	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<i>Placeholder for Future Year Capital Projects</i>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total: Capital Improvement Program Costs (Future-Year Dollars)	\$ -	\$ 63,880	\$ 65,796	\$ 67,770	\$ 69,803	\$ 71,898	\$ 74,054	\$ 76,276	\$ 78,564	\$ 80,921

FORECASTING ASSUMPTIONS:

Economic Variables	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Annual Construction Cost Inflation, Per Engineering News Record(2)	0.00%	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Cumulative Construction Cost Multiplier from 2016	1.00	1.00	1.03	1.06	1.09	1.13	1.16	1.19	1.23	1.27

1. Capital project costs were provided by City Staff in source file: *VWHA_Capital_Asset_Cost_of_Service_9_02_16.pdf*.

2. For reference purposes, the annual Construction Cost Inflation percentage is the 10 year average change in the Construction Cost Index for 2005-2015 (3.0%). Source: *Engineering News Record website (http://enr.construction.com)*.

SEWER UTILITY EXISTING DEBT OBLIGATIONS	Budget	Projected								
Annual Repayment Schedules:	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
Grand Total: Existing Annual Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Total: Existing Annual Coverage Requirement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Total: Existing Debt Reserve Target	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Existing Annual Debt Obligations to be Satisfied by Sewer Rates:

Existing Annual Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Existing Annual Coverage Requirement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Existing Debt Reserve Target	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Current Sewer Rate Schedule:

Fixed Charges	Current Monthly
Sewer	\$149.00

SAN LORENZO VALLEY WATER DISTRICT
SEWER RATE STUDY
Cost of Service Analysis

Classification of Expenses - Sewer									
Budget Categories	Total Cost Requirements	Flow	Strength		Customer	Basis of Classification			
	FY 2017/18	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
PERSONNEL									
PERSONNEL									
Salaries	\$ -	\$ -	\$ -	\$ -	\$ -	56%	22%	22%	0%
REGULAR SALARIES	\$ 15,403	\$ 8,626	\$ 3,389	\$ 3,389	\$ -	56%	22%	22%	0%
OVERTIME WAGES	\$ 2,567	\$ 1,412	\$ 513	\$ 513	\$ 128	55%	20%	20%	5%
STANDBY WAGES	\$ 513	\$ 282	\$ 103	\$ 103	\$ 26	55%	20%	20%	5%
Subtotal	\$ 18,483	\$ 10,320	\$ 4,005	\$ 4,005	\$ 154	56%	22%	22%	1%
Benefits									
MEDICAL INSURANCE	\$ -	\$ -	\$ -	\$ -	\$ -	55%	20%	20%	5%
DENTAL INSURANCE	\$ -	\$ -	\$ -	\$ -	\$ -	55%	20%	20%	5%
PERS - RETIREMENT	\$ -	\$ -	\$ -	\$ -	\$ -	55%	20%	20%	5%
FICA - SOCIAL SECURITY	\$ 1,122	\$ 617	\$ 224	\$ 224	\$ 56	55%	20%	20%	5%
WORKERS COMPENSATION	\$ -	\$ -	\$ -	\$ -	\$ -	55%	20%	20%	5%
MEDICARE RETIRED MEDICAL	\$ 334	\$ 184	\$ 67	\$ 67	\$ 17	55%	20%	20%	5%
SPECIAL CLOTHING	\$ -	\$ -	\$ -	\$ -	\$ -	56%	22%	22%	0%
Subtotal	\$ 1,456	\$ 801	\$ 291	\$ 291	\$ 73	55%	20%	20%	5%
TOTAL: PERSONNEL	\$ 19,939	\$ 11,120	\$ 4,296	\$ 4,296	\$ 227	56%	22%	22%	1%
MATERIALS & SERVICES									
ADMIN OVERHEAD ALLOCATION FROM WATER (3)	\$ 11,639	\$ 6,401	\$ 2,328	\$ 2,328	\$ 582	55%	20%	20%	5%
CONTRACT/PROFESSIONAL SERVICES	\$ 52,352	\$ 28,793	\$ 10,470	\$ 10,470	\$ 2,618	55%	20%	20%	5%
OUTSIDE WATER ANALYSIS	\$ 12,318	\$ 6,775	\$ 2,464	\$ 2,464	\$ 616	55%	20%	20%	5%
ADMINISTRATION OVERHEAD	\$ -	\$ -	\$ -	\$ -	\$ -	0%	0%	0%	100%
EQUIPMENT REPLACEMENT FUND	\$ -	\$ -	\$ -	\$ -	\$ -	55%	20%	20%	5%
UTILITIES	\$ 7,186	\$ 3,952	\$ 1,437	\$ 1,437	\$ 359	55%	20%	20%	5%
OPERATING SUPPLIES	\$ 6,672	\$ 3,670	\$ 1,334	\$ 1,334	\$ 334	55%	20%	20%	5%
MAINT & OPERATIONS OF VEHICLES	\$ 513	\$ 282	\$ 103	\$ 103	\$ 26	55%	20%	20%	5%
RENTAL/LEASES/PERMITS	\$ 15,398	\$ 8,469	\$ 3,080	\$ 3,080	\$ 770	55%	20%	20%	5%
FACILITIES MAINTENANCE	\$ 513	\$ 282	\$ 103	\$ 103	\$ 26	55%	20%	20%	5%
COMMUNICATIONS & TELEMETERING	\$ 3,901	\$ 2,145	\$ 780	\$ 780	\$ 195	55%	20%	20%	5%
OFFICE SUPPLIES (included 5078)	\$ -	\$ -	\$ -	\$ -	\$ -	0%	0%	0%	100%
POSTAGE	\$ -	\$ -	\$ -	\$ -	\$ -	0%	0%	0%	100%
Subtotal	\$ 110,490	\$ 60,770	\$ 22,098	\$ 22,098	\$ 5,525	55%	20%	20%	5%
TOTAL: MATERIALS & SERVICES	\$ 110,490	\$ 60,770	\$ 22,098	\$ 22,098	\$ 5,525	55%	20%	20%	5%
GRAND TOTAL: SEWER EXPENSES	\$ 130,429	\$ 71,890	\$ 26,394	\$ 26,394	\$ 5,751	55%	20%	20%	4%

SAN LORENZO VALLEY WATER DISTRICT
SEWER RATE STUDY
Cost of Service Analysis

Classification of Expenses - Sewer, continued									
Budget Categories	Total Revenue Requirements	Flow	Strength		Customer	Basis of Classification			
	FY 2017/18	(VOL)	(BOD)	(TSS)	(CA)	(VOL)	(BOD)	(TSS)	(CA)
Debt Service Payments									
Existing Annual Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	50%	25%	25%	0%
Future Annual Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	50%	25%	25%	0%
Total Debt Service Payments	\$ -	\$ -	\$ -	\$ -	\$ -	0%	0%	0%	0%
Capital Expenditures									
Rate Funded Capital Expenses	\$ 65,796	\$ 32,898	\$ 16,449	\$ 16,449	\$ -	50%	25%	25%	0%
TOTAL COST REQUIREMENTS	\$ 196,226	\$ 104,788	\$ 42,843	\$ 42,843	\$ 5,751	53%	22%	22%	3%
Less: Non-Rate Revenues									
SEWER REVENUE									
Other Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	53%	22%	22%	3%
Sewer Service Charge	\$ -	\$ -	\$ -	\$ -	\$ -	53%	22%	22%	3%
NET SEWER COST REQUIREMENTS	\$ 196,226	\$ 104,788	\$ 42,843	\$ 42,843	\$ 5,751				
Allocation of Sewer Cost Requirements	100.0%	53.4%	21.8%	21.8%	2.9%				

Net Revenue Req. Check from Financial Plan \$ -

Classification of Expenses - Sewer, continued					
Adjustments to Classification of Expenses					
Adjustment to Current Rate Level:	Total	(VOL)	(BOD)	(TSS)	(CA)
FY 2017/18 Target Rate Revenue	\$120,000				
Projected Rate Revenue at Current Rates	\$100,000				
FY 2017/18 Projected Rate Increase	20.0%				
Adjusted Sewer Net Revenue Requirements	\$ 120,000	\$ 64,082	\$ 26,200	\$ 26,200	\$ 3,517
<i>Percent of Revenue</i>		<i>53.4%</i>	<i>21.8%</i>	<i>21.8%</i>	<i>2.9%</i>

SAN LORENZO VALLEY WATER DISTRICT
SEWER RATE STUDY
Sewer Cost of Service Analysis

Development of the BASE CAPACITY Allocation Factor (1) - Sewer					
Customer Class	Number of Accounts	Monthly Average Consumption	Estimated Annual Volume Total (CCF)	Adjusted Annual Volume Total (CCF)	Percentage of Adjusted Volume
Residential	55	292	3,505	3,505	100.0%
Grand Total:	55		3,505	3,505	100.0%
<i>3,505 Flow (ccf/yr.)</i> <i>1.00 Flow Adj. Factor</i>					

1. Consumption data is based on SLVWD water customer data; several months of consumption have been approximated.

Development of the Strength Allocation Factor - Sewer									
Customer Class	Biochemical Oxygen Demand (BOD)					Total Suspended Solids (TSS)			
	Annual Flow (gallons)	Average Strength Factor (mg/l) (1)	Calculated BOD (lbs./yr.)	Adjusted BOD (lbs./yr.)	Percent of Total	Average Strength Factor (mg/l) (1)	Calculated TSS (lbs./yr.)	Adjusted TSS (lbs./yr.)	Percent of Total
Residential	2,621,915	200	4,373	4,373	100.00%	200	4,373	4,373	100.00%
Grand Total:	2,621,915		4,373	4,373			4,373	4,373	
<i>Target, from WWTP Data</i> <i>4,373 BOD (lbs./yr.)</i> <i>1.000 BOD Adj. Factor</i> <i>4,373 TSS (lbs./yr.)</i> <i>1.000 TSS Adj. Factor</i>									

1. Average strength factors for BOD and TSS are derived from the State Water Resources Control Board Revenue Program Guidelines, Appendix G.

Capacity Related Costs: Costs associated with the maximum demand required at one point in time or the maximum size of facilities required to meet this demand.

Development of the Customer Allocation Factor - Sewer		
Customer Class	Number of Accounts	Percent of Total
Residential	55	100.00%
Grand Total:	55	100.00%

Allocation of FY 2017/18 Cost Requirements by Customer Class - Sewer						
Customer Class	Cost Classification Components				Net Cost-of-Service Requirements	% of Net Cost-of-Service Requirements
	Volume	Treatment		Customer Related		
		BOD	TSS			
Net Cost Requirements (1)	\$ 64,082	\$ 26,200	\$ 26,200	\$ 3,517	\$ 120,000	--
	53.4%	21.8%	21.8%	2.9%	100.0%	
SINGLE FAMILY	\$ 64,082	\$ 26,200	\$ 26,200	\$ 3,517	\$ 120,000	100.0%
TOTAL	\$ 64,082	\$ 26,200	\$ 26,200	\$ 3,517	\$ 120,000	100%

1. Cost requirement for each customer class is determined by multiplying the requirement from each cost classification by the allocation factors for each customer class.

SAN LORENZO VALLEY WATER DISTRICT
SEWER RATE STUDY
Sewer Rates

Customer Class	Number of Accounts
Residential	55
Grand Total:	55

Customer Class	Number of Accounts	No. of Housing Equivalent Units ¹	Annual Billable Volume ² (ccf)	Annual Rev. Req't			
				Total	Fixed - Customer	Fixed (Treatment Strength)	Volumetric (Flow)
Residential	55	55	3,505	\$ 120,000	\$ 3,517	\$ 52,400	\$ 64,082
				100%	3%	44%	53%

Customer Class	100% Fixed Rates	Current Monthly Rates
Residential	\$ 181.82	\$ 149.00

Sewer Rate Schedule	Current Rates	Proposed Rates				
		FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22
<i>Projected Increase in Rate Revenue per Financial Plan:</i>		20.00%	20.00%	20.00%	20.00%	20.00%
Monthly Fixed Service Charges:						
All Customers	\$149.00	\$181.82	\$218.18	\$261.82	\$314.18	\$377.02

5 Year Residential Sewer Bill Comparison

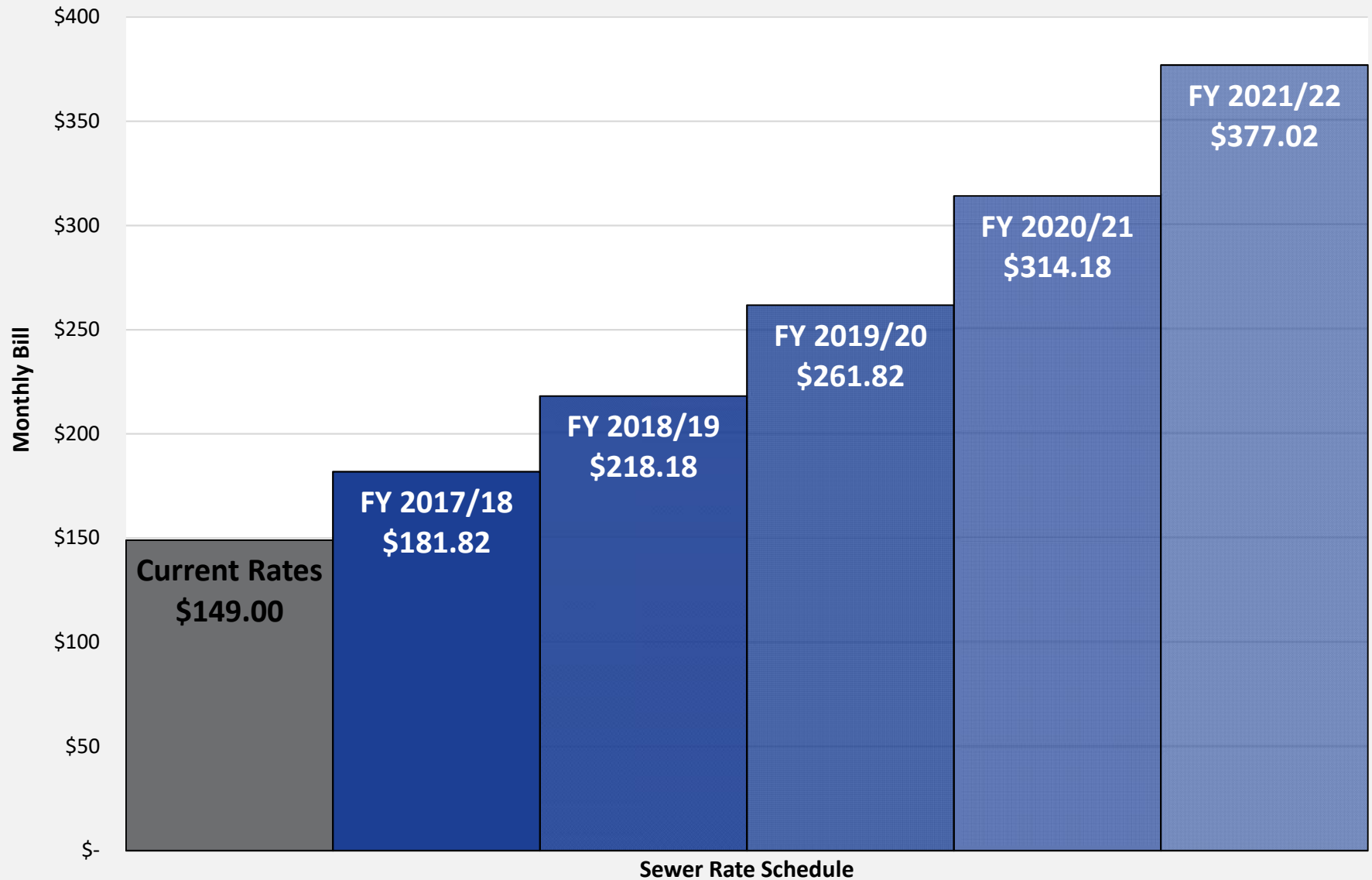


Exhibit Number	Pages	Function
1	<i>Not Printed</i>	Demographic Data and Projections
2		Summary of Existing Capital Facilities and Equipment for Consideration (System Buy-In)
3		Detail of Existing Capital Facilities and Equipment for Consideration (System Buy-In)
4		Cash Reserves and Debt Service Allocation
5		Planned Capital Facilities and Equipment for Consideration (System Development)
6	<i>Not Printed</i>	Updated Unit Cost Calculation
7		Updated Water Connection Fees
8		Inflation Factors from Handy-Whitman Index Used for Estimation of Existing System Asset Values

SAN LORENZO VALLEY WATER DISTRICT
Water Connection Fee Analysis
Demographic Data and Projections

EXHIBIT 1

METER EQUIVALENT UNITS:

Meter Size	Existing Water Meters (1)	Meter Equivalence		Water Meter Equivalent Units
		Maximum Flow (gpm) (2)	Flow Factor for 5/8 or 3/4 inch Base Meter	
5/8 Inch	6,439	20	1.00	6,439
3/4 Inch	241	30	1.00	241
1 Inch	616	50	1.67	1,027
1 1/2 Inch	37	100	3.33	123
2 Inch	31	160	5.33	165
3 Inch	4	320	10.67	43
4 Inch	1	500	16.67	17
6 Inch	-	1,000	33.33	-
8 Inch	-	1,600	53.33	-
Total	7,369			8,055

1. Data is based on SLVWD billing data. Meter count is from February 2016.
2. Source: AWWA M1, Table B-2. Assumes displacement meters for 5/8" through 2" and Compound Class I for 3" through 8".

EXISTING AND PROJECTED SERVICE NUMBERS:

Demographic Statistics	Existing Total	Projected Service Total	Allocation Factors		Cumulative Change	
			Existing Services	Future Services	Number of Units	% Increase
SFR Meter Equivalent Units	8,055	10,082	79.9%	20.1%	2,027	25.2%

SAN LORENZO VALLEY WATER DISTRICT
Water Connection Fee Analysis
Existing Capital Facilities and Equipment for Consideration (System Buy-In)

EXHIBIT 2

Asset Category (1)	Original Values (1)		Asset Cost Less Depreciation	Replication Values (2)		System Buy-In Cost Basis for Consideration (3)	Allocation Basis (%) (4)				Distribution of Cost Basis (\$)		
	Asset Cost	Depreciation to Date		Asset Cost	Depreciation to Date		Exclude from Analysis	Existing Services	Future Services	()	Exclude from Analysis	Existing Services	Future Services
Water Fund													
Admin/Office Building	\$ 1,915,392	\$ 1,226,381	\$ 689,011	\$ 2,063,820	\$ 1,147,583	\$ 916,237	0.0%	79.9%	20.1%		\$0	\$ 732,027	\$ 184,210
Diversions	1,643,966	1,349,582	294,384	1,858,102	1,254,547	603,555	0.0%	79.9%	20.1%		0	482,210	121,345
Hydrants	17,333	11,919	5,414	48,596	34,487	14,110	0.0%	79.9%	20.1%		0	11,273	2,837
Land	5,074,098	-	5,074,098	22,096,913	-	22,096,913	0.0%	79.9%	20.1%		0	17,654,317	4,442,596
Meters	1,090,299	782,833	307,466	1,592,646	1,157,703	434,944	0.0%	79.9%	20.1%		0	347,498	87,446
Other	1,454,329	1,356,812	97,517	527,419	303,797	223,622	0.0%	79.9%	20.1%		0	178,663	44,959
Pipes	20,413,079	11,323,233	9,089,847	32,334,922	16,554,302	15,780,620	0.0%	79.9%	20.1%		0	12,607,918	3,172,702
Pump Stations	6,450,031	2,351,357	4,098,675	9,882,393	4,118,735	5,763,658	0.0%	79.9%	20.1%		0	4,604,871	1,158,786
Rolling Stock	662,164	563,085	99,079	326,649	223,623	103,025	0.0%	79.9%	20.1%		0	82,312	20,713
Tanks	3,067,699	2,823,352	244,347	12,871,568	12,012,360	859,208	0.0%	79.9%	20.1%		0	686,464	172,744
Tools	362,607	340,460	22,147	52,283	21,468	30,815	0.0%	79.9%	20.1%		0	24,620	6,195
Treatment	6,591,825	4,565,356	2,026,469	14,192,484	9,937,793	4,254,690	0.0%	79.9%	20.1%		0	3,399,283	855,408
Wells	1,605,663	787,916	817,747	2,303,912	1,286,583	1,017,329	0.0%	79.9%	20.1%		0	812,794	204,534
Total Capital Facilities & Equipmen	\$ 50,348,485	\$ 27,482,285	\$ 22,866,200	\$100,151,706	\$ 48,052,982	\$ 52,098,724	0.0%	79.9%	20.1%		\$0	\$ 41,624,248	\$ 10,474,476

1. The source of the original asset cost and depreciation to date is in the Asset Data and Acquired Date provided by District staff in source file: 2017.02.21-38575990-fa-asset listing.xls.

2. Replication values are calculated by escalating the original values (from District's fixed asset report) from service date to 2017 values using historical cost inflation factors from the Handy-Whitman Index of Public Utility Construction Costs, for Water Utility Construction in the Pacific Region. The percentage change in the asset cost is shown in column M of the Existing Assets Detail tab, labeled "Adjusted % of Original Value".

3. Cost basis for consideration is calculated as replication value less accumulated depreciation.

4. Refer to Exhibit 1: proportionate allocation between existing and future users.

ALLOCATION OF DEBT TO EXISTING AND FUTURE USERS:

Bond Issue	Outstanding Principal	% Allocation			Total	\$ - Allocation			Total	()
		Exclude from Analysis	Existing Users	Future Users		Exclude from Analysis	Existing Users	Future Users		
2004 Refunding Water Revenue Bond, 2012	\$ 3,127,540	0%	79.9%	20.1%	100%	\$ -	\$ 2,498,746	\$ 628,794	\$ 3,127,540	1
2008 Safe Drinking Water Loan	1,865,736	0%	79.9%	20.1%	100%	-	1,490,629	375,107	1,865,736	1
Grand Total	\$ 4,993,276	0%	79.9%	20.1%	100%	\$ -	\$ 3,989,375	\$ 1,003,901	\$ 4,993,276	

1. Outstanding bond principal is allocated to existing and future services based on projected growth in the system. See Demographics tab for detail.

ALLOCATION OF CASH RESERVES TO EXISTING AND FUTURE USERS:

Water Cash Reserves	Beginning Cash (1)	% Allocation			\$ - Allocation		
		Exclude from Analysis	Existing Users	Future Users	Exclude from Analysis	Existing Users	Future Users
Cash in Banks (Operating)	\$ 2,218,677	0%	79.9%	20.1%	\$ -	\$ 1,772,611	\$ 446,066
Cash with Fiscal Agent (Restricted Bond Funds)	\$ 376,582	0%	79.9%	20.1%	\$ -	\$ 300,870	\$ 75,712
Capacity Fees Held in Reserve	\$ -	0%	79.9%	20.1%	\$ -	\$ -	\$ -
Total Beginning Cash	\$ 2,595,259	0%	79.9%	20.1%	\$ -	\$ 2,073,481	\$ 521,778
Cash Net of Unspent Capacity Fees	\$ 2,595,259	0%	79.9%	20.1%	\$ -	\$ 2,073,481	\$ 521,778

1. The beginning Cash balance is from June 2016 Liquid Assets report.

SAN LORENZO VALLEY WATER DISTRICT
Water Connection Fee Analysis
Water Planned Capital Facilities and Equipment for Consideration (System Development)

EXHIBIT 5

Facility / Equipment ¹	Current Cost Estimate (\$2017) ¹	External Funding	Year to be Completed	System Development Cost Basis for Consideration ²	% Allocation			Distribution of Cost Basis (\$)		
					Exclude from Analysis	Existing Services	Future Services	Exclude from Analysis	Existing Services	Future Services
Pipes	\$ 21,076,074	\$ -	2035	\$ 21,076,074	0%	79.9%	20.1%	\$ -	\$ 16,838,718	\$ 4,237,356
Tanks (including 10% volume contingency)	10,977,120	-	2035	10,977,120	0%	79.9%	20.1%	-	8,770,164	2,206,956
Pump Stations	12,276,000	-	2035	12,276,000	0%	79.9%	20.1%	-	9,807,904	2,468,096
Wells	4,590,000	-	2035	4,590,000	0%	79.9%	20.1%	-	3,667,178	922,822
Treatment	1,274,661	-	2035	1,274,661	0%	79.9%	20.1%	-	1,018,390	256,271
Diversions	1,147,500	-	2035	1,147,500	0%	79.9%	20.1%	-	916,795	230,705
Admin/Operations Building	2,493,162	-	2035	2,493,162	0%	79.9%	20.1%	-	1,991,910	501,252
Estimated FY 2016/17 CIP Expenditures	3,100,000	-	2017	3,100,000	0%	79.9%	20.1%	-	2,476,743	623,257
Total	\$ 56,934,517			\$ 56,934,517		79.9%	20.1%	\$ -	\$ 45,487,802	\$ 11,446,715

1. Capital project costs were provided by City Staff in source file: *VWHA_Capital_Asset_Cost_of_Service_9_02_16.pdf*.

2. Project costs are allocated to existing and future services based on projected growth in the system. See Demographics tab for detail.

SAN LORENZO VALLEY WATER DISTRICT
Water Connection Fee Analysis
Unit Cost Calculation

EXHIBIT 6

DEVELOPMENT OF THE MAXIMUM CONNECTION FEE FOR A 5/8-INCH METER EQUIVALENT (or EDU):

System Asset Values Allocated to Future Development	
Projected Increase In Connections to the Water System	Customers
Increase in 5/8-inch Equivalent Meters (1)	2,027
System Asset Values Allocated to Future Development	
<i>System Asset Values Allocated to New Development</i>	
Existing System Buy-In (2)	\$ 10,474,476
Future System Expansion (3)	11,446,715
Total: Existing & Future System Costs	\$ 21,921,191
<i>Adjustments to Cost Basis:</i>	
Cash Reserves	\$ 521,778
Outstanding Long-Term Debt (Principal) Allocated to Future Users	(1,003,901)
Total: Adjustments to Cost Basis	\$ (482,123)
Total Adjusted Cost Basis for New Development	\$ 21,439,068
Maximum Water Connection Per 5/8 or 3/4-inch meter	\$ 10,577

Summary of Costs Allocated to Connection Fees	Adjusted System Cost Basis	Planned Additional EDU's	Maximum Connection Fee
Maximum Water Connection Per 5/8-inch meter	\$ 21,439,068	2,027	\$ 10,577

1. Refer to Exhibit 1 (Demographics) for growth projections.
2. Refer to Exhibits 2 and 3 for detail of existing assets.
3. Refer to Exhibit 5 for detail related to planned assets.

SAN LORENZO VALLEY WATER DISTRICT
Water Connection Fee Analysis
Water Fee Classification and Calculation of Maximum Fee

EXHIBIT 7

WATER CONNECTION FEES BASED ON METER SIZE:

Meter Size	Equivalency Factor		Maximum Unit Cost (\$/EDU)	Updated Maximum Connection Fee Per Meter
	Maximum Continuous Flow (gpm) (1)	Equivalency to 5/8 or 3/4-inch Base Meter Size		
5/8 Inch	20	1.00	\$10,577	\$10,577
3/4 Inch	30	1.00	\$10,577	\$10,577
1 Inch	50	1.67	\$10,577	\$17,629
1 1/2 Inch	100	3.33	\$10,577	\$35,257
2 Inch	160	5.33	\$10,577	\$56,412
3 Inch	320	10.67	\$10,577	\$112,824
4 Inch	500	16.67	\$10,577	\$176,287
6 Inch	1,000	33.33	\$10,577	\$352,575
8 Inch	1,600	53.33	\$10,577	\$564,120

1. Source: AWWA M1, Table B-2. Assumes displacement meters for 5/8" through 2", Compound Class I for 3" through 8", and Turbine Class II for 10" through 12" meters.