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**RFC**  
RAFTELIS FINANCIAL  
CONSULTANTS, INC.



RAFTELIS FINANCIAL  
CONSULTANTS, INC.

201 S Lake Av, Suite 301  
Pasadena, CA 91101

Phone 626 • 583 • 1894 [www.raftelis.com](http://www.raftelis.com)  
Fax 626 • 583 • 1411

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## **SECTION 1: EXECUTIVE SUMMARY**

The City of Chowchilla (City) is situated in Madera County, covering approximately seven square miles with a population of 11,000. Approximately 480 acres in the City is zoned for light and heavy industry. Another 880 acres adjacent to the City limits are industrially zoned.

The City's last wastewater rate study was conducted more than five years ago and the rates have not been updated since 2008. Moreover, the City has experienced a decline in accounts in recent years due to foreclosures. The City's wastewater enterprise fund is also facing challenges from increasing operating costs and planned capital expenditures. The City's current wastewater rates are not adequate to support the enterprise fund. As a result, the City engaged RFC to review rates and develop a financial plan that accomplishes the following objectives:

- ◆ Ensure revenue sufficiency to meet operating and capital costs;
- ◆ Determine wastewater rates that are equitable to current and future users;
- ◆ Rates that are easy to understand and administer; and
- ◆ Provide a user-friendly rate model in Microsoft Excel® to assist the City in future planning;

This section of the Executive Summary provides a brief description of the wastewater system, a review of revenue requirements, an analysis of cost of service, and the design of wastewater rates.

## **BACKGROUND**

The City operates a 1.8 million gallon-per-day (MGD) wastewater treatment plant and maintains 4 sewage lift pump stations and 37 miles of sewer pipelines. The wastewater utility's objective is to collect, treat, and dispose of residential and commercial wastewater in an environmentally safe manner. This process is closely monitored by several State of California regulatory agencies to guarantee compliance with Federal and State mandates.

## **CURRENT RATE STRUCTURE**

The City's current rate structure consists of a monthly flat charge for all metered and non-metered residential and commercial customers that varies by customer type. In addition to the flat charge, a separate debt service charge that also varies

Description	Fees effective July 1, 2008	
Single Family Dwelling	\$	24.86
each additional unit	\$	19.69
Multi-Family Dwelling, including duplex, triplex and apartments (per unit)	\$	19.69
Mobile Home, including trailers (per mobile unit)	\$	19.69
Hotels, Motels, Rooming Houses (per unit, 80% of monthly water charge)	\$	19.69
Schools: Elementary Schools, first 50 students	\$	19.69
each additional student	\$	0.39
High Schools, first 50 students	\$	27.47
each additional student	\$	0.55
Churches, theaters, places of public assembly without food preparation	\$	21.76
Churches, theaters, places of public assembly with food preparation	\$	30.04
Hospitals	\$	290.01
Bowling Alleys, Skating Rinks, & Similar establishments without food preparation	\$	21.76
Bowling Alleys, Skating Rinks, & Similar establishments with food preparation	\$	30.04
Restaurants, Cafeterias	\$	30.04
Bars, Lounges, etc	\$	21.76
Office Building, including commercial shops, stores, Dental & Medical offices, barbershops beauty shops	\$	21.76
Service Station	\$	30.04
Laundromats & Laundries		80% of metered water charge
Light industrial uses where sewer charge is for domestic purposes only		80% of metered water charge

Description	Fees effective July 1, 2008
Single Family Dwelling	\$ 2.55
Multi Family Dwellings including duplex, triplex, and apartments	\$ 2.02
Mobile Home, including trailers	\$ 2.02
Hotels, Motels, Rooming-houses	Rate based on meter size
Schools:	
Elementary Schools, per nearest 50 students	\$ 2.02
High Schools, per nearest 50 students	\$ 2.82
Churches, theaters, places of public assembly without food preparation	\$ 2.23
Churches, theaters, places of public assembly with food preparation	\$ 3.08
Hospitals	\$ 29.75
Bowling Alleys, Skating Rinks, & Similar establishments without food preparation	\$ 2.33
Bowling Alleys, Skating Rinks, & Similar establishments with food preparation	\$ 3.08
Restaurants, cafeterias	\$ 3.08
Bars, Lounges, etc	\$ 2.23
Office Buildings, including commercial shops and stores, dental and medical offices, and Beauty Shops	\$ 2.23
Service Stations	\$ 3.08
Combination	\$ 2.55
each additional unit	\$ 2.02
Laundromats and Laundries	Rate based on meter size
Light industrial uses where sewer discharge is for domestic purposes only	Rate based on meter size

issue a 30-year term debt of \$1.3 million at the beginning of FY 2012 to cover future capital improvement program (CIP) expenses. Debt service charges will be adjusted to cover additional annual debt service expenses.

**COST OF SERVICE**

The cost of service (COS) allocations in this study are based on a methodology approved by the State Water Resources Control Board (SWRCB). The revenue requirements are allocated to different user classes in proportion to the cost of providing their wastewater service. As mandated by the SWRCB, functional allocations are made to flow, Biochemical Oxygen Demand (BOD), and Suspended Solids (SS) parameters.

**RECOMMENDATIONS AND PROPOSED CHANGES**

This section of the Executive Summary outlines RFC’s suggestions and recommendations that will enhance equity in the apportionment and recovery of costs.

*Revenue Adjustments*

Revenue requirements for the planning period were projected from the City’s FY 2011 budget information. The projections indicated that the City needs revenue adjustments in the next few years. To ensure financial sufficiency, RFC proposes the following revenue adjustments. The FY 2011 adjustment will be effective in May. The subsequent proposed revenue adjustments will be effective in July of each year.

FY 2011	FY 2012	FY 2013 – FY 2016
11%	0%	5% each year

It should be noted that revenue adjustments are not necessarily the same as rate increases. Some customers may face bill impacts higher than the overall revenue adjustment while other customers may face lower bill impacts.

*Recommended Rate Structure*

RFC recommends the following rate structure for the different classes of customers:

**Single Family Residence (SFR):** RFC recommends that the City continue to charge SFR customers a flat monthly rate.

**Multiple Family Residence (MFR):** Non-metered MFR accounts will be assessed a flat monthly charge on a per apartment basis.

Table ES – 3 shows the proposed rates for the residential customers.

**Non-Metered Commercial Customers:** RFC recommends that the City simplify the non-metered commercial classes. Under the proposed rate structure, non-metered commercial users will be classified into six classes and a variable charge based on number of relevant parameters will be applied.

Table ES – 4 shows the proposed rates for the non-metered commercial customers.

**Metered Commercial Customers:** Commercial customers who have water meters will be classified into four groups based on users' strength and flow characteristics. Users in each group will be charged different rates based on hundred cubic feet (hcf) of water usage.

Group 1 (Extra-low Strength): School

Group 2 (Low Strength): Commercial and Church

Group 3 (Medium Strength): Hospital

Group 4 (High Strength): Restaurant

The City should also implement a program that would allow master metered accounts to petition for a revision of strength classification should their strength characteristics change. For example, if a meter serves three restaurants and one of the restaurants converts to office space, the strength characteristics of the account have changed from Group 4 (High Strength) to Group 3 (Medium Strength).

To accommodate potential industrial customers with higher strength parameters, please refer to the Appendix for the unit rates that can be charged.

Table ES – 5 shows the proposed rates for the metered commercial customers.

**Debt Service Charges:** The City wants to retain a separate debt service charge to cover annual debt payments. RFC recommends the same rate structure for both wastewater and debt service charges. The proposed debt service charges are shown in Tables ES – 6 to ES – 8.





## SECTION 2: INTRODUCTION

The City's last rate study was conducted more than five years ago and the rates have not been updated since 2008. Moreover, the City has experienced a decline in accounts in recent years due to foreclosures. The City's wastewater enterprise fund is also facing challenges from increasing operating costs and planned capital expenditures. The City's current wastewater rates are not adequate to support the enterprise fund. As a result, the City engaged Raftelis Financial Consultants, Inc. (RFC) to review existing rates, develop a financial plan, and perform a wastewater cost of service rate study.

### BACKGROUND

The wastewater division of the City of Chowchilla provides service to a population of approximately 11,000. The City operates a 1.8 million gallon-per-day (MGD) wastewater treatment plant and maintains 4 sewage lift pump stations and 37 miles of sewer pipelines. The wastewater utility's purpose is to collect, treat, and dispose of residential and commercial wastewater in an environmentally safe manner. This process is closely monitored by several State of California regulatory agencies to guarantee compliance with Federal and State mandates.

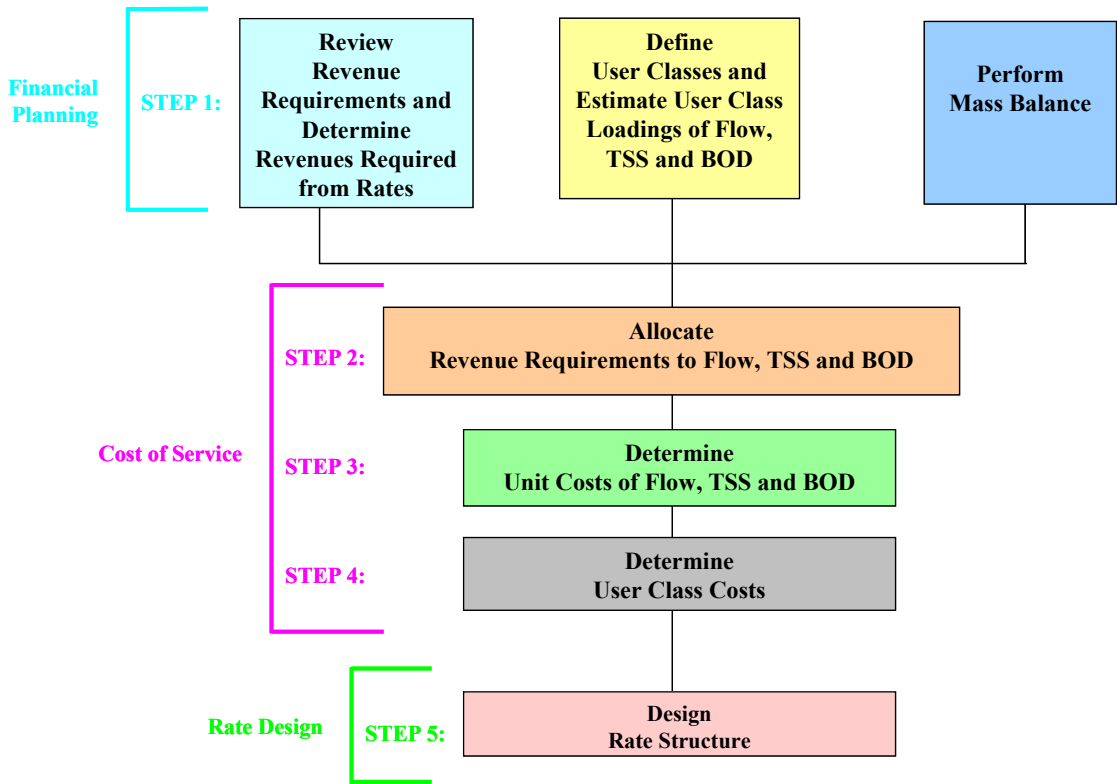
### SCOPE OF STUDY

The scope of this study includes developing a financial plan and cost-based wastewater user rates through a comprehensive cost of service and rate design process. Figure 2-1 provides a graphical representation of the three major processes involved in this study. The three major processes are as follows:

**Financial Planning:** Revenue requirements are projected for the forecast period from FY 2011 through FY 2016. Financial planning involves estimation of annual O&M and capital expenses, annual debt service, debt service coverage and reserve requirements, operating and capital revenue sources, and the determination of required annual user revenues from rates and charges.

**Cost of Service Analysis:** The cost of service analysis involves identifying and allocating annual revenue requirements to the different cost parameters.

**Rate Design:** The rate design involves the development of a rate structure that meets the City's objective of providing a fair and equitable distribution of cost to the system's users.



Customer Class (Non-Metered)	Parameter of Measure	# of Accounts	Average Wastewater Flow per Parameter (gpd) (1)	Total # of Parameters
<b>SFR</b>	# of units	3,093		
<b>Duplex</b>	# of units	118		
<b>MFR</b>	# of apartments	136		
<b>Commercial</b>	1000 Sq. Ft.	72	100	197
<b>Church</b>	1000 Sq. Ft.	20	50	87
<b>Restaurants</b>	# of seats	7	30	502
<b>Schools :</b>				
High School	# of students	1	12	887
Elementary School	# of students	3	8	1,114
<b>Hospitals/Clinics</b>	1000 Sq. Ft.	8	300	48
(1) WW flow data from Los Angeles County Sanitation District (LACSD) and Los Angeles Charge Guide				

Description	Fees effective July 1, 2008
Single Family Dwelling	\$ 24.86
each additional unit	\$ 19.69
Multi-Family Dwelling, including duplex, triplex and apartments (per unit)	\$ 19.69
Mobile Home, including trailers (per mobile unit)	\$ 19.69
Hotels, Motels, Rooming Houses (per unit, 80% of monthly water charge)	\$ 19.69
Schools: Elementary Schools, first 50 students	\$ 19.69
each additional student	\$ 0.39
High Schools, first 50 students	\$ 27.47
each additional student	\$ 0.55
Churches, theaters, places of public assembly without food preparation	\$ 21.76
Churches, theaters, places of public assembly with food preparation	\$ 30.04
Hospitals	\$ 290.01
Bowling Alleys, Skating Rinks, & Similar establishments without food preparation	\$ 21.76
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Restaurants, Cafeterias	\$ 30.04
Bars, Lounges, etc	\$ 21.76
Office Building, including commercial shops, stores, Dental & Medical offices, barbershops beauty shops	\$ 21.76
Service Station	\$ 30.04
Laundromats & Laundries	80% of metered water charge
Light industrial uses where sewer charge is for domestic purposes only	80% of metered water charge

Description	Fees effective July 1, 2008
Single Family Dwelling	\$ 2.55
Multi Family Dwellings including duplex, triplex, and apartments	\$ 2.02
Mobile Home, including trailers	\$ 2.02
Hotels, Motels, Rooming-houses	Rate based on meter size
Schools:	
Elementary Schools, per nearest 50 students	\$ 2.02
High Schools, per nearest 50 students	\$ 2.82
Churches, theaters, places of public assembly without food preparation	\$ 2.23
Churches, theaters, places of public assembly with food preparation	\$ 3.08
Hospitals	\$ 29.75
Bowling Alleys, Skating Rinks, & Similar establishments without food preparation	\$ 2.33
Bowling Alleys, Skating Rinks, & Similar establishments with food preparation	\$ 3.08
Restaurants, cafeterias	\$ 3.08
Bars, Lounges, etc	\$ 2.23
Office Buildings, including commercial shops and stores, dental and medical offices, and Beauty Shops	\$ 2.23
Service Stations	\$ 3.08
Combination	\$ 2.55
each additional unit	\$ 2.02
Laundromats and Laundries	Rate based on meter size
Light industrial uses where sewer discharge is for domestic purposes only	Rate based on meter size

	Estimated FY 2011	Projected FY 2012	Projected FY 2013	Projected FY 2014	Projected FY 2015	Projected FY 2016
<b>Administration</b>						
Salary and Benefits	\$ 105,380	\$ 97,427	\$ 101,324	\$ 105,377	\$ 109,592	\$ 113,976
<b>Billing and Collections</b>						
Salary and Benefits	\$ 43,197	\$ 44,925	\$ 46,722	\$ 48,591	\$ 50,534	\$ 52,556
Operating Costs	\$ 18,920	\$ 14,477	\$ 15,056	\$ 15,658	\$ 16,284	\$ 16,936
<b>Operations</b>						
Salary and Benefits	\$ 272,222	\$ 294,002	\$ 305,762	\$ 317,993	\$ 330,712	\$ 343,941
Operating Costs	\$ 275,756	\$ 275,757	\$ 286,787	\$ 298,259	\$ 310,189	\$ 322,597
<b>Maintenance</b>						
Salary and Benefits	\$ 116,667	\$ 126,001	\$ 131,041	\$ 136,283	\$ 141,734	\$ 147,403
Operating Costs	\$ 118,182	\$ 118,181	\$ 122,908	\$ 127,825	\$ 132,938	\$ 138,255
<b>Total O&amp;M Expenses</b>	<b>\$ 950,324</b>	<b>\$ 970,770</b>	<b>\$ 1,009,601</b>	<b>\$ 1,049,985</b>	<b>\$ 1,091,984</b>	<b>\$ 1,135,663</b>

Regular CIP	<u>Estimated</u> FY 2011	<u>Projected</u> FY 2012	<u>Projected</u> FY 2013	<u>Projected</u> FY 2014	<u>Projected</u> FY 2015	<u>Projected</u> FY 2016
<b>System Improvements</b>						
Capital Outlay Contingency	\$ -	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
Annual Line Replacement	\$ -	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
<b>Existing WWTP Costs:</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Installation of Security Fencing	\$ -	\$ 228,200	\$ -	\$ -	\$ -	\$ -
Add Ponding Basin	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ -
Upgrade/replace equipment	\$ -	\$ -	\$ 200,000	\$ 300,000	\$ -	\$ -
Lift station rehab	\$ -	\$ 15,000	\$ 30,000	\$ 15,000	\$ -	\$ -
Upgrade lift station to submersibles	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000
Install SCADA @ plant/5 lift stations	\$ -	\$ -	\$ 75,000	\$ -	\$ -	\$ -
Wastewater Treatment Plant Upgrade	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 900,000
<b>Add'l M&amp;O</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Rip ponding basins/repair banks	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
Annual line mtce. & inspection	\$ -	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Rolling Stock:</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Loader	\$ -	\$ -	\$ 150,000	\$ -	\$ -	\$ -
Vactor Truck	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -
<b>Total CIP</b>	<b>\$ 10,000</b>	<b>\$ 913,200</b>	<b>\$ 925,000</b>	<b>\$ 485,000</b>	<b>\$ 170,000</b>	<b>\$1,120,000</b>

	Estimated FY 2011	Projected FY 2012	Projected FY 2013	Projected FY 2014	Projected FY 2015	Projected FY 2016
1 Existing Rate Revenue	\$ 1,175,000	\$ 1,198,500	\$ 1,222,470	\$ 1,246,919	\$ 1,271,858	\$ 1,297,295
2 Debt Charge Revenue	123,000	103,546	103,344	102,747	101,782	100,453
3 Additional Revenue	-	-	-	-	-	-
4 Other Revenue	5,088	2,962	1,300	1,300	1,300	1,300
5 <b>Total Revenue</b>	<b>\$ 1,303,088</b>	<b>\$ 1,305,008</b>	<b>\$ 1,327,114</b>	<b>\$ 1,350,966</b>	<b>\$ 1,374,940</b>	<b>\$ 1,399,048</b>
6 <b>Total O&amp;M Expenses</b>	<b>\$ 950,324</b>	<b>\$ 970,770</b>	<b>\$ 1,009,601</b>	<b>\$ 1,049,985</b>	<b>\$ 1,091,984</b>	<b>\$ 1,135,663</b>
7 <b>Net Revenue</b>	<b>\$ 352,763</b>	<b>\$ 334,238</b>	<b>\$ 317,513</b>	<b>\$ 300,982</b>	<b>\$ 282,956</b>	<b>\$ 263,384</b>
8 Total Bond Issued	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9 Issuance Expense & Reserve	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10 Amount available for CIP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11 <b>CIP Financing</b>						
12 Cash CIP	\$ 10,000	\$ 913,200	\$ 925,000	\$ 485,000	\$ 170,000	\$ 1,120,000
13 Debt CIP	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14 Existing Debt Service	103,382	103,546	103,344	102,747	101,782	100,453
15 New Debt Service	-	-	-	-	-	-
16 <b>Total Debt Service</b>	<b>\$ 103,382</b>	<b>\$ 103,546</b>	<b>\$ 103,344</b>	<b>\$ 102,747</b>	<b>\$ 101,782</b>	<b>\$ 100,453</b>
17 <b>Net Cash Balance</b>	<b>\$ 239,381</b>	<b>\$ (682,508)</b>	<b>\$ (710,831)</b>	<b>\$ (286,765)</b>	<b>\$ 11,174</b>	<b>\$ (957,069)</b>
18 Beginning Reserve Level	\$ 245,482	\$ 484,863	\$ (197,645)	\$ (908,476)	\$ (1,195,241)	\$ (1,184,067)
19 <b>Ending Reserve Level</b>	<b>\$ 484,863</b>	<b>\$ (197,645)</b>	<b>\$ (908,476)</b>	<b>\$ (1,195,241)</b>	<b>\$ (1,184,067)</b>	<b>\$ (2,141,136)</b>
20 <b>Ending Reserve Level (less bonds)</b>	484,863	(197,645)	(908,476)	(1,195,241)	(1,184,067)	(2,141,136)
21 <b>Target Reserve Level</b>	<b>\$ 539,514</b>	<b>\$ 544,626</b>	<b>\$ 554,334</b>	<b>\$ 564,430</b>	<b>\$ 574,929</b>	<b>\$ 585,849</b>
22 Coverage Ratio	341%	323%	307%	293%	278%	262%

**OPERATING FINANCIAL PLAN**

*Proposed Revenue Adjustments*

The forecast of revenue requirements indicated that the City will need several revenue increases over the forecast period. The first rate adjustment is proposed for May 2011. The subsequent rate increases are anticipated to take place in July of each year. RFC proposes the following adjustments.

FY 2011	FY 2012	FY 2013 – FY 2016
11%	0%	5% each year

It should be noted that revenue adjustments are not necessarily the same as rate increases. Some customers may face bill impacts higher than the overall revenue adjustment while other customers may face lower bill impacts.

*Operating Reserve*

Prudent business practice requires the City to maintain an operating reserve created from rate revenues. This reserve may be used to meet ongoing operating expenses as well as unexpected increases in costs. RFC recommends that the City should maintain 25 percent or 90 days of O&M expenses in its operating reserve to meet working capital requirements and unexpected increases in costs during the year. Under the proposed financial plan, the City will meet this reserve requirement by FY 2012.

**CAPITAL FINANCIAL PLAN**

*Existing and Proposed Debt Service Requirements and Coverage*

Debt service requirements consist of both principal and interest payments. In 1994, the Chowchilla Public Financing Authority issued Revenue Bonds to fund the wastewater plant improvement project in the amount of \$920,000. This bond was refinanced in 2000. In 2001, the City entered into a loan agreement with USDA for the purpose of obtaining construction funding for capital improvements to the City’s wastewater system. The USDA bond matures in 2020.

In order to fund all planned capital projects, RFC recommends that the City should issue 30-year debt at the beginning of FY 2012 to fund the capital projects in order to avoid a larger rate increase. We have assumed annual debt coverage requirements of

125% of annual debt service payments. The monthly debt service charges will adjust in 2012 to reflect the additional revenue needed to fund the new debt service.

*Capital Reserve*

The City's Capital Reserve would be used to finance capital projects and maintain reserves for emergency needs. RFC recommends that the City should maintain a target of 50 percent of average annual routine capital expenses over the planning period in this reserve.

**RESERVES UNDER PROPOSED RATE STRUCTURE**

With the proposed revenue adjustments and proposed debt, the City will have the reserve level shown in Table 3-4. The table indicates that the City will meet its proposed debt coverage over the forecast period and target reserve level by the end of the forecast period with the proposed adjustments and recommendations.

Line 6 shows the annual O&M expenses. Line 12 and 13 show the total CIP expenses, separated by cash and debt funding sources. Line 21 shows the target reserve level, including both operating and capital reserves targets. Line 20 indicates that the City will meet its target reserve level by FY 2012. Line 21 shows that the City will maintain its proposed debt coverage requirement of at least 125 percent of annual debt service after issuance of the proposed debt at the beginning of FY 2012.

	Estimated FY 2011	Projected FY 2012	Projected FY 2013	Projected FY 2014	Projected FY 2015	Projected FY 2016
1 Existing Rate Revenue	\$ 1,175,000	\$ 1,198,500	\$ 1,222,470	\$ 1,246,919	\$ 1,271,858	\$ 1,297,295
2 Debt Charge Revenue	123,000	200,697	200,495	199,898	198,933	197,604
3 Additional Revenue	21,542	131,835	202,319	279,029	362,433	453,031
4 Other Revenue	5,196	8,916	10,170	9,106	11,023	10,466
5 <b>Total Revenue</b>	<b>\$ 1,324,738</b>	<b>\$ 1,539,949</b>	<b>\$ 1,635,454</b>	<b>\$ 1,734,953</b>	<b>\$ 1,844,248</b>	<b>\$ 1,958,396</b>
6 <b>Total O&amp;M Expenses</b>	<b>\$ 950,324</b>	<b>\$ 970,770</b>	<b>\$ 1,009,601</b>	<b>\$ 1,049,985</b>	<b>\$ 1,091,984</b>	<b>\$ 1,135,663</b>
7 <b>Net Revenue</b>	<b>\$ 374,413</b>	<b>\$ 569,179</b>	<b>\$ 625,853</b>	<b>\$ 684,969</b>	<b>\$ 752,264</b>	<b>\$ 822,732</b>
8 Total Bond Issued	\$ -	\$ 1,337,269	\$ -	\$ -	\$ -	\$ -
9 Issuance Expense & Reserve	\$ -	\$ 137,269	\$ -	\$ -	\$ -	\$ -
10 Amount available for CIP	\$ -	\$ 1,200,000	\$ -	\$ -	\$ -	\$ -
11 <b>CIP Financing</b>						
12 Cash CIP	\$ 10,000	\$ -	\$ 638,200	\$ 485,000	\$ 170,000	\$ 1,120,000
13 Debt CIP	\$ -	\$ 913,200	\$ 286,800	\$ -	\$ -	\$ -
14 Existing Debt Service	103,382	103,546	103,344	102,747	101,782	100,453
15 New Debt Service	-	97,151	97,151	97,151	97,151	97,151
16 <b>Total Debt Service</b>	<b>\$ 103,382</b>	<b>\$ 200,697</b>	<b>\$ 200,495</b>	<b>\$ 199,898</b>	<b>\$ 198,933</b>	<b>\$ 197,604</b>
17 <b>Net Cash Balance</b>	<b>\$ 261,031</b>	<b>\$ 655,282</b>	<b>\$ (499,642)</b>	<b>\$ 70</b>	<b>\$ 383,330</b>	<b>\$ (494,872)</b>
18 Beginning Reserve Level	\$ 245,482	\$ 506,513	\$ 1,161,795	\$ 662,153	\$ 662,223	\$ 1,045,553
19 <b>Ending Reserve Level</b>	<b>\$ 506,513</b>	<b>\$ 1,161,795</b>	<b>\$ 662,153</b>	<b>\$ 662,223</b>	<b>\$ 1,045,553</b>	<b>\$ 550,681</b>
20 <b>Ending Reserve Level (less bonds)</b>	506,513	874,995	662,153	662,223	1,045,553	550,681
21 <b>Target Reserve Level</b>	<b>\$ 539,514</b>	<b>\$ 544,626</b>	<b>\$ 554,334</b>	<b>\$ 564,430</b>	<b>\$ 574,929</b>	<b>\$ 585,849</b>
22 Coverage Ratio	362%	284%	312%	343%	378%	416%

## **SECTION 4: COST OF SERVICE**

To determine equitable rates, it is necessary to perform a cost of service analysis that allocates costs to customers in proportion to the service received. SWRCB revenue guidelines as well as industry practice require that costs be allocated to flow, SS and BOD.

### *Cost of Service Analysis*

The determination of the wastewater flows, wastewater loadings, and the revenue requirements of the wastewater enterprise funds provide the basis for performing the cost of service analysis. The total revenue requirement (net of miscellaneous revenue credits) is the net cost of providing service, and will be allocated to the flow, BOD and SS parameters. These allocations are then used as the basis to develop unit rates for the wastewater parameters and to allocate costs to the various user classes in proportion to the wastewater services rendered. The concept of proportionate allocation to user classes implies that allocations should take into consideration the quantity of wastewater a user contributes and the strength of wastewater. The same methodology is used to allocate debt service charges to different user classes.

## SECTION 5: PROPOSED RATE STRUCTURE

Rate design is the process of developing rate schedules for each user class that will equitably recover the annual cost of service incurred by members of that class. After careful review of the City's revenue requirements and cost of service, RFC recommends the following rate structure:

**Single Family Residence (SFR):** RFC recommends that the City should continue charging non-metered SFR customers a flat monthly rate.

**Multiple Family Residence (MFR):** Non-metered MFR accounts will be assessed a flat monthly charge on a per apartment basis.

Table 5-1 shows the proposed rates for the residential customers.

**Non-Metered Commercial Customers:** RFC recommends that the City simplify the non-metered commercial classes. Under the proposed rate structure, non-metered commercial users will be classified into six classes and a variable charge based on number of relevant parameters will be applied.

Table 5-2 shows the proposed rates for the non-metered commercial customers.

**Metered Commercial Customers:** Commercial customers who have water meters will be classified into four groups based on users' strength and flow characteristics. Users in each group will be charged different rates based on hundred cubic feet (hcf) units of water usage.

Group 1 (Extra-low Strength): School

Group 2 (Low Strength): Commercial and Church

Group 3 (Medium Strength): Hospital

Group 4 (High Strength): Restaurant

The City should also implement a program that would allow master metered accounts to petition for a revision of strength classification should their strength characteristics change. For example, if a meter serves three restaurants and one of the restaurants converts to office space, the strength characteristics of the account have changed from Group 4 (High Strength) to Group 3 (Medium Strength).

To accommodate potential industrial customers with higher strength parameters, please refer to the Appendix for the unit rates that can be charged.

Table 5-3 shows the proposed rates for the metered commercial customers.

**Debt Service Charges:** The City wants to retain a separate debt service charge to cover annual debt payments. RFC recommends the same rate structure for both wastewater

Residential Customers	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Single Family Dwelling	\$ 20.17	\$ 20.17	\$ 21.18	\$ 22.24	\$ 23.35	\$ 24.52
Multi-Family Dwelling (per unit)	\$ 15.13	\$ 15.13	\$ 15.89	\$ 16.68	\$ 17.52	\$ 18.39
Mobile Home (per mobile unit)	\$ 15.13	\$ 15.13	\$ 15.89	\$ 16.68	\$ 17.52	\$ 18.39

Non- Metered Commercial Customers	Parameter	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed
		FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Commercial	1000 Sq. Ft.	\$ 7.85	\$ 7.85	\$ 8.24	\$ 8.65	\$ 9.09	\$ 9.54
Church	1000 Sq. Ft.	\$ 3.92	\$ 3.92	\$ 4.12	\$ 4.33	\$ 4.54	\$ 4.77
Restaurants	# of seats	\$ 6.29	\$ 6.29	\$ 6.60	\$ 6.93	\$ 7.28	\$ 7.64
Schools :							
High School	# of students	\$ 0.85	\$ 0.85	\$ 0.89	\$ 0.94	\$ 0.99	\$ 1.04
Elementary School	# of students	\$ 0.57	\$ 0.57	\$ 0.60	\$ 0.63	\$ 0.66	\$ 0.69
Hospitals/Clinics	1000 Sq. Ft.	\$ 24.69	\$ 24.69	\$ 25.93	\$ 27.23	\$ 28.59	\$ 30.02

Commercial Customers - Metered	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed
	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
<b>Wastewater Charge (\$/ hcf of water usage - 80% wastewater return factor is assumed)</b>						
Non-Residential - Group 1 (Extra-low Strength)	\$ 1.40	\$ 1.40	\$ 1.47	\$ 1.54	\$ 1.62	\$ 1.70
Non-Residential - Group 2 (Low Strength)	\$ 1.54	\$ 1.54	\$ 1.62	\$ 1.70	\$ 1.79	\$ 1.88
Non-Residential - Group 3 (Medium Strength)	\$ 1.62	\$ 1.62	\$ 1.70	\$ 1.79	\$ 1.87	\$ 1.97
Non-Residential - Group 4 (High Strength)	\$ 4.12	\$ 4.12	\$ 4.33	\$ 4.55	\$ 4.77	\$ 5.01



Residential Customers	Proposed FY 2011	Parameter FY2011	Count FY2011
Single Family Dwelling	\$ 20.17	Account	3,093
Multi-Family Dwelling (per unit)	\$ 15.13	Dwelling Unit	719
Mobile Home (per mobile unit)	\$ 15.13	Dwelling Unit	-

Non- Metered Commercial Customers	Proposed FY 2011	Parameter FY2011	Count FY2011
Commercial	\$ 7.85	1000 Sq. Ft.	197
Church	\$ 3.92	1000 Sq. Ft.	87
Restaurants	\$ 6.29	# of seats	502
Schools			
High School	\$ 0.85	# of students	887
Elementary School	\$ 0.57	# of students	1,114
Hospitals/Clinics	\$ 24.69	1000 Sq. Ft.	48

Commercial Customers - Metered	Proposed FY 2011	Parameter FY2011	Count FY2011
<b>Wastewater Charge (\$/ hcf of water usage - 80% wastewater return factor is assumed)</b>			
Group 1 (Extra-low Strength)	\$ 1.40	HCF - Water	24,075
Group 2 (Low Strength)	\$ 1.54	HCF - Water	146,122
Group 3 (Medium Strength)	\$ 1.62	HCF - Water	-
Group 4 (High Strength)	\$ 4.12	HCF - Water	18,031

	Current			Parameter	Proposed FY 2011		
	Water Rate	Sewer Rate	Combined		Water Rate	Sewer Rate	Combined
<b>Non-Metered Residential Customers</b>							
SF (7,000 Sq. Ft. Lot)	\$ 21.26	\$ 27.41	\$ 48.67		\$ 31.60	\$ 23.20	\$ 54.80
SF (8,500 Sq. Ft. Lot)	\$ 23.62	\$ 27.41	\$ 51.03		\$ 35.45	\$ 23.20	\$ 58.65
MF (Per Unit)	\$ 11.71	\$ 21.71	\$ 33.42		\$ 18.35	\$ 17.40	\$ 35.75
<b>Non-Metered Commercial Customers (measurements are for sample calculation purposes only)</b>							
Commercial (2,500 Sq. Ft.)	\$ 24.92	\$ 23.99	\$ 48.91	1,000 Sq. Ft.	\$ 21.93	\$ 22.55	\$ 44.48
Church (5,500 Sq. Ft.)	\$ 31.13	\$ 23.99	\$ 55.12	1,000 Sq. Ft.	\$ 22.78	\$ 24.81	\$ 47.59
Restaurants (45 seats)	\$ 89.55	\$ 33.12	\$ 122.67	# of seats	\$ 59.62	\$ 329.05	\$ 388.67
High School (900 students)*	\$ 899.04	\$ 545.73	\$ 1,444.77	# of students	\$ 383.41	\$ 879.00	\$ 1,262.41
Elementary School (400 students)*	\$ 360.11	\$ 172.35	\$ 532.46	# of students	\$ 123.01	\$ 260.44	\$ 383.45
Hospitals (12,000 Sq. Ft.)	\$ 494.29	\$ 319.76	\$ 814.05	1,000 Sq. Ft.	\$ 136.71	\$ 340.87	\$ 477.58
Clinics (3,000 Sq. Ft.)	\$ 50.35	\$ 23.99	\$ 74.34	1,000 Sq. Ft.	\$ 44.20	\$ 85.22	\$ 129.42
<b>Metered Residential Customers</b>							
1" meter, 22 hcf	\$ 37.39	\$ 27.41	\$ 64.80	hcf	\$ 28.85	\$ 23.20	\$ 52.05
* Schools will be moved to meter rate							

	FY2011 Change in Bill - %			FY2011 Change in Bill - \$		
	Water Rate	Sewer Rate	Combined	Water Rate	Sewer Rate	Combined
<b>Non-Metered Residential Customers</b>						
SF (7,000 Sq. Ft. Lot)	49%	-15%	13%	\$10.34	-\$4.21	\$6.13
SF (8,500 Sq. Ft. Lot)	50%	-15%	15%	\$11.83	-\$4.21	\$7.62
MF (Per Unit)	57%	-20%	7%	\$6.64	-\$4.31	\$2.33
<b>Non-Metered Commercial Customers (measurements are for sample calculation purposes only)</b>						
Commercial (2,500 Sq. Ft.)	-12%	-6%	-9%	-\$2.99	-\$1.44	-\$4.43
Church (5,500 Sq. Ft.)	-27%	3%	-14%	-\$8.35	\$0.82	-\$7.53
Restaurants (45 seats)	-33%	894%	217%	-\$29.93	\$295.93	\$266.00
High School (900 students)*	-57%	61%	-13%	-\$515.63	\$333.27	-\$182.36
Elementary School (400 students)*	-66%	51%	-28%	-\$237.10	\$88.09	-\$149.01
Hospitals (12,000 Sq. Ft.)	-72%	7%	-41%	-\$357.58	\$21.11	-\$336.47
Clinics (3,000 Sq. Ft.)	-12%	255%	74%	-\$6.15	\$61.23	\$55.08
<b>Metered Residential Customers</b>						
1" meter, 22 hcf	-23%	-15%	-20%	-\$8.54	-\$4.21	-\$12.75
* Schools will be moved to meter rate						

Non-Metered	Current Rate	Proposed Non-Metered Rate	Proposed Debt Service Charge	Parameter	Sample Bill Impacts		
					# of parameters	Monthly Bills	% increase
<b>Monthly Charge</b>							
Commercial	\$ 23.99	\$ 7.85	\$ 1.17	1000 Sq. Ft.	2,500	\$ 22.55	-6%
					5,000	\$ 45.10	88%
					10,000	\$ 90.20	276%
Church	\$ 23.99	\$ 3.92	\$ 0.59	1000 Sq. Ft.	2,000	\$ 9.02	-62%
					5,500	\$ 24.81	3%
					10,000	\$ 45.10	88%
Restaurants	\$ 33.12	\$ 6.29	\$ 1.02	# of seats	20	\$ 146.25	342%
					45	\$ 329.05	894%
					100	\$ 731.23	2108%
High School	\$ 545.73	\$ 0.85	\$ 0.13	# of students	900	\$ 879.00	61%
Elementary School	\$ 172.35	\$ 0.57	\$ 0.08	# of students	400	\$ 260.44	51%
Hospitals/Clinics	\$ 319.76	\$ 24.69	\$ 3.71	1000 Sq. Ft.	3,000	\$ 85.22	-73%
					5,000	\$ 142.03	-56%
					12,000	\$ 340.87	7%

### Monthly Residential Wastewater Charges Comparison

