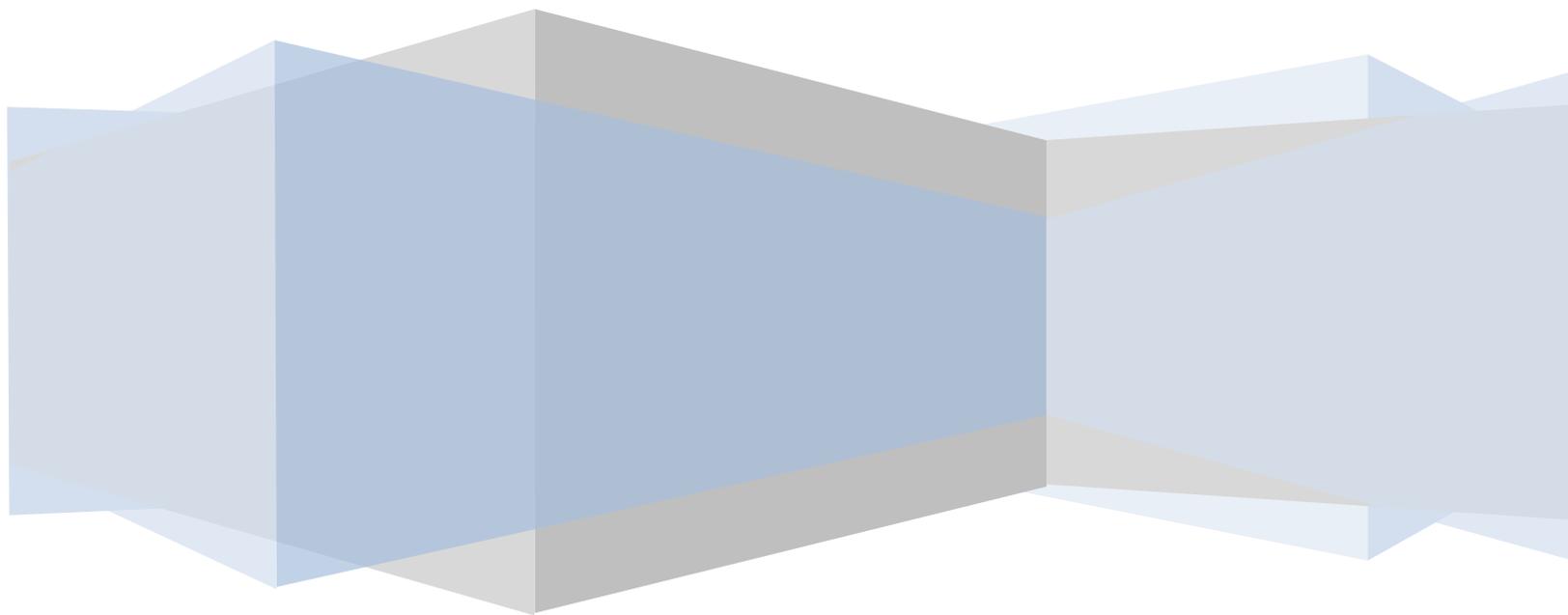


# Water Rate Study

## Final Report

September 2012

### City of Merced





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September 19, 2012

Michael Wegley  
Director of Public Works  
1776 Grogan Ave.  
Merced, CA 95341

Dear Mr. Wegley,

Raftelis Financial Consultants (RFC), Inc. is pleased to provide the Water Rate Study Report (Report), which develops a financial plan and the associated rates for the City for fiscal years 2013 to 2017. This Report summarizes key findings and recommendations related to the rates necessary for the City to meet its financial obligations.

It has been a pleasure working with you and we wish to express our thanks to you and City Staff for the support provided throughout the course of this study. If you have any questions regarding the Report, please do not hesitate to contact me at (213) 327-4405.

Sincerely,

Raftelis Financial Consultants, Inc.

A handwritten signature in black ink, appearing to read 'Sanjay Gaur', written in a cursive style.

Sanjay Gaur  
Senior Manager

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# Background

## Section 1

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The City of Merced (City) is a charter city located on the east side of the San Joaquin Valley, serving a population of approximately 83,400. The City currently serves approximately 9,000 metered accounts, in addition to 10,000 flat rate non-metered accounts. The City's current source of water supply includes approximately 23,000 acre-feet (AF) of groundwater per year from 22 groundwater wells.

The City engaged Raftelis Financial Consultants, Inc. (RFC) to conduct a water rate study, as well as a Water Capital Facilities Charge study. In addition, RFC examined the methodology for determining commercial wastewater charges and provided recommendations as a part of the study.

There are several key issues that act as drivers for the current study. In an effort to promote water conservation efforts, the California State Legislature adopted the Water Measurement Law (Water Code Sec. 500 et seq.), requiring that all structures built on and after January 1, 1992 be equipped with water meters capable of measuring water consumption before connecting into the City's water system. In addition, in 2004 the law was amended requiring Cities to install water meters on current unmetered water services on or before January 1, 2025. The City is currently seeking to implement a plan to retrofit its current unmetered water accounts with water meters consistent with the January 2025 requirement. For the proposed rate plan, the City is interested in developing rates which account for this transition of accounts from unmetered to metered service.

In addition, the City last performed a water rate study in 2006 and a water capital facilities charge study in 2004. The City is planning a comprehensive capital improvement program and the implementation of a water operations plan to comply with drinking water regulations, and is interested in developing a five-year revenue program which generates adequate revenues to sufficiently cover anticipated operating and capital expenditures while meeting bond coverage tests. Lastly, the City is interested in developing a rate plan which is equitable and meets current legal requirements.

The following Water Rate Study Report (Report) summarizes the findings and recommendations of the study. This report contains a summary of the general assumptions necessary to complete the water study, proposed financial plans and associated revenue adjustments for the City's water enterprise, a cost of service analysis for the wastewater enterprise, and the resulting water rates. In addition, a water rate survey comparing the City's current and proposed water charges to neighboring agencies, as well as options for implementing the proposed changes are included as a part of the water rate study. Lastly, proposed changes to the existing Water Capital Facilities Charge, options for commercial wastewater charge methodologies, and options for developing a bulk rate are described and included as a part of the Report.

# Scope of Study

## Section 2

### Data and Assumptions

In order to conduct the study, RFC compiled both current and historical data from the City. This information included the number of accounts (both metered and unmetered), water usage records (for metered accounts), operating budgets, the City’s Capital Improvement Program (CIP), and existing debt schedules. In addition, as a part of the financial planning process, RFC utilized the collected data to develop projections for accounts, revenues, and revenue requirements. Projections were made over a five year planning period, from fiscal year (FY) 2013 to FY 2017. To perform the study, RFC engaged with City staff to develop a set of account growth factors, escalation factors for the City’s operating and capital costs, and other various miscellaneous inflation factors, which are shown in **Table 1**.

**Table 1: Escalation Factors and Assumptions**

#### *Revenue Assumptions*

##### General Account Growth

| Description               | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 |
|---------------------------|---------|---------|---------|---------|---------|
| Metered Accounts          | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 1.50%   |
| Unmetered Accounts/ Pools | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   |
| Fire Protection Services  | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 1.50%   |
| Backflow Devices          | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 1.50%   |
| Conservation/Use Factor   | 100.00% | 90.00%  | 90.00%  | 100.00% | 100.00% |

##### Miscellaneous Revenues

| Description                  | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 |
|------------------------------|---------|---------|---------|---------|---------|
| Miscellaneous Revenue Growth | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   |
| Interest Rate on Reserves    | 0.80%   | 1.00%   | 1.00%   | 2.00%   | 2.00%   |

**Revenue Requirement Assumptions**

**Cost Inflation Factors**

| Description         | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 |
|---------------------|---------|---------|---------|---------|---------|
| General             | 0.00%   | 4.00%   | 4.00%   | 4.00%   | 4.00%   |
| Personnel           | 0.00%   | 4.00%   | 4.00%   | 4.00%   | 4.00%   |
| Capital             | 0.00%   | 4.00%   | 4.00%   | 4.00%   | 4.00%   |
| Utilities           | 0.00%   | 4.00%   | 4.00%   | 4.00%   | 4.00%   |
| Core/PERS Allowance | 0.00%   | 4.00%   | 4.00%   | 4.00%   | 4.00%   |
| Other               | 0.00%   | 4.00%   | 4.00%   | 4.00%   | 4.00%   |

**Proposed Debt Terms**

| Description       | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 |
|-------------------|---------|---------|---------|---------|---------|
| Interest Rate     | 5.00%   | 5.00%   | 5.00%   | 5.00%   | 5.00%   |
| Bond Term (Years) | 30      | 30      | 30      | 30      | 30      |
| Issuance Cost     | 1.00%   | 1.00%   | 1.00%   | 1.00%   | 1.00%   |

The City is assumed to have very little to no growth in both metered and unmetered customers for the next five years, with very minimal growth occurring in FY 2017, the last year of the study period (1.5 percent growth in metered accounts, no growth in unmetered accounts). In addition, the City anticipates some level of short term reduction in per capita usage in FY 2014 and FY 2015 (as shown in Conservation / Use Factor), due to the installation of meter. Typically, there is about a 20 percent reduction in water usage when converting from unmetered to metered units. The Conservation/Use factor in FY 2014 and FY2015 reflect the estimated water use reduction.

In addition to the assumptions shown in the table, RFC has incorporated the City’s debt coverage and reserve target requirements as a part of the financial planning process. Here, debt coverage is defined as net revenues (revenues less expenses) divided by existing and proposed annual debt service.

Currently, existing debt covenants require the City to maintain a debt coverage ratio of 125 percent. In addition, City’s current practice is to maintain a minimum level of reserves equivalent to 25 percent of its annual operating budget. Lastly, RFC recommends that the City also maintain an additional reserve target equal to the cost of replacing a single well, approximately \$3.5 million. This target ensures that the City will be able to meet its revenue requirements and provide continual service in the event of an emergency and provides the City with added revenue stability.

**Existing Water Rate Structure**

The City currently implements rates for both metered and unmetered service. For metered customers, the City charges a fixed monthly meter charge which varies by meter size. This fixed charge includes an

allowance for water use which also varies by meter size. Usage which exceeds the provided allowance is charged on a per hundred cubic feet (hcf<sup>1</sup>) basis. Unmetered customers are assessed a monthly flat rate charge which varies based on lot size. Lastly, the City implements several miscellaneous fees, including charges for swimming pools for unmetered customers (charges on a per pool basis), charges for fire service (monthly fixed charge based on meter size), and charges for backflow devices (charges on a per device basis). Lastly, the current revenue program includes rate adjustments which go into effect at the start of each calendar year (CY). The existing water rate structure for years 2010, 2011 and 2012 can be seen in **Table 2**.

**Table 2: Existing Water Rates, 2010-2012**

**Minimum Base Fee for Metered Service**

| <u>Meter Size</u> | <u>Water Use (hcf)</u> |  | <u>2009/2010</u> | <u>2010/2011</u> | <u>2011/2012</u> |
|-------------------|------------------------|--|------------------|------------------|------------------|
|                   | <u>Included</u>        |  |                  |                  |                  |
| 5/8" x 3/4"       | 30                     |  | \$33.47          | \$35.14          | \$35.14          |
| 1"                | 30                     |  | \$34.80          | \$36.54          | \$36.54          |
| 1 1/2"            | 40                     |  | \$46.39          | \$48.71          | \$48.71          |
| 2"                | 50                     |  | \$63.81          | \$67.00          | \$67.00          |
| 3"                | 50                     |  | \$73.96          | \$77.66          | \$77.66          |
| 4"                | 50                     |  | \$87.02          | \$91.37          | \$91.37          |
| 6"                | 50                     |  | \$101.53         | \$106.60         | \$106.60         |
| 8"                | 50                     |  | \$145.04         | \$152.30         | \$152.30         |
| 10"               | 50                     |  | \$188.55         | \$197.97         | \$197.97         |
| 12"               | 50                     |  | \$231.80         | \$243.39         | \$243.39         |

**Base Flat Rate for Unmetered Service**

| <u>Lot Area (sq. ft)</u> |           | <u>2009/2010</u> | <u>2010/2011</u> | <u>2011/2012</u> |
|--------------------------|-----------|------------------|------------------|------------------|
| <u>From</u>              | <u>To</u> |                  |                  |                  |
| 0                        | 10,000    | \$33.47          | \$35.14          | \$35.14          |
| 10,001                   | 13,000    | \$38.94          | \$40.89          | \$40.89          |
| 13,001                   | 16,000    | \$46.38          | \$48.70          | \$48.70          |
| 16,001                   | 19,000    | \$53.40          | \$56.07          | \$56.07          |
| 19,001                   | 22,000    | \$59.98          | \$62.98          | \$62.98          |
| 22,001                   | 25,000    | \$65.92          | \$69.22          | \$69.22          |
| 25,001                   | 28,000    | \$72.81          | \$76.45          | \$76.45          |
| 28,001                   | 31,000    | \$79.39          | \$83.36          | \$83.36          |
| 31,001                   | 34,000    | \$86.60          | \$90.93          | \$90.93          |
| 34,001                   | 37,000    | \$93.80          | \$98.49          | \$98.49          |
| 37,001                   | 40,000    | \$101.32         | \$106.38         | \$106.38         |
| 40,001                   | 43,000    | \$105.07         | \$110.33         | \$110.33         |

<sup>1</sup> 1 hcf = 100 cubic feet = 748 gallons

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|        |        |          |          |          |
|--------|--------|----------|----------|----------|
| 43,001 | 46,000 | \$112.59 | \$118.22 | \$118.22 |
| 46,001 | 49,000 | \$120.10 | \$126.11 | \$126.11 |
| 49,001 | 52,000 | \$127.62 | \$134.00 | \$134.00 |
| 52,001 | 55,000 | \$135.13 | \$141.89 | \$141.89 |
| 55,001 | 58,000 | \$142.64 | \$149.78 | \$149.78 |
| 58,001 | 61,000 | \$150.16 | \$157.67 | \$157.67 |
| 61,001 | 64,000 | \$157.67 | \$165.55 | \$165.55 |
| 64,001 | 67,000 | \$165.19 | \$173.44 | \$173.44 |
| 67,001 | 70,000 | \$172.70 | \$181.33 | \$181.33 |
| 70,001 | 73,000 | \$180.21 | \$189.22 | \$189.22 |
| 73,001 | 76,000 | \$187.83 | \$197.11 | \$197.11 |
| 76,001 | 79,000 | \$195.24 | \$205.00 | \$205.00 |
| 79,001 | 82,000 | \$202.75 | \$212.89 | \$212.89 |
| 82,001 | 85,000 | \$210.27 | \$220.78 | \$220.78 |
| 85,001 | 88,000 | \$217.78 | \$228.67 | \$228.67 |

**Base Water Rate for Metered Service**

| Base Rate      | 2009/2010 | 2010/2011 | 2011/2012 |
|----------------|-----------|-----------|-----------|
| Charge per hcf | \$0.87    | \$0.91    | \$0.91    |

**Pool Charge for Unmetered Service**

| Pool Charge     | 2009/2010 | 2010/2011 | 2011/2012 |
|-----------------|-----------|-----------|-----------|
| Charge per Pool | \$6.96    | \$7.31    | \$7.31    |

**Base Fee for Fire Protection Services**

| Meter Size   | 2009/2010 | 2010/2011 | 2011/2012 |
|--------------|-----------|-----------|-----------|
| Fire Hydrant | \$16.73   | \$17.56   | \$17.56   |
| 4"           | \$14.79   | \$15.53   | \$15.53   |
| 6"           | \$17.26   | \$18.13   | \$18.13   |
| 8"           | \$24.66   | \$25.89   | \$25.89   |
| 10"          | \$32.05   | \$33.66   | \$33.66   |
| 11"          | \$76.91   | \$76.91   | \$76.91   |
| 12"          | \$48.40   | \$48.40   | \$48.40   |

**Backflow Device Charge**

|                        | 2010   | 2011   | 2012   |
|------------------------|--------|--------|--------|
| Backflow Device Charge | \$5.00 | \$5.00 | \$5.00 |

## Revenue Requirements

RFC evaluated the City’s revenue requirements as a part of the financial planning process. This evaluation included an analysis of the City’s operating costs, planned capital costs, annual debt service obligations, and transfers. This section provides a discussion of the City’s projected financials, including operations and maintenance (O&M) costs, capital costs associated with the City’s Capital Improvement Program (CIP), as well as annual debt service requirements.

## Operation and Maintenance Costs

The City’s fiscal year (FY) 2013 budget and the cost escalation factors shown in **Table 1** were used as the basis for projecting the City’s operating costs throughout the planning period (from FY 2013 – FY 2017). Budgeted and projected O&M costs are shown in **Table 3**.

**Table 3: Operation and Maintenance Costs**

|                               | <i>Budgeted</i><br>FY 2013 | <i>Projected</i><br>FY 2014 | <i>Projected</i><br>FY 2015 | <i>Projected</i><br>FY 2016 | <i>Projected</i><br>FY 2017 |
|-------------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Personnel Services            | \$2,764,339                | \$2,874,913                 | \$2,989,909                 | \$3,109,505                 | \$3,233,886                 |
| Supplies and Services         | \$3,902,063                | \$4,058,146                 | \$4,220,471                 | \$4,389,290                 | \$4,590,900                 |
| Property                      | \$245,250                  | \$255,060                   | \$265,262                   | \$275,873                   | \$286,908                   |
| Administrative                | \$484,449                  | \$503,827                   | \$523,980                   | \$544,939                   | \$566,737                   |
| Interdepartmental             | \$1,342,525                | \$1,396,226                 | \$1,452,075                 | \$1,510,158                 | \$1,570,564                 |
| Other                         | \$0                        | \$400,000                   | \$533,333                   | \$666,667                   | \$800,000                   |
| <b>Total O&amp;M Expenses</b> | <b>\$8,738,626</b>         | <b>\$9,488,171</b>          | <b>\$9,985,031</b>          | <b>\$10,496,433</b>         | <b>\$11,048,995</b>         |

Operational and maintenance costs include Personnel Services, Supplies and Services, Property and Administrative, and Interdepartmental expenses. Personnel Services are the costs of labor which include: regular salaries, overtime, call back, sick leave, retirement, social security, medicare, unemployment, workers compensation, standby, uniforms, post-employment benefits and employer paid insurance. Supplies and Services are the supporting materials, utilities and outside services necessary to keep operations running and properly maintained. Supplies and Services also include: gas, electricity, water, sewer, refuse, telephone, postage, advertising, printing, professional services, travel, meetings, mileage, training, rents and leases, vehicle maintenance, memberships, maintenance materials and services, small tools, safety supplies, insurance, vehicle replacement and support services. Property includes the water systems machinery and equipment. Administrative expense consists of the services provided by the City Manager, City Attorney, Finance, Purchasing, Support Services, and City Council to operate the water system. Finally, Interdepartmental charges are for specific assistance provided by other City departments; These charges include administrative staff, utility billing and customer service staff, legal fees, economic development costs, drug screening, fire hydrant testing, engineering, planning, and inspections services on capital projects.

Operating expenses are projected to increase approximately five (5) percent annually after FY 2013. A majority of the increase in each year is largely driven by anticipated costs associated with water quality treatment, projected to increase from \$400,000 per year in FY 2014 to \$800,000 in FY 2017 (see “Other” line item in **Table 3**). Utility costs included in the “Supplies and Services” cost category are one of the most significant operating cost items.

**Capital Improvement Program**

A majority of the City’s capital projects are either funded through revenues from water rates and charges, or through water capital facilities charge revenues. The City has a total of four (557, 556/566, 463 and 344A) different funds for the water enterprise. These funds are categorized based on their usage. Projects funded through rates and used for operations are categorized as being funded by the Water System Fund (Fund 557), and projects funded through water capital facilities charges are used for infrastructure and categorized as being funded by the restricted funds (this includes the Restricted Water Fund – fund 556 and the Restricted Water Wells Fund – Fund 566). A listing of projects and anticipated capital costs is shown below in **Table 4**. It is important to note that these figures represent that the costs shown are inflated based on the capital inflation factors shown in **Table 1**.

**Table 4: Inflated Capital Improvement Program**

| Description                                  | Project No. | FY 2013   | FY 2014   | FY 2015 | FY 2016 | FY 2017 |
|--|-------------|-----------|-----------|---------|---------|---------|
| <b>CIP Funded Through Water System (557)</b> |             |           |           |         |         |         |
| PCE Remediation                              | 104052      | \$244     | \$0       | \$0     | \$0     | \$0     |
| Water Supply Plan                            | 106055      | \$66,855  | \$0       | \$0     | \$0     | \$0     |
| Analysis for MTBE Testing                    | 106077      | \$1,833   | \$0       | \$0     | \$0     | \$0     |
| PCE Sampling and Testing                     | 106092      | \$21,872  | \$0       | \$0     | \$0     | \$0     |
| Interim Water Master Plan                    | 109053      | \$6,839   | \$0       | \$0     | \$0     | \$0     |
| **Relocation of Utilities                    | 111044      | \$1,757   | \$0       | \$0     | \$0     | \$0     |
| Repair Utility Cuts                          | 111047      | \$8,284   | \$0       | \$0     | \$0     | \$0     |
| Well #3 - Wellhead Treatment                 | 112038      | \$40,000  | \$0       | \$0     | \$0     | \$0     |
| Well #7 - Wellhead Treatment                 | 112039      | \$10,000  | \$0       | \$0     | \$0     | \$0     |
| Well Pump Enclosure                          | 113030      | \$300,000 | \$0       | \$0     | \$0     | \$0     |
| Easement Line and Service Replacement        | 113031      | \$150,000 | \$0       | \$0     | \$0     | \$0     |
| Nitrate and Arsenic Analysis                 | 113032      | \$100,000 | \$0       | \$0     | \$0     | \$0     |
| Water System Fund - PTBD                     | 113033      | \$417,455 | \$0       | \$0     | \$0     | \$0     |
| Disinfect Byproducts                         | Future      | \$0       | \$260,000 | \$0     | \$0     | \$0     |
| Technology Enhancements                      | Future      | \$0       | \$52,000  | \$0     | \$0     | \$0     |
| Security System Improvements                 | Future      | \$0       | \$52,000  | \$0     | \$0     | \$0     |
| SCADA Expansion and Maintenance              | Future      | \$0       | \$104,000 | \$0     | \$0     | \$0     |
| Water Main Oversizing                        | Future      | \$0       | \$104,000 | \$0     | \$0     | \$0     |
| Pave Well Sites                              | Future      | \$0       | \$104,000 | \$0     | \$0     | \$0     |
| Parkway Cleaners Pilot Program               | Future      | \$0       | \$208,000 | \$0     | \$0     | \$0     |
| Water Storage Tanks                          | Future      | \$0       | \$260,000 | \$0     | \$0     | \$0     |
| Groundwater Remediation                      | Future      | \$0       | \$260,000 | \$0     | \$0     | \$0     |

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|   |        |                     |                    |                    |                    |                    |
|---|--------|---------------------|--------------------|--------------------|--------------------|--------------------|
| Campus Parkway Water Main Crossing  | Future | \$0                 | \$1,352,000        | \$0                | \$0                | \$0                |
| Water Main Looping At Lake Road   | Future | \$0                 | \$2,600,000        | \$0                | \$0                | \$0                |
| 6th Street Btwn K St and M Street   | Future | \$0                 | \$260,000          | \$0                | \$0                | \$0                |
| Water Main Replacements   | Future | \$0                 | \$0                | \$324,480          | \$337,459          | \$350,958          |
| <b>Total Capital Expenses (557/463)</b>   |        | <b>\$1,125,139</b>  | <b>\$5,616,000</b> | <b>\$324,480</b>   | <b>\$337,459</b>   | <b>\$350,958</b>   |
| <b>CIP Funded Through Restricted Water Fund/Restricted Water Mains Fund (556/566)</b> |        |                     |                    |                    |                    |                    |
| Water Wells 18 - Burbank Park   | 106047 | \$2,951             | \$0                | \$0                | \$0                | \$0                |
| Water Well 20 - Location TBD  | 107033 | \$2,027,119         | \$0                | \$0                | \$0                | \$0                |
| Water Well 19 - Ada Givens Park   | 107059 | \$160,048           | \$0                | \$0                | \$0                | \$0                |
| Restricted Water Wells - PTBD   | 113029 | \$9,316,279         | \$0                | \$0                | \$0                | \$0                |
| Water Meter Installation  | 108068 | \$6,420,777         | \$0                | \$0                | \$0                | \$0                |
| Water Well 21 - Location TBD  | 113026 | \$3,000,000         | \$0                | \$0                | \$0                | \$0                |
| Well Site #2 Wellhead Treatment   | 113027 | \$2,500,000         | \$0                | \$0                | \$0                | \$0                |
| Well Site #7 Wellhead Treatment   | 113028 | \$2,000,000         | \$0                | \$0                | \$0                | \$0                |
| Water Well 22 - Location TBD  | Future | \$0                 | \$0                | \$0                | \$3,374,592        | \$0                |
| Water Well 23 - Location TBD  | Future | \$0                 | \$0                | \$0                | \$0                | \$0                |
| Water Well 24 - Location TBD  | Future | \$0                 | \$0                | \$0                | \$0                | \$0                |
| Water Well 25 - Location TBD  | Future | \$0                 | \$0                | \$0                | \$0                | \$0                |
| Well Site #3 - Wellhead Treatment   | Future | \$0                 | \$2,600,000        | \$0                | \$0                | \$0                |
| Well Sites TBD - Wellhead Treatment   | Future | \$0                 | \$0                | \$0                | \$0                | \$0                |
| Water Well 26   | Future | \$0                 | \$0                | \$0                | \$0                | \$0                |
| Water Well 27   | Future | \$0                 | \$0                | \$0                | \$0                | \$0                |
| Loop Water Mains  | 109033 | \$248,334           | \$0                | \$0                | \$0                | \$0                |
| Well 19 Water Main  | 110024 | \$299,592           | \$0                | \$0                | \$0                | \$0                |
| Bradley Overpass  | 110025 | \$25,916            | \$0                | \$0                | \$0                | \$0                |
| Restricted Water Main Fund - PTBD   | 113050 | \$4,093,333         | \$0                | \$0                | \$0                | \$0                |
| Restricted Water Main Fund - PTBD   | Future | \$0                 | \$0                | \$0                | \$281,216          | \$292,465          |
| <b>Total Capital Expenses (556/566)</b>   |        | <b>\$30,094,349</b> | <b>\$2,600,000</b> | <b>\$0</b>         | <b>\$3,655,808</b> | <b>\$292,465</b>   |
| <b>Average Yearly Capital Spending (556/566)</b>                                      |        | <b>\$4,000,000</b>  | <b>\$4,000,000</b> | <b>\$4,000,000</b> | <b>\$4,000,000</b> | <b>\$4,000,000</b> |
| <b>CIP Funded Through PCE Water Clean Ups CIP Fund (463)</b>                          |        |                     |                    |                    |                    |                    |
| PCE Clean Up Water - PTBD   | 113046 | \$635,157           | \$260,000          | \$270,400          | \$281,216          | \$292,465          |
| <b>Total Capital Expenses (463)</b>   |        | <b>\$635,157</b>    | <b>\$260,000</b>   | <b>\$270,400</b>   | <b>\$281,216</b>   | <b>\$292,465</b>   |

After discussions with City staff, it was decided for financial planning purposes to use an estimated average yearly capital spending value of \$4 million per year for capital funded by the Restricted Water/Restricted Water Wells Fund. This estimation is based on what the City anticipates that it will actually spend in capital expenses. Table 5 below shows the total capital expenditure by all funds from FY 2013 to FY 2017.

**Table 5: Total CIP for all funds**

|                              | FY 2013            | FY 2014            | FY 2015            | FY 2016            | FY 2017            |
|------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Fund 557 CIP                 | \$1,125,139        | \$5,616,000        | \$324,480          | \$337,459          | \$350,958          |
| Fund 556/566 CIP             | \$4,000,000        | \$4,000,000        | \$4,000,000        | \$4,000,000        | \$4,000,000        |
| Fund 463 CIP                 | \$635,157          | \$260,000          | \$270,400          | \$281,216          | \$292,465          |
| <b>Total CIP (All Funds)</b> | <b>\$5,760,296</b> | <b>\$9,876,000</b> | <b>\$4,594,880</b> | <b>\$4,618,675</b> | <b>\$4,643,422</b> |

**Existing Debt Service**

The City currently is responsible for paying annual debt service for its *2012 Water System Refunding Revenue Bonds*. Payments per year are approximately \$536,000 per year for each year throughout the study period, with an exception in FY 2013 (total annual debt service of approximately \$388,000). The City’s existing debt service obligations are shown in **Table 6** on the following page. Total annual debt service throughout the study period is approximately \$745,000.

**Table 6: Existing Annual Debt Service**

|                           |                         | Actual<br>FY 2013 | Actual<br>FY 2014 | Actual<br>FY 2015 | Actual<br>FY 2016 | Actual<br>FY 2017 |
|---------------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Fund 557</b>           |                         |                   |                   |                   |                   |                   |
| 706.71-01                 | Principal-Bond Payment  | \$335,000         | \$355,000         | \$365,000         | \$375,000         | \$385,000         |
| 706.72-01                 | Interest Bond Payment   | \$53,121          | \$180,788         | \$170,138         | \$159,188         | \$149,063         |
| 706.73-01                 | Agent Fees-Bond Payment | \$0               | \$0               | \$0               | \$0               | \$0               |
| <b>Total 557 Debt</b>     |                         | <b>\$388,121</b>  | <b>\$535,788</b>  | <b>\$535,138</b>  | <b>\$534,188</b>  | <b>\$534,063</b>  |
| <b>Fund 566/556</b>       |                         |                   |                   |                   |                   |                   |
| 706.71-01                 | Principal-Bond Payment  | \$24,016          | \$0               | \$0               | \$0               | \$0               |
| 706.72-01                 | Interest Bond Payment   | \$985             | \$0               | \$0               | \$0               | \$0               |
| <b>Total 566/556 Debt</b> |                         | <b>\$25,001</b>   | <b>\$0</b>        | <b>\$0</b>        | <b>\$0</b>        | <b>\$0</b>        |
| <b>Fund 344A</b>          |                         |                   |                   |                   |                   |                   |
| 706.71-01                 | Principal-Bond Payment  | \$85,750          | \$85,750          | \$98,000          | \$98,000          | \$124,950         |
| 706.72-01/73-01           | Interest & Agent Fees   | \$124,585         | \$124,585         | \$112,335         | \$112,335         | \$85,385          |
| <b>Total 344A Debt</b>    |                         | <b>\$210,335</b>  | <b>\$210,335</b>  | <b>\$210,335</b>  | <b>\$210,335</b>  | <b>\$210,335</b>  |
| <b>Total Debt Service</b> |                         | <b>\$623,457</b>  | <b>\$746,122</b>  | <b>\$745,472</b>  | <b>\$744,522</b>  | <b>\$744,397</b>  |

**Proposed Financial Plan**

RFC reviewed revenues under current rates and projected accounts and usage, projected operating and capital revenue requirements, and existing debt service obligations to evaluate the necessary revenue adjustments and proposed debt issues throughout the planning period. Primary indicators of financial health include debt coverage and reserve levels.

Under the status quo scenario (no rate adjustments and no additional debt throughout the study period), the City will still be able to meet its debt coverage and target reserve requirements throughout each year of the study period.

Fund 557 is an unrestricted fund mainly used for operating purposes. The other four funds are restricted funds which are used for capital facility charges and other capital related purposes. As a result of the differences between the funds, we have included two pro-forma’s to represent the unrestricted and restricted funds. Both financial pro-forma statements for the City’s unrestricted and restricted funds under the proposed status quo scenario are shown on the next page in **Table 7**.

**Table 7: Status Quo Pro-Forma Statement**

**Unrestricted Pro-Forma Statement**

| Line No. | Description                                      | Projected FY 2013   | Projected FY 2014    | Projected FY 2015   | Projected FY 2016   | Projected FY 2017   |
|----------|--|---------------------|----------------------|---------------------|---------------------|---------------------|
| 1        | <b>REVENUES</b>                                  |                     |                      |                     |                     |                     |
| 2        | Existing Revenue From Rates                      | \$12,000,000        | \$11,883,338         | \$11,668,594        | \$11,668,594        | \$11,769,673        |
| 3        | Additional Revenue (Proposed Adj.)               | \$0                 | \$0                  | \$0                 | \$0                 | \$0                 |
| 4        | Other Revenues                                   | \$242,407           | \$242,397            | \$242,397           | \$242,397           | \$242,397           |
| 5        | Interest   | \$134,700           | \$160,747            | \$147,381           | \$309,881           | \$316,588           |
| 6        | <b>TOTAL REVENUES</b>                            | <b>\$12,377,107</b> | <b>\$12,286,481</b>  | <b>\$12,058,372</b> | <b>\$12,220,872</b> | <b>\$12,328,658</b> |
| 7        |  |                     |                      |                     |                     |                     |
| 8        | <b>OPERATING EXPENSES</b>                        |                     |                      |                     |                     |                     |
| 9        | O&M Expenses                                     | \$8,738,626         | \$9,488,171          | \$9,985,031         | \$10,496,433        | \$11,048,995        |
| 10       | <b>TOTAL OPERATING EXPENSES</b>                  | <b>\$8,738,626</b>  | <b>\$9,488,171</b>   | <b>\$9,985,031</b>  | <b>\$10,496,433</b> | <b>\$11,048,995</b> |
| 11       |  |                     |                      |                     |                     |                     |
| 12       | <b>NET REVENUES</b>                              | <b>\$3,638,481</b>  | <b>\$2,798,310</b>   | <b>\$2,073,341</b>  | <b>\$1,724,439</b>  | <b>\$1,279,663</b>  |
| 13       |  |                     |                      |                     |                     |                     |
| 14       | <b>CAPITAL EXPENSES</b>                          |                     |                      |                     |                     |                     |
| 15       | CIP - Rates Funded/PAYGO                         | \$1,125,139         | \$5,616,000          | \$324,480           | \$337,459           | \$350,958           |
| 16       | <b>TOTAL CAPITAL EXPENSES</b>                    | <b>\$1,125,139</b>  | <b>\$5,616,000</b>   | <b>\$324,480</b>    | <b>\$337,459</b>    | <b>\$350,958</b>    |
| 17       |  |                     |                      |                     |                     |                     |
| 18       | <b>DEBT SERVICE</b>                              |                     |                      |                     |                     |                     |
| 19       | Existing Debt Service                            | \$388,121           | \$535,788            | \$535,138           | \$534,188           | \$534,063           |
| 20       | Proposed Debt Service                            | \$0                 | \$0                  | \$0                 | \$0                 | \$0                 |
| 21       | <b>TOTAL DEBT SERVICE</b>                        | <b>\$388,121</b>    | <b>\$535,788</b>     | <b>\$535,138</b>    | <b>\$534,188</b>    | <b>\$534,063</b>    |
| 22       |  |                     |                      |                     |                     |                     |
| 23       | <b>TRANSFERS</b>                                 |                     |                      |                     |                     |                     |
| 24       | Transfers (In)/Out of Water Enterprise           | \$1,500             | \$1,500              | \$1,500             | \$1,500             | \$1,500             |
| 25       | Interfund Transfers (In)/Out of Fund 557         | \$250,000           | \$260,000            | \$270,400           | \$281,216           | \$292,465           |
| 26       | <b>TOTAL TRANSFERS</b>                           | <b>\$251,500</b>    | <b>\$261,500</b>     | <b>\$271,900</b>    | <b>\$282,716</b>    | <b>\$293,965</b>    |
| 27       |  |                     |                      |                     |                     |                     |
| 28       | <b>NET CASH BALANCES</b>                         | <b>\$1,873,721</b>  | <b>(\$3,614,977)</b> | <b>\$941,823</b>    | <b>\$570,076</b>    | <b>\$100,678</b>    |
| 29       |  |                     |                      |                     |                     |                     |
| 30       | Total Beginning Balance - Unrestricted (Fund 55) | \$16,008,430        | \$17,882,151         | \$14,267,173        | \$15,208,997        | \$15,779,073        |
| 31       | Total Ending Balance - Unrestricted (Fund 557)   | \$17,882,151        | \$14,267,173         | \$15,208,997        | \$15,779,073        | \$15,879,751        |

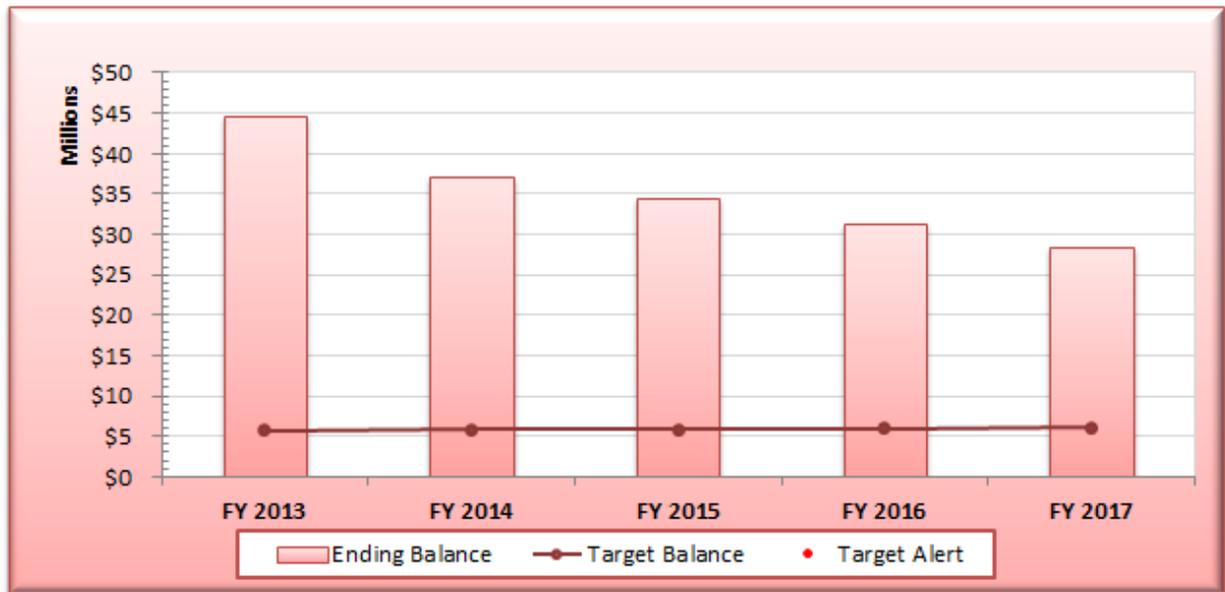
**Restricted Funds Pro-Forma**

| Line No. | Description                                      | Projected FY 2013    | Projected FY 2014    | Projected FY 2015    | Projected FY 2016    | Projected FY 2017    |
|----------|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| 1        | <b>REVENUES</b>                                  |                      |                      |                      |                      |                      |
| 2        | Other Revenues                                   | \$478,507            | \$210,335            | \$210,335            | \$210,335            | \$931,159            |
| 3        | Interest   | \$230,600            | \$248,969            | \$211,271            | \$348,135            | \$281,641            |
| 4        | <b>TOTAL REVENUES</b>                            | <b>\$709,107</b>     | <b>\$459,304</b>     | <b>\$421,606</b>     | <b>\$558,470</b>     | <b>\$1,212,801</b>   |
| 5        |  |                      |                      |                      |                      |                      |
| 6        | <b>OPERATING EXPENSES</b>                        |                      |                      |                      |                      |                      |
| 7        | O&M Expenses                                     | \$0                  | \$0                  | \$0                  | \$0                  | \$0                  |
| 8        | <b>TOTAL OPERATING EXPENSES</b>                  | <b>\$0</b>           | <b>\$0</b>           | <b>\$0</b>           | <b>\$0</b>           | <b>\$0</b>           |
| 9        |  |                      |                      |                      |                      |                      |
| 10       | <b>NET REVENUES</b>                              | <b>\$709,107</b>     | <b>\$459,304</b>     | <b>\$421,606</b>     | <b>\$558,470</b>     | <b>\$1,212,801</b>   |
| 11       |  |                      |                      |                      |                      |                      |
| 12       | <b>CAPITAL EXPENSES</b>                          |                      |                      |                      |                      |                      |
| 13       | CIP - Rates Funded/PAYGO                         | \$4,635,157          | \$4,260,000          | \$4,270,400          | \$4,281,216          | \$4,292,465          |
| 14       | <b>TOTAL CAPITAL EXPENSES</b>                    | <b>\$4,635,157</b>   | <b>\$4,260,000</b>   | <b>\$4,270,400</b>   | <b>\$4,281,216</b>   | <b>\$4,292,465</b>   |
| 15       |  |                      |                      |                      |                      |                      |
| 16       | <b>DEBT SERVICE</b>                              |                      |                      |                      |                      |                      |
| 17       | Existing Debt Service                            | \$235,336            | \$210,335            | \$210,335            | \$210,335            | \$210,335            |
| 18       | <b>TOTAL DEBT SERVICE</b>                        | <b>\$235,336</b>     | <b>\$210,335</b>     | <b>\$210,335</b>     | <b>\$210,335</b>     | <b>\$210,335</b>     |
| 19       |  |                      |                      |                      |                      |                      |
| 20       | <b>TRANSFERS</b>                                 |                      |                      |                      |                      |                      |
| 21       | Transfers (In)/Out of Water Enterprise           | \$0                  | \$0                  | \$0                  | \$0                  | \$0                  |
| 22       | Interfund Transfers (In)/Out of Other Funds      | (\$250,000)          | (\$260,000)          | (\$270,400)          | (\$281,216)          | (\$292,465)          |
| 23       | <b>TOTAL TRANSFERS</b>                           | <b>(\$250,000)</b>   | <b>(\$260,000)</b>   | <b>(\$270,400)</b>   | <b>(\$281,216)</b>   | <b>(\$292,465)</b>   |
| 24       |  |                      |                      |                      |                      |                      |
| 25       | <b>NET CASH BALANCES</b>                         | <b>(\$3,911,386)</b> | <b>(\$3,751,031)</b> | <b>(\$3,788,729)</b> | <b>(\$3,651,865)</b> | <b>(\$2,997,534)</b> |
| 26       |  |                      |                      |                      |                      |                      |
| 27       | Total Beginning Balance - Restricted (Fund 557/  | \$30,683,837         | \$26,772,451         | \$23,021,420         | \$19,232,691         | \$15,580,826         |
| 28       | Total Ending Balance - Restricted (Fund 557/463) | \$26,772,451         | \$23,021,420         | \$19,232,691         | \$15,580,826         | \$12,583,292         |

Table 7 shows total revenues declining (line 6) in FY 2014 and FY 2015 as a result of a decrease in water usage as displayed in Table 1 – Conservation/Use Factor. FY 2017 shows total revenues in the restricted funds increase substantially because of an increase in capital facility charge revenue (line 37). This is because the City is expecting a growth of 1.5% in metered accounts to occur in FY 2017 which will result in additional capital facility charges. Net revenues (line 12 in Table 7), which are Revenues (line 6) subtracted by total O&M (line 10) are projected to be positive in each year of the study.

The City has historically built a healthy level of reserves, successfully meeting coverage and reserve targets in each year throughout the study period. As such, RFC proposes the City retain its current revenue levels and draw down its reserves to adequately fund revenue requirements. **Figure 1** below shows the reserve levels throughout the study. The bars represent the ending balance of the reserves and the line shows the target balance.

**Figure 1: Total Reserve Balances**



**Proposed Rates**

The previous section discussed the necessary levels of revenue required to be generated; the following section discusses proposed changes to the rates and the manner in which those revenues will be generated. RFC collaborated with City staff to identify key goals and objectives to be accomplished by the proposed rate structure. These objectives are listed below (in no particular order).

- Develop proposed rates that are proportional to the cost of providing service;
- Establish a rational nexus between the proposed rates and the cost of service analysis;
- Develop rates that promote efficient water use; and
- Develop rates that enhance revenue stability.

In determining water rates, Government Code Section 54999 requires utilities to perform a cost of service evaluation once every ten (10) years and Proposition 218 requires water rates to be proportional to the cost of service to the property owner. Performing a cost of service analysis ensures that costs are equitably allocated to the appropriate customer class and that the resulting rates are fair and equitable. As a part of the study, RFC developed an updated cost-of service analysis which was used as a nexus linked to the proposed rates.

RFC recommends that the City retain its existing water rate structure for both metered and unmetered customers, including the existing water allocations for metered customers and the existing lot size categories for unmetered customers. However, RFC proposes that several changes be made to the underlying assumptions used to develop the rates. These include the following:

- The City's current unmetered rates are determined assuming a fixed meter portion equivalent to the monthly meter charge for a ¾" meter and a certain usage (which varies based on lot size); Based off discussion with staff, these customers will be assigned a meter portion equivalent to the monthly meter charge for 1" meter. For these unmetered customers, the conversion from unmetered to metered service will include the installation of a 1" meter; proposing to charge an unmetered rate based on a 1" meter is consistent with these conversions. In addition to the fixed amount, unmetered customers are charged based on an assumed consumption which varies by lot size. Currently, the relationship between assumed consumption and lot size is unclear; to establish a rate structure that is more equitable, RFC proposes that the assumed usage be billed proportionately to the customer's lot area. For example, should a customer have a lot size that is twice as large, the proposed bill for that customer would include a usage component which includes twice as much billed usage.
- RFC determined the average water use for metered and unmetered accounts, based on well production and water consumption from metered accounts. Unmetered accounts, on average, use 32.5 hcf per month which is higher than the current default allotment of 30 hcf. The unmetered rates should take into account the higher usage. The higher unmetered consumption is consistent with the Kantor Report<sup>2</sup> findings which conclude that unmetered accounts tend to have higher water consumption than equivalent metered accounts. **Table 8** on the following page shows the methodology used to calculate the average unmetered account usage.

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<sup>2</sup> Kantor, Shawn, PHD. "A Review of the Literature on the Influence of Prices on Residential Water Demand", July 2008

**Table 8: Average Monthly Unmetered Account Usage Calculation**

| Line # |  |                      |
|--------|--|----------------------|
| 1      | Actual Water Production FY 2011 in acre feet (AF)  | 23,260 AF            |
| 2      | Water loss Estimate (-)  | 10%                  |
| 3      | <b>Total Usable Water (Actual Production - 10% Water Loss)</b>   | <b>20,934 AF</b>     |
| 4      | Total Water Production in HCF (multiply by 435.6)  | 9,118,800 HCF        |
| 5      | Actual Metered Usage in FY 2011 in hundred cubic feet (HCF)  | 4,930,662 HCF        |
| 6      | <b>Total Unmetered Account Usage (Total Production - Metered Usage)</b>  | <b>4,188,138 HCF</b> |
| 7      | Number of Unmetered accounts in FY 2011  | 10,747               |
| 8      | <b>Average Consumption Per Unmetered Account (HCF)<br/>(Total Unmetered Account Usage / # of Unmetered Accounts)</b> | <b>32.5 HCF</b>      |

In order to estimate the average monthly consumption for unmetered accounts, the total annual well water production, less estimated water loss, was used as a basis for total annual water demand (line 3), which includes both metered and unmetered accounts. The total metered usage was then subtracted from the total water production to determine the total unmetered usage (line 6). Finally, the total unmetered usage was divided by the total number of unmetered accounts and the number of months in a year to arrive at the average monthly usage of 32.5 HCF per unmetered account.

The proposed rates have been adjusted based on the cost of service analysis performed and the proposed changes to methodology listed above; current and proposed rates are shown in **Table 9**.

Table 9: Current and Proposed Water Rates

**Proposed Rates for Metered Service**

| Meter Size  | Current  | 2013 - 2017 | \$ Change | % Change |
|-------------|----------|-------------|-----------|----------|
| 5/8" x 3/4" | \$35.14  | \$33.66     | (\$1.48)  | -4%      |
| 1"          | \$36.54  | \$35.03     | (\$1.51)  | -4%      |
| 1 1/2"      | \$48.71  | \$46.71     | (\$2.00)  | -4%      |
| 2"          | \$67.00  | \$64.39     | (\$2.61)  | -4%      |
| 3"          | \$77.66  | \$74.84     | (\$2.82)  | -4%      |
| 4"          | \$91.37  | \$88.28     | (\$3.09)  | -3%      |
| 6"          | \$106.60 | \$103.21    | (\$3.39)  | -3%      |
| 8"          | \$152.30 | \$148.02    | (\$4.28)  | -3%      |
| 10"         | \$197.97 | \$192.79    | (\$5.18)  | -3%      |
| 12"         | \$243.39 | \$237.32    | (\$6.07)  | -2%      |
| HCF Charge  | \$0.91   | \$0.87      | (\$0.04)  | -5%      |

**Rates for Unmetered Service**

| Lot Area (sq. ft.) |        | Current         | 2013-2017       | \$ Change | % Change |
|--------------------|--------|-----------------|-----------------|-----------|----------|
| From               | To     |                 |                 |           |          |
| -                  | 10,000 | <b>\$35.14</b>  | <b>\$36.74</b>  | \$1.60    | 5%       |
| 10,001             | 13,000 | <b>\$40.89</b>  | <b>\$45.06</b>  | \$4.17    | 10%      |
| 13,001             | 16,000 | <b>\$48.70</b>  | <b>\$53.37</b>  | \$4.67    | 10%      |
| 16,001             | 19,000 | <b>\$56.07</b>  | <b>\$61.69</b>  | \$5.62    | 10%      |
| 19,001             | 22,000 | <b>\$62.98</b>  | <b>\$70.01</b>  | \$7.03    | 11%      |
| 22,001             | 25,000 | <b>\$69.22</b>  | <b>\$78.32</b>  | \$9.10    | 13%      |
| 25,001             | 28,000 | <b>\$76.45</b>  | <b>\$86.64</b>  | \$10.19   | 13%      |
| 28,001             | 31,000 | <b>\$83.36</b>  | <b>\$94.96</b>  | \$11.60   | 14%      |
| 31,001             | 34,000 | <b>\$90.93</b>  | <b>\$103.27</b> | \$12.34   | 14%      |
| 34,001             | 37,000 | <b>\$98.49</b>  | <b>\$111.59</b> | \$13.10   | 13%      |
| 37,001             | 40,000 | <b>\$106.38</b> | <b>\$119.91</b> | \$13.53   | 13%      |
| 40,001             | 43,000 | <b>\$110.33</b> | <b>\$128.22</b> | \$17.89   | 16%      |
| 43,001             | 46,000 | <b>\$118.22</b> | <b>\$136.54</b> | \$18.32   | 15%      |
| 46,001             | 49,000 | <b>\$126.11</b> | <b>\$144.86</b> | \$18.75   | 15%      |
| 49,001             | 52,000 | <b>\$134.00</b> | <b>\$153.17</b> | \$19.17   | 14%      |
| 52,001             | 55,000 | <b>\$141.89</b> | <b>\$161.49</b> | \$19.60   | 14%      |
| 55,001             | 58,000 | <b>\$149.78</b> | <b>\$169.81</b> | \$20.03   | 13%      |
| 58,001             | 61,000 | <b>\$157.67</b> | <b>\$178.12</b> | \$20.45   | 13%      |
| 61,001             | 64,000 | <b>\$165.55</b> | <b>\$186.44</b> | \$20.89   | 13%      |
| 64,001             | 67,000 | <b>\$173.44</b> | <b>\$194.76</b> | \$21.32   | 12%      |
| 67,001             | 70,000 | <b>\$181.33</b> | <b>\$203.07</b> | \$21.74   | 12%      |

|        |        |          |          |         |     |
|--------|--------|----------|----------|---------|-----|
| 70,001 | 73,000 | \$189.22 | \$211.39 | \$22.17 | 12% |
| 73,001 | 76,000 | \$197.11 | \$219.71 | \$22.60 | 11% |
| 76,001 | 79,000 | \$205.00 | \$228.02 | \$23.02 | 11% |
| 79,001 | 82,000 | \$212.89 | \$236.34 | \$23.45 | 11% |
| 82,001 | 85,000 | \$220.78 | \$244.66 | \$23.88 | 11% |
| 85,001 | 88,000 | \$228.67 | \$252.97 | \$24.30 | 11% |
| Pools  |        | \$7.31   | \$7.80   | \$0.49  | 7%  |

Table 10: Miscellaneous Current and Proposed Rates

Backflow Device Charge

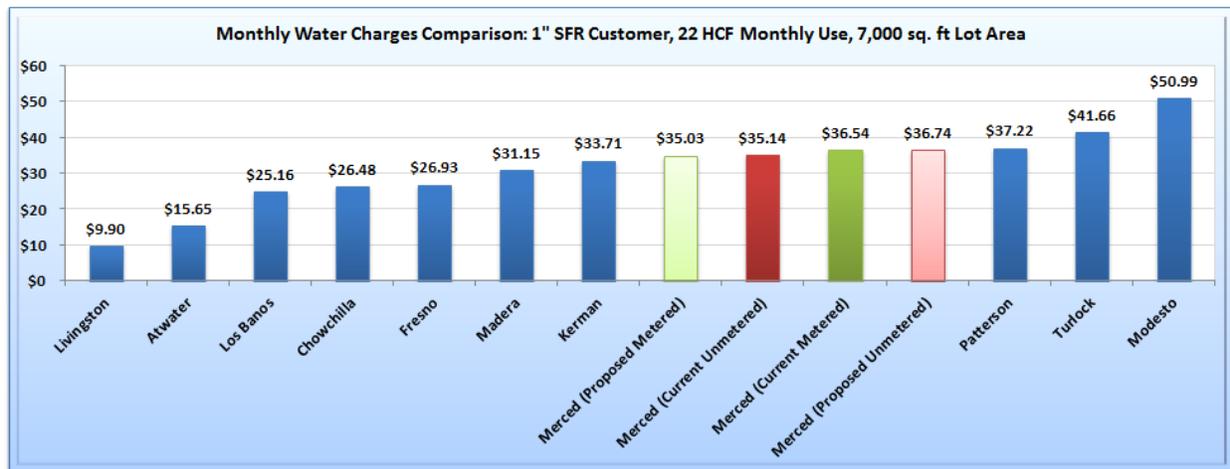
|                | Current | 2013 - 2017 | \$ Change | % Change |
|----------------|---------|-------------|-----------|----------|
| Per Connection | \$5.00  | \$5.00      | \$0.00    | 0%       |

Rate Survey

Comparing water can provide insight into a utility’s pricing policies related to water service. Care should be taken, however, in drawing conclusions from such a comparison. High rates may not necessarily mean poor operations and management practices. Many factors affect the level of costs and the pricing structure employed to recover those costs. Some of the most prevalent factors include geographic location, demand, water supply sources, customer constituency, level of treatment, level of grant funding, age of system, level of general fund subsidization, and rate-setting methodology.

Figure 2 compares monthly bills under existing and proposed rates to other bills within the region, using regional charges that will be in effect at the time of the City’s rate increase. In order to provide a meaningful comparison, all bills are calculated on a monthly basis for an SFR customer using a 1” meter and an assumed monthly usage of 22 hcf (1 hcf = 748 gallons). For comparison purposes with unmetered customers, a 7,000 sq. ft lot area is assumed. From the figure, the City’s monthly residential water charge is still comparable to other agencies even after the new rate structure.

Figure 2: Monthly Water Charges Comparison for 1” SFR Customer, 22 HCF use, 7,000 sq. ft Lot Area



### Implementation Options

RFC collaborated with City staff to identify different rate implementation options and to evaluate the possible impacts on the City's water enterprise as a result of the options available. Based on discussion, the two options are as follows:

- **Option 1** - The first option is to implement all of the proposed changes together in one year, with no phase-in options. This option results in no revenue losses to the City, with maximum impacts to both metered and unmetered customers
- **Option 2** - The second option is to phase in the proposed rates over a two year period. In the first year, the City would implement the proposed changes to meter rates and retain its existing unmetered rates. In the second year, the City would implement the proposed changes to unmetered rates as well. The decrease to metered rates is offset by the increase to unmetered rates. Since the phase in option decreases the metered rates but retains the existing unmetered in year one, implementing a phase-in option would result in a decrease in revenue in the first year, totaling approximately \$300,000. However, the second year would result in the same revenues being collected as a result of an increase to the unmetered rates. This will allow the City to phase-in the meter installation program, providing incentives to convert by having a lower meter rate in the first year and higher unmetered rate in the second year.

Based on input from City Council, Option 2 was recommended.

# Water Capital Facilities Charge

## Section 2

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Capital Facilities Charge (also commonly referred to as a System Buy-in Fee) are one time capital charges assessed against new development, used as a way to provide or cover a proportional share of the costs of capital facilities constructed or to be constructed for use. Capital Facilities Charges are a financial mechanism used to ensure that new customers pay their fair share of capital costs necessary to provide service. In the State of California it is required that these charges comply with the Mitigation Act (AB1600, Government Code 66000 et seq.), which states that there needs to be nexus between the connection and costs, and that fees should be proportionate to the cost of providing service.

There are several approaches to developing such charges. Based on discussions with City staff, RFC recommends using the system buy-in method to determine the fee, as there is already available capacity in the system to serve new customers. Under this method, customers pay an amount equal to the net investment made by existing customers. The total net investment (less any outstanding debt) is divided by the number of equivalent meter units (EMUs) to obtain the unit buy-in cost.

For the system buy-in approach, RFC utilized the replacement cost less depreciation (RCLD) method to determine the asset value of the water systems. This method considers the costs necessary to replace existing facilities but also recognizes that the capacity available in existing facilities is not new and is therefore adjusted for depreciation.

The City provided a listing of assets and capital projects through FY 2012. The calculated replacement cost (RC) of the system as of the current fiscal year (FY 2013) by inflating historical costs using the annual average Engineering News-Record (ENR) 20-City Construction Cost Index (CCI). To recognize that the system is not new, we subtracted the accumulated depreciation of those assets from the replacement cost to determine the value of the system known as replacement cost less depreciation (RCLD). A listing of asset categories and the RCLD of each category is shown in **Table 10**.

**Table 10: Water Enterprise Assets – Replacement Cost Less Depreciation**

| Asset Type                       | Assets Value        |
|----------------------------------|---------------------|
| <u>Depreciable</u>               |                     |
| Building                         | \$1,348,157         |
| Improvement                      | \$35,204,416        |
| Infrastructure                   | \$9,500,400         |
| Machinery and Equipment          | \$650,784           |
| <u>Non-Depreciable</u>           |                     |
| Land                             | \$212,062           |
| Construction in Progress         | \$4,739,803         |
| <b>Total Assets Value (RCLD)</b> | <b>\$51,655,621</b> |

When new users join the system, they will benefit from the City’s cash reserves and will be responsible for payments on existing debt service. It is therefore necessary to add cash reserves (approximately \$44 million) and subtract any outstanding debt principal (approximately \$14.6 million) to determine the net assets value of the water system. The results are shown on **Table 11** below.

**Table 11: Net Asset Value for Water Enterprise**

| Current Assets | + Reserves   | - Outstanding Debt | Net Asset Value     |
|----------------|--------------|--------------------|---------------------|
| \$51,655,621   | \$43,883,987 | \$14,604,295       | <b>\$80,935,313</b> |

Once the net asset value has been determined, the connection fee unit cost can be determined by dividing the net asset value by the total equivalent meter units (EMU).

Current and proposed Water Capital Facilities Charges are shown in **Table 12**.

**Table 12: Current and Proposed Water Capital Facilities Charges**

| Meter Size | Current   | Proposed         | \$ Change   | % Change |
|------------|-----------|------------------|-------------|----------|
| 1"         | \$6,240   | <b>\$3,867</b>   | (\$2,373)   | -38%     |
| 1 1/2"     | \$12,478  | <b>\$7,734</b>   | (\$4,744)   | -38%     |
| 2"         | \$19,966  | <b>\$12,374</b>  | (\$7,592)   | -38%     |
| 3"         | \$39,931  | <b>\$24,749</b>  | (\$15,182)  | -38%     |
| 4"         | \$62,392  | <b>\$38,670</b>  | (\$23,722)  | -38%     |
| 6"         | \$124,783 | <b>\$77,340</b>  | (\$47,443)  | -38%     |
| 8"         | \$199,654 | <b>\$123,745</b> | (\$75,909)  | -38%     |
| 10"        | \$311,959 | <b>\$193,351</b> | (\$118,608) | -38%     |
| 12"        | --        | <b>\$270,690</b> | n/a         | n/a      |

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# Commercial Wastewater Rates

## Section 3

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In addition to the City's water rates and water capital facilities charges, the City engaged RFC to evaluate possible methodologies for evaluating commercial wastewater rates. The last wastewater rate and connection fee study was performed in 2010; the study established wastewater rates for commercial customers based on water usage, with a 10% deduction to account for irrigation needs. The City was interested in evaluating the validity of these deductions – specifically whether or not they truly account for customers irrigation use – as well as other alternative methods for determining charges.

Based on discussion with City staff, RFC evaluated three different options. Criteria that were evaluated included the ease of administering the proposed option, the ability for to maintain consistency with the existing rate structure, and equity.

- **Proactive Process** – One driver for addressing the commercial wastewater rate methodology is that a significant number of previously residential properties have been converted into offices, and thus have greater irrigation needs than provided for by the current deduction. Under this method, the City will proactively identify customers that fit the above characteristics. If so, the City will evaluate the possibility of charging such customers under a Single Family Residential (SFR) rate to better reflect the wastewater generation.
- **Winter Water Use** – Another methodology for determining non-residential wastewater use is to use winter water usage. Under this option, customers are billed based on usage during a winter period (typically taken as the months of January to March); irrigation use during winter months is significantly lower and thus winter water use is an accurate indicator of wastewater use. Based on discussion with City staff, the challenge associated with this option is the ability to administer such a change given the City's current billing capabilities.
- **Meter Size** – This option involves developing commercial wastewater rates which vary based upon meter size. Although this method is easy to implement (the billing data lists accounts by meter size), the challenge associated with using meter size is that the developed rates do not account for different customer classes and the strength requirements of those classes.

A ranking matrix for the three options under the three criteria is shown in **Table 13** below.

**Table 13: Objectives Ranking Matrix for Wastewater Rate Options**

| Description              | Administrative Ease | Consistency with Current Rate Structure | Equity |
|--------------------------|---------------------|---|--------|
| <b>Proactive Process</b> | ★★                  | ★★★                                     | ★★★    |
| <b>Winter Water Use</b>  | ★                   | ★★                                      | ★★★    |
| <b>Meter Size</b>        | ★★★                 | ★                                       | ★      |

Based on discussions with City staff and City Council regarding the benefits and challenges of each, RFC recommends that the City implement the proactive process.

# Bulk Water Rates

## Section 4

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As a part of the study, RFC evaluated the options associated with developing a bulk water rate for large water users. Bulk water rates are primarily utilized as a way of providing economic incentive for development.

However, there are several challenges associated with the development of bulk water rates. One challenge is that as specified by Government Code 54999 and Proposition 218, water rates (which include bulk water rates) must reflect the true costs of providing service. In addition, current large scale water users may qualify for the bulk rate program, and under a bulk rate program this would result in a revenue decrease.

Upon discussions with the City, three options were proposed, described as the following.

- **Standalone/dedicated well** – By establishing a standalone well for a large scale user, such user ultimately qualifies for bulk water rates, as such a customer qualifies for a lower level of service. The challenge with this proposed option is that the customer would be responsible for covering costs associated with drilling the well and operating costs (either on an upfront cash basis or through debt financing, in which case the customer would be responsible for the associated debt service)
- **Take or Pay Contract** – Under this option, the customer would be responsible for paying for a certain water allotment regardless of whether or not that customer used water up to their allotment. To determine the appropriate contract rate, the peaking cost of capital should be determined and removed from the contract rate, as the customer will buy a set amount ever month. Should such a customer exceed their allotment, additional water use would be charged at the normal commodity rate. Challenges associated with this method include administrative costs – a certain contract amount would need to be established to recover such costs
- **Individual Contract** – Under this option, the proposed bulk rate customer would separately negotiate a contract with the City to provide a bulk rate option