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Foresthill Public Utility District
Water Rate Study

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Prepared for
Foresthill PUD

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Introduction and Summary of Findings

1.1 BACKGROUND

The Foresthill Public Utility District (the District) currently serves treated water to approximately 1,874 customers, of which approximately 95 percent are residential and 5 percent are non-residential customers. The District's service area comprises the unincorporated community of Foresthill, California, the primary commercial areas serving that community, and a sizeable residential development known as Todd Valley. The Foresthill area is located on the ridge between the North and Middle forks of the American River, commonly referred to as the Foresthill Divide.

The District's service territory encompasses approximately 13,000 acres inhabited primarily with residential development. The District has a population of approximately 5,200.

1.2 PURPOSE OF THE REPORT

The purpose of the report is to provide an explanation and justification of the calculated water rates for the District. Rates have been calculated for the fiscal years 2010-11 through 2015-16. The rates have been calculated in accordance with the requirements of XIIIC et. seq. of the California Constitution, commonly known as Proposition 218, which mandates that the fee or charge imposed is commensurate with the benefit received by those paying the fee.

1.3 SUMMARY OF FINDINGS

Current water rates are insufficient to fund the on-going expenses of the District and need to be revised to provide adequate revenues in the future. On-going expenses include operations and maintenance costs, capital costs, and depreciation.

Governmental Accounting Standards Board Rule 34 (GASB 34) requires public agencies to either include depreciation in their budgeting and rate setting methodology or develop a highly detailed asset management plan. Most public agencies have found it easiest to comply by including depreciation in budgeting and the rate setting methodology. Ideally this money should be set aside in a sinking fund to accrue interest. The money can be used to replace fixed capital assets at the end of their useful lives. This analysis includes depreciation in the rate calculations.

However, since including depreciation in the rate model has a significant impact on the calculated rates, Section 5 includes alternative scenarios that include a more gradual approach to funding depreciation. In the alternative scenarios, depreciation is funded over a four year period as opposed to full depreciation in year 1.

Table 1 shows the calculated water rates for 2010-11 through 2015-16 under the base case, which includes full funding of repair replacement/depreciation. The base case is presented as a hypothetical example to ascertain rates if full funding of replacement and repair is achieved immediately. As discussed later in this report, repair and replacement will be phased in over time to limit the rate increase. Table 2, discussed below, includes the recommended rate structure.

Table 2 shows the calculated rates for the preferred rate scenario as recommended by the Foresthill PUD Board of Directors, Scenario 3B. Scenario 3B is the water rate structure recommended for public consideration and adoption, assuming no significant protest through the Proposition 218 Hearing process. Scenario 3B is discussed in more detail in Section 5.

All of the tables in the report that show the methodology used in calculating the rates are for the base case. Appendix B shows similar tables for Scenario 3B.

1.4 ORGANIZATION OF THE REPORT

This report is divided into seven sections. Following this introduction, Section 2 provides an overview of the District's water system and the current customer base. Section 3 details the projected annual revenue requirements in a five-year financial plan, which serves as the basis for the rate calculations. Section 4 provides the rate analysis and calculations for the base case scenario, which includes fully funding the depreciation for District.

Section 5 provides a discussion of five alternative rate scenarios in addition to the base case. The Board of Directors requested analysis of alternative rate structures based on varying depreciation amounts and the baseline water usage included in the fixed monthly charge. Section 6 includes the findings and recommendations of the analysis. Appendix A provides the budget detail for 2009-10, which served as the basis for projecting costs for 2010-11 and future years. Appendix B provides supporting tables for the rate calculations for Scenario 3B.

Table 1
Summary of Current and Calculated Water Rates – Base Case

	Current Water Rate			2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2010-11 to 2015-16
	Base/ Fixed [1]	Commodity per 1,000 gallons	Base Water Use Allocation	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base Water Use Allocation
Less than 1"	$37.32	$2.24	10,000 gallons	$56.24	$2.02	$58.99	$2.12	$61.86	$2.22	$64.92	$2.33	$68.17	$2.45	$71.63	$2.57	10,000 gallons
Dual (2 homes, 1 parcel)	$71.32	$2.24	20,000 gallons	$112.49	$2.02	$117.98	$2.12	$123.72	$2.22	$129.84	$2.33	$136.35	$2.45	$143.25	$2.57	20,000 gallons
Triple (3 homes, 1 parcel)	$105.32	$2.24	30,000 gallons	$168.73	$2.02	$176.96	$2.12	$185.58	$2.22	$194.75	$2.33	$204.52	$2.45	$214.88	$2.57	30,000 gallons
1" Meter	$64.13	$2.24	18,000 gallons	$102.93	$2.02	$107.96	$2.12	$113.22	$2.22	$118.81	$2.33	$124.77	$2.45	$131.09	$2.57	18,000 gallons
1 1/5" Meter	$124.06	$2.24	35,000 gallons	$207.30	$2.02	$217.42	$2.12	$228.01	$2.22	$239.28	$2.33	$251.28	$2.45	$264.01	$2.57	35,000 gallons
2" Meter	$238.29	$2.24	60,000 gallons	$406.24	$2.02	$426.07	$2.12	$446.82	$2.22	$468.90	$2.33	$492.41	$2.45	$517.36	$2.57	60,000 gallons
Greater than 2"	$579.75	$2.24	175,000 gallons	$1,000.90	$2.02	$1,049.76	$2.12	$1,100.89	$2.22	$1,155.28	$2.33	$1,213.22	$2.45	$1,274.68	$2.57	175,000 gallons
Multiple Units (single meter)																
Per Unit or Space	$35.95	$2.24	10,000 gallons	$53.85	$2.02	$56.48	$2.12	$59.23	$2.22	$62.15	$2.33	$65.27	$2.45	$68.58	$2.57	10,000 gallons

[1] Includes Sugar Pine Surcharge of $6.50 and Repair and Replacement Surcharge of $3.32.

Table 2
Summary of Current and Calculated Water Rates – Preferred Scenario 3B

	Current Water Rate			2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2010-11 to 2015-16
	Base/ Fixed [1]	Commodity per 1,000 gallons	Base Water Use Allocation	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base Water Use Allocation
Less than 1"	$37.32	$2.24	10,000 gallons	$48.21	$1.50	$52.01	$1.61	$55.80	$1.73	$59.61	$1.85	$60.72	$1.88	$62.17	$1.93	7,500 gallons
Dual (2 homes, 1 parcel)	$71.32	$2.24	20,000 gallons	$96.42	$1.50	$104.03	$1.61	$111.59	$1.73	$119.21	$1.85	$121.43	$1.88	$124.34	$1.93	15,000 gallons
Triple (3 homes, 1 parcel)	$105.32	$2.24	30,000 gallons	$144.63	$1.50	$156.04	$1.61	$167.39	$1.73	$178.82	$1.85	$182.15	$1.88	$186.51	$1.93	22,500 gallons
1" Meter	$64.13	$2.24	18,000 gallons	$86.97	$1.50	$93.83	$1.61	$100.65	$1.73	$107.52	$1.85	$109.53	$1.88	$112.15	$1.93	13,500 gallons
1 1/5" Meter	$124.06	$2.24	35,000 gallons	$173.61	$1.50	$187.30	$1.61	$200.92	$1.73	$214.64	$1.85	$218.64	$1.88	$223.88	$1.93	26,250 gallons
2" Meter	$238.29	$2.24	60,000 gallons	$338.75	$1.50	$365.46	$1.61	$392.04	$1.73	$418.81	$1.85	$426.62	$1.88	$436.84	$1.93	45,000 gallons
Greater than 2"	$579.75	$2.24	175,000 gallons	$832.40	$1.50	$898.03	$1.61	$963.35	$1.73	$1,029.12	$1.85	$1,048.31	$1.88	$1,073.42	$1.93	131,250 gallons
Multiple Units (single meter)																
Per Unit or Space	$35.95	$2.24	10,000 gallons	$46.22	$1.50	$49.87	$1.61	$53.50	$1.73	$57.15	$1.85	$58.21	$1.88	$59.61	$1.93	7,500 gallons

[1] Includes Sugar Pine Surcharge of $6.50 and Repair and Replacement Surcharge of $3.32.

Section 2

Water System and Customer Summary

This section provides a brief description of the District's water system and an overview of the District's customer base and current billing structure.

2.1 WATER SYSTEM INFRASTRUCTURE

The District's primary water supply is North Shirttail Creek. Sugar Pine Dam was constructed on North Shirttail Creek by the Bureau of Reclamation (the Bureau) in the 1980's. The District purchased the project from the Bureau in 2003. The storage impoundment behind the dam is referred to as the Sugar Pine Reservoir. Raw water from Sugar Pine Dam flows into a 40-acre ft forebay prior to entering the water treatment plant.

The water treatment plant is considered a direct filtration plant. Two dual media pressure filters provide treatment. The maximum allowable flow based on filter load rates is 2,184 gallons per minute (gpm) or 3 million gallons per day (gpd). Treated water is discharged from the filters, enters onsite storage tanks, then into the distribution system. Transmission mains convey water throughout the system. The entire transmission is fed by gravity, with the exception of a pumped zone in the vicinity of the water treatment plant into the downtown area to increase the system pressure at the higher elevations. Distribution system pipelines are supplied directly from the transmission main. Distribution pipelines are typically smaller diameter and provide service to customers via a service lateral and meter set.

For a more detailed description of the water system, refer to the *Foresthill Public Utility District Water System Master Pla*n, completed by ECO:LOGIC in January 2008.

2.2 CUSTOMER SUMMARY AND RATE STRUCTURE

The District's current water rate structure includes a fixed charge and a commodity rate per 1,000 gallons of usage. While the fixed charge is charged to each water meter and varies with meter size, the commodity rate is applied to a customer's water usage. The current District rates for various meter sizes are shown in **Table 3**.

A typical single family user has a 5/8 or a 3/ 4 inch meter and pays a base fixed charge of $27.50 per unit per month. In addition there are a number of surcharges that are also paid. Meters under 1" are allowed up to 10,000 gallons of use per month before a quantity charge of $2.24 per 1,000 gallons of use is applied.

Customers with greater water demands need larger meters. Larger meters are more expensive to maintain and replace and so are typically charged a higher monthly service charge, as is the case with the District.

Table 3
Current Water Rates and Charges

Meter Size	Charges per Month: Base	Sugar Pine Surcharge	Repair & Replacement Surcharge	System Rehab	Filtration Benefit	TOTAL FIXED	Quantity Charge Per Month	Amount inclued in Fixed Base Charge
Residential/Commercial								
Under 1"	$27.50	$6.50	$3.32			$37.32	$2.24 per 1000 Gallons	10,000 gallons
Dual (2 homes, 1 parcel)	$55.00	$13.00	$3.32	$4.00	$2.00	$77.32	$2.24 per 1000 Gallons	20,000 gallons
Triple (3 homes, 1 parcel)	$82.50	$19.50	$3.32	$8.00	$4.00	$117.32	$2.24 per 1000 Gallons	30,000 gallons
1"	$54.31	$6.50	$3.32		$2.00	$64.13	$2.24 per 1000 Gallons	18,000 gallons
1 1/2"	$114.24	$6.50	$3.32		$8.00	$124.06	$2.24 per 1000 Gallons	35,000 gallons
2"	$228.47	$6.50	$3.32		$16.00	$238.29	$2.24 per 1000 Gallons	60,000 gallons
2" or larger	$569.93	$6.50	$3.32		$16.00	$579.75	$2.24 per 1000 Gallons	175,000 gallons
Multiple Units (single meter)								
Per Unit or Space	$26.13	$6.50	$3.32	$4.00		$39.95	$2.24 per 1000 Gallons	10,000 gallons
Agricultural								
1"	$54.31	$6.50	$3.32		$2.00	$66.13	$1.34 per 1000 Gallons	18,000 gallons
1 1/2"	$114.24	$6.50	$3.32		$8.00	$132.06	$1.34 per 1000 Gallons	35,000 gallons
2"	$228.47	$6.50	$3.32		$16.00	$254.29	$1.34 per 1000 Gallons	60,000 gallons
2" or larger	$569.93	$6.50	$3.32		$16.00	$595.75	$1.34 per 1000 Gallons	175,000 gallons

Source: Foresthill PUD

Table 4 shows the summary of potable water use for Fiscal Year 2008-09, which totaled approximately 1,076.4 acre feet or 350.7 million gallons. **Table 5** shows the number of accounts by the various meter sizes. The majority of customers have a 5/8" or 3/4" meter.

Table 4
Potable Water Use for FY 2008-09

Month	Single Family Residential	Multi-Family Residential	Commercial/ Institutional	Industrial	Bulk Water	**Total**	**Total, 1,000 Gallons**
Jul-08	108.69	2.48	25.39	0.02	17.90	**154.48**	**50,337**
Aug-08	129.46	3.63	35.14	0.02	7.45	**175.70**	**57,252**
Sep-08	125.17	3.01	28.74	0.02	5.84	**162.78**	**53,042**
Oct-08	80.97	2.58	19.02	0.02	5.18	**107.77**	**35,117**
Nov-08	61.41	2.61	11.27	0.02	2.46	**77.77**	**25,341**
Dec-08	38.60	1.74	6.00	0.02	3.01	**49.37**	**16,087**
Jan-09	30.49	2.20	5.36	0.03	3.28	**41.36**	**13,477**
Feb-09	34.98	1.91	5.81	0.03	2.00	**44.73**	**14,575**
Mar-09	24.68	1.47	3.89	0.02	0.59	**30.65**	**9,987**
Apr-09	34.08	3.54	2.45	0.02	4.87	**44.96**	**14,650**
May-09	47.10	7.28	5.60	0.03	7.72	**67.73**	**22,070**
Jun-09	89.15	7.94	16.58	0.03	5.41	**119.11**	**38,812**
Total	**804.78**	**40.39**	**165.25**	**0.28**	**65.71**	**1,076.41**	**350,749**

Table 5
Customers by Meter Size

	Code	Accounts	Units	5/8" & 3/4"	Multiple Units	1"	1 1/5"	2"	2 1/5" or larger	No charge
Residential										
3/4" Meter	34	520	520	520						
5/8" Meter	58	1216	1216	1216						
1" Meter	1M	8				8				
1 1/5" Meter	15	1					1			
Multi-Units	MU, SV, S4,	8	327		327					
2X Meter	2X	22		22						
Dual Service 3/4"	D3	9		9						
Triple Service	S3	2		2						
No Charge	NC	3								3
Limited Income	59	6		6						
Dual Service with Limit	DL	1		1						
Subtotal		**1796**		**1776**		**8**	**1**	**0**	**0**	**3**
Commercial										
3/4" Meter	34	5		5						
5/8" Meter	58	35		35						
1" Meter	1M	3				3				
1 1/4" Meter	15	3					3			
2" Meter	2	6						6		
4" Meter	4	1							1	
6" Meter	6	1							1	
2X Meter	2X	6		6						
Dual Service 3/4"	D3	1		1						
Dual Service with Limit	DL									
Triple Service	S3	2		2						
No Charge	NC	7								7
Accumulate Meter	CM	3		3						
Swimming Pool	SP	1		1						
Subtotal		**74**								
Agricultural										
Ag Meter	36	1		1						
1 1/5" Agri-business	5A	1					1			
2" Agri-business	2A	1						1		
Subtotal		**3**								
Industrial										
Industrial		1				1				
Total		**1874**	**2063**	**1830**	**327**	**12**	**5**	**7**	**2**	**10**

Section 3

Revenue Requirements and Financial Plan

A review of the District's revenue requirements is a key first step in the rate analysis process. The review involves an analysis of current and historical operating revenues and expenses. This section of the report also provides a discussion of projected revenues and expenses.

3.1 HISTORICAL REVENUE AND EXPENSES

Table 6 provides a summary of the District's historical and budgeted revenues and expenses. Operating revenues include water sales, service connections, and various surcharge revenues. In addition, the District also receives property tax revenue and interest income. On average, the District's revenues have increased by approximately 6.4 percent over the past four years.

Operating expenses include operation and maintenance (O&M) costs and depreciation. Non-operating expenses include the $100,000 annual assistance to Assessment District #2 and debt service on current loans and capital leases. On average the District's expenses have increased by 11.4 percent over the past four years. Operating expenses have outpaced District revenues over recent years.

Although the annual deficits would decrease substantially with the exclusion of depreciation as an operating expense, ECO:LOGIC recommends treating depreciation as an operating expense in the rate analysis to be consistent with Government Accounting Standards Board Rule 34 (GASB 34). The base case scenario includes fully funding depreciation. Section 5 includes a discussion and calculated rates for several other rate scenario alternatives that include funding depreciation over four years in a ramped-up fashion (25% in year 1, 50% in year 2, etc.).

3.2 PROJECTED REVENUE REQUIREMENTS

The projected annual revenue requirements are directly related to the projected expenses of the District. **Table 7** shows the projected expenses for fiscal years 2010-11 through 2015-16. The cost adjustment factors are roughly based on the historical percentage increases from **Table 6**, but are rounded and standardized. In general, cost adjustment factors vary by public agency but do tend to fall in the range of 2.5 to 7.0 percent based on ECO:LOGIC's experience with other utility rate studies.

Table 8 shows the projected revenue requirement from water sales for the same fiscal years. The revenue requirement adjusts for other non-water sales related revenues (other revenue sources) and includes $50,000 annually for operating reserves (or net revenues). The annual revenue requirement in 2010-11 is approximately $1.9 million and grows to approximately $2.4 million in 2015-16.

Table 6
Comparison of Historical and Budgeted Revenues and Expenses

	Fiscal Year Ending					% Change
	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Prelim. Budget	2006 to 2009
Operating Revenues						
Sales						
Residential	$644,933	$751,871	$839,750	$959,353	$965,000	14.15%
Business	$194,780	$203,883	$183,646	$135,619	$184,000	(11.37%)
Industrial	$285	$311	$300	$325	$325	4.48%
Total Sales	**$839,998**	**$956,065**	**$1,023,696**	**$1,095,297**	**$1,149,325**	
Other Revenues						
Service Connections	$26,875	$11,250	$22,982	$3,206	$5,000	(50.77%)
Sugar Pine Surcharge	$173,514	$175,597	$176,719	$176,455	$180,000	0.56%
Repair Replacement Surcharge				$0	$91,112	
Other	$43,781	$65,105	$56,326	$31,504	$44,550	(10.39%)
Subtotal Other Revenues	**$244,170**	**$251,952**	**$256,027**	**$211,165**	**$320,662**	
Subtotal Operating Revenues	**$1,084,168**	**$1,208,017**	**$1,279,723**	**$1,306,462**	**$1,469,987**	**6.41%**
Non-Operating Revenues						
Will Serve	$173,000	$74,300	$85,171	$0	$0	(100.00%)
Interest Income	$47,326	$69,574	$48,402	$729	$750	(75.12%)
Property Taxes	$24,631	$78,112	$82,697	$78,625	$76,360	47.24%
Subtotal Non Operating Revenues	**$244,957**	**$221,986**	**$216,270**	**$79,354**	**$77,110**	**(31.32%)**
Total Revenues	**$1,329,125**	**$1,430,003**	**$1,495,993**	**$1,385,816**	**$1,547,097**	**1.40%**
Operating Expenses						
Source of Supply	$79,545	$61,864	$70,315	$80,740	$72,700	0.50%
Pumping	$6,985	$7,286	$16,784	$8,923	$9,350	8.50%
Water Treatment	$120,343	$130,025	$164,344	$166,689	$169,450	11.47%
Transmission and Distribution	$124,369	$186,856	$229,887	$229,673	$218,400	22.69%
Customer Accounts	$19,586	$17,440	$13,151	$20,705	$15,700	1.87%
Administrative and General	$467,564	$561,375	$640,155	$714,865	$739,304	15.20%
Depreciation	$323,454	$339,976	$360,709	$358,135	$358,135	3.45%
Subtotal Operating Expenses	**$1,141,846**	**$1,304,822**	**$1,495,345**	**$1,579,730**	**$1,583,039**	**11.43%**
Non-Operating Expenses						
Assistance - AD #2	$100,000	$100,000	$100,000	$100,000	$100,000	
Loss on Disposal	$0	$56	$794	$0	$0	
Debt Service						
2003 COPs- Sugar PineProject	$235,922	$235,922	$235,922	$235,922	$226,338	
Capital Lease				$30,153	$17,866	
Total Expenses	**$1,477,768**	**$1,640,800**	**$1,832,061**	**$1,945,805**	**$1,927,243**	
Net Revenue (Losses)	**($148,643)**	**($210,797)**	**($336,068)**	**($559,989)**	**($380,146)**	

Source: Foresthill PUD *"rev_exp_comp"*

Table 7
Projected Expenses

	2009-10 Budget	Cost Adj. Factors 2010-11	Cost Adj. Factors After 2010-11	Projected 2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Operating Expenses									
Source of Supply	$72,700	0%	2%	$72,700	$74,154	$75,637	$77,150	$78,693	$80,267
Pumping	$9,350	0%	5%	$9,350	$9,818	$10,308	$10,824	$11,365	$11,933
Water Treatment	$169,450	0%	7%	$169,450	$181,312	$194,003	$207,584	$222,114	$237,662
Transmission and Distribution	$218,400	0%	7%	$218,400	$233,688	$250,046	$267,549	$286,278	$306,317
Customer Accounts	$15,700	0%	2%	$15,700	$16,014	$16,334	$16,661	$16,994	$17,334
Administrative and General	$739,304	0%	7%	$739,304	$791,055	$846,429	$905,679	$969,077	$1,036,912
Subtotal Operating Expenses	**$1,224,904**			**$1,224,904**	**$1,306,040**	**$1,392,758**	**$1,485,447**	**$1,584,521**	**$1,690,426**
Non-Operating Expenses									
Assistance - AD #2	$100,000			$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Loss on Disposal	$0			$0	$0	$0	$0	$0	$0
Subtotal Non-Op Expense	**$100,000**			**$100,000**	**$100,000**	**$100,000**	**$100,000**	**$100,000**	**$100,000**
Debt Service									
2003 COPs- Sugar PineProject	$226,338			$226,338	$224,788	$221,538	$218,025	$214,338	$209,963
Capital Lease [1]	$17,866			$17,886	$17,886	$17,886	$17,886	$17,886	$17,886
Subtotal Debt Service	**$244,204**			**$244,224**	**$242,674**	**$239,424**	**$235,911**	**$232,224**	**$227,849**
Facility Replacement/Depreciation				$358,135	$368,879	$379,945	$391,344	$403,084	$415,177
Total Expenses	**$1,569,108**			**$1,927,263**	**$2,017,593**	**$2,112,127**	**$2,212,701**	**$2,319,829**	**$2,433,451**
Percent Increase				**22.8%**	**4.7%**	**4.7%**	**4.8%**	**4.8%**	**4.9%**

"proj_costs"

[1] District's current capital lease is scheduled to be paid in full by mid 2011-12. The rate study assumes on-going costs in expectation that the District will continue to have on-going vehicle related capital costs.

Table 8
Revenue Requirement Allocated to Water Sales

		Costs Allocated to Water Sales (User Charges) for Fiscal Years: 2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Revenue Requirements							
O&M Expense	*A (From Table 5)*	$1,224,904	$1,306,040	$1,392,758	$1,485,447	$1,584,521	$1,690,426
Assistance - AD #2	*B*	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Facility Replacement/Dep.	*C*	$358,135	$368,879	$379,945	$391,344	$403,084	$415,177
Debt Service	*D*	$244,224	$242,674	$239,424	$235,911	$232,224	$227,849
Subtotal		**$1,927,263**	**$2,017,593**	**$2,112,127**	**$2,212,701**	**$2,319,829**	**$2,433,451**
Operating Reserve Allowance	*E*	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
Subtotal		**$1,977,263**	**$2,067,593**	**$2,162,127**	**$2,262,701**	**$2,369,829**	**$2,483,451**
Less Revenues Met from Other Sources							
Service Connections		($5,000)	($5,000)	($5,000)	($5,000)	($5,000)	($5,000)
Other		($44,550)	($44,550)	($44,550)	($44,550)	($44,550)	($44,550)
Interest Income		($750)	($750)	($750)	($750)	($750)	($750)
Property Taxes		($76,360)	($76,360)	($76,360)	($76,360)	($76,360)	($76,360)
Subtotal	*F*	**($126,660)**	**($126,660)**	**($126,660)**	**($126,660)**	**($126,660)**	**($126,660)**
Rev. Req. Allocated to Water Sales	***G=A+B+C+D+E+F***	**$1,850,603**	**$1,940,933**	**$2,035,467**	**$2,136,041**	**$2,243,169**	**$2,356,791**
Percent Increase			4.9%	4.9%	4.9%	5.0%	5.1%

Table 9 shows the five-year financial plan assuming annual increases in rates. It is assumed that revised rates will be adopted in 2010-11. By 2010-11 net revenues are projected to be positive and the District's expenses (including depreciation) fully funded.

Table 9
Operating Financial Plan

	Budgeted 2009-10	Inflation Assump.	Projected 2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Revenues								
Current Water Sales	$1,149,325		$1,149,325	$1,149,325	$1,149,325	$1,149,325	$1,149,325	$1,149,325
Additional Revenue Required:								
Year / Percent / Months Effective								
2010-11 61.0% 12			$701,278	$701,278	$701,278	$701,278	$701,278	$701,278
2011-12 4.9% 12				$90,330	$90,330	$90,330	$90,330	$90,330
2012-13 4.9% 12					$94,534	$94,534	$94,534	$94,534
2013-14 4.9% 12						$100,574	$100,574	$100,574
2014-15 5.0% 12							$107,127	$107,127
2015-16 5.1% 12								$113,622
Total Revenues from Rates			$1,850,603	$1,940,933	$2,035,467	$2,136,041	$2,243,169	$2,356,791
Other Revenues								
Service Connections	$5,000		$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Other	$44,550		$44,550	$44,550	$44,550	$44,550	$44,550	$44,550
Interest Income	$750		$750	$750	$750	$750	$750	$750
Property Taxes	$76,360		$76,360	$76,360	$76,360	$76,360	$76,360	$76,360
Sugar Pine Surcharge	$180,000		$0					
Repair & Replacement Surcharge	$91,112		$0					
Subtotal Other Revenues	**$397,772**		**$126,660**	**$126,660**	**$126,660**	**$126,660**	**$126,660**	**$126,660**
Total Revenues	**$1,547,097**		**$1,977,263**	**$2,067,593**	**$2,162,127**	**$2,262,701**	**$2,369,829**	**$2,483,451**
Operating Expenses								
Source of Supply	$72,700	2%	$72,700	$74,154	$75,637	$77,150	$78,693	$80,267
Pumping	$9,350	5%	$9,350	$9,818	$10,308	$10,824	$11,365	$11,933
Water Treatment	$169,450	7%	$169,450	$181,312	$194,003	$207,584	$222,114	$237,662
Transmission and Distribution	$218,400	7%	$218,400	$233,688	$250,046	$267,549	$286,278	$306,317
Customer Accounts	$15,700	2%	$15,700	$16,014	$16,334	$16,661	$16,994	$17,334
Administrative and General	$739,304	7%	$739,304	$791,055	$846,429	$905,679	$969,077	$1,036,912
Subtotal Operating Expenses	**$1,224,904**		**$1,224,904**	**$1,306,040**	**$1,392,758**	**$1,485,447**	**$1,584,521**	**$1,690,426**
Non-Operating Expenses								
Assistance - AD #2	$100,000	0%	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Loss on Disposal	$0	0%	$0	$0	$0	$0	$0	$0
Subtotal Non-Op Expense	**$100,000**		**$100,000**	**$100,000**	**$100,000**	**$100,000**	**$100,000**	**$100,000**
Debt Service								
2003 COPs- Sugar PineProject	$226,338	0%	$226,338	$224,788	$221,538	$218,025	$214,338	$209,963
Capital Lease	$17,866	0%	$17,886	$17,886	$17,886	$17,886	$17,886	$17,886
Subtotal Debt Service	**$244,204**		**$244,224**	**$242,674**	**$239,424**	**$235,911**	**$232,224**	**$227,849**
Facility Replacement/Depreciation	$0		$358,135	$368,879	$379,945	$391,344	$403,084	$415,177
Total Expenses	**$1,569,108**		**$1,927,263**	**$2,017,593**	**$2,112,127**	**$2,212,701**	**$2,319,829**	**$2,433,451**
Net Revenues	**($22,011)**		**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**
Net Rev. Before D/S and Depreciation	*$222,193*		*$652,359*	*$661,553*	*$669,369*	*$677,255*	*$685,308*	*$693,025*
Debt Service Coverage	*0.91*		*2.67*	*2.73*	*2.80*	*2.87*	*2.95*	*3.04*
Beginning Balance	**$859,996**		**$837,985**	**$887,985**	**$937,985**	**$987,985**	**$1,037,985**	**$1,087,985**
Net Revenues	($22,011)		$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
Ending Balance	**$837,985**		**$887,985**	**$937,985**	**$987,985**	**$1,037,985**	**$1,087,985**	**$1,137,985**
Target Ending Balance [1]	*$612,452*		*$612,452*	*$653,020*	*$696,379*	*$742,723*	*$792,260*	*$845,213*

Notes: *"proj_cashflow"*

[1] Target ending balance represents 6 months of operating expenses.

The District recently completed its Water Master Plan. The Master Plan identifies future projects to improve the reliability of the District's water system by addressing existing deficiencies or replace aging infrastructure.

The financial plan as shown above does not include a specific financing plan for future projects; however, by funding depreciation and repair and replacement, the District will have approximately $350,000 per year to put towards CIP projects or general repair and replacement as shown in **Table 10**. It is assumed that any future expansion projects to increase capacity to serve new development will be financed by developers, not existing District customers.

Table 10
CIP Projected Cash Flow

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Beginning Balance	**$0**	**$8,135**	**$27,014**	**$56,959**	**$98,303**	**$151,387**	**$0**
Revenues							
Facility Replacement/Depreciation	$358,135	$368,879	$379,945	$391,344	$403,084	$415,177	**$2,316,564**
Subtotal Revenues	**$358,135**	**$368,879**	**$379,945**	**$391,344**	**$403,084**	**$415,177**	**$2,316,564**
Expenses							
CIP Projects/Repair & Replacement [1]	$350,000	$350,000	$350,000	$350,000	$350,000	$350,000	**$2,100,000**
Subtotal Expenses	**$350,000**	**$350,000**	**$350,000**	**$350,000**	**$350,000**	**$350,000**	**$2,100,000**
Ending Balance	**$8,135**	**$27,014**	**$56,959**	**$98,303**	**$151,387**	**$216,564**	**$216,564**

Notes: *"CIP_cashflow"*
[1] This represents the amount of money that could be spent on actual projects.

Section 4

Water Rate Analysis

This section of the report describes the development of water rate calculations for the District. The District's user classifications as described in Section 2 of this report and the revenue requirements reviewed and finalized through the operating and capital cash flow analysis discussed in Section 3 of the report provide the basis for performing the cost of service analysis and rate calculations.

4.1 COST OF SERVICE ANALYSIS

Cost allocation is the method by which the annual water rate revenue requirement is recovered from each customer class based on the cost of providing water service. The total revenue requirements, net of revenue credits from other sources, shown in **Table 8**, is by definition the cost of providing service. These costs must then be allocated to each customer class.

ECO:LOGIC has allocated costs (the revenue requirement to be recovered through water rates) into three cost categories as follows:

- **Customer Costs (fixed costs).** These costs generally include meter reading, billing, and customer service and are considered fixed costs that tend to vary with number of customers served. The $100,000 annual assistance was also included in this category. Customer costs are allocated to customers based on the number of accounts.

- **Capacity Costs (fixed costs)**. Capacity costs are also considered fixed costs, but rather than vary based on the number of customers, tend to vary based on the capacity of the water system. Customers that place greater demand on the water system should pay a proportionally higher cost of service. In general, the demand that each customer could potentially place on the water system is reflected by the size and hydraulic capacity of the water meter. Capacity costs include costs associated with the water system's capacity including fixed water system O&M and repair and replacement. These costs are allocated to customers based on the number of equivalent meters, determined by the relative hydraulic capacity of the meter size relative to a ¾" meter. For this analysis, the District's current rate structure was used as the basis for the hydraulic peaking factors.

- **Commodity Costs (variable costs).** Commodity costs are costs that vary with the amount of actual water consumption. Treatment and pumping costs would fall into this category. Based on the District's cost categories it would appear that the Source of Supply and Treatment costs would fall into the Commodity cost group. However, not all costs in those categories are variable and for purposes of this analysis, these cost categories were split between the Capacity and Commodity group by 30 percent and 70 percent, respectively. This means that it is assumed that approximately 70 percent of the costs are variable in those cost categories.

Appendix A shows how each line item of the District's 2009-10 budget was allocated to each of these three categories. Overall it works out to the fixed charges (customer and capacity) equating to approximately 83 percent of costs and the variable (commodity) charges equating to 17 percent of costs.

Table 11 shows the revenue requirement and the allocation of costs to each of the cost categories.

Table 11
Cost Allocation Categories

		Costs Allocated to Water Sales (User Charges) for Fiscal Years:					
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Revenue Requirement Allocated to Water Sales	*A (From Table 6)*	**$1,850,603**	**$1,940,933**	**$2,035,467**	**$2,136,041**	**$2,243,169**	**$2,356,791**
Allocation of Costs to:							
Customer	12% [1]	$218,753	$229,430	$240,605	$252,493	$265,156	$278,587
Capacity	71% [1]	$1,313,045	$1,377,137	$1,444,211	$1,515,571	$1,591,580	$1,672,197
Commodity	17% [1]	$318,805	$334,366	$350,652	$367,978	$386,433	$406,006

Notes:
[1] See Appendix A

Customer, capacity and commodity components of the revenue requirement are allocated to the customer categories and rates calculated as shown in **Table 12**. The Customer and Capacity charge combined comprise the fixed base charge per month. The Commodity charge represents the flow charge per month per 1,000 gallons above the base allocations.

The Commodity charge is based on the estimated gallons above the base allocations per year. Based on water meter data provided by the District, it was estimated that approximately 157 million gallons were sold above the base usage allocations (the amount of water allocated in the fixed charge) in 2008-09.

Section 5 discusses alternative assumptions and rate calculations that primarily vary the amount of depreciation that is covered in the rate analysis and modifies the base water use allocation, and modifies the assumed inflation rate per year to a fixed 3 percent across the board.

Table 12
Calculation of Customer, Capacity, and Commodity Charges, Base Case

	Number of Accts/Meters	Number of Equiv. Mtrs	Hydr. Peaking Factor [2]	2010-11 Customer	2010-11 Capacity	2010-11 **Total**	2011-12 Customer	2011-12 Capacity	2011-12 **Total**
Customer and Capacity Cost Allocation (Fixed) [1]				$218,753	$1,313,045		$229,430	$1,377,137	
5/8" & 3/4"	1,830	1,830.00	1.00	$8.35	$47.89	**$56.24**	$8.76	$50.23	**$58.99**
Multi-Units	327	310.65	0.95	$8.35	$45.50	**$53.85**	$8.76	$47.72	**$56.48**
1"	12	23.70	1.97	$8.35	$94.58	**$102.93**	$8.76	$99.20	**$107.96**
1 1/5"	5	20.77	4.15	$8.35	$198.95	**$207.30**	$8.76	$208.66	**$217.42**
2"	7	58.16	8.31	$8.35	$397.89	**$406.24**	$8.76	$417.31	**$426.07**
Over 2"	2	41.45	20.72	$8.35	$992.55	**$1,000.90**	$8.76	$1,041.00	**$1,049.76**
Total	2,183	2,284.73							

	Total Gallons		2010-11 Commodity		2011-12 Commodity	
Commodity Cost Allocation (Variable) [1]			$318,805		$334,366	
Total Annual Use	350,749,275	gallons				
Est. Flow over Base Allocation [3]	157,976,000	gallons	**$2.02**	*per 1000 gallons*	**$2.12**	*per 1000 gallons*

Notes:
[1] See Table 10
[2] Based on existing rate structure.
[3] Based on water meter data provided by the District.

Table 12
Calculation of Customer, Capacity, and Commodity Charges, Base Case *(continued)*

	2012-13			2013-14			2014-15			2015-16		
	Customer	Capacity	**Total**	Customer	Capacity	**Total**	Customer	Capacity	**Total**	Customer	Capacity	**Total**
	$240,605	$1,444,211		$252,493	$1,515,571		$265,156	$1,591,580		$278,587	$1,672,197	
5/8" & 3/4"	$9.18	$52.68	**$61.86**	$9.64	$55.28	**$64.92**	$10.12	$58.05	**$68.17**	$10.63	$60.99	**$71.63**
Multi-Units	$9.18	$50.04	**$59.23**	$9.64	$52.52	**$62.15**	$10.12	$55.15	**$65.27**	$10.63	$57.94	**$68.58**
1"	$9.18	$104.03	**$113.22**	$9.64	$109.17	**$118.81**	$10.12	$114.65	**$124.77**	$10.63	$120.45	**$131.09**
1 1/5"	$9.18	$218.83	**$228.01**	$9.64	$229.64	**$239.28**	$10.12	$241.16	**$251.28**	$10.63	$253.37	**$264.01**
2"	$9.18	$437.63	**$446.82**	$9.64	$459.26	**$468.90**	$10.12	$482.29	**$492.41**	$10.63	$506.72	**$517.36**
Over 2"	$9.18	$1,091.70	**$1,100.89**	$9.64	$1,145.64	**$1,155.28**	$10.12	$1,203.10	**$1,213.22**	$10.63	$1,264.04	**$1,274.68**
Total												

Commodity	Commodity	Commodity	Commodity
$350,652	$367,978	$386,433	$406,006
$2.22 *per 1000 gallons*	**$2.33** *per 1000 gallons*	**$2.45** *per 1000 gallons*	**$2.57** *per 1000 gallons*

Section 5

Water Rate Alternatives Analysis

The above discussion references the base case rate analysis. However, the District also wanted to look at several alternative scenarios to the base case. These alternatives are summarized as follows:

Scenario 1: Base Case, which includes full depreciation

Scenario 2: Ramped up depreciation beginning in 2010-11 and a uniform 3% annual cost inflator for the expense categories

Scenario 3A: Includes ramped up depreciation beginning in 2011-12 and a uniform 3% annual cost inflator for the expense categories. It also includes a reduced usage allowed in the base rate, from 10,000 gallons per month to 7,500 gallons per month

Scenario 3B: Same as Scenario 3, except the ramped up depreciation begins in 2010-11 and the 2010-11 commodity or flow charge is held at $1.50 per 1,000 gallons and then escalated in future years.

Scenario 4A: Same as Scenario 2 (ramped up depreciation beginning in 2010-11), with the exception of a reduced usage allowed in the base rate, from 10,000 gallons per month to 5,000 gallons per month

Scenario 4B: Same as Scenario 4, except the ramped up depreciation begins in 2011-12 and 2010-11 commodity or flow charge is held at $1.50 per 1,000 gallons and then escalated in future years.

Table 13 summarizes the results of the various rate scenario alternatives. It is our understanding that the Foresthill Board of Directors has recommended implementation of Scenario 3B. Under Scenario 3B, the fixed or base charge would increase from $37.32 (see Table 2) to $48.21 per month. The commodity or flow charge would decrease from the current $2.24 to $1.50 per 1,000 gallons.

Table 13
Summary of Scenarios Analysis

Scenario	1				2				3A				3B				4A				4B			
Description	**Base Case Full Fac. Rep./Dep.; Current Base Usage**				Ramped Up Fac. Rep/Dep.; Current Base Usage				Ramped Up Fac. Rep/Dep. Beginning 2011/12; Reduced Base Usage (7500)				***Preferred Alternative 1*** Ramped Up Fac. Rep/Dep. Beginning 2010/11; Reduced Base Usage (7500) - FY10/11 Flow charge @ $1.50 per 1,000 Gal				***Preferred Alternative 2*** Ramped Up Fac. Rep/Dep. Beginning 2010/11; Red. Base Usage (5000)				Ramped Up Fac. Rep/Dep. Beginning 2011/12; Reduced Base Usage (5000) - FY10/11 Flow charge @ $1.50 per 1,000 Gal			
Cost Inflator (11/12 through 15/16)																								
Source of Supply	2.0%				3.0%				3.0%				3.0%				3.0%				3.0%			
Pumping	5.0%				3.0%				3.0%				3.0%				3.0%				3.0%			
Water Treatment	7.0%				3.0%				3.0%				3.0%				3.0%				3.0%			
Transmission and Distribution	7.0%				3.0%				3.0%				3.0%				3.0%				3.0%			
Customer Accounts	2.0%				3.0%				3.0%				3.0%				3.0%				3.0%			
Administrative and General	7.0%				3.0%				3.0%				3.0%				3.0%				3.0%			
Facility Replacement/Dep.	3.0%				3.0%				3.0%				3.0%				3.0%				3.0%			
Allocation of Costs to:	*Based on 2009-10 Expenses*				*Based on 2009-10 Expenses*				*Based on 2009-10 Expenses*				*Assumed*				*Assumed*				*Assumed*			
Fixed - (Customer & Capacity)	82.8%				82.8%				82.8%				82.9%				83.7%				78.8%			
Variable - (Commodity)	17.2%				17.2%				17.2%				17.1%				16.3%				21.2%			
Expenses - 2010-11																								
O&M Expense	$1,306,040				$1,224,904				$1,224,904				$1,224,904				$1,224,904				$1,224,904			
Assistance - AD #2	$100,000				$100,000				$100,000				$100,000				$100,000				$100,000			
Facility Replacement/Dep.	$368,879				$89,534				$0				$89,534				$89,534				$0			
Debt Service	$244,224				$244,224				$244,224				$244,224				$244,224				$244,224			
Operating Reserve Allowance	$50,000				$50,000				$50,000				$50,000				$50,000				$50,000			
Total	**$2,069,143**				**$1,708,662**				**$1,619,128**				**$1,708,662**				**$1,708,662**				**$1,619,128**			
Difference with Base Case					*$360,482*				*$450,015*				*$360,482*				*$360,482*				*$450,015*			
Depreciation																								
Actual Full Depreciation - 2009-10	$358,135				$358,135				$358,135				$358,135				$358,135				$358,135			
Year 1 -2010-11	$358,135				$89,534				$0				$89,534				$89,534				$0			
Year 2 -2011-12	$368,879				$179,068				$89,534				$179,068				$179,068				$89,534			
Year 3 -2012-13	$379,945				$268,601				$179,068				$268,601				$268,601				$179,068			
Year 4 -2013-14	$391,344				$358,135				$268,601				$358,135				$358,135				$268,601			
Total Estimated CIP Projects funded through 2015-16	$2,100,000				$1,233,000				$948,000				$1,217,000				$1,217,000				$948,000			
Rate Calculations - SFU	*Base*	*$ Incr.*	*Per 1000 Gal*	*$ Incr.*	*Base*	*$ Incr.*	*Per 1000 Gal*	*$ Incr.*	*Base*	*$ Incr.*	*Per 1000 Gal*	*$ Incr.*	*Base*	*$ Incr.*	*Per 1000 Gal*	*$ Incr.*	*Base*	*$ Incr.*	*Per 1000 Gal*	*$ Incr.*	*Base*	*$ Incr.*	*Per 1000 Gal*	*$ Incr.*
Existing Rate [1]	$37.32		$2.24		$37.32		$2.24		$37.32		$2.24		$37.32		$2.24		$37.32		$2.24		$37.32		$2.24	
Year 1 -2010-11	$56.24	$18.92	$2.02	($0.22)	$48.08	*$10.76*	$1.73	($0.51)	$45.36	*$8.04*	$1.42	($0.82)	$48.21	*$10.89*	$1.50	($0.74)	$48.61	*$11.29*	$1.22	($1.02)	$43.25	*$5.93*	$1.50	($0.74)
Year 2 -2011-12	$58.99	$2.75	$2.12	*$0.10*	$51.87	*$3.79*	$1.86	*$0.14*	$49.15	*$3.79*	$1.54	*$0.12*	$52.01	*$3.80*	$1.61	*$0.12*	$52.45	*$3.83*	$1.32	*$0.10*	$46.87	*$3.61*	$1.62	*$0.13*
Year 3 -2012-13	$61.86	$2.87	$2.22	*$0.10*	$55.64	*$3.77*	$2.00	*$0.14*	$52.92	*$3.77*	$1.66	*$0.12*	$55.80	*$3.78*	$1.73	*$0.12*	$56.26	*$3.81*	$1.41	*$0.10*	$50.46	*$3.60*	$1.75	*$0.12*
Year 4 -2013-14	$64.92	$3.06	$2.33	*$0.11*	$59.44	*$3.80*	$2.13	*$0.14*	$56.72	*$3.80*	$1.78	*$0.12*	$59.61	*$3.81*	$1.85	*$0.12*	$60.10	*$3.84*	$1.51	*$0.10*	$54.09	*$3.62*	$1.87	*$0.13*
Base Usage Flow Allocation	10,000 gallons				10,000 gallons				7,500 gallons				7,500 gallons				5,000 gallons				5,000 gallons			

[1] Includes Sugar Pine Surcharge of $6.50 and Repair and Replacement Surcharge of $3.32.
Sugar Pine Debt Service and Repair and Replacement costs are built into future years rate calculations and surcharges are assumed to be eliminated.

Section 6

Findings and Recommendations

Through this rate analysis it was determined that current water rates are insufficient to fund the on-going expenses of the District and need to be increased to provide adequate revenues in the future.

The current rate structure provides for an allocation, through a surcharge, for approximately 25 percent of depreciation. The base case analysis shows the rates if full depreciation was realized through the rates. ECO:LOGIC recognizes that fully funding depreciation does significantly impact the monthly charges and therefore to minimize the rate impact, the alternatives analysis included several scenarios where the depreciation expense is ramped up over four years.

It is recommended that the District move towards eventual full funding of depreciation. This is likely to be the only way, unless the District incurs debt, to fund projects to improve the long term reliability of the water system.

The rates under any of the five scenarios meet the requirements of Proposition 218, in terms of how the rates are calculated. Each customer would pay a monthly charge based on its proportional share of the cost of service.

Appendix A

Budget Detail and Cost Allocation

Table A-1
Foresthill PUD
Water Rate Analysis
Detail Revenue and Expenses

DRAFT

	Actual	Prelim Budget	2009-10		
Fiscal Year	2008-09	2009-10	Customer	Capacity	Commodity
Revenues					
Sales					
Residential	$959,353	$965,000			
Commercial	$135,619	$184,000			
Industrial	$325	$325			
Service Connections					
Meter Installations	$3,206	$5,000			
3/4" meter Upgrade	$0	$0			
DSCC - Will Serves	$0	$0			
Sugar Pine Surcharge	$176,455	$180,000			
Repair Replacement Surcharge	$0	$91,112			
Other					
Line Taps	$81	$1,300			
Inspection Fees	$0	$0			
Water Charge Penalties	$18,745	$19,000			
Service Charges	$6,205	$12,750			
Misc. Income	$5,148	$9,000			
Standby Charges	$1,325	$2,500			
Interest Income	$729	$750			
Property Taxes	$78,625	$76,360			
Total Revenues	**$1,385,816**	**$1,547,097**			
Operating Expenses					
Source of Supply					
Salaries	$11,140	$10,000		$3,000	$7,000
Maintenance	$899	$1,000		$300	$700
Instrumentation Report/Study	$745	$2,700		$810	$1,890
SP and Mill Creek Pipeline Maint.	$10,470	$0		$0	$0
Restoration Fee	$22,259	$23,000		$6,900	$16,100
State Dam Inspection	$30,499	$31,000		$9,300	$21,700
H2O Rights and Storage Fees	$1,029	$1,200		$360	$840
Vehicle Expense	$341	$400		$120	$280
Power	$3,358	$3,400		$1,020	$2,380
Subtotal Source of Supply	**$80,740**	**$72,700**	**$0**	**$21,810**	**$50,890**
Pumping					
Maintenance	$24	$250		$75	$175
Power	$7,079	$7,200		$2,160	$5,040
Propoane	$1,600	$1,600		$480	$1,120
Vehicle Expense	$220	$300		$90	$210
Subtotal Pumping	**$8,923**	**$9,350**	**$0**	**$2,805**	**$6,545**
Treatment					
Salaries	$109,407	$110,000		$33,000	$77,000
Equipment Maintenance	$8,384	$7,000		$2,100	$4,900
General Maintenance	$5,061	$5,500		$1,650	$3,850
State Dept. of Health Serv.	$3,980	$4,500		$1,350	$3,150
Water Analysis	$8,806	$9,000		$2,700	$6,300
Vehicle Expense	$2,601	$2,700		$810	$1,890
Vehicle Maintenance	$156	$500		$150	$350
Chemicals	$19,768	$20,000		$6,000	$14,000

Table A-1
Foresthill PUD
Water Rate Analysis
Detail Revenue and Expenses

DRAFT

	Actual	Prelim Budget	2009-10		
Fiscal Year	2008-09	2009-10	Customer	Capacity	Commodity
Power	$5,985	$7,500		$2,250	$5,250
Propane	$2,541	$2,750		$825	$1,925
Subtotal Treatment	**$166,689**	**$169,450**	**$0**	**$50,835**	**$118,615**
Transmission and Distribution					
Salaries	$180,898	$181,000		$54,300	$126,700
Maintenance	$20,253	$20,500		$6,150	$14,350
Foresthill Pipeline Maintenance	$11,470	$0		$0	$0
Equipment Maintenance	$5,909	$5,000		$1,500	$3,500
Vehicle Expense	$8,119	$8,500		$2,550	$5,950
Vehicle Maintenance	$2,633	$3,000		$900	$2,100
USA	$150	$150		$45	$105
Propane	$241	$250		$75	$175
Subtotal Transmission & Dist	**$229,673**	**$218,400**	**$0**	**$65,520**	**$152,880**
Meter Reading					
Salaries	$19,053	$14,000	$14,000		
Vehicle Expense	$1,652	$1,700	$1,700		
Subtotal Meter Reading	**$20,705**	**$15,700**	**$15,700**		**$0**
Administration					
Salaries	$217,368	$220,000	$110,000	$110,000	
Board Remuneration	$7,950	$0		$0	
Office Maintenance	$1,910	$2,000		$2,000	
Vehicle Maintenance/Expense	$1,218	$1,400		$1,400	
Accounting and Auditing	$7,700	$7,800		$7,800	
County Tax Collection Charge	$4,638	$4,700		$4,700	
Legal Services	$42,836	$20,000		$20,000	
Engineering Services	$7,422	$8,000		$8,000	
Office Supplies	$15,084	$14,500		$14,500	
Utilities/Telephone	$5,143	$6,000		$6,000	
Subtotal Administration	**$311,269**	**$284,400**	**$110,000**	**$174,400**	**$0**
General Expenses					
Travel Conferences	$5,849	$6,000		$6,000	
Other General Exp	$13,003	$10,000		$10,000	
Public Information Program	$3,802	$4,000		$4,000	
Dues & Subscriptions	$8,874	$9,000		$9,000	
Computer System Maintenance	$10,849	$11,500		$11,500	
Worker's Comp Insurance	$20,165	$17,200		$17,200	
Liability & Vehicle Insurance	$32,753	$32,500		$32,500	
FICA-MC	$38,684	$39,000		$39,000	
State Unemployment Insurance	$1,448	$1,900		$1,900	
Maintenance - Gen Plant	$266	$500		$500	
Property Taxes	$65	$65		$65	
Computer System Maintenance	$5,036	$0		$0	
Prop 218 Cost	$473	$3,000		$3,000	
Subtotal General Expenses	**$141,267**	**$134,665**	**$0**	**$134,665**	**$0**
Employee Benefits					
OPEB Med Pre- Funding		$75,888		$75,888	
Dental Insurance	$8,793	$8,800		$8,800	
Vision Insurance	$3,101	$3,500		$3,500	
Medical Insurance	$134,206	$113,951		$113,951	

Table A-1
Foresthill PUD
Water Rate Analysis
Detail Revenue and Expenses

DRAFT

	Actual	Prelim Budget	2009-10		
Fiscal Year	2008-09	2009-10	Customer	Capacity	Commodity
Life Insurance	$4,566	$4,700		$4,700	
Disability Insurance	$0	$0		$0	
Retirement	$105,097	$106,000		$106,000	
Uniforms	$4,393	$4,400		$4,400	
Education Incentive	$2,173	$3,000		$3,000	
Subtotal Employee Benefits	**$262,329**	**$320,239**	**$0**	**$320,239**	**$0**
Total Operating Expense	**$1,221,595**	**$1,224,904**	**$125,700**	**$770,274**	**$328,930**
Non-Operating Expense					
Interest Expense	$0				
Assistance - AD #2	$100,000	$100,000	$100,000		
Loss on Disposal					
Depreciation	$358,135	$358,135		$358,135	
Total Non-Operating	**$458,135**	**$458,135**	**$100,000**	**$358,135**	**$0**
Sugar Pine Debt Service	$235,922	$226,338		$226,338	
Total Expenses	**$1,915,652**	**$1,909,377**	**$225,700**	**$1,354,747**	**$328,930**
Percent Fixed vs. Variable			*12%*	*71%*	*17%*

Source: FHPUD *"detail_rev_exp"*

Appendix B

Scenario 3B Support Calculations Tables

Table B-1
Foresthill PUD
Water Rate Analysis
Summary of Current and Calculated Water Rates

Scenario 3b
Ramped Up Fac. Rep/Dep. Beginning 2010/11; Reduced Base Usage (7500) - FY10/11 Flow

DRAFT

	Current Water Rate			2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2010-11 to 2015-16
	Base/ Fixed [1]	Commodity per 1,000 gallons	Base Water Use Allocation	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base/ Fixed [1]	Comm. per 1,000 gallons	Base Water Use Allocation
Less than 1"	$37.32	$2.24	10,000 gallons	$48.21	$1.50	$52.01	$1.61	$55.80	$1.73	$59.61	$1.85	$60.72	$1.88	$62.17	$1.93	7,500 gallons
Dual (2 homes, 1 parcel)	$71.32	$2.24	20,000 gallons	$96.42	$1.50	$104.03	$1.61	$111.59	$1.73	$119.21	$1.85	$121.43	$1.88	$124.34	$1.93	15,000 gallons
Triple (3 homes, 1 parcel)	$105.32	$2.24	30,000 gallons	$144.63	$1.50	$156.04	$1.61	$167.39	$1.73	$178.82	$1.85	$182.15	$1.88	$186.51	$1.93	22,500 gallons
1" Meter	$64.13	$2.24	18,000 gallons	$86.97	$1.50	$93.83	$1.61	$100.65	$1.73	$107.52	$1.85	$109.53	$1.88	$112.15	$1.93	13,500 gallons
1 1/5" Meter	$124.06	$2.24	35,000 gallons	$173.61	$1.50	$187.30	$1.61	$200.92	$1.73	$214.64	$1.85	$218.64	$1.88	$223.88	$1.93	26,250 gallons
2" Meter	$238.29	$2.24	60,000 gallons	$338.75	$1.50	$365.46	$1.61	$392.04	$1.73	$418.81	$1.85	$426.62	$1.88	$436.84	$1.93	45,000 gallons
Greater than 2"	$579.75	$2.24	175,000 gallons	$832.40	$1.50	$898.03	$1.61	$963.35	$1.73	$1,029.12	$1.85	$1,048.31	$1.88	$1,073.42	$1.93	131,250 gallons
Multiple Units (single meter)																
Per Unit or Space	$35.95	$2.24	10,000 gallons	$46.22	$1.50	$49.87	$1.61	$53.50	$1.73	$57.15	$1.85	$58.21	$1.88	$59.61	$1.93	7,500 gallons

[1] Includes Sugar Pine Surcharge of $6.50 and Repair and Replacement Surcharge of $3.32.

Table B-2
Foresthill PUD
Water Rate Analysis
Projected Expenses

DRAFT

Scenario 3b
Ramped Up Fac. Rep/Dep. Beginning 2010/11; Reduced Base Usage (7500) - FY10/11 Flow charge @ $1.50 per 1,000 Gal

	2009-10	Cost Adj. Factors		Projected					
	Budget	*2010-11*	*After 2010-11*	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Operating Expenses									
Source of Supply	$72,700	0%	3%	$72,700	$74,881	$77,127	$79,441	$81,824	$84,279
Pumping	$9,350	0%	3%	$9,350	$9,631	$9,919	$10,217	$10,524	$10,839
Water Treatment	$169,450	0%	3%	$169,450	$174,534	$179,770	$185,163	$190,717	$196,439
Transmission and Distribution	$218,400	0%	3%	$218,400	$224,952	$231,701	$238,652	$245,811	$253,185
Customer Accounts	$15,700	0%	3%	$15,700	$16,171	$16,656	$17,156	$17,670	$18,201
Administrative and General	$739,304	0%	3%	$739,304	$761,483	$784,328	$807,857	$832,093	$857,056
Subtotal Operating Expenses	**$1,224,904**			**$1,224,904**	**$1,261,651**	**$1,299,501**	**$1,338,486**	**$1,378,640**	**$1,419,999**
Non-Operating Expenses									
Assistance - AD #2	$100,000			$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Loss on Disposal	$0			$0	$0	$0	$0	$0	$0
Subtotal Non-Op Expense	**$100,000**			**$100,000**	**$100,000**	**$100,000**	**$100,000**	**$100,000**	**$100,000**
Debt Service									
2003 COPs- Sugar PineProject	$226,338			$226,338	$224,788	$221,538	$218,025	$214,338	$209,963
Capital Lease [1]	$17,866			$17,886	$17,886	$17,886	$17,886	$17,886	$17,886
Subtotal Debt Service	**$244,204**			**$244,224**	**$242,674**	**$239,424**	**$235,911**	**$232,224**	**$227,849**
Facility Replacement/Depreciation				$89,534	$179,068	$268,601	$358,135	$358,135	$368,879
Total Expenses	**$1,569,108**			**$1,658,662**	**$1,783,392**	**$1,907,525**	**$2,032,532**	**$2,068,999**	**$2,116,727**
Percent Increase				**5.7%**	**7.5%**	**7.0%**	**6.6%**	**1.8%**	**2.3%**

"proj_costs"

[1] District's current capital lease is scheduled to be paid in full by mid 2011-12. The rate study assumes on-going costs in expectation that the District will continue to have on-going vehicle related capital costs.

Table B-3
Foresthill PUD
Water Rate Analysis
Revenue Requirement Allocated to Water Sales

DRAFT

Scenario 3b
Ramped Up Fac. Rep/Dep. Beginning 2010/11; Reduced Base Usage (7500) - FY10/11 Flow charge @ $1.50 per

		Costs Allocated to Water Sales (User Charges) for Fiscal Years:					
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Revenue Requirements							
O&M Expense	*A (From Table 5)*	$1,224,904	$1,261,651	$1,299,501	$1,338,486	$1,378,640	$1,419,999
Assistance - AD #2	*B*	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Facility Replacement/Dep.	*C*	$89,534	$179,068	$268,601	$358,135	$358,135	$368,879
Debt Service	*D*	$244,224	$242,674	$239,424	$235,911	$232,224	$227,849
Subtotal		**$1,658,662**	**$1,783,392**	**$1,907,525**	**$2,032,532**	**$2,068,999**	**$2,116,727**
Operating Reserve Allowance	*E*	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
Subtotal		**$1,708,662**	**$1,833,392**	**$1,957,525**	**$2,082,532**	**$2,118,999**	**$2,166,727**
Less Revenues Met from Other Sources							
Service Connections		($5,000)	($5,000)	($5,000)	($5,000)	($5,000)	($5,000)
Other		($44,550)	($44,550)	($44,550)	($44,550)	($44,550)	($44,550)
Interest Income		($750)	($750)	($750)	($750)	($750)	($750)
Property Taxes		($76,360)	($76,360)	($76,360)	($76,360)	($76,360)	($76,360)
Subtotal	*F*	**($126,660)**	**($126,660)**	**($126,660)**	**($126,660)**	**($126,660)**	**($126,660)**
Rev. Req. Allocated to Water Sales	***G=A+B+C+D+E+F***	**$1,582,002**	**$1,706,732**	**$1,830,865**	**$1,955,872**	**$1,992,339**	**$2,040,067**
Percent Increase			7.9%	7.3%	6.8%	1.9%	2.4%

Table B-4
Foresthill PUD
Water Rate Analysis
Operating Financial Plan

DRAFT

Scenario 3b
Ramped Up Fac. Rep/Dep. Beginning 2010/11; Reduced Base Usage (7500) - FY10/11 Flow charge

	Budgeted	Inflation	Projected					
	2009-10	Assump.	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Revenues								
Current Water Sales	$1,149,325		$1,149,325	$1,149,325	$1,149,325	$1,149,325	$1,149,325	$1,149,325
Additional Revenue Required:								
Year / Percent / Months Effective								
2010-11 / 37.6% / 12			$432,677	$432,677	$432,677	$432,677	$432,677	$432,677
2011-12 / 7.9% / 12				$124,730	$124,730	$124,730	$124,730	$124,730
2012-13 / 7.3% / 12					$124,133	$124,133	$124,133	$124,133
2013-14 / 6.8% / 12						$125,006	$125,006	$125,006
2014-15 / 1.9% / 12							$36,467	$36,467
2015-16 / 2.4% / 12								$47,728
Total Revenues from Rates			$1,582,002	$1,706,732	$1,830,865	$1,955,872	$1,992,339	$2,040,067
Other Revenues								
Service Connections	$5,000		$5,000	$5,000	$5,000	$5,000	$5,000	$5,000
Other	$44,550		$44,550	$44,550	$44,550	$44,550	$44,550	$44,550
Interest Income	$750		$750	$750	$750	$750	$750	$750
Property Taxes	$76,360		$76,360	$76,360	$76,360	$76,360	$76,360	$76,360
Sugar Pine Surcharge	$180,000		$0					
Repair & Replacement Surcharge	$91,112		$0					
Subtotal Other Revenues	**$397,772**		**$126,660**	**$126,660**	**$126,660**	**$126,660**	**$126,660**	**$126,660**
Total Revenues	**$1,547,097**		**$1,708,662**	**$1,833,392**	**$1,957,525**	**$2,082,532**	**$2,118,999**	**$2,166,727**
Operating Expenses								
Source of Supply	$72,700	3%	$72,700	$74,881	$77,127	$79,441	$81,824	$84,279
Pumping	$9,350	3%	$9,350	$9,631	$9,919	$10,217	$10,524	$10,839
Water Treatment	$169,450	3%	$169,450	$174,534	$179,770	$185,163	$190,717	$196,439
Transmission and Distribution	$218,400	3%	$218,400	$224,952	$231,701	$238,652	$245,811	$253,185
Customer Accounts	$15,700	3%	$15,700	$16,171	$16,656	$17,156	$17,670	$18,201
Administrative and General	$739,304	3%	$739,304	$761,483	$784,328	$807,857	$832,093	$857,056
Subtotal Operating Expenses	**$1,224,904**		**$1,224,904**	**$1,261,651**	**$1,299,501**	**$1,338,486**	**$1,378,640**	**$1,419,999**
Non-Operating Expenses								
Assistance - AD #2	$100,000	0%	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
Loss on Disposal	$0	0%	$0	$0	$0	$0	$0	$0
Subtotal Non-Op Expense	**$100,000**		**$100,000**	**$100,000**	**$100,000**	**$100,000**	**$100,000**	**$100,000**
Debt Service								
2003 COPs- Sugar PineProject	$226,338	0%	$226,338	$224,788	$221,538	$218,025	$214,338	$209,963
Capital Lease	$17,866	0%	$17,886	$17,886	$17,886	$17,886	$17,886	$17,886
Subtotal Debt Service	**$244,204**		**$244,224**	**$242,674**	**$239,424**	**$235,911**	**$232,224**	**$227,849**
Facility Replacement/Depreciation	$0		$89,534	$179,068	$268,601	$358,135	$358,135	$368,879
Total Expenses	**$1,569,108**		**$1,658,662**	**$1,783,392**	**$1,907,525**	**$2,032,532**	**$2,068,999**	**$2,116,727**
Net Revenues	**($22,011)**		**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**
Net Rev. Before D/S and Depreciation	*$222,193*		*$383,758*	*$471,741*	*$558,025*	*$644,046*	*$640,359*	*$646,728*
Debt Service Coverage	*0.91*		*1.57*	*1.94*	*2.33*	*2.73*	*2.76*	*2.84*
Beginning Balance	**$859,996**		**$837,985**	**$887,985**	**$937,985**	**$987,985**	**$1,037,985**	**$1,087,985**
Net Revenues	($22,011)		$50,000	$50,000	$50,000	$50,000	$50,000	$50,000
Ending Balance	**$837,985**		**$887,985**	**$937,985**	**$987,985**	**$1,037,985**	**$1,087,985**	**$1,137,985**
Target Ending Balance [1]	*$612,452*		*$612,452*	*$630,826*	*$649,750*	*$669,243*	*$689,320*	*$710,000*

Notes:
[1] Target ending balance represents 6 months of operating expenses.

"proj_cashflow"

Table B-5
Foresthill PUD
Water Rate Analysis
CIP Projected Cash Flow

Scenario 3b
Ramped Up Fac. Rep/Dep. Beginning 2010/11; Reduced Base Usage (7500) - FY10/11 Flow charge @ $1.50 per 1,000 Gal

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Beginning Balance	**$0**	**$22,534**	**$67,601**	**$135,203**	**$224,338**	**$313,473**	**$0**
Revenues							
Facility Replacement/Depreciation	$89,534	$179,068	$268,601	$358,135	$358,135	$368,879	**$1,622,352**
Subtotal Revenues	**$89,534**	**$179,068**	**$268,601**	**$358,135**	**$358,135**	**$368,879**	**$1,622,352**
Expenses							
CIP Projects/Repair & Replacement [1]	$67,000	$134,000	$201,000	$269,000	$269,000	$277,000	**$1,217,000**
Subtotal Expenses	**$67,000**	**$134,000**	**$201,000**	**$269,000**	**$269,000**	**$277,000**	**$1,217,000**
Ending Balance	**$22,534**	**$67,601**	**$135,203**	**$224,338**	**$313,473**	**$405,352**	**$405,352**

Notes: *"CIP_cashflow"*
[1] This represents the amount of money that could be spent on actual projects.

Table B-6
Foresthill PUD
Water Rate Analysis
Cost Allocation Categories

Scenario 3b
Ramped Up Fac. Rep/Dep. Beginning 2010/11; Reduced Base Usage (7500) - FY10/11 Flow charge @ $1.50 per

		Costs Allocated to Water Sales (User Charges) for Fiscal Years:					
		2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Revenue Requirement Allocated to Water Sales	*A (From Table 6)*	**$1,582,002**	**$1,706,732**	**$1,830,865**	**$1,955,872**	**$1,992,339**	**$2,040,067**
Allocation of Costs to:							
Customer	14% [1]	$221,480	$238,942	$256,321	$273,822	$278,927	$285,609
Capacity	69% [1]	$1,089,999	$1,175,938	$1,261,466	$1,347,596	$1,372,721	$1,405,606
Commodity	17% [1]	$270,522	$291,851	$313,078	$334,454	$340,690	$348,851

Notes:
[1] See Appendix A

Table B-7
Foresthill PUD
Water Rate Analysis
Calculation of Customer, Capacity and Commodity Charges

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Scenario 3b
Ramped Up Fac. Rep/Dep. Beginning 2010/11; Reduced Base Usage (7500) - FY10/11 Flow

	Number of Accts/Meters	Number of Equiv. Mtrs	Hydr. Peaking Factor [2]	2010-11 Customer	2010-11 Capacity	2010-11 **Total**	2011-12 Customer	2011-12 Capacity	2011-12 **Total**
Customer and Capacity Cost Allocation (Fixed) [1]				$221,480	$1,089,999		$238,942	$1,175,938	
5/8" & 3/4"	1,830	1,830.00	1.00	$8.45	$39.76	**$48.21**	$9.12	$42.89	**$52.01**
Multi-Units	327	310.65	0.95	$8.45	$37.77	**$46.22**	$9.12	$40.75	**$49.87**
1"	12	23.70	1.97	$8.45	$78.52	**$86.97**	$9.12	$84.71	**$93.83**
1 1/5"	5	20.77	4.15	$8.45	$165.16	**$173.61**	$9.12	$178.18	**$187.30**
2"	7	58.16	8.31	$8.45	$330.30	**$338.75**	$9.12	$356.34	**$365.46**
Over 2"	2	41.45	20.72	$8.45	$823.95	**$832.40**	$9.12	$888.91	**$898.03**
Total	2,183	2,284.73							

	Total Gallons		Commodity		Commodity	
Commodity Cost Allocation (Variable) [1]			$270,522		$291,851	
Total Annual Use	350,749,275	gallons				
Est. Flow over Base Allocation [3]	180,784,000	gallons	**$1.50**	*per 1000 gallons*	**$1.61**	*per 1000 gallons*

Notes:
[1] See Table 10
[2] Based on existing rate structure.
[3] Based on water meter data provided by the District.

Table B-7 ***Continued***
Foresthill PUD
Water Rate Analysis
Calculation of Customer, Capacity and Commodity Charges

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Scenario 3b
Ramped Up Fac. Rep/Dep. Beginning 2010/11; Reduced Base Usage (7500) - FY10/11 Flow

	2012-13			**2013-14**			**2014-15**			**2015-16**		
	Customer	Capacity	**Total**	Customer	Capacity	**Total**	Customer	Capacity	**Total**	Customer	Capacity	**Total**
	$256,321	$1,261,466		$273,822	$1,347,596		$278,927	$1,372,721		$285,609	$1,405,606	
5/8" & 3/4"	$9.78	$46.01	**$55.80**	$10.45	$49.15	**$59.61**	$10.65	$50.07	**$60.72**	$10.90	$51.27	**$62.17**
Multi-Units	$9.78	$43.71	**$53.50**	$10.45	$46.69	**$57.15**	$10.65	$47.57	**$58.21**	$10.90	$48.70	**$59.61**
1"	$9.78	$90.87	**$100.65**	$10.45	$97.07	**$107.52**	$10.65	$98.88	**$109.53**	$10.90	$101.25	**$112.15**
1 1/5"	$9.78	$191.14	**$200.92**	$10.45	$204.19	**$214.64**	$10.65	$207.99	**$218.64**	$10.90	$212.98	**$223.88**
2"	$9.78	$382.26	**$392.04**	$10.45	$408.36	**$418.81**	$10.65	$415.97	**$426.62**	$10.90	$425.94	**$436.84**
Over 2"	$9.78	$953.56	**$963.35**	$10.45	$1,018.67	**$1,029.12**	$10.65	$1,037.66	**$1,048.31**	$10.90	$1,062.52	**$1,073.42**
Total												

Commodity	Commodity	Commodity	Commodity
$313,078	$334,454	$340,690	$348,851
$1.73 *per 1000 gallons*	**$1.85** *per 1000 gallons*	**$1.88** *per 1000 gallons*	**$1.93** *per 1000 gallons*