



## *Appendix E – Water Rate Model Tables*

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# **Water Utility Cost of Service Rate Study**

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*Prepared for:*

**City of Modesto**

*Prepared by:*



*September 3, 2004*

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## **Appendix E – Water Rate Model Tables**

<b>INTRODUCTION</b>	<b>1</b>
<b>1. CURRENT AND PROJECTED WATER ACCOUNTS AND DEMAND</b>	<b>1</b>
<b>2. REVENUE REQUIREMENTS</b>	<b>3</b>
<b>3. REVENUE FROM CURRENT AND PROPOSED RATES</b>	<b>4</b>
<b>4. VOLUME-BASED CHARGES</b>	<b>8</b>
<b>5. FIXED MONTHLY METERS CHARGES</b>	<b>9</b>
<b>6. FLAT RATE CHARGES</b>	<b>11</b>
<b>7. PROJECTED RATES</b>	<b>13</b>
<b>8. FINANCIAL PLAN</b>	<b>22</b>
<b>9. CAPITAL COST ALLOCATION – WEST YOST</b>	<b>25</b>

# Introduction

This is an appendix to the report titled **Water Utility Cost of Service Rate Study**. The tables and figures presented in this appendix are provided as documentation of the water rate model used to develop the proposed water rates, and include both the tables already shown in the rate study report the ancillary tables not shown in the report. Table numbers reflect Section numbers used in the report, not this appendix.

## 1. Current and Projected Water Accounts and Demand

Table 3-1  
**Projected Number of Water Utility Accounts**

City of Modesto

Customer Classes	Existing Accounts		Projected Number of Accounts				
	2003	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
	Yr. End (a)	Adj. to FY (b)	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Flat Rate Customers</b>							
Single-Family Flat Rate (c)	50,812	50,812	50,812	50,812	50,812	50,812	47,245
Single-Family Mtrd-Flat Rate (c)	11,352	11,352	11,352	7,622	3,892	162	0
Subtotal - Flat Rate	62,164	62,164	62,164	58,434	54,704	50,974	47,245
Flat Rate % of Total	84%	83%	82%	76%	70%	64%	58%
<b>Metered Customers</b>							
Single-Family Metered (d)	2,295	2,829	3,869	4,926	5,999	7,090	8,198
Single-Family Meter Retrofits (e)							
2005-06 Retrofits	-	-	-	3,730	3,730	3,730	3,730
2006-07 Retrofits	-	-	-	-	3,730	3,730	3,730
2007-08 Retrofits	-	-	-	-	-	3,730	3,730
2008-09 Retrofits	-	-	-	-	-	-	3,730
Multi-Family (2-4 Units)	3,936	3,967	4,030	4,094	4,160	4,227	4,295
Multi-Family (5+ Units)	588	593	602	612	622	632	642
Commercial	3,948	3,980	4,044	4,109	4,175	4,242	4,310
Landscape Meters	640	645	655	665	676	687	698
Churches	224	226	230	234	238	242	246
Schools	96	97	99	101	103	105	107
Industrial	81	81	81	81	81	81	81
Subtotal - Metered	11,808	12,418	13,610	18,552	23,514	28,496	33,497
Commercial - No Sewer	341	344	350	356	362	368	374
Metered % of Total	16%	17%	18%	24%	30%	36%	42%
Total	74,313	74,926	76,124	77,342	78,580	79,838	81,116
Assumed Growth Rate (f)		0.8%	1.6%	1.6%	1.6%	1.6%	1.6%

a. From Table 3-2.

b. Projected 2003-04 includes an 0.8% growth rate (i.e., 6 months of a 1.6%/year growth rate). All SFR growth is metered.

c. After 2003, all new residential is metered. Also, based on the City's metering plan, existing single-family flat rate customers are converted to meters only after all metered-flat rate customers are converted to metered use.

d. All new single-family residential is assumed to be metered accounts.

e. These are retrofitted SFR flat-rate customers converted to meters at 6%/yr per the City's metering plan, beginning in 2005-06.

f. Growth rate is reflect in residential metered customer only (i.e., all new residential units are assumed to be metered). Source of projected growth rate: Modesto Planning Department, Memo to Craig Scott, August 19, 2004.

Table 3-2  
**Actual 2003 Water Consumption and Number of Accounts**

City of Modesto

Customer Classes (a)	No. of Accts. (b)	Use/Acct. gpd/acct. (c)	Actual 2003 Consumption			
			mgd	Ac. Ft./yr	hcf/yr.	% of Total
Single-Family Flat Rate d	50,812	610	31.0	34,722	15,124,722	49.5%
Single-Family Mtrd-Flat Rate (e) d	11,352	610	6.9	7,757	3,379,041	11.1%
Single-Family Metered (f)	2,295	519	1.2	1,334	581,221	1.9%
Multi-Family (2-4 Units)	3,936	828	3.3	3,651	1,590,243	5.2%
Multi-Family (5+ Units)	588	5,907	3.5	3,892	1,695,213	5.5%
Commercial	3,948	2,357	9.3	10,424	4,540,754	14.9%
Landscape Meters	640	276	0.2	198	86,147	0.3%
Commercial - No Sewer	341	2,357	0.8	900	392,198	1.3%
Churches	224	1,933	0.4	485	211,286	0.7%
Schools	96	1,281	0.1	138	59,987	0.2%
Industrial	81	73,554	6.0	6,674	2,907,251	9.5%
<b>Total</b>	<b>74,313</b>		<b>62.6</b>	<b>70,175</b>	<b>30,568,063</b>	<b>100.0%</b>

gpd = gallon per day, mgd = million gallons per day, Ac.Ft. = acre feet, hcf = hundred cubic feet of water consumption

a. Unless noted as flat rate, all accounts are assumed to be metered.

b. From City Billing records, Mark Roberts, 6-15-04. This represents the 2003 year-end number of accounts.

c. From West Yost & Assoc., Water System Hydraulic Model Update, Final Water Demand Evaluation, Tech Memo dated March 19, 2003, Table 9.

d. Hcf/yr consumption is from Table 8, Water System Hydraulic Model Update, Final Water Demand Evaluation, West Yost & Assoc., March 19, 2003.

610 gpd is from Table 9, Water System Hydraulic Model Update, Final Water Demand Evaluation, West Yost & Assoc., March 19, 2003.

e. These accounts are considered flat rate for historical water consumption purposes, but are converted to metered in future years.

f. 1996 data indicates SFR metered use is about 25% lower SFR flat rate (i.e., 25.76 hcf/mo compared to metered SFR use of 20.3 hcf/mo). Current conservation measures are estimated to have already reduced 2003 SFR rate consumption (thereby reducing the potential additional water savings from conversion to meters) and SFR metered consumption is estimated to be about 15% below the SFR flat rate of 610 gpd, which equals 519 gpd.

g. Gpd/acct is calculated from 2003 water use and number of accounts from City billing records.

Table 3-3  
**Projected Annual Water Consumption by Customer Class**

City of Modesto

Customer Classes	2003 Yr. End (a)	2003-04 Adj. to FY (b)	Projected Consumption (hcf/year)				
			2004-05 Year 1	2005-06 Year 2	2006-07 Year 3	2007-08 Year 4	2008-09 Year 5
<b>Flat Rate Customers</b>							
Single-Family Flat Rate (c)	15,124,722	15,124,722	15,124,722	15,124,722	15,124,722	15,124,722	14,062,860
Single-Family Mtrd-Flat Rate (c)	3,379,041	3,379,041	3,379,041	2,268,815	1,158,589	48,364	0
<b>Subtotal - Flat Rate</b>	<b>18,503,763</b>	<b>18,503,763</b>	<b>18,503,763</b>	<b>17,393,537</b>	<b>16,283,311</b>	<b>15,173,086</b>	<b>14,062,860</b>
<b>Metered Customers</b>							
Single-Family Metered (d)	581,221	716,459	979,844	1,210,109	1,440,541	1,689,754	1,939,169
Single-Family Meter Retrofits (e)							
2005-06 Retrofits	-	-	-	1,076,965	1,052,733	1,044,838	1,037,002
2006-07 Retrofits	-	-	-	-	1,085,292	1,077,152	1,069,073
2007-08 Retrofits	-	-	-	-	-	1,101,946	1,093,681
2008-09 Retrofits	-	-	-	-	-	-	1,101,946
Multi-Family (2-4 Units)	1,590,243	1,602,170	1,627,614	1,636,927	1,650,841	1,673,235	1,695,902
Multi-Family (5+ Units)	1,695,213	1,707,927	1,733,848	1,745,023	1,760,235	1,784,063	1,807,761
Commercial	4,540,754	4,574,810	4,648,375	4,723,089	4,798,953	4,875,966	4,954,129
Landscape Meters	86,147	86,793	88,139	89,485	90,965	92,445	93,925
Commercial - No Sewer	392,198	395,139	402,031	408,923	415,815	422,707	429,599
Churches	211,286	212,871	216,639	220,407	224,175	227,943	231,711
Schools	59,987	60,437	61,683	62,929	64,175	65,421	66,667
Industrial	2,907,251	2,929,056	2,929,056	2,929,056	2,929,056	2,929,056	2,929,056
<b>Subtotal - Metered</b>	<b>12,064,300</b>	<b>12,285,662</b>	<b>12,687,229</b>	<b>14,102,913</b>	<b>15,512,781</b>	<b>16,984,526</b>	<b>18,449,621</b>
<b>Total</b>	<b>30,568,063</b>	<b>30,789,425</b>	<b>31,190,992</b>	<b>31,496,450</b>	<b>31,796,092</b>	<b>32,157,612</b>	<b>32,512,481</b>
<b>Assumed Growth Rate (f)</b>		<b>0.8%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>1.6%</b>
SFR Price Elasticity (g)	--	--	--	-0.0015	-0.0015	-0.0015	-0.0015
MFR Price Elasticity (g)	--	--	--	-0.0005	-0.0005	-0.0005	-0.0005
Water Rate Increases (%) (h)	--	--	--	20.0%	15.0%	5.0%	5.0%
SFR Net Price Elasticity Impact (i)	--	--	--	-3.00%	-2.25%	-0.75%	-0.75%
MFR Net Price Elasticity Impact (i)	--	--	--	-1.00%	-0.75%	-0.25%	-0.25%

a. From Table 3-2.

b. Projected using a 0.8% growth rate (i.e., 6 months of a 1.6%/year growth rate).

c. After 2003, all residential growth is metered. Also, based on the City's metering plan, existing single-family flat rate customers are converted to meters only after all metered-flat rate customers are converted to metered use.

d. Includes consumption from all existing metered plus all SFR growth, which is assumed to occur as metered accounts.

e. Retrofitted flat rate customers per the City's metering plan assumptions to convert 6%/year of existing SFR flat-rate to meters beginning in 2005-06. Water consumption assumes retrofitted customers consume at the 2003-04 flat-rate level except for the price elasticity impact in the current year.

f. Assumed growth rate is same as shown in Table 3-1.

g. Estimated impacts on residential consumption, shown as the decrease for every 1% increase in water rates, beginning in 2005-06.

h. From Table 7-1.

i. Price Elasticity times the Water Rate Increase.

## 2. Revenue Requirements

Table 4-1

**Projected Water Utility Budgets (From 10-Year Proforma)**

City of Modesto

Agency/Org.	Description	Estimate	Adopted	Projected			
		7/14/04 2003-04	2004-05 Year 1	2005-06 Year 2	2006-07 Year 3	2007-08 Year 4	2008-09 Year 5
<b>Operating Expenses</b>							
440/5015	Capital Planning	\$766,000	\$998,000	\$1,018,000	\$1,039,000	\$1,059,000	\$1,081,000
440/509x	Billing & Collection	\$1,243,000	\$1,393,000	\$1,422,000	\$1,450,000	\$1,479,000	\$1,508,000
480/5009	Water Admin.	\$594,000	\$866,000	\$883,000	\$901,000	\$919,000	\$937,000
480/50xx	Construction/Repairs	\$7,489,000	\$7,882,000	\$8,040,000	\$7,918,000	\$8,034,000	\$8,153,000
480/50xx	Meter & Service Install.	\$1,366,000	\$1,582,000	\$1,614,000	\$1,647,000	\$1,679,000	\$1,713,000
480/5017	Water Conservation	\$361,000	\$372,000	\$379,000	\$387,000	\$395,000	\$403,000
480/50xx	Well Site Improvement	\$4,526,000	\$5,856,000	\$5,912,000	\$6,335,000	\$6,461,000	\$6,590,000
480/50xx	Water Quality/Lab	\$411,000	\$780,000	\$796,000	\$812,000	\$828,000	\$845,000
	Remainder of Operating Expen.	-\$778,000	-\$2,596,000	\$431,000	\$504,000	\$532,000	\$585,000
	Subtotal - Operating Expenses	\$15,978,000	\$17,133,000	\$20,495,000	\$20,993,000	\$21,386,000	\$21,815,000
480/5013	Treatment (MID T&DA O&M) (a)	\$4,052,000	\$4,853,000	\$4,998,000	\$5,148,000	\$6,795,000	\$8,536,000
N.A.	New Meter Reading & Billing (b)	\$0	\$338,000	\$516,000	\$531,480	\$547,424	\$563,847
N.A.	New Meter & Service O&M (c)	\$0	\$0	\$721,000	\$466,796	\$480,800	\$495,224
<b>Total Operating Expenditures</b>		<b>\$20,030,000</b>	<b>\$22,324,000</b>	<b>\$26,730,000</b>	<b>\$27,139,276</b>	<b>\$29,209,224</b>	<b>\$31,410,071</b>
<b>Debt Service Payments</b>							
	1997 COPs/CDWR Loan	\$2,045,000	\$2,044,944	\$2,049,564	\$2,055,314	\$2,058,776	\$2,056,586
	MID T&DA Debt Service	\$6,724,000	\$7,124,000	\$7,124,000	\$7,124,000	\$7,124,000	\$7,124,000
	New MID Treatment Plant (\$37.6 mil.) (d, e)	\$0	\$0	\$0	\$0	\$4,110,000	\$4,110,000
	Tier 1 Downstream Imprvmnts (\$34 mil.) (d)	\$0	\$0	\$0	\$0	\$3,618,000	\$3,618,000
	Tier 2 Downstream Imprvmnts (\$15 mil.) (d)	\$0	\$0	\$0	\$0	\$0	\$1,619,000
	Subtotal - Debt Service	\$8,769,000	\$9,168,944	\$9,173,564	\$9,179,314	\$16,910,776	\$18,527,586
	Capital & Other Uses	\$1,869,000	\$2,001,000	\$2,010,000	\$2,012,000	\$1,907,000	\$1,869,000
<b>Total Revenue Requirements</b>		<b>\$30,668,000</b>	<b>\$33,493,944</b>	<b>\$37,913,564</b>	<b>\$38,330,590</b>	<b>\$48,027,000</b>	<b>\$51,806,657</b>

Unless otherwise noted, source of data is the City Water Utility Budgets and Finance Dept.'s 10-Year Proforma (7-26-04).

a. Assumes the MID Treatment Plant will be completed in the 1st quarter of 2008. therefore, additional O&M costs in '07-08 are for 6 months of operations.

b. Estimate of personnel and O&M costs for new meter reading and billing operations, provided by Cheryl Detmar.

c. Includes \$260,000 in one-time costs and \$440,000 in ongoing costs for meter installation and maintenance, from Judith Ray, 7-26-04.

d. Financing assumption: 6% interest rate, 20-year repayment period, and 12 months of capitalized interest. Source: Peter Miller, Public Financial Mngmt, 9/1/04.

e. Assumes the MID Treatment Plant will be completed in the 1st quarter of 2008, that interest is capitalized, and debt service payments start in 2007-08.

### 3. Revenue from Current and Proposed Rates

Table 2-1  
**Current Water Rates & Charges**  
*City of Modesto*

Customer Classes	Zone 1	Zone 2	Zone 3
<b>Flat Rate Residential - Mo. Service Charges</b>			
0-3,500 sq. ft. lot	\$17.86	--	--
0-6,000 sq. ft. lot	--	\$24.61	\$15.63
3,501-7,000 sq. ft. lot	\$20.60	--	--
6,001-10,000 sq. ft. lot	--	\$28.58	\$18.20
7,001-10,500 sq. ft. lot	\$23.08	--	--
10,501-14,000 sq. ft. lot	\$25.56	--	--
10,001-16,000 sq. ft. lot	--	\$34.30	\$21.80
14,001-17,500 sq. ft. lot	\$30.78	--	--
16,001-25,000 sq. ft. lot	--	\$41.11	\$26.08
17,501-21,000 sq. ft. lot (b)	\$36.09	--	--
Over 25,000 sq. ft. lot	--	\$50.73	\$32.21
<b>Metered Charges (Residential &amp; Commercial)</b>			
Uniform Vol. Charge (\$/hcf) (a)	\$0.82	\$1.005	\$0.601
Fixed Meter Charges			
5/8"-3/4"	\$13.63	\$8.12	\$11.12
1"	\$18.14	\$10.17	\$13.94
1-1/2"	\$22.54	\$15.53	\$21.09
2"	\$27.20	\$21.09	\$28.54
3"	\$36.27	\$33.73	\$45.61
4"	\$47.16	\$51.58	\$69.22
6"	\$70.90	\$83.08	\$111.29
8"	\$90.55	\$119.27	\$159.36
10"	\$109.16	\$180.55	\$241.79
12"	\$127.83	\$219.36	\$293.88

Source of Data: City records.

a. Current Zone 1 metered charges include a minimum consumption of 1,680 cubic feet per month. Zone 2 and 3 meter charges reflect the first 100 hcf of consumption.

b. Lots over 21,000 sq.ft. pay an additional \$4.85 per 3,500 sq.ft.

Table 7A-1

**Summary of Estimated Water Utility Revenues in 2004-05**

(with Current Rates Thru Nov. 30 and 35% Increase for Dec. 1 thru June 30)

	<u>Current Rates</u> July 1 '04 to Dec. 31 '04	<u>New Rates</u> Jan. 1 '04 to June 30 '05	<u>Combined</u> Total Revenue 2004-05
<b>Metered Customers</b>			
Mo. Service Charges	--	\$1,682,200	--
Volume-Based Charges	--	\$5,381,444	--
Subtotal - Metered	\$5,440,898	\$7,063,643	\$12,504,542
<b>Flat Rate Customers</b>	\$8,663,537	\$11,009,226	\$19,672,763
<b>Total - Metered &amp; Flat Rate</b>	\$14,104,435	\$18,072,870	<b>\$32,177,305</b>

Source: City's billing records. See Tables 7A-2 (Current Rates) and 7A-3 (New Rates).

Estimates assumes water consumption similar to recorded in 2003.

Table 7A-2

**Estimated Water Utility Revenues from**

**Current Rates - July 1 through June 30, 2005**

Customer Class	July 1 '04 to Dec. 31 '04 (a)	Jan. 1 '04 June 30 '05 (a)	Total from Current Rates
<b>Metered Customers</b>			
Zone 1	\$3,441,373	\$3,468,904	\$6,910,276
Zone 2	\$1,512,504	\$1,524,604	\$3,037,108
Zone 3	\$487,022	\$490,918	\$977,939
Subtotal	\$5,440,898	\$5,484,425	\$10,925,324
<b>Flat Rate Customers</b>			
Zone 1	\$5,861,864	\$5,908,759	\$11,770,623
Zone 2	\$1,784,882	\$1,799,162	\$3,584,044
Zone 3	\$1,016,790	\$1,024,925	\$2,041,715
Subtotal	\$8,663,537	\$8,732,845	\$17,396,382
<b>Total</b>	\$14,104,435	\$14,217,270	\$28,321,705

Source: Estimated using 2003 revenues from Rate Table 1 - Summary of Water

Utility Revenues for 2002 & 2003, from City billing records, plus 0.8% growth.

a. Revenues thru Nov. 30 were inflated by 0.8% over 2003 revenues to account for growth in accounts. Revenues thru June 30 are also inflated by 0.8% for growth.

Table 7A-3

**Estimated Water Utility Revenues from Projected New Rates -  
Dec. 1, 2004 Thru June 30, 2005**

<b>Flat Rate Customers</b>						Total Revenues
Customer	No. of	COS Mo. Srv.	Adjustment for	Max. Charge	6 Mo. Of	Jan-June '05
<u>Classes (Sq. Ft.)</u>	<u>Customers (f)</u>	<u>Charge</u>	<u>35% Incr. (b)</u>	<u>@ 35% Incr.</u>	<u>Revenues (c)</u>	
0-5,000 sq. ft. lot	7,390	\$22.65	108.0%	\$24.47	\$1,084,879	
5,001-7,000 sq. ft. lot	30,336	\$25.74	108.0%	\$27.81	\$5,061,825	
7,001-11,000 sq. ft. lot	19,933	\$30.55	108.0%	\$33.00	\$3,947,041	
11,001-17,000 sq. ft. lot	2,554	\$32.42	108.0%	\$35.03	\$536,869	
Over 17,000 sq. ft. lot	<u>1,532</u>	\$38.12	108.0%	\$41.19	<u>\$378,613</u>	
<b>Total</b>	<b>61,745</b>				<b>\$11,009,226</b>	<b>\$11,009,226</b>
<b>Metered Customers</b>						
<i>Monthly Metered Service Charges</i>						
Meter Size	No. of	COS Mo. Srv.	Adjustment for	Max. Charge	6 Mo. Of	
	<u>Customers (a)</u>	<u>Charge (a)</u>	<u>35% Incr. (b)</u>	<u>@ 35% Incr.</u>	<u>Revenues (c)</u>	
5/8"-3/4"	3,513	\$8.34	108.0%	\$9.01	\$190,018	
1"	6,701	\$11.83	108.0%	\$12.78	\$513,988	
1 1/2"	1,046	\$20.48	108.0%	\$22.13	\$138,911	
2"	1,915	\$30.90	108.0%	\$33.38	\$383,605	
3"	103	\$58.71	108.0%	\$63.43	\$39,263	
4"	249	\$89.96	108.0%	\$97.19	\$145,399	
6"	130	\$176.73	108.0%	\$190.95	\$148,808	
8"	48	\$280.90	108.0%	\$303.49	\$88,305	
10"	11	\$402.46	108.0%	\$434.84	\$28,921	
12"	<u>1</u>	\$749.65	108.0%	\$809.95	<u>\$4,982</u>	
<b>Total</b>	<b>13,719</b>				<b>\$1,682,200</b>	<b>\$1,682,200</b>
<i>Volume-Based Charges</i>						
<u>Vol-Based Rates</u>	<u>Mtr'd. Consumption (d)</u>	<u>Mtr. Rate</u>			<u>6 Mo. Of</u>	
	<u>% of Total</u>	<u>(hcf)</u>	<u>(\$/hcf) (e)</u>		<u>Revenues (b)</u>	
Zone 1	64%	4,069,482	\$0.779	108.0%	\$0.842	\$3,426,542
Zone 2	27%	1,712,655	\$0.779	108.0%	\$0.842	\$1,442,072
Zone 3	10%	<u>609,054</u>	\$0.779	108.0%	\$0.842	<u>\$512,829</u>
		<b>6,391,192 (e)</b>			<b>\$5,381,444</b>	<b>\$5,381,444</b>
<b>Total Revenue (Dec-June 30 '05)</b>						<b>\$18,072,870</b>

a. From Table MSC-2, Monthly Service Charge Calculations - 2004-05. Rates reflect full cost-of-Service revenue requirements.

See Proforma (Table 7-2) and Financial Plan (Table 7-1).

b. Rate adjustment to the COS rate to reflect a 35% increase rather than the full 2004-05 revenue requirements.

c. No. of Customers times Mo. Service Charge times 6 months.

d. "% of Total" is from Table 1a - Summary of Water Consumption for 2002 & 2003 and reflects consumption from the City's billing system.

e. From Table 6-4, Total Volume-Based Charges Recovered from Flat- and Metered-Customers. Consumption by Zone reflects 50% of the 2004-05 consumption of Metered Customers.

f. From most current City billing data, Mark Roberts, 6-15-04.

Rate Table 1 - Summary of Water Utility Revenues for 2002 & 2003							
City of Modesto							
Jurisdiction	No. in Class	Zone Changes		Total 2002	Total 2003	2-Yr Total 2002 & 2003	'02-03 Total (Net of Discounts)
		From	To				
<b>Zone 1</b>							
MORERE	57,189	W1	1	\$11,168,530	\$11,585,750	\$22,769,340	\$22,703,401
MOMFAC	3,603	W4	2	\$2,098,389	\$2,189,578	\$4,278,830	\$4,278,524
MOCOAC	2,551	W4	2	\$2,753,883	\$2,916,140	\$5,670,282	\$5,670,282
MOLSAC	283	W4	2	\$720,427	\$716,584	\$1,432,797	\$1,432,492
MOREAC	217	W4	2	\$28,115	\$28,663	\$56,566	\$56,566
MOMFRE	191	W1	1	\$28,440	\$26,361	\$54,445	\$54,098
MOCHAC	100	W4	2	\$161,125	\$169,017	\$288,609	\$288,609
MOCHRE/CH	28	W1	1	\$16,600	\$16,450	\$33,313	\$33,263
MOINAC	21	W4	2	\$580,665	\$657,673	\$1,266,131	\$1,266,131
MOSCAC	12	W4	2	\$37,762	\$150,466	\$188,047	\$188,047
MOCORE/RECO	15	W1	1	\$2,231	\$2,122	\$4,287	\$4,287
Subtotal	64,210	--	--	\$17,596,166	\$18,458,803	\$36,042,648	\$35,975,701
<b>Zone 2</b>							
MORERE	11,538	W2	2	\$3,294,303	\$3,339,841	\$6,636,862	\$6,610,755
MOMFAC	1,163	W5	2	\$642,458	\$583,272	\$1,217,026	\$1,217,026
MOREAC	1,117	W5	2	\$245,445	\$243,970	\$486,434	\$486,434
MOCOAC	689	W5	2	\$868,746	\$675,941	\$1,538,152	\$1,538,152
MOUNRE	313	W2	1	\$88,637	\$90,154	\$178,675	\$177,928
MOFSCO	184	W2	elim.	\$60,396	\$76,679	\$136,821	\$136,692
MOMFRE	161	W2	1	\$33,897	\$33,414	\$67,288	\$67,182
MOINAC	38	W5	2	\$1,433,271	\$1,288,395	\$2,809,778	\$2,809,778
MOLSAC	30	W5	2	\$40,580	\$42,039	\$83,968	\$83,968
MOCHAC	34	W5	2	\$30,913	\$29,593	\$59,841	\$59,841
MOSCAC	21	W5	2	\$156,208	\$137,790	\$293,935	\$293,935
MOCORE	22	W5	1	\$1,284	\$1,346	\$2,630	\$2,630
Subtotal	15,310	--	--	\$6,896,138	\$6,542,433	\$13,511,411	\$13,484,323
<b>Zone 3</b>							
WA/MORERE	10,570	W3	3	\$1,952,281	\$2,002,385	\$3,954,410	\$3,946,524
WA/MOREAC	1,407	W6	3	\$351,465	\$347,580	\$695,724	\$695,724
WA/MOCOAC	429	W6	3	\$284,700	\$283,561	\$562,314	\$562,314
WA/MOMFAC	414	W6	3	\$147,717	\$151,910	\$298,921	\$298,817
MOLSAC	30	W6	3	\$71,508	\$71,942	\$144,005	\$144,005
MOCHAC	40	W6	3	\$14,757	\$15,673	\$30,588	\$30,588
MOMFRE	24	W3	3	\$4,430	\$3,674	\$8,082	\$8,082
MOSCAC	16	W6	3	\$82,123	\$85,868	\$168,141	\$168,141
MOCORE	27	W3	3	\$1,314	\$1,137	\$2,452	\$2,452
WA/MOFSCO	24	W3	elim.	\$10,041	\$10,246	\$20,694	\$20,694
MOINAC	2	W6	3	\$7,285	\$9,779	\$17,009	\$17,009
Subtotal	12,983	--	--	\$2,927,620	\$2,983,754	\$5,902,339	\$5,894,350
Total Transactions	92,503			\$27,419,925	\$27,984,990	\$55,456,399	\$55,354,373

# 4. Volume-Based Charges

Table 6-3  
**Calculation of Uniform Volume-Based Charges**  
*City of Modesto*

<u>Volume-Based Charge Component</u>	<u>2004-05</u>
Consumption-Based Costs (a)	\$24,307,708
Total Volume (hcf/year) (b)	<u>31,190,992</u>
Uniform Vol-Based Charge (\$/hcf) (c)	<u>\$0.779318</u>

- a. Includes costs allocated to the Commodity function to be recover from volume-based charges. From Table 6-2.
- b. From Table 3-3.
- c. Consumption-Based Costs divided by Total Volume.

Table 6-4  
**Total Volume-Based Charges Recovered from Flat-Rate and Metered-Customers**  
*City of Modesto*

	<u>2004-05</u>
<u>Volumes (hcf/year) (a)</u>	
Flat Rate Customers	18,503,763
Metered Customers	<u>12,687,229</u>
<i>Total</i>	<u>31,190,992</u>
<u>Uniform Vol-Based Charge (\$/hcf) (b)</u>	<u>\$0.779318</u>
<u>Volume Charges Recovered (c)</u>	
From Flat Rate Customers	\$14,420,319
From Metered Customers	<u>\$9,887,389</u>
<i>Total Volume-Based Charges</i>	<u>\$24,307,708</u>
From Flat Rate Customers (%)	59%
From Metered Customers (%)	41%

- a. From Table 3-3.
- b. From Table 6-3.
- c. Volume (hcf/yr) times the Uniform Volume-Based Charge.

Table 6-5  
**Calculation of Uniform Volume-Based Charges**  
*City of Modesto*

<u>Volume-Based Charge Component</u>	<u>2004-05</u>
	<i>Year 1</i>
Consumption-Based Costs (a)	\$24,307,708
Total Volume (hcf/year) (b)	<u>31,190,992</u>
Uniform Vol-Based Charge (\$/hcf) (c)	<u>\$0.779318</u>

- a. Includes costs allocated to the Commodity function to be recover from volume-based charges. From Tables 6A-3 through 6A-6.
- b. From Table 3-3.
- c. Consumption-Based Costs divided by Total Volume.

# 5. Fixed Monthly Meter Charges

**Table 6-5**  
**Number of Accounts and Equivalent Meters - 2004-05**

City of Modesto

Customer Class	Meter Size										Total
	5/8"-3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	
<b>No. of Accounts (a)</b>											
Single-Family	942	2,892	19	16	0	-	-	-	-	-	3,869
Multi-Family	1,409	2,506	377	217	6	39	66	10	2	-	4,632
Commercial	1,025	1,027	489	1,199	68	145	52	32	5	1	4,044
Landscape Meters	33	142	121	325	6	24	1	2	-	-	655
Churches	50	71	26	74	-	8	-	1	-	-	230
Schools	21	7	5	20	17	22	4	1	2	-	99
Industrial	5	2	1	50	5	8	7	3	2	-	81
<b>Total</b>	<b>3,486</b>	<b>6,648</b>	<b>1,038</b>	<b>1,900</b>	<b>102</b>	<b>247</b>	<b>129</b>	<b>48</b>	<b>11</b>	<b>1</b>	<b>13,610</b>
<b>Hydraulic Capacity Factors (b)</b>											
	1.00	1.67	3.33	5.33	10.67	16.67	33.33	53.33	76.67	143.33	
<b>No. of Equivalent Meters (a)</b>											
Single-Family	942	4,829	65	83	3	-	-	-	-	-	5,922
Multi-Family	1,409	4,185	1,256	1,157	68	653	2,189	508	162	-	11,588
Commercial	1,025	1,716	1,629	6,392	727	2,425	1,729	1,682	390	146	17,859
Landscape Meters	33	238	404	1,731	59	408	37	119	-	-	3,028
Churches	50	119	86	393	-	129	-	69	-	-	846
Schools	21	12	15	107	186	367	122	49	141	-	1,020
Industrial	5	3	2	265	49	142	218	139	150	-	972
<b>Total</b>	<b>3,486</b>	<b>11,102</b>	<b>3,457</b>	<b>10,128</b>	<b>1,092</b>	<b>4,123</b>	<b>4,295</b>	<b>2,566</b>	<b>843</b>	<b>146</b>	<b>41,236</b>

a. Source: City billing records from Mark Roberts, 6/21/04.

b. These factors reflect AWWA commonly used industry standards for hydraulic capacity. See AWWA Manual M1, Table 28-2 for up to 3" meters.

**Table 6-6**  
**Monthly Service Charge Calculations - 2004-05**

City of Modesto

Customer/Meter Data	Meter Size										Total
	5/8"-3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	
No. of Customers	3,486	6,648	1,038	1,900	102	247	129	48	11	1	13,610
No. of Equivalent Meters	3,486	11,102	3,457	10,128	1,092	4,123	4,295	2,566	843	146	41,236
Hydraulic Capacity Factor	1.00	1.67	3.33	5.33	10.67	16.67	33.33	53.33	76.67	143.33	
<b>Monthly Service Charge</b>											
Customer Costs	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	\$3.13
Capacity Costs	\$5.21	\$8.70	\$17.34	\$27.76	\$55.57	\$86.82	\$173.59	\$277.76	\$399.33	\$746.52	
<b>Monthly Service Charge</b>	<b>\$8.34</b>	<b>\$11.83</b>	<b>\$20.48</b>	<b>\$30.90</b>	<b>\$58.71</b>	<b>\$89.96</b>	<b>\$176.73</b>	<b>\$280.90</b>	<b>\$402.46</b>	<b>\$749.65</b>	
Annual Customer Cost (a)	\$131,103	\$250,040	\$39,046	\$71,470	\$3,850	\$9,304	\$4,847	\$1,810	\$414	\$38	\$511,920
Annual Capacity Cost (b)	\$217,847	\$693,849	\$216,050	\$632,982	\$68,252	\$257,706	\$268,423	\$160,355	\$52,696	\$9,111	\$2,577,273
<b>Costs Included in Fixed Monthly Service Charges (c)</b>											
Customer Costs											\$511,920
Demand Costs											\$2,577,273
<b>Total Fixed Costs</b>											<b>\$3,089,192</b>

a. Allocated based on the number of customers.

b. Allocated based on the number of equivalent meters.

c. From Table 6-2.

**Most Recent City Records on Number of Meters by Size:**

Customer Class	Meter Size										Total
	5/8"-3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	12"	
<b>No. of Accounts</b>											
Single-Family	3,194	9,803	66	53	1	-	-	-	-	-	13,117
Multi-Family	1,330	2,366	356	205	6	37	62	9	2	-	4,373
Commercial	1,008	1,010	481	1,179	67	143	51	31	5	1	3,976
Landscape Meters	30	128	109	292	5	22	1	2	-	-	589
Churches	39	55	20	57	-	6	-	1	-	-	178
Schools	23	8	5	22	19	24	4	1	2	-	108
Industrial	7	3	1	76	7	13	10	4	3	-	124
<b>Total</b>	<b>5,631</b>	<b>13,373</b>	<b>1,038</b>	<b>1,884</b>	<b>105</b>	<b>245</b>	<b>128</b>	<b>48</b>	<b>12</b>	<b>1</b>	<b>22,465</b>

Size of Meter	Equivalency Factor <sup>a</sup>	Adjusted Equiv. Factor <sup>a</sup>
5/8"	1	1
3/4"	1.5	1
1"	2.5	1.67
1-1/2"	5	3.33
2"	8	5.33
3"	16	10.67
4"	25	16.67
6"	50	33.33
8"	80	53.33
10"	115	76.67
12"	215	143.33

a. Source: American Water Works Assoc.. Adjusted factor assumes that a 3/4" meter is the standard for single-family homes, and is calculated by dividing the equivalency factor by 1.5.

# 6. Flat Rate Charges

Table 6-7  
**Total Costs Recovered from Flat-Rate Customers**  
 City of Modesto

	2004-05
<b>Costs Allocated to Flat Rates (a)</b>	
Commodity Costs - Uniform Volume Charges	\$14,420,319
Demand Costs - Fixed Monthly Charges	\$3,758,838
Customer Costs - Mo. Service Charges	\$2,338,205
<b>Total Flat-Rate Costs</b>	<b>\$20,517,363</b>

a. From Table 6-2.

Table 6-8  
**Calculation of Monthly Flat-Rate Charges for 2004-05**  
 City of Modesto

Costs Allocated to Flat Rates	Allocated Costs (a)	Total Units (b)	0 to					Over
			5,000 sq.ft.	7,000 sq.ft.	11,000 sq.ft.	17,000 sq.ft.	17,000 sq.ft.	
<b>Commodity Costs - Uniform Volume Charges</b>	\$14,420,319							
Allocation Basis: Est. Consumption (hcf/yr) (c)		18,503,763	1,773,105	8,432,633	6,718,934	919,947	659,144	
Costs Allocated to Flat Rate Lots			\$1,381,813	\$6,571,704	\$5,236,187	\$716,932	\$513,683	
Number of Accounts		62,164	7,440	30,542	20,068	2,572	1,543	
Monthly Flat Rate Charge Per SFR Customer			\$15.48	\$17.93	\$21.74	\$23.23	\$27.75	
<b>Demand Costs - Fixed Monthly Charges</b>	\$3,758,838							
Allocation Basis: Est. Consumption (hcf/yr) (c)		18,503,763	1,773,105	8,432,633	6,718,934	919,947	659,144	
Costs Allocated to Flat Rate Lots			\$360,187	\$1,712,998	\$1,364,878	\$186,877	\$133,898	
Number of Accounts		62,164	7,440	30,542	20,068	2,572	1,543	
Flat Rate Charge Per SFR Customer			\$4.03	\$4.67	\$5.67	\$6.06	\$7.23	
<b>Customer Costs - Mo. Service Charges</b>	\$2,338,205							
Allocation Basis: Number of Accounts		62,164	7,440	30,542	20,068	2,572	1,543	
Costs Allocated to Flat Rate Lots			\$279,836	\$1,148,776	\$754,845	\$96,727	\$58,021	
Flat Rate Charge Per SFR Customer			\$3.13	\$3.13	\$3.13	\$3.13	\$3.13	
<b>Total Flat-Rate Costs &amp; Charges</b>	<b>\$20,517,363</b>		<b>\$22.65</b>	<b>\$25.74</b>	<b>\$30.55</b>	<b>\$32.42</b>	<b>\$38.12</b>	

a. From Table 6-1.

b. Data from either Tables 3-1 or 3-3.

c. Consumption by flat rate class is the total hcf/yr times the "Est. Ave. Mo. Water Use" (in %) of metered lot consumption data as follows:

Flat Rate Lots Sq. Ft. Ranges	Ave. hcf/mo. per Metered Lot	Current No. of Flat Rate Lots Number	%	Est. Ave. Mo. Water Use hcf/mo	%
0-5,000	16.72	7,331	11.97%	122,584	9.58%
5,001-7,000	19.37	30,095	49.13%	582,994	45.57%
7,001-11,000	23.49	19,775	32.28%	464,517	36.31%
11,001-17,000	25.10	2,534	4.14%	63,601	4.97%
Over 17,000	29.98	1,520	2.48%	45,570	3.56%
Total		61,255	100.00%	1,279,267	100.00%

2004 Billing Data on Flat Rate Residential:

Flat Rate Lot Sq. Ft. Ranges	No. of Flat Rate Lots (2004) (a)		Ave. hcf/mo. per Lot (b)
	Number	Percent	
0-5,000	7,331	12%	16.7
5,001-7,000	30,095	49%	19.4
7,001-11,000	19,775	32%	23.5
11,001-17,000	2,534	4%	25.1
Over 17,000	1,520	2%	30.0
Total	61,255	100%	23.9

a. Source of Data: City Billing records, Mark Roberts, 6-15-04.

b. Average water consumption in 2003 for metered residential customers.

Lot Size Ranges (Sq.Ft.)	No. of Metered Lots (2004)		Total 2003 Water Use		Ave. hcf/mo. per Lot
	Number	%	hcf	%	
0-5,000	113	6%	22,674	4.37%	<b>16.7</b>
5,001-7,000	581	32%	135,060	26.01%	<b>19.4</b>
7,001-11,000	401	22%	113,034	21.77%	<b>23.5</b>
11,001-17,000	143	8%	43,070	8.29%	<b>25.1</b>
<u>Over 17,000</u>	<u>571</u>	<u>32%</u>	<u>205,426</u>	<u>39.56%</u>	<u><b>30.0</b></u>
Total	1,809	100%	519,265	100.00%	<b>23.9</b>

# 7. Projected Rates

Table 6-9

## Calibration Adjustment to Cost-of-Service Rates City of Modesto

Customer Classes	COS Charges (a)	Adjustment for 35% Incr. (b)	Proposed Rates
<b>Flat Rate Customers</b>			
0-5,000 sq. ft. lot	\$22.65/mo.	108.0%	<b>\$24.47/mo.</b>
5,001-7,000 sq. ft. lot	\$25.74/mo.	108.0%	<b>\$27.81/mo.</b>
7,001-11,000 sq. ft. lot	\$30.55/mo.	108.0%	<b>\$33.00/mo.</b>
11,001-17,000 sq. ft. lot	\$32.42/mo.	108.0%	<b>\$35.03/mo.</b>
Over 17,000 sq. ft. lot	\$38.12/mo.	108.0%	<b>\$41.19/mo.</b>
<b>Metered Customers</b>			
<i>Monthly Metered Service Charges</i>			
<u>Meter Size</u>			
5/8"-3/4"	\$8.34/mo.	108.0%	<b>\$9.01/mo.</b>
1"	\$11.83/mo.	108.0%	<b>\$12.78/mo.</b>
1 1/2"	\$20.48/mo.	108.0%	<b>\$22.13/mo.</b>
2"	\$30.90/mo.	108.0%	<b>\$33.38/mo.</b>
3"	\$58.71/mo.	108.0%	<b>\$63.43/mo.</b>
4"	\$89.96/mo.	108.0%	<b>\$97.19/mo.</b>
6"	\$176.73/mo.	108.0%	<b>\$190.95/mo.</b>
8"	\$280.90/mo.	108.0%	<b>\$303.49/mo.</b>
10"	\$402.46/mo.	108.0%	<b>\$434.84/mo.</b>
12"	\$749.65/mo.	108.0%	<b>\$809.95/mo.</b>
<i>Volume-Based Charges</i>	\$0.779/hcf	108.0%	<b>\$0.842/hcf</b>

a. Flat rates are from Table 6-8, Metered service charges are from Table 6-6, and volume-based charge is from Table 6-4.

b. Current rate for 5,001-7,000 sq.ft. lots plus 35%, divided by COS rate (i.e.,  $(1.35 \times \$20.60)/\$25.74 = 1.08$ ).

Table ES-1

## Comparison of Selected Current & Proposed New Water Rates

City of Modesto

Customer Classes	Current Rates			Proposed New Rates & % Change (a)			
	Zone 1	Zone 2	Zone 3	Uniform	Zone 1	Zone 2	Zone 3
<b>Flat Rate Residential</b>							
5,001-7,000 sq. ft. lot	\$20.60	\$24.61	\$15.63	<b>\$27.81</b>	35%	13%	78%
7,001-11,000 sq. ft. lot	\$23.08	\$28.58	\$18.20	<b>\$33.00</b>	43%	15%	81%
<b>Metered Charges</b>							
Uniform Vol. Charge (\$/hcf) (b)	\$0.82	\$1.005	\$0.601	<b>\$0.84</b>	3%	-16%	40%
<b>Fixed Meter Charges</b>							
5/8"-3/4"	\$13.63	\$8.12	\$11.12	<b>\$9.01</b>	-34%	11%	-19%
1"	\$18.14	\$10.17	\$13.94	<b>\$12.78</b>	-30%	26%	-8%
1-1/2"	\$22.54	\$15.53	\$21.09	<b>\$22.13</b>	-2%	42%	5%
2"	\$27.20	\$21.09	\$28.54	<b>\$33.38</b>	23%	58%	17%

a. From Table 8-1. Proposed new rates are effective January 1, 2005.

b. Current Zone 1 metered charges include a minimum of 1,680 cubic feet/mo. Zone 2 and 3 charges are for the first 100 hcf of use.

Table 8-1  
**Projected Water Utility Service Charges & Rates**  
 City of Modesto

Customer Classes	Current Rates			Projected Charges & Rates (c)				
	Zone 1	Zone 2	Zone 3	2004-05 1/1/2005	2005-06 7/1/2005	2006-07 7/1/2006	2007-08 7/1/2007	2008-09 7/1/2008
<b>Flat Rate - Mo. Service Charges</b>				<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
0-5,000 sq. ft. lot	\$20.60	\$24.61	\$15.63	\$24.47	\$29.36	\$33.77	\$35.45	\$37.23
5,001-7,000 sq. ft. lot	\$20.60	\$24.61-\$28.58	\$15.63-\$18.20	\$27.81	\$33.37	\$38.38	\$40.30	\$42.31
7,001-11,000 sq. ft. lot	\$23.08	\$28.58-\$34.30	\$18.20-\$21.08	\$33.00	\$39.60	\$45.54	\$47.82	\$50.21
11,001-17,000 sq. ft. lot	\$30.78	\$34.30-\$41.11	\$21.80-\$26.08	\$35.03	\$42.04	\$48.34	\$50.76	\$53.30
Over 17,000 sq. ft. lot	\$36.09	\$41.11-\$50.73	\$26.08-\$32.21	\$41.19	\$49.42	\$56.84	\$59.68	\$62.66
<b>Metered Charges</b>								
Uniform Vol. Charge (\$/hcf) (a)	\$0.82	\$1.005	\$0.601	\$0.84	\$1.01	\$1.16	\$1.22	\$1.28
Fixed Meter Charges (b)								
5/8"-3/4"	\$13.63	\$8.12	\$11.12	\$9.01	\$10.82	\$12.44	\$13.06	\$13.71
1"	\$18.14	\$10.17	\$13.94	\$12.78	\$15.34	\$17.64	\$18.52	\$19.45
1-1/2"	\$22.54	\$15.53	\$21.09	\$22.13	\$26.55	\$30.53	\$32.06	\$33.66
2"	\$27.20	\$21.09	\$28.54	\$33.38	\$40.06	\$46.06	\$48.37	\$50.79
3"	\$36.27	\$33.73	\$45.61	\$63.43	\$76.12	\$87.53	\$91.91	\$96.51
4"	\$47.16	\$51.58	\$69.22	\$97.19	\$116.63	\$134.13	\$140.83	\$147.88
6"	\$70.90	\$83.08	\$111.29	\$190.95	\$229.14	\$263.51	\$276.68	\$290.51
8"	\$90.55	\$119.27	\$159.36	\$303.49	\$364.19	\$418.82	\$439.76	\$461.75
10"	\$109.16	\$180.55	\$241.79	\$434.84	\$521.80	\$600.07	\$630.08	\$661.58
12"	\$127.83	\$219.36	\$293.88	\$809.95	\$971.95	\$1,117.74	\$1,173.62	\$1,232.31
<b>Annual Rate Increase (d)</b>				(varies)	20.0%	15.0%	5.0%	5.0%

a. Current Zone 1 metered charges include a minimum consumption of 1,680 cubic feet per month.  
 b. Fixed Meter Charges cover customer service, billing, and related costs that do not vary with consumption levels.  
 c. 2004-05 Flat Rate Charges are from Tables 7-1. 2004-05 Metered Charges are from Tables 6-6. After 2004-05, rates are "across-the-board" increases using the Annual Rate Increase shown. Effective date of implementation is shown below the fiscal year.  
 d. From Table 7-1, Financial Plan - Projected Rate Revenue Including Rate Increases. Percent rate increases in 2004-05 vary by customer class and current zone.

Table 8-2  
**Projected Water Rates and Annual Percentage Increases**  
 City of Modesto

<b>Current Flat Rates - Zone 1</b>				<b>New '04-05 SFR Flat Rates</b>		
<i>Current Sq. Ft. Ranges</i>	<i>Increment</i>	<i>% of Flat-Rate Lots</i>	<i>Current Rates</i>	<i>Low End</i>	<i>High End</i>	<i>% Change</i>
<3,500 sq. ft. lot	<3,500	2.2%	\$17.86	\$24.47	--	37.0%
3,501-7,000 sq. ft. lot	3,501-5,000	9.8%	\$20.60	\$24.47	--	18.8%
	5,001-7,000	49.1%	\$20.60	--	\$27.81	<b>35.0%</b>
7,001-10,500 sq. ft. lot	7,001-10,000	29.5%	\$23.08	\$27.81	--	20.5%
	10,001-10,500	1.7%	\$23.08	--	\$33.00	43.0%
10,501-14,000 sq. ft. lot	10,501-14,000	4.4%	\$25.56	\$33.00	--	29.1%
14,001-17,500 sq. ft. lot	14,001-17,000	0.9%	\$30.78	\$35.03	--	13.8%
	17,001-17,500	0.1%	\$30.78	--	\$41.19	33.8%
17,501-21,000 sq. ft. lot	17,501-21,000	0.8%	\$36.09	\$41.19	--	14.1%
<b>Annual Percent Increases of Flat Rates (b)</b>						
<u>New Flat Rate Charges</u>	<u>Current Rates (a)</u>	<u>2004-05 (a)</u>	<u>2005-06</u>	<u>2006-07</u>	<u>2007-08</u>	<u>2008-09</u>
0-5,000 sq. ft. lot	\$20.60	18.8%	20.0%	15.0%	5.0%	5.0%
5,001-7,000 sq. ft. lot	\$20.60	35.0%	20.0%	15.0%	5.0%	5.0%
7,001-11,000 sq. ft. lot	\$23.08	43.0%	20.0%	15.0%	5.0%	5.0%
11,001-17,000 sq. ft. lot	\$30.78	13.8%	20.0%	15.0%	5.0%	5.0%
Over 17,000 sq. ft. lot	\$36.09	14.1%	20.0%	15.0%	5.0%	5.0%
<b>Metered Rates - Zone 1</b>						
<b>Annual Percent Increases of Metered Rates (b)</b>						
<u>Metered Charges</u>	<u>Current Rates</u>	<u>2004-05</u>	<u>2005-06</u>	<u>2006-07</u>	<u>2007-08</u>	<u>2008-09</u>
Uniform Volume Charge	\$0.82	2.7%	20.0%	15.0%	5.0%	5.0%
Fixed Meter Charges						
5/8"-3/4"	\$13.63	-33.9%	20.0%	15.0%	5.0%	5.0%
1"	\$18.14	-29.5%	20.0%	15.0%	5.0%	5.0%
1-1/2"	\$22.54	-1.8%	20.0%	15.0%	5.0%	5.0%
2"	\$27.20	22.7%	20.0%	15.0%	5.0%	5.0%
3"	\$36.27	74.9%	20.0%	15.0%	5.0%	5.0%
4"	\$47.16	106.1%	20.0%	15.0%	5.0%	5.0%
6"	\$70.90	169.3%	20.0%	15.0%	5.0%	5.0%
8"	\$90.55	235.2%	20.0%	15.0%	5.0%	5.0%
10"	\$109.16	298.3%	20.0%	15.0%	5.0%	5.0%
12"	\$127.83	533.6%	20.0%	15.0%	5.0%	5.0%

Source of rate information: Table 8-1.

a. Rates reflects the lowest current rate in the lot-size range.

b. Effective dates of new rates are 1-1-05 (Year 1), 7-1-05 (Year 2), 7-1-06 (Year 3), 7-1-07 (Year 4), and 7-1-08 (Year 5).

Table 8-3  
**Projected Water Rates and Annual Percentage Increases**  
 City of Modesto

<b>Current Flat Rates - Zone 2</b>			<b>New '04-05 SFR Flat Rates</b>			
<i>Current Sq. Ft. Ranges</i>	<i>Increment</i>	<i>Current Rates</i>	<i>Low End</i>	<i>High End</i>	<i>% Change</i>	
0-6,000 sq. ft. lot	0-5,000	\$24.61	\$24.47	--	-0.6%	
	5,001-6,000	\$24.61	--	\$27.81	13.0%	
6,001-10,000 sq. ft. lot	6,001-7,000	\$28.58	\$27.81	--	-2.7%	
	7,001-10,000	\$28.58	--	\$33.00	15.5%	
10,001-16,000 sq. ft. lot	10,001-11,000	\$34.30	\$33.00	--	-3.8%	
	11,001-16,000	\$34.30	--	\$35.03	2.1%	
16,001-25,000 sq. ft. lot	16,001-17,000	\$41.11	\$35.03	--	-14.8%	
	17,001-25,000	\$41.11	--	\$41.19	0.2%	
>25,000 sq. ft. lot	>25,000	\$50.73	\$41.19	--	-18.8%	
<b>Annual Percent Increases of Flat Rates</b>						
<b>New Flat Rate Charges</b>	<b>Current Rates (a)</b>	<b>2004-05 (a)</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
0-5,000 sq. ft. lot	\$24.61	-0.6%	20.0%	15.0%	5.0%	5.0%
5,001-7,000 sq. ft. lot	\$24.61	13.0%	20.0%	15.0%	5.0%	5.0%
7,001-11,000 sq. ft. lot	\$28.58	15.5%	20.0%	15.0%	5.0%	5.0%
11,001-17,000 sq. ft. lot	\$34.30	2.1%	20.0%	15.0%	5.0%	5.0%
Over 17,000 sq. ft. lot	\$41.11	0.2%	20.0%	15.0%	5.0%	5.0%
<b>Current Flat Rates - Zone 3</b>			<b>New '04-05 SFR Flat Rates</b>			
<i>Current Sq. Ft. Ranges</i>	<i>Increment</i>	<i>Current Rates</i>	<i>Low End</i>	<i>High End</i>	<i>% Change</i>	
0-6,000 sq. ft. lot	0-5,000	\$15.63	\$24.47	--	56.5%	
	5,001-6,000	\$15.63	--	\$27.81	77.9%	
6,001-10,000 sq. ft. lot	6,001-7,000	\$18.20	\$27.81	--	52.8%	
	7,001-10,000	\$18.20	--	\$33.00	81.3%	
10,001-16,000 sq. ft. lot	10,001-11,000	\$21.80	\$33.00	--	51.4%	
	11,001-16,000	\$21.80	--	\$35.03	60.7%	
16,001-25,000 sq. ft. lot	16,001-17,000	\$26.08	\$35.03	--	34.3%	
	17,001-25,000	\$26.08	--	\$41.19	57.9%	
>25,000 sq. ft. lot	>25,000	\$32.21	\$41.19	--	27.9%	
<b>Annual Percent Increases of Flat Rates</b>						
<b>New Flat Rate Charges</b>	<b>Current Rates (a)</b>	<b>2004-05 (a)</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
0-5,000 sq. ft. lot	\$15.63	56.5%	20.0%	15.0%	5.0%	5.0%
5,001-7,000 sq. ft. lot	\$15.63	52.8%	20.0%	15.0%	5.0%	5.0%
7,001-11,000 sq. ft. lot	\$18.20	81.3%	20.0%	15.0%	5.0%	5.0%
11,001-17,000 sq. ft. lot	\$21.80	60.7%	20.0%	15.0%	5.0%	5.0%
Over 17,000 sq. ft. lot	\$26.08	57.9%	20.0%	15.0%	5.0%	5.0%

Table 8-4  
**Number of Zone 3 Lots by Size and Their % Rate Increases**  
*City of Modesto*

<u>Lot Sizes</u> <i>(square feet)</i>	<u>% Rate Increase</u> <i>(2004-05) (a)</i>	<u>Number of</u> <u>Zone 3 Lots</u> (b)	<u>% of All Flat</u> <u>Rate Lots</u>
0-5,000	56.5%	327	0.5%
5,001-6,000	77.9%	1,035	1.7%
6,001-7,000	52.8%	3,677	6.0%
7,001-10,000	81.3%	2,331	3.8%
10,001-11,000	51.4%	181	0.3%
11,001-16,000	60.7%	385	0.6%
16,001-17,000	34.3%	43	0.1%
17,001-25,000	57.9%	343	0.6%
>25,000	27.9%	246	0.4%
<b>Total - Zone 3</b>	--	<b>8,568</b>	<b>14.0%</b>
<b>Total - All Zones</b>	--	<b>61,255</b>	--

a. From Table 8-3

b. From City billing records.

Table 8-5  
**Projected Water Rates and Annual Percentage Increases**  
 City of Modesto

<b>Current Flat Rates - Zone 2</b>			<b>New '04-05 SFR Flat Rates</b>		
<u>Current Sq. Ft. Ranges</u>	<u>Increment</u>	<u>Current Rates</u>	<u>Low End</u>	<u>High End</u>	<u>% Change</u>
0-6,000 sq. ft. lot	0-5,000	\$24.61	\$24.47	--	-0.6%
	5,001-6,000	\$24.61	--	\$27.81	13.0%
6,001-10,000 sq. ft. lot	6,001-7,000	\$28.58	\$27.81	--	-2.7%
	7,001-10,000	\$28.58	--	\$33.00	15.5%
10,001-16,000 sq. ft. lot	10,001-11,000	\$34.30	\$33.00	--	-3.8%
	11,001-16,000	\$34.30	--	\$35.03	2.1%
16,001-25,000 sq. ft. lot	16,001-17,000	\$41.11	\$35.03	--	-14.8%
	17,001-25,000	\$41.11	--	\$41.19	0.2%
>25,000 sq. ft. lot	>25,000	\$50.73	\$41.19	--	-18.8%

  

<b>Annual Percent Increases of Flat Rates</b>						
<u>New Flat Rate Charges</u>	<u>Current Rates (a)</u>	<u>2004-05 (a)</u>	<u>2005-06</u>	<u>2006-07</u>	<u>2007-08</u>	<u>2008-09</u>
0-5,000 sq. ft. lot	\$24.61	-0.6%	20.0%	15.0%	5.0%	5.0%
5,001-7,000 sq. ft. lot	\$24.61	13.0%	20.0%	15.0%	5.0%	5.0%
7,001-11,000 sq. ft. lot	\$28.58	15.5%	20.0%	15.0%	5.0%	5.0%
11,001-17,000 sq. ft. lot	\$34.30	2.1%	20.0%	15.0%	5.0%	5.0%
Over 17,000 sq. ft. lot	\$41.11	0.2%	20.0%	15.0%	5.0%	5.0%

  

<b>Metered Rates - Zone 2</b>						
<b>Annual Percent Increases of Metered Rates</b>						
<u>Metered Charges</u>	<u>Current Rates</u>	<u>2004-05</u>	<u>2005-06</u>	<u>2006-07</u>	<u>2007-08</u>	<u>2008-09</u>
Uniform Volume Charge	\$1.005	-16.2%	20.0%	15.0%	5.0%	5.0%
Fixed Meter Charges						
5/8"-3/4"	\$8.12	11.0%	20.0%	15.0%	5.0%	5.0%
1"	\$10.17	25.7%	20.0%	15.0%	5.0%	5.0%
1-1/2"	\$15.53	42.5%	20.0%	15.0%	5.0%	5.0%
2"	\$21.09	58.3%	20.0%	15.0%	5.0%	5.0%
3"	\$33.73	88.1%	20.0%	15.0%	5.0%	5.0%
4"	\$51.58	88.4%	20.0%	15.0%	5.0%	5.0%
6"	\$83.08	129.8%	20.0%	15.0%	5.0%	5.0%
8"	\$119.27	154.5%	20.0%	15.0%	5.0%	5.0%
10"	\$180.55	140.8%	20.0%	15.0%	5.0%	5.0%
12"	\$219.36	269.2%	20.0%	15.0%	5.0%	5.0%

Source of rate information: Table 8-1.

a. Rates reflects the lowest current rate in the lot-size range.

Table 8-6

**Projected Water Rates and Annual Percentage Increases**

City of Modesto

Current Flat Rates - Zone 3			New '04-05 SFR Flat Rates		
Current Sq. Ft. Ranges	Increment	Current Rates	Low End	High End	% Change
0-6,000 sq. ft. lot	0-5,000	\$15.63	\$24.47	--	56.5%
	5,001-6,000	\$15.63	--	\$27.81	77.9%
6,001-10,000 sq. ft. lot	6,001-7,000	\$18.20	\$27.81	--	52.8%
	7,001-10,000	\$18.20	--	\$33.00	81.3%
10,001-16,000 sq. ft. lot	10,001-11,000	\$21.80	\$33.00	--	51.4%
	11,001-16,000	\$21.80	--	\$35.03	60.7%
16,001-25,000 sq. ft. lot	16,001-17,000	\$26.08	\$35.03	--	34.3%
	17,001-25,000	\$26.08	--	\$41.19	57.9%
>25,000 sq. ft. lot	>25,000	\$32.21	\$41.19	--	27.9%

  

Annual Percent Increases of Flat Rates						
New Flat Rate Charges	Current Rates (a)	2004-05 (a)	2005-06	2006-07	2007-08	2008-09
0-5,000 sq. ft. lot	\$15.63	56.5%	20.0%	15.0%	5.0%	5.0%
5,001-7,000 sq. ft. lot	\$15.63	52.8%	20.0%	15.0%	5.0%	5.0%
7,001-11,000 sq. ft. lot	\$18.20	81.3%	20.0%	15.0%	5.0%	5.0%
11,001-17,000 sq. ft. lot	\$21.80	60.7%	20.0%	15.0%	5.0%	5.0%
Over 17,000 sq. ft. lot	\$26.08	57.9%	20.0%	15.0%	5.0%	5.0%

  

Metered Rates - Zone 3						
Annual Percent Increases of Metered Rates						
Metered Charges	Current Rates	2004-05	2005-06	2006-07	2007-08	2008-09
Uniform Volume Charge	\$0.601	40.1%	20.0%	15.0%	5.0%	5.0%
Fixed Meter Charges						
5/8"-3/4"	\$11.12	-18.9%	20.0%	15.0%	5.0%	5.0%
1"	\$13.94	-8.3%	20.0%	15.0%	5.0%	5.0%
1-1/2"	\$21.09	4.9%	20.0%	15.0%	5.0%	5.0%
2"	\$28.54	17.0%	20.0%	15.0%	5.0%	5.0%
3"	\$45.61	39.1%	20.0%	15.0%	5.0%	5.0%
4"	\$69.22	40.4%	20.0%	15.0%	5.0%	5.0%
6"	\$111.29	71.6%	20.0%	15.0%	5.0%	5.0%
8"	\$159.36	90.4%	20.0%	15.0%	5.0%	5.0%
10"	\$241.79	79.8%	20.0%	15.0%	5.0%	5.0%
12"	\$293.88	175.6%	20.0%	15.0%	5.0%	5.0%

Source of rate information: Table 8-1.

a. Rates reflects the lowest current rate in the lot-size range.

<b>Current - Zone 1</b>		<b>Projected Charges &amp; Rates</b>				
	<i>2003-04</i>	2004-05	2005-06	2006-07	2007-08	2008-09
Customer Classes		<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<b>Flat Rate - Mo. Service Charges</b>						
0-3,500 sq. ft. lot	\$17.86	\$24.47	\$29.36	\$33.77	\$35.45	\$37.23
3,501-5,000 sq. ft. lot	\$20.60	\$24.47	\$29.36	\$33.77	\$35.45	\$37.23
5,001-7,000 sq. ft. lot	\$20.60	\$27.81	\$33.37	\$38.38	\$40.30	\$42.31
7,001-10,000 sq. ft. lot	\$23.08	\$27.81	\$33.37	\$38.38	\$40.30	\$42.31
10,001-10,500 sq. ft. lot	\$23.08	\$33.00	\$39.60	\$45.54	\$47.82	\$50.21
10,501-14,000 sq. ft. lot	\$25.56	\$33.00	\$39.60	\$45.54	\$47.82	\$50.21
14,001-17,000 sq. ft. lot	\$30.78	\$35.03	\$42.04	\$48.34	\$50.76	\$53.30
17,001-17,500 sq. ft. lot	\$30.78	\$41.19	\$49.42	\$56.84	\$59.68	\$62.66
17,501-21,000 sq. ft. lot	\$36.09	\$41.19	\$49.42	\$56.84	\$59.68	\$62.66
<b>Metered Charges</b>						
Uniform Vol. Charge (\$/hcf)	\$0.82	\$0.84	\$1.01	\$1.16	\$1.22	\$1.28
<b>Fixed Meter Charges</b>						
5/8"-3/4"	\$13.63	\$9.01	\$10.82	\$12.44	\$13.06	\$13.71
1"	\$18.14	\$12.78	\$15.34	\$17.64	\$18.52	\$19.45
1-1/2"	\$22.54	\$22.13	\$26.55	\$30.53	\$32.06	\$33.66
2"	\$27.20	\$33.38	\$40.06	\$46.06	\$48.37	\$50.79
3"	\$36.27	\$63.43	\$76.12	\$87.53	\$91.91	\$96.51
4"	\$47.16	\$97.19	\$116.63	\$134.13	\$140.83	\$147.88
6"	\$70.90	\$190.95	\$229.14	\$263.51	\$276.68	\$290.51
8"	\$90.55	\$303.49	\$364.19	\$418.82	\$439.76	\$461.75
10"	\$109.16	\$434.84	\$521.80	\$600.07	\$630.08	\$661.58
12"	\$127.83	\$809.95	\$971.95	\$1,117.74	\$1,173.62	\$1,232.31
<b>Annual Rate Increase</b>		<i>(varies)</i>	20.0%	15.0%	5.0%	5.0%

<b>Current - Zone 2</b>		<b>Projected Charges &amp; Rates</b>				
	<i>2003-04</i>	2004-05	2005-06	2006-07	2007-08	2008-09
Customer Classes		<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<b>Flat Rate - Mo. Service Charges</b>						
0-5,000 sq. ft. lot	\$24.61	\$24.47	\$29.36	\$33.77	\$35.45	\$37.23
5,001-7,000 sq. ft. lot	\$24.61	\$27.81	\$33.37	\$38.38	\$40.30	\$42.31
	\$28.58	\$27.81	\$33.37	\$38.38	\$40.30	\$42.31
7,001-11,000 sq. ft. lot	\$28.58	\$33.00	\$39.60	\$45.54	\$47.82	\$50.21
	\$34.30	\$33.00	\$39.60	\$45.54	\$47.82	\$50.21
11,001-17,000 sq. ft. lot	\$34.30	\$35.03	\$42.04	\$48.34	\$50.76	\$53.30
	\$41.11	\$35.03	\$42.04	\$48.34	\$50.76	\$53.30
Over 17,000 sq. ft. lot	\$41.11	\$41.19	\$49.42	\$56.84	\$59.68	\$62.66
	\$50.73	\$41.19	\$49.42	\$56.84	\$59.68	\$62.66
<b>Metered Charges</b>						
Uniform Vol. Charge (\$/hcf)	\$1.005	\$0.84	\$1.01	\$1.16	\$1.22	\$1.28
<b>Fixed Meter Charges</b>						
5/8"-3/4"	\$8.12	\$9.01	\$10.82	\$12.44	\$13.06	\$13.71
1"	\$10.17	\$12.78	\$15.34	\$17.64	\$18.52	\$19.45
1-1/2"	\$15.53	\$22.13	\$26.55	\$30.53	\$32.06	\$33.66
2"	\$21.09	\$33.38	\$40.06	\$46.06	\$48.37	\$50.79
3"	\$33.73	\$63.43	\$76.12	\$87.53	\$91.91	\$96.51
4"	\$51.58	\$97.19	\$116.63	\$134.13	\$140.83	\$147.88
6"	\$83.08	\$190.95	\$229.14	\$263.51	\$276.68	\$290.51
8"	\$119.27	\$303.49	\$364.19	\$418.82	\$439.76	\$461.75
10"	\$180.55	\$434.84	\$521.80	\$600.07	\$630.08	\$661.58
12"	\$219.36	\$809.95	\$971.95	\$1,117.74	\$1,173.62	\$1,232.31
<b>Annual Rate Increase</b>		<i>(varies)</i>	20.0%	15.0%	5.0%	5.0%

<b>Current - Zone 3</b>		<b>Projected Charges &amp; Rates</b>				
	<i>2003-04</i>	2004-05	2005-06	2006-07	2007-08	2008-09
Customer Classes		<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
<b>Flat Rate - Mo. Service Charges</b>						
0-5,000 sq. ft. lot	\$15.63	\$24.47	\$29.36	\$33.77	\$35.45	\$37.23
5,001-7,000 sq. ft. lot	\$15.63	\$27.81	\$33.37	\$38.38	\$40.30	\$42.31
	\$18.20	\$27.81	\$33.37	\$38.38	\$40.30	\$42.31
7,001-11,000 sq. ft. lot	\$18.20	\$33.00	\$39.60	\$45.54	\$47.82	\$50.21
	\$21.80	\$33.00	\$39.60	\$45.54	\$47.82	\$50.21
11,001-17,000 sq. ft. lot	\$21.80	\$35.03	\$42.04	\$48.34	\$50.76	\$53.30
	\$26.08	\$35.03	\$42.04	\$48.34	\$50.76	\$53.30
Over 17,000 sq. ft. lot	\$26.08	\$41.19	\$49.42	\$56.84	\$59.68	\$62.66
	\$32.21	\$41.19	\$49.42	\$56.84	\$59.68	\$62.66
<b>Metered Charges</b>						
Uniform Vol. Charge (\$/hcf)	\$0.601	\$0.84	\$1.01	\$1.16	\$1.22	\$1.28
<b>Fixed Meter Charges</b>						
5/8"-3/4"	\$11.12	\$9.01	\$10.82	\$12.44	\$13.06	\$13.71
1"	\$13.94	\$12.78	\$15.34	\$17.64	\$18.52	\$19.45
1-1/2"	\$21.09	\$22.13	\$26.55	\$30.53	\$32.06	\$33.66
2"	\$28.54	\$33.38	\$40.06	\$46.06	\$48.37	\$50.79
3"	\$45.61	\$63.43	\$76.12	\$87.53	\$91.91	\$96.51
4"	\$69.22	\$97.19	\$116.63	\$134.13	\$140.83	\$147.88
6"	\$111.29	\$190.95	\$229.14	\$263.51	\$276.68	\$290.51
8"	\$159.36	\$303.49	\$364.19	\$418.82	\$439.76	\$461.75
10"	\$241.79	\$434.84	\$521.80	\$600.07	\$630.08	\$661.58
12"	\$293.88	\$809.95	\$971.95	\$1,117.74	\$1,173.62	\$1,232.31
<b>Annual Rate Increase</b>		<i>(varies)</i>	20.0%	15.0%	5.0%	5.0%

# 8. Financial Plan

Table 7-1  
**Financial Plan - Projected Rate Increases and Revenue**  
 City of Modesto

	Current		Projected Revenue Requirements and Rate Increases			
	F Y 03-04	F Y 04-05	F Y 05-06	F Y 06-07	F Y 07-08	F Y 08-09
<b>Annual Net Revenue Req'ts. (a)</b>	\$30,668,000	\$33,493,944	\$37,913,564	\$38,330,590	\$48,027,000	\$51,806,657
<b>Revenue from Rates</b>						
Revenue from Current Rates (b)	\$27,366,000	\$28,322,000	\$28,775,000	\$29,235,000	\$29,703,000	\$30,178,000
Revenue from previous year rate incr.	\$ -	\$ -	\$ 10,071,250	\$ 18,125,700	\$ 25,633,689	\$ 28,854,695
Subtotal	\$27,366,000	\$28,322,000	\$38,846,250	\$47,360,700	\$55,336,689	\$59,032,695
<b>Current Year Surplus/(Deficit)</b>	(\$3,302,000)	(\$5,171,944)	\$932,686	\$9,030,110	\$7,309,689	\$7,226,038
<i>Surplus/(Deficit) (No Rate Increases)</i>	(\$3,302,000)	(\$5,171,944)	(\$9,138,564)	(\$9,095,590)	(\$18,324,000)	(\$21,628,657)
<b>Annual Rate Increase</b>	<b>0.0%</b>	<b>35.0%</b>	<b>20.0%</b>	<b>15.0%</b>	<b>5.0%</b>	<b>5.0%</b>
<i>Cumulative Increase</i>	<i>0.0%</i>	<i>35%</i>	<i>62%</i>	<i>86%</i>	<i>96%</i>	<i>105%</i>
<b>REVENUE FROM INCREASES (c)</b>						
Effective Dec 1: FY 04-05 (d)		\$ 3,855,305	\$ 10,071,250	\$ 10,232,250	\$ 10,396,050	\$ 10,562,300
Effective July 1: FY 05-06			\$ 7,769,250	\$ 7,893,450	\$ 8,019,810	\$ 8,148,060
Effective July 1: FY 06-07				\$ 7,104,105	\$ 7,217,829	\$ 7,333,254
Effective July 1: FY 07-08					\$ 2,766,834	\$ 2,811,081
Effective July 1: FY 08-09						\$ 2,951,635
Subtotal - Revenue from Increases	\$ -	\$ 3,855,305	\$ 17,840,500	\$ 25,229,805	\$ 28,400,523	\$ 31,806,329
<b>Total Annual Rate Revenue</b>	\$27,366,000	\$32,177,305	\$46,615,500	\$54,464,805	\$58,103,523	\$61,984,329
<i>Annual Avail. to Cash-fund CIP Projects (e)</i>	(\$3,302,000)	(\$1,316,639)	\$8,701,936	\$16,134,215	\$10,076,524	\$10,177,673
<i>Cumulative Surplus/(Deficit) after Increase</i>	(\$3,302,000)	(\$4,618,639)	\$4,083,297	\$20,217,512	\$30,294,035	\$40,471,708
<i>Assumed Growth Rate: (From Table 3-1)</i>		1.6%	1.6%	1.6%	1.6%	1.6%

a. From Table 4-1, Projected Water Utility Budgets. Includes Total Operating Expenses, Debt Service Payments, and Non-Rate Revenues.

b. Current rate revenue for FY'03-04 is from Table 7-2, FY'04-05 is based on actual revenue from City billing records (see Appendix E, Table 7A-2).

Projections after FY'04-05 reflect the annual growth rate.

c. Revenue increases calculated from the Annual Rate Increase. FY'04-05 assumes an effective date of January 1, 2005.

d. Revenue from rate increases in FY'04-05 are the estimated total revenue from Appendix E Table 7A-1 less the FY'04-05 revenue from Current Rates.

e. The difference between Total Annual Rate Revenue and Annual Net Revenue Requirements.

Table 7-2

**Projected Operating Results and Coverage Ratios (\$ in 000's)**

City of Modesto Water Fund

	Estimated	Year 1	Year 2	Year 3	Year 4	Year 5
	'03-04	'04-05	'05-06	'06-07	'07-08	'08-09
<b>Expenditures</b>						
Operating Expenses	\$15,978	\$17,133	\$20,495	\$20,993	\$21,386	\$21,815
New Metering, Billing, O&M Costs	NA	\$338	\$1,237	\$998	\$1,028	\$1,059
MID T&DA Debt Svc	\$6,724	\$7,124	\$7,124	\$7,124	\$7,124	\$7,124
MID T&DA O&M	\$4,052	\$4,853	\$4,998	\$5,148	\$6,795	\$8,536
Other Uses (transfers out)	\$1,869	\$2,001	\$2,010	\$2,012	\$1,907	\$1,869
PCE Litigation (Special Item)	\$3,756	\$1,897	\$0	\$0	\$0	\$0
Total Expenditures	\$32,379	\$33,346	\$35,864	\$36,275	\$38,240	\$40,403
<b>Revenue Sources</b>						
Operating Revenue	\$1,702	\$851	\$860	\$868	\$877	\$886
Water Sale - Current Flat Rates (a)	\$16,842	\$17,396	\$17,675	\$17,957	\$18,245	\$18,537
Water Sale - Current Metered Rates (a)	\$10,524	\$10,925	\$11,100	\$11,278	\$11,458	\$11,641
Other Sources (transfers in)	\$2,033	\$2,203	\$2,207	\$2,211	\$2,105	\$2,066
Connection Fee Revenues (b)	\$1,159	\$1,243	\$1,255	\$1,268	\$1,280	\$1,293
PCE Litigation Reimbursement	\$2,572	\$660	\$0	\$0	\$0	\$0
Total Operating Revenue	\$34,832	\$33,279	\$33,097	\$33,582	\$33,965	\$34,423
Net Operating Revenues (c)	\$10,898	\$6,855	\$4,160	\$4,231	\$2,651	\$947
Net Revenues (d)	\$2,453	(\$67)	(\$2,767)	(\$2,694)	(\$4,275)	(\$5,980)
<b>Add'l Revenue from Rate Increases (e)</b>	--	<b>\$3,855</b>	<b>\$17,841</b>	<b>\$25,230</b>	<b>\$28,401</b>	<b>\$31,806</b>
Annual Rate Increase (%)		35%	20%	15%	5%	5%
Debt Service Payments - MID T&DA	\$6,724	\$7,124	\$7,124	\$7,124	\$7,124	\$7,124
1997 COPs/CDWR Loan	\$2,045	\$2,045	\$2,050	\$2,055	\$2,059	\$2,057
New MID Plant Debt Ser. (\$37.6 mil.) (f, g)	\$0	\$0	\$0	\$0	\$4,110	\$4,110
Tier 1 Projects Debt Service (\$34 mil.) (f)	\$0	\$0	\$0	\$0	\$3,618	\$3,618
Tier 2 Projects Debt Service (\$15 mil.) (f)	\$0	\$0	\$0	\$0	\$0	\$1,619
Total - Debt Service	\$8,769	\$9,169	\$9,174	\$9,179	\$16,911	\$18,528
<b>Debt Coverage Ratio (h)</b>	<b>1.24</b>	<b>1.17</b>	<b>2.40</b>	<b>3.21</b>	<b>1.84</b>	<b>1.77</b>
<b>New Debt Coverage Ratio (i)</b>	<b>1.67</b>	<b>1.37</b>	--	<b>2.93</b>	<b>1.68</b>	<b>1.61</b>

a. Rate revenue from current rates. From Table 7-1 - Financial Plan - Projected Rate Increases and Revenue

b. Includes water connection fees at current fee levels. Future revenues are expected to be greater after City increases these fees to reflect planned capital improvements to serve growth.

c. Excludes transfers in and out, and MID T&DA Debt Svc

d. Total Operating Revenue less Total Expenditures.

e. From Table 7-1, Financial Plan - Projected Rate Revenue Including Rate Increases

f. Assumes a 6% interest rate, 20-year repayment period, and 12 months of capitalized interest. Source: Peter Miller, Public Financial Mngmt, 9/1/04.

g. Assumes the MID Treatment Plant will be completed in the 1st quarter of 2008, that interest is capitalized, and debt service payments start in 2007-08.

h. FY'03-04 will be different assuming adopted debt ratio has adjustments for environmental litigation.

i. FY'03-04 and '04-05 are the Auditor's interpretation, which does not include PCE Litigation expenses. After '05-06 are new debt coverage ratios for future projects, which may exclude connection fee revenue and use 95% of planned rate increases.

Table 7-3

**Projected Reserve Levels (in \$000's)**

*City of Modesto Water Fund*

	Estimated	Year 1	Year 2	Year 3	Year 4	Year 5	Total Cash-Funded CIP (Years 1-5)
	'03-04	'04-05	'05-06	'06-07	'07-08	'08-09	
<b>Available Working Capital</b>							
Net Revenues (from Table 7-2)		(\$67)	(\$2,767)	(\$2,694)	(\$4,275)	(\$5,980)	
Add'l Revenue from Rate Increases (From Table 7-1)		\$3,855	\$17,841	\$25,230	\$28,401	\$31,806	
<b>Debt Service Payments</b>							
1997 COPs/CDWR Loan		(\$2,045)	(\$2,050)	(\$2,055)	(\$2,059)	(\$2,057)	
New MID Plant Debt Ser.		\$0	\$0	\$0	(\$4,110)	(\$4,110)	
Tier 1 CIP Debt Service		\$0	\$0	\$0	(\$3,618)	(\$3,618)	
Tier 2 CIP Debt Service		\$0	\$0	\$0	\$0	(\$1,619)	
Available for Reserves & Cash-funding		\$1,743	\$13,024	\$20,481	\$14,339	\$14,423	
<b>Reserve Contributions &amp; Cash-Funding</b>							
Beginning Working Capital (a)	\$17,642	\$5,377	\$0	\$0	\$0	\$0	
Available for Reserves & Cash-funding	--	\$1,743	\$13,024	\$20,481	\$14,339	\$14,423	
Cash-Funded CIP (b)	(\$4,926)	(\$5,330)	(\$9,456)	(\$9,456)	(\$9,456)	(\$9,456)	(\$43,153)
Cash-Funded Tier 2 COP Projects (c)	\$0	\$0	\$0	(\$3,900)	(\$3,900)	(\$3,900)	(\$11,700)
New Contrib. to Rate Stabilization	--	\$1,000	\$0	(\$158)	\$0	\$0	
New Contrib. to Operating Reserve	--	\$0	(\$1,313)	(\$2,000)	\$0	\$0	
New Contrib. to R&R Reserve	--	\$0	(\$1,000)	(\$3,700)	\$297	\$226	
less Connection Fee Revenues (d)	(\$1,159)	(\$1,243)	(\$1,255)	(\$1,268)	(\$1,280)	(\$1,293)	
Existing Restricted Reserves (e)	(\$3,673)	--	--	--	--	--	
Adjustments (f)	(\$2,507)	(\$1,547)	\$0	\$0	\$0	\$0	
Ending Working Capital After CIP (g)	\$5,377	\$0	\$0	\$0	\$0	\$0	(\$54,853)
<b>Balance of Reserves</b>							
Ending Working Capital After CIP	\$5,377	\$0	\$0	\$0	\$0	\$0	
Rate Stabilization Reserve	\$2,847	\$1,847	\$1,847	\$2,004	\$2,004	\$2,004	
Target Balance (h) 20%	\$2,100	\$2,200	\$2,200	\$2,300	\$2,300	\$2,300	
Operating Reserve	\$0	\$0	\$1,313	\$3,313	\$3,313	\$3,313	
Target Balance (i) 25%	\$4,000	\$4,300	\$5,100	\$5,200	\$5,300	\$5,500	
Repair & Replacement Reserve	\$0	\$0	\$1,000	\$4,700	\$4,403	\$4,177	
Target Balance (j) 5%	\$4,900	\$4,900	\$4,900	\$4,900	\$4,900	\$4,900	
<b>Balance of Reserves</b>	<b>\$8,224</b>	<b>\$1,847</b>	<b>\$4,160</b>	<b>\$10,018</b>	<b>\$9,720</b>	<b>\$9,494</b>	
Target Balance - Operating Reserves	\$11,000	\$11,400	\$12,200	\$12,400	\$12,500	\$12,700	

a. FY '03-04 is from Finance Department, 10-year proforma.

b. Currently planned cash-funded CIP projects for existing users totaling \$41.8 million plus from 2005-06 through 2008-09, plus \$1.353 mil. carryover from '04-05.

c. Cash-funded portion of existing users share of Tier 2 CIP projects. Remainder of \$15 million is debt funded (see Tables 4-1 and 7-1).

d. Connection fee revenues are included in the Net Revenues, but will not be used to pay for CIP projects for existing customers.

e. Includes existing balance in Rate Stabilization fund as of June 30, 2003 (from p. 117 of CAFR) and restricted cash (p.28).

f. Includes Balance Sheet & Non-Cash adjustments plus annual Surplus/Deficit from 10-Year Proforma, 7-26-04, plus Net Revenues of \$2.453 mil from Table 7-2.

g. Prior year CIP carryover exceeds ending working capital in FY'03-04.

h. Rate Stabilization Fund target balance = 20% of rate revenues from metered customers (from Table 7-1).

i. Operating Reserve target balance = 25% of Operating Expenses (from Table 7-1). Excludes MID O&M, debt service, etc.

j. Repair & Replacement Reserve target balance = 5% of next 5-years of cash- and debt-funded CIP projects (approximately \$100 million).

# 9. Capital Cost Allocations/West Yost

Chart 7-1

## Overview of West-Yost's Capital Cost Allocations

City of Modesto

<u>Capital Projects</u>	<u>Existing</u>	<u>Future growth</u>	<u>Total</u>	<u>Allocation</u>
MID - Phase 2	\$ 14,621,732 38.9%	\$ 22,966,268 61.1%	\$ 37,588,000 100%	25%
Downstream Bond	\$ 56,982,250 89.0%	\$ 7,042,750 11.0%	\$ 64,025,000 100%	42%
Pay as you go	\$ 41,799,052 81.6%	\$ 9,401,948 18.4%	\$ 51,201,000 100%	34%
<b>Total</b>	<b>\$ 113,403,034 74.2%</b>	<b>\$ 39,410,966 25.8%</b>	<b>\$ 152,814,000 100%</b>	<b>100%</b>

Source: West Yost & Associates, Table 1, *Justification and Cost Allocation for Proposed Water System Improvements*, West Yost & Associates, September, 2004.

<b>Project</b>	<b>Cost</b>	<b>Funding Source</b>	<b>Existing Customer Share</b>	<b>Growth Share</b>	<b>Comments</b>
MID Treatment Plant Expansion	\$37.6 M	MID Revenue Bond	\$14.6 M	\$23 M	Rate base will initially fully fund debt payments. Connection fees will be increased to reimburse existing rate base and pay for growth's allocation (61.1%).
Downstream Improvements – Tier 1	\$34 M	City Certificates of Participation (COP) bond	\$30.3 M	\$3.7 M	Rate base will initially fully fund debt payments. Connection fees will be increased to reimburse existing base and pay for growth's allocation (11%).
Downstream Improvements – Tier 2	\$30 M	COP bond financing - \$15M / Cash-funded (existing customers)- \$11.7 M <i>See comments</i>	\$26.7 M	\$3.3 M	Connection fees will be increased to fund growth projects.
Cash-funded, pay-as-you-go Projects & Programs	\$51.2 M	Cash-funded through rate base (existing share only) <i>See comments</i>	\$41.8 M	\$9.4 M	Connection fees will be increased to fund projects allocated to growth.
Prior Year CIP Carryover (pre-audit)	\$1.353 M (estimate)	Cash-funded through rate base	\$1.353 M		These projects were not included in the West Yost report

	Existing	Growth	Total		
MRWTP Expansion Phase 2	\$ 14,621,732	\$ 22,966,268	\$ 37,588,000		
MRWTP Downstream Facilities	Existing	Growth	Total		
Major City Transmission Mains and Pumping Facilities	\$ 16,021,269	\$ 4,625,961	\$ 20,647,230	77.6%	22.4%
Storage Tanks and Transmission Facilities (contiguous area only)	\$ 39,422,305	\$ -	\$ 39,422,305	100.0%	0.0%
Motor Operated Flow Control Valves	\$ 1,538,676	\$ 2,416,789	\$ 3,955,465	38.9%	61.1%
	\$ 56,982,250	\$ 7,042,750	\$ 64,025,000	89.0%	11.0%
Project Type Distribution Improvements	Existing	Growth	Total		
TID Water Supply Project	\$ 549,000	\$ 2,451,000	\$ 3,000,000	18.3%	81.7%
Water Quality Report	\$ 82,080	\$ 157,920	\$ 240,000	34.2%	65.8%
Remove Storage Tanks	\$ 300,000	\$ -	\$ 300,000	100.0%	0.0%
Install Fence at Satellite Corporation Yard	\$ 50,000	\$ -	\$ 50,000	100.0%	0.0%
	\$ 981,080	\$ 2,608,920	\$ 3,590,000	27.3%	72.7%
Program Type Distribution Improvements	Existing	Growth	Total		
Recoat the Interior of Existing Steel Storage Tanks	\$ 420,000	\$ -	\$ 420,000	100.0%	0.0%
Extend Water Mains Program	\$ -	\$ 2,895,000	\$ 2,895,000	0.0%	100.0%
Strengthen and Replace Water System Program	\$ 8,489,000	\$ -	\$ 8,489,000	100.0%	0.0%
Install New Wells Program	\$ 4,723,992	\$ 1,044,008	\$ 5,768,000	81.9%	18.1%
Wellhead Treatment Program	\$ 14,826,000	\$ -	\$ 14,826,000	100.0%	0.0%
New Generators Program	\$ 990,000	\$ -	\$ 990,000	100.0%	0.0%
Water System Security Enhancements Program	\$ 1,305,000	\$ -	\$ 1,305,000	100.0%	0.0%
Groundwater Management Program	\$ 85,500	\$ 164,500	\$ 250,000	34.2%	65.8%
Urban Water Management Plan	\$ 268,260	\$ 71,740	\$ 340,000	78.9%	21.1%
Water Master Plan	\$ 499,850	\$ 150,150	\$ 650,000	76.9%	23.1%
Water System Evaluation Program	\$ 157,220	\$ 965,780	\$ 1,123,000	14.0%	86.0%
Storage Tanks Program	\$ 4,628,150	\$ 1,501,850	\$ 6,130,000	75.5%	24.5%
Water Meters Program	\$ 4,425,000	\$ -	\$ 4,425,000	100.0%	0.0%
	\$ 40,817,972	\$ 6,793,028	\$ 47,611,000	85.7%	14.3%
					\$ 51,201,000