

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

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

## TECHNICAL MEMORANDUM

To: Robert Lynch, General Manager, Marin County Sanitary District No. 5

From: John Farnkopf, Senior Vice President, HF&H

Date: May 11, 2010

Subject: Sewer Rate Study

---

---

This technical memorandum briefly summarizes the results of our update of Marin County Sanitary District No. 5's (District) sewer rates. This update was a collaborative effort with the District's Staff and Board in which we revised the previous District financial plan and rate analysis model using the District's current operating and capital budgets. The results of the update lead to our recommendation that the District increase its sewer service charges for the next five years.

### **1. Background**

The District provides wastewater conveyance and treatment services to the Town of Tiburon and City of Belvedere. The conveyance systems in Tiburon and Belvedere comprise pipelines and pump stations that are hydraulically separate. However, flows from their respective conveyance systems converge at the District's treatment plant. The District maintains separate zones for purposes of operations and maintenance, managing budgets, and setting rates.

In 2005, the City of Belvedere's conveyance system was annexed to the District. Studies indicated the need for major capital improvements in the collection systems for both Tiburon and Belvedere as well as treatment plant upgrades at both the main plant and the Paradise Cove plant. Because rates had not increased recently, the District's reserve funds were declining. With the projected capital improvements, the need for rate increases was imminent.

HF&H developed a rate model for the District in 2005 to be used in financial planning for the Tiburon and Belvedere zones. With that model, rate increases were determined

for both zones. Since 2005, the District has made substantial capital improvements in the Tiburon zone, including replacement of the Paradise Cove treatment facility, which serves the north side of the Tiburon peninsula. The District also completed studies indicating the need to refurbish Belvedere's facilities adjacent to the Bay to minimize the potential for overflows or leakage. As a consequence, despite the recent rate increases, the reserve funds for each zone are lower than previously projected.

The process of updating the rates began in August 2009 with a Board workshop. Subsequent workshops with the District's Finance Committee and Board of Directors resolved numerous policy issues. The results were presented to the elected officials of Belvedere and Tiburon for their input in early 2010 and were presented at separate public forums on April 27 and 28.

## **2. Key Assumptions**

In updating the financial plan and rate model for each zone, there are certain general assumptions that are common to both zones and other specific assumptions that tailored to each zone. The following key assumptions were incorporated in the model for deriving rates for FY 2010-11 through FY 2014-15:

- **O&M expense and revenue projections.** The O&M budget for FY 2009-10 served as the starting point for expense and revenue projections. The escalation factors are summarized in **Figure 1**. Common expenses were allocated between Tiburon and Belvedere based on annual flow. Specific expenses related the Tiburon's and Belvedere's collection systems were allocated entirely to the appropriate zone.
- **Capital expense projections.** The District's Capital Improvement Program (CIP) lists the projects planned for the treatment plant, which are allocated between Tiburon and Belvedere based on projected annual flow. **Figure 2A** summarizes the treatment plant CIP. The CIP also lists the projects specific to each zone, which are paid for entirely by the zone. **Figure 2B** summarizes the CIP for each zone.
- **Capital Financing.** It is the District's policy to fund the CIP from cash on a pay-as-you-go basis. This policy reflects the fact that the nature of the CIP comprises on-going renewal and replacement projects, which should be paid from current rate revenue rather than with debt, if possible. For large, infrequent capital projects, such as a major upgrade of the treatment plant, the District would issue debt.

- **Fund balance.** The District is committed to setting rates that maintain a minimum unrestricted cash balance to meet its month-to-month cash flow. Because the District bills on the Marin County tax roll, there is considerable lag from when it incurs debt to when it receives payments from the County. As a result, the District must carry a relatively high fund balance.

The foregoing assumptions are consistent with the District's prior policies and practices.

### **3. Financial Projections**

The projections shown in **Figures 3A** and **B** were derived by updating the previous model with the current operating and capital budgets, which were then escalated based on reasonable growth factors.

- **Revenue requirements.** Operating expenses gradually increase. In Tiburon's case, substantial property tax revenue offsets these expenses. In Belvedere's case, however, there is no comparable offset. The District does not receive an apportionment of property taxes from Belvedere residents. Instead, property taxes are retained by the City of Belvedere for its use. Capital improvements are funded by transfers of rate revenue to the capital funds. In FY 2009-10, there was less revenue than needed to transfer funds to reserves.
- **Revenue from current rates.** The revenue from current rates increases very little because it is assumed that there will be negligible growth.
- **Annual surplus/(deficit) without rate increases.** Revenue from current rates is consistently less than the increasing revenue requirements, and therefore ever-increasing, annual deficits are projected. Most of the deficit is attributable to funding capital improvements, without which the capital programs would come to a standstill.
- **Revenue from increased rates.** Rate increases have been programmed to close the gap between the revenue requirements and the revenue.
- **Annual surplus/(deficit) with rate increases.** Sufficient revenue is available to fund capital projects because of the increased revenue from rate increases.

The required rate increases and resulting annual residential bills are summarized in **Figure 4**. The increases are significant both as percentages and as dollar amounts. These increases are required to fund the District's revenue requirements and to maintain adequate reserves. **Figures 5A** and **5B** graph the fund balances against the minimum and target balances.

As previously mentioned, the minimum balance is required to provide sufficient cash to meet monthly cash flow. The target balance adds an allowance for capital projects so that the District can engage contractors and make progress payments without funding constraints. The sum of the operating and capital funding requirements equals the target balance. It is essential that the fund balances for each zone equal or exceed the minimum balances because loans between zones are legally prohibited. In addition, it is desirable to achieve or even exceed the target balances.

The rate increases in **Figure 4** are intended to cover expenses and provide sufficient funds to maintain adequate reserves. In **Figure 5A**, Tiburon's fund balance initially exceeds the minimum but trends down past the minimum balance over the next two years without rate increases. The rate increases that are projected hold the reserves at their current level for the next three years, after which the fund balance climbs toward the target balance. In **Figure 5B**, Belvedere's fund balance is projected to be near the minimum balance by year-end FY 2009-10. The rate increases that are projected will hold the fund balance in this position for two years before ground is gained and the balance climbs toward the target balance.

#### **4. Rates and Customer Bills**

The District bills residential customers per equivalent dwelling unit and non-residential customers using a formula that reflects the volume of flow and strength of the non-residential wastewater. The rate increases in **Figure 4** would apply across-the-board to the residential and non-residential rates in each zone. In other words, the residential and non-residential rates in each zone will increase by the same percentage in each zone. Hence, the rates will increase, but the structure will not change. The Board has expressed an interest in alternative rate structures, however. The District has indicated that it plans to study alternatives to its current rate structure.

**Figure 6** compares the resulting average bills for the District's customers with other neighboring wastewater agencies in Southern Marin. The table indicates the costs associated with the collection systems and treatment. For those agencies for which we are aware that customers also pay property taxes that are distributed to the sewer agency, we added the average property tax payment to the sewer service charge to provide the full cost.

**Figure 7** expands on the data in **Figure 6** by including additional agencies in San Mateo and Santa Clara Counties. **Figure 7** graphs monthly bills versus population within each agency’s service area. The trendline indicates that sewer bills are higher for smaller agencies, which have smaller customer bases to spread their fixed costs. Larger agencies’ lower bills reflect economies of scale.

Tiburon’s current and proposed charges (excluding property taxes) are slightly below the trendline in **Figure 7**. When property taxes are included, Tiburon residents’ charges fall slightly above the trend line. Belvedere’s current and proposed charges are close to the trendline, albeit they are higher than Tiburon’s and most other agencies. Belvedere is also one of the smallest, which is a key reason for why its charges are higher. In addition, its service area is hilly, requiring more pump stations. With half the population of Tiburon, Belvedere has twice the pump stations.

**5. Findings and Recommendations**

Prior to 2005, the District enjoyed a long period of stable rates. Since 2005, when Belvedere annexed to the District, studies have indicated the need to take affirmative steps to upgrade its facilities. We recommend the following actions in response.

1. **Rate increases.** The District should adopt the rate increases indicated in **Figure 4** for the next four years, namely:

	Budgeted						
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
<b>Tiburon</b>							
Annual sewer service charge per EDU	\$478	\$478	\$598	\$717	\$825	\$923	\$1,034
Annual increase	\$0	\$0	\$120	\$120	\$108	\$99	\$111
Monthly increase	\$0	\$0	\$10	\$10	\$9	\$8	\$9
<b>Belvedere</b>							
Annual sewer service charge	\$1,139	\$1,185	\$1,457	\$1,748	\$1,836	\$1,928	\$1,985
Annual increase	\$0	\$46	\$272	\$291	\$87	\$92	\$58
Monthly increase	\$0	\$4	\$23	\$24	\$7	\$8	\$5

These rate increases will enable the District to fund the capital improvements that are required for the District to comply with its discharge permit and other negotiated agreements.

2. **Implementation.** Each year, prior to implementing the rate increase, District staff should confirm the need for the rate increase. The District can implement a lower rate increase, if possible, without going through the Proposition 218 notification process.

Mr. Robert Lynch  
May 11, 2010  
Page 6

3. **Rate structure.** The District's current rate structure is consistent with industry practices and is defensible. However, the District has indicated its plan to conduct a brief evaluation to determine what would be required in the future if the District elected to bill its residential and commercial customers based on alternative rate structures.

**Figure 1. Key Modeling Assumptions**

	Budgeted 2009-10	Projected				
		2010-11	2011-12	2012-13	2013-14	2014-15
a. Interest on Fund Balance	1.0%	1.0%	1.5%	1.5%	2.0%	2.0%
b. General inflation	Per Budget	3.0%	3.0%	3.0%	3.0%	3.0%
c. Labor Increases	Per Budget	3.0%	3.0%	3.0%	3.0%	3.0%
d. Pension & benefit increases	Per Budget	5.0%	5.0%	5.0%	5.0%	5.0%
e. Growth in Total EDU's	Actual	0.27%	0.27%	0.27%	0.26%	0.26%
f. Growth in EDU's - Tiburon	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%
	5	5	5	5	5	5
g. Growth in EDU's - Belvedere	0.43%	0.43%	0.42%	0.42%	0.42%	0.42%
	5	5	5	5	5	5
h. Growth in EDU's - Paradise	32.99%	7.75%	1.44%	1.42%	1.40%	1.38%
	32	10	2	2	2	2
i. Power	Per Budget	5.00%	5.00%	5.00%	5.00%	5.00%
j. Tiburon/PC tax revenue increase	Per Budget	1.00%	1.00%	1.00%	1.00%	1.00%
k. Tiburon/PC O&M allocation		66.29%	66.29%	66.29%	66.29%	66.29%
l. Belvedere O&M allocation		33.71%	33.71%	33.71%	33.71%	33.71%

**Figure 2A. Capital Improvement Program – Treatment Plant**

Treatment Plant	Budgeted	Projected					Total
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	
Chlorine Contact Mixer: Replacement	\$0	\$5,000	\$0	\$5,000	\$0	\$0	\$10,000
Dry Weather Influent Pump	\$24,000	\$0	\$0	\$0	\$0	\$30,000	\$54,000
Influent Grinder: Replacement	\$0	\$26,000	\$0	\$30,000	\$0	\$0	\$56,000
24 hr composite samplers	\$0	\$0	\$6,000	\$0	\$0	\$7,000	\$13,000
Plant water piping	\$0	\$10,000	\$15,000	\$0	\$0	\$0	\$25,000
Vehicle Replacement	\$0	\$25,000	\$25,000	\$0	\$25,000	\$0	\$75,000
Chemical Storage Tanks Replacement	\$0	\$20,000	\$20,000	\$0	\$0	\$0	\$40,000
Dissolved Air Flotation Refurbish	\$39,500	\$0	\$0	\$0	\$0	\$50,000	\$89,500
Gate Valve Replacement Program	\$0	\$50,000	\$50,000	\$50,000	\$0	\$0	\$150,000
SCADA Upgrade and Replacement	\$0	\$20,000	\$20,000	\$0	\$0	\$0	\$40,000
SCADA Master Plan	\$0	\$75,000	\$100,000	\$0	\$0	\$0	\$175,000
Digester Mixing Pumps	\$0	\$0	\$30,000	\$0	\$0	\$0	\$30,000
Digester Recirc. Pump (2)	\$0	\$0	\$0	\$40,000	\$0	\$0	\$40,000
Digester #1 Seismic Retrofit	\$0	\$100,000	\$150,000	\$0	\$0	\$0	\$250,000
Plant Air Compressor Replacement (2)	\$0	\$0	\$0	\$15,000	\$0	\$0	\$15,000
Aeration Blower: Replacement	\$0	\$10,000	\$0	\$0	\$10,000	\$0	\$20,000
Undesignated Capital Project	\$26,000	\$50,000	\$50,000	\$50,000	\$120,000	\$130,000	\$426,000
Wet Weather Influent Pump	\$0	\$0	\$30,000	\$0	\$0	\$0	\$30,000
Digester Cover Rehabilitation	\$0	\$350,000	\$0	\$0	\$0	\$0	\$350,000
Aeration Valve Replacement	\$0	\$0	\$0	\$75,000	\$75,000	\$0	\$150,000
Aeration Blower: Upgrade	\$0	\$0	\$100,000	\$150,000	\$0	\$0	\$250,000
WWP- VFD Replacement	\$0	\$0	\$25,000	\$0	\$0	\$0	\$25,000
Moyno Pump Replacement	\$0	\$15,000	\$15,000	\$25,000	\$15,000	\$0	\$70,000
Headworks Concrete Project	\$15,000	\$0	\$0	\$0	\$0	\$0	\$15,000
Boiler Heat Exchanger Replacement	\$0	\$0	\$100,000	\$0	\$0	\$0	\$100,000
Refrigerated Lab Sampler	\$5,000	\$0	\$0	\$5,000	\$0	\$0	\$10,000
Lab Equipment	\$2,500	\$0	\$0	\$0	\$0	\$0	\$2,500
Laptops	\$0	\$2,000	\$0	\$0	\$0	\$0	\$2,000
Chlorine Contact Tank Liner Project	\$0	\$0	\$0	\$300,000	\$0	\$0	\$300,000
Asset Management	\$0	\$75,000	\$75,000	\$0	\$0	\$0	\$150,000
Main Plant Master Plan	\$0	\$0	\$0	\$50,000	\$0	\$0	\$50,000
Secondary Clarifier - Liner Project	\$0	\$0	\$0	\$0	\$0	\$50,000	\$50,000
Secondary Clarifier -Refurbish	\$40,000	\$0	\$0	\$0	\$0	\$0	\$40,000
Headworks/Grit Chamber Valve Replace	\$0	\$0	\$0	\$0	\$0	\$150,000	\$150,000
Electrical/Mechanical Upgrades	\$0	\$0	\$0	\$50,000	\$50,000	\$50,000	\$150,000
R.A.S. and W.A.S. VFD/Controller Replacement	\$0	\$0	\$0	\$0	\$25,000	\$0	\$25,000
Screw Press Sludge Feed Pump	\$0	\$0	\$0	\$0	\$0	\$20,000	\$20,000
Gas Sensors for Main Plant - SAFETY CIP	\$0	\$0	\$0	\$0	\$40,000	\$0	\$40,000
Gearbox & Motor Replace for All Tanks	\$0	\$0	\$0	\$0	\$150,000	\$0	\$150,000
Confined Space Equip for All Tanks - SAFETY	\$0	\$0	\$0	\$0	\$15,000	\$0	\$15,000
Service Water Pumps & Motor Replacement	\$0	\$0	\$0	\$0	\$0	\$40,000	\$40,000
<b>Subtotal, Treatment Plant</b>	<b>\$152,000</b>	<b>\$833,000</b>	<b>\$811,000</b>	<b>\$845,000</b>	<b>\$525,000</b>	<b>\$527,000</b>	<b>\$3,693,000</b>
<i>Allocation to Tiburon</i>	<b>\$100,761</b>	<b>\$552,196</b>	<b>\$537,612</b>	<b>\$560,151</b>	<b>\$348,023</b>	<b>\$349,348</b>	<b>\$2,448,090</b>
<i>Allocation to Belvedere</i>	<b>\$50,525</b>	<b>\$280,804</b>	<b>\$273,388</b>	<b>\$284,850</b>	<b>\$176,978</b>	<b>\$177,652</b>	<b>\$1,244,910</b>
<i>Allocation to Paradise Cove</i>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
	<b>\$151,286</b>	<b>\$833,000</b>	<b>\$811,000</b>	<b>\$845,000</b>	<b>\$525,000</b>	<b>\$527,000</b>	<b>\$3,693,000</b>



**Figure 2B. Capital Improvement Program - Tiburon, Belvedere, and Total**

	Budgeted	Projected					Total
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	
<b>Tiburon Zone Pumps &amp; Lines CIP</b>							
Sewer Line Rehabilitation Program	\$75,000	\$0	\$0	\$0	\$0	\$0	\$75,000
* Sewer Line Rehabilitation Program	\$0	\$100,000	\$130,000	\$100,000	\$100,000	\$40,000	\$470,000
Pump Stations - Pump Replacement	\$0	\$0	\$10,000	\$0	\$10,000	\$0	\$20,000
Pump Station - Generator Replacement	\$0	\$0	\$0	\$0	\$60,000	\$0	\$60,000
Finish Televising/Cleaning Sewer Lines	\$0	\$82,200	\$0	\$0	\$0	\$0	\$82,200
Station #9 Structural Repair	\$0	\$0	\$150,000	\$0	\$0	\$0	\$150,000
Station No.5 rebuild/ 4 pumps/gen	\$0	\$0	\$0	\$150,000	\$150,000	\$0	\$300,000
Force Main Replacement Program	\$0	\$75,000	\$75,000	\$75,000	\$0	\$0	\$225,000
Station 1 & 4 - generator conduit	\$0	\$0	\$0	\$100,000	\$0	\$0	\$100,000
Install Manholes/Rodholes	\$0	\$30,000	\$0	\$0	\$0	\$0	\$30,000
Purchase Rodder Truck	\$0	\$75,000	\$0	\$0	\$0	\$0	\$75,000
Tib Station #9 VFD/Controller Replacement	\$0	\$0	\$0	\$0	\$0	\$30,000	\$30,000
Undesignated Capital Projects	\$20,000	\$50,000	\$50,000	\$50,000	\$50,000	\$240,000	\$460,000
<b>Subtotal, Tiburon</b>	<b>\$95,000</b>	<b>\$412,200</b>	<b>\$415,000</b>	<b>\$475,000</b>	<b>\$370,000</b>	<b>\$310,000</b>	<b>\$2,077,200</b>
<b>Paradise Cove CIP</b>							
Paradise Cove Reuse Water Title 22	\$0	\$90,000	\$0	\$0	\$0	\$0	\$90,000
Paradise Cove Generator Replacement	\$0	\$75,000	\$0	\$0	\$0	\$0	\$75,000
Paradise Cove Refrigerated Lab Sampler	\$0	\$0	\$0	\$0	\$5,000	\$0	\$5,000
<b>Subtotal, Paradise Cove</b>	<b>\$0</b>	<b>\$165,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,000</b>	<b>\$0</b>	<b>\$170,000</b>
<b>Subtotal, Tiburon/Paradise Cove</b>	<b>\$95,000</b>	<b>\$577,200</b>	<b>\$415,000</b>	<b>\$475,000</b>	<b>\$375,000</b>	<b>\$310,000</b>	<b>\$2,247,200</b>
<b>Belvedere Zone Pumps &amp; Lines CIP</b>							
* Sewer Line Rehabilitation Program	\$50,000	\$65,000	\$65,000	\$40,000	\$85,000	\$65,000	\$370,000
Pump Station - Pump Replacement	\$0	\$0	\$10,000	\$0	\$10,000	\$0	\$20,000
Pump Station Control Panel - Upgrade	\$0	\$10,000	\$10,000	\$10,000	\$0	\$0	\$30,000
Pump Station - Generator Replacement	\$0	\$0	\$0	\$0	\$0	\$60,000	\$60,000
Valve Cover lid Replacement	\$0	\$0	\$20,000	\$20,000	\$20,000	\$0	\$60,000
Finish Televising/Cleaning Sewer Lines	\$0	\$38,900	\$0	\$0	\$0	\$0	\$38,900
Install Manholes/Rodholes	\$0	\$30,000	\$0	\$0	\$0	\$0	\$30,000
Cove Rd. Force Main Replacement	\$0	\$0	\$600,000	\$0	\$0	\$0	\$600,000
Purchase Rodder Truck	\$0	\$75,000	\$0	\$0	\$0	\$0	\$75,000
Force Main Replacement Program	\$0	\$75,000	\$75,000	\$0	\$75,000	\$0	\$225,000
Lagoon Rd. installation of Generator/conduit	\$0	\$0	\$0	\$175,000	\$0	\$0	\$175,000
Cove Road Station No.1 Generator repl	\$0	\$0	\$0	\$150,000	\$0	\$0	\$150,000
Undesignated Cap Projects	\$20,000	\$50,000	\$50,000	\$50,000	\$160,000	\$230,000	\$560,000
<b>Subtotal, Belvedere</b>	<b>\$70,000</b>	<b>\$343,900</b>	<b>\$830,000</b>	<b>\$445,000</b>	<b>\$350,000</b>	<b>\$355,000</b>	<b>\$2,393,900</b>
<b>Total Planned Capital Spending</b>	<b>\$317,000</b>	<b>\$1,754,100</b>	<b>\$2,056,000</b>	<b>\$1,765,000</b>	<b>\$1,250,000</b>	<b>\$1,192,000</b>	<b>\$8,334,100</b>
<i>Tiburon/Paradise</i>	\$195,761	\$1,129,396	\$952,612	\$1,035,151	\$723,023	\$659,348	\$4,530,290
<i>Belvedere</i>	\$120,525	\$624,704	\$1,103,388	\$729,850	\$526,978	\$532,652	\$3,638,810
	<b>\$316,286</b>	<b>\$1,754,100</b>	<b>\$2,056,000</b>	<b>\$1,765,000</b>	<b>\$1,250,000</b>	<b>\$1,192,000</b>	<b>\$8,169,100</b>

**Figure 3A. Financial Projections - Tiburon Zone**

<b>Tiburon Zone</b>	<b>Budgeted 2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
<b>Revenue Requirements</b>						
Operating Expenses	1,810,842	1,917,090	1,984,015	2,051,490	2,121,604	2,194,466
Property Tax Revenue	(800,000)	(808,000)	(816,080)	(824,241)	(832,483)	(840,808)
Other Non-Op Rev	(58,925)	(58,925)	(58,925)	(58,925)	(58,925)	(58,925)
Debt Service	0	0	0	0	0	0
Capital Improvements	0	600,000	800,000	900,000	900,000	1,000,000
<b>Total</b>	<b>951,917</b>	<b>1,650,165</b>	<b>1,909,011</b>	<b>2,068,324</b>	<b>2,130,197</b>	<b>2,294,734</b>
<b>Revenue from Current Rates</b>	<b>1,306,278</b>	<b>1,313,535</b>	<b>1,316,967</b>	<b>1,320,399</b>	<b>1,323,831</b>	<b>1,327,264</b>
<b>Transfer To/(From) Reserves</b>	<b>354,362</b>	<b>(336,631)</b>	<b>(592,044)</b>	<b>(747,925)</b>	<b>(806,365)</b>	<b>(967,470)</b>
<b>Revenue Requirements</b>	<b>951,917</b>	<b>1,650,165</b>	<b>1,909,011</b>	<b>2,068,324</b>	<b>2,130,197</b>	<b>2,294,734</b>
<b>Revenue With Rate Increase</b>	<b>1,306,278</b>	<b>1,641,918</b>	<b>1,975,450</b>	<b>2,277,688</b>	<b>2,557,642</b>	<b>2,871,986</b>
<b>Transfer To/(From) Reserves</b>	<b>354,362</b>	<b>(8,247)</b>	<b>66,440</b>	<b>209,364</b>	<b>427,446</b>	<b>577,252</b>

**Figure 3B. Financial Projections - Belvedere Zone**

<b>Belvedere Zone</b>	<b>Budgeted 2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
<b>Revenue Requirements</b>						
Operating Expenses	938,459	992,916	1,027,383	1,062,135	1,098,235	1,135,738
Property Tax Revenue	0	0	0	0	0	0
Other Non-Op Rev	(22,374)	(22,374)	(22,374)	(22,374)	(22,374)	(22,374)
Debt Service	153,100	153,100	153,100	200,000	200,000	200,000
Capital Improvements	0	600,000	800,000	800,000	900,000	900,000
<b>Total</b>	<b>1,069,185</b>	<b>1,723,642</b>	<b>1,958,109</b>	<b>2,039,761</b>	<b>2,175,861</b>	<b>2,213,364</b>
<b>Revenue from Current Rates</b>	<b>1,387,517</b>	<b>1,393,416</b>	<b>1,399,315</b>	<b>1,405,214</b>	<b>1,411,114</b>	<b>1,417,013</b>
<b>Transfer To/(From) Reserves</b>	<b>318,332</b>	<b>(330,226)</b>	<b>(558,794)</b>	<b>(634,546)</b>	<b>(764,748)</b>	<b>(796,351)</b>
<b>Revenue Requirements</b>	<b>1,069,185</b>	<b>1,723,642</b>	<b>1,958,109</b>	<b>2,039,761</b>	<b>2,175,861</b>	<b>2,213,364</b>
<b>Revenue With Rate Increase</b>	<b>1,443,017</b>	<b>1,782,457</b>	<b>2,148,005</b>	<b>2,264,913</b>	<b>2,388,143</b>	<b>2,470,071</b>
<b>Transfer To/(From) Reserves</b>	<b>373,833</b>	<b>58,816</b>	<b>189,896</b>	<b>225,153</b>	<b>212,282</b>	<b>256,706</b>

**Figure 4. Rate Increases and Annual Residential Charges**

	<b>2008-09</b>	<b>Budgeted 2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
<b>Tiburon</b>							
Annual rate revenue increase	0%	0%	25%	20%	15%	12%	12%
Cumulative increase	0%	0%	25%	50%	73%	93%	116%
Annual sewer service charge per EDU	\$478	\$478	\$598	\$717	\$825	\$923	\$1,034
Property tax payment per EDU	\$304	\$304	\$306	\$308	\$311	\$313	\$316
Combined payment per EDU	\$782	\$782	\$903	\$1,025	\$1,135	\$1,237	\$1,350
Annual increase	\$0	\$0	\$122	\$122	\$110	\$101	\$113
Monthly increase	\$0	\$0	\$10	\$10	\$9	\$8	\$9
<b>Belvedere</b>							
Annual rate increase	0%	4%	23%	20%	5%	5%	3%
Cumulative increase	0%	4%	28%	54%	61%	69%	74%
Annual sewer service charge per EDU	\$1,139	\$1,185	\$1,457	\$1,748	\$1,836	\$1,928	\$1,985
Property tax payment per EDU	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Combined payment per EDU	\$1,139	\$1,185	\$1,457	\$1,748	\$1,836	\$1,928	\$1,985
Annual increase	\$0	\$46	\$272	\$291	\$87	\$92	\$58
Monthly increase	\$0	\$4	\$23	\$24	\$7	\$8	\$5

Figure 5A. Fund Balance With and Without Increased Rate Revenue - Tiburon

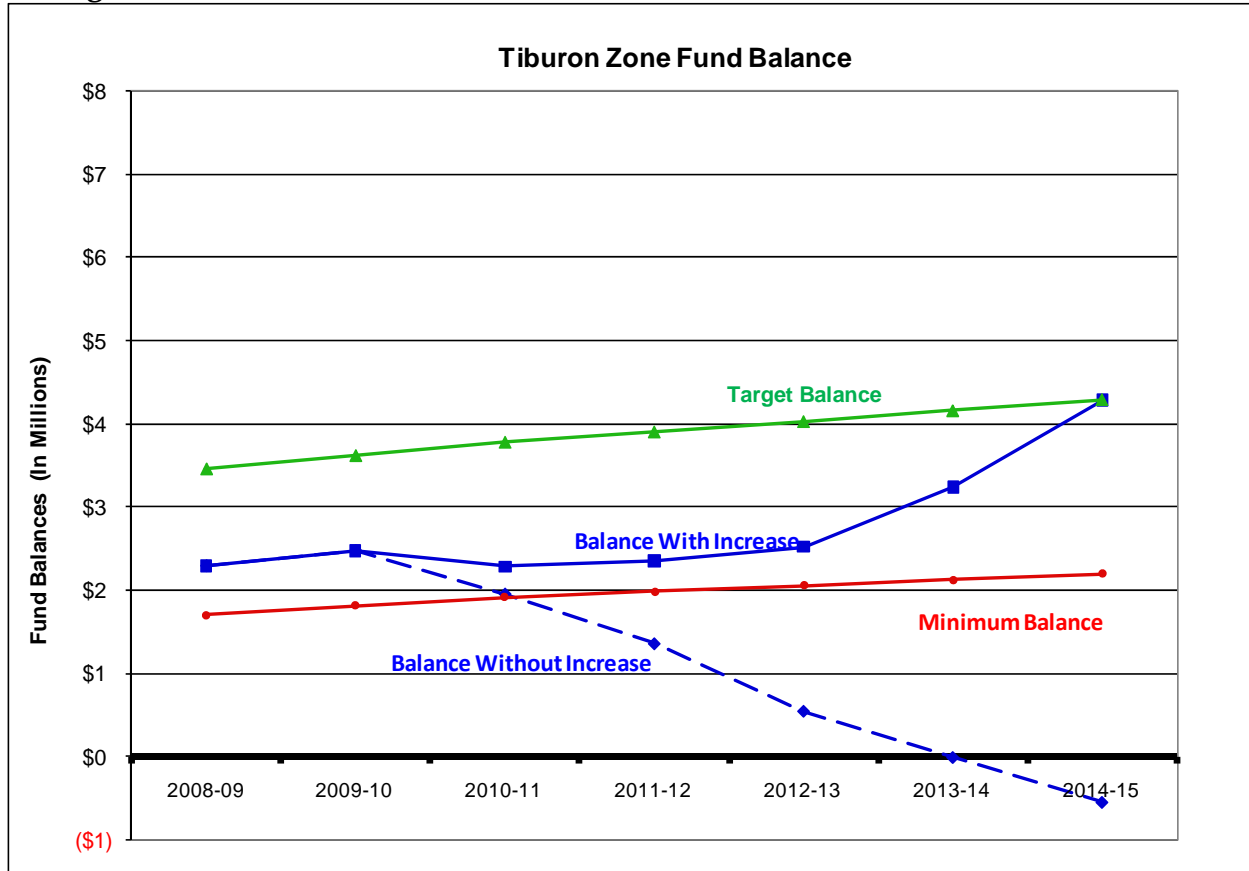
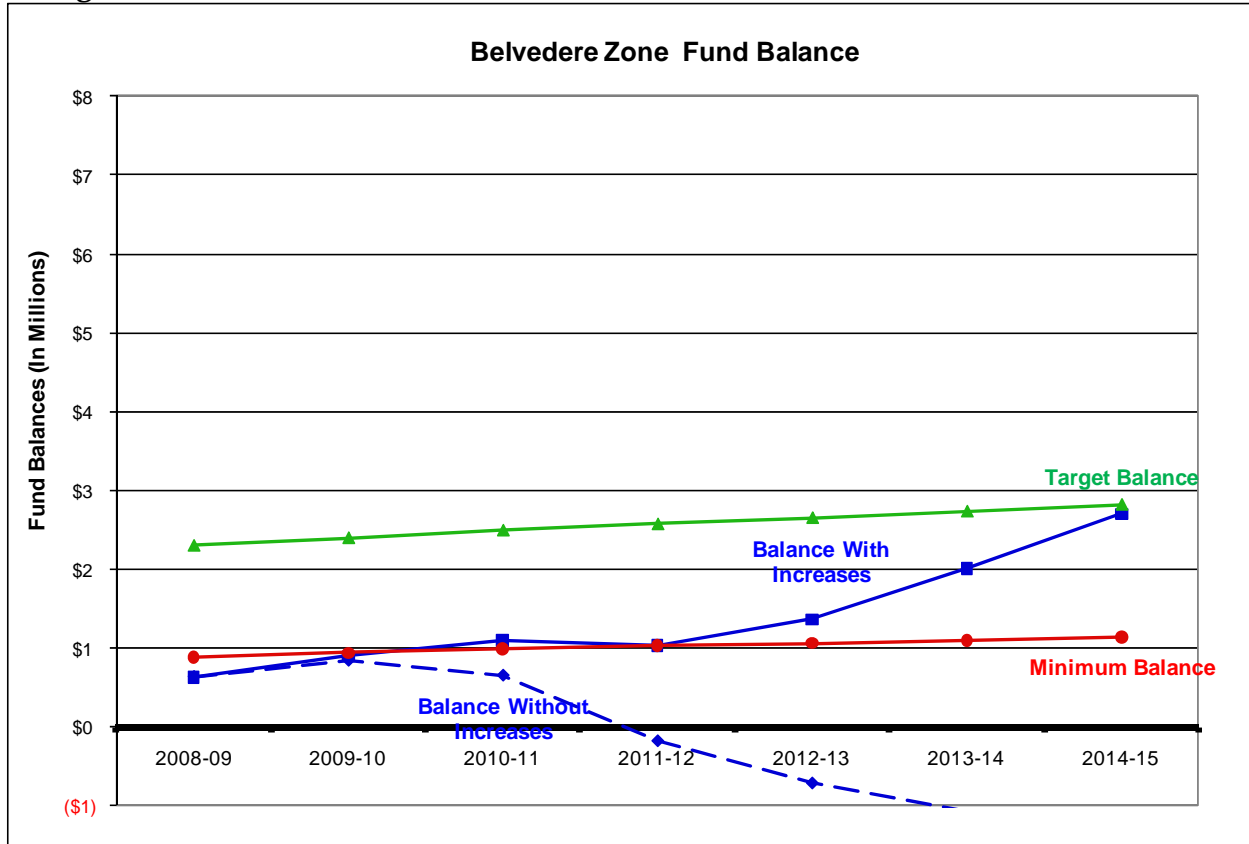


Figure 5B. Fund Balance With and Without Increased Rate Revenue - Belvedere



**Figure 6. Annual Residential Bills In Southern Marin**

	<b>FY 09-10</b>	<b>FY 10-11</b>
<b>City of Sausalito</b>		
Collection System (Sausalito)	\$360	\$422
Treatment (SMCSD)	\$388	\$469
Sewer service charge	\$748	\$891
Property Tax (approx)	\$45	\$37
<b>Total Payment</b>	<b>\$793</b>	<b>\$928</b>
<b>Marin City</b>		
Collection System (SMCSD)	--	--
Treatment (SMCSD)	--	--
Sewer service charge	\$439	\$531
Property Tax (approx)	\$45	\$37
<b>Total Payment</b>	<b>\$484</b>	<b>\$568</b>
<b>Tamalpais Community Services District</b>		
Collection System (TCSD)	--	--
Treatment (SMCSD/SASM)	--	--
Sewer service charge	<b>\$710</b>	<b>\$1,014</b>
<b>City of Mill Valley</b>		
Collection System (Mill Valley)	--	--
Treatment (SASM)	--	--
Sewer service charge	<b>\$297</b>	<b>\$297</b>
<b>SD 5 - Tiburon Zone</b>		
Collection System (SD 5)	--	--
Treatment (SD5)	--	--
Sewer service charge	\$478	\$598
Property Tax (approx)	\$304	\$304
<b>Total Payment</b>	<b>\$782</b>	<b>\$902</b>
<b>SD 5 - Belvedere Zone</b>		
Collection System (SD 5)	--	--
Treatment (SD5)	--	--
Sewer service charge	<b>\$1,185</b>	<b>\$1,457</b>
<b>Ross Valley Sanitary District</b>		
Collection System (RVSD)	\$500	\$500
Treatment (CMSD)	\$254	\$254
Sewer service charge	<b>\$754</b>	<b>\$754</b>

Based on current rates or proposed increased rates.

**Figure 7. Residential Customer Bills Versus Population**

