



TO: Ramiro Jimenez, Utilities Administrative Manager

FROM: Tom Gaffney, Principal
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DATE: October 8, 2015

SUBJECT: Water Rate Study 2015 -- Summary of Findings and Recommendations

DRAFT MEMORANDUM

Study Overview

The City last conducted a rate study in 2007 which adopted water rates through March 2014. The water utility relies primarily on revenues from water rates to fund the costs of providing service. As such, rates must be set at levels adequate to fund the costs of operating and maintaining the water system and fund necessary capital improvements to keep the water system in good operating condition.

Since the last rate study, Proposition 218 was enacted and stipulates specific procedural and substantive requirements for water rate adjustments. Paramount among the requirements is that all customers must pay their proportional cost of service. Moreover, Proposition 218 permits rate increases for up to five years before another rate study is required.

The City retained Bartle Wells Associates (BWA) to develop a long-term water rate study for the next five years through Fiscal Year 2019/20 (FY 19/20). The major objectives of the study include:

- Ensuring the continued financial health and stability of the City's water enterprise;
- Developing a ten-year projection of operating and capital revenue requirements for the water utility;
- Recommending rates which meet these revenue requirements;
- Recommending alternative water rate structures to recover the full cost of providing service;
- Developing water shortage or drought rates;
- Amending the City's tiered rates to be in compliance with the ruling from Capistrano Taxpayer's Association, Inc. v. City of San Juan Capistrano;

- Maintaining equity among all users of the system and ensure compliance with all legal requirements such as Proposition 218.

This summary report presents key findings and recommendations of our study. The recommendations were developed with substantial input from City staff.

Rate Study Legislation & Principles

The California Constitution includes two key articles that directly govern or impact the City's water rates: Article 10 and Article 13D. The water rates developed in this Water Rate Study 2015 were designed to comply with both of these constitutional mandates as well as various provisions of the California Water Code and Government Code that support and add further guidance for implementing these constitutional requirements. In accordance with the constitutional provisions, the proposed rates are designed to a) recover the City's cost of providing water service; b) allocate costs in proportion to the cost for serving each customer class; and c) promote conservation and discourage waste.

Article 10, Section 2

Article 10, Section 2 of the California Constitution was established by voter-approval in 1976 and requires public agencies to maximize the beneficial use of water, prevent waste, and encourage conservation. Section 2 states that:

It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.

Article 13D, Section 6 (Proposition 218)

Proposition 218 was adopted by California voters in 1996 and added Articles 13C and 13D to the California Constitution. Article 13D, Section 6 governs property-related charges, which the California Supreme Court subsequently ruled includes ongoing utility service charges such as water, sewer, and garbage rates. Article 13D, Section 6 establishes a) procedural requirements for imposing or increasing property-related charges, and b) substantive requirements for those charges. Article 13D also requires voter approval for new or increased property-related charges but exempts from this voting requirement rates for water, sewer, and garbage service.

The City must follow the procedural requirements of Proposition 218 for all water rate increases. These requirements include:

1. **Noticing Requirement** - The City must mail a notice of the proposed rate increases to all affected property owners. The notice must specify the amount of the fee, the basis upon which it was calculated, the reason for the fee, and the date/time/location of a public rate hearing at which the proposed rates will be considered/adopted.
2. **Public Hearing** - The City must hold a public hearing prior to adopting the proposed rate increases. The public hearing must be held not less than 45 days after the required notices are mailed.
3. **Rate Increases Subject to Majority Protest** - At the public hearing, the proposed rate increases are subject to majority protest. If more than 50% of affected property owners submit written protests against the proposed rate increases, the increases cannot be adopted.

Proposition 218 also established a number of substantive requirements that apply to water rates and charges, including:

1. **Cost of Service** - Revenues derived from the fee or charge cannot exceed the funds required to provide the service. In essence, fees cannot exceed the “cost of service”.
2. **Intended Purpose** - Revenues derived from the fee or charge can only be used for the purpose for which the fee was imposed.
3. **Proportional Cost Recovery** - The amount of the fee or charge levied on any customer shall not exceed the proportional cost of service attributable to that customer.
4. **Availability of Service** - No fee or charge may be imposed for a service unless that service is used by, or immediately available to, the owner of the property.
5. **General Government Services** - No fee or charge may be imposed for general governmental services where the service is available to the public at large.

A subsequent appellate court decision in 2011 further clarified that agencies must demonstrate, satisfactory to a court’s independent judgment, that property-related fees and charges meet the substantive requirements of Section 6 (3b). This rate study provides that justification. The water rates derived in this report are based on a cost-of-service methodology that fairly apportions costs to all customers.

Use of Industry Standard Rate-Making Principles

The rates developed in this Water Rate Study 2015 use a straightforward methodology to establish an equitable system of fixed and variable charges that recover the cost of providing

service and fairly apportion costs to each rate component. The rates were developed using cost-based principles and methodologies for establishing water rates, charges, and fees contained and discussed in the American Water Works Association (AWWA) M1 Manual. In developing water rates, it is important to know that there is no “one-size-fits-all” approach for establishing cost-based water rates, “the (M1 Manual) is aimed at outlining the basic elements involved in water rates and suggesting alternative rules of procedure for formulating rates, thus permitting the exercise of judgment and preference to meet local conditions and requirements.”¹

In reviewing the City’s water rates and finances, BWA used the following criteria in developing our recommendations:

1. *Revenue Sufficiency:* Rates should recover the annual cost of service and provide revenue stability.
2. *Rate Impact:* While rates are calculated to generate sufficient revenue to cover operating and capital costs, they should be designed to minimize, as much as possible, the impacts on ratepayers.
3. *Equitable:* Rates should be fairly allocated among all customer classes based on their estimated demand characteristics. Each user class only pays its proportionate share.
4. *Practical:* Rates should be simple in form and, therefore, adaptable to changing conditions, easy to administer and easy to understand.
5. *Provide Incentive:* Rates provide price signals which serve as indicators to conserve water and to produce wastewater efficiently.

Financial Challenges

The City has implemented a number of cost-cutting measures over the past few years and remains committed to providing high-quality water service as cost-efficiently as possible. Operating expenses, including personnel costs, have increased very little recently as a result of continued budget reductions, cost-containment, and financial controls. Cost saving measures include minimization of non-essential purchases, reduced reliance on consultants for design services, and temporary reduction of contributions to rehabilitation accounts during the economic downturn.

¹ AWWA Manual M1 Manual, Principles of Water Rates, Fees, and Charges, Sixth Edition, 2012, page 5.

Despite the City's continued efforts to reduce expenses, the City's water enterprise is facing a number of financial challenges that will require the City to raise its water rates. Key drivers of future rate increases are summarized as follows.

- **Operating Deficit:** From FY 02/03 through FY 11/12, the water enterprise ran in annual operating deficits. The cumulative deficit peaked in FY 11/12 at \$10.9 million. Since that time the water enterprise has operated within an annual surplus reducing the cumulative deficit to \$7.9 million at the end of FY 14/15. Despite annual rate increases and cost saving measures to reduce expenditures, water consumption has declined while expenses continue to increase slightly each year. Consequently, water sales revenues have not fully funded operating expenses for nearly twelve years. Without rate increases, the water enterprise will continue to operate in a deficit.

Moreover, with a negative fund balance of \$7.9 million, the water utility does not have any cash in the operating fund reserve. Prior rate studies recommended an operating reserve fund target equivalent to six months of operating expenses. This recommended water fund reserve target is in line with industry standards. Maintaining a prudent minimal level of fund reserves provides a financial cushion for dealing with unanticipated expenses, revenue shortfalls, and non-catastrophic emergency capital repairs. The fund reserve target will escalate over time as the water utility's expenses gradually increase in future years. It is acceptable if reserves fall below the target on a temporary basis, provided action is taken to achieve the target over the longer run.

- **Fixed versus Variable Expenses in the Water Fund:** Approximately 77% of the operating and maintenance costs in the Water Fund are fixed and are incurred regardless of how much water is consumed each year. Fixed costs include debt service, employee costs, franchise fees, parts and equipment, support services, and long-term water purchase contracts. The City's current rate structure, however, consists of a fixed service meter charge that generates only 38% of the water fund revenue required to recover costs, and a variable charge, based on the volume of water consumed, that generates 62% of the water fund revenue. Shifting to a more balanced fixed versus variable revenue ratio over the next five years would help stabilize the fund and mitigate the effects of water conservation on future revenues.
- **Drought and Decline in Water Sales:** California is experiencing one of the most serious droughts on record. On April 1, 2015 the Governor issued an Executive Order directing the State Water Resources Control Board (SWRCB) to implement mandatory water conservation regulations to reduce water usage by 25% statewide. To achieve these savings, the SWRCB set emergency water conservation targets for communities around the State. Agencies that fail to achieve the required reductions could be subject to penalties of up to \$10,000 per

day. The State assigned a water conservation standard of 32% reduction in water use from demand in calendar year 2013 for Vacaville. To achieve the required State-mandated reduction, the City Council has implemented the Stage 3 (Severe Drought) Water Conservation Response of the *Urban Water Shortage Contingency Plan*. The reduction in consumption will result in lower water sales than originally projected.

- **Capital Improvement Projects:** In addition to annual repair and replacements, the water utility is facing significant capital needs to comply with State regulations. A major project is to treat a number of the City's water at groundwater supply wells for Hexavalent Chromium, or Chromium 6, to meet the new State requirements. Total project costs are estimated at \$5.5 million, and the multi-year project is expected to be completed in FY 19/20.
- **Ongoing Operating Cost Inflation:** The City faces ongoing operating cost inflation due to annual increases in a range of expenses including power, employee costs, chemicals, supplies, etc. Cost inflation in the utility industry has historically been significantly higher than the Consumer Price Index (CPI) for consumer goods and services.

Projected Water Consumption

To meet State-mandated reductions, total consumption for FY 15/16 is estimated at 5,261,487 ccf (100 cubic feet), representing an approximate 27% reduction from the base year FY 13/14 usage of 7,123,000 ccf. The table below shows a forecast of consumption through FY 19/20. The City anticipates that recent conservation efforts will continue through FY 19/20, projecting slight increases over the next five years to account for the drought leveling off as well as annual growth.

Customer Class (1)	Base Year 2013/14	Projected				
		2015/16	2016/17	2017/18	2018/19	2019/20
PROJECTED CONSUMPTION WITH GROWTH						
<i>Projected Growth</i>		0.5%	0.5%	0.8%	0.8%	1.0%
Single Family Residential	3,914,989	3,934,564	3,954,237	3,985,871	4,017,758	4,057,935
Senior Single Family Residential	392,265	394,226	396,197	399,367	402,562	406,588
Multi-Family Residential	883,284	887,700	892,139	899,276	906,470	915,535
Commercial/Indus./Insti./Construction	1,340,511	1,347,214	1,353,950	1,364,781	1,375,699	1,389,456
Public Agency	25,437	25,564	25,692	25,898	26,105	26,366
Parks & Public Landscape	405,878	407,907	409,947	413,227	416,532	420,698
<u>Schools</u>	<u>160,508</u>	<u>161,311</u>	<u>162,117</u>	<u>163,414</u>	<u>164,721</u>	<u>166,369</u>
Total Consumption (ccf)	7,122,872	7,158,486	7,194,279	7,251,833	7,309,848	7,382,946
PROJECTED CONSUMPTION WITH REDUCTION						
<i>Reduction</i>		26.5%	20.0%	20.0%	20.0%	20.0%
Single Family Residential	3,914,989	2,891,904	3,163,389	3,188,697	3,214,206	3,246,348
Senior Single Family Residential	392,265	289,756	316,958	319,494	322,050	325,270
Multi-Family Residential	883,284	652,460	713,711	719,421	725,176	732,428
Commercial/Indus./Insti./Construction	1,340,511	990,202	1,083,160	1,091,825	1,100,560	1,111,565
Public Agency	25,437	18,790	20,554	20,718	20,884	21,093
Parks & Public Landscape	405,878	299,812	327,958	330,581	333,226	336,558
<u>Schools</u>	<u>160,508</u>	<u>118,563</u>	<u>129,694</u>	<u>130,731</u>	<u>131,777</u>	<u>133,095</u>
Total Consumption (ccf)	7,122,872	5,261,487	5,755,423	5,801,466	5,847,878	5,906,357
Total % Change from Base Year 2013/14		-26.1%	-19.2%	-18.6%	-17.9%	-17.1%
Annual % Change		-26.1%	9.4%	0.8%	0.8%	1.0%

1 - Assumes that all customer classes will conserve the same amount.

Water Conservation Surcharges

During times of drought and water shortages, water agencies need to both: 1) reduce water demand, and 2) maintain adequate revenues to fund operations despite reduced water sales. In order to help the City recover its costs of service and remain financially stable during droughts and periods of reduced water sales, BWA recommends the City adopt a temporary Water Conservation Surcharge. The Water Conservation Surcharge is designed to recover lost revenue in FY 15/16 attributed to the decrease in consumption. Although a 26% decrease in consumption is anticipated for FY 15/16, the water fund will not see a corresponding decrease in water expenses.

The proposed Water Conservation Surcharge is an additional separate volume charge levied on all usage. The City recognizes that ratepayers are already doing their part to conserve. Therefore, applying the Water Conservation Surcharge to only the volume charge component gives customers the increased ability to control a portion of their water bills. The Water Conservation Surcharge would be charged on a temporary basis and will be phased out when the City determines that water supply conditions have returned to normal and revenue reductions have been recovered. This study evaluated two options for implementing a surcharge to recover lost revenue in FY 15/16. The first option is a Water Conservation Surcharge that will be in effect for a period of 1 year. The second option is a Water

Conservation Surcharge that will be levied over a period of 5 years to minimize the impact on ratepayers.

Water Rate Scenarios

BWA developed eight scenarios to determine the impacts on the water enterprise's finances and on ratepayers. The scenarios include a separate Water Conservation Surcharge to recover anticipated lost revenue from FY 15/16 due to the drought. Scenarios 1a through 4a include a water conservation surcharge that will be in effect for 1 year. Scenarios 1b through 4b include a water conservation surcharge that will be in effect for 5 years. The scenarios were developed to phase in rate increases, to restore the utility's financial foundation, and to gradually meet the following objectives:

Objective 1	Recover all operating & capital expenses to maintain a positive net income
Objective 2	Eliminate the fund deficit and sustain a positive operating fund reserve balance
Objective 3	Meet the operating fund balance reserve target of 50% of annual operating expenses

Given that the water enterprise has been operating in a deficit for the past twelve years coupled with the need to minimize the impacts on ratepayers, the City recognizes that achieving all three objectives is a gradual process. The plan is to steadily reduce the deficit with the target of reaching a positive operating fund balance over a seven year period ending in FY 21/22. After five years, the City should conduct another water rate study to ensure that the utility is on the right track to achieving all three objectives.

It is important to note that the projected percentage increases represent the overall increase in water sales revenues and does not imply that each customer will receive the same percentage increase in their bill. Actual bill impacts will vary for each customer as a result of the proposed rate structure changes to comply with Proposition 218 and recent legislation which are described in the next section. The scenarios are described below:

- **Scenario 1: 2.5% Annual Revenue Increases**
 - *Scenario 1a: Water Conservation Surcharge for 1 Year*
 - *Scenario 1b: Water Conservation Surcharge for 5 Years*With 2.5% annual revenue increases, the water fund is projected to have a negative fund balance of approximately \$9.7 million at the end of FY 19/20.

- **Scenario 2: 3.5% Annual Revenue Increases**
 - *Scenario 2a: Water Conservation Surcharge for 1 Year*
 - *Scenario 2b: Water Conservation Surcharge for 5 Years*

With 3.5% annual revenue increases, the water fund is projected to have a negative fund balance of approximately \$7.7 million at the end of FY 19/20.

▪ **Scenario 3: 4.5% Annual Revenue Increases**

- *Scenario 3a: Water Conservation Surcharge for 1 Year*
- *Scenario 3b: Water Conservation Surcharge for 5 Years*

With 4.5% annual revenue increases, the water fund is projected to have a negative fund balance of approximately \$5.7 million at the end of FY 19/20.

▪ **Scenario 4: 5.5% Annual Revenue Increases to Eliminate Operating Deficit**

- *Scenario 4a: Water Conservation Surcharge for 1 Year*
- *Scenario 4b: Water Conservation Surcharge for 5 Years*

With 5.5% annual revenue increases, the negative fund balance is projected to be \$3.7 million at the end of FY 19/20. If the 5.5% revenue increases are to be extended by a second rate study, to beyond FY 20/21, the water fund is projected to return to a positive fund balance at the end of FY 21/22.

BWA developed ten-year cash flow projections to determine annual revenue requirements and required rate adjustments. The projections incorporate the latest information available from the Rate Impact Projection (RIP) tables dated July 1, 2015, and include a number of conservative assumptions. Key assumptions include:

Revenues:

- The study proposes five years of rate increases. Rate increases will be effective January 1 of each year, beginning on January 1, 2016.
- Beginning in FY 15/16, the sewer fund will pay the water fund \$1 million a year over the next five years repay a previous loan.
- The City will sell designated surplus NBR land for approximately \$900,000 in FY 15/16.
- The Well Replacement/Water Rehabilitation Fund will contribute \$2 million to pay for the Chromium 6 project. Annual transfers of \$1 million are included for FY 15/16 and FY 16/17.
- The senior discount rate will be discontinued beginning on January 1, 2016.
- All customer classes will pay the same service charge and volume charge beginning on January 1, 2016.
- All other revenues except for property taxes are projected to increase by 2% annually.
- Property taxes are escalated by the estimated growth rate which gradually increases to 1% in FY 19/20.
- Interest earnings are escalated by 1.5% each year.
- Fire flow protection rates are increased based on the same percentages as the water rates.

- Service charges will be phased in to recover 50%, and volume charge will be phased in to recover 50%, of water sales revenues by FY 19/20.
- A 26.5% reduction in consumption from FY 13/14 is anticipated for FY 15/16 due to State-mandated drought-related water conservation.
- Although moderate increases in consumption are projected for later years after FY 15/16 due to the drought ending and estimated growth, these will be offset in part by continued water conservation due to a permanent change in potable water use and the City's compliance with the statewide "20% x 2020" mandate calling for a permanent reduction in water use of 20%.

Expenses:

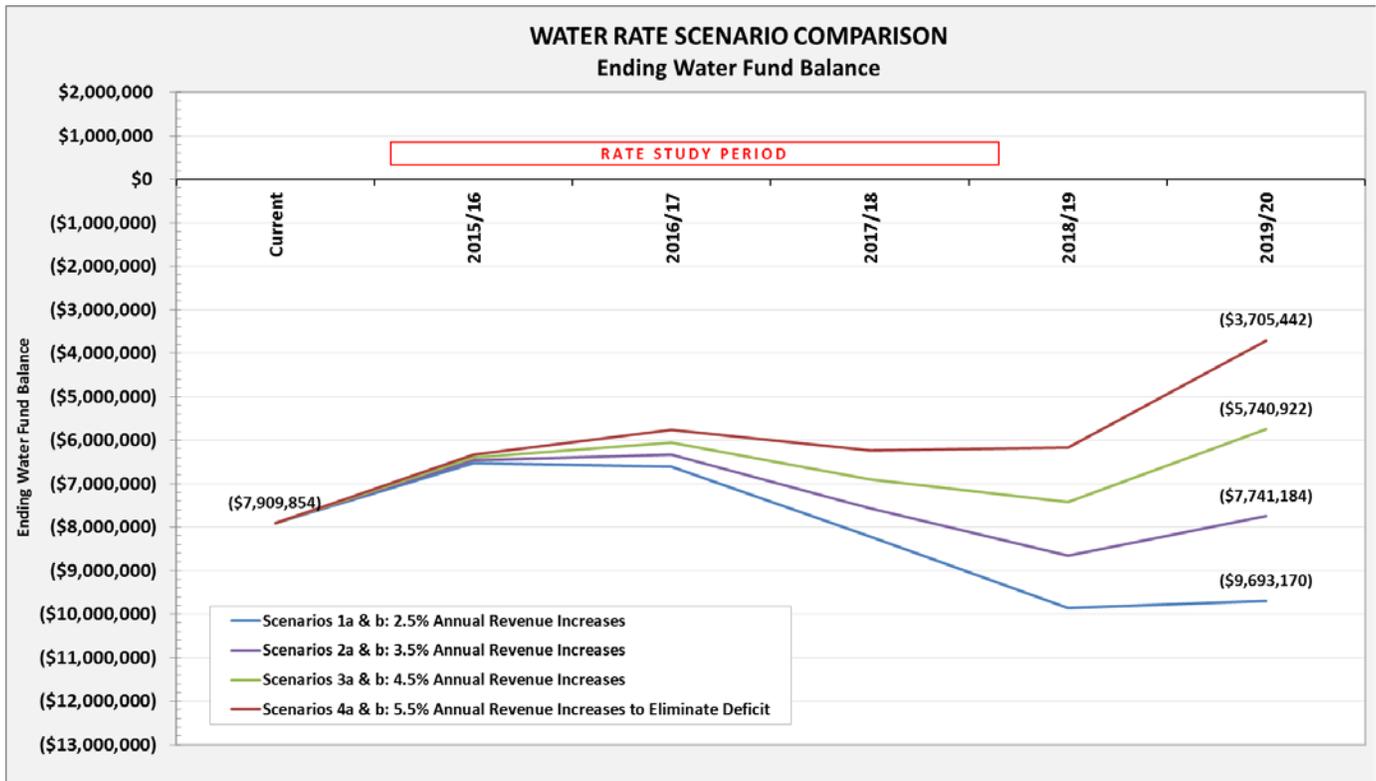
- The Chromium 6 project is estimated at \$5.5 million beginning in FY 15/16 with completion in FY 19/20.
- Most operating expenses, except for Supply and Production and Solano Irrigation District (SID) expenditures, are escalated by 3% each year.
- The Measure G Tax Franchise Fee is based on 5% of annual revenues (service charges + volume charges + cross connection/backflow + late fees).
- The Major Replacement Fund is based on 2% of total service and volume charge revenues.
- The minimum water fund reserve target is equal to 50% of annual operating and maintenance costs.

The following table shows the cash flow projection for *Scenarios 4a and b: 5.5% Annual Revenue Increases to Eliminate Operating Deficit*. BWA proposes annual 5.5% revenue increases over the next five years beginning in 2015/16 to meet reserve fund targets and to eliminate the operating deficit by 2021FY 21/22. The projections show estimates of future rate increases after FY 19/20 for planning purposes only. The appendix includes cash flow projections for the Scenarios 1 through 3.

	Budget	Prop. 218 Rates					Projected				
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Assumptions:											
Water Sales Revenue Adjustment (effective Jan 1)	0.0%	5.5%	2.0%	2.0%	2.0%						
Interest Earnings Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Other Revenues (2)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Annual Inflation	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Growth % (estimated)	0.4%	0.5%	0.5%	0.8%	0.8%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Beginning Water Fund Balance (Working Capital)	(\$8,412,222)	(\$7,909,900)	(\$6,336,900)	(\$5,769,400)	(\$6,232,000)	(\$6,175,200)	(\$3,705,400)	(\$1,795,200)	\$816,100	\$3,441,300	\$6,082,400
Full Year of Rate Increases		16,756,000	17,160,000	18,239,000	19,386,000	20,656,000	22,010,000	23,453,000	24,162,000	24,892,000	25,644,000
REVENUES											
Utility Service Charges	5,950,300	6,094,000	6,461,000	6,867,000	7,299,000	7,777,000	8,287,000	8,830,000	9,097,000	9,372,000	9,655,000
Utility Volume charges	<u>9,853,300</u>	<u>10,091,000</u>	<u>10,699,000</u>	<u>11,372,000</u>	<u>12,087,000</u>	<u>12,879,000</u>	<u>13,723,000</u>	<u>14,623,000</u>	<u>15,065,000</u>	<u>15,520,000</u>	<u>15,989,000</u>
Water Sales Revenues	15,803,600	16,185,000	17,160,000	18,239,000	19,386,000	20,656,000	22,010,000	23,453,000	24,162,000	24,892,000	25,644,000
Property taxes	93,400	93,900	94,400	95,100	95,800	96,800	97,800	98,800	99,800	100,800	101,800
Interest income	(100,000)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	0	0	0	0	0
Late fees	275,400	280,900	286,500	292,200	298,000	304,000	310,100	316,300	322,600	329,100	335,700
Cross connection/backflow	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Other income (1)	819,400	19,800	20,200	20,600	21,000	21,400	21,800	22,200	22,600	23,100	23,600
Loan repayment from Sewer Fund/Sale of NBR Property Adjustment/Trf based on Finance's Operating Statement	0	1,900,000	1,000,000	1,000,000	1,000,000	1,000,000	0	0	0	0	0
Transfer from Well Replacement Reserve	33,430	33,430	33,430	33,430	33,430	33,430	33,430	0	0	0	0
<u>Transfer from Well Replacement Reserve</u>	<u>0</u>	<u>1,000,000</u>	<u>1,000,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
TOTAL REVENUES	17,125,230	19,663,030	19,744,530	19,830,330	20,984,230	22,261,630	22,673,130	24,090,300	24,807,000	25,545,000	26,305,100
EXPENSES											
Operating Expenses											
Supply and production	2,309,047	2,394,400	2,466,200	2,540,200	2,616,400	2,694,900	2,775,700	2,859,000	2,944,800	3,033,100	3,124,100
Transmission and distribution	1,722,779	1,832,000	1,887,000	1,943,600	2,001,900	2,062,000	2,123,900	2,187,600	2,253,200	2,320,800	2,390,400
NBR treatment plant	3,200,000	3,200,000	3,296,000	3,394,900	3,496,700	3,619,100	3,745,800	3,876,900	4,012,600	4,153,000	4,298,400
Maintenance - ICE	597,992	692,900	713,700	735,100	757,200	779,900	803,300	827,400	852,200	877,800	904,100
System Administration	1,266,913	1,270,000	1,308,100	1,847,300	1,887,800	1,429,400	1,472,300	1,516,500	1,562,000	1,608,900	1,657,200
Maintenance - Mechanical	659,691	716,500	738,000	760,100	782,900	806,400	830,600	855,500	881,200	907,600	934,800
All Other Operating Expenses	<u>1,801,524</u>	<u>2,061,000</u>	<u>2,146,850</u>	<u>2,239,650</u>	<u>2,336,250</u>	<u>2,436,500</u>	<u>2,530,700</u>	<u>2,647,300</u>	<u>2,776,800</u>	<u>2,911,600</u>	<u>3,051,900</u>
Subtotal Operating Expenses	11,557,946	12,166,800	12,555,850	13,460,850	13,879,150	13,828,200	14,282,300	14,770,200	15,282,800	15,812,800	16,360,900
Intragovernmental Expenses											
Measure G Tax (Property Based) 1% of Net Fixed Assets	984,000	1,013,500	1,043,900	1,075,200	1,107,500	1,140,700	1,174,900	1,210,100	1,246,400	1,283,800	1,322,300
Measure G Tax (Revenue Based) Franchise Fee	800,000	833,300	882,400	936,600	994,300	1,058,100	1,126,100	1,198,600	1,240,300	1,277,200	1,315,400
Cost Allocation	1,124,425	1,150,700	1,208,200	1,268,600	1,332,000	1,398,600	1,468,500	1,541,900	1,619,000	1,700,000	1,785,000
Bad Debt Expense	<u>61,200</u>	<u>61,000</u>	<u>61,000</u>	<u>61,000</u>	<u>61,000</u>						
Subtotal Intragovernmental Expenses	2,969,625	3,058,500	3,195,500	3,341,400	3,494,800	3,658,400	3,830,500	4,011,600	4,166,700	4,322,000	4,483,700
Transfers											
Chromium 6 Fund	0	1,000,000	1,500,000	1,500,000	1,500,000	200,000	200,000	200,000	200,000	200,000	200,000
Meter Replacement Program	250,000	150,000	150,000	150,000	150,000	150,000	300,000	300,000	300,000	300,000	300,000
Easterly Lab/Shop Expansion	80,000	0	0	0	0	0	0	0	0	0	0
Well Replacement (15203)	200,000	200,000	200,000	200,000	200,000	200,000	250,000	250,000	250,000	250,000	250,000
Water Storage Replacement (15203)	200,000	200,000	200,000	200,000	200,000	200,000	250,000	250,000	250,000	250,000	250,000
Water System Mapping (GIS)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Water Facilities Rehabilitation Fund (15202)	450,000	450,000	450,000	450,000	450,000	450,000	500,000	500,000	500,000	500,000	500,000
Major Replacement Fund (15203) (2)	<u>316,072</u>	<u>323,700</u>	<u>343,210</u>	<u>364,802</u>	<u>387,754</u>	<u>413,172</u>	<u>440,256</u>	<u>469,114</u>	<u>485,650</u>	<u>500,316</u>	<u>515,426</u>
Subtotal Transfers	1,506,072	2,333,700	2,853,210	2,874,802	2,897,754	1,623,172	1,950,256	1,979,114	1,995,650	2,010,316	2,025,426
Meter Replacement Loan											
Siemens Accrued Account Expense (Meter Replacements)	<u>589,219</u>	<u>531,000</u>	<u>572,500</u>	<u>615,900</u>	<u>655,700</u>	<u>682,100</u>	<u>699,900</u>	<u>718,100</u>	<u>736,700</u>	<u>758,800</u>	<u>785,200</u>
Subtotal Meter Replacement Loan	589,219	531,000	572,500	615,900	655,700	682,100	699,900	718,100	736,700	758,800	785,200
TOTAL EXPENSES	16,622,862	18,090,000	19,177,060	20,292,952	20,927,404	19,791,872	20,762,956	21,479,014	22,181,850	22,903,916	23,655,226
Net Income (Revs less Exp)	502,368	1,573,030	567,470	(462,622)	56,826	2,469,758	1,910,174	2,611,286	2,625,150	2,641,084	2,649,874
Ending Fund Balance	(7,909,854)	(6,336,870)	(5,769,430)	(6,232,022)	(6,175,174)	(3,705,442)	(1,795,226)	816,086	3,441,250	6,082,384	8,732,274
Min. Fund Reserve Target (6 months of O&M)	5,778,973	6,083,400	6,277,925	6,730,425	6,939,575	6,914,100	7,141,150	7,385,100	7,641,400	7,906,400	8,180,450
Target Met	no	no	no	yes							

1 - Other Income includes SID/Monticello Pwr Plant, NBR Property, Benicia Water Sale

The chart below shows the ending projected water fund balance for each scenario. Only Scenarios 4a and 4b have a positive fund balance by FY 2022/23.



Rate Structure Recommendations

BWA conducted an independent analysis of the City’s current water rate structure and recommends the following modifications to comply with Proposition 218 while providing revenue stability for the enterprise. The recommendations listed below incorporate input received from the City’s project team.

The City’s water rates currently include two components:

- a) A **Fixed Service Charge** that varies based on meter size and is levied regardless of water consumption. The service charge recognizes the fact that the water utility incurs fixed costs in connection with the ability to serve each connection at any given time. The minimum charge per billing period for all accounts is the service charge. Fixed charges currently generate about 38% of total rate revenues.
- b) A **Volume Charge** billed per each unit of metered water use. Residential customers are currently billed according to a two-tiered inclining volumetric rate structure in which the cost of each incremental unit of water increases in each tier. All other customers are

charged a single rate based on all water consumption. Volume charges currently generate about 62% of water sales revenues.

The current monthly water rates are shown below:

CURRENT MONTHLY WATER RATES	
MONTHLY SERVICE CHARGE	
<u>Meter Size</u>	
5/8"	\$10.71
3/4"	\$16.05
1"	\$26.74
1-1/2"	\$53.47
2"	\$85.59
3"	\$160.47
4"	\$267.44
6"	\$534.88
8"	\$855.76
<u>Senior (1)</u>	
5/8"	\$9.11
3/4"	\$13.64
1"	\$22.73
1-1/2"	\$45.47
MONTHLY VOLUME CHARGE	
<u>Residential</u>	
Tier 1: 0 - 6 ccf	\$1.24
Tier 2: 7 ccf and over	\$1.70
<u>Senior (1)</u>	
Tier 1: 0 - 6 ccf	\$1.06
Tier 2: 7 ccf and over	\$1.45
<u>Non-Residential (Commercial, Industrial, Institutional, & Construction)</u>	
All Use per ccf	\$1.70
<u>Parks & Public Landscape</u>	
All Use per ccf	\$0.41
<u>Public Agency (City Domestic Water)</u>	
All Use per ccf	\$0.48
1 - Senior Discount - Customers aged 65 and older are eligible for a 15% discount on both the service charge and volume charge.	

Key rate structure recommendations include:

- Fixed vs. Volume Cost Recovery:** Water utilities can recover costs from a combination of fixed and variable charges. There is no single correct way to allocate or attribute costs. Hence, five similar agencies may have five different rate structures provided each agency can establish a reasonable cost basis for their own particular rate structure within the parameters of meeting the various requirements of the California Constitution.

The percentage of revenues derived from the fixed and variable charges varies for each agency and should be proportional to each system's expenditures. A higher level of fixed revenues provides better revenue stability and less dependence on volumetric sales. On the other hand, higher dependence on volumetric revenues provides a better price signal for conservation and local resources. Revenue stability is a major concern for utilities State-wide due to the recent downward trend in consumption which has affected water sales.

- **Recommendation:** Revenues from service charges currently account for approximately 38% of total rate revenues. BWA recommends amending the fixed vs. volume cost recovery profile to recover 50% of expenditures from the fixed service charge and 50% from variable charges based on a detailed cost allocation. As water sales have declined, despite the City's best efforts to reduce costs, expenses have not decreased proportionately. Recovering additional revenue from the fixed charge will help stabilize operating revenues and better align the City's revenue recovery with actual costs. The transition to the recommended ratios can be phased in over 5 years to mitigate the annual impacts on customers.
- **Impacts:** The impact of transitioning to a 50% fixed and variable cost recovery over the next five years will vary. Because we are deriving the water rates from the ground up, actual impacts will vary based on a customers' meter size.
- **Water Volume Charges:** In the recent court case *Capistrano Taxpayers Association, Inc. v. City of San Juan Capistrano*, the court ruled that tiered water rates must be supported by actual cost of service calculations with identifiable, incremental costs correlating to each tier. It is important to note that the decision has not invalidated tiered rate structures in general. The Court invalidated the specific rates that were presented in the case. Proposition 218 places the burden of proving the constitutionality of a challenged rate structure on the water service provider. In the case, the Court concluded that the administrative record did not provide sufficient support for each of the tier breakpoints or for the proportionate allocation of system-wide costs. Because the water service provider failed to carry its burden, the Court held that the rate structure at issue failed to comply with Proposition 218.
 - **Recommendation:** BWA recommends a single uniform tier for all customers. Under a uniform block rate structure, all water use is billed at the same rate per unit. This rate structure provides a conservation incentive since customers have to pay for each unit of water use. The advantages of a uniform block rate structure are: 1) the simplicity of the rate structure and 2) the City will be recovering its full cost of purchasing water from all water sold.

- **Impacts:** The impact of transitioning to a single uniform tier varies depending on the customer category and actual consumption. Seniors, parks, and public agency accounts will typically see the most significant increases since their current rates are lower than all other customer classes.
- **Senior Water Discount:** The City currently offers discounted water rates to seniors aged 65 and older. The rates are based on the same structure of a flat monthly service charge and an inclining volume rate, but seniors are given a 15% discount on both the fixed and variable charges. In 2014/15, the annual subsidy for the senior rates was nearly \$141,000.

The reduced rate was designed to assist those in need. However, this discount violates Proposition 218 because the rates provide a lower cost of service to one specific customer class and is subsidized through higher charges to other customers.

A legal opinion from Michael G. Colantuono, Esq. of Colantuono & Levin, PC concurred that the senior rates violate Proposition 218, stating that there is *“no cost justification for discounted rates to senior citizens because the cost of providing water service to seniors is generally no different than the cost of providing water service to other customers.”*

Alternatively, *“the City could fund the discounted rates with funds other than the proceeds of water rates, such as general fund dollars or other water discretionary revenues. The City might fund subsidies from non-rate water utility revenues. These might include the proceeds of wholesale transactions, or interest and penalties on late payments.”*

- **Recommendation:** Based on the legal opinions, BWA recommends eliminating the senior discount rate. In turn, when the new rates are adopted, seniors will pay the same fixed and volume charges as other residential customers. The City could also choose to phase out the discounted rate over the next five years to minimize the impact on seniors. However, if the City Council desires to continue to provide a discount to seniors, funding sources other than rate revenue will be needed to subsidize the senior discount. Options for funding the discount include:
 - ◆ *Property Taxes:* The water enterprise currently receives nearly \$94,000 in property taxes based on the 2015/16 budget. Property taxes are escalated by the estimated growth rate which gradually increases to 1% in 2019/20.
 - ◆ *Late Fee Revenues:* The water enterprise currently collects \$280,000 in late fee revenues based on the 2015/16 budget. Late fees are projected to increase 2% annually.

- ◆ *Franchise Fees:* The General Fund charges the water utility a Measure G Tax Franchise Fee based on 5% of annual revenues. Based on the 2015/16 budget, the utility's expense for the franchise fee is about \$773,000. This amount increases each year as revenues increase. The City could choose to reduce the amount that is transferred to the General Fund. The savings, in turn, could be applied to fund the senior discount.
 - ◆ *General Fund:* The General Fund could supplement the discount.
 - **Impacts:** For the first year of adopted rates, senior customers will see a greater impact to their bills than compared to other customers. The impact to seniors would be gradual if the City chooses to phase out the discount over five years.
- **City Park and Public Agency Water Rates:** The current rate structure also includes a discounted public agency rate at 76% of the commercial rate and a city parks/landscape rate at 72% of the commercial rate. Colantuono's legal opinion explains that *"unless the City can justify lower rates for city parks and other public agency facilities on the basis of a lower cost of service, those discounts must also be either discontinued or funded from non-rate revenues."*
 - **Recommendation:** Based on the legal opinions, BWA recommends eliminating the discounted City Park and Public Agency rate. In turn, when the new rates are adopted, parks and public agencies will pay the same fixed and volume charges as residential and commercial customers.
 - **Impacts:** Park and public agency accounts will see a significant impact to their monthly bills. Actual impacts will vary based on usage.

Water Rate Derivation

To comply with Proposition 218 and recent legislation regarding water rates, BWA derived the City's water rates utilizing rate development principles and methodologies from the AWWA M1 Manual and other industry standards. BWA recommends maintaining the fixed service charge based on meter size. For the volume charge, BWA recommends a single uniform tier for all customers in which all water use is billed at the same rate per unit. The following tables detail the water rate derivation for *Scenarios 4a and b: 5.5% Annual Revenue Increases to Eliminate Operating Deficit*. The rate derivation for Scenarios 1 through 3 are included in the appendix.

Fixed Service Charge

The most common method to levy fixed charges is by meter size. The ratio at which the meter charge increases is typically a function of either meter investment (estimated cost) or the meter's safe operating capacity. The AWWA has established a set of capacity ratios using the maximum safe flow of various meter sizes relative to the base meter (either a 5/8" or 3/4" meter which are the City's smallest meters). Many agencies use the AWWA ratios as a basis for setting their fixed rates and, in doing so, charge customers proportional to the capacity that is reserved for them in the public water system.

These capacity-based meter ratios are widely used in California rate setting and are consistent with meter ratios adopted by the California Public Utility Commission for private water companies. Larger meters have the ability to place a greater demand on the water system and are therefore, charged based on that potential demand. For example, based on the AWWA meter capacity ratios, a customer that has a 2" meter has 8.0 times the capacity equivalency of a customer with a 5/8" meter. (A 2" meter has a safe operating capacity of 160 gallons per minute (gpm) compared to a 5/8" meter which has a safe operating capacity of 20 gpm).

The fixed service charge is designed to recover costs from each meter proportional to their meter capacity and the associated demand placed on the water system. The fixed charges are calculated by multiplying a) the annual revenue requirement from the cash flow projection by b) the percentage of costs allocated for fixed charge revenue recovery. This funding target is then divided by c) the current total number of meter equivalents to determine d) the fixed charge per meter equivalent. This meter equivalent represents the capacity of a base 5/8" meter. The fixed charges for larger meters are determined by multiplying the base charge by the corresponding proposed meter equivalent ratios. The table below shows the rate derivation for the proposed monthly service charges.

<i>Rate Effective Fiscal Year</i>	1-Jan-16	1-Jan-17	1-Jan-18	1-Jan-19	1-Jan-20			
	2015/16	2016/17	2017/18	2018/19	2019/20			
Annual Revenue Adjustment	5.5%	5.5%	5.5%	5.5%	5.5%			
Water Rate Revenue Requirement (from Cash Flow)	\$16,756,000	\$17,160,000	\$18,239,000	\$19,386,000	\$20,656,000			
Fixed/Variable Allocation								
Fixed: Service Charges	42.0%	44.0%	46.0%	48.0%	50.0%			
Variable: Volume Charges	58.0%	56.0%	54.0%	52.0%	50.0%			
SERVICE CHARGE CALCULATION								
Fixed Revenue Requirement	\$7,037,520	\$7,550,400	\$8,389,940	\$9,305,280	\$10,328,000			
Projected Growth	0.5%	0.5%	0.8%	0.8%	1.0%			
Divided by Total Meter Equivalents	48,115	48,115	48,476	48,840	49,328			
Annual Charge per 5/8" Meter	\$146.26	\$156.92	\$173.07	\$190.53	\$209.37			
Monthly Service Charge per 5/8" Meter	\$12.19	\$13.08	\$14.42	\$15.88	\$17.45			
\$ Increase	\$1.74	\$0.89	\$1.34	\$1.46	\$1.57			
% Increase	16.7%	7.3%	10.2%	10.1%	9.9%			
Monthly Service Charge								
<u>Meter Size</u>	<u>Current</u>	<u>Meter Ratios</u>						
5/8"	\$10.71	1.0	\$12.19	\$13.08	\$14.42	\$15.88	\$17.45	
3/4"	\$16.05	1.5	\$18.27	\$19.60	\$21.61	\$23.80	\$26.15	
1"	\$26.74	2.5	\$30.44	\$32.66	\$36.00	\$39.65	\$43.57	
1-1/2"	\$53.47	5.0	\$60.86	\$65.30	\$71.99	\$79.28	\$87.12	
2"	\$85.59	8.0	\$97.42	\$104.53	\$115.24	\$126.91	\$139.45	
3"	\$160.47	15.0	\$182.65	\$195.98	\$216.06	\$237.93	\$261.46	
4"	\$267.44	25.0	\$304.40	\$326.62	\$360.08	\$396.54	\$435.74	
6"	\$534.88	49.9	\$608.79	\$653.24	\$720.17	\$793.08	\$871.49	
8"	\$855.76	79.9	\$974.02	\$1,045.13	\$1,152.20	\$1,268.86	\$1,394.31	
10"	\$0.00	115.0	\$1,401.85	\$1,504.20	\$1,658.30	\$1,826.20	\$2,006.75	

Water Volume Charge

Volume or consumption charges recover system costs that vary based on consumption. These charges may also be labeled usage rates, consumption charges, block rates, commodity rates, etc. Regardless of the name, all volume charges are based upon metered water consumption and levied on a per-unit cost. Conservation is most effectively encouraged through the variable rate component. BWA recommends a uniform block rate structure in which all water use is billed at the same rate per unit for all customers. This rate structure provides a conservation incentive since customers have to pay for each unit of water use.

As shown on the following table, the rate for the uniform tier is calculated by multiplying a) the annual revenue requirement by b) the percentage of costs allocated for volume charge revenue recovery. This funding target is then divided by c) total yearly consumption to derive the volume charge per ccf.

<i>Rate Effective Fiscal Year</i>	1-Jan-16	1-Jan-17	1-Jan-18	1-Jan-19	1-Jan-20
	2015/16	2016/17	2017/18	2018/19	2019/20
Annual Revenue Adjustment	5.5%	5.5%	5.5%	5.5%	5.5%
Water Rate Revenue Requirement (from Cash Flow)	\$16,756,000	\$17,160,000	\$18,239,000	\$19,386,000	\$20,656,000
Fixed/Variable Allocation					
Fixed: Service Charges	42.0%	44.0%	46.0%	48.0%	50.0%
Variable: Volume Charges	58.0%	56.0%	54.0%	52.0%	50.0%
VOLUME CHARGE CALCULATION					
VOLUME CHARGE BASED ON BASELINE (NORMAL YEAR) USAGE					
Volumetric Revenue Requirement	\$9,718,480				
Projected Consumption with Growth (ccf)	7,158,486				
Volume Charge per ccf	\$1.36				
% Increase	-1.4%				
VOLUME CHARGE BASED ON REDUCED CONSUMPTION					
Volumetric Revenue Requirement	\$9,718,480	\$9,609,600	\$9,849,060	\$10,080,720	\$10,328,000
Projected Consumption with Reduction (ccf)	5,261,487	5,755,423	5,801,466	5,847,878	5,906,357
Volume Charge per ccf	\$1.85	\$1.67	\$1.70	\$1.72	\$1.75
% Increase	34.1%	-9.7%	1.8%	1.2%	1.7%
Option 1: Water Conservation Surcharge - 1 YEAR (1)	\$0.49				
Option 2: Water Conservation Surcharge - 5 YEARS					
Lost Revenue in FY 15/16	\$2,562,857				
Surcharge spread over 5 years	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09

1 - Difference between Volume Charge based on Growth & Volume Charge Based on Consumption

Water Conservation Surcharge

The table above also details the two options for the Water Conservation Surcharge for recovering lost revenue in FY 15/16 due to the drought.

Option 1: Water Conservation Surcharge for 1 Year

For Option 1, the FY 15/16 revenue requirement allocated for cost recovery from the volume charge is divided by normal year usage (7,158,486 ccf) to derive a volume charge per ccf of \$1.36. Next, the FY 15/16 volume charge revenue requirement is divided by projected consumption with a 26% reduction (5,261,487 ccf) to derive a volume charge per ccf of \$1.85. The proposed Water Conservation Surcharge of \$0.49 is the difference between the two charges (\$1.85 less \$1.36).

Option 2: Water Conservation Surcharge for 5 Years

For Option 2, the lost revenue for FY 15/16 is calculated by multiplying the volume charge per ccf based on normal year consumption (\$1.36) by reduced consumption (5,261,487 ccf). This amount is subtracted from the total FY 15/16 volumetric revenue requirement of \$9,442,400 to determine the FY 15/16 revenue loss with a 26% decrease in use. The result is an estimated \$2,497,237 loss in revenue in FY 15/16. To recover the lost revenue over a 5 year period, the proposed Water Conservation Surcharge is \$0.09 annually through FY 19/20.

Proposed Water Rates

The following tables show the proposed water rates and the Water Conservation Surcharge options for each scenario.

Scenario 1a & b: 2.5% Annual Revenue Increases					
<i>Rate Effective</i>	1-Jan-16	1-Jan-17	1-Jan-18	1-Jan-19	1-Jan-20
<i>Fiscal Year</i>	2015/16	2016/17	2017/18	2018/19	2019/20
Annual Revenue Adjustment	2.5%	2.5%	2.5%	2.5%	2.5%
Monthly Service Charge					
<u>Meter Size</u>					
5/8"	\$11.84	\$12.56	\$13.45	\$14.39	\$15.36
3/4"	\$17.74	\$18.82	\$20.16	\$21.56	\$23.02
1"	\$29.56	\$31.36	\$33.58	\$35.93	\$38.35
1-1/2"	\$59.11	\$62.71	\$67.15	\$71.84	\$76.69
2"	\$94.62	\$100.37	\$107.49	\$115.00	\$122.75
3"	\$177.40	\$188.19	\$201.52	\$215.61	\$230.14
4"	\$295.66	\$313.64	\$335.86	\$359.33	\$383.56
6"	\$591.31	\$627.27	\$671.72	\$718.67	\$767.11
8"	\$946.05	\$1,003.58	\$1,074.69	\$1,149.80	\$1,227.31
Monthly Volume Charges (per ccf)					
Volume Charge per ccf	\$1.32	\$1.60	\$1.58	\$1.56	\$1.54
Monthly Water Conservation Surcharge (per ccf)					
Option 1: Water Conservation Surcharge (per ccf) for 1 Year	\$0.47				
Option 2: Water Conservation Surcharge (per ccf) for 5 Years	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09

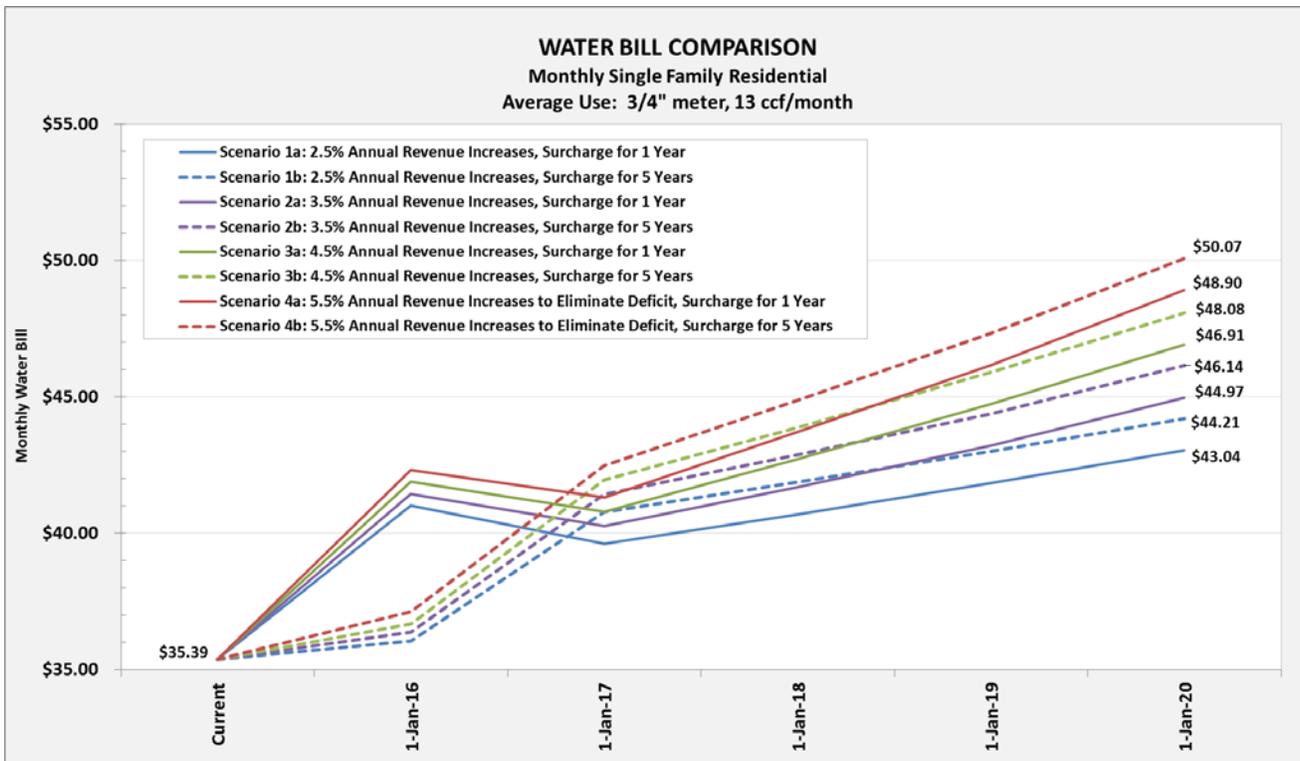
Scenario 2a & b: 3.5% Annual Revenue Increases					
Rate Effective Fiscal Year	1-Jan-16	1-Jan-17	1-Jan-18	1-Jan-19	1-Jan-20
	2015/16	2016/17	2017/18	2018/19	2019/20
Annual Revenue Adjustment	3.5%	3.5%	3.5%	3.5%	3.5%
Monthly Service Charge					
<u>Meter Size</u>					
5/8"	\$11.96	\$12.73	\$13.77	\$14.87	\$16.04
3/4"	\$17.92	\$19.08	\$20.64	\$22.28	\$24.04
1"	\$29.86	\$31.78	\$34.38	\$37.13	\$40.05
1-1/2"	\$59.71	\$63.55	\$68.75	\$74.24	\$80.08
2"	\$95.58	\$101.73	\$110.04	\$118.84	\$128.19
3"	\$179.20	\$190.74	\$206.32	\$222.80	\$240.33
4"	\$298.65	\$317.88	\$343.85	\$371.32	\$400.54
6"	\$597.31	\$635.76	\$687.70	\$742.64	\$801.07
8"	\$955.64	\$1,017.16	\$1,100.26	\$1,188.16	\$1,281.64
Monthly Volume Charges (per ccf)					
Volume Charge per ccf	\$1.33	\$1.63	\$1.62	\$1.61	\$1.61
Monthly Water Conservation Surcharge (per ccf)					
Option 1: Water Conservation Surcharge (per ccf) for 1 Year	\$0.48				
Option 2: Water Conservation Surcharge (per ccf) for 5 Years	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09

Scenario 3a & b: 4.5% Annual Revenue Increases					
Rate Effective Fiscal Year	1-Jan-16	1-Jan-17	1-Jan-18	1-Jan-19	1-Jan-20
	2015/16	2016/17	2017/18	2018/19	2019/20
Annual Revenue Adjustment	4.5%	4.5%	4.5%	4.5%	4.5%
Monthly Service Charge					
<u>Meter Size</u>					
5/8"	\$12.07	\$12.90	\$14.10	\$15.37	\$16.73
3/4"	\$18.09	\$19.33	\$21.13	\$23.03	\$25.07
1"	\$30.14	\$32.21	\$35.20	\$38.37	\$41.77
1-1/2"	\$60.26	\$64.40	\$70.39	\$76.74	\$83.53
2"	\$96.46	\$103.09	\$112.68	\$122.83	\$133.70
3"	\$180.85	\$193.28	\$211.26	\$230.29	\$250.67
4"	\$301.40	\$322.13	\$352.09	\$383.81	\$417.77
6"	\$602.80	\$644.25	\$704.18	\$767.61	\$835.53
8"	\$964.43	\$1,030.75	\$1,126.63	\$1,228.11	\$1,336.78
Monthly Volume Charges (per ccf)					
Volume Charge per ccf	\$1.34	\$1.65	\$1.66	\$1.67	\$1.68
Monthly Water Conservation Surcharge (per ccf)					
Option 1: Water Conservation Surcharge (per ccf) for 1 Year	\$0.49				
Option 2: Water Conservation Surcharge (per ccf) for 5 Years	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09

Scenario 4a & b: 5.5% Annual Revenue Increases to Eliminate Deficit					
Rate Effective Fiscal Year	1-Jan-16	1-Jan-17	1-Jan-18	1-Jan-19	1-Jan-20
	2015/16	2016/17	2017/18	2018/19	2019/20
Annual Revenue Adjustment	5.5%	5.5%	5.5%	5.5%	5.5%
Monthly Service Charge					
<u>Meter Size</u>					
5/8"	\$12.19	\$13.08	\$14.42	\$15.88	\$17.45
3/4"	\$18.27	\$19.60	\$21.61	\$23.80	\$26.15
1"	\$30.44	\$32.66	\$36.00	\$39.65	\$43.57
1-1/2"	\$60.86	\$65.30	\$71.99	\$79.28	\$87.12
2"	\$97.42	\$104.53	\$115.24	\$126.91	\$139.45
3"	\$182.65	\$195.98	\$216.06	\$237.93	\$261.46
4"	\$304.40	\$326.62	\$360.08	\$396.54	\$435.74
6"	\$608.79	\$653.24	\$720.17	\$793.08	\$871.49
8"	\$974.02	\$1,045.13	\$1,152.20	\$1,268.86	\$1,394.31
Monthly Volume Charges (per ccf)					
Volume Charge per ccf	\$1.36	\$1.67	\$1.70	\$1.72	\$1.75
Monthly Water Conservation Surcharge (per ccf)					
Option 1: Water Conservation Surcharge (per ccf) for 1 Year	\$0.49				
Option 2: Water Conservation Surcharge (per ccf) for 5 Years	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09

Sample Bill Impacts

The following chart shows a projected monthly bill comparison for a typical single family residential (SFR) customer with a ¾-inch meter using 13 ccf of water per month. Please note that the projected percentage increases represent the overall increase in water sales revenues and does not imply that each customer will receive the same percentage increase in their bill. As a result of the proposed rate structure changes to comply with Proposition 218 and recent legislation, actual bill impacts will vary for each customer based on customer class, consumption, and meter size. Additional sample bill impacts are included in the appendix.



BWA Recommendations

Based on our analysis of the water utility’s finances, BWA proposes the following modifications to the water rates beginning on January 1, 2016. BWA finds the water rates detailed in this report satisfy the substantive requirements of Proposition 218 and are based on cost of service. Bill impacts will vary for each customer as a result of the proposed revenue adjustments and rate structure changes.

- **Recommended Scenario: Water Rate Scenario 4a**

Going forward, the City’s water enterprise is facing a number of financial challenges that will require the City to raise its water rates over the next five years. Despite the City’s best efforts to control costs, operating expenses are increasing and capital projects are needed to renovate the water system. To restore financial stability to the water enterprise, BWA recommends the City implement Scenario 4a which gradually phases in rate increases to meet all objectives while minimizing the impacts on ratepayers. Scenario 4a includes a \$2 million transfer of funds from the water rehabilitation fund to fund the Chromium 6 project and proposes 5.5% annual revenue increases through FY 19/20. The recommended revenue adjustments will gradually reduce the water fund deficit, and with continued 5.5% revenue increases through FY 21/22, the water fund is projected to return to a positive fund balance at the end of FY 22/23.

- **Temporary Water Conservation Surcharge**

BWA recommends the City implement a temporary Water Conservation Surcharge on January 1, 2016 to recover projected revenue losses in FY 15/16. The City Council may choose to implement the Water Conservation Surcharge over a period of 1 year or 5 years. If the City Council selects Option 1, the Water Conservation Surcharge will be effective beginning January 1, 2016 through December 31, 2016. If the City Council selects Option 2, the Water Conservation Surcharge will be effective beginning January 1, 2016 through December 31, 2020.

- **Rate Structure Recommendations**

BWA recommends the City gradually transition to a 50% fixed and 50% variable cost recovery allocation to help stabilize operating revenues and better align the City's revenue recovery with actual costs.

BWA recommends the City implement a single uniform tier in which all customers are billed the same rate per unit of consumption to comply with recent legal decisions related to tiered water rates.

- **Eliminate Discounted Rates**

Pursuant to Proposition 218, BWA recommends the City eliminate discounted rates for seniors, City Parks, and Public Agencies. All customer categories will be levied the same water rates so that each customer class will pay their equitable share of water system expenses. The City may choose to continue to provide a discount for seniors; however any discount must be subsidized with another revenue source unrelated to water rates.

Recommended Rates: Scenario 4a & b: 5.5% Annual Revenue Increases to Eliminate Deficit					
Rate Effective Fiscal Year	1-Jan-16	1-Jan-17	1-Jan-18	1-Jan-19	1-Jan-20
	2015/16	2016/17	2017/18	2018/19	2019/20
Annual Revenue Adjustment	5.5%	5.5%	5.5%	5.5%	5.5%
Monthly Service Charge					
<u>Meter Size</u>					
5/8"	\$12.19	\$13.08	\$14.42	\$15.88	\$17.45
3/4"	\$18.27	\$19.60	\$21.61	\$23.80	\$26.15
1"	\$30.44	\$32.66	\$36.00	\$39.65	\$43.57
1-1/2"	\$60.86	\$65.30	\$71.99	\$79.28	\$87.12
2"	\$97.42	\$104.53	\$115.24	\$126.91	\$139.45
3"	\$182.65	\$195.98	\$216.06	\$237.93	\$261.46
4"	\$304.40	\$326.62	\$360.08	\$396.54	\$435.74
6"	\$608.79	\$653.24	\$720.17	\$793.08	\$871.49
8"	\$974.02	\$1,045.13	\$1,152.20	\$1,268.86	\$1,394.31
Monthly Volume Charges (per ccf)					
Volume Charge per ccf	\$1.36	\$1.67	\$1.70	\$1.72	\$1.75
Monthly Water Conservation Surcharge (per ccf)					
Option 1: Water Conservation Surcharge (per ccf) for 1 Year	\$0.49				
Option 2: Water Conservation Surcharge (per ccf) for 5 Years	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09

Appendix

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Appendix A
City of Vacaville - Water Rate Study 2015
Scenario 1a: 2.5% Annual Rate Increases
Cash Flow Projection

	Budget	Prop. 218 Rates					Projected				
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Assumptions:											
Water Sales Revenue Adjustment (effective Jan 1)	0.0%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Interest Earnings Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Other Revenues (2)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Annual Inflation	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Growth % (estimated)	0.4%	0.5%	0.5%	0.8%	0.8%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Beginning Water Fund Balance (Working Capital)	(\$8,412,222)	(\$7,909,900)	(\$6,524,100)	(\$6,603,500)	(\$8,215,500)	(\$9,857,900)	(\$9,693,200)	(\$10,751,500)	(\$11,833,400)	(\$12,913,800)	(\$13,995,200)
Full Year of Rate Increases		16,280,000	16,475,000	17,014,000	17,570,000	18,189,000	18,830,000	19,494,000	20,181,000	20,893,000	21,629,000
REVENUES											
Water Sales Revenues	15,803,600	15,994,000	16,475,000	17,014,000	17,570,000	18,189,000	18,830,000	19,494,000	20,181,000	20,893,000	21,629,000
Property taxes	93,400	93,900	94,400	95,100	95,800	96,800	97,800	98,800	99,800	100,800	101,800
Interest income	(100,000)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	0	0	0	0	0
Late fees	275,400	280,900	286,500	292,200	298,000	304,000	310,100	316,300	322,600	329,100	335,700
Cross connection/backflow	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Other income (1)	819,400	19,800	20,200	20,600	21,000	21,400	21,800	22,200	22,600	23,100	23,600
Loan repayment from Sewer Fund/Sale of NBR Property	0	1,900,000	1,000,000	1,000,000	1,000,000	1,000,000	0	0	0	0	0
Adjustment/Trf based on Finance's Operating Statement	33,430	33,430	33,430	33,430	33,430	33,430	33,430	0	0	0	0
Transfer from Well Replacement Reserve	0	1,000,000	1,000,000	0	0	0	0	0	0	0	0
TOTAL REVENUES	17,125,230	19,472,030	19,059,530	18,605,330	19,168,230	19,794,630	19,493,130	20,131,300	20,826,000	21,546,000	22,290,100
EXPENSES											
Operating Expenses											
Supply and production	2,309,047	2,394,440	2,466,300	2,540,300	2,616,500	2,695,000	2,775,900	2,859,200	2,945,000	3,033,400	3,124,400
Transmission and distribution	1,722,779	1,832,017	1,887,000	1,943,600	2,001,900	2,062,000	2,123,900	2,187,600	2,253,200	2,320,800	2,390,400
NBR treatment plant	3,200,000	3,200,000	3,296,000	3,394,900	3,496,700	3,619,100	3,745,800	3,876,900	4,012,600	4,153,000	4,298,400
Maintenance - ICE	597,992	501,964	692,900	713,700	735,100	757,200	779,900	803,300	827,400	852,200	877,800
System Administration	1,266,913	1,279,600	1,318,000	1,857,500	1,898,300	1,440,200	1,483,400	1,527,900	1,573,700	1,620,900	1,669,500
Maintenance - Mechanical	659,691	716,500	738,000	760,100	782,900	806,400	830,600	855,500	881,200	907,600	934,800
All Other Operating Expenses	1,801,524	2,251,879	2,167,550	2,260,950	2,358,250	2,459,100	2,553,900	2,671,200	2,801,400	2,936,900	3,077,900
Subtotal Operating Expenses	11,557,946	12,176,400	12,565,750	13,471,050	13,889,650	13,839,000	14,293,400	14,781,600	15,294,500	15,824,800	16,373,200
Intragovernmental Expenses											
Measure G Tax (Property Based) 1% of Net Fixed Assets	984,000	1,013,500	1,043,900	1,075,200	1,107,500	1,140,700	1,174,900	1,210,100	1,246,400	1,283,800	1,322,300
Measure G Tax (Revenue Based) Franchise Fee	800,000	823,700	848,100	875,300	903,400	934,700	967,100	1,000,600	1,035,200	1,071,100	1,108,300
Cost Allocation	1,124,425	1,150,700	1,208,200	1,268,600	1,332,000	1,398,600	1,468,500	1,541,900	1,619,000	1,700,000	1,785,000
Bad Debt Expense	61,200	61,000	61,000	61,000	61,000	61,000	61,000	61,000	61,000	61,000	61,000
Subtotal Intragovernmental Expenses	2,969,625	3,048,900	3,161,200	3,280,100	3,403,900	3,535,000	3,671,500	3,813,600	3,961,600	4,115,900	4,276,600
Transfers											
Chromium 6 Fund	0	1,000,000	1,500,000	1,500,000	1,500,000	200,000	200,000	200,000	200,000	200,000	200,000
Meter Replacement Program	250,000	150,000	150,000	150,000	150,000	150,000	300,000	300,000	300,000	300,000	300,000
Easterly Lab/Shop Expansion	80,000	0	0	0	0	0	0	0	0	0	0
Well Replacement (15203)	200,000	200,000	200,000	200,000	200,000	200,000	250,000	250,000	250,000	250,000	250,000
Water Storage Replacement (15203)	200,000	200,000	200,000	200,000	200,000	200,000	250,000	250,000	250,000	250,000	250,000
Water System Mapping (GIS)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Water Facilities Rehabilitation Fund (15202)	450,000	450,000	450,000	450,000	450,000	450,000	500,000	500,000	500,000	500,000	500,000
Major Replacement Fund (15203) (2)	316,072	319,900	329,516	340,288	351,412	363,800	376,624	389,900	403,644	417,874	432,604
Subtotal Transfers	1,506,072	2,329,900	2,839,516	2,850,288	2,861,412	1,573,800	1,886,624	1,899,900	1,913,644	1,927,874	1,942,604
Meter Replacement Loan											
Siemens Accrued Account Expense (Meter Replacements)	589,219	531,000	572,500	615,900	655,700	682,100	699,900	718,100	736,700	758,800	785,200
Subtotal Meter Replacement Loan	589,219	531,000	572,500	615,900	655,700	682,100	699,900	718,100	736,700	758,800	785,200
TOTAL EXPENSES	16,622,862	18,086,200	19,138,966	20,217,338	20,810,662	19,629,900	20,551,424	21,213,200	21,906,444	22,627,374	23,377,604
Net Income (Revs less Exp)	502,368	1,385,830	(79,436)	(1,612,008)	(1,642,432)	164,730	(1,058,294)	(1,081,900)	(1,080,444)	(1,081,374)	(1,087,504)
Ending Fund Balance	(7,909,854)	(6,524,070)	(6,603,536)	(8,215,508)	(9,857,932)	(9,693,170)	(10,751,494)	(11,833,400)	(12,913,844)	(13,995,174)	(15,082,704)
Min. Fund Reserve Target (6 months of O&M)	5,778,973	6,088,200	6,282,875	6,735,525	6,944,825	6,919,500	7,146,700	7,390,800	7,647,250	7,912,400	8,186,600
Target Met	no	no	no	no	no	no	no	no	no	no	no

1 - Other Income includes SID/Monticello Pwr Plant, NBR Property, Benicia Water Sale

Appendix B
City of Vacaville - Water Rate Study 2015
Scenario 2a: 3.5% Annual Rate Increases
Cash Flow Projection

	Budget	Prop. 218 Rates					Projected				
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Assumptions:											
Water Sales Revenue Adjustment (effective Jan 1)	0.0%	3.5%									
Interest Earnings Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Other Revenues (2)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Annual Inflation	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Growth % (estimated)	0.4%	0.5%	0.5%	0.8%	0.8%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Beginning Water Fund Balance (Working Capital)	(\$8,412,222)	(\$7,909,900)	(\$6,461,400)	(\$6,325,500)	(\$7,559,400)	(\$8,648,800)	(\$7,741,200)	(\$7,851,800)	(\$7,766,500)	(\$7,443,500)	(\$6,869,300)
Full Year of Rate Increases		16,438,000	16,703,000	17,417,000	18,161,000	18,984,000	19,845,000	20,745,000	21,686,000	22,669,000	23,697,000
REVENUES											
Water Sales Revenues	15,803,600	16,058,000	16,703,000	17,417,000	18,161,000	18,984,000	19,845,000	20,745,000	21,686,000	22,669,000	23,697,000
Property taxes	93,400	93,900	94,400	95,100	95,800	96,800	97,800	98,800	99,800	100,800	101,800
Interest income	(100,000)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	0	0	0	0	0
Late fees	275,400	280,900	286,500	292,200	298,000	304,000	310,100	316,300	322,600	329,100	335,700
Cross connection/backflow	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Other income (1)	819,400	19,800	20,200	20,600	21,000	21,400	21,800	22,200	22,600	23,100	23,600
Loan repayment from Sewer Fund/Sale of NBR Property	0	1,900,000	1,000,000	1,000,000	1,000,000	1,000,000	0	0	0	0	0
Adjustment/Trf based on Finance's Operating Statement	33,430	33,430	33,430	33,430	33,430	33,430	33,430	0	0	0	0
<u>Transfer from Well Replacement Reserve</u>	<u>0</u>	<u>1,000,000</u>	<u>1,000,000</u>	<u>0</u>							
TOTAL REVENUES	17,125,230	19,536,030	19,287,530	19,008,330	19,759,230	20,589,630	20,508,130	21,382,300	22,331,000	23,322,000	24,358,100
EXPENSES											
Operating Expenses											
Supply and production	2,309,047	2,394,400	2,466,200	2,540,200	2,616,400	2,694,900	2,775,700	2,859,000	2,944,800	3,033,100	3,124,100
Transmission and distribution	1,722,779	1,832,000	1,887,000	1,943,600	2,001,900	2,062,000	2,123,900	2,187,600	2,253,200	2,320,800	2,390,400
NBR treatment plant	3,200,000	3,200,000	3,296,000	3,394,900	3,496,700	3,619,100	3,745,800	3,876,900	4,012,600	4,153,000	4,298,400
Maintenance - ICE	597,992	692,900	713,700	735,100	757,200	779,900	803,300	827,400	852,200	877,800	904,100
System Administration	1,266,913	1,276,400	1,314,700	1,854,100	1,894,800	1,436,600	1,479,700	1,524,100	1,569,800	1,616,900	1,665,400
Maintenance - Mechanical	659,691	716,500	738,000	760,100	782,900	806,400	830,600	855,500	881,200	907,600	934,800
<u>All Other Operating Expenses</u>	<u>1,801,524</u>	<u>2,061,000</u>	<u>2,146,850</u>	<u>2,239,650</u>	<u>2,336,250</u>	<u>2,436,500</u>	<u>2,530,700</u>	<u>2,647,300</u>	<u>2,776,800</u>	<u>2,911,600</u>	<u>3,051,900</u>
Subtotal Operating Expenses	11,557,946	12,173,200	12,562,450	13,467,650	13,886,150	13,835,400	14,289,700	14,777,800	15,290,600	15,820,800	16,369,100
Intragovernmental Expenses											
Measure G Tax (Property Based) 1% of Net Fixed Assets	984,000	1,013,500	1,043,900	1,075,200	1,107,500	1,140,700	1,174,900	1,210,100	1,246,400	1,283,800	1,322,300
Measure G Tax (Revenue Based) Franchise Fee	800,000	826,900	859,500	895,500	933,000	974,500	1,017,800	1,063,200	1,110,500	1,160,000	1,211,700
Cost Allocation	1,124,425	1,150,700	1,208,200	1,268,600	1,332,000	1,398,600	1,468,500	1,541,900	1,619,000	1,700,000	1,785,000
<u>Bad Debt Expense</u>	<u>61,200</u>	<u>61,000</u>									
Subtotal Intragovernmental Expenses	2,969,625	3,052,100	3,172,600	3,300,300	3,433,500	3,574,800	3,722,200	3,876,200	4,036,900	4,204,800	4,380,000
Transfers											
Chromium 6 Fund	0	1,000,000	1,500,000	1,500,000	1,500,000	200,000	200,000	200,000	200,000	200,000	200,000
Meter Replacement Program	250,000	150,000	150,000	150,000	150,000	150,000	300,000	300,000	300,000	300,000	300,000
Easterly Lab/Shop Expansion	80,000	0	0	0	0	0	0	0	0	0	0
Well Replacement (15203)	200,000	200,000	200,000	200,000	200,000	200,000	250,000	250,000	250,000	250,000	250,000
Water Storage Replacement (15203)	200,000	200,000	200,000	200,000	200,000	200,000	250,000	250,000	250,000	250,000	250,000
Water System Mapping (GIS)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Water Facilities Rehabilitation Fund (15202)	450,000	450,000	450,000	450,000	450,000	450,000	500,000	500,000	500,000	500,000	500,000
<u>Major Replacement Fund (15203) (2)</u>	<u>316,072</u>	<u>321,200</u>	<u>334,062</u>	<u>348,346</u>	<u>363,242</u>	<u>379,714</u>	<u>396,934</u>	<u>414,936</u>	<u>433,752</u>	<u>453,422</u>	<u>473,984</u>
Subtotal Transfers	1,506,072	2,331,200	2,844,062	2,858,346	2,873,242	1,589,714	1,906,934	1,924,936	1,943,752	1,963,422	1,983,984
Meter Replacement Loan											
<u>Siemens Accrued Account Expense (Meter Replacements)</u>	<u>589,219</u>	<u>531,000</u>	<u>572,500</u>	<u>615,900</u>	<u>655,700</u>	<u>682,100</u>	<u>699,900</u>	<u>718,100</u>	<u>736,700</u>	<u>758,800</u>	<u>785,200</u>
Subtotal Meter Replacement Loan	589,219	531,000	572,500	615,900	655,700	682,100	699,900	718,100	736,700	758,800	785,200
TOTAL EXPENSES	16,622,862	18,087,500	19,151,612	20,242,196	20,848,592	19,682,014	20,618,734	21,297,036	22,007,952	22,747,822	23,518,284
Net Income (Revs less Exp)	502,368	1,448,530	135,918	(1,233,866)	(1,089,362)	907,616	(110,604)	85,264	323,048	574,178	839,816
Ending Fund Balance	(7,909,854)	(6,461,370)	(6,325,482)	(7,559,366)	(8,648,762)	(7,741,184)	(7,851,804)	(7,766,536)	(7,443,452)	(6,869,322)	(6,029,484)
Min. Fund Reserve Target (6 months of O&M)	5,778,973	6,086,600	6,281,225	6,733,825	6,943,075	6,917,700	7,144,850	7,388,900	7,645,300	7,910,400	8,184,550
<i>Target Met</i>	<i>no</i>										

1 - Other Income includes SID/Monticello Pwr Plant, NBR Property, Benicia Water Sale

Appendix C
City of Vacaville - Water Rate Study 2015
Scenario 3a: 4.5% Annual Rate Increases
Cash Flow Projection

	Budget	Prop. 218 Rates					Projected				
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Assumptions:											
Water Sales Revenue Adjustment (effective Jan 1)	0.0%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
Interest Earnings Rate	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Other Revenues (2)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Annual Inflation	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Growth % (estimated)	0.4%	0.5%	0.5%	0.8%	0.8%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Beginning Water Fund Balance (Working Capital)	(\$8,412,222)	(\$7,909,900)	(\$6,399,600)	(\$6,048,300)	(\$6,898,300)	(\$7,419,600)	(\$5,740,900)	(\$4,859,000)	(\$3,539,200)	(\$1,718,400)	\$640,100
Full Year of Rate Increases		16,597,000	16,931,000	17,826,000	18,768,000	19,809,000	20,908,000	22,068,000	23,292,000	24,583,000	25,946,000
REVENUES											
Water Sales Revenues	15,803,600	16,121,000	16,931,000	17,826,000	18,768,000	19,809,000	20,908,000	22,068,000	23,292,000	24,583,000	25,946,000
Property taxes	93,400	93,900	94,400	95,100	95,800	96,800	97,800	98,800	99,800	100,800	101,800
Interest income	(100,000)	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	0	0	0	0	0
Late fees	275,400	280,900	286,500	292,200	298,000	304,000	310,100	316,300	322,600	329,100	335,700
Cross connection/backflow	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Other income (1)	819,400	19,800	20,200	20,600	21,000	21,400	21,800	22,200	22,600	23,100	23,600
Loan repayment from Sewer Fund/Sale of NBR Property	0	1,900,000	1,000,000	1,000,000	1,000,000	1,000,000	0	0	0	0	0
Adjustment/Trf based on Finance's Operating Statement	33,430	33,430	33,430	33,430	33,430	33,430	33,430	0	0	0	0
Transfer from Well Replacement Reserve	0	1,000,000	1,000,000	0	0	0	0	0	0	0	0
TOTAL REVENUES	17,125,230	19,599,030	19,515,530	19,417,330	20,366,230	21,414,630	21,571,130	22,705,300	23,937,000	25,236,000	26,607,100
EXPENSES											
Operating Expenses											
Supply and production	2,309,047	2,394,400	2,466,200	2,540,200	2,616,400	2,694,900	2,775,700	2,859,000	2,944,800	3,033,100	3,124,100
Transmission and distribution	1,722,779	1,832,000	1,887,000	1,943,600	2,001,900	2,062,000	2,123,900	2,187,600	2,253,200	2,320,800	2,390,400
NBR treatment plant	3,200,000	3,200,000	3,296,000	3,394,900	3,496,700	3,619,100	3,745,800	3,876,900	4,012,600	4,153,000	4,298,400
Maintenance - ICE	597,992	692,900	713,700	735,100	757,200	779,900	803,300	827,400	852,200	877,800	904,100
System Administration	1,266,913	1,273,200	1,311,400	1,850,700	1,891,300	1,433,000	1,476,000	1,520,300	1,565,900	1,612,900	1,661,300
Maintenance - Mechanical	659,691	716,500	738,000	760,100	782,900	806,400	830,600	855,500	881,200	907,600	934,800
All Other Operating Expenses	1,801,524	2,061,000	2,146,850	2,239,650	2,336,250	2,436,500	2,530,700	2,647,300	2,776,800	2,911,600	3,051,900
Subtotal Operating Expenses	11,557,946	12,170,000	12,559,150	13,464,250	13,882,650	13,831,800	14,286,000	14,774,000	15,286,700	15,816,800	16,365,000
Intragovernmental Expenses											
Measure G Tax (Property Based) 1% of Net Fixed Assets	984,000	1,013,500	1,043,900	1,075,200	1,107,500	1,140,700	1,174,900	1,210,100	1,246,400	1,283,800	1,322,300
Measure G Tax (Revenue Based) Franchise Fee	800,000	830,100	870,900	915,900	963,300	1,015,600	1,070,800	1,129,100	1,190,600	1,255,500	1,323,900
Cost Allocation	1,124,425	1,150,700	1,208,200	1,268,600	1,332,000	1,398,600	1,468,500	1,541,900	1,619,000	1,700,000	1,785,000
Bad Debt Expense	61,200	61,000	61,000	61,000	61,000	61,000	61,000	61,000	61,000	61,000	61,000
Subtotal Intragovernmental Expenses	2,969,625	3,055,300	3,184,000	3,320,700	3,463,800	3,615,900	3,775,200	3,942,100	4,117,000	4,300,300	4,492,200
Transfers											
Chromium 6 Fund	0	1,000,000	1,500,000	1,500,000	1,500,000	200,000	200,000	200,000	200,000	200,000	200,000
Meter Replacement Program	250,000	150,000	150,000	150,000	150,000	150,000	300,000	300,000	300,000	300,000	300,000
Easterly Lab/Shop Expansion	80,000	0	0	0	0	0	0	0	0	0	0
Well Replacement (15203)	200,000	200,000	200,000	200,000	200,000	200,000	250,000	250,000	250,000	250,000	250,000
Water Storage Replacement (15203)	200,000	200,000	200,000	200,000	200,000	200,000	250,000	250,000	250,000	250,000	250,000
Water System Mapping (GIS)	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Water Facilities Rehabilitation Fund (15202)	450,000	450,000	450,000	450,000	450,000	450,000	500,000	500,000	500,000	500,000	500,000
Major Replacement Fund (15203) (2)	316,072	322,400	338,614	356,504	375,340	396,152	418,120	441,306	465,776	491,602	518,862
Subtotal Transfers	1,506,072	2,332,400	2,848,614	2,866,504	2,885,340	1,606,152	1,928,120	1,951,306	1,975,776	2,001,602	2,028,862
Meter Replacement Loan											
Siemens Accrued Account Expense (Meter Replacements)	589,219	531,000	572,500	615,900	655,700	682,100	699,900	718,100	736,700	758,800	785,200
Subtotal Meter Replacement Loan	589,219	531,000	572,500	615,900	655,700	682,100	699,900	718,100	736,700	758,800	785,200
TOTAL EXPENSES	16,622,862	18,088,700	19,164,264	20,267,354	20,887,490	19,735,952	20,689,220	21,385,506	22,116,176	22,877,502	23,671,262
Net Income (Revs less Exp)	502,368	1,510,330	351,266	(850,024)	(521,260)	1,678,678	881,910	1,319,794	1,820,824	2,358,498	2,935,838
Ending Fund Balance	(7,909,854)	(6,399,570)	(6,048,334)	(6,898,324)	(7,419,560)	(5,740,922)	(4,858,990)	(3,539,206)	(1,718,376)	640,098	3,575,938
Min. Fund Reserve Target (6 months of O&M)	5,778,973	6,085,000	6,279,575	6,732,125	6,941,325	6,915,900	7,143,000	7,387,000	7,643,350	7,908,400	8,182,500
Target Met	no	no	no	no	no	no	no	no	no	no	no

1 - Other Income includes SID/Monticello Pwr Plant, NBR Property, Benicia Water Sale