

RECYCLED WATER, SEWER AND WATER RATE STUDY REPORT



City of San Clemente

Final – May 30, 2012

Prepared by:





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May 30, 2012

Mr. Tom Rendina
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City of San Clemente
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Subject: Recycled Water, Sewer and Water Rate Study Report

Dear Mr. Rendina,

Raftelis Financial Consultants, Inc. (RFC) is pleased to provide this Recycled Water, Sewer and Water Rate Study Report (Report) for the City of San Clemente (City), to address current financial challenges the City is facing and to establish rates that are equitable and in compliance with Proposition 218.

The major objectives of the study include the following:

1. Develop financial plans for Water and Sewer Enterprise Funds to ensure financial sufficiency to successfully meet operation and maintenance (O&M) costs, to ensure sufficient depreciation funding for capital replacement and refurbishment (R&R) needs, and to improve the financial health of the enterprises;
2. Develop fair and equitable water and sewer rates; and
3. Review current rate structure for recycled water (RW) and model the impacts from recycled water system expansion.

The Report summarizes the key findings and recommendations related to the development of the financial plans for Recycled Water, Sewer and Water Enterprise Funds and the development of the sewer and water rates.

It has been a pleasure working with you and we thank you and the City staff for the support provided during the course of this study.

Sincerely,

Raftelis Financial Consultants, Inc.

Sanjay Gaur
Senior Manager

Khanh Phan
Senior Consultant

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1 Executive Summary

1.1 Background of the Study

The City of San Clemente (City) provides recycled water, sewer and water services to over 17,500 accounts within the City limits. For the past few years, the City has experienced a steady decline in water demand from roughly 10,000 acre-feet (AF) four years ago to a current total water usage of approximately 8,600 AF. As a result of this decreased demand, revenues generated from water sales (along with several other forms of miscellaneous revenues) have been unable to fully fund the City's expenditures; in turn the City has been operating at a deficit. The approved fiscal year (FY) 2012 budget projected the City's Water and Sewer Funds to operate at a combined deficit of approximately \$1.7 million. This prompted the City to approve reduction of depreciation funding in addition to a one-time \$1 million transfer from the water depreciation fund to the water operating fund in FY 2012. In addition to these issues, the City would also like to develop a financial plan that incorporates the City's expansion of recycled water production at its sewer facility. The City currently has approximately 100 irrigation customers that the City intends to convert from potable water consumption to non-potable water consumption.

In 2011, the City engaged Raftelis Financial Consultants, Inc (RFC) to conduct a Recycled Water, Sewer and Water Rate Study (Study) to address these concerns and establish rates that are equitable and in compliance with Proposition 218.

The major objectives of the study include the following:

1. Develop financial plans for Water and Sewer Enterprise Funds to ensure financial sufficiency to successfully meet operation and maintenance (O&M) costs, to ensure sufficient depreciation funding for capital replacement and refurbishment (R&R) needs, and to improve the financial health of the enterprises;
2. Develop fair and equitable water and sewer rates; and
3. Review current rate structure for recycled water (RW) and model the impacts from recycled water system expansion.

This executive summary provides an overview of the study and includes findings and recommendations for recycled water, sewer and water rates.

1.2 Recycled Water System

The City currently owns and operates a Water Reclamation Plant (WRP) with a capacity of 2.2 million gallons per day (MGD). The City currently has plans to expand the plant's peak capacity to 5.0 MGD; the associated project is scheduled to be completed by the end of FY 2014.

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In order to adequately fund operating expenses, debt service payments and depreciation, and to ensure financial sufficiency for the RW system by FY 2017, RFC recommends the following revenue adjustments for the City's RW system (**Table 1-1**). Further details regarding the proposed financial plan can be seen in Section 3.

Table 1-1: Proposed RW Revenue Adjustments

| <u>Effective Date</u> | <u>Proposed RW Revenue Adjustments</u> |
|-----------------------|--|
| August 1, 2012 | 0 percent |
| August 1, 2013 | 0 percent |
| August 1, 2014 | 4 percent |
| August 1, 2015 | 4 percent |
| August 1, 2016 | 4 percent |

1.3 Sewer Fund

The City owns and maintains the public sanitary sewer system (which includes a collection system, lift station and water reclamation plant (WRP)), which it uses to serve the community. Regulations mandate secondary treatment for influent sewer flows before effluent clean water can be returned to the ocean. Currently, as an operating revenue source, secondary treated water (or effluent water) is sold to Program 465 – Water Reclamation of the Water Fund as raw water to be further treated to tertiary level and in turn to be used as recycled water. Based on the City staff's analysis, RW should only pay for costs associated with tertiary treatment, and should not pay Sewer Fund for acquiring the effluent water. To minimize impacts to the Sewer Fund, RFC recommends phasing out the cost associated with purchasing effluent water by FY 2014. Currently the cost is set at \$571 per AF in FY 2012; as a part of the phasing out process, RFC recommends that the cost is reduced to \$286 per AF in FY 2013 and reduced to no charge in FY 2014 and thereafter.

In FY 2012, the Sewer Fund operated at net operating loss of approximately \$740K. With the reduction of the effluent water sales to program 465 starting FY 2013, the sewer operating fund will have negative ending balances starting FY 2013. To reduce the financial burdens on the Sewer Fund, City staff recommends reducing depreciation contributions by \$500K in FY 2013 and FY 2014 (for a two-year period) and returning to full depreciation contributions in FY 2015.

To ensure that the Sewer Fund will be self-sufficient and able to fund operating expenses and build its operating fund balance to a sufficient level (set at 8 percent of the annual operating expense budget), RFC recommends the following revenue adjustments for sewer, shown in **Table 1-2**. Further details regarding the associated financial plan are described in Section 4.

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Table 1-2: Proposed Sewer Revenue Adjustments

| <u>Effective Date</u> | <u>Proposed Sewer Revenue Adjustments</u> |
|-----------------------|---|
| August 1, 2012 | 8 percent |
| August 1, 2013 | 8 percent |
| August 1, 2014 | 6 percent |
| August 1, 2015 | 4 percent |
| August 1, 2016 | 3 percent |

The proposed sewer rates corresponding to proposed revenue adjustments are shown in **Table 1-3**.

Table 1-3: Current and Proposed Sewer Rates

| <u>Effective Date</u> | <u>8/1/2011</u> | <u>8/1/2012</u> |
|--|-----------------|-----------------|
| <u>Sewer Rates</u> | <u>Current</u> | <u>Proposed</u> |
| Monthly Fixed Fees by meter size | | |
| 5/8 in. | \$20.80 | \$22.47 |
| 3/4 in. | \$20.80 | \$22.47 |
| 1 in. | \$20.80 | \$22.47 |
| 1½ in. | \$68.61 | \$74.10 |
| 2 in. | \$110.19 | \$119.01 |
| 2½ in. | \$228.71 | \$247.01 |
| 3 in. | \$228.71 | \$247.01 |
| 4 in. | \$353.45 | \$381.73 |
| 5 in. | \$522.90 | \$564.74 |
| 6 in. | \$692.34 | \$747.73 |
| Commodity Rates (\$ / ccf¹) | | |
| Single-family residential ² | \$1.27 | \$1.38 |
| Multi-family residential/ Mobile Home | \$1.27 | \$1.38 |
| Low strength commercial/ Schools/ Religious Institutions | \$1.73 | \$1.87 |
| Medium strength commercial | \$2.26 | \$2.45 |
| Commercial/ residential | \$2.29 | \$2.48 |
| Medium high strength commercial | \$4.00 | \$4.32 |
| High strength commercial | \$5.57 | \$6.02 |

¹ 1 ccf = 100 cubic feet = 748 gallons

² According to the City Ordinance, “the sewer commodity rate for single-family dwellings shall be annually calculated by multiplying the per unit rate times ninety (90) percent of Winter Month Average (WMA). For the purposes of this section, winter months shall be defined as January, February, March and April. The WMA shall be calculated using the total consumption for a service location during the prior fiscal year's winter months divided by the number of winter months in which there was water consumption.”

1.4 Water Fund

The Water Fund provides potable and non-potable water services to approximately 17,250 customers within City limits. The City supplies the current 8,600 AF potable demand through groundwater (around 620 AF) and water purchases from the Municipal Water District of Orange County (MWDOC), a member agency of Metropolitan Water District (MWD).

In FY 2012, the City approved a one-time transfer of \$1 million from water depreciation fund as well as a temporary \$500K reduction in depreciation and delayed full depreciation funding until FY 2015 to help maintain the operating fund. Despite the reduction to depreciation, the Water operating fund is still projected to have a negative ending balance at the end of FY 2012 of approximately negative \$293K. To ensure that the City will have adequate revenues to fund operating expenses and build operating fund balances to the target level of 8 percent (of the City's annual operating expense budget), RFC recommends the following potable water revenue adjustments (**Table 1-4**). Detailed discussion of the financial plan can be seen in Section 5.

Table 1-4: Proposed Potable Water Revenue Adjustments

| <u>Effective Date</u> | <u>Proposed Potable Water Revenue Adjustments</u> |
|-----------------------|---|
| August 1, 2012 | 7 percent |
| August 1, 2013 | 7 percent |
| August 1, 2014 | 6 percent |
| August 1, 2015 | 4.5 percent |
| August 1, 2016 | 4.5 percent |

RFC conducted a thorough analysis of the City's user consumption, tier definitions and season definitions. Within the scope of the Study, RFC also evaluated the feasibility of "traditional" water budget tiered rates (water budget rates) for indoor and outdoor uses based on the intrinsic characteristics for each single family residential customer. The analysis indicated that the water savings provided by water budget rates are not substantial enough to offset the increased costs associated with implementation and administration. To enhance rate equity and to better align with industry standards and the City's historical weather conditions, RFC recommends the following changes, as illustrated in **Table 1-5**, be made to the season and tier definitions for single family residential (SFR), SFR-LL (SFR for lot size larger than 7,000 sq ft) and irrigation (IRR) accounts. For SFR, Tier 1 represents the essential indoor water needs sufficient for a family of four. Indoor needs do not vary with season or lot size, thus a tier 1 definition of 9 ccf³ has been established for all seasons and lot sizes based on the recent California legislation Senate Bill (SB) x7-7. Tier 2 represents the efficient outdoor usage requirements, which varies with season and lot size.

³ Indoor use (9 ccf) estimated for a family of 4 people using 55 gallons of water per capita for 30 days

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Table 1-5: Current and Revised Season and Tier Definitions

| | | <u>Current</u> | | <u>Revised</u> | |
|---------------------------------|---------------|----------------|---------------|-----------------|-----------------|
| | | <u>Winter</u> | <u>Summer</u> | <u>Winter</u> | <u>Summer</u> |
| Season Definitions | | Jan – Apr | May – Dec | Oct – Mar | Apr – Sep |
| Tier Definitions | | | | | |
| SFR (ccf / month) | Tier 1 | 0 – 9 | 0 – 13 | 0 – 9 | 0 – 9 |
| | Tier 2 | 10 – 15 | 14 – 21 | 10 – 14 | 10 – 19 |
| SFR-LL (ccf / month) | Tier 1 | 0 – 11 | 0 – 17 | 0 – 9 | 0 – 9 |
| | Tier 2 | 12 – 17 | 18 – 31 | 10 – 19 | 10 – 28 |
| IRR (ccf / 100 sq ft) | Tier 1 | 0 – 0.0714 | 0 – 0.143 | 0 – 0.0463 | 0 – 0.0918 |
| | Tier 2 | 0.0715 – 0.143 | 0.144 – 0.357 | 0.0464 – 0.1853 | 0.0919 – 0.3673 |

To calculate fair and equitable rates so that users pay in proportion to the cost of providing service, RFC performed a cost allocation of the total revenue requirements, consistent with industry standards and in compliance with Proposition 218 requirements. **Table 1-6** shows the proposed water rates for FY 2013. Detailed cost of service analysis is discussed in Section 5 of the Report.

Table 1-6: Current and Proposed Water Rates

| <u>Effective Date</u> | <u>8/1/2011</u> | <u>8/1/2012</u> |
|--|-----------------|-----------------|
| <u>Water Rates</u> | <u>Current</u> | <u>Proposed</u> |
| Monthly Fixed Service Charges by Meter Size | | |
| 5/8 in. | \$12.30 | \$14.40 |
| 3/4 in. | \$12.30 | \$14.40 |
| 1 in. | \$12.30 | \$14.40 |
| 1½ in. | \$27.63 | \$32.36 |
| 2 in. | \$41.28 | \$48.34 |
| 3 in. | \$80.23 | \$93.95 |
| 4 in. | \$121.21 | \$141.92 |
| 6 in. | \$232.59 | \$272.32 |
| Commodity Rates (\$ / ccf) | | |
| Residential / Irrigation Potable | | |
| Tier I | \$2.40 | \$2.36 |
| Tier II | \$3.59 | \$3.86 |
| Tier III | \$8.35 | \$8.30 |
| Commercial Potable | | |
| Uniform | \$3.19 | \$3.31 |

RFC also developed a bill calculator for the single family residential customers to assess the impacts of the proposed changes on their monthly bills. The bill calculator RFC has developed is available on the City's website at <http://san-clemente.org/sc/News1.aspx?PageID=1>.

2 Introduction

2.1 About the Recycled Water, Sewer and Water Operations

The City of San Clemente (City) provides recycled water, sewer and water services to over 17,250 accounts within the City limits. The Water Enterprise Fund (Water Fund) supplies the current 8,600 AF potable demand through groundwater (around 620 AF) and water purchases from MWDOC, a member agency of MWD. The Sewer Enterprise Fund (Sewer Fund) owns and maintains its public sanitary sewer system, including collection system, lift station, water reclamation plant (WRP), with which it serves the community. Regulations mandate secondary treatment for influent sewer flows before effluent clean water can be returned to the ocean.

Currently, the recycled water system is managed as program 465 – Water Reclamation under the Water Fund. The City plans to expand its WRP from current capacity of 2.2 MGD to 5.0 MGD peak capacity. In addition to increased operating costs and depreciation, the expansion project will cost approximately \$24.4 million, which will be financed by a State Revolving Fund (SRF) loan, grants and from the City's depreciation reserves. The upgraded WRP will be operational by the beginning of FY 2015. The City currently has 113 irrigation customers that have been identified to convert from potable to non-potable water consumption between FY 2015 and FY 2018.

2.2 Current Issues and Challenges

For the past few years, the City has experienced a steady decline in water demand, from roughly 10,000 acre-feet (AF) four years ago to a current total water usage of approximately 8,600 AF. As a result of this decreased demand, the revenues generated from water sales (along with several other forms of miscellaneous revenue) have been unable to fully fund the City's expenditures, and as a result the City has been operating at a deficit. The approved fiscal year (FY) 2012 budget projected the City's Water and Sewer Enterprises to operate at a combined deficit of approximately \$1.7 million. This prompted the City to approve a reduction on depreciation funding, in addition to a one-time \$1 million transfer from water depreciation fund to water operating fund in FY 2012. In addition to the issues and challenges that the City would like to address, the City would also like to develop a financial plan that incorporates the expansion of recycled water production at the WRP.

2.3 Objectives of the Study

In 2011, the City engaged RFC to conduct a Recycled Water, Sewer and Water Rate Study to address the current issues, and establish rates that are equitable and in compliance with Proposition 218.

The major objectives of the study include the following:

1. Develop financial plans for Water and Sewer Enterprise Funds to ensure financial sufficiency, in order to meet operation and maintenance (O&M) costs, to ensure sufficient

- depreciation funding for capital replacement and refurbishment (R&R) needs, and to improve the financial health of the enterprises;
- 2. Develop fair and equitable water and sewer rates; and
- 3. Review current rate structure for recycled water (RW) and model the impacts from recycled water system expansion.

3 Recycled Water System

3.1 Recycled Water System Review

In FY 2011, the City signed an agreement with two golf courses to provide RW services under discounted declining 3-tier rates (**Table 3-1**) in exchange for a minimum annual purchase commitment. The contract will expire at the end of FY 2013 and will be open for renegotiation in FY 2014. RW sales are budgeted at 800 AF for FY 2012, of which 300 AF are sold to the Sewer Fund for the WRP at non-contractual rates, and the other 500 AF are sold to two contract golf courses at Tier 1 and Tier 2 contractual rates. Should the golf courses’ consumption exceed their Tier 2 allocation, these customers will pay the Tier 3 rate at \$800 per AF (or \$1.492 per ccf⁴). Current RW rates are shown in **Table 3-1**. It is assumed that the converted irrigation accounts will be classified as non-contractual RW customers.

Table 3-1: Current Recycled Water Rates

| <u>RW (Non-Potable Water) Rates</u> | <u>FY 2012</u> |
|-------------------------------------|-----------------|
| <u>Effective Date</u> | <u>9/1/2010</u> |
| Contractual RW | |
| Tier I | \$2.066 |
| Tier II | \$1.837 |
| Tier III | \$1.492 |
| Non-Contractual RW | |
| Uniform | \$2.550 |

3.2 Findings & Recommendations

Currently, program 465 – Water Reclamation of the Water Fund pays the Sewer Fund for effluent water treated to secondary levels at the cost for raw water (\$571 / AF). City staff’s analysis concludes that impacts of recycled water production on secondary and primary treatment are negligible. To be more consistent with industry standards, it is recommended that the RW (program 465) system only pays for costs associated with tertiary treatment, and that the Sewer Fund should be fully responsible for

⁴ 1 ccf = 100 cubic feet = 748 gallons

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primary and secondary treatment costs. The reduction in effluent purchased cost will be phased-out in FY 2013 at \$286 / AF and in FY 2014 and thereafter at \$0 /AF, to reduce the financial impacts on Sewer Fund revenues.

The City plans to increase its WRP peak capacity to 5.0 MGD by the beginning of FY 2015. The plant upgrade will incur the following costs for the City's program 465.

1. Capital Expenditures (**Figure 3-1**): \$24.4 million financed by:
 - a. \$14.6 million from SRF loans;
 - b. \$6.1 million from grants; and
 - c. \$3.7 million from the City's depreciation reserves.
2. Operating expenses:
 - a. Depreciation: add approximately \$330K in annual depreciation funding
 - b. Labor: add 1.5 Full-Time Employees (FTE)
 - c. Debt Service: add \$919K per year for the repayment of the \$14.6 million SRF loan

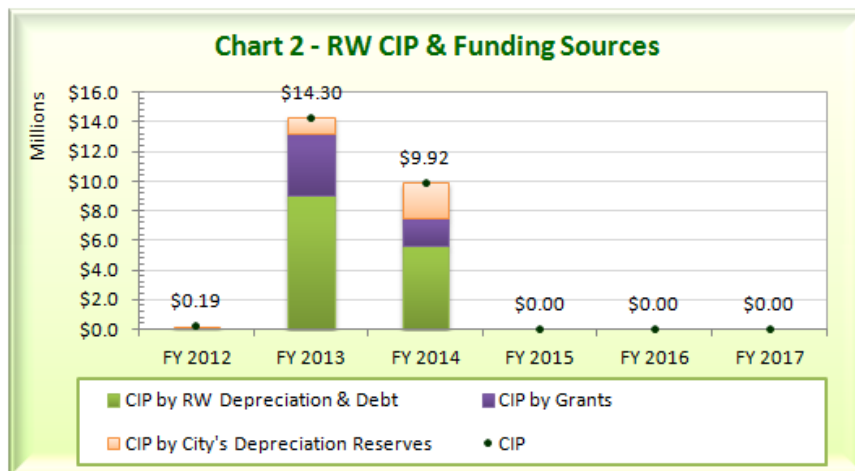


Figure 3-1: RW Expansion Capital Costs and Funding Sources

To evaluate the financial health of the RW system, RFC developed the financial plan for program 465 as if it were an independent and self-sufficient enterprise fund. In addition to the assumed escalators for the operating costs, the RW system will continue to receive annual funding of \$188K from Water Fund, and interfund loans from the City's depreciation reserves on an as-needed basis. **Table 3-2** shows the pro-forma for RW assuming no revenue adjustments (Status Quo) in FY 2013 to FY 2017. RW system will receive \$250 per expanded AF of RW from MWD starting FY 2015 in the form of rebates, which is reflected in "Other RW Operating Revenues". The O&M expenses are decreased from \$924K in FY 2012 to \$561K in FY 2014 due to the elimination of effluent water costs. Once the expanded WRP goes online in FY 2015, depreciation will increase from \$40K in FY 2014 to \$372K in FY 2015. The Status Quo pro-forma projects that RW system will have a negative net income of approximately \$200K in FY 2017.

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Table 3-2: Status Quo RW Pro-forma

| | FY 2012 <i>Budgeted</i> | FY 2013 <i>Projected</i> | FY 2014 <i>Projected</i> | FY 2015 <i>Projected</i> | FY 2016 <i>Projected</i> | FY 2017 <i>Projected</i> |
|--|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| REVENUES | | | | | | |
| RW Revenues from Current Rates - Existing | \$775,573 | \$775,573 | \$775,573 | \$775,573 | \$775,573 | \$775,573 |
| RW Revenues from Current Rates - Expanded | \$0 | \$0 | \$0 | \$261,033 | \$542,061 | \$889,735 |
| RW Revenue Adjustments | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Other RW Operating Revenues | \$55,515 | \$46,392 | \$56,563 | \$129,178 | \$173,344 | \$277,461 |
| TOTAL REVENUES | \$831,088 | \$821,966 | \$832,136 | \$1,165,785 | \$1,490,978 | \$1,942,769 |
| OPERATING EXPENSES | | | | | | |
| <i>SUBTOTAL O&M EXPENSES</i> | <i>\$924,480</i> | <i>\$710,614</i> | <i>\$561,467</i> | <i>\$673,454</i> | <i>\$754,324</i> | <i>\$850,451</i> |
| <i>SUBTOTAL DEPRECIATION FUNDING</i> | <i>\$38,250</i> | <i>\$39,398</i> | <i>\$40,579</i> | <i>\$372,197</i> | <i>\$373,701</i> | <i>\$375,248</i> |
| RW DEBT SERVICE | | | | | | |
| Existing Debt Service | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| New Debt Service | \$0 | \$0 | \$0 | \$919,000 | \$919,000 | \$919,000 |
| <i>SUBTOTAL RW DEBT SERVICE</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$919,000</i> | <i>\$919,000</i> | <i>\$919,000</i> |
| TOTAL OPERATING EXPENSES | \$962,730 | \$750,012 | \$602,046 | \$1,964,651 | \$2,047,025 | \$2,144,699 |
| NET INCOME | -\$131,642 | \$71,954 | \$230,090 | -\$798,866 | -\$556,047 | -\$201,930 |
| Net Transfers from / (to) Other Funds | | | | | | |
| Subsidy from Water Fund | \$188,000 | \$188,000 | \$188,000 | \$188,000 | \$188,000 | \$188,000 |
| Loans from City's Depreciation Reserves | \$0 | \$0 | \$0 | \$610,866 | \$368,047 | \$13,930 |
| NET CASH BALANCES | \$56,358 | \$259,954 | \$418,090 | \$0 | \$0 | \$0 |
| Beginning Operating Fund Balances | \$0 | \$56,358 | \$316,312 | \$734,402 | \$734,402 | \$734,402 |
| Ending Operating Fund Balances | \$56,358 | \$316,312 | \$734,402 | \$734,402 | \$734,402 | \$734,402 |
| Target Operating Fund Balances | \$73,958 | \$56,849 | \$44,917 | \$53,876 | \$60,346 | \$68,036 |

In order to adequately fund operating expenses, debt service payments and depreciation and ensure financial sufficiency, RFC recommends the following revenue adjustments for RW in **Table 3-3**. **Table 3-4** shows the pro-forma for RW under proposed revenue adjustments. By FY 2017, the RW system will start to have positive net income without taking into account any subsidies from Water Fund or City's depreciation reserves. Given the projected healthy reserves in FY 2017 and the positive net income, the RW system will be able to repay its interfund loans.

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Table 3-3: Proposed RW Revenue Adjustments

| <u>Effective Date</u> | <u>Proposed RW Revenue Adjustments</u> |
|-----------------------|--|
| August 1, 2012 | 0 percent |
| August 1, 2013 | 0 percent |
| August 1, 2014 | 4 percent |
| August 1, 2015 | 4 percent |
| August 1, 2016 | 4 percent |

Table 3-4: Proposed RW Pro-forma

| | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 |
|--|-------------------|------------------|------------------|--------------------|--------------------|--------------------|
| | <i>Budgeted</i> | <i>Projected</i> | <i>Projected</i> | <i>Projected</i> | <i>Projected</i> | <i>Projected</i> |
| REVENUES | | | | | | |
| RW Revenues from Current Rates - Existing | \$775,573 | \$775,573 | \$775,573 | \$775,573 | \$775,573 | \$775,573 |
| RW Revenues from Current Rates - Expanded | \$0 | \$0 | \$0 | \$261,033 | \$542,061 | \$889,735 |
| RW Revenue Adjustments | \$0 | \$0 | \$0 | \$38,009 | \$102,951 | \$201,933 |
| Other RW Operating Revenues | \$55,515 | \$46,392 | \$56,563 | \$129,757 | \$174,911 | \$280,536 |
| TOTAL REVENUES | \$831,088 | \$821,966 | \$832,136 | \$1,204,372 | \$1,595,496 | \$2,147,777 |
| OPERATING EXPENSES | | | | | | |
| <i>SUBTOTAL O&M EXPENSES</i> | <i>\$924,480</i> | <i>\$710,614</i> | <i>\$561,467</i> | <i>\$673,454</i> | <i>\$754,324</i> | <i>\$850,451</i> |
| <i>SUBTOTAL DEPRECIATION FUNDING</i> | <i>\$38,250</i> | <i>\$39,398</i> | <i>\$40,579</i> | <i>\$372,197</i> | <i>\$373,701</i> | <i>\$375,248</i> |
| RW DEBT SERVICE | | | | | | |
| Existing Debt Service | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| New Debt Service | \$0 | \$0 | \$0 | \$919,000 | \$919,000 | \$919,000 |
| <i>SUBTOTAL RW DEBT SERVICE</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$919,000</i> | <i>\$919,000</i> | <i>\$919,000</i> |
| TOTAL OPERATING EXPENSES | \$962,730 | \$750,012 | \$602,046 | \$1,964,651 | \$2,047,025 | \$2,144,699 |
| NET INCOME | -\$131,642 | \$71,954 | \$230,090 | -\$760,278 | -\$451,528 | \$3,078 |
| Net Transfers from / (to) Other Funds | | | | | | |
| Subsidy from Water Fund | \$188,000 | \$188,000 | \$188,000 | \$188,000 | \$188,000 | \$188,000 |
| Loans from City's Depreciation Reserves | \$0 | \$0 | \$0 | \$572,278 | \$263,528 | \$0 |
| NET CASH BALANCES | \$56,358 | \$259,954 | \$418,090 | \$0 | \$0 | \$191,078 |
| Beginning Operating Fund Balances | \$0 | \$56,358 | \$316,312 | \$734,402 | \$734,402 | \$734,402 |
| Ending Operating Fund Balances | \$56,358 | \$316,312 | \$734,402 | \$734,402 | \$734,402 | \$925,480 |
| Target Operating Fund Balances | \$73,958 | \$56,849 | \$44,917 | \$53,876 | \$60,346 | \$68,036 |

4 Sewer Fund

4.1 Financial Plan

4.1.1 O&M Expenses & Depreciation Funding

To develop the 5-year financial plan for the Sewer Fund, RFC projected the revenue requirements, including: operations and maintenance (O&M), depreciation funding, debt service costs, operating reserve requirements, etc., for the study period from FY 2012 to 2017. O&M projections are based on the City's FY 2012 budget, using inflation factors of 3 percent each year for all O&M expenditures, except salary, benefits and utilities, which are projected to increase at 2 percent, 5 percent and 5 percent per year, respectively. The City also decided to temporarily reduce \$500K in depreciation in FY 2013 and FY 2014 and return to full depreciation in FY 2015 to ease the rate impacts on Sewer Fund from the lost revenues for effluent water sales. **Table 4-1** summarizes the O&M expenses by program, and depreciation funding for Sewer Fund over the study period.

Table 4-1: Budgeted and Projected O&M and Depreciation Expenses for Sewer Fund

| | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> |
|-------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| O&M Expenses | | | | | | |
| 471 Sewer Admin | \$1,270,690 | \$1,309,058 | \$1,348,663 | \$1,389,546 | \$1,431,753 | \$1,475,329 |
| 472 Treatment | \$3,162,660 | \$3,271,575 | \$3,384,670 | \$3,502,121 | \$3,624,111 | \$3,750,832 |
| 473 Collection | \$1,503,130 | \$1,549,815 | \$1,598,123 | \$1,648,118 | \$1,699,866 | \$1,753,434 |
| Depreciation | \$2,736,000 | \$2,318,080 | \$2,387,622 | \$2,959,251 | \$3,048,029 | \$3,139,469 |
| Total | \$8,672,480 | \$8,448,527 | \$8,719,078 | \$9,499,037 | \$9,803,759 | \$10,119,064 |
| % Increase | | -3% | 3% | 9% | 3% | 3% |

4.1.2 Current Financial Policies

Currently, the Sewer Fund does not have any outstanding debt, thus there are no official debt coverage requirements that the enterprise is responsible for maintaining. However, the current financial policy specifies an operating reserve fund target level of 8 percent of annual operating expenses (excluding depreciation). In FY 2012, the sewer operating fund balance is far from meeting the target level.

4.1.3 Status Quo Pro-forma

The current sewer rates are shown in **Table 4-2**. Sewer rates consist of a monthly fixed fees varied with meter sizes and a uniform commodity rates by customer classes on the generated sewer flows estimated using a 90 percent wastewater return factor on water usage.

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Table 4-2: Current Sewer Rates

| <u>Sewer Rates</u> | <u>FY 2012</u> |
|---|-----------------|
| <u>Effective Date</u> | <u>8/1/2011</u> |
| Monthly Fixed Fees by meter size | |
| 5/8 in. | \$20.80 |
| 3/4 in. | \$20.80 |
| 1 in. | \$20.80 |
| 1½ in. | \$68.61 |
| 2 in. | \$110.19 |
| 2½ in. | \$228.71 |
| 3 in. | \$228.71 |
| 4 in. | \$353.45 |
| 5 in. | \$522.90 |
| 6 in. | \$692.34 |
| Sewer Commodity Rates (\$ / ccf) | |
| Single-family residential ⁵ | \$1.27 |
| Multi-family residential/ Mobile Home | \$1.27 |
| Low strength commercial/ Schools/ Religious Institutions ⁶ | \$1.73 |
| Medium strength commercial ⁷ | \$2.26 |
| Commercial/ residential ⁸ | \$2.29 |
| Medium high strength commercial ⁹ | \$4.00 |
| High strength commercial ¹⁰ | \$5.57 |

The following assumptions are used for status quo pro-forma:

1. Effluent water sales paid by RW system will be eliminated by FY 2014 (currently at \$571 per AF in FY 2012 and reduced to \$286 per AF in FY 2013, no charge thereafter);
2. In FY 2013, depreciation will be reduced by \$500K; the Sewer Fund will return to full depreciation funding in FY 2015;
3. The City is essentially built out, thus no growth will be observed; and

⁵ According to the City Ordinance, “the sewer commodity rate for single-family dwellings shall be annually calculated by multiplying the per unit rate times ninety (90) percent of Winter Month Average (WMA). For the purposes of this section, winter months shall be defined as January, February, March and April. The WMA shall be calculated using the total consumption for a service location during the prior fiscal year’s winter months divided by the number of winter months in which there was water consumption.”

⁶ Assumed strength = 130 – 149 mg/L

⁷ Assumed strength = 150 – 282 mg/L

⁸ Assumed strength = 283 – 290 mg/L

⁹ Assumed strength = 291 – 500 mg/L

¹⁰ Assumed strength > 500 mg/L

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4. Sewer flows¹¹ are expected to increase by 3 percent from FY 2011 to FY 2012 due to increased usage associated with indoor water use¹².

Table 4-3 shows the status quo pro-forma for the sewer operating fund. The Sewer Fund currently operates under a deficit and the proposed effluent water revenue loss further increases that deficit. Without any revenue adjustment, the Sewer Fund will have negative operating balances in FY 2013.

Table 4-3: Status Quo Sewer Operating Pro-forma

| | FY 2012 <i>Budgeted</i> | FY 2013 <i>Projected</i> | FY 2014 <i>Projected</i> | FY 2015 <i>Projected</i> | FY 2016 <i>Projected</i> | FY 2017 <i>Projected</i> |
|--|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| REVENUES | | | | | | |
| Revenues from Current Rates | \$7,473,140 | \$7,725,087 | \$7,725,087 | \$7,725,087 | \$7,725,087 | \$7,725,087 |
| Revenue Adjustments | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Other Operating Revenues | \$459,510 | \$231,030 | \$2,550 | \$2,576 | \$2,602 | \$2,628 |
| Non-Operating Revenues | \$3,460 | \$1,515 | \$1,530 | \$1,545 | \$1,561 | \$1,577 |
| TOTAL REVENUES | \$7,936,110 | \$7,957,632 | \$7,729,167 | \$7,729,208 | \$7,729,249 | \$7,729,291 |
| OPERATING EXPENSES | | | | | | |
| <i>SUBTOTAL O&M EXPENSES</i> | <i>\$5,936,480</i> | <i>\$6,130,447</i> | <i>\$6,331,456</i> | <i>\$6,539,785</i> | <i>\$6,755,730</i> | <i>\$6,979,595</i> |
| <i>SUBTOTAL DEPRECIATION FUNDING</i> | <i>\$2,736,000</i> | <i>\$2,318,080</i> | <i>\$2,387,622</i> | <i>\$2,959,251</i> | <i>\$3,048,029</i> | <i>\$3,139,469</i> |
| <i>SUBTOTAL SEWER DEBT SERVICE</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> |
| TOTAL OPERATING EXPENSES | \$8,672,480 | \$8,448,527 | \$8,719,078 | \$9,499,037 | \$9,803,759 | \$10,119,064 |
| NET INCOME | -\$736,370 | -\$490,896 | -\$989,911 | -\$1,769,829 | -\$2,074,510 | -\$2,389,773 |
| Net Transfers from / (to) Other Funds | \$781,410 | \$35,510 | \$35,510 | \$35,510 | \$35,510 | \$35,510 |
| GENERAL FUND | \$35,510 | \$35,510 | \$35,510 | \$35,510 | \$35,510 | \$35,510 |
| WATER FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| CLEAN OCEAN FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| OTHER FUNDS | \$45,900 | \$0 | \$0 | \$0 | \$0 | \$0 |
| SEWER DEPRECIATION FUND | \$700,000 | \$0 | \$0 | \$0 | \$0 | \$0 |
| SEWER DEPRECIATION OTHER AGENCY FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| NET CASH BALANCES | \$45,040 | -\$455,386 | -\$954,401 | -\$1,734,319 | -\$2,039,000 | -\$2,354,263 |
| Beginning Operating Fund Balances | \$42,822 | \$87,862 | -\$367,523 | -\$1,321,924 | -\$3,056,243 | -\$5,095,243 |
| Ending Operating Fund Balances | \$87,862 | -\$367,523 | -\$1,321,924 | -\$3,056,243 | -\$5,095,243 | -\$7,449,506 |
| Target Fund Balances | \$474,918 | \$490,436 | \$506,516 | \$523,183 | \$540,458 | \$558,368 |

4.2 Proposed Operating Financial Plan

To ensure that the Sewer Fund will be self-sufficient and be able to fund operating expenses and build operating fund to meet target levels in FY 2015, RFC recommends the sewer revenue adjustments in **Table 4-4**. The resulting pro-forma is shown in **Table 4-5**.

¹¹ Sewer flows are estimated using 90 percent return factors on billed usage (or WMA for single family residential). The billed usage in FY 2012 is 2.34 million ccf, 3 percent increased from 2.28 million ccf in FY 2011.

¹² Water sales in FY 2012 are projected to increase 13 percent from FY 2011 actual sales

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Table 4-4: Proposed Sewer Revenue Adjustments

| <u>Effective Date</u> | <u>Proposed Sewer Revenue Adjustments</u> |
|-----------------------|---|
| August 1, 2012 | 8 percent |
| August 1, 2013 | 8 percent |
| August 1, 2014 | 6 percent |
| August 1, 2015 | 4 percent |
| August 1, 2016 | 3 percent |

Table 4-5: Proposed Sewer Operating Pro-forma

| | <i>FY 2012 Budgeted</i> | <i>FY 2013 Projected</i> | <i>FY 2014 Projected</i> | <i>FY 2015 Projected</i> | <i>FY 2016 Projected</i> | <i>FY 2017 Projected</i> |
|--|-----------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| REVENUES | | | | | | |
| Revenues from Current Rates | \$7,473,140 | \$7,725,087 | \$7,725,087 | \$7,725,087 | \$7,725,087 | \$7,725,087 |
| Revenue Adjustments | \$0 | \$566,506 | \$1,229,834 | \$1,781,034 | \$2,176,297 | \$2,481,297 |
| Other Operating Revenues | \$459,510 | \$231,030 | \$2,550 | \$2,576 | \$2,602 | \$2,628 |
| Non-Operating Revenues | \$3,460 | \$5,883 | \$11,918 | \$17,155 | \$20,449 | \$25,065 |
| TOTAL REVENUES | \$7,936,110 | \$8,528,506 | \$8,969,389 | \$9,525,852 | \$9,924,433 | \$10,234,076 |
| OPERATING EXPENSES | | | | | | |
| <i>SUBTOTAL O&M EXPENSES</i> | <i>\$5,936,480</i> | <i>\$6,130,447</i> | <i>\$6,331,456</i> | <i>\$6,539,785</i> | <i>\$6,755,730</i> | <i>\$6,979,595</i> |
| <i>SUBTOTAL DEPRECIATION FUNDING</i> | <i>\$2,736,000</i> | <i>\$2,318,080</i> | <i>\$2,387,622</i> | <i>\$2,959,251</i> | <i>\$3,048,029</i> | <i>\$3,139,469</i> |
| <i>SUBTOTAL SEWER DEBT SERVICE</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> |
| TOTAL OPERATING EXPENSES | \$8,672,480 | \$8,448,527 | \$8,719,078 | \$9,499,037 | \$9,803,759 | \$10,119,064 |
| NET INCOME | -\$736,370 | \$79,979 | \$250,311 | \$26,816 | \$120,675 | \$115,012 |
| Net Transfers from / (to) Other Funds | \$781,410 | \$35,510 | \$35,510 | \$35,510 | \$35,510 | \$35,510 |
| GENERAL FUND | \$35,510 | \$35,510 | \$35,510 | \$35,510 | \$35,510 | \$35,510 |
| WATER FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| CLEAN OCEAN FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| OTHER FUNDS | \$45,900 | \$0 | \$0 | \$0 | \$0 | \$0 |
| SEWER DEPRECIATION FUND | \$700,000 | \$0 | \$0 | \$0 | \$0 | \$0 |
| SEWER DEPRECIATION OTHER AGENCY FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| NET CASH BALANCES | \$45,040 | \$115,489 | \$285,821 | \$62,326 | \$156,185 | \$150,522 |
| Beginning Operating Fund Balances | \$42,822 | \$87,862 | \$203,351 | \$489,172 | \$551,497 | \$707,682 |
| Ending Operating Fund Balances | \$87,862 | \$203,351 | \$489,172 | \$551,497 | \$707,682 | \$858,204 |
| Target Fund Balances | \$474,918 | \$490,436 | \$506,516 | \$523,183 | \$540,458 | \$558,368 |

4.3 Proposed Sewer Rates

Government Code Section 54999 mandates that a cost of service analysis be done every 10 years to ensure that rates are equitable and fair to customers. The City completed the cost of service for Sewer rates in 2008. Historically, the City has applied uniform rate increases on the sewer rates; RFC

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recommends the City to continue that practice, and to conduct a mass balance and full cost of service analyses for its sewer rates before FY 2018. The proposed sewer rates are shown in **Table 4-6**.

Table 4-6: Current and Proposed Sewer Rates

| <u>Effective Date</u> | <u>8/1/2011</u> | <u>8/1/2012</u> |
|--|-----------------|-----------------|
| <u>Sewer Rates</u> | <u>Current</u> | <u>Proposed</u> |
| Monthly Fixed Fees by meter size | | |
| 5/8 in. | \$20.80 | \$22.47 |
| 3/4 in. | \$20.80 | \$22.47 |
| 1 in. | \$20.80 | \$22.47 |
| 1½ in. | \$68.61 | \$74.10 |
| 2 in. | \$110.19 | \$119.01 |
| 2½ in. | \$228.71 | \$247.01 |
| 3 in. | \$228.71 | \$247.01 |
| 4 in. | \$353.45 | \$381.73 |
| 5 in. | \$522.90 | \$564.74 |
| 6 in. | \$692.34 | \$747.73 |
| Commodity Rates (\$ / ccf) | | |
| Single-family residential ¹³ | \$1.27 | \$1.38 |
| Multi-family residential/ Mobile Home | \$1.27 | \$1.38 |
| Low strength commercial/ Schools/ Religious Institutions | \$1.73 | \$1.87 |
| Medium strength commercial | \$2.26 | \$2.45 |
| Commercial/ residential | \$2.29 | \$2.48 |
| Medium high strength commercial | \$4.00 | \$4.32 |
| High strength commercial | \$5.57 | \$6.02 |

¹³ According to the City Ordinance, “the sewer commodity rate for single-family dwellings shall be annually calculated by multiplying the per unit rate times ninety (90) percent of Winter Month Average (WMA). For the purposes of this section, winter months shall be defined as January, February, March and April. The WMA shall be calculated using the total consumption for a service location during the prior fiscal year’s winter months divided by the number of winter months in which there was water consumption.”

5 Water Fund

5.1 Financial Plan

5.1.1 Growth and Projected Water Sales

The City is essentially built-out, thus no account growth is assumed in the study period. 113 irrigation accounts have been identified to be converted to non-potable water consumption upon the completion of the expansion WRP project; as a result, total potable demand will be reduced. No further reduction in demand from the estimated 8,673 AF in FY 2012 due to conservation or weather factors is assumed. Estimated potable water sales are shown in **Table 5-1**.

Table 5-1: Estimated Potable Water Sales from FY 2012 to FY 2017

| Water Sales (in AF) | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 |
|--------------------------------|---------|---------|---------|---------|---------|---------|
| Estimated Potable Sales | 8,673 | 8,673 | 8,673 | 8,673 | 8,673 | 8,673 |
| Total Converted AF | | | | -235 | -488 | -801 |
| Net Potable Water Sales | 8,673 | 8,673 | 8,673 | 8,438 | 8,185 | 7,872 |

The current potable water rate structure consists of monthly fixed fees that vary by meter size, tiered commodity rates for residential and irrigation customers, and a uniform rate for commercial for water usage within the billing period, as shown in **Table 5-2**.

Table 5-2: Current Potable Water Rates effective August 1, 2011

| <u>Monthly Fixed Service Charges by Meter Size</u> | <u>FY 2012</u> |
|--|----------------|
| 5/8 in. | \$12.30 |
| 3/4 in. | \$12.30 |
| 1 in. | \$12.30 |
| 1½ in. | \$27.63 |
| 2 in. | \$41.28 |
| 3 in. | \$80.23 |
| 4 in. | \$121.21 |
| 6 in. | \$232.59 |
| <u>Commodity Rates by Customer Classes</u> | <u>FY 2012</u> |
| Residential / Irrigation Potable | |
| Tier I | \$2.40 |
| Tier II | \$3.59 |
| Tier III | \$8.35 |
| Commercial Potable | |
| Uniform | \$3.19 |

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5.1.2 O&M Expenses & Depreciation Funding

O&M expenses are projected based on the City's FY 2012 budget using inflationary factors of 3 percent per year for all O&M expenditures except salary, benefits and utilities, which are projected to increase at 2 percent, 5 percent and 5 percent per year, respectively. Water supply costs are escalated based on the projected water supply costs imposed by MWDOC and the assumed water demand.

The City decided to temporarily reduce depreciation funding for Water Fund until FY 2015 in order to help restore the City's water operating fund without the implementation of significant rate increases in FY 2013 and FY 2014. City staff indicated that this temporary reduction to depreciation contributions would not impact the ability of the Water Fund to maintain the City's water system infrastructure. O&M and depreciation expenses are summarized in **Table 5-3**.

Table 5-3: Water O&M and Depreciation Expenses from FY 2012 to FY 2017

| <u>Water Operating Expenses</u> | <u>FY 2012 Budgeted</u> | <u>FY 2013 Projected</u> | <u>FY 2014 Projected</u> | <u>FY 2015 Projected</u> | <u>FY 2016 Projected</u> | <u>FY 2017 Projected</u> |
|-------------------------------------|-------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 461 Water Admin | \$1,185,490 | \$1,220,822 | \$1,257,256 | \$1,294,830 | \$1,333,579 | \$1,373,543 |
| 462 Production | \$2,057,100 | \$2,118,777 | \$2,182,446 | \$2,248,178 | \$2,316,044 | \$2,386,119 |
| Water Cost | \$7,292,830 | \$7,445,642 | \$7,799,492 | \$7,983,636 | \$8,087,964 | \$8,181,114 |
| 463 T&D | \$2,461,730 | \$2,543,492 | \$2,628,362 | \$2,716,472 | \$2,807,959 | \$2,902,965 |
| 464 Conservation | \$227,300 | \$234,455 | \$241,868 | \$249,551 | \$257,515 | \$265,770 |
| RW Funding | \$188,000 | \$188,000 | \$188,000 | \$188,000 | \$188,000 | \$188,000 |
| Depreciation | \$2,590,000 | \$2,646,700 | \$2,705,101 | \$3,595,654 | \$3,672,862 | \$3,752,384 |
| Debt Service | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Total O&M Expenses | \$15,964,200 | \$16,358,490 | \$16,961,947 | \$17,904,124 | \$18,290,220 | \$18,674,648 |
| <i>Total O&M w/o Water Cost</i> | <i>\$8,671,370</i> | <i>\$8,912,848</i> | <i>\$9,162,455</i> | <i>\$9,920,488</i> | <i>\$10,202,257</i> | <i>\$10,493,534</i> |
| % Change, excl water costs | | 3% | 3% | 8% | 3% | 3% |

5.1.3 Current Financial Policies

Currently, the Water Fund does not have any outstanding debt, thus there are no official debt coverage requirements that the City is responsible for maintaining. However, the SRF loan issued to fund RW expansion project is pledged against the Water Fund and requires a minimum debt coverage ratio¹⁴ of 120 percent. In addition, the current financial policy specifies a target operating fund level be set at 8

¹⁴ Debt coverage = Net Annual Revenues / Total Annual Debt Service

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percent of its annual operating expenses (excluding depreciation). The projected water operating fund ending balance in FY 2012 is in the red and thus it the City is far from meeting the target level.

5.1.4 Status Quo Pro-forma

Table 5-4 shows the status quo pro-forma for the water operating fund. Water revenues for FY 2012 are based on the FY 2012 approved operating budget; water revenues for FY 2013 to FY 2017 are calculated based on the projected potable demand resulting from non-potable conversion of the irrigation accounts beginning in FY 2015 (shown in **Table 5-1**), projected number of accounts and the current effective rates. The budget only assumed a 3 percent increase in water sales as compared to FY 2011 sales; however, most recent estimates indicate that FY 2012 water sales are up 13 percent from actual FY 2011 sales. Therefore, there is a difference of 10 percent between the budgeted increase in sales for FY 2012 as compared to the actual increase in sales for FY 2012 from FY 2011.

Under the status quo financial plan scenario, the total revenues generated through water rates and other miscellaneous sources are inadequate to fund operations and as a result the water operating fund balances dip further into the red (\$12 million deficit in FY 2017).

Table 5-4: Status Quo Water Operating Pro-forma

| | FY 2012 <i>Budgeted</i> | FY 2013 <i>Projected</i> | FY 2014 <i>Projected</i> | FY 2015 <i>Projected</i> | FY 2016 <i>Projected</i> | FY 2017 <i>Projected</i> |
|--|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| REVENUES | | | | | | |
| Water Revenues from Current Rates | \$13,399,700 | \$14,492,377 | \$14,492,377 | \$14,162,140 | \$13,806,573 | \$13,368,488 |
| Water Revenue Adjustments | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Other Water Operating Revenues | \$520,200 | \$525,402 | \$530,656 | \$535,963 | \$541,322 | \$546,735 |
| Water Non-Operating Revenues | \$657,500 | \$664,075 | \$670,716 | \$677,423 | \$684,197 | \$691,039 |
| TOTAL REVENUES | \$14,577,400 | \$15,681,854 | \$15,693,749 | \$15,375,525 | \$15,032,092 | \$14,606,263 |
| OPERATING EXPENSES | | | | | | |
| <i>SUBTOTAL O&M EXPENSES</i> | <i>\$13,412,450</i> | <i>\$13,751,188</i> | <i>\$14,297,425</i> | <i>\$14,680,667</i> | <i>\$14,991,060</i> | <i>\$15,297,512</i> |
| <i>SUBTOTAL DEPRECIATION FUNDING</i> | <i>\$2,551,750</i> | <i>\$2,607,303</i> | <i>\$2,664,522</i> | <i>\$3,223,457</i> | <i>\$3,299,161</i> | <i>\$3,377,136</i> |
| <i>SUBTOTAL WATER DEBT SERVICE</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> |
| TOTAL OPERATING EXPENSES | \$15,964,200 | \$16,358,490 | \$16,961,947 | \$17,904,124 | \$18,290,220 | \$18,674,648 |
| NET INCOME | -\$1,386,800 | -\$676,637 | -\$1,268,198 | -\$2,528,599 | -\$3,258,128 | -\$4,068,385 |
| Net Transfers from / (to) Other Funds | \$1,070,210 | \$0 | \$0 | \$0 | \$0 | \$0 |
| GENERAL FUND | \$16,710 | \$0 | \$0 | \$0 | \$0 | \$0 |
| SEWER FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| CLEAN OCEAN FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| OTHER FUNDS | \$53,500 | \$0 | \$0 | \$0 | \$0 | \$0 |
| WATER ACREAGE FEES FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| WATER DEPRECIATION FUND | \$1,000,000 | \$0 | \$0 | \$0 | \$0 | \$0 |
| WATER DEPRECIATION OTHER AGENCY FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| NET CASH BALANCES | -\$316,590 | -\$676,637 | -\$1,268,198 | -\$2,528,599 | -\$3,258,128 | -\$4,068,385 |
| Beginning Operating Fund Balances | \$23,935 | -\$292,655 | -\$969,292 | -\$2,237,490 | -\$4,766,089 | -\$8,024,217 |
| Ending Operating Fund Balances | -\$292,655 | -\$969,292 | -\$2,237,490 | -\$4,766,089 | -\$8,024,217 | -\$12,092,602 |
| Target Operating Fund Balances | \$1,072,996 | \$1,100,095 | \$1,143,794 | \$1,174,453 | \$1,199,285 | \$1,223,801 |

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5.1.5 Proposed Operating Financial Plan

To ensure that the Water Fund will be self-sufficient and will be able to fund operating expenses and to build operating fund balance to meet the target levels in FY 2016, RFC recommends the water revenue adjustments in **Table 5-5**. The resulting pro-forma is shown in **Table 5-6**.

Table 5-5: Proposed Water Revenue Adjustments

| <u>Effective Date</u> | <u>Proposed Water Revenue Adjustments</u> |
|-----------------------|---|
| August 1, 2012 | 7 percent |
| August 1, 2013 | 7 percent |
| August 1, 2014 | 6 percent |
| August 1, 2015 | 4.5 percent |
| August 1, 2016 | 4.5 percent |

Table 5-6: Proposed Water Operating Pro-forma

| | FY 2012 <i>Budgeted</i> | FY 2013 <i>Projected</i> | FY 2014 <i>Projected</i> | FY 2015 <i>Projected</i> | FY 2016 <i>Projected</i> | FY 2017 <i>Projected</i> |
|--|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| REVENUES | | | | | | |
| Water Revenues from Current Rates | \$13,399,700 | \$14,492,377 | \$14,492,377 | \$14,162,140 | \$13,806,573 | \$13,368,488 |
| Water Revenue Adjustments | \$0 | \$929,928 | \$2,009,489 | \$2,943,877 | \$3,640,169 | \$4,284,857 |
| Other Water Operating Revenues | \$520,200 | \$525,402 | \$530,656 | \$535,963 | \$541,322 | \$546,735 |
| Water Non-Operating Revenues | \$657,500 | \$664,075 | \$680,806 | \$705,433 | \$725,202 | \$742,407 |
| TOTAL REVENUES | \$14,577,400 | \$16,611,781 | \$17,713,327 | \$18,347,412 | \$18,713,266 | \$18,942,488 |
| OPERATING EXPENSES | | | | | | |
| <i>SUBTOTAL O&M EXPENSES</i> | <i>\$13,412,450</i> | <i>\$13,751,188</i> | <i>\$14,297,425</i> | <i>\$14,680,667</i> | <i>\$14,991,060</i> | <i>\$15,297,512</i> |
| <i>SUBTOTAL DEPRECIATION FUNDING</i> | <i>\$2,551,750</i> | <i>\$2,607,303</i> | <i>\$2,664,522</i> | <i>\$3,223,457</i> | <i>\$3,299,161</i> | <i>\$3,377,136</i> |
| <i>SUBTOTAL WATER DEBT SERVICE</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> | <i>\$0</i> |
| TOTAL OPERATING EXPENSES | \$15,964,200 | \$16,358,490 | \$16,961,947 | \$17,904,124 | \$18,290,220 | \$18,674,648 |
| NET INCOME | -\$1,386,800 | \$253,291 | \$751,381 | \$443,288 | \$423,045 | \$267,840 |
| Net Transfers from / (to) Other Funds | \$1,070,210 | \$0 | \$0 | \$0 | \$0 | \$0 |
| GENERAL FUND | \$16,710 | \$0 | \$0 | \$0 | \$0 | \$0 |
| SEWER FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| CLEAN OCEAN FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| OTHER FUNDS | \$53,500 | \$0 | \$0 | \$0 | \$0 | \$0 |
| WATER ACREAGE FEES FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| WATER DEPRECIATION FUND | \$1,000,000 | \$0 | \$0 | \$0 | \$0 | \$0 |
| WATER DEPRECIATION OTHER AGENCY FUND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| NET CASH BALANCES | -\$316,590 | \$253,291 | \$751,381 | \$443,288 | \$423,045 | \$267,840 |
| Beginning Operating Fund Balances | \$23,935 | -\$292,655 | -\$39,364 | \$712,016 | \$1,155,304 | \$1,578,349 |
| Ending Operating Fund Balances | -\$292,655 | -\$39,364 | \$712,016 | \$1,155,304 | \$1,578,349 | \$1,846,189 |
| Target Operating Fund Balances | \$1,072,996 | \$1,100,095 | \$1,143,794 | \$1,174,453 | \$1,199,285 | \$1,223,801 |

5.2 Water Rate Structure Review

5.2.1 Current Water Rate Structure

5.2.1.1 Findings & Recommendations

Potable water accounts are charged a monthly fixed service charge which varies by meter size, as well as a 3-tiered commodity rate for residential and irrigation accounts and a uniform rate for commercial accounts for water usage within the billing period. **Table 5-7** shows the current seasonal tier definitions for each customer class, applicable to potable water rates. Currently, winter is defined as January to April, and summer is defined as the remaining months of the year.

Table 5-7: Current Tier and Season Definitions for Water Rates

| | | Current | |
|--------------------------------------|---------------|----------------|---------------|
| | | Winter | Summer |
| Season Definitions | | Jan – Apr | May – Dec |
| Tier Definitions | | | |
| SFR (ccf / month) | Tier 1 | 0 – 9 | 0 – 13 |
| | Tier 2 | 10 – 15 | 14 – 21 |
| SFR-LL (ccf / month) | Tier 1 | 0 – 11 | 0 – 17 |
| | Tier 2 | 12 – 17 | 18 – 31 |
| MFR-M (ccf / unit / month) | Tier 1 | 0 – 6 | 0 – 6 |
| | Tier 2 | 7 – 9 | 7 – 10 |
| MFR (ccf / unit / month) | Tier 1 | 0 – 6 | 0 – 6 |
| | Tier 2 | 7 – 9 | 7 – 11 |
| IRR (ccf / 100 sq ft) | Tier 1 | 0 – 0.0714 | 0 – 0.143 |
| | Tier 2 | 0.0715 – 0.143 | 0.144 – 0.357 |

RFC conducted a thorough usage analysis for the City’s water customers. Traditional water budget tiers¹⁵ were also evaluated for single family residential (SFR) and irrigation customers.

Figure 5-1 reveals a unique usage¹⁶ feature for the City’s SFR customers; regardless of lot size, the average SFR monthly usage ranges from 9 to 11 ccf for Winter and 14 to 17 ccf for Summer. As lot sizes increase, water usage generally increases, as well as the total water budget allocation for customers; however, this is not the case for the City. It can be concluded that the City’s SFR customers either do not see increases in total irrigation areas as their lot sizes increase, or that they have separate irrigation meters. Thus, the potential outdoor water savings provided by water budget rates for residential customers are minimal and are not substantial enough to offset the increased costs of implementation

¹⁵ Traditional water budgets take into account the estimated household size for indoor use and landscape areas and weather data for outdoor use.

¹⁶ Using FY 2011 usage for single family residential accounts with identifiable lot size

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and administering such a rate structure that the City would incur, such as: costs to modify or acquire new billing system, customer support costs to support variance and to answer customer questions, etc. Instead, RFC recommends that the City focus on fine-tuning the current water rate structure to enhance equity.

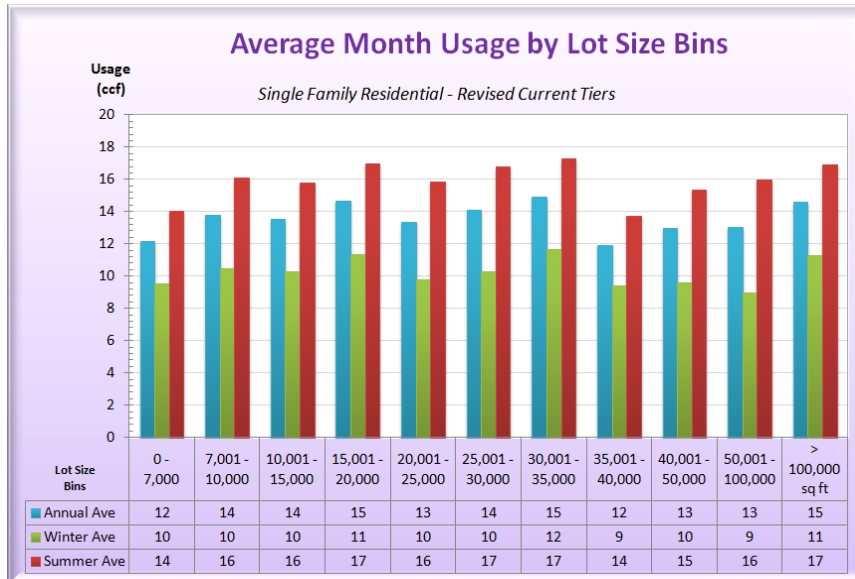


Figure 5-1: SFR Average Monthly Usage by Lot Size

5.2.1.2 Revised season definitions

Figure 5-2 summarizes the monthly reference EvapoTranspiration (ET_0) for California Irrigation Management Information System (CIMIS) station 75 located in Irvine. EvapoTranspiration (ET) is the loss of water to the atmosphere due to the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant tissues). It is an indicator of how much water is needed by crops, lawn, garden, and trees for healthy growth and productivity. The orange dot shows the 20-year average ET_0 by month. The red line is the implied ET_0 calculated based on the current tier and season definitions. The City’s current season definitions significantly differ from the 20-year historical average weather in April, October, November and December. The historical ET_0 for April is closer to the summer average ET_0 than winter. Similarly, historical ET_0 of October to December are closer to winter average ET_0 than summer. To better align with the City’s historical weather conditions, RFC recommends that the season definitions (Table 5-8) are changed to reflect the purple line shown in Figure 5-2.

Table 5-8: Current and Proposed Season Definitions

| Season Definitions | Current | Proposed |
|--------------------|-----------------|-------------------|
| Winter | January – April | October – March |
| Summer | May – December | April – September |

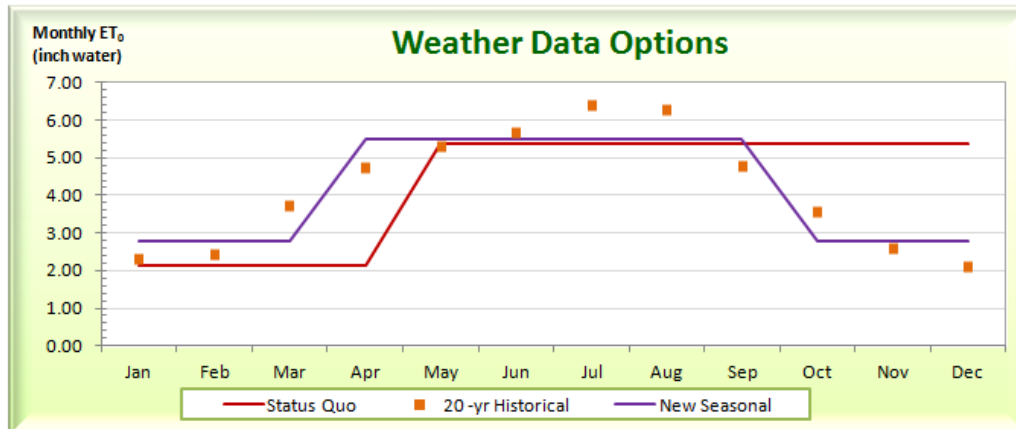


Figure 5-2: Weather Data Comparison

5.2.1.3 Revised tier width definitions

Article X of the California Constitution states 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.”

Indoor water use is considered essential and stays level throughout the year; efficient outdoor use is beneficial and inefficient use should be reduced and eliminated. Recent legislation - Senate Bill (SB) x7-7 - defines efficient indoor water use per capita at 55 gallons per capita per day. Efficient outdoor water use is described in the Updated Model Water Efficient Landscape Ordinance (Pursuant to AB 1881 Section 65597). Using the above State legislations as guidelines, RFC recommends the revised tier definitions as shown in **Table 5-9**. Tier 1 provides adequate water for essential indoor water use or ultra-efficient outdoor use; 9 ccf proves adequate for efficient indoor use for a family of 4. Tier 2 is reserved for efficient outdoor use, which changes with season and landscape area. The revised tier 2 for SFR is determined using the seasonal ET_0 and estimated landscape areas. SFR with lots larger than 7,000 sq ft (SFR-LL) and standard SFR (lot size smaller than 7,000 sq ft) will be provided 5,000 sq ft and 2,600 sq ft, respectively, as the provided landscape sizes. Outdoor water use for irrigation accounts are estimated in similar methodology to residential accounts. 25 percent of outdoor water use is considered essential, and is thus allocated for Tier 1 usage with the remaining 75 percent of outdoor water allocation considered efficient usage in Tier 2. This is to encourage landscape accounts to convert to low-water use landscaping and to allocate an appropriate portion of the groundwater to irrigation accounts. RFC recommends no change in tier definitions for multi-family accounts¹⁷. All residential and irrigation

¹⁷ City staff indicated that all multi-family dwellings have dedicated irrigation meters, thus the multi family accounts are for domestic use only.

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customers are subject to Tier 3 pricing once their usage exceeds 100 percent of the seasonal allocations for efficient indoor and outdoor use.

Table 5-9: Current and Revised Tier Definitions

| Tier Definitions by Customer Class | | Current | | Revised | |
|---|----------------------------|-----------------------------|---------------|-----------------|-----------------|
| | | Winter | Summer | Winter | Summer |
| | | SFR (ccf / month) | Tier 1 | 0 – 9 | 0 – 13 |
| | Tier 2¹⁸ | 10 – 15 | 14 – 21 | 10 – 14 | 10 – 19 |
| SFR-LL (ccf / month) | Tier 1 | 0 – 11 | 0 – 17 | 0 – 9 | 0 – 9 |
| | Tier 2¹⁹ | 12 – 17 | 18 – 31 | 10 – 19 | 10 – 28 |
| IRR (ccf / 100 sq ft) | Tier 1 | 0 – 0.0714 | 0 – 0.143 | 0 – 0.0463 | 0 – 0.0918 |
| | Tier 2 | 0.0715 – 0.143 | 0.144 – 0.357 | 0.0464 – 0.1853 | 0.0919 – 0.3673 |

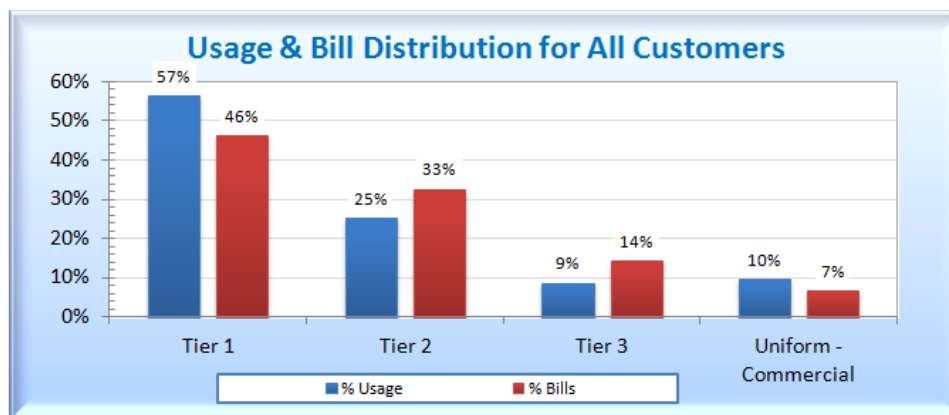


Figure 5-3: Usage and Bill Distribution for All Customers under Revised Tiers

Figure 5-3 summarizes the usage and distribution between tiers for all customers. For example, 57 percent of the water usage is used in Tier 1 and 25 percent is used in Tier 2. 46 percent of the customer bills only use and pay strictly the Tier 1 rate, whereas 33 percent of customer bills have to pay Tier 2 rate.

5.2.1.4 Results of Cost of Service Analyses

The cost of service analysis is based upon the premise that the utility must generate annual revenues adequate to meet its estimated annual expenses. As part of the cost of service analysis, revenues from sources other than water rates and charges (e.g. revenues from miscellaneous services) are deducted from the appropriate cost elements. Additional deductions are made to reflect interest income and other non-operating income during FY 2013. Adjustments are also made to account for cash balances to ensure adequate collection of revenue and to determine the annual revenues needed from rates. For

¹⁸ Provides 2,600 sq ft of landscape

¹⁹ Provides 5,000 sq ft of landscape area

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this analysis, water utility costs of service are assigned under the Base-Extra Capacity method to four basic functional cost components, including: water supply costs, base costs, extra capacity or peaking costs and customer service related costs as described in the M1 Manual, Principles of Water Rates, Fees, and Charges, published by the American Water Works Association (AWWA). This method is widely used in the water industry to serve retail customers.

Revenue requirements for monthly fixed charges include customer service costs and a portion of peaking costs. Customer service costs include customer related and meter related costs. Customer costs include such costs as meter reading, billing, collecting, and accounting. Meter service costs include maintenance and capital costs associated with meters and a portion of the capacity related costs.

Proposition 218 requires a nexus between the rates and costs of providing service. To meet this requirement, RFC has conducted cost of service analysis and identified five different rate components of the commodity rates, including Water Supply, Delivery, Peaking Cost, Conservation and Rate Incentives (Table 5-10).

Table 5-10: Descriptions of Proposed Commodity Rate Components

| <u>Commodity Rate Components</u> | <u>Descriptions</u> |
|----------------------------------|--|
| Water Supply | To recover water supply costs using the following supply allocation <ol style="list-style-type: none"> 1. Tier 1 is supplied by groundwater and imported water from MWDOC 2. Tier 2 is supplied by MWDOC water 3. Tier 3 represents the true unit cost of RW expansion without grants or subsidies. |
| Delivery | To recover the City’s cost to operate and maintain water system to meet average demand (or base costs) |
| Peaking Cost | To recover the water system costs associated with meeting peak demand. Tier 2 is associated costs to meet max day demand and tier 3 is associated with max hour peaking costs. |
| Conservation | To pay for conservation program to help reducing tier 3 inefficient usage and any inefficient commercial usage. |
| Rate Incentives | To provide affordability for essential usage, Other Agency (JRWSS) Revenues is dedicated to offset Tier 1 revenue requirements. |

Table 5-11 summarizes the resulting rate components and associated proposed commodity tiered rates.

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Table 5-11: Proposed Water Commodity Rate Components

| | <u>Water Supply</u> | <u>Delivery</u> | <u>Peaking Cost</u> | <u>Conservation</u> | <u>Rate Incentives</u> | <u>Proposed Rates</u> |
|-----------------------------|---------------------|-----------------|---------------------|---------------------|------------------------|-----------------------|
| Tier 1 | \$1.83 | \$0.79 | \$0.00 | \$0.00 | -\$0.26 | \$2.36 |
| Tier 2 | \$2.01 | \$0.79 | \$1.06 | \$0.00 | \$0.00 | \$3.86 |
| Tier 3 | \$5.12 | \$0.79 | \$1.33 | \$1.06 | \$0.00 | \$8.30 |
| Uniform - Commercial | \$1.99 | \$0.79 | \$0.57 | \$0.22 | -\$0.26 | \$3.31 |

5.2.2 Proposed Water Rates

Based on the cost of service analysis, the proposed water rates are shown in **Table 5-12**.

Table 5-12: Current and Proposed Water Rates

| <u>Effective Date</u> | <u>8/1/2011</u> | <u>8/1/2012</u> |
|--|-----------------|-----------------|
| <u>Meter Size</u> | <u>Current</u> | <u>Proposed</u> |
| Monthly Fixed Service Charges by meter size | | |
| 5/8 in. | \$12.30 | \$14.40 |
| 3/4 in. | \$12.30 | \$14.40 |
| 1 in. | \$12.30 | \$14.40 |
| 1 1/2 in. | \$27.63 | \$32.36 |
| 2 in. | \$41.28 | \$48.34 |
| 3 in. | \$80.23 | \$93.95 |
| 4 in. | \$121.21 | \$141.92 |
| 6 in. | \$232.59 | \$272.32 |
| Commodity Rates (\$ / ccf) | | |
| Residential / Irrigation Potable | | |
| Tier I | \$2.40 | \$2.36 |
| Tier II | \$3.59 | \$3.86 |
| Tier III | \$8.35 | \$8.30 |
| Commercial Potable | | |
| Uniform | \$3.19 | \$3.31 |

5.2.3 Customer Impacts

Before implementing any rate structure recommendations, it is important to understand how the proposed rate structure would impact the City's customers. The rate ramification chart is a powerful tool which can be used to assist elected officials in making informed decisions. The chart summarizes

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the percentage of customers who will be impacted upon the implementation of the new rates. The usage ramification chart is a tool that shows the actual impacts in customer bills based on their usage behavior. RFC performed an analysis to evaluate the impact of the proposed rate structure on customers with various water usage levels as shown in **Figure 5-4** for a SFR customer with 1-inch meter during the summer season, **Figure 5-5** for bills during the winter season and **Figure 5-6** for an annual average month.

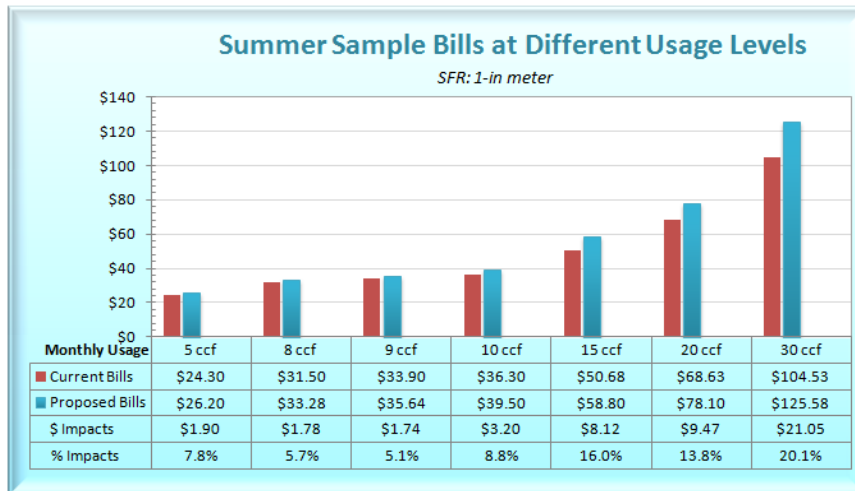


Figure 5-4: Summer SFR Bills at Different Usage Levels

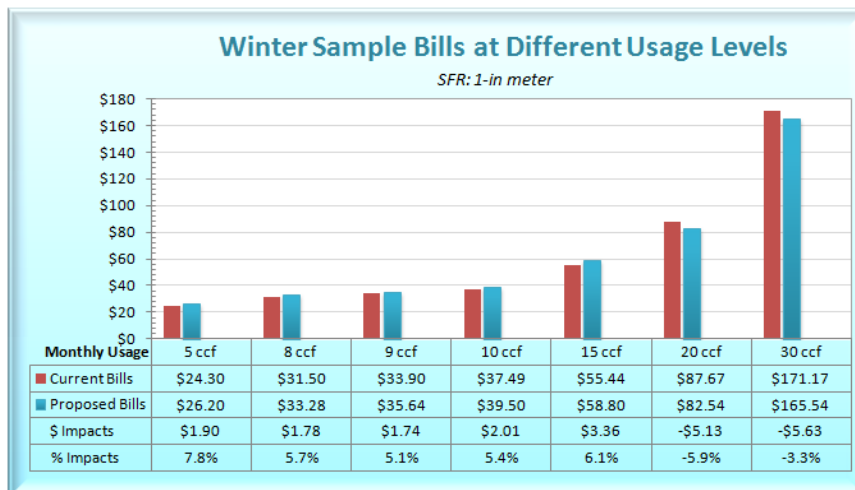


Figure 5-5: Winter SFR Bills at Different Usage Levels

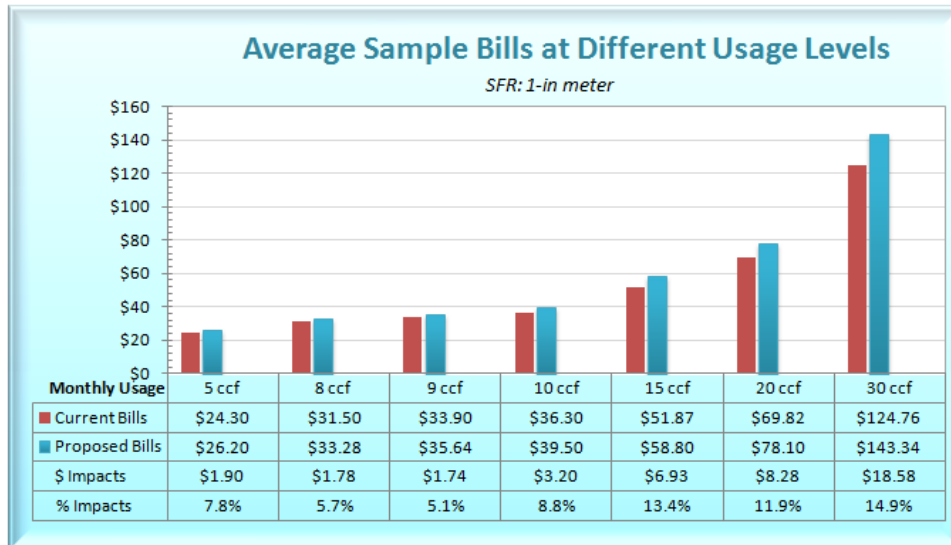


Figure 5-6: Average Month SFR Bills at Different Usage Levels

Figure 5-7 shows the customer impacts for all potable water customers as results of the proposed water rates in FY 2013. The majority of the customers (67 percent) will see minor increases of less than \$5 in their monthly water bills. Approximately 2 percent of the customers will see no changes or some reduction in the monthly bills. Only 4 percent of the customers will see large increases (>\$30).

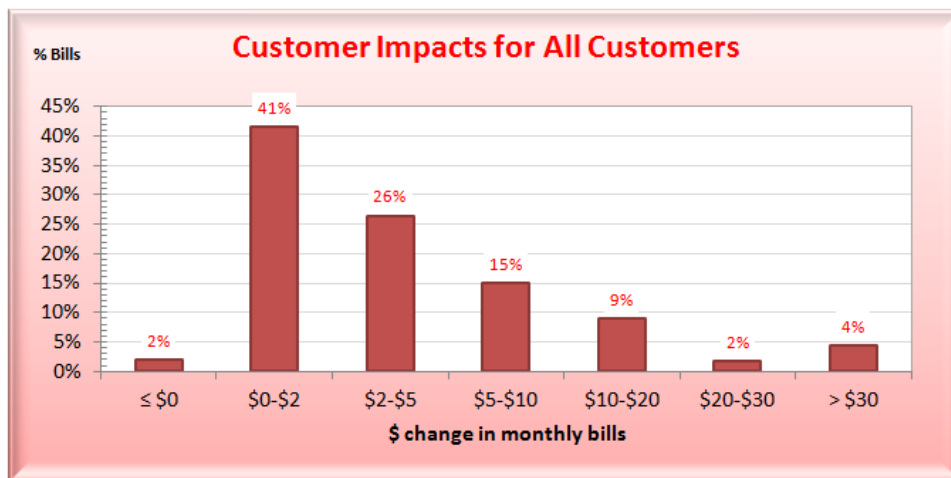


Figure 5-7: Customer Impacts for All Potable Water Customers under FY 2013 Proposed Rates

RFC also developed a bill calculator for the single family residential customers to assess the impacts of the proposed changes on their monthly bills. The bill calculator is available on the City’s website at <http://san-clemente.org/sc/News1.aspx?PageID=1>.