

ROSS VALLEY SANITARY DISTRICT SEWER RATE STUDY



June 22, 2011 - Final



HF&H Consultants, LLC

ROSS VALLEY SANITARY DISTRICT

2960 Kerner Blvd
San Rafael, CA 94901

SEWER RATE STUDY

June 22, 2011

HF&H CONSULTANTS, LLC

201 North Civic Drive, Suite 230
Walnut Creek, CA 94596

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201 North Civic Drive, Suite 230
Walnut Creek, California 94596
Telephone: 925/977-6950
Fax: 925/977-6955
www.hfh-consultants.com

Robert D. Hilton, CMC
John W. Farnkopf, PE
Laith B. Ezzet, CMC
Richard J. Simonson, CMC
Marva M. Sheehan, CPA

June 22, 2011

Mr. Brett Richards
General Manager
Ross Valley Sanitary District
2960 Kerner Blvd
San Rafael, CA 94901

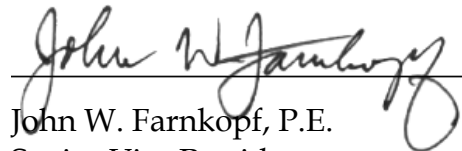
Subject: Sewer Rate Study

Dear Mr. Richards:

HF&H Consultants, LLC is pleased to submit this Sewer Rate Study. The report summarizes the analysis that was conducted to develop the recommended rates. Copies of the rate model and the District's capital improvement program are included in the Appendices.

Very truly yours,

HF&H CONSULTANTS, LLC



John W. Farnkopf, P.E.
Senior Vice President

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ACRONYMS

BOD	Biochemical Oxygen Demand; a component of wastewater strength
CIP	Capital Improvement Plan
CMSA	Central Marin Sanitation Agency
EDU	Equivalent Dwelling Unit; an average single-family residential customer
EPA	Environmental Protection Agency
FY	Fiscal Year
GPD	Gallons Per Day
HCF or CCF	Hundred Cubic Feet of metered water; 748 gallons; a cube of water 4.6 feet on edge
I&I	Inflow and Infiltration; stormwater runoff that enters collection systems through surface or subsurface connections, cracks, or other openings
Mg/l	Milligrams per Liter
MMWD	Marin Municipal Water District
O&M	Operations and Maintenance
PAYGo	Pay-As-You-Go, in reference to funding capital improvements from cash revenue from sewer service charges rather than from borrowed sources of revenue
SD 1	Sanitary District No. 1 of Marin County – Ross Valley Sanitary District
SD 2	Sanitary District No. 2 of Marin County – Corte Madera
SRSD	San Rafael Sanitary District
TSS	Total Suspended Solids; a component of wastewater strength

ACKNOWLEDGEMENTS

Board of Directors

Marcia Johnson, President
 Peter Sullivan, Secretary
 Pat Guasco, Treasurer
 Pamela Meigs
 Frank Egger

District Staff

Brett Richards, General Manager
 Wendy Martin-Miller, Business Manager

HF&H Consultants, LLC

John Farnkopf, Sr. Vice President
 Rick Simonson, Vice President
 Sima Mostafaei, Associate
 Kim Erwin, Production Manager

1. EXECUTIVE SUMMARY

This report summarizes the analysis of the Ross Valley Sanitary District's sewer service charges. The process of updating the District's sewer rates began in March 2011 with data collection and model development. Preliminary results were presented to the District Board of Directors on April 7 and revised results were presented on April 20 and May 3, 2011. At that time, the District Board directed Staff to prepare and mail notices to property owners and rate payers notifying them of the proposed rate increases and of a public hearing on June 28, 2011. At this hearing, public comment will be received and protests will be tallied to determine if a majority of property owners and rate payers protested.

FINDINGS AND RECOMMENDATIONS

1. **Recent rates.** The District's sewer charges are billed annually on the tax rolls. The current annual sewer service charges are \$520 per EDU in the Ross Valley Service Area and \$592 in the Larkspur Service Area. Ross Valley rate payers pay a lower sewer service charge because a portion of their property taxes is also contributed to the District by the County to help fund the District. Approximately \$5,050,000 in property taxes is paid to the District, which averages \$226 per EDU in Ross Valley.
2. **Projected rates.** The financial model indicates that sewer service charges need to increase as follows over the next five years:

	Ross Valley (Per EDU)	Larkspur (Per EDU)
Current	\$520	\$592
FY 2011-12	\$697	\$923
FY 2012-13	\$835	\$1,061
FY 2013-14	\$878	\$1,104
FY 2014-15	\$914	\$1,140
FY 2015-16	\$952	\$1,178

Although this study is completed with a 5-year outlook that incorporates plans for increased capital and maintenance production, the District is currently hearing a rate proposal to establish only the FY2011-12 proposed rate above. Adoption of the projected rates for years beyond FY2011-12 (which may be more or less than projected) are not currently under consideration by the District and is presented for informational purposes only.

These increases would be effective July 1 of each fiscal year. With these increases, the District will be in a good position over the five-year rate period to continue to fund capital improvements on a pay-as-you-go basis, provide adequate reserves, and fund additional staffing and programs.

3. **Rate structure modifications.** The projected rates reflect two modifications in the rate structure beginning in FY 2011-12: (1) a reduction of San Quentin's strength factor from 2.34 to 1.00 and (2) an increase in the Larkspur sewer charge equal to the average property tax paid by Ross Valley rate payers. These two modifications are required under Proposition 218,¹ which requires that property related fees and charges must be proportionate to the cost of providing service.
4. **Annual implementation.** A significant portion of the District's revenue requirement consists of CMSA's annual charge. The rate projections for the District for the next five years are based on CMSA's current estimates. However, CMSA updates its estimates each year. To ensure that the District's rates are aligned with CMSA's charges, it is recommended that the District index its projected charges to CMSA's most recent charges. Indexing of pass-through expenses is permitted under AB 3030 and does not trigger the need to notify customers under Proposition 218. Each year, prior to implementing the sewer service charge increases, District Staff should confirm the amount of the index adjustment, which should be ratified by the Board. The indexing period is limited to no more than five years.

The recommended rates will provide funding to offset recent extraordinary capital costs and litigation settlement payments, which have drawn down the District's reserves to minimum levels. With the rate increases, reserves are initially stabilized and then able to increase toward the target balance.

¹ Proposition 218 enacted California Constitution Article XIIIID, Section 6, which applies to sewer service charges.

2. INTRODUCTION

BACKGROUND

The District provides wastewater collection and conveyance services to the District's approximately 21,509 residential and 7,982 non-residential equivalent dwelling units (EDUs) through a system of pipelines and pump stations that transport their wastewater to the Central Marin Sanitation Agency (CMSA) for treatment and discharge into San Francisco Bay. CMSA is a Joint Powers Authority that provides wastewater treatment services to 55,376 EDUs, as summarized in **Figure 1**.

Figure 1. CMSA Member Agencies

Agency	EDUs	Percentage of Total
Sanitary District No. 1 – Ross Valley	19,261	34.8%
Sanitary District No. 1 – Larkspur	3,021	5.5%
San Quentin Prison	7,209	13.0%
Sanitary District No. 2 – Corte Madera	6,200	11.2%
San Rafael Sanitary District	19,685	35.5%
Total	55,376	100.0%

CMSA costs are allocated among the member agencies based on their proportionate share of EDUs. In the District's case, its proportionate share is comprised of Ross Valley, Larkspur, and San Quentin Prison.

EXISTING SEWER RATE STRUCTURE

The District charges sewer customers annually on the tax rolls, which is a common practice in billing for sewer service. Billing on the tax rolls is less expensive than it would be if the District issued its own bills and it allows the District to easily levy liens for nonpayment. Even though the District bills on the tax rolls, its sewer service charges are not a tax or assessment. Unlike taxes or assessments, which are based on land-related characteristics such as assessed value or parcel size, the District's sewer charges are a form of fee or charge that is proportionate to the cost of providing sewer service.

The District's sewer service charges have increased in the last few years primarily in response to increases in CMSA's treatment charges and to debt finance certain of the District's capital improvements. Since 2006, CMSA has doubled its charge per EDU from \$129.00 to \$268.59. More recently, the District has also been faced with additional capital improvements to renew and replace District infrastructure.

The District's sewer service charges are specified in Resolution No. 1310. Residential customers (i.e., single-family and multi-family) are charged the same amount per equivalent dwelling unit (EDU) per year. The current annual sewer service charge is \$520 per EDU in Ross Valley and San Quentin Prison and \$592 per EDU in Larkspur. Larkspur pays a higher charge to compensate for the fact that Ross Valley rate payers also contribute a portion of their property taxes to the District. However, the average property tax payment per EDU paid in Ross Valley is \$226; hence, the difference between the Ross Valley and Larkspur sewer service charges does not currently cover Ross Valley's property tax payments.

Non-residential customers are charged based on their estimated wastewater discharges using metered flow measurements from Marin Municipal Water District. The sewer charges must be based on estimated wastewater discharges because wastewater discharges are not metered the way water service is. A formula is used that accounts for both the volume of flow plus the strength of the wastewater for each non-residential customer.

The formula proportions the flow of non-residential customers to the flow for an average residential customer (i.e., 10 hundred cubic feet per month or 255 gallons per day, a typical value for wastewater agencies). The flow is based on the most recent average winter monthly water consumption. A strength factor of 2.34 is also applied to high-strength customers including markets with garbage disposals, mortuaries, restaurants, laundries, bakeries, and San Quentin Prison. This multiplier accounts for the higher strength of the wastewater discharged by these customers.

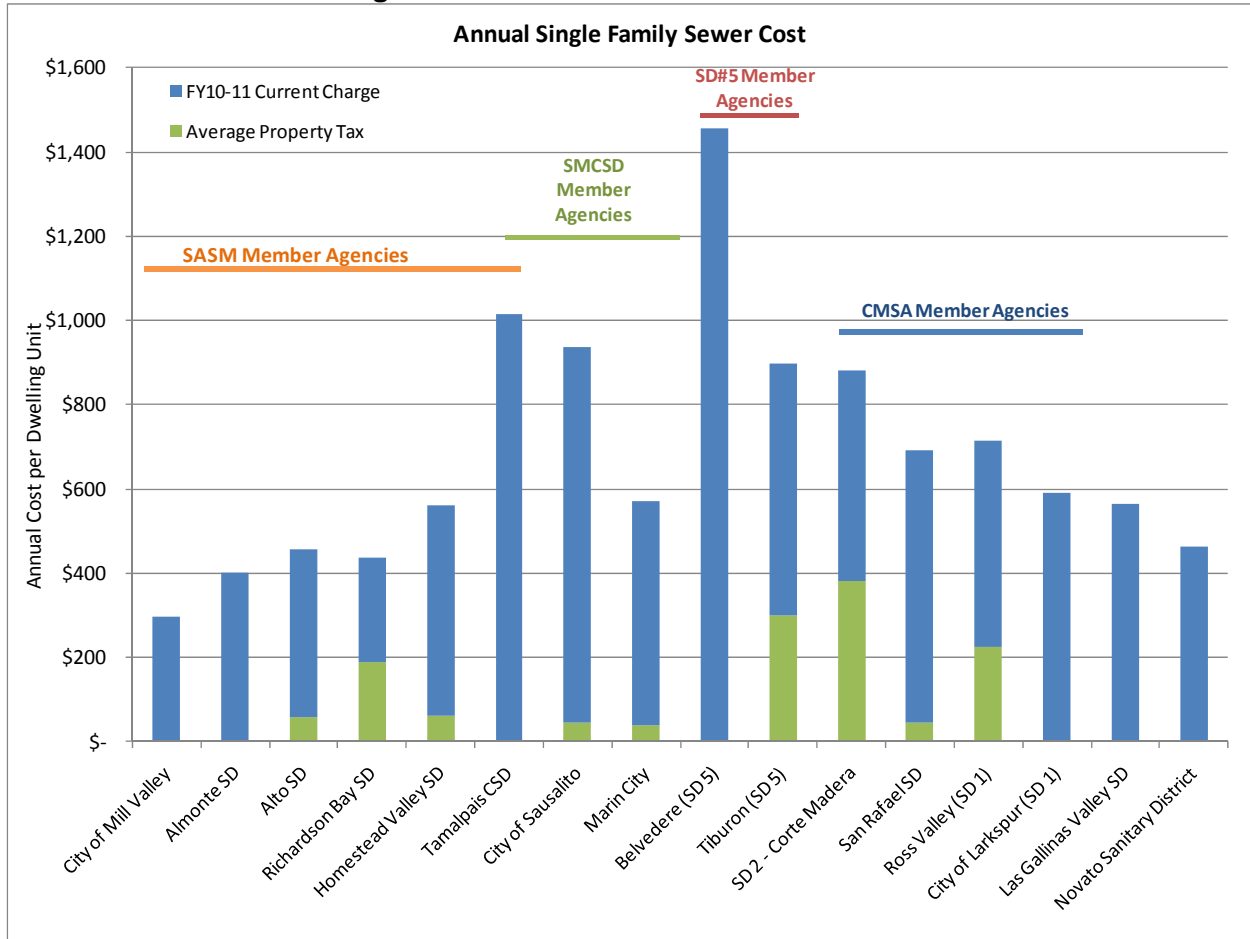
For example, a restaurant with an average winter monthly flow of 30 hcf would be assigned 3.0 EDUs, which, in turn would be increased by the 2.34 strength factor to 7.02 EDUs. If the restaurant were located in Ross Valley, it would be charged \$3,650.40 at the current \$520 per EDU sewer service charge. This charge does not reflect the additional property taxes paid by the property owner of the restaurant's premises.

Recent studies of San Quentin Prison's wastewater discharges indicate that San Quentin Prison no longer discharges high strength wastewater. The strength of its wastewater is comparable to residential wastewater. Consequently, District Staff recommend reducing San Quentin Prison's strength factor to 1.00.

Comparison of Current Cost of Sewer Service With Neighboring Agencies

Figure 2 compares the District's current annual cost per EDU for sewer service with other sewerage agencies in Marin County. The annual cost includes property taxes, if applicable. The Ross Valley property taxes are relatively high and, when added to the sewer service charge, exceed the Larkspur sewer service charge. By comparison with other agencies in the survey, the District's annual cost is in the mid-range. The District's sewer service charges are also comparable to those of neighboring agencies.

Figure 2. Current Cost of Sewer Service



3. REVENUE REQUIREMENT PROJECTIONS

A spreadsheet model (see Appendix A) was developed to derive revenue requirements for FY 2011-12 through FY 2015-16. The following key assumptions were incorporated into the model.

CMSA EXPENSES

CMSA’s treatment charge is currently half of the District’s total revenue requirement and is the District’s single largest expense. The District’s share of CMSA’s costs is allocated in proportion to the number of its EDUs compared with the other CMSA member agencies.

If San Quentin Prison’s strength factor is reduced from 2.34 to 1.00 based on District Staff’s recommendation, San Quentin Prison’s current 7,209 EDUs would be reduced to 3,081 EDUs, a reduction of 4,128 EDUs. This reduction will increase the amount CMSA should charge its members because its costs would be distributed among fewer EDUs. It is estimated that CMSA’s charge would increase from approximately \$273 to \$287 per EDU. Even with this increase, the District would be allocated \$794,000 less because of the 4,128 EDU reduction, which would be redistributed among the other CMSA members.

DISTRICT O&M EXPENSES

The District’s O&M budget for FY 2011-12 served as the starting point for projecting expenses and revenues. The escalation factors are summarized in **Figure 3**.

Figure 3. Key Modeling Assumptions

Escalation Factors and Other Assumptions	Budgeted		Projected				Source
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	
a. Interest on Fund Balance	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	Estimate
b. General Inflation	Per Budget	3.0%	3.0%	3.0%	3.0%	3.0%	District's Budget
c. Labor/Benefit Increases (current personnel)	Per Budget	8.0%	4.5%	3.6%	6.3%	4.5%	District's Budget
d. Change in CMSA Charges (per EDU) - Treatment	Per Budget	8.1%	3.5%	3.5%	3.5%	0.4%	CMSA's Budget
e. Change in CMSA Charges (per EDU) - Debt Servi	Per Budget	4.5%	0.0%	0.3%	-0.1%	-0.3%	CMSA's Budget
f. San Quentin Strength Factor	2.34	1.00	1.00	1.00	1.00	1.00	

Source: Model Tab 1A.

For FY 2011-12, the District does not project significant increases in its O&M budget. Beginning in FY 2012-13, the District projects hiring additional staff to improve its administrative and operational capabilities. The majority of the additional staffing is required for improved O&M and operational services. Current staffing does not allow the District to maintain and operate its facilities as required and will allow improved response time to emergencies.

DISTRICT CAPITAL EXPENSES

The recent and projected capital improvements through FY 2021-22 are summarized in Appendix B. This capital improvement program was developed by the District and is summarized by category in **Figure 4** for the next five years. On average, the District expects to spend \$6.5 million annually on the Capital Improvement Plan projects. In addition, the District has other capital spending planned for equipment and fixed assets averaging \$2.0 million per year. The District plans to fund all of these capital improvements on a PAYGo basis without issuing additional debt.

Given that the replacement value of the District's nearly 200-mile collection system is approximately \$400 million, an annual expenditure of \$8.5 million is commensurate with \$8 million in annual depreciation (assuming a 50-year service life for pipelines). Hence, the planned CIP is not overly aggressive.

Figure 4. Capital Costs – FY 2011-12 to FY 2015-16 (\$000s)

	FY11/12	FY12/13	FY13/14	FY14/15	FY15/16	Total
Capital Improvement Plan						
Pipeline upgrades	\$3,900	\$2,897	\$5,654	\$5,423	\$4,431	\$22,305
Pipe bursting	\$850	\$850	\$850	\$850	\$850	\$4,250
Pump Stations	\$321	\$2,305	\$0	\$0	\$0	\$2,626
SCADA system	\$1,000	\$0	\$0	\$0	\$0	\$1,000
Lateral replacements	\$500	\$500	\$500	\$500	\$500	\$2,500
	<u>\$6,571</u>	<u>\$6,552</u>	<u>\$7,004</u>	<u>\$6,773</u>	<u>\$5,781</u>	<u>\$32,681</u>
Other Capital Programs						
Lateral replacement grants	\$0	\$500	\$500	\$500	\$500	\$2,000
Cured-in-place pipes	\$0	\$1,200	\$1,200	\$1,200	\$1,200	\$4,800
Equipment purchases	\$0	\$500	\$0	\$0	\$0	\$500
Fixed asset purchases	\$740	\$136	\$131	\$137	\$144	\$1,288
Other capital	\$292	\$296	\$300	\$304	\$309	\$1,502
	<u>\$1,032</u>	<u>\$2,632</u>	<u>\$2,132</u>	<u>\$2,142</u>	<u>\$2,153</u>	<u>\$10,090</u>
Debt Service						
	\$968	\$898	\$824	\$789	\$805	\$4,284
Total	<u>\$8,571</u>	<u>\$10,082</u>	<u>\$9,960</u>	<u>\$9,704</u>	<u>\$8,738</u>	<u>\$47,055</u>

Source: Model Tab 7.

CONTRIBUTIONS TO RESERVES

The District's reserves have recently dropped significantly as unusual capital expenses and litigation costs have been incurred. Sewer service charges need to generate revenue to maintain adequate operation and capital reserves. To determine what constitutes adequate reserve amounts, the fund balance was subdivided into an Operations and a Capital Reserve. In this way, it is possible to set target balances for each purpose.

Operations Reserve Minimum Balance

The Operations Reserve provides working capital for monthly O&M expenses. Because of the nine-month lag between payments from the County, the minimum Operations Reserve balance is set equal to seven months of O&M expenses plus 70% of CMSA's debt service allocation to the District. In total, a minimum cash Operations Reserve of approximately \$10 million is required. If this minimum balance were maintained, the District's Operations Reserves should be able to fund its monthly cash flow over this extended period without relying on the Capital Reserve for a short-term loan. During the year, the balance will be drawn down well below this minimum but should be restored by year end with adequate rate increases.

Capital Reserve Target Balance

The Capital Reserve provides liquidity to fund construction for projects on a pay-as-you-go (PAYGo) basis (as opposed to those that are funded from debt). With adequate capital reserves, the District is able to pay contractors without encroaching on the Operations Reserve. The target balance for the Capital Reserve depends on the level of construction. A minimum \$7.9 million balance equal to the average annual construction costs and other PAYGo expenditures was used for determining an appropriate target balance.

REVENUE REQUIREMENTS

The foregoing modeling assumptions lead to the projected revenue requirements shown in **Figure 5A/5B**.

- There is a slight decrease in CMSA's cost to the District because of the reduction in EDUs resulting from the reduction in San Quentin Prison's strength factor.
- The District's O&M cost with its current staff increases very gradually.
- The additional staffing occurs in FY 2012-13 and remains stable thereafter.
- Transfers to reserves increase significantly as required to arrest the recent downward decline and to restore them to the target level. By FY 2015-16, the transfers to reserves should level off at the ongoing level of annual capital expenditures.

Figure 5A. Revenue Requirement Projections

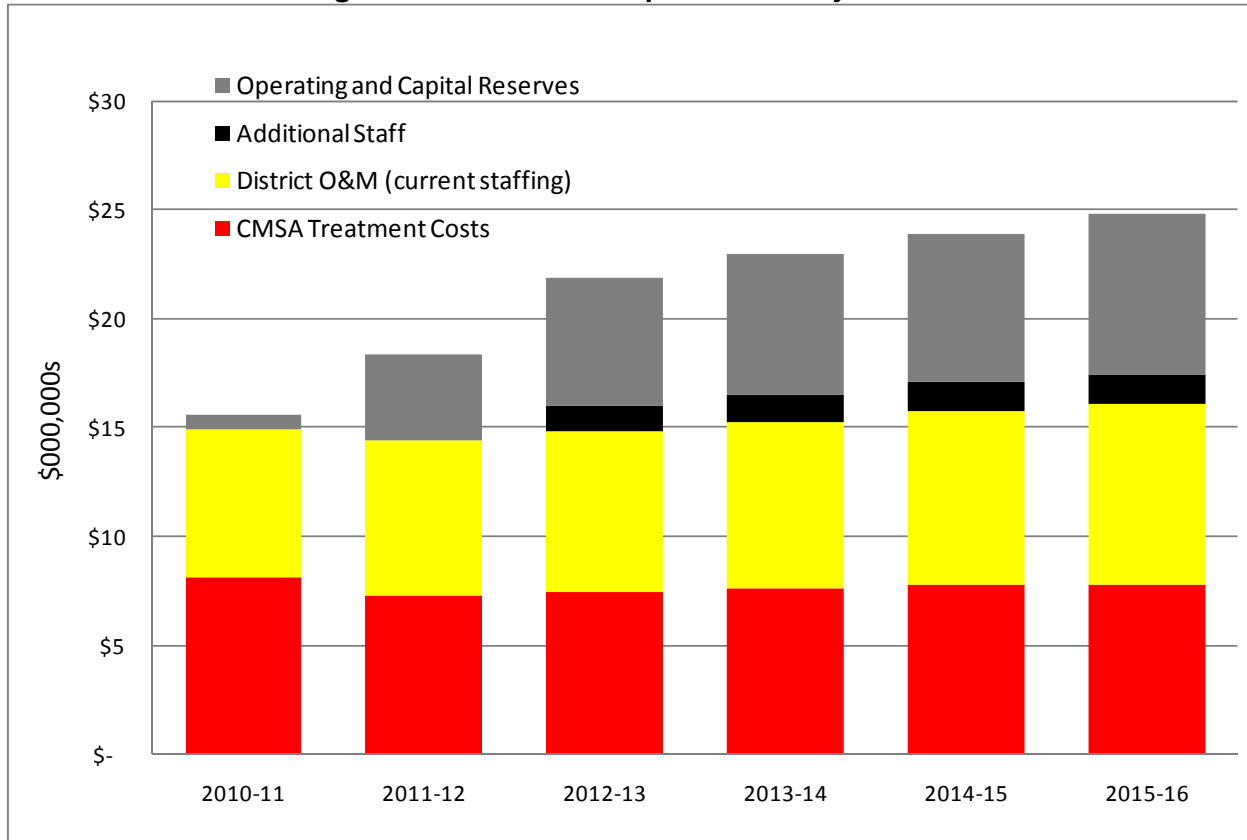


Figure 5B. Revenue Requirement Projections

Rate Revenue Requirement	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
CMSA Treatment Costs	\$ 8,120,496	\$ 7,267,541	\$ 7,424,693	\$ 7,596,045	\$ 7,760,895	\$ 7,769,874
District O&M (current staffing)	6,799,057	7,105,108	7,376,737	7,618,212	7,997,829	8,309,128
Additional Staff	-	-	1,209,840	1,259,897	1,310,953	1,371,531
Operating and Capital Reserves	633,280	3,993,944	5,844,975	6,474,904	6,797,343	7,371,167
	\$ 15,552,832	\$ 18,366,593	\$ 21,856,246	\$ 22,949,057	\$ 23,867,020	\$ 24,821,701
<i>Annual increase</i>		18.1%	19.0%	5.0%	4.0%	4.0%

Source: Model Tab 1B.

Figure 5B indicates the annual percentage increase in the revenue requirements. The FY 2011-12 is 18.1% greater than FY 2010-11 primarily because of the transfer to the reserves. In FY 2012-13, a 19.0% increase is indicated, which is required to fund the additional staffing and reserve transfer. In the subsequent years, the revenue requirement increases taper off to single-digit percentage increases.

4. PROJECTED RATE INCREASES

REVENUE AND RATE INCREASES

Current rates cannot support the projected revenue requirements shown in **Figures 5A/5B**. The revenue increases and corresponding sewer service charges that are recommended are summarized in **Figure 6**.

Figure 6. Projected Revenue and Rate Increases

	Current 2010-11	2011-12	2012-13	Projected		
				2013-14	2014-15	2015-16
Average Cost Per EDU (District-w	\$527	\$724	\$862	\$905	\$941	\$979
<i>Annual increase</i>		37.0%	19.0%	5.0%	4.0%	4.0%
<i>Cumulative Increase</i>		37.0%	63.0%	71.2%	78.0%	85.1%
Charge Per EDU						
Larkspur	\$592	\$923	\$1,061	\$1,104	\$1,140	\$1,178
<i>Annual increase</i>		56.0%	14.9%	4.1%	3.3%	3.3%
Ross Valley (incl. San Quentin)	\$520	\$923	\$1,061	\$1,104	\$1,140	\$1,178
Less: Ad Valorem Property Tax		(\$226)	(\$226)	(\$226)	(\$226)	(\$226)
<i>Annual increase</i>		34.1%	19.7%	5.2%	4.1%	4.1%

Source: Model Tab 1B.

Figure 6 derives the average cost for each year by dividing the revenue requirement for each year from **Figure 5** by the total EDUs. The EDUs decrease in FY 2011-12 because of the reduction in San Quentin Prison’s strength factor, which reduces San Quentin Prison’s EDUs by 4,128 EDUs. The combination of the 18.1% increase in the revenue requirement and the 14.0% reduction in EDUs results in the 37.0% increase in the average cost per EDU from \$527 to \$724 for FY 2011-12.

In subsequent years, the average cost increases follow the revenue requirement increases with further affects of the reduction in San Quentin Prison’s strength factor, which is a one-time adjustment. It is noted that the percentage increases in FY 2013-14 and thereafter for Larkspur and Ross Valley are slightly less than and greater than the average cost increase instead of equal to the average cost increase. This is caused because the annual ad valorem property tax paid per EDU is fixed at \$226 per EDU, whereas the revenue requirements increase gradually. Although the percentage increases differ, the dollar increases are the same for each service area.

FUND BALANCE

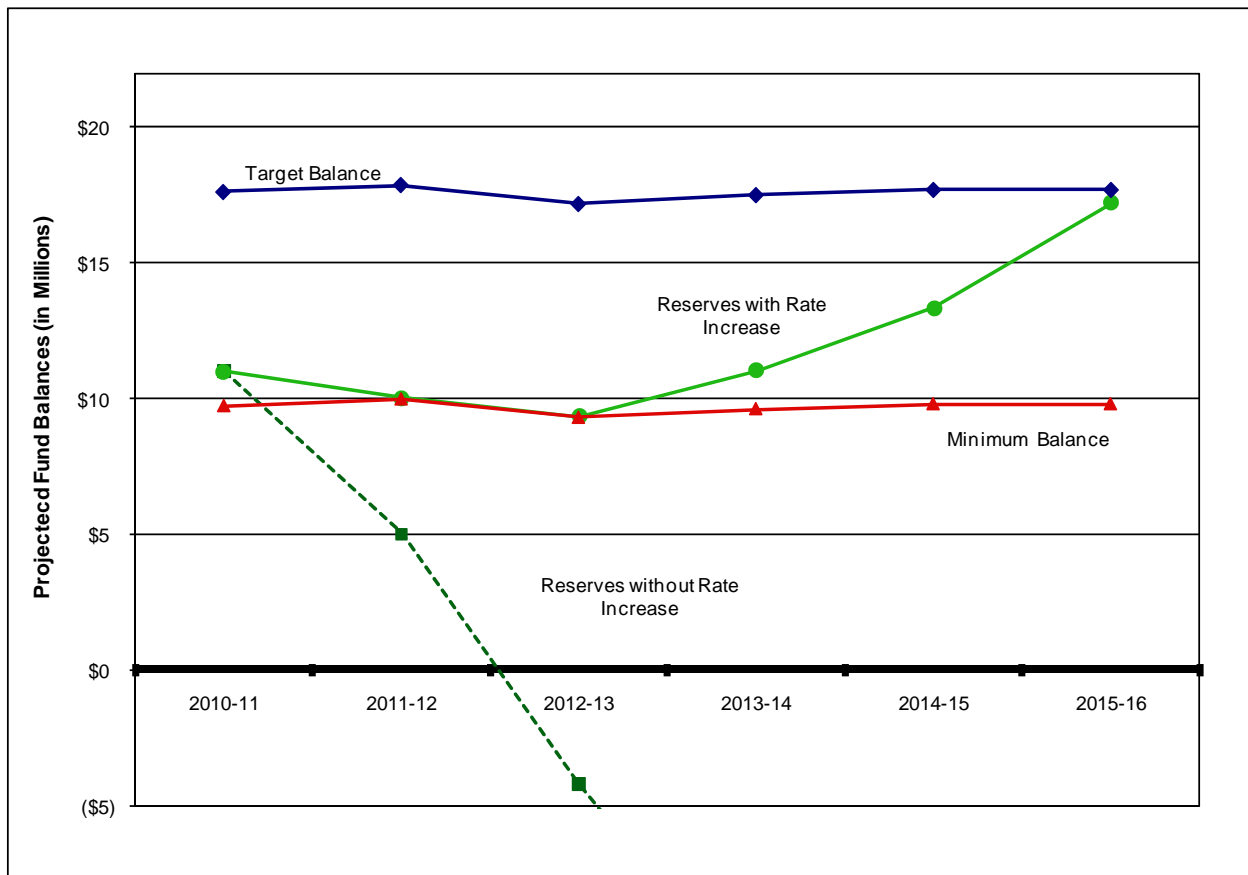
Figure 7 shows the projected fund balances with the rate increases (solid green line) and without the rate increases (dashed green line). Although the projections show straight lines between years, the fund balance will fluctuate down substantially during each year. In other words, the reserves are actively drawn on at all times but only

periodically added to when payments are received from the County. The reserves are not simply accumulated without being used.

By June 30, 2011, the projected fund balance is near the minimum balance (red line). Without rate increases, the fund balance would decline steeply. Clearly the District would not continue expenditures that would result in a negative fund balance. The District would have to severely curtail expenditures if rates were not increased.

With the proposed rate increases, the fund balance is projected to level off at the minimum target balance and then increase toward the upper target balance (blue line). The proposed rate increases are not sufficient to achieve the target balance until FY 2015-16. Until the upper target balance is met, funding the CIP will call for careful cash flow management. Once the target balance is met, the District will have sufficient liquidity to fund operating and capital needs but should not be regarded as being amply endowed. Additional funding that can be accumulated above the target balance will provide the District with a contingency for emergencies.

Figure 7. Fund Balance With and Without Increased Rate Revenue

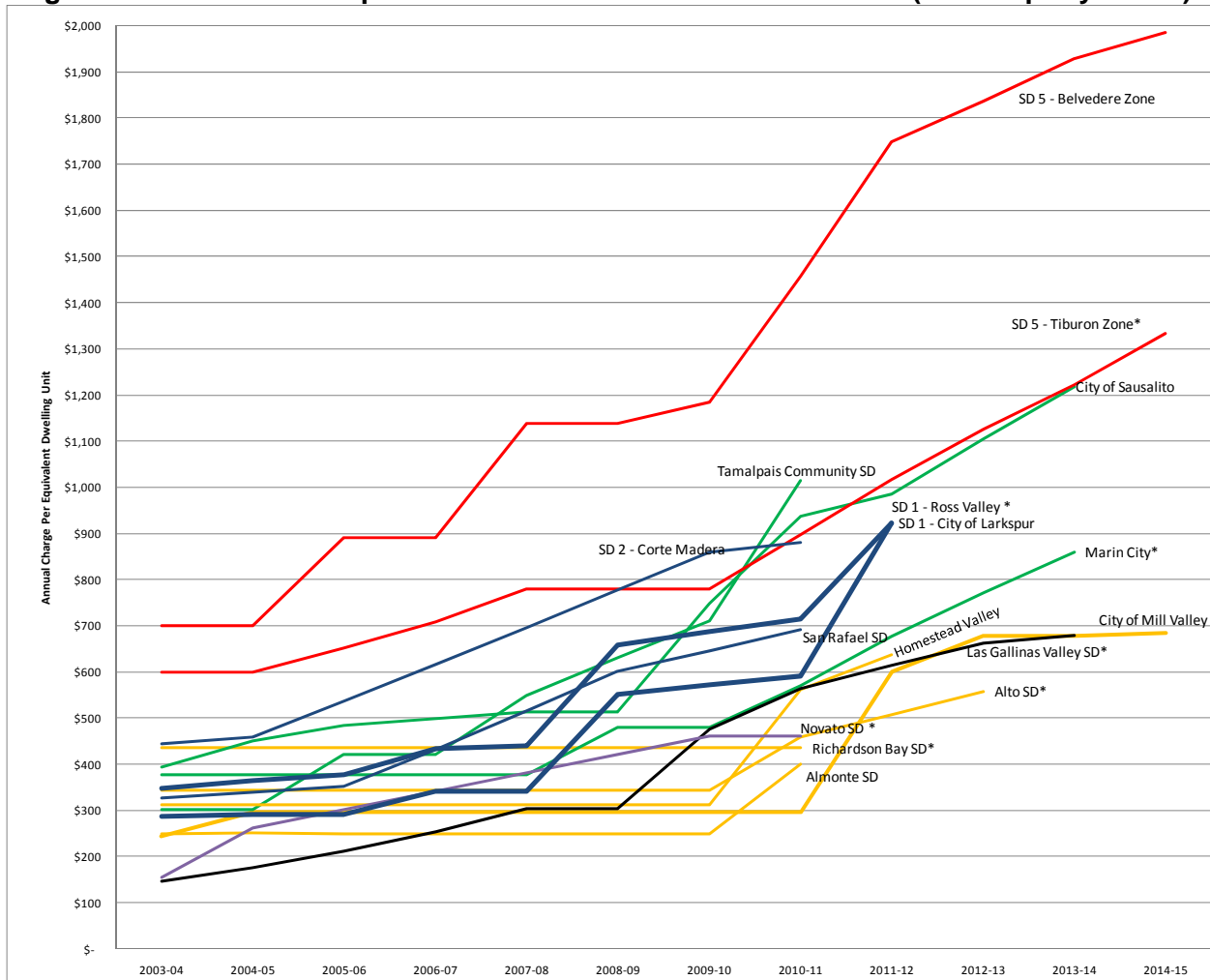


COMPARISON OF RECENT AND PROPOSED SEWER COSTS

Based on available sources, **Figure 8** shows the recent and proposed costs² for sewer service in southern and central Marin County. **Figure 8** indicates that the District's sewer rates have historically been in the mid range among the agencies surveyed. With the recommended increase, the District's sewer rates will continue to fall in the mid-range for the group.

² In most cases, the proposed increases in sewer service charges are already adopted. In some cases, the final charge is pending adoption at the respective agency's public hearing.

Figure 8. Recent and Proposed Increases In Sewer Service Costs (Incl Property Taxes)



* Includes estimated property taxes per EDU

RATE STRUCTURE MODIFICATIONS

At the present time, residential customers will continue to pay flat charges and non-residential customers will continue to pay flow-based charges; high-strength non-residential customers will also be subject to strength factors.

The District plans to adjust San Quentin Prison’s strength factor, which does not constitute a rate structure modification, *per se*, although it increases both Ross Valley’s and Larkspurs rates as a consequence of the fewer number of EDUs over which the District’s costs can be spread.

The District also plans to maintain the differential between Ross Valley and Larkspur sewer service charges equal to the property taxes contributed by Ross Valley that are

not contributed by Larkspur. Again, this change is maintained to address rate payer equity issues and does not constitute a rate structure modification.

During the public presentations, rate payers requested the District to investigate using flow for setting residential rates. Converting residential customers from the current flat rates to flow-based rates is a rate structure modification that would require further study and could not be implemented in time for adoption by August 2011, which is the deadline for placing sewer service charges on the tax rolls.

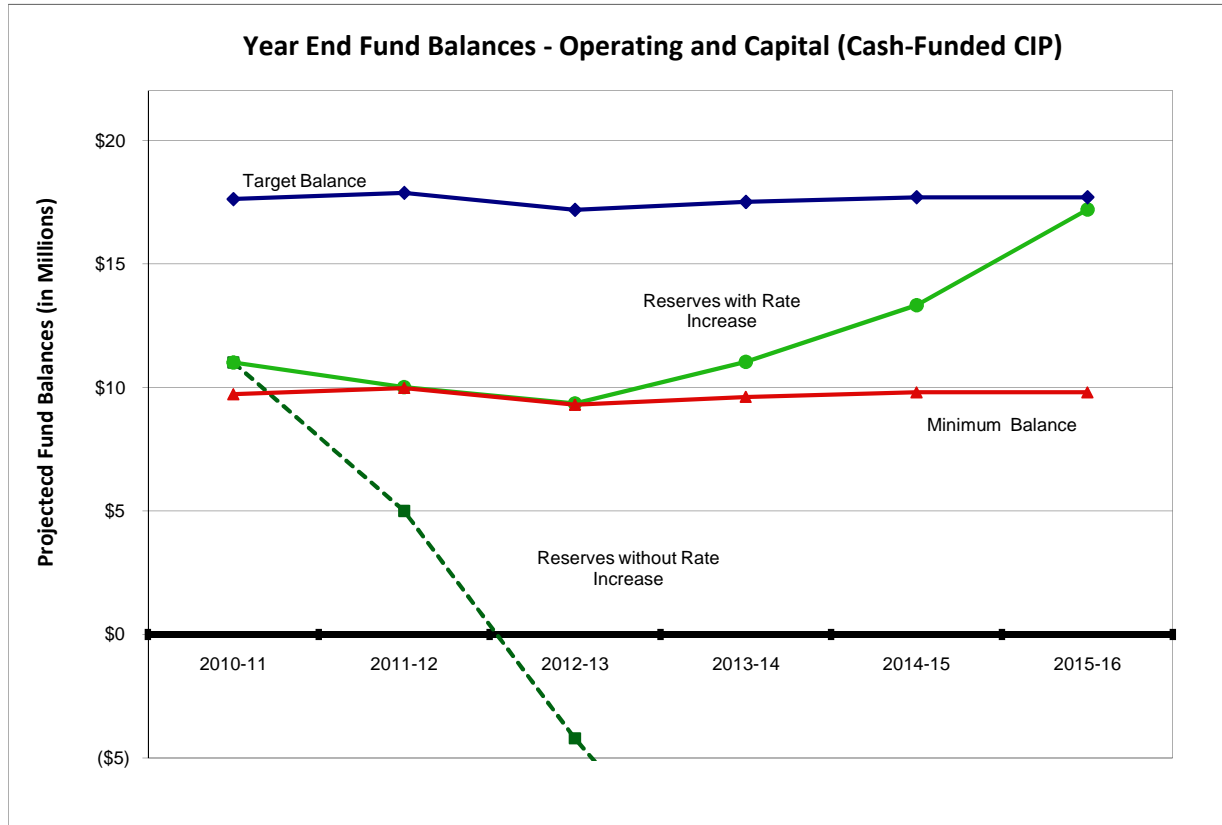
At the workshops in April and May, 2011, the public raised concerns regarding the residential sewer service charge, which is the same for all residential customers within each service area. In effect, the flat charge per EDU paid by all residential customers represents the average cost per connection within each service area. Because of differences in household size, the District Board is interested in other residential sewer rate structures that contain a flow-based component.

The District Board requested District Staff to review flow-based residential sewer rate structures during the next year for possible future implementation. If the District elected to convert its residential flat sewer charges to flow-based charges, it would be required to comply with the notification process in compliance with Proposition 218.

When making changes to the rate structure, it is advisable to perform a cost-of-service analysis to determine how much of the revenue should be recovered from each customer class. At this time, the District has not adopted a change in its rate structure; therefore, a cost-of-service analysis was not performed.

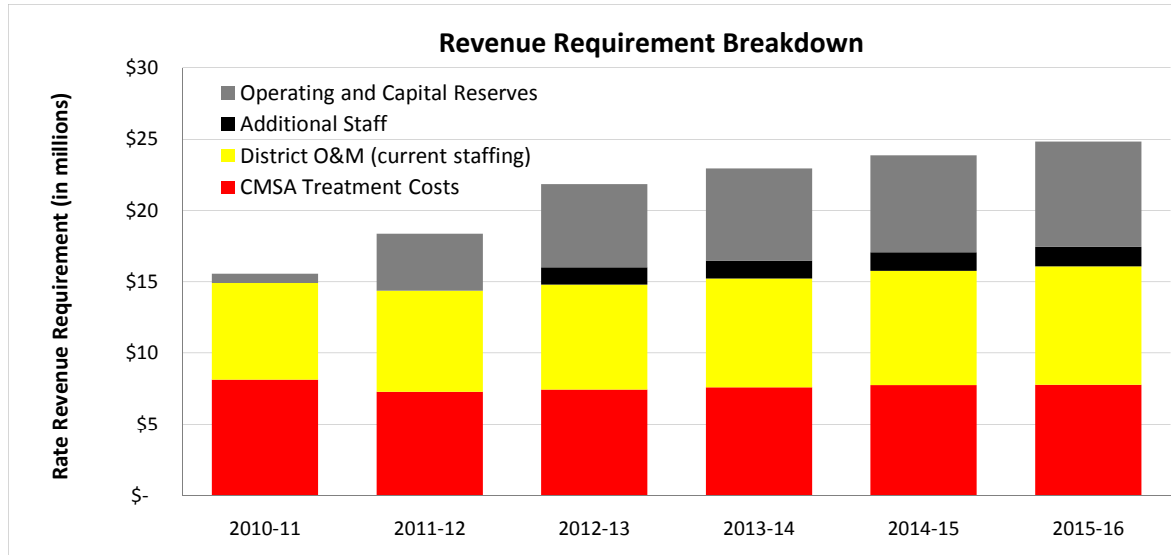
APPENDIX A. SEWER RATE MODEL

	B	C	D	E	F	G	H	I	J
1	Ross Valley Sanitary District								
2	Sewer Service Charges Rate Study								
3	Table 1B. Summary								
4									
5	Projected								
6	<i>Fiscal Year:</i>	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16		
7	Revenue Increases (District-wide Average)		37.0%	19.0%	5.0%	4.0%	4.0%		
8	<i>Cumulative Increase</i>		37.0%	63.0%	71.2%	78.0%	85.1%		
9									



1 **Ross Valley Sanitary District**
 2 **Sewer Service Charges Rate Study**
 3 **Table 1B. Summary**
 4

Rate Revenue Requirement	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
CMSA Treatment Costs	\$ 8,120,496	\$ 7,267,541	\$ 7,424,693	\$ 7,596,045	\$ 7,760,895	\$ 7,769,874
District O&M (current staffing)	6,799,057	7,105,108	7,376,737	7,618,212	7,997,829	8,309,128
Additional Staff	-	-	1,209,840	1,259,897	1,310,953	1,371,531
Operating and Capital Reserves	633,280	3,993,944	5,844,975	6,474,904	6,797,343	7,371,167
	\$ 15,552,832	\$ 18,366,593	\$ 21,856,246	\$ 22,949,057	\$ 23,867,020	\$ 24,821,701
<i>Annual increase</i>		18.1%	19.0%	5.0%	4.0%	4.0%



Projected Costs (\$/EDU)	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
# of EDUs - Ross Valley	19,261	19,261	19,261	19,261	19,261	19,261
# of EDUs - San Quentin	7,209	3,081	3,081	3,081	3,081	3,081
# of EDUs - Larkspur	3,021	3,021	3,021	3,021	3,021	3,021
Total EDUs	29,491	25,363	25,363	25,363	25,363	25,363

	Current	Projected				
	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Average Cost Per EDU (District-wide)	\$527	\$724	\$862	\$905	\$941	\$979
<i>Annual increase</i>		37.0%	19.0%	5.0%	4.0%	4.0%
<i>Cumulative Increase</i>		37.0%	63.0%	71.2%	78.0%	85.1%
Charge Per EDU						
Larkspur	\$592	\$923	\$1,061	\$1,104	\$1,140	\$1,178
<i>Annual increase</i>		56.0%	14.9%	4.1%	3.3%	3.3%
Ross Valley (incl. San Quentin)	\$520	\$923	\$1,061	\$1,104	\$1,140	\$1,178
Less: Ad Valorem Property Tax		(\$226)	(\$226)	(\$226)	(\$226)	(\$226)
		\$697	\$835	\$878	\$914	\$952
<i>Annual increase</i>		34.1%	19.7%	5.2%	4.1%	4.1%

	A	B	C	D	E	F	G	H	I	J	K
1	Ross Valley Sanitary District										
2	Sewer Service Charges Rate Study										
3	Table 2. Revenue Requirement Projection										
4											
5											
6	Projected										
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	B	C	D	E	F	G	H	I	J					
1	Ross Valley Sanitary District													
2	Sewer Service Charges Rate Study													
3	Table 3. Projected Revenue Increases													
4														
5														
6														
7			Budgeted	Projected										
8			2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Notes					
9														
10	Revenue With No Rate Increases													
11	Revenue from Current Rates and EDUs	\$	15,552,832	\$	13,406,272	\$	13,406,272	\$	13,406,272	From District YTD Estimates				
12	Less: Revenue Requirements	\$	(15,552,832)	\$	(18,366,593)	\$	(21,856,246)	\$	(22,949,057)	\$	(23,867,020)	\$	(24,821,701)	From Table 2
13	Surplus/(Deficit) before rate increase	\$	(0)	\$	(4,960,321)	\$	(8,449,974)	\$	(9,542,785)	\$	(10,460,748)	\$	(11,415,429)	To Table 4
14														
15														
16	Revenue With Rate Increases													
17	Increase in Revenue from rates		0.0%	37.0%	19.0%	5.0%	4.0%	4.0%	From Table 1B					
18	<i>Cumulative Percent Increase</i>			37.0%	63.0%	71.2%	78.0%	85.1%						
19														
20	Total Revenue from Existing Rates	\$	15,552,832	\$	13,406,272	\$	13,406,272	\$	13,406,272	From Above				
21	Revenue from Rate Increases													
22	FY 11-12 (effective 7/1/11)			\$	4,960,321	\$	4,960,321	\$	4,960,321	\$	4,960,321			
23	FY 12-13 (effective 7/1/12)					\$	3,489,653	\$	3,489,653	\$	3,489,653			
24	FY 13-14 (effective 7/1/13)						\$	1,092,812	\$	1,092,812	\$	1,092,812		
25	FY 14-15 (effective 7/1/14)							\$	917,962	\$	917,962			
26	FY 15-16 (effective 7/1/15)								\$	954,681				
27	Subtotal - Revenue from Rate Increases	\$	-	\$	4,960,321	\$	8,449,973	\$	9,542,786	\$	10,460,748	\$	11,415,429	
28														
29	Total Rate Revenue	\$	15,552,832	\$	18,366,593	\$	21,856,245	\$	22,949,058	\$	23,867,020	\$	24,821,701	
30	Less: Revenue Requirements	\$	(15,552,832)	\$	(18,366,593)	\$	(21,856,246)	\$	(22,949,057)	\$	(23,867,020)	\$	(24,821,701)	From Table 2
31	Surplus/(Deficit) after Rate Increase	\$	(0)	\$	(0)	\$	(0)	\$	0	\$	0	\$	(0)	To Table 4

	B	C	D	F	G	H	I	J	K	L
1	Ross Valley Sanitary District									
2	Sewer Service Charges Rate Study									
3	Table 4. Reserves									
4				Budgeted	Projected					
5				2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Notes
6	Operating Reserve Funds With Rate Increase									
7	Revenue Increase									
8	Annual increases			0.0%	37.0%	19.0%	5.0%	4.0%	4.0%	
9	Cumulative increase				37.0%	63.0%	71.2%	78.0%	85.1%	
10										
11	Operations Fund									
12	Beginning Balance			\$ 20,226,868	\$11,005,301	\$10,009,099	\$9,292,773	\$9,612,951	\$9,797,961	6/30/10 Beg. Bal. per J. Blue 3/24/11 email
13	Surplus/(Deficit)			(\$0)	(\$0)	(\$0)	\$0	\$0	(\$0)	From Table 3
14										
15	Settlement Payment			(\$1,583,333)	(\$1,583,333)	(\$1,583,333)	\$0	\$0	\$0	per recent legal settlement
16										
17	Transfers (to)/from									
18	Capital Replacement Fund			(\$7,747,197)	\$0	\$0	\$0	\$0	(\$97,010)	To below
19	Revenue Requirement			\$0	\$488,031	\$775,000	\$225,000	\$88,000	\$0	To Table 2
20										
21	Subtotal - Fund Balance			\$10,896,338	\$9,909,999	\$9,200,765	\$9,517,773	\$9,700,951	\$9,700,950	
22	Estimated Interest Earnings			\$108,963	\$99,100	\$92,008	\$95,178	\$97,010	\$97,010	
23	Ending Balance			\$11,005,301	\$10,009,099	\$9,292,773	\$9,612,951	\$9,797,961	\$9,797,960	
24	<i>Minimum Balance</i>			<i>\$9,722,350</i>	<i>\$9,973,910</i>	<i>\$9,293,710</i>	<i>\$9,612,493</i>	<i>\$9,797,871</i>	<i>\$9,797,871</i>	<i>7 mos. O&M + 70% CMSA's debt service</i>
25	Capital Replacement Fund									
26	Beginning Balance			\$0	\$0	(\$0)	\$54,254	\$1,423,705	\$3,529,983	
27	Revenues									
28	Connection Fee Revenue			\$17,650	\$15,300	\$15,300	\$15,300	\$15,300	\$15,300	per District's Statement of Activities Projections
29	Ross Valley property taxes			\$5,180,781	\$5,050,105	\$5,050,105	\$5,050,105	\$5,050,105	\$5,050,105	per District's Statement of Activities Projections
30	Subtotal - Revenue			\$5,198,431	\$5,065,405	\$5,065,405	\$5,065,405	\$5,065,405	\$5,065,405	
31	Capital Improvement Projects									
32	Capital Improvement Projects			(\$11,714,850)	(\$6,571,000)	(\$6,552,000)	(\$7,004,000)	(\$6,773,000)	(\$5,781,000)	per District's Statement of Activities Projections
33	Proposed - Increase Lateral Replacement Grant Program			-	\$0	(\$500,000)	(\$500,000)	(\$500,000)	(\$500,000)	per District's Statement of Activities Projections
34	Proposed - Cured in Place Pipe (CIPP)			-	\$0	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	(\$1,200,000)	per District's Statement of Activities Projections
35	Subtotal - CIP			(\$11,714,850)	(\$6,571,000)	(\$8,252,000)	(\$8,704,000)	(\$8,473,000)	(\$7,481,000)	
36	Other Capital									
37	Other Capital Spending			(\$207,364)	(\$292,239)	(\$296,206)	(\$300,291)	(\$304,500)	(\$308,991)	per District's Statement of Activities Projections
38	Proposed - Equipment Purchases			\$0	\$0	(\$500,000)	\$0	\$0	\$0	per District's Statement of Activities Projections
39	Fixed Asset Purchases			(\$864,000)	(\$740,000)	(\$135,500)	(\$131,250)	(\$137,261)	(\$143,546)	per District's Statement of Activities Projections
40	Subtotal - Other			(\$1,071,364)	(\$1,032,239)	(\$931,706)	(\$431,541)	(\$441,761)	(\$452,536)	
41										
42	Debt Service (Principal and Interest)									
43	Subtotal - Cash-Funded CIP plus Debt Service			(\$792,693)	(\$968,080)	(\$897,957)	(\$824,413)	(\$788,659)	(\$804,791)	per District's Statement of Activities Projections
44				(\$13,578,907)	(\$8,571,319)	(\$10,081,662)	(\$9,959,954)	(\$9,703,420)	(\$8,738,327)	
45	Transfers (to)/from									
46	Revenue Requirements			\$633,280	\$3,505,913	\$5,069,975	\$6,249,904	\$6,709,343	\$7,371,167	To Table 2
47	Operations Fund			\$7,747,197	\$0	\$0	\$0	\$0	\$97,010	From above
48	Subtotal - Transfers			\$8,380,477	\$3,505,913	\$5,069,975	\$6,249,904	\$6,709,343	\$7,468,177	
49	Subtotal - Fund Balance			\$0	(\$0)	\$53,717	\$1,409,609	\$3,495,033	\$7,325,238	
50	Estimated Interest Earnings			\$0	\$0	\$537	\$14,096	\$34,950	\$73,252	
51	Ending Balance			\$0	(\$0)	\$54,254	\$1,423,705	\$3,529,983	\$7,398,490	
52	<i>Target Balance</i>			<i>\$7,896,200</i>	<i>\$7,896,200</i>	<i>\$7,896,200</i>	<i>\$7,896,200</i>	<i>\$7,896,200</i>	<i>\$7,896,200</i>	<i>Avg annual CIP excl debt service</i>

APPENDIX B. CAPITAL IMPROVEMENT PROGRAM

