

CITY OF RIO VISTA

WATER RATE ANALYSIS *FINAL REPORT*

OCTOBER 1, 2008



Corporate Office:

27368 Via Industria
Suite 110
Temecula, CA 92590
Tel: (951) 587-3500
Tel: (800) 755-MUNI (6864)
Fax: (951) 587-3510

Office Locations:

Anaheim, CA
Lancaster, CA
Oakland, CA

Sacramento, CA
Orlando, FL
Memphis, TN

www.muni.com

Table of Contents

Table of Contents	<i>i</i>
Executive Summary	<i>1</i>
Assumptions.....	1
Findings.....	1
Recommendations.....	2
Introduction	<i>3</i>
Projected Number of Accounts and Water Demand.....	3
Table 1: Projected Number of Accounts.....	4
Table 2: Growth Factors	5
Table 3: Projected Annual Water Usage (in HCF).....	5
Table 4: Projected Residential Monthly Water Usage (in HCF)	6
Current Rates	7
Table 5: Current Water Rates	7
Annual Revenue Requirements	<i>8</i>
Approaches to Determining Revenue Requirements.....	8
Current and Future Revenue Requirements	8
Future Revenue Requirements.....	9
Table 6: Capital Improvement Projects Related to Operations	10
Table 7: Water Utility Revenue Requirements.....	12
Allocation of Water Costs	<i>13</i>
Cost of Service Procedure.....	13
Classification of Expenses to Cost Components	13
Table 8: Functionalization of Water Utility Revenue Requirements.....	14
Table 9: Allocation of Required Revenue	15
Proposed Water Rates	<i>16</i>
Table 10: Meter-Equivalent Ratios.....	17
Water Rate Structure.....	18
Table 11: Calculation of Water Rates.....	18
Table 12: Proposed Water Rate Schedule.....	19
Conclusion	<i>20</i>

Executive Summary

This study of water rates was conducted for the City of Rio Vista to determine revenue requirements, costs of services, appropriate and fair rates, and to maintain its water utility on a financially sound and stable basis over the next five fiscal years. The study was conducted using historical and projected operating and non-operating expenses, capital expenditures, and consumption data provided by the City. The rates developed will assist in achieving equity in deriving revenue from each class of customers served by the Rio Vista water system.

The City retained MuniFinancial to prepare a water rate analysis that will include a new water rate schedule that meets current and near-term projected system revenue requirements. For the purpose of determining annual revenue requirements as a basis to set future water rates, a projection period of five years was used, spanning fiscal years 2008/2009 through 2012/2013.

Assumptions

1. The budget for fiscal year ending June 30, 2008 was used as the base year.
2. The water system serves water to 4,004 customer accounts (based on residential customer account data and number of meters from fiscal year 2007/2008).
3. A cost of living factor of four percent (4%) was used to project future expenses, except for the PG&E Utilities costs, which were projected using an inflation factor of ten percent (10%) in fiscal year 2008/2009 and then nine percent (9%) each year thereafter.
4. The ending operating fund balance for fiscal year 2006/2007 was \$(168,960).

Findings

This section presents the findings of the water rate analysis.

1. The water system's current financial condition is not viable since revenues have not kept up with rising costs, such as labor, materials, and maintenance. Due to these increasing expenses, the current revenues are insufficient to finance the utility's operations.
2. The cumulative deficit in the enterprise's operating fund balance will continue to increase unless water rates are adjusted to meet revenue requirements.
3. Existing rates do not fund system replacement; furthermore, the existing rates do not adequately fund system reserves.

Recommendations

The findings of this water rate analysis indicate the City should consider adoption of the following recommendations:

1. Adopt a rate structure that adequately provides for ongoing costs and allows for funding of reserves for unscheduled expenses.
2. The City should adopt a policy of maintaining a designated balance in the operating fund (such as three months of operating expenses or any other amount approved by the Council), in order to satisfy expense obligations as cash flow fluctuates during the year.

Introduction

This report documents the results of a water rate study conducted for the City of Rio Vista. The primary purpose of this study is to develop a water rate structure that will adequately fund the annual operations of the water utility.

The rate study has used utility revenues, operating expenses, and capital expenditures data provided by the City. The objective of the rate study is to develop rate schedules for the water utility for the duration of the five-year study period. The projected rate schedules are designed to produce revenues for the water utility to pay administrative, operations, maintenance, and capital improvement expenditures, in addition to maintaining fund balances at reasonable operating levels.

The results of the rate study are derived from projected financial analyses of the water utility based upon the budgeted revenues and expenses of the fiscal year ending June 30, 2008. A five-year projection of operating results to determine future revenue requirements was developed for the water utility for the fiscal years ending June 30, 2009 through 2013. The projections also determine the amounts required to maintain sufficient balances in the Water utility Enterprise Fund.

Projected Number of Accounts and Water Demand

The water system serves water to 4,004 customer accounts, of which 3,772 are unmetered (mainly residential accounts). The remaining metered accounts are largely commercial customers. The projected number of accounts are detailed in Table 1 by meter size (where applicable). The growth factors used in the projections are illustrated in Table 2. Note that although future residences are required to install one-inch meters for fire-flow purposes, they are treated as standard 3/4-inch meters for the purposes of the study and are expected to be charged at the 3/4-inch meter rate.

With almost 94% of all accounts being unmetered, residential water usage had to be estimated for the purposes of this study. Water usage data based on average CY 2007 raw water production estimates were used to estimate unmetered usage (unmetered customers account for 72.4% of usage). Annual water usage projections are illustrated in Table 3; Table 4 depicts the estimated monthly residential consumption (note that an equivalency factor of 76.07% was used to estimate multi-family consumption in relation to a single family residence).

Table 1: Projected Number of Accounts

Number of Unmetered Customers						
	FY 2007-2008	FY 2008-2009	FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013
Single Family	3,493	3,580	3,670	3,853	4,046	4,248
Multi-family	279	279	279	279	282	285
Unmetered Sub-total	3,772	3,859	3,949	4,132	4,328	4,533

Number of Metered Customers						
Meter Size	FY 2007-2008	FY 2008-2009	FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013
3/4	131	131	131	131	131	131
1	39	39	39	39	39	39
1 1/2	9	9	9	9	9	9
2	31	31	31	31	31	31
3	15	15	15	15	15	15
4	7	7	7	7	7	7
6	-	-	-	-	-	-
Total Meters	232	232	232	232	232	232
Total Accounts	4,004	4,091	4,181	4,364	4,560	4,765

Note:

Base account figures based on June 2008 data.

Source: City of Rio Vista.

Table 2: Growth Factors

	<u>FY 08-09</u>	<u>FY 09-10</u>	<u>FY 10-11</u>	<u>FY 11-12</u>	<u>FY 12-13</u>
Single Family	2.5%	2.5%	5.0%	5.0%	5.0%
Multi-family	0.0%	0.0%	0.0%	1.0%	1.0%
Commercial	0.0%	0.0%	0.0%	0.0%	0.0%

Source: City of Rio Vista

Table 3: Projected Annual Water Usage (in HCF)

	<u>FY 2006-2007</u>	<u>FY 2007-2008</u>	<u>FY 2008-2009</u>	<u>FY 2009-2010</u>	<u>FY 2010-2011</u>	<u>FY 2011-2012</u>	<u>FY 2012-2013</u>
Unmetered	846,670	846,670	867,836	889,532	934,009	980,709	1,029,745
Metered	322,764	322,764	322,764	322,764	322,764	322,764	322,764
Total	1,169,433	1,169,433	1,190,600	1,212,296	1,256,772	1,303,473	1,352,508

Notes:

Water usage data based on average CY 2007 raw water production estimates. Unmetered customers account for 72.4% of usage.

Source: City of Rio Vista.

Table 4: Projected Residential Monthly Water Usage (in HCF)

	<u>FY 2008-2009</u>	<u>FY 2009-2010</u>	<u>FY 2010-2011</u>	<u>FY 2011-2012</u>	<u>FY 2012-2013</u>
Estimated Residential Usage (HCF)	867,836	889,532	934,009	980,709	1,029,745
Single Family Dwelling Units	3,580	3,670	3,853	4,046	4,248
Residential usage per month (HCF)	20.2	20.2	20.2	20.2	20.2

* Note: One multi-family unit is equivalent to 0.7607 single family units.

Sources: City of Rio Vista; MuniFinancial.

Current Rates

The water rate structure has two basic customer classes:

- ♦ Residential (unmetered)
- ♦ Commercial (metered)

Currently, metered customers pay a monthly base fee (or minimum rate) and a monthly volume charge per gallon of water consumed. Residential customers are charged a flat rate equal to the 3/4-inch meter minimum monthly rate. Table 5 illustrates the current water rate schedule.

Table 5: Current Water Rates

Service Size	Minimum Monthly Rate	Gallon Allowance
3/4-inch	\$16.80	10,000
1-inch	28.05	17,000
1 1/2-inch	55.90	33,000
2-inch	89.45	53,000
3-inch	167.90	100,000
4-inch	279.90	167,000
6-inch	559.60	333,000

Volume charge is \$0.46 per each one thousand gallons, or any fraction thereof, of use in excess of the gallon allowance

Note: Residential customers are charged a flat rate equal to the 3/4-inch meter minimum monthly rate

Source: City of Rio Vista.

Annual Revenue Requirements

As in most cities, the water system operates on an enterprise basis with expenses and revenues accounted for separately from the City's general and other funds. The City's water enterprise fund must receive sufficient total revenue to ensure proper operation and maintenance of the system as well as preserve the financial integrity of the utility and the fund. Adequacy of water revenues can be measured by comparing the water system's revenue requirements to be met from the water rates it charges to its customers.

Approaches to Determining Revenue Requirements

In order to develop adequate revenues from a system of water rates, the annual revenue requirements of the water system must be determined. There are two commonly accepted bases for determining annual revenue requirements in order to develop a financially sound water rate structure. These approaches are the "cash needs" approach and the "utility" approach.

The "cash needs" basis is typically used by municipally-owned water utilities when establishing rates for their customers. Under this approach, the basic revenue-requirement components include:

- ◆ Operating and maintenance (O&M) expenses
- ◆ Debt service costs (principal and interest on water utility-related debt instruments)
- ◆ Capital expenditures funded directly from current revenues or accruals on a pay-as-you-go basis
- ◆ Other elements such as interdepartmental expenses (cost allocation) and interest earnings (considered as a credit to the expenses)

The "utility" basis for determining annual revenue requirements is typically used by regulated investor-owned utilities and regulated municipal utilities. Items normally included in annual revenue requirements based on this approach include:

- ◆ Operating and maintenance (O&M) expenses
- ◆ Depreciation expense
- ◆ Fair rate of return on the rate base

To determine the revenue requirements for the water system we have used the "cash" basis.

Current and Future Revenue Requirements

The annual revenue requirements are derived from maintenance and operations costs and projected capital expense items. Interest earnings, fines and forfeitures, and other miscellaneous income may offset some of these expenses, but the majority of the costs should be recovered via customer rates and charges.

The water system prepares an annual budget that itemizes all the expenditures for each fiscal year. These expenses include personnel costs, maintenance and operations, equipment repair

and replacement, and Capital Improvement Program (operations) costs. The water system activities included in our analysis were gathered from the City's annual operating budget and audited financial statements.

Historical Revenues and Expenses

Base year income and expense data for the water system were obtained for fiscal year 2007/2008 using the water system budget for that year and audited financial statements ending June 30, 2007. This analysis is not a restatement of the City's audits or budgets, but does rely heavily on these data sources.

Our analysis revealed that the water system had an operating deficit at the end of fiscal year 2006/2007 due to increasing operating costs and inflationary pressures placed on operating and non-operating expenses. This fund balance was \$(168,960) at the end of fiscal year 2006/2007.

In summary, the water utility's current financial condition is not financially viable since revenues have not kept up with rising costs, such as labor, materials, and maintenance. Due to these increasing expenses, the current revenues are insufficient to finance the utility's operations.

Future Revenue Requirements

An evaluation of future revenue requirements should focus on three specific areas. These areas are increases in operating expenses, capital improvement costs, and the maintenance of reserves in the operating fund. The following sections discuss the impact of these factors on the water utility revenue requirements.

Operating Expense Projections

For the purpose of determining annual revenue requirements as a basis to set future water rates, we used a projection period of five years. During this period (FY 2008/2009 through FY 2012/2013), costs are naturally assumed to increase due to inflationary pressures. Therefore, we have projected future revenue requirements of the water utility by applying a cost of living factor of four percent (4%) to the operating expense line items, except for the PG&E Utilities costs, which were projected using an inflation factor of ten percent (10%) in fiscal year 2008/2009 and then nine percent (9%) each year thereafter.

Capital Improvement Costs

The City maintains a Capital Improvement Plan (CIP) for the funding of annual capital projects. The City has capital improvement projects for operations as well as for expansion-related requirements. Because we are only analyzing annual operations requirements, we included the CIP program costs associated with operations only. Table 6 presents the operations CIP over the five-year planning period of this study (note that it is assumed that all operations-related CIP costs will be funded on a "pay-as-you-go" basis).

Table 6: Capital Improvement Projects Related to Operations

PROJECT	FY 2008-2009	FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013
Water Hydrant Replacement	\$ -	\$ -	\$ -	\$ 200,000	\$ -
Water Line Replacement	-	-	-	-	1,330,000
Water line (12")	-	489,000	801,000	-	-
Arsenic Filters at all Wells	200,000	1,000,000	800,000	1,000,000	-
Water Well Replacement	-	-	-	-	-
Total	\$ 200,000	\$ 1,489,000	\$ 1,601,000	\$ 1,200,000	\$ 1,330,000

Source: City of Rio Vista

Operating Fund Reserves

The operating fund for the water utility had a balance of \$(168,960) as of June 30, 2007. It is recommended that the City adopt a policy of maintaining a designated balance in the operating fund (such as three months of operating expenses or any other amount approved by the Council), in order to satisfy expense obligations as cash flow fluctuates during the year. The rate study projects that with the revenue increase outlined in Table 7, the balance in the operating fund should meet the balance requirement by the end of the study period. Having adequate reserves makes emergency cash available and helps reduce future rate shocks.

Revenue Requirements Analysis

Table 7 presents the five-year projected revenue requirements for the water system. This table includes annual revenues projected to be raised using the current rate structure, the additional revenue required to meet projected system expenditures, the projected operating and non-operating expenses, and fund balance information based on the revenues generated from rate increases.

Rows 1 through 4 of this table show the revenue generated using current rates. These rates do not produce enough revenue to maintain a positive operating fund balance. The section below the current revenues (rows 5 through 12) incorporates the revenue generated by the proposed rate increase. As the table illustrates, total system revenues must be increased by 65% in FY 2008/2009, 58% in FY 2009/2010, 1% in FY 2010/2011, -1% in FY 2011/2012, and -8% in fiscal year 2012/2013 in order to achieve a positive cumulative fund balance by the end of the study period, which will be used to set up reserves.

Total operating expense is shown in row 61, net income is found in row 79, and the operating fund balance is detailed at the bottom of the table in row 85.

A line for the targeted operating fund balance (row 87) is also included to show the minimum amount of funds the City should have in its operating fund to address any emergency requirements that may arise for the water system.

Table 7: Water Utility Revenue Requirements

		FY 2008-2009	FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013
1	Operating Revenue					
2	Utility Service Fee	\$ 1,006,491	\$ 1,031,653	\$ 1,083,235	\$ 1,137,397	\$ 1,194,267
3	Forfeitures/ Penalties	26,606	27,271	28,635	30,066	31,570
4	Total Operating Funds	<u>1,033,096</u>	<u>1,058,924</u>	<u>1,111,870</u>	<u>1,167,464</u>	<u>1,225,837</u>
5	Additional Revenue Required					
6	Year	Revenue Increase	Months Effective			
7	FY 2008-2009	65%	6	335,756	688,301	722,716
8	FY 2009-2010	58%	12	-	1,013,390	1,064,060
9	FY 2010-2011	1%	12	-	-	28,986
10	FY 2011-2012	-1%	12	-	-	(29,818)
11	FY 2012-2013	-8%	12	-	-	(268,818)
12	Total Additional Operating Revenue	<u>335,756</u>	<u>1,701,691</u>	<u>1,815,762</u>	<u>1,876,732</u>	<u>1,701,751</u>
13	Total Operating Revenues (Required Revenue)	<u>1,368,853</u>	<u>2,760,615</u>	<u>2,927,632</u>	<u>3,044,195</u>	<u>3,160,088</u>
14	Operating Expenses					
15	Salaries & Wages	277,582	288,686	300,233	312,242	324,732
16	Temporary Staffing	-	-	-	-	-
17	Overtime	22,719	23,557	24,425	25,326	26,259
18	Clothing & Work Boots	243	252	261	270	280
19	Dental Insurance	7,623	7,904	8,196	8,498	8,811
20	Health Insurance	49,427	51,249	53,138	55,098	57,129
21	Life Insurance	1,072	1,112	1,153	1,195	1,239
22	Employee Assistance Prg.	90	94	97	101	104
23	Vision Insurance	727	754	781	810	840
24	PERS Retirement	47,163	48,902	50,705	52,574	54,513
25	Social Security/FICA	21,786	22,589	23,422	24,285	25,181
26	Workers Comp. Insurance	22,015	22,827	23,668	24,541	25,446
27	State Unemployment Insurance	319	331	343	356	369
28	Car Allowance	2,087	2,164	2,244	2,327	2,412
29	Administrative Expense	3,059	3,172	3,288	3,410	3,535
30	Legal Fees	19,638	20,362	21,113	21,892	22,699
31	Printing	849	881	913	947	982
32	Chemicals & Gases	20,348	21,098	21,876	22,682	23,518
33	Conferences & Meetings	534	554	574	595	617
34	Contractual Services	64,746	117,134	114,452	118,672	123,048
35	Equipment Rental	296	306	318	329	342
36	Equipment (Non-Capital, <\$5,000)	1,296	1,344	1,393	1,445	1,498
37	Fuel & Mileage	8,171	8,472	8,784	9,108	9,444
38	Flood & Fire Insurance	8,721	9,043	9,376	9,722	10,080
39	Liability Insurance	11,821	12,257	12,709	13,178	13,664
40	Laboratory Testing	22,106	22,921	23,766	24,642	25,551
41	M & R Machinery & Equipment	43,308	44,905	46,560	48,277	50,057
42	M & R Real Property	20,423	21,176	21,957	22,767	23,606
43	M & R Vehicles	1,450	1,503	1,558	1,616	1,675
44	Meals	-	-	-	-	-
45	Membership Dues	119	124	128	133	138
46	Misc. Services & Supplies	14,752	15,295	15,859	16,444	17,050
47	Office Supplies & Materials	-	-	-	-	-
48	Payment in Lieu of Taxes	100,778	104,493	108,346	112,341	116,483
49	Permits & Licenses	15,379	15,946	16,534	17,143	17,775
50	Postage	4,031	4,180	4,334	4,494	4,660
51	Safety Equipment	39	41	42	44	46
52	Bad Debt Expense	-	-	-	-	-
53	Publications & Subscriptions	-	-	-	-	-
54	Telephone	3,972	4,119	4,271	4,428	4,591
55	Utilities - PG&E	238,454	259,169	281,683	306,152	332,748
56	Miscellaneous Expense	-	-	-	-	-
57	Legal Fees	6,217	6,446	6,684	6,930	7,186
58	Unplanned Repairs/Replacement	100,000	100,000	100,000	100,000	100,000
59	Equipment (Non-Capital, <\$5,000)	-	-	-	-	-
60	Auditing	4,770	4,945	5,128	5,317	5,513
61	Total Operating Expenses	<u>1,168,129</u>	<u>1,270,303</u>	<u>1,320,314</u>	<u>1,380,331</u>	<u>1,443,821</u>
62	Net Operating Income (Loss)	<u>200,724</u>	<u>1,490,312</u>	<u>1,607,318</u>	<u>1,663,865</u>	<u>1,716,266</u>
63	Debt Service					
64	Current Bonds	-	-	-	-	-
65	Proposed Bonds	-	-	-	-	-
66	Total Debt Service	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
67	Debt Service Coverage Ratio	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
68	Non-Operating Revenue					
69	Interest Income	-	-	-	1,806	12,613
70	Operating Transfer In	-	-	-	-	-
71	Total Non-Operating Revenue	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,806</u>	<u>12,613</u>
72	Non-Operating Expenses					
73	Transfers Out to Other Funds	-	-	-	-	-
74	Total Non-Operating Expenses	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
75	Capital Projects Funded by Rates					
76	CIP PAYGO projects	200,000	1,489,000	1,601,000	1,200,000	1,330,000
76	Depreciation	-	-	-	-	-
77	Repair & Replacement Reserve Collection	-	-	-	-	-
78	Total CIP Expenses	<u>200,000</u>	<u>1,489,000</u>	<u>1,601,000</u>	<u>1,200,000</u>	<u>1,330,000</u>
79	Net Income (Loss)	<u>724</u>	<u>1,312</u>	<u>6,318</u>	<u>465,671</u>	<u>398,879</u>
80	Operating Fund Withdrawal	Desired balance not met	Desired balance not met	Desired balance not met	Desired balance not met	-
81	Total Funds	<u>724</u>	<u>1,312</u>	<u>6,318</u>	<u>465,671</u>	<u>398,879</u>
82	Water Enterprise Fund					
83	Beginning Operating Fund Balance	(168,960)	(168,236)	(166,925)	(160,607)	305,064
84	Deposit (Withdrawals)	724	1,312	6,318	465,671	398,879
85	Ending Operating Fund Balance	<u>(168,236)</u>	<u>(166,925)</u>	<u>(160,607)</u>	<u>305,064</u>	<u>703,943</u>
86	Funding Balance Percent of O&M	25.0%	25.0%	25.0%	25.0%	25.0%
87	Desired Operating Fund Balance	292,032	317,576	330,078	345,083	360,955

Source: City of Rio Vista; MuniFinancial

Allocation of Water Costs

In *Bighorn-Desert View Water Agency v. Verjil*, the California Supreme Court held water agency's rates were subject to repeal by initiative pursuant to Section 3 of Article XIII C of the California Constitution. Because of the Bighorn decision, water rates in California are now considered property-related fees, therefore the substantive and procedural requirements of California Constitution Articles XIII C and XIII D (Proposition 218) apply to water rate setting. Section 6 of Article XIII D states:

The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.

This utility rate study was performed to allocate the costs of providing service to users in order to ensure that rates are equitable and not unduly discriminatory, thereby satisfying the Proposition 218 requirements. The total cost of serving each customer class is determined by distributing each of the utility cost components among the user classes based upon the respective service requirements of each customer class. Therefore, a true cost of service rate study enables a water utility to adopt rates based on the true costs to each user class. The purposes of this water utility cost of service study include:

- ◆ Proportional allocation of the costs of service to users.
- ◆ Derivation of unit costs to support the development of water rates.

Cost of Service Procedure

To design equitable water rates, it is necessary to allocate costs among the various customer classes commensurate with the cost of providing service. Revenue requirements are allocated to functional characteristics in the first step of a three-step process and then distributed to customers and customer classes proportional to their share of each of the functional characteristics.

The second step of the allocation process classifies operating and non-operating expenses to the cost components of consumption and fixed costs of the system. Consumption, or variable, costs vary with the consumption of water by users over a specified period. Fixed costs vary with the number of customers served by the system, or number of equivalent meters connected to the system. The final step of the process translates these costs of service into water rates.

Classification of Expenses to Cost Components

Operating and non-operating expenses are allocated directly to functional cost components to distribute the costs to the various user classes. Table 8 presents the allocation of each expense component based on its functional category of fixed or variable costs. Fixed costs are costs that occur regardless of the amount of water used, such as customer service or administrative costs. It is recommended that fixed costs be covered by the customer's monthly meter charge. Variable costs are usage-based costs, such as treatment and pumping costs, and are addressed by the customer's monthly consumption charge.

Table 8: Functionalization of Water Utility Revenue Requirements

Description	Allocation Factor	Classification			Average of FYE 2009 to 2016		
		Fixed	Variable	Total	Fixed	Variable	Total
Operating Expenses							
Salaries & Wages	F/V	50%	50%	100%	\$ 159,857	\$ 159,857	\$ 319,713
Temporary Staffing	V	0%	100%	100%	-	-	-
Overtime	F/V	50%	50%	100%	12,939	12,939	25,877
Clothing & Work Boots	F/V	50%	50%	100%	138	138	276
Dental Insurance	F/V	50%	50%	100%	4,341	4,341	8,683
Health Insurance	F/V	50%	50%	100%	28,149	28,149	56,297
Life Insurance	F/V	50%	50%	100%	611	611	1,221
Employee Assistance Prg.	F/V	50%	50%	100%	51	51	103
Vision Insurance	F/V	50%	50%	100%	414	414	828
PERS Retirement	F/V	50%	50%	100%	26,860	26,860	53,719
Social Security/FICA	F/V	50%	50%	100%	12,407	12,407	24,814
Workers Comp. Insurance	F/V	50%	50%	100%	12,538	12,538	25,075
State Unemployment Insurance	F/V	50%	50%	100%	182	182	364
Car Allowance	F/V	50%	50%	100%	1,189	1,189	2,377
Administrative Expense	F	100%	0%	100%	3,484	-	3,484
Legal Fees	F/V	85%	15%	100%	19,013	3,355	22,368
Printing	F/V	85%	15%	100%	822	145	967
Chemicals & Gases	F/V	85%	15%	100%	19,700	3,476	23,176
Conferences & Meetings	F/V	85%	15%	100%	517	91	608
Contractual Services	F/V	85%	15%	100%	99,353	17,533	116,886
Equipment Rental	F/V	50%	50%	100%	168	168	337
Equipment (Non-Capital, <\$5,000)	F/V	50%	50%	100%	738	738	1,476
Fuel & Mileage	V	0%	100%	100%	-	9,306	9,306
Flood & Fire Insurance	F/V	50%	50%	100%	4,967	4,967	9,933
Liability Insurance	F/V	50%	50%	100%	6,732	6,732	13,465
Laboratory Testing	V	0%	100%	100%	-	25,179	25,179
M & R Machinery & Equipment	F	100%	0%	100%	49,328	-	49,328
M & R Real Property	F/V	85%	15%	100%	19,773	3,489	23,262
M & R Vehicles	F/V	25%	75%	100%	413	1,238	1,651
Meals	F	100%	0%	100%	-	-	-
Membership Dues	F	100%	0%	100%	136	-	136
Misc. Services & Supplies	F	100%	0%	100%	16,802	-	16,802
Office Supplies & Materials	F/V	50%	50%	100%	-	-	-
Payment in Lieu of Taxes	F/V	75%	25%	100%	86,090	28,697	114,787
Permits & Licenses	F	100%	0%	100%	17,517	-	17,517
Postage	F/V	85%	15%	100%	3,903	689	4,592
Safety Equipment	F/V	50%	50%	100%	22	22	45
Bad Debt Expense	F/V	85%	15%	100%	-	-	-
Publications & Subscriptions	F/V	50%	50%	100%	-	-	-
Telephone	F/V	50%	50%	100%	2,262	2,262	4,524
Utilities - PG&E	V	0%	100%	100%	-	325,018	325,018
Miscellaneous Expense	F	100%	0%	100%	-	-	-
Legal Fees	F/V	50%	50%	100%	3,541	3,541	7,081
Unplanned Repairs/Replacement	F/V	90%	10%	100%	90,000	10,000	100,000
Equipment (Non-Capital, <\$5,000)	F/V	50%	50%	100%	-	-	-
Auditing	V	0%	100%	100%	-	5,433	5,433
Total Operating Expenses					\$ 704,956	\$ 711,755	\$ 1,416,712
Capital Expenses Funded by Rates							
CIP PAYGO projects	F	100%	0%	100%	\$ 748,333	\$ -	\$ 748,333
Total Debt Service	F	100%	0%	100%	-	-	-
Total Capital Expenses					\$ 748,333	\$ -	\$ 748,333
Reserve Funds							
Depreciation	F	100%	0%	100%	-	-	-
Repair & Replacement Reserve Collection	F	100%	0%	100%	-	-	-
Total Reserve Funds					\$ 748,333	\$ -	\$ 748,333
Total Operating/Non-Operating Expenses					\$ 2,201,623	\$ 711,755	\$ 2,913,378
Classification Factor					75.6%	24.4%	100.0%

Sources: City of Rio Vista; MuniFinancial.

Table 9 presents the allocation of the revenue requirements (from Table 7) between their fixed and variable components. This allocation is based on the functionalization percentages calculated in Table 8.

Table 9: Allocation of Required Revenue

	Fixed 75.6%	Variable 24.4%	Revenue Requirement
FY 2008-2009	\$ 1,254,988	\$ 405,721	\$ 1,660,709
FY 2009-2010	2,032,454	657,065	2,689,519
FY 2010-2011	2,155,417	696,818	2,852,235
FY 2011-2012	2,241,235	724,561	2,965,797
FY 2012-2013	2,331,083	753,608	3,084,692

Sources: City of Rio Vista; MuniFinancial.

Development of Water Rates

Following the distribution of the revenue requirements to the classification factors, these components are used in the development of new water rates. The variable costs are accounted for through each customer's monthly consumption charge. Fixed costs are allocated based on the number of equivalent meters within the entire system. Equivalent meters represent the burden each user group places upon the water utility as measured by an equivalent meter index. This index should reflect the level of service to each customer group based on their potential commodity demand.

Proposed Water Rates

The proposed water rates are designed to increase the water system's revenue in order to meet rising operations costs, to enhance the financial condition of the water enterprise, and to provide funds for needed rehabilitation of the water infrastructure. The rates are expected to recover all fixed and variable costs for this division.

For the proposed rate structure developed in this report, we assumed that all division costs were included and that all customers are metered. Table 10 was developed to determine what the hypothetical total number of equivalent meters might be in the water system, in order to establish a fair and equitable rate structure. Utilizing a 3/4-inch meter as the base unit, a meter-equivalent ratio was determined for each meter size in the water system.

It should be noted that these recommended ratios are based on each meter's specific maximum flow rate. Meter sizes are determined by a customer's required water use and water use directly correlates to a customer's use of the water system in proportion to other customers, therefore maximum flow rates offer a reasonable basis for determining meter-equivalents. As shown in Table 10, a list of hypothetical meters by size was determined based on existing meters and the assumption that all residential customers have a 3/4" meter. The total number of equivalent meters (4,694 equivalent meters) is calculated by multiplying the number of hypothetical meters by their respective meter-equivalent ratios. This total is then used as the basis for the projected number of equivalent meters, which are forecasted using the growth factors illustrated in Table 2. The projected total number of equivalent meters for each fiscal year is used in determining the proposed water rates.

Table 10: Meter-Equivalent Ratios

Meter Size	Maximum Flow	Meter- Equivalent Ratio	# of Hypothetical Meters	# of Actual Meters	Total Number of Equivalent Meters					
					(FY 07/08)	FY 2008-2009	FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013
3/4	20	1.0	3,772	131	3,903	3,990	4,080	4,263	4,459	4,664
1	50	2.5	-	39	98	98	98	98	98	98
1 1/2	100	5.0	-	9	45	45	45	45	45	45
2	160	8.0	-	31	248	248	248	248	248	248
3	300	15.0	-	15	225	225	225	225	225	225
4	500	25.0	-	7	175	175	175	175	175	175
6	1,000	50.0	-	-	-	-	-	-	-	-
			3,772	232	4,694	4,781	4,870	5,054	5,249	5,454

Sources: City of Rio Vista; MuniFinancial.

Water Rate Structure

Table 11 illustrates the calculation of the proposed water rates for metered and unmetered customers. The baseline (3/4") minimum monthly meter charge is calculated by dividing all fixed costs of the water system by the total number of equivalent meters. The monthly meter charge for all other meter sizes are calculated by multiplying the baseline meter charge by each meter size's respective meter-equivalent ratio. The monthly volume charge is calculated by dividing the variable costs of the water system by the estimated total water consumption for the water system.

The residential rates are calculated using both a minimum monthly charge component and a volume charge component. The monthly service charge is based on the baseline rate calculated for metered customers. The monthly water charge is computed by multiplying the consumption charge calculated for metered customers by the average usage rate per month estimated for the residential customer class (as illustrated in Table 4).

The resulting water rate schedule is summarized in Table 12.

Table 11: Calculation of Water Rates

	<u>FY 2008-2009</u>	<u>FY 2009-2010</u>	<u>FY 2010-2011</u>	<u>FY 2011-2012</u>	<u>FY 2012-2013</u>
Minimum Monthly Rate:					
Fixed Costs of Water System	\$ 1,254,988	\$ 2,032,454	\$ 2,155,417	\$ 2,241,235	\$ 2,331,083
Number of Equivalent Meters	4,781	4,870	5,054	5,249	5,454
Minimum Monthly Rate for 3/4" Meter	\$ 21.88	\$ 34.78	\$ 35.54	\$ 35.58	\$ 35.61
<i>Meter Size</i>					
3/4	\$ 21.88	\$ 34.78	\$ 35.54	\$ 35.58	\$ 35.61
1	54.69	86.94	88.85	88.95	89.04
1 1/2	109.38	173.88	177.71	177.90	178.07
2	175.00	278.21	284.33	284.64	284.92
3	328.13	521.64	533.12	533.70	534.22
4	546.88	869.40	888.53	889.50	890.37
6	1,093.77	1,738.80	1,777.05	1,779.00	1,780.74
Monthly Volume Charge:					
Variable Costs of Water System	\$ 405,721	\$ 657,065	\$ 696,818	\$ 724,561	\$ 753,608
Estimated Water System Consumption (HCF)	1,190,600	1,212,296	1,256,772	1,303,473	1,352,508
Monthly Volume Charge (per HCF)	\$ 0.34	\$ 0.54	\$ 0.55	\$ 0.56	\$ 0.56

Source: City of Rio Vista; MuniFinancial.

Table 12: Proposed Water Rate Schedule

Minimum Monthly Rate:	<u>FY 2008-2009</u>	<u>FY 2009-2010</u>	<u>FY 2010-2011</u>	<u>FY 2011-2012</u>	<u>FY 2012-2013</u>
<u>Meter Size</u>					
3/4	\$ 21.88	\$ 34.78	\$ 35.54	\$ 35.58	\$ 35.61
1	54.69	86.94	88.85	88.95	89.04
1 1/2	109.38	173.88	177.71	177.90	178.07
2	175.00	278.21	284.33	284.64	284.92
3	328.13	521.64	533.12	533.70	534.22
4	546.88	869.40	888.53	889.50	890.37
6	1,093.77	1,738.80	1,777.05	1,779.00	1,780.74
Monthly Volume Charge (per HCF)	\$ 0.34	\$ 0.54	\$ 0.55	\$ 0.56	\$ 0.56

Note:

Single Family Residential Charge is based on 3/4-inch meter rate plus 20.2 HCF consumption multiplied by volume charge. The Multi-family Residential Charge is based on 3/4-inch meter rate plus 0.7607 of Single-Family Residential volume amount. Until the City goes to a metered reading the total bill for residential customers will be the fixed and volume charge as described in this note.

Source: City of Rio Vista; MuniFinancial.

Conclusion

The proposed water rate schedule is based on the City's projected revenue requirements over the next five fiscal years. The proposed rates are designed to generate additional water revenues to promote revenue adequacy throughout the five fiscal year planning period. In addition, the rates were designed to satisfy Proposition 218 regulations.

We recommend that the City adopt the proposed rate structure to ensure that the water system has a stable cash flow stream in order to provide for ongoing costs and allow for the funding of reserves for unscheduled expenses. We also recommend setting a policy of maintaining a designated balance in the operating fund (such as three months of operating expenses or any other amount approved by the Council), in order to satisfy expense obligations as cash flow fluctuates during the year.