



WEST BAY SANITARY DISTRICT SEWER RATE STUDY



February 13, 2013



HF&H Consultants, LLC

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WEST BAY SANITARY DISTRICT

500 Laurel Street
Menlo Park, CA 94025



SEWER RATE STUDY

FINAL REPORT

February 13, 2013

HF&H CONSULTANTS, LLC

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



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HILTON FARNKOPF & HOBSON

HF&H CONSULTANTS, LLC

Managing Tomorrow's Resources Today

201 North Civic Drive, Suite 230
Walnut Creek, California 94596
Tel: (925) 977-6950
Fax: (925) 977-6955
hfh-consultants.com

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

February 13, 2013

Mr. Phil Scott
District Manager
West Bay Sanitary District
500 Laurel Street
Menlo Park, CA 94025

Subject: Sewer Rate Study - Final Report

Dear Mr. Scott:

HF&H is pleased to submit this sewer rate update of the District's FY 2013-14 rates. The report summarizes the analysis that was conducted to develop the recommended rates. The analysis updates last year's projections to reflect the District's and SBSA's current operating and capital costs. The results are consistent with last year, which indicates the need for a 9.0% revenue increase in FY 2013-14 rates. A copy of the rate model is included in the appendix.

Very truly yours,

HF&H CONSULTANTS, LLC

A handwritten signature in black ink, appearing to read 'John W. Farnkopf', written over a horizontal line.

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

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ACRONYMS

FY	Fiscal Year
CCF or HCF	Hundred cubic feet of metered water sold; 748 gallons; a cube of water 4.6 feet on edge
EDU	Equivalent dwelling unit
O&M	Operations and Maintenance
PAYGo	Pay-As-You-Go, in reference to funding capital improvements from cash rather than from borrowed sources of revenue
SBSA	South Bayside System Authority, a Joint Powers Authority that is responsible for regional conveyance and wastewater treatment for West Bay Sanitary District and the cities of Redwood City, San Carlos and Belmont.
STEP	Septic Tank Effluent Pumping systems

ACKNOWLEDGEMENTS

District Board

- Ron Shepherd, President
- David Walker, Secretary
- Fran Dehn, Member
- Edward Moritz, Member, Treasurer
- Roy Thiele-Sardina, Member

District Staff

- Phil Scott, District Manager
- Liz Bahrami, Finance Manager
- Bill Kitajima, Projects Manager

HF&H Consultants, LLC

- John Farnkopf, Sr. Vice President
- Sima Mostafaei, Senior Associate



SEWER RATE STUDY

1. BACKGROUND AND SUMMARY

This report presents a financial plan for the District that incorporates the capital improvements identified in the District's 2011 Master Plan, as well as updates to the SBSA capital improvement plan. The financial plan comprises projected operating and capital expenses for the District, including its share of SBSA costs, projected revenues from the District's sewer service charges, and projected District reserves for the period from FY 2012-13 to FY 2020-21. The results of the financial plan indicate the annual increases in sewer service charges that are projected to fund the District's expenses and maintain adequate reserves. Detailed spreadsheets comprising the rate model are included in Appendix A.

1.1 REGIONAL CONTEXT

The District provides wastewater collection and conveyance services to approximately 32,000 residential and non-residential EDUs through a system of pipelines and pump stations that transport their wastewater to the SBSA for treatment and discharge into San Francisco Bay. SBSA is a Joint Powers Authority (JPA) that provides wastewater treatment services to the Cities of Redwood City, San Carlos, and Belmont as well as the District.

SBSA's operating and capital costs that are common to all the member agencies are allocated based on their proportionate shares of the total EDUs. The SBSA JPA Commission approved a resolution that would increase the District's cost allocation for future capital improvement projects from 23.70% to 26.84%; this increase does not apply to Stage 2 Capacity Projects. This new cost allocation is pending approval from each member agency. For purposes of this study, it is assumed that the increased allocation to the District is in effect. Facilities that are not shared by all member agencies (*e.g.*, pump stations and force mains) are allocated based on each agency's cost allocation percentage (pending approval).

1.2 EXISTING SEWER RATES

The District charges sewer customers annually on the tax rolls, which is a common practice for billing for sewer service. Billing on the tax rolls is less expensive than it would be if the District issued its own bills while allowing the County to easily levy liens for nonpayment. Even though the District bills through 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 service fee or charge that is proportionate to the cost of providing sewer service.

The District's sewer service charges have recently increased primarily in response to increases in SBSA's treatment charges, as well as to maintain the level of service required to safely and reliably meet the sewer service needs of the District ratepayers. The District has also been faced with additional recent capital improvements to renew and replace aging District infrastructure, in addition to significant increases in SBSA capital improvement needs.

1.3 SUMMARY

A 9% increase for FY 2012-13 was approved and adopted in the District's rate-setting process last year. The increases indicated in Figure 1-1 are predicated on updated assumptions (including the increased allocation of SBSA costs to the District) and currently available information.

Figure 1-1. Projected Rate Increases

Fiscal Year	Rate Increase
2013-14	9%
2014-15	9%
2015-16	9%
2016-17	9%
2017-18	4%
2018-19	4%
2019-20	3%
2020-21	3%

The resulting increases are consistent with last year's projections. The increases for FY 2013-14 through FY 2016-17 are recommended primarily because of the need to fund the District's share of SBSA's debt service as well as to build the District's reserves. Because the SBSA debt service projection continues to change over time, prior to adopting future rate increases, it is recommended that the District update these assumptions to reflect the most current information available from SBSA.

Figure 1-2 shows the current FY 2012-13 rates and the projected FY 2013-14 rates, which reflect a 9% across-the-board increase.

Figure 1-2. Projected FY 2013-14 Rates

	Current FY 2012-13	Projected FY 2013-14
<u>Residential</u> (charge per DU)		
Single Family, Multi Family	\$752	\$820
On-site Wastewater Disposal Zone	\$956	\$1,042
<u>Non-Residential</u> (charge per CCF)		
Retail/Commercial	\$6.93	\$7.55
Institution/Public	\$6.82	\$7.44
Restaurants	\$8.64	\$9.42
Supermarkets with Grinders	\$8.70	\$9.49
Hospitals	\$6.97	\$7.60
Hotels with Dining Facilities	\$8.04	\$8.76
Industrial	Measured	Measured

Of the 9% overall rate increase in FY 2013-14, approximately 8.3% is attributable to increases in SBSA's costs and 0.7% is attributable to increases in the District's local operations and capital expenses.

Residential customers are charged per dwelling unit. Approximately 60 homes in the Portola Valley area (located within the On-Site Wastewater Disposal Zone) pay higher charges for the maintenance of the STEP or Grinder Sewer Collection Systems that they require.

Non-residential customers pay charges based on their metered water use from the prior calendar year (measured in CCF or hundred cubic feet). Each non-residential charge is the product of the customer's flow multiplied by the rate corresponding to the customer's class.

Industrial customers are billed based on each customer's prior annual flow and the strength of the customer's wastewater based on sampling data.

2. REVENUE REQUIREMENT PROJECTIONS

A spreadsheet model was developed to derive revenue requirements for FY 2013-14 through FY 2020-21. The District's O&M budget for FY 2012-13 served as the starting point for projecting the District's expenses and revenues. The escalation factors summarized in Figure 2-1 were incorporated in the model for projecting expense and revenues.

Figure 2-1. Key Modeling Assumptions

		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Source
General Inflation	Per Budget	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	WBSD Budget
Utilities	Per Budget	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	Estimate
Salaries & Benefits	Per Budget	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	Estimate
SBSA O&M Increase	Per Budget	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	SBSA Budget
Interest on Earnings		0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	WBSD Budget
Non-rate Revenues	Per Budget	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	Estimate
Growth in Accounts & Demand		0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	Estimate
Construction Cost Inflation	Per Budget	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	ENR CCI; 5 YR Avg

The application of these assumptions to the O&M and capital expenses is described below and summarized in Figure 2-3.

2.1 DISTRICT O&M EXPENSES

The District's O&M expenses are projected to increase by a few percent per year from approximately \$5.6 million to \$6.6 million over the ten year period. Annual increases are no greater than the estimated rate of inflation for most recurring expenses.

2.2 DISTRICT CAPITAL EXPENSES

The District's capital expenses are summarized by category in Figure 2-2. On average, the District expects to spend approximately \$5.7 million annually on these projects, the majority of which (approximately \$3.8 million per year with construction cost inflation) funds Master Plan projects. The Master Plan costs have been escalated to reflect inflation over time. The remaining capital expenses comprise various ongoing administrative and other capital expenditures.

Figure 2-2. CIP Summary

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Administration	\$160,000	\$165,000	\$168,300	\$171,666	\$175,099	\$178,601	\$182,173	\$185,817	\$189,533
Collection Facilities	\$722,500	\$327,500	\$327,500	\$327,500	\$343,875	\$361,069	\$379,122	\$398,078	\$417,982
Subsurface Lines									
Proposed (Master Plan)	\$3,459,000	\$3,539,617	\$4,070,611	\$4,251,956	\$4,411,342	\$4,861,882	\$5,167,738	\$5,318,597	\$4,658,942
Other	\$500,000	\$518,200	\$537,062	\$556,612	\$576,872	\$597,870	\$619,633	\$642,187	\$665,563
Construction Proj. Environ Review	\$10,000	\$10,364	\$10,741	\$11,132	\$11,537	\$11,957	\$12,393	\$12,844	\$13,311
Manhole Raising	\$100,000	\$103,640	\$107,412	\$111,322	\$115,374	\$119,574	\$123,927	\$128,437	\$133,113
Allow. For Unanticipated Cap Ex	<u>\$75,000</u>								
Total Capital Expenses	\$5,026,500	\$4,739,321	\$5,296,628	\$5,505,188	\$5,709,100	\$6,205,954	\$6,559,986	\$6,760,961	\$6,153,444

The District plans to fund all of these capital improvements on a pay-as-you-go (PAYGo) basis without issuing debt, which continues the District's historical practice. The District's rates do not directly fund each year's capital improvements. Instead, the funding for the District's capital expenses will take the form of contributions of rate revenue to the Capital Reserve from which capital projects are funded. In this way, rates can be modulated smoothly by using the Capital Reserve as a buffer.

2.3 CONTRIBUTIONS TO DISTRICT RESERVES

In addition to covering annual expenses, sewer service charges need to generate revenue to maintain adequate operations and capital reserves. To determine what constitutes adequate reserve amounts, the reserve balance was subdivided into Operations, Capital, and Emergency Reserves. In this way, it is possible to set recommended target balances for each purpose.

2.3.1 Operations Reserve Minimum Balance

The Operations Reserve provides working capital for monthly O&M expenses. Because of the nine-month lag between sewer service charge payments from the County tax assessor, the minimum Operations Reserve balance is set equal to five months of O&M expenses to provide adequate cash flow. If this minimum balance is maintained, the District should be able to fund its monthly operations cash flow over this extended period without relying on the Capital Reserve for a short-term loan.

Maintaining the minimum balance for the Operations Reserve is recommended as the highest priority for the District's three reserves.

2.3.2 Emergency Reserve Target Balance

The target balances for the Operations and Capital Reserves are sufficient to provide working capital on an ongoing basis, but do not provide for unforeseen contingencies such as emergencies. Should an emergency strike, the District cannot suddenly raise rates to generate additional funds due to state law requirements for such rate increases (e.g., Proposition 218). Therefore, an Emergency Reserve of \$5.0 million is recommended. With such a reserve, the District would have funds on hand to take immediate remedial steps without waiting to procure a loan or issue bonds.

Maintaining the target balance for the Emergency Reserve is recommended as the second highest priority after meeting the minimum balance for the Operations Reserve. The Emergency Reserve can be used for funding capital projects until the Capital Reserve is fully funded.

2.3.3 Capital Reserve Target Balance

The Capital Reserve provides liquidity to fund construction for projects that are funded on a 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 or Emergency Reserves. The target balance for the Capital Reserve depends on the level of construction. A minimum balance equal to the average annual construction costs (approximately \$3.8 million) was used for determining an appropriate and reasonable target balance.

Maintaining the target balance for the Capital Reserve is recommended to be a lower priority after meeting the minimum balances for the Operations and Emergency Reserves.

To provide additional protection until all reserves are fully funded, the cost of a line of credit is included in the revenue recommendations.

2.4 SBSA EXPENSES

SBSA's treatment charge currently is 41% of the District's total revenue requirement, and is the District's single largest expense. The District's charge is allocated in proportion to the number of its EDUs compared with the other SBSA member agencies.¹ SBSA's cost has recently increased significantly to fund the debt service on the series of bonds that have been issued to fund the rehabilitation of its interceptors, pump stations, and wastewater treatment plant. By the projected completion of the project, SBSA's debt service allocation to the District will equal \$7.8 million, an increase of \$6.3 million over the current debt service.

2.5 TOTAL REVENUE REQUIREMENTS

The foregoing modeling assumptions lead to the projected revenue requirements shown in Figure 2-3 and Figure 2-4. Figure 2-3 shows that:

- There will be very little increase projected in the District's own O&M expenses.
- The District's funding for capital improvements will gradually increase.
- The projected SBSA O&M expenses increase gradually, although current estimates may not reflect future O&M after SBSA completes its capital improvement program.
- SBSA's capital costs increase significantly as SBSA issues bonds to construct its capital improvement program.

Unlike the District's local costs, SBSA costs are largely beyond the District's control. Figure 2-4 contains the same data as Figure 2-3 in tabular form.

¹ As mentioned in Section 1.1, the resulting allocation increased recently. The combination of the District's increased share of costs and the overall increase in SBSA's costs is a primary reason for the need for the District's rate increases in the near term years.

Figure 2-3. Projected Revenue Requirements

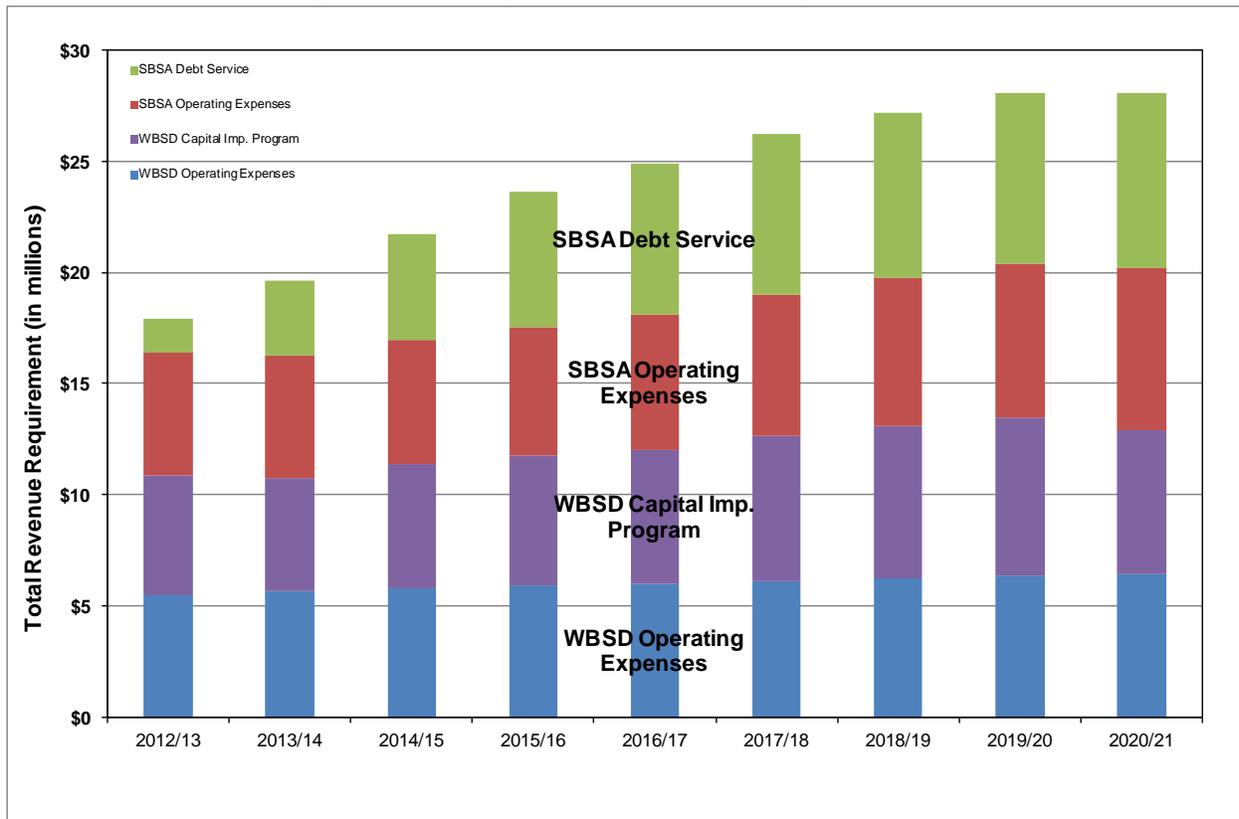


Figure 2-4. Projected Revenue Requirements

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
WBSD Operating Expenses	\$5,471,262	\$5,628,302	\$5,738,733	\$5,883,681	\$5,950,131	\$6,101,660	\$6,174,838	\$6,333,652	\$6,414,310
SBSA Operating Expenses	\$5,554,581	\$5,554,581	\$5,554,581	\$5,809,461	\$6,077,084	\$6,358,089	\$6,653,145	\$6,962,953	\$7,288,251
SBSA Debt Service	\$1,494,778	\$3,352,092	\$4,751,056	\$6,098,054	\$6,818,630	\$7,189,798	\$7,410,010	\$7,674,284	\$7,825,499
WBSD Capital Imp. Program	<u>\$5,376,500</u>	<u>\$5,089,321</u>	<u>\$5,646,628</u>	<u>\$5,855,188</u>	<u>\$6,059,100</u>	<u>\$6,555,954</u>	<u>\$6,909,986</u>	<u>\$7,110,961</u>	<u>\$6,503,444</u>
Total Projected Revenue Req't.	\$17,897,121	\$19,624,295	\$21,690,997	\$23,646,384	\$24,904,945	\$26,205,501	\$27,147,978	\$28,081,849	\$28,031,504

Figure 2-5 shows the annual increases attributable to the District and SBSA. SBSA’s share of the increases is greatest in the first five years because of the issuance of bonds for its capital improvement program. The District’s share of the revenue requirement grows from a slight deficit in FY 2013-14 to higher amounts as revenue first covers O&M and capital expenditures and then has the ability to contribute to reserves. Figure 2-6 shows the cumulative increases in revenue requirements. Figure 2-6 indicates that increases in SBSA’s costs are the primary factor driving the District’s overall rate increases through FY 2016-17.

Figure 2-5. Annual Increases in Revenue Requirements

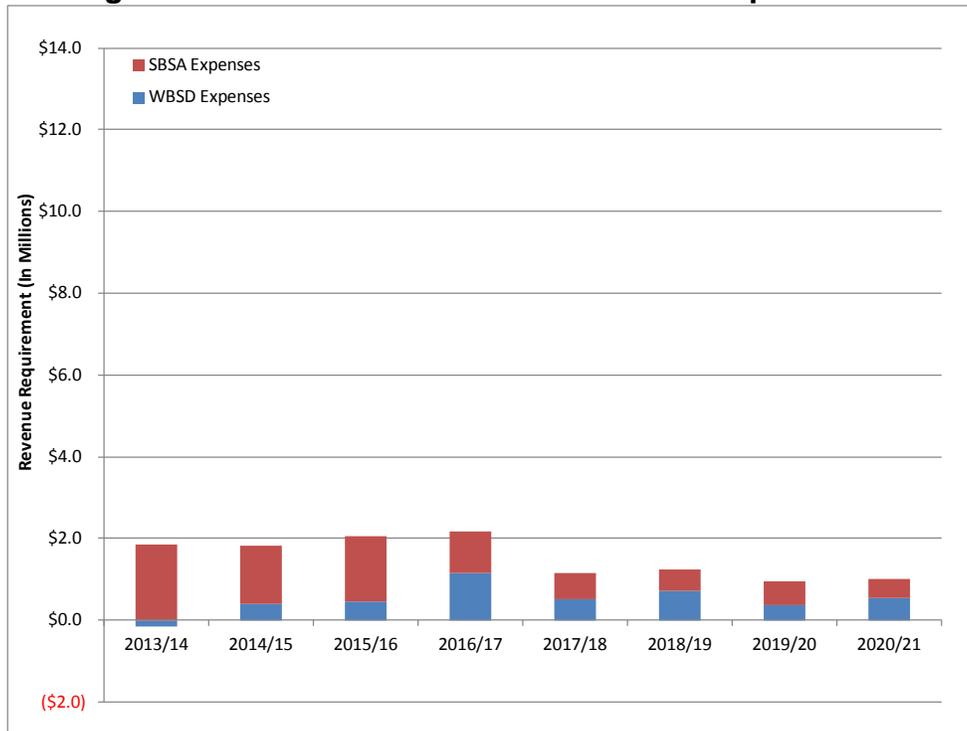
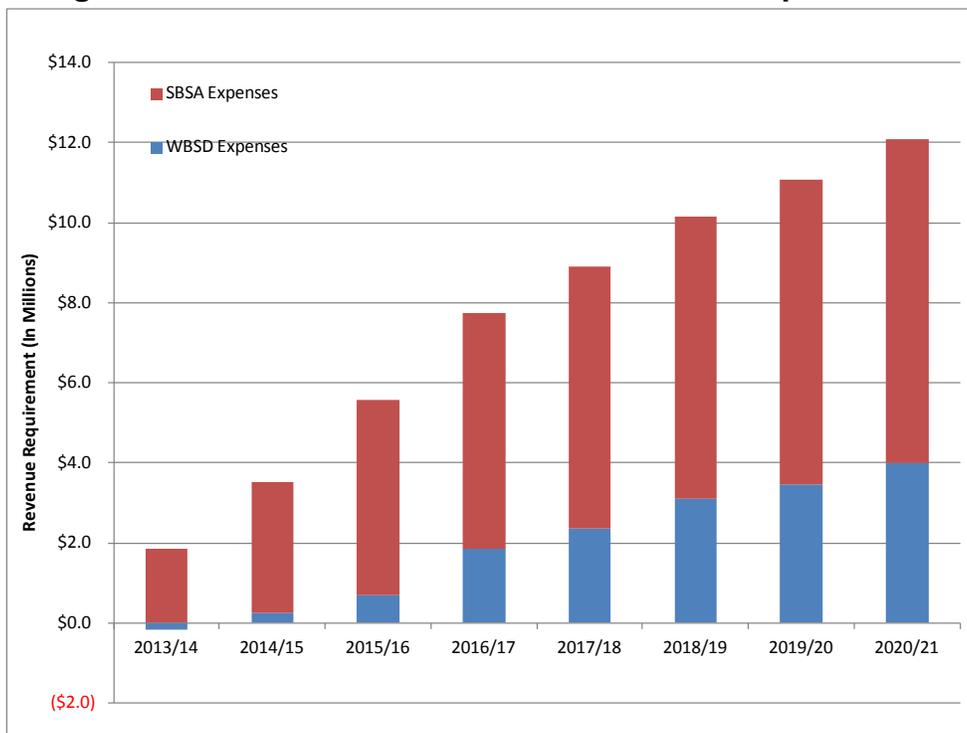


Figure 2-6. Cumulative Increases in Revenue Requirements



3. PROJECTED RATE INCREASES

3.1 REVENUE FROM EXISTING RATES

Revenue from the District's rates included the 9.0% increase that was previously approved for adoption in FY 2012-13. Subsequent revenue from rates assumed 0.5% annual growth. This revenue projection serves as the baseline for comparison with the projected revenue requirements in order to determine future revenue increases that are recommended to cover the increased revenue requirements.

3.2 REVENUE AND RATE INCREASES

Current rates cannot support the projected revenue requirements shown in Figure 2-4. The revenue increases and corresponding sewer service charges that are recommended are summarized in Figure 3-1. The revenue increase represents how much more revenue is needed compared to existing rates.

Figure 3-1. Projected Revenue and Rate Increase

	ADOPTED								
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Sewer Service Charge per EDU	\$752	\$820	\$894	\$974	\$1,062	\$1,104	\$1,148	\$1,183	\$1,218
Annual Increase in Charge	\$0	\$68	\$74	\$80	\$88	\$42	\$44	\$34	\$35
Annual Increase	9%	9%	9%	9%	9%	4%	4%	3%	3%
Cumulative Increase		19%	30%	41%	54%	60%	66%	71%	77%

3.3 FUND BALANCE

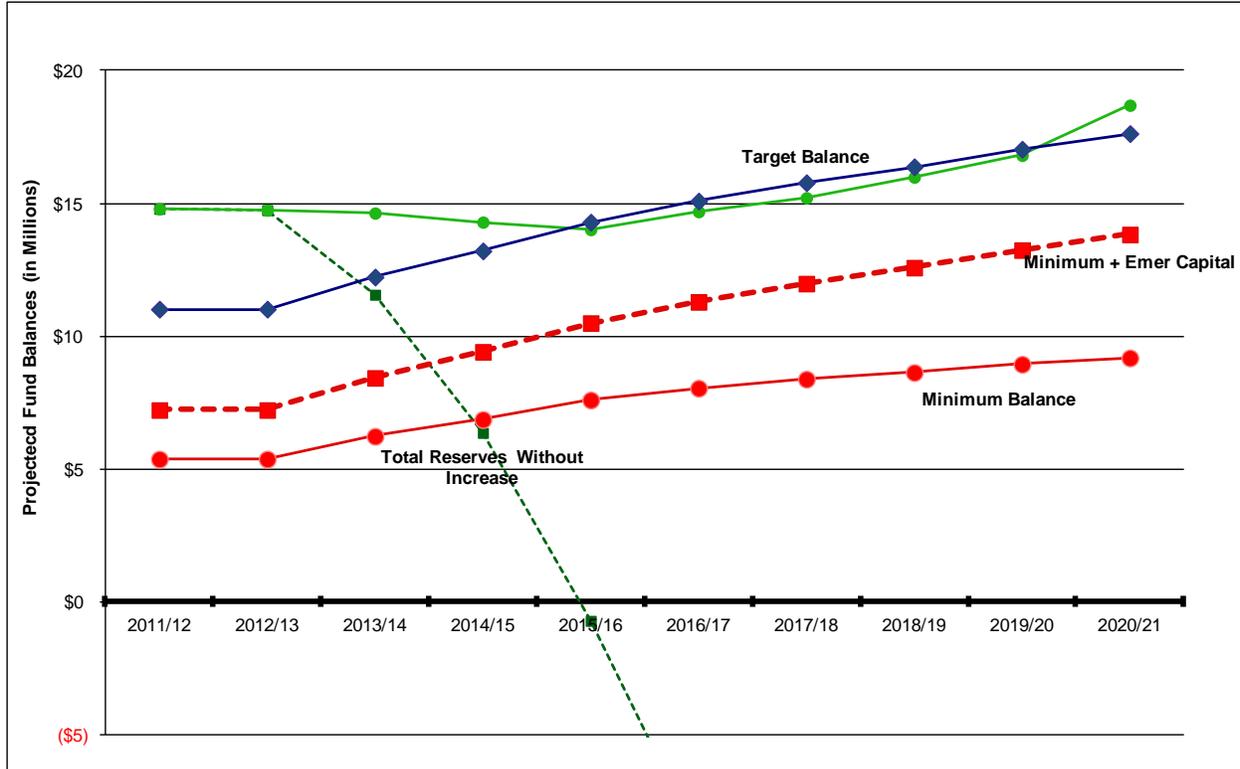
Figure 3-2 shows the projected annual fund balances with the rate increases (solid green line) and without the rate increases (dashed green line). Although the projections show straight lines between years, the fund balance will fluctuate down substantially during each year. In other words, the reserves are actively drawn on at all times during the year but only periodically added to when payments are received from the County. The reserves are not simply accumulated without being used.

By June 30, 2016, the projected fund balance would be nearly zero without future rate increases, assuming that the District did not to reduce expenditures. Clearly, the District would not be able to continue expenditures that would result in a negative fund balance. The District would have to severely curtail expenditures if rates are not increased.

The recommended sewer service charges are increased so that the resulting fund balance meets the target balance (blue line). 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 or other unanticipated events.

Figure 3-2. Fund Balance With and Without Increased Rate Revenue

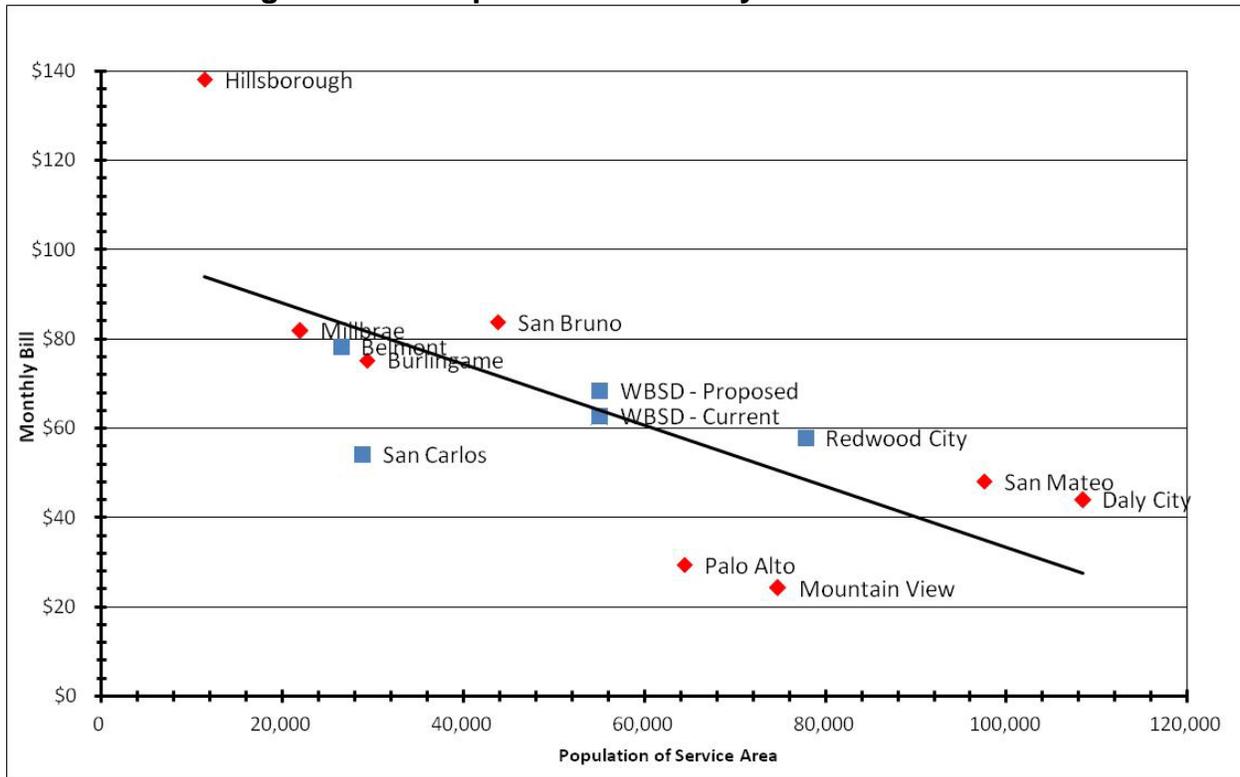


3.4 COMPARISON OF RECENT AND PROPOSED SEWER COSTS

Based on available sources, Figure 3-3 shows the recent charges² for sewer service among various San Mateo and Santa Clara County agencies. Figure 3-3 indicates that the District’s current sewer rates track the trend line along with the other SBSA member agencies (identified with blue squares in Figure 3-3). It should be noted that the other SBSA member agencies are also faced with similar additional costs as the District. It is expected that these agencies will be required to increase their rates substantially to cover their share of SBSA costs. Even with the projected rate increases, we would not expect the District’s position among its neighbors to change significantly.

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 3-3. Comparison of Monthly Residential Bills



4. STEP/GRINDER CHARGES

The District has approximately 60 single family residential customers located in the On-Site Wastewater Disposal Zone who require either Septic Tank Effluent Pumping systems (STEP) or Grinder Pumping systems. These customers are currently charged an additional \$204 annually for the services the District provides these customers to service and replace their pumps and appurtenances. It has been the District's practice to charge the same amount for either a STEP or grinder pump.

The District has not updated the STEP/grinder charge for several years. The District prepared cost analyses shown in Figures 4-1 and 4-2 to determine the current cost of providing this service. These analyses were verified by HF&H and indicate that the District's current cost to maintain STEP and grinder pumping systems is greater than the District's charge. The analyses also indicate that the cost to maintain a grinder system is greater than a STEP system.

Assuming that the average cost of a STEP/grinder system is \$593, the District is foregoing \$389 in revenue per STEP/grinder system or approximately \$23,000 in total from the 60 customers. The District is clearly not overcharging these customers for this service, which it could justifiably increase to the amounts shown in Figures 4-1 and 4-2. Going forward, the charges could also be increased to track inflation and periodically updated to reflect prevailing costs.

Figure 4-1. Annual Cost of STEP System Maintenance

	Annual Costs Paid by the District
1 Septic tank pumping (\$800 every ten years) paid for by owner	\$0
2 Routine service (cost per service)	
On-site labor costs	\$138
travel labor costs	\$0
Pick up truck and equipment	\$80
Bio - systems Bacteria	\$70
Subtotal - Annual Costs	\$288
3 Emergency services (every 4 years)	\$62
On site labor costs	\$31
Pick up truck and equipment	\$7
Subtotal - Annual Costs	\$99
4 Pump replacement (10 year cycle)	\$65
5 Filter, valves & floats replacement	\$83
Total Annual Costs for STEP system to the district	\$535

Figure 4-2. Annual Cost of Private Grinder Maintenance

	Annual Costs Paid by the District
1 Routine service. Cost per service	
On-site labor costs	\$138
Pick up truck and equipment	\$80
Subtotal - Annual Costs	\$218
2 Pump rebuild (5 year cycle)	
parts	\$140
labor	\$55
Subtotal - Annual Costs	\$195
3 Panel Replacement 20 year cycle	\$200
labor	\$37
Subtotal - Annual Costs	\$237
Total Annual Costs for Private grinder stations to the District	\$650

5. NEXT STEPS

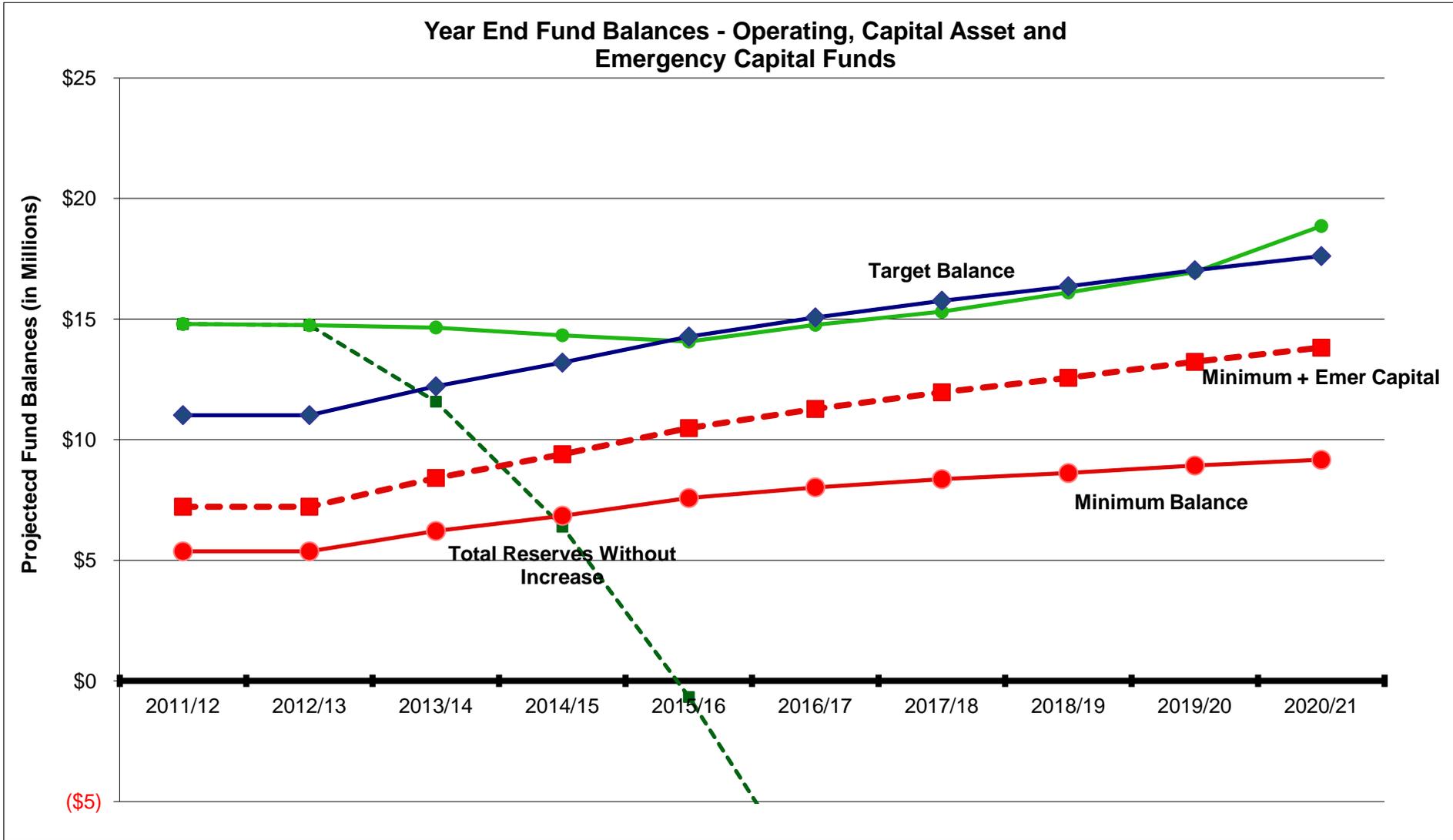
The District's current rates have been set to fund its current expenses. Going forward, rate increases are recommended to provide continued funding. Rates for subsequent years have been projected in this financial plan that are based on a number of assumptions and information that will require review prior to adopting any future rate increases. For present purposes, the rate increases indicated in the financial plan provide a preview of the increases that may eventually be required.

For rate increases after FY 2013-14, the District is advised to update the financial planning model in conjunction with an update to the capital improvement program and associated O&M. A critical area for consideration is SBSA's capital costs, which are dependent on the rate with which SBSA makes progress with its capital improvement program.

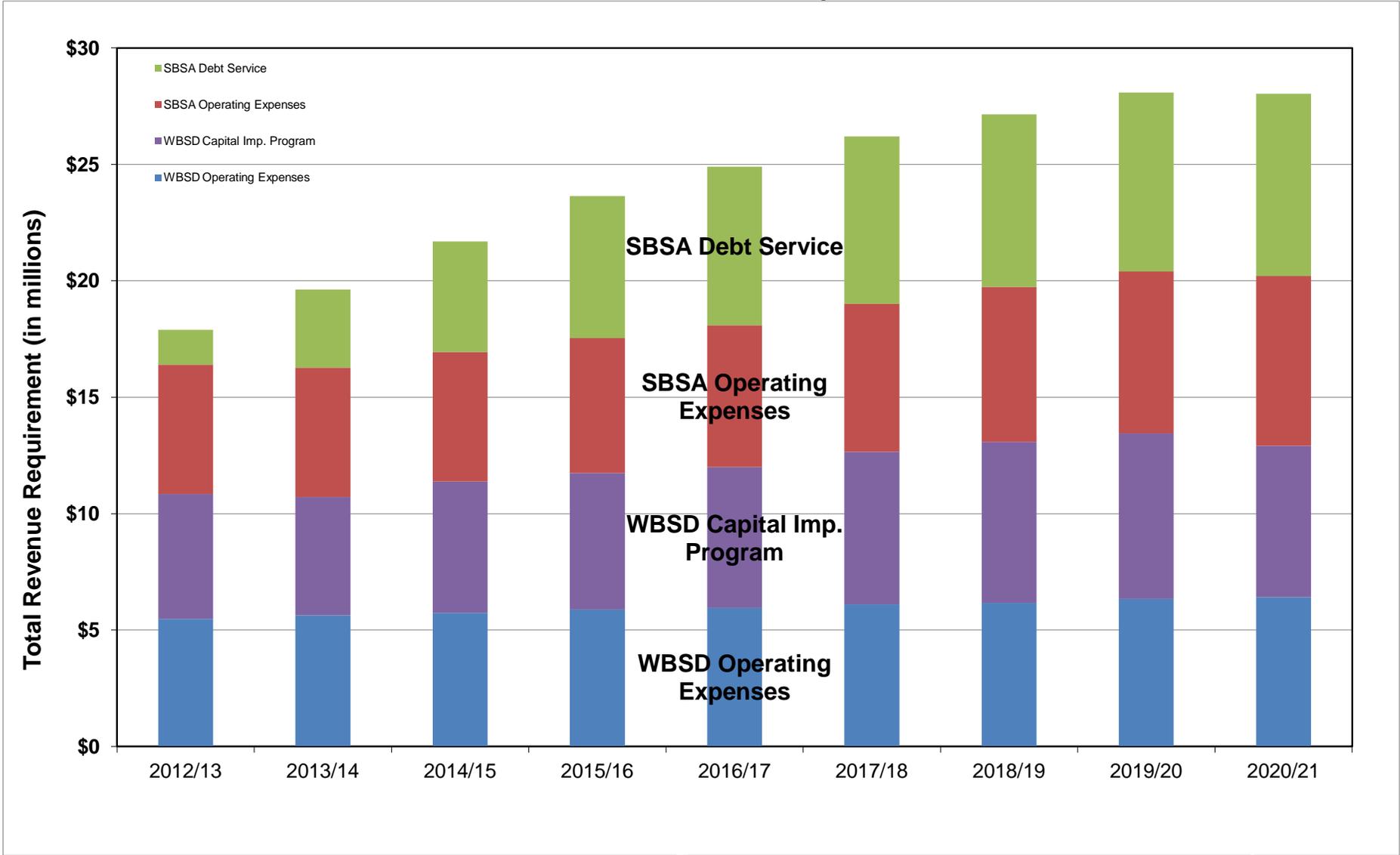
This report also includes an evaluation of the STEP/grinder pumping system charges that are paid by a small group of customers. The evaluation indicates that the current charge is below the District's cost to provide the service. The evaluation indicates that the District's Board would be justified in increasing this component of these customers' sewer service charges. At a minimum, the District should apply annual rate increases to the STEP/grinder charges in addition to the sewer service charge paid by all other customers.

APPENDIX A. SEWER RATE MODEL

	A	B	C	D	E	F	G	H	I	J	K	L
1	West Bay Sanitary District											
2	Sewer Rate Study											
3	Table 1A. Summary											
4												
5		Adopted	Adopted									
6	<i>Fiscal Year:</i>	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Notes
7	Revenue Increases	6%	9%	9%	9%	9%	9%	4%	4%	3%	3%	To Tables 3, 4
8	<i>Cumulative Increase</i>			18.8%	29.5%	41.2%	53.9%	60.0%	66.4%	71.4%	76.6%	From Table 3
9												
10	<i>Average Residential Bill</i>	\$690	\$752	\$820	\$894	\$974	\$1,062	\$1,104	\$1,148	\$1,183	\$1,218	
11	<i>Average Residential Bill Increase</i>			\$68	\$74	\$80	\$88	\$42	\$44	\$34	\$35	
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1	West Bay Sanitary District											
2	Sewer Rate Study											
3	Table 1A. Summary											
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1	West Bay Sanitary District												
2	Sewer Rate Study												
3	Table 1B. General												
4													
5	List of Model Worksheets												
6	Table 1A. Summary												
7	Table 1B. General												
8	Table 2. Revenue Requirement												
9	Table 3. Revenue Increases												
10	Table 4. Reserves												
11	Table 5. Capital Projects												
12	Table 6. Debt Service Schedule												
13	Table 7. Single-Family Rate Comparison												
14													
15													
16	Assumptions		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Source	Notes
17													
18	(1)	General Inflation	Per Budget	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	WBSD Budget	To Table 2
19	(2)	Utilities	Per Budget	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	Estimate	To Table 2
20	(3)	Salaries & Benefits	Per Budget	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	Estimate	To Table 2
21	(5)	SBSA O&M Increase %	Per Budget	0.0%	0.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	SBSA Budget	To Table 2
22	(7)	Interest on Earnings	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	WBSD Budget	To Table 4
23	(8)	Non-rate Revenues	Per Budget	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	Estimate	To Table 2
24	(9)	% Growth in Accounts & De	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	Estimate	To Tables 2,3
25	(10)	Cost of Grinder Maintenanc	Per Budget	9.0%	9.0%	9.0%	9.0%	4.0%	4.0%	3.0%	3.0%	Estimate	To Table 2
26	(11)	Construction Cost Inflation	Per Budget	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	3.6%	ENR CCI; 5 YR Avg	To Table 5
27													
28	Target Fund Balances												
29	<u>Operating Fund</u>												
30		Purpose	For O&M cash flow during the year										
31		Minimum balance	Cannot go negative										
32		Target balance	Five months of operating expenses										
33													
34	<u>Capital Asset Fund</u>												
35		Purpose	To be used for replacement of Equipment/ Facilities										
36		Minimum balance	Cannot go negative										
37		Target balance	\$3,500,000										
38													
39	<u>Emergency Capital Fund</u>												
40		Purpose	To be used for sewer emergencies										
41		Minimum balance	Cannot go negative										
42		Target balance	\$5,000,000										

	A	B	C	D	E	F	G	H	I	J	K	L	
1	West Bay Sanitary District												
2	Sewer Rate Study												
3	Table 2. Revenue Requirement												
4													
5		Tbl.	Budgeted	Projected									
6		1B	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Notes	
61	Capital Projects Fund		\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	From Table 4	
62	Emergency Capital Reserves		\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000	From Table 4	
63	Total Transfers		\$4,850,000	\$4,500,000	\$4,800,000	\$5,100,000	\$6,200,000	\$6,550,000	\$7,200,000	\$7,400,000	\$7,850,000		
64													
65	Total Revenue Requirement		\$17,637,344	\$19,306,389	\$21,120,525	\$23,172,138	\$25,331,615	\$26,490,689	\$27,734,605	\$28,673,181	\$29,686,143	To Table 3	
66	<i>Annual Change</i>			9.5%	9.4%	9.7%	9.3%	4.6%	4.7%	3.4%	3.5%		
67	<i>Cumulative Change</i>			9.5%	19.7%	31.4%	43.6%	50.2%	57.2%	62.6%	68.3%		
68													
69	Source: West Bay Sanitary District FY 2012/13 Budget												

	A	B	C	D	E	F	G	H	I	J	K
1	West Bay Sanitary District										
2	Sewer Rate Study										
3	Table 3. Revenue Increases										
4											
5											
6		Budgeted	Projected								
7		2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Notes
8	Current Rate Revenue										
9	Sewer Service Charges	\$16,185,831	\$16,266,760	\$16,348,094	\$16,429,834	\$16,511,984	\$16,594,544	\$16,677,516	\$16,760,904	\$16,844,708	2012-13 from WBSD Budget
10	Revenue Requirement	(\$17,637,344)	(\$19,306,389)	(\$21,120,525)	(\$23,172,138)	(\$25,331,615)	(\$26,490,689)	(\$27,734,605)	(\$28,673,181)	(\$29,686,143)	From Table 2
11	To/(From) operations before Rate Incr.	(\$1,451,513)	(\$3,039,629)	(\$4,772,431)	(\$6,742,303)	(\$8,819,632)	(\$9,896,145)	(\$11,057,088)	(\$11,912,277)	(\$12,841,435)	To Table 4
12											
13											
14	Increase in Rate Revenue	9%	9%	9%	9%	9%	4%	4%	3%	3%	From Table 1B
15	Cumulative Increase in Rate Revenue	9%	18.81%	29.50%	41.16%	53.86%	60.02%	66.42%	71.41%	76.55%	To Table 1A
16	Revenue from Rate Increases										
17	FY 2012-13 (eff. July 1, 2012)	\$1,456,725	\$1,464,008	\$1,471,328	\$1,478,685	\$1,486,079	\$1,493,509	\$1,500,976	\$1,508,481	\$1,516,024	
18	FY 2013-14 (eff. July 1, 2013)		\$1,595,769	\$1,603,748	\$1,611,767	\$1,619,826	\$1,627,925	\$1,636,064	\$1,644,245	\$1,652,466	
19	FY 2014-15 (eff. July 1, 2014)			\$1,748,085	\$1,756,826	\$1,765,610	\$1,774,438	\$1,783,310	\$1,792,227	\$1,801,188	
20	FY 2015-16 (eff. July 1, 2015)				\$1,914,940	\$1,924,515	\$1,934,137	\$1,943,808	\$1,953,527	\$1,963,295	
21	FY 2016-17 (eff. July 1, 2016)					\$2,097,721	\$2,108,210	\$2,118,751	\$2,129,345	\$2,139,991	
22	FY 2017-18 (eff. July 1, 2017)						\$1,021,310	\$1,026,417	\$1,031,549	\$1,036,707	
23	FY 2018-19 (eff. July 1, 2018)							\$1,067,474	\$1,072,811	\$1,078,175	
24	FY 2019-20 (eff. July 1, 2019)								\$836,793	\$840,977	
25	FY 2020-21 (eff. July 1, 2020)									\$866,206	
26	Total Revenue from Rate Increases	\$1,456,725	\$3,059,778	\$4,823,162	\$6,762,218	\$8,893,750	\$9,959,529	\$11,076,801	\$11,968,977	\$12,895,028	
27	Total Current Revenue	\$16,185,831	\$16,266,760	\$16,348,094	\$16,429,834	\$16,511,984	\$16,594,544	\$16,677,516	\$16,760,904	\$16,844,708	From above
28	Total Revenue	\$17,642,556	\$19,326,538	\$21,171,256	\$23,192,052	\$25,405,734	\$26,554,073	\$27,754,317	\$28,729,881	\$29,739,736	
29	Revenue Requirement	(\$17,637,344)	(\$19,306,389)	(\$21,120,525)	(\$23,172,138)	(\$25,331,615)	(\$26,490,689)	(\$27,734,605)	(\$28,673,181)	(\$29,686,143)	From above
30	To/(From) operations after Rate Incr.	\$5,212	\$20,149	\$50,731	\$19,915	\$74,118	\$63,384	\$19,712	\$56,700	\$53,593	To Table 4

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	West Bay Sanitary District													
2	Sewer Rate Study													
3	Table 4. Reserves													
4														
5			Tbl.	Actual	Budgeted									
6			1B	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Notes
7														
8	OPERATING (GENERAL) FUND													
9	Revenue Increases													
10	Beginning Balance			9%	9%	9%	9%	9%	9%	4%	4%	3%	3%	From Table 1A
11	Surplus/Deficit													Ending 2009-10 projected by WBSD
12	Settlement Agreement													From Table 3
13	Transfers (To)/From													
14	Revenue Requirement													To Table 2
15	Emergency Capital Reserves													From Below
16	Capital Asset Fund													To Below
17	Fund Subtotal													
18	Estimated Interest Earnings (7)													
19	Ending Balance													
20	<i>Minimum Balance (5 mo. operations)</i>													
21														
22	CAPITAL PROJECTS FUND													
23	Beginning Balance													
24	Revenues													
25	Connection Charges (8)													
26	Capital Projects													
27	Administration (1)													
28	Collection Facilities (1)													
29	Subsurface Lines													
30	Proposed (Master Plan)													From Table 5
31	Other (11)													
32	Construction Proj. Environ Review (11)													
33	Manhole Raising (11)													
34	Allow. For Unanticipated Cap Ex													
35	Subtotal Expenses													
36	Transfers (To)/From													
37	Revenue Requirements													To Table 2
38	Operating Fund													From Above
39	Emergency Capital Reserve													To Below
40	Subtotal Transfers													
41	Fund Subtotal													
42	Estimated Interest Earnings (7)													
43	Ending Balance													
44	<i>Target Balance (Avg Annual CIP)</i>													
45														
46	EMERGENCY CAPITAL RESERVES													
47	Beginning Balance													
48	Transfers (To)/From													
49	Revenue Requirements													To Table 2
50	Operating Fund													To Above
51	Capital Asset Fund													From Above
52	Subtotal Transfers													
53	Fund Subtotal													
54	Estimated Interest Earnings (7)													
55	Ending Balance													\$14,796,198
56	<i>Minimum Balance</i>													
57	<i>Target Balance (\$5M by 2015-16)</i>													
58														
59	OPERATING FUND (without rate increases)													
60	Beginning Balance													Ending 2009-10 projected by WBSD
61	Surplus/Deficit													From Table 3
62	Settlement Agreement													
63	Transfers (To)/From													
64	Revenue Requirement													From Above

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	West Bay Sanitary District													
2	Sewer Rate Study													
3	Table 4. Reserves													
4														
5														
6			Tbl.	Actual	Budgeted									
65		1B	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Notes	
65	Emergency Capital Reserves			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	From Above
66	Capital Asset Fund			(\$8,000,000)	(\$4,500,000)	(\$4,500,000)	(\$5,000,000)	(\$5,500,000)	(\$6,000,000)	(\$6,000,000)	(\$6,250,000)	(\$5,750,000)	From Above	
67	Fund Subtotal			\$8,751,410	\$5,055,538	(\$91,615)	(\$7,433,919)	(\$16,253,550)	(\$26,299,696)	(\$36,856,784)	(\$48,319,061)	(\$59,760,496)		
68	Estimated Interest Earnings (7)			\$43,757	\$25,278	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
69	Ending Balance			\$12,596,198	\$8,795,167	\$5,080,816	(\$91,615)	(\$7,433,919)	(\$16,253,550)	(\$26,299,696)	(\$36,856,784)	(\$48,319,061)	(\$59,760,496)	
70	Minimum Balance (5 mo. operations)			\$5,370,435	\$6,213,999	\$6,847,392	\$7,579,962	\$8,024,392	\$8,364,553	\$8,615,339	\$8,926,656	\$9,165,129		

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1	West Bay Sanitary District										
2	Sewer Rate Study										
3	Table 5. Capital Projects										
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	A	B	C	D	E	F	G	H	I	J	K
46	Middlefield at Fair Oaks										
47	Future Capacity Projects									\$500,000	
48	Subtotal - Capacity	\$0	\$530,000	\$2,385,000	\$2,861,000	\$640,000	\$667,000	\$0	\$376,000	\$500,000	
49											
50	Total CIP	\$3,459,000	\$3,415,300	\$3,789,700	\$3,819,500	\$3,823,500	\$4,066,000	\$4,170,000	\$4,141,000	\$3,500,000	
51	Inflationary Index		3.64%	7.41%	11.32%	15.37%	19.57%	23.93%	28.44%	33.11%	From Table 1B
52	Total Inflated CIP	\$3,459,000	\$3,539,617	\$4,070,611	\$4,251,956	\$4,411,342	\$4,861,882	\$5,167,738	\$5,318,597	\$4,658,942	To Table 4

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1	West Bay Sanitary District										
2	Sewer Rate Study										
3	Table 6. Debt Service Schedule										
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	A	B	C	D	E	F	G
1	West Bay Sanitary District						
2	Sewer Rate Study						
3	Table 7. Single-Family Rate Comparison						
4							
5	Assumption: For flow-based rates, average consumption is 8.21 HCF per month (Burlingame SFR average)						
6							
7	City	Population	Basis	Monthly	Annual Rate	As of	
8	Hillsborough	11,395	Fixed - Full Service	\$138.17	\$1,658.00	7/1/2010*	
9	San Bruno	43,811	Fixed + Flow - Annualized Winter	\$83.78	\$1,005.41	7/1/2013	
10	Millbrae	21,968	Fixed + Flow - Annualized Winter	\$82.01	\$984.13	7/1/2010*	
11	Belmont	26,507	Fixed + Flow - Annualized Winter, SBSA Treatment	\$78.17	\$938.03	7/1/2012	
12	West Bay SD (13-14)	55,000	Fixed - Full Service, Gravity Line, SBSA Treatment	\$68.33	\$820.00	7/1/2013	
13	West Bay SD (12-13)	55,000	Fixed - Full Service, Gravity Line, SBSA Treatment	\$62.67	\$752.00	7/1/2012	
14	Burlingame	29,342	Annualized Winter Monthly Flow (per thousand gallons)	\$75.23	\$902.80	1/1/2013	
15	Redwood City	77,819	Fixed - Full Service, SBSA Treatment	\$57.88	\$694.56	7/1/2012	
16	San Carlos	28,839	Fixed - Full Service, SBSA Treatment	\$54.11	\$649.26	7/1/2012	
17	San Mateo	97,535	Flow - Annualized Winter Monthly Flow	\$47.97	\$575.60	7/1/2011*	
18	Daly City	108,383	Flow - Annualized Winter Monthly Flow	\$44.06	\$528.69	7/1/2007*	
19	Palo Alto	64,484	Fixed - Full Service	\$29.31	\$351.72	7/1/2012	
20	Mountain View	74,762	Fixed - Full Service	\$24.25	\$291.00	7/1/2012	
21							
22	<i>Sources:</i>						
23	<i>Population - California Department of Finance, Demographic Research Unit, E-5 City/County Population & Housing Estimates, 1/1/2010</i>						
24	<i>except West Bay Sanitary District (population estimate from district).</i>						
25	<i>Monthly Rates - Bay Area Sewer Service Charges Benchmarking Survey - Period Ending March 31,2011, online resources and telephone contact with Agencies.</i>						
26	* = Most current rate increase based on rates available on website						
27							
28	Volume Conversions	98.56227	FY 2010-11 Consumption Report, City of Burlingame Average Single-Family Use (inside City)				
29		8.21000	Monthly HCF				
30	1 CF =	7.48052	Gallons				
31	1 HCF =	748.05200	Gallons				
32	8.21 HCF =	6,141.50692	Gallons				
33	8.21 HCF =	6.14151	TGal				
34							

