

WASTEWATER FINANCIAL PLAN STUDY REPORT



City of Thousand Oaks

FINAL – October 7, 2013

Prepared by:





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October 7, 2013

Mr. Clifford G. Finley
Deputy Director of Public Works
City of Thousand Oaks
2100 Thousand Oaks Blvd
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Subject: Wastewater Financial Plan Study Report

Dear Mr. Finley,

Raftelis Financial Consultants, Inc. (RFC) is pleased to provide this Wastewater Financial Plan Study Report (Report) for the City of Thousand Oaks (City) to address current financial challenges the City is facing and to establish wastewater rates that are equitable and in compliance with Proposition 218.

The major objectives of the study include the following:

1. Develop financial plans for the wastewater enterprise to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital replacement and refurbishment (R&R) needs, and improve the financial health of the wastewater enterprise;
2. Develop sound and sufficient reserve fund targets;
3. Review current rate structures;
4. Develop a cost-of-service analysis,
5. Develop fair and equitable rates; and
6. Develop connection fees for the wastewater enterprise.

The Report summarizes the key findings and recommendations related to the development of the financial plans for the wastewater utility and the development of the updated wastewater rates.

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

Sincerely,

Raftelis Financial Consultants, Inc.

A handwritten signature in black ink, appearing to read 'Sanjay Gaur', written over a light blue horizontal line.

Sanjay Gaur
Senior Manager

A handwritten signature in black ink, appearing to read 'Khanh Phan', written over a light blue horizontal line.

Khanh Phan
Senior Consultant

Table of Contents

1	<u>EXECUTIVE SUMMARY</u>	6
1.1	BACKGROUND OF THE STUDY	6
1.1.1	OBJECTIVES OF THE STUDY	6
1.2	RESERVE POLICY	6
1.3	WASTEWATER (WW) SYSTEM	7
1.3.1	PROPOSED REVENUE ADJUSTMENTS	7
1.3.2	PROPOSED WW RATES	8
1.4	CONNECTION FEES	9
2	<u>GENERAL ASSUMPTIONS</u>	10
2.1	INFLATION	10
2.2	GROWTH AND DEMAND FACTORS	10
2.3	NEW DEBT TERMS	10
3	<u>RESERVE POLICY</u>	11
3.1	OVERVIEW OF RESERVE POLICY	11
3.2	PROPOSED WW FUND RESERVE POLICY	12
3.2.1	OPERATIONS AND MAINTENANCE (O&M)	12
3.2.2	CAPITAL	12
3.2.1	PROPOSED WASTEWATER RESERVE POLICY	14
4	<u>WASTEWATER SYSTEM – FINANCIAL PLAN AND RATES</u>	14
4.1	REVENUE REQUIREMENTS	14
4.1.1	O&M EXPENSES	14
4.1.2	CAPITAL IMPROVEMENT PLAN AND ASSET R&R	15
4.2	STATUS QUO FINANCIAL PLAN	16
4.3	RECOMMENDATIONS AND PROPOSED FINANCIAL PLAN	17
4.3.1	PROPOSED REVENUE ADJUSTMENTS	17
4.3.2	RECOMMENDATIONS	18
4.3.3	PROPOSED FINANCIAL PLAN	18
4.4	COST OF SERVICE ANALYSIS	22
4.5	PROPOSED WW RATES	22

5	CONNECTION FEES	24
5.1	OVERVIEW OF CONNECTION FEES	24
5.2	WW CONNECTION FEES	25
6	CONCLUSION	26
7	TECHNICAL APPENDIX ON COST OF SERVICE AND RATES	27
7.1	MASS BALANCE	27
7.2	ALLOCATION OF REVENUE REQUIREMENTS	28
7.3	UNIT COST OF SERVICE	29
7.4	REVISED SERVICE UNIT DEFINITION	31
7.5	DETAILED PROPOSED RATES SCHEDULES	31

List of Tables and Figures

<i>Table 1-1: Recommended Wastewater Reserve Policy</i>	7
<i>Table 1-2: Proposed Wastewater Revenue Adjustments</i>	8
<i>Table 1-3: Proposed Wastewater Rates (\$/Service Unit)</i>	8
<i>Table 1-4: Proposed Wastewater Rates (\$/ERU) by Customer Classes</i>	9
<i>Table 1-5: Proposed Connection Fees</i>	9
<i>Table 2-1: Inflation Factor Assumptions</i>	10
<i>Table 2-2: Account Growth Rate Assumptions for Various Customer Classes</i>	10
<i>Table 3-1: Replacement Cost of WW Critical Assets</i>	13
<i>Table 3-2: Recommended Wastewater Reserve Policy</i>	14
<i>Table 4-1: Projected WW O&M Expenses</i>	15
<i>Table 4-2: Proposed Monthly WW Rates per Revised Service Unit (\$ / SU)</i>	22
<i>Table 4-3: Proposed Monthly WW Rates per ERU after Revenue Adjustment in FY 2014</i>	23
<i>Table 4-4: Customer Class Impacts</i>	23
<i>Table 5-1: Current WW Asset Value using Replacement Cost Approach</i>	25
<i>Table 5-2: Calculation of Proposed WW Connection Fees</i>	25
<i>Table 7-1: Wastewater Mass Balance</i>	27
<i>Table 7-2: Allocation Factors for WW O&M Expenses</i>	29
<i>Table 7-3: Allocation Factors for WW Capital Expenditures</i>	29
<i>Table 7-4: Net Revenue Requirements from WW Rates (FY 2014)</i>	30
<i>Table 7-5: Unit Cost of Service Calculation</i>	30
<i>Table 7-6: WW Combined Factors for Strengths and Flows for Different Customer Classes</i>	31
<i>Table 7-7: Proposed Monthly WW Rates per ERU before Revenue Adjustment in FY 2014</i>	32
<i>Table 7-8: Proposed Monthly WW Rates (\$/ERU) by Customer Classes</i>	32
<i>Table 7-9: Customer Class Impacts</i>	33
<i>Figure 3-1: Projected 50-year CIP and Asset R&R for Wastewater Funds</i>	13
<i>Figure 4-1: Projected 15-year WW Capital Expenditures</i>	16
<i>Figure 4-3: 15-year WW Operating Financial Plan</i>	20
<i>Figure 4-4: Projected CIP and Asset R&R Expenditures and Funding Sources for WW Funds</i>	21
<i>Figure 4-5: Projected Ending Balances for WW Funds</i>	21

1 Executive Summary

1.1 Background of the Study

In 2012, the City of Thousand Oaks engaged RFC to conduct a Wastewater Financial Plan Study (Study) to develop a sustainable reserve policy and a solvent financial plan for the wastewater enterprise and to establish rates that are equitable and in compliance with Proposition 218.

The City's wastewater enterprise is operating in an environment where revenues from rates are outpaced by operating expenditures and other costs to maintain existing infrastructure.

For the wastewater enterprise, there are several significant capital Replacement & Refurbishment (R&R) projects coming due such as major interceptor rehabilitation and biosolids dewatering/drying improvements. The City has instructed RFC to propose the level of wastewater rates needed for financial sufficiency for the projected operating and capital expenditures and other financial obligations, and to develop a capital R&R charge to support upcoming capital expenditures.

In proposing updated wastewater rates, RFC ensured an equitable structure by developing rates based on a cost of service analysis.

1.1.1 Objectives of the Study

The major objectives of the study include the following:

1. Develop financial plans for the wastewater enterprise to ensure financial sufficiency, meet operation and maintenance (O&M) costs, ensure sufficient funding for capital replacement and refurbishment (R&R) needs, and improve the financial health of the wastewater enterprise;
2. Develop sound and sufficient reserve fund targets;
3. Review current rate structures;
4. Develop a cost-of-service analysis,
5. Develop fair and equitable rates; and
6. Develop connection fees for the wastewater enterprise.

This executive summary provides an overview of the study and includes findings and recommendations for the wastewater reserve policy, financial plan and rates.

1.2 Reserve Policy

A reserve policy provides a basis for the City to cope with fiscal emergencies such as revenue shortfalls, asset failure, natural disaster, etc. It also provides guidelines for sound financial management with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs and emergencies.

RFC recommends that the City maintain three types of reserves for its wastewater utility: 1) O&M reserve - to provide working capital to support the operation, maintenance, and administration of the utility; 2) emergency reserve - to allow the utility to provide uninterrupted service in light of a fiscal or physical emergency; and 3) Capital R&R reserve - used to fund future obligations that are necessary for maintaining reliable infrastructure.

Below in Table 1-1 is the recommended reserve policy for the wastewater enterprise. Reserve targets are maintained not only to provide sufficient working and emergency capital, but to maintain sufficient levels of metrics such as days cash on hand should the City pursue debt funding of future CIP, as proposed in this Study.

Table 1-1: Recommended Wastewater Reserve Policy

Reserve	Recommended Policy	2013 Target Level
Fund 621 – WW Operating Fund		
Operating	25% of Operating Budget	\$3.7M
Fund 624 – WW Capital Fund		
Emergency	Replacement cost of Chlorine Contact Chamber and Filter Influent Pumps	\$2.4M
Capital R&R	2.5% of Asset Value	\$9.1M
Total Wastewater Fund	~ 355 days of cash (AA Rating)	\$15.2M

1.3 Wastewater (WW) System

1.3.1 Proposed Revenue Adjustments

In FY 2013, revenues expected to be generated from rates are adequate to sufficiently recover the total operating expenses and current debt service of the wastewater enterprise. However, the demands placed on the aggregated funds of projected CIP/R&R requirements cause rapid annual drawdown from the total fund balance. Total fund balance does not meet reserve targets by FY 2016. As a result, the City is unable to maintain fiscal sustainability and solvency under the current wastewater rates (Status Quo).

To ensure financial solvency for the wastewater enterprise, it is recommended that the City implement the following revenue adjustments scheduled to be implemented in January of each year, with the first increase scheduled to be implemented in February 2014. The proposed revenue adjustments would enable the enterprise to complete the planned capital projects for the Study period while maintaining the wastewater fund at the recommended reserve level. Proposed WW revenue adjustments are shown in Table 1-2, below, and a detailed discussion of the wastewater financial plan can be seen in Section 5.

Table 1-2: Proposed Wastewater Revenue Adjustments

Effective Date	Proposed WW Revenue Adjustments
February 2014	4 percent
January 2015	5 percent
January 2016	5 percent
January 2017	5 percent
January 2018	5 percent

1.3.2 Proposed WW Rates

The cost of service analysis for the City’s wastewater enterprise ensures that customers pay the appropriate rates proportional to the demand that they place on the wastewater system. The formula below represents the revised service unit definition, and is similar to the City’s prior format. Note that the City’s method for determining Equivalent Residential Units (ERU) equivalents between customer classes was retained with the revised formula.

$$1 \text{ SU} = \frac{\text{Daily Flow}}{180} \left[0.54 + 0.23 \times \frac{\text{BOD}}{290} + 0.23 \times \frac{\text{SS}}{290} \right]$$

SU = Service Unit

Daily Flow = Wastewater flow in gallons per day (gpd)

BOD = Biochemical Oxygen Demand (mg/L)

SS = Suspended Solid (mg/L)

The proposed rates for the FY 2014-2015 study period are presented according to service unit rate in Table 1-3 below. Table 1-4 shows the proposed WW rates (\$/ERU) by customer classes, effective January 2014 and January 2015.

Table 1-3: Proposed Wastewater Rates (\$/Service Unit)

	Current	1/1/2014	1/1/2015
WW Service Unit Rate	\$25.45	\$26.85	\$28.20
Impact		\$1.40	\$1.35

Table 1-4: Proposed Wastewater Rates (\$/ERU) by Customer Classes

WW Rate Customer Class	Current \$ / ERU	1/1/2014 \$ / ERU	1/1/2015 \$ / ERU
Residential	\$25.45	\$26.85	\$28.20
Multi Family	\$25.45	\$26.85	\$28.20
Commercial	\$25.45	\$26.85	\$28.20
School	\$17.05	\$18.81	\$19.76
Market / Mortuary	\$50.90	\$49.61	\$52.10
Restaurant (grease traps)	\$63.63	\$32.11	\$33.72
Restaurant / Bakery	\$63.63	\$49.54	\$52.02
Industrial High Flow	\$25.45	\$17.54	\$18.42
Car Wash	\$25.45	\$18.84	\$19.79

1.4 Connection Fees

Connection fees are the one-time capital charges that the City imposes on customers that request new or expanded connections to the City’s wastewater system facilities. The fees should generally reflect the estimated reasonable cost to the City of providing existing or additional system capacity to new development. For single-family residential dwelling units, the current connection fee is \$10,264 for wastewater connections.

Since the City’s wastewater infrastructure is substantially built-out, new customers will largely be served by existing infrastructure in which existing customers have invested a considerable amount of economic resources through wastewater rates. Thus, a system buy-in approach is determined most appropriate for the City. Proposed connection fees for additions to the wastewater system are summarized below.

Table 1-5: Proposed Connection Fees

Wastewater Connection Fees	
Current Connection Fees	\$10,264 / SU
Proposed Connection Fees (in 2012 \$)	\$6,858 / SU
Estimated Connection Fees¹ (in 2014 \$)	\$7,288 / SU

¹ Escalated to 2014 using estimated Engineering New Records Construction Cost Index (ERN CCI) for 20-City in 2014 using 30-year historical average. Proposed Connection Fees are in 2012 dollars based on asset listing current as of FY 2012 year end.

2 General Assumptions

The study period for the Wastewater Financial Plan Study is from Fiscal Year (FY) 2013 to 2018. Various types of assumptions and inputs were incorporated into the Study. These assumptions were based on discussion with and/or direction from City staff (Staff) including projected accounts and annual growth rates in consumption for different customer classes, inflation factors, assumptions regarding proposed new debt issuances, and other miscellaneous assumptions. These assumptions are presented in Tables 2-1 and 2-2.

2.1 Inflation

Table 2-1: Inflation Factor Assumptions

KEY FACTORS	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
General	3%	3%	3%	3%	3%
Salary	3%	3%	3%	3%	3%
Benefits	5%	5%	5%	5%	5%
Capital	2%	2%	2%	2%	2%
Energy	5%	5%	5%	5%	5%

2.2 Growth and Demand Factors

Table 2-2: Account Growth Rate Assumptions for Various Customer Classes

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
GROWTH RATE						
SFR	0.15%	0.15%	0.06%	0.06%	0.06%	0.06%
MFR	0.15%	0.15%	0.06%	0.06%	0.06%	0.06%
Commercial	0.15%	0.15%	0.06%	0.06%	0.06%	0.06%
Irrigation	0.15%	0.15%	0.06%	0.06%	0.06%	0.06%
Others	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

2.3 New Debt Terms

Terms for new debt issuances include a 30-year repayment term, a 5 percent coupon rate (interest expense rate), and 2 percent for costs of issuance (bond counsel, financial advisor, printing etc.). The coverage requirement for debt is equal to 125 percent of total net revenues divided by total annual debt service.

3 Reserve Policy

3.1 Overview of Reserve Policy

A reserve policy is a written document that provides a basis for the City to cope with fiscal emergencies such as revenue shortfalls, asset failure, natural disaster etc. It also provides guidelines for sound financial management with an overall long-range perspective to maintain financial solvency and mitigate financial risks associated with revenue instability, volatile capital costs and emergencies. Additionally, adopting and adhering to a sustainable reserve policy enhances financial management transparency, which improves public confidence and elected officials' credibility and helps achieve or maintain a certain credit rating for future debt issues.

There are two main financial health indicators for the wastewater enterprise: debt coverage and liquidity.

Debt coverage: Debt coverage is the ratio of cash available for debt service to interest and principal payments. It is a popular benchmark used in the measurement of an entity's ability to produce enough cash to cover its debt payments. Debt coverage also measures the debt capacity of a municipal utility. The higher the ratio is, the easier it is for an entity to issue new debt. Usually, bond covenants stipulate a minimum debt coverage requirement for the entity to avoid technical default. Standard and Poor's (S&P) rating agency considers debt coverage ratios ranging from 126 to 150 percent as good and coverage exceeding 150 percent as strong.

Liquidity: Liquidity for a municipal utility can be measured by unrestricted cash balances available for working capital for O&M and capital expenditures, as well as emergencies and rate stabilization. Rating agencies measure liquidity in term of days cash on hand (number of days that the utility can operate with unrestricted cash on hand without further incoming cash).² According to S&P, the median days cash of municipal utilities with an "AA" rating is 354. To achieve or maintain a certain liquidity level, a documented reserve policy is needed. It will provide transparent guidelines for effective and prudent financial management to mitigate risks and maintain financial solvency. There are many types of reserves, and each reserve serves different purposes depending on the objectives and goals of the utility. The appropriate amount of reserve and reserve type are determined by a variety of factors such as the size of the operating budget, the amount of debt, the type of rate structure, frequency of customer billing, and proximity to natural disaster. With this being said, most reserves tend to fall into the following categories: O&M cash flow, capital replacement and refurbishment (R&R), and emergency projects.

Operations & Maintenance (O&M) Cash Flow – The purpose of O&M reserve is to provide working capital to support the operation, maintenance and administration of the utility. From a risk management perspective, the O&M reserve supports the City's cash flow needs during normal operations and ensures that operations can continue should there be significant events that impact cash flow. As it is unlikely for a utility to predict perfectly the revenues and revenue requirements for each billing period, a reserve set

² Days cash on hand = Unrestricted balance / average daily operating expenses

aside to hedge the risk of monthly negative cash positions is prudent in financial planning. Another factor to take into consideration when creating a cash flow reserve is the frequency of billing. For example, a utility that bills once a month would require less minimum reserves than a utility that bills semi-annually. City of Thousand Oaks bills bi-monthly; therefore, a reserve with a minimum target of 60 to 120 days of daily operating expenses is considered sufficient.

Emergency – The purpose of an emergency fund is to allow the utility to provide uninterrupted service in light of a fiscal emergency, natural disaster or facility failure. An emergency reserve decreases risk by recognizing the high capital cost of the utilities and setting aside adequate funds to restart the system after an event or replace an essential facility. Critical asset analysis completed by staff and GHD, the City’s engineering consultants for its Asset Management Plan Study which was conducted concurrently with the Financial Plan Study, provides the basis for the target level of emergency reserve.

Capital Replacement & Refurbishment – Capital R&R reserves are used to fund future obligations that are necessary for maintaining a reliable infrastructure. Because wastewater utilities are highly capital-intensive enterprises, it is important to accurately estimate long-term R&R costs and develop a reserve to fund the eventual replacement of the system. The City’s wastewater enterprise has two options in funding R&R projects: 1) the issuance of debt or pay-as-you-go (PAYGO), or 2) a fund set up specifically for future capital expenditures using rate revenue proceeds.

3.2 Proposed WW Fund Reserve Policy

3.2.1 Operations and Maintenance (O&M)

The City bills bi-monthly for its sewer services; thus, the time gap between accounts receivables and actual cash expenses ranges from 60 to 120 days. RFC recommends that the City maintain 90 days cash (25 percent) for Wastewater Fund to ensure adequate working capital for operating expenses. Staff estimates FY 2013 O&M expenses for WW Fund 621 to be approximately \$14.3M and 90 days cash reserve equals \$3.5M.

3.2.2 Capital

3.2.2.1 Emergency

Per a critical-asset analysis provided by GHD and based on the Asset Management Plan Study, the chlorine contact chamber and filter influent pumps are the most critical assets in the system. Typical asset failure scenarios were evaluated and it was determined that \$2.4M would be needed to replace these assets. RFC recommends that \$2.4M be set aside for emergency use within Fund 624. Although this level of emergency reserve is sufficient for now, the reserve should be re-evaluated periodically as the system ages.

Table 3-1: Replacement Cost of WW Critical Assets³

Location	Install Year	Replacement Cost
Chlorine Contact Chamber	2003	\$2,000,000
Filter Influent Pump #2	2003	\$85,000
Filter Influent Pump #4	2003	\$85,000
Filter Influent Pump #1	2003	\$85,000
Filter Influent Pump #3	2003	\$85,000
Recommended Target		\$ 2,400,000

3.2.2.2 Capital Replacement and Refurbishment (R&R)

The total asset value for the wastewater enterprise is estimated at \$364.1M by the end of FY 2012. Based on discussions with Staff, the capital R&R reserve is recommended to be set at 2.5 percent of the replacement value of wastewater-related assets. For FY 2013, the capital R&R reserve requirement is \$9.1M for WW Fund 624. The idea of the capital R&R reserve is to smooth future rate spikes that might otherwise be necessary to meet the 50-year asset requirements.

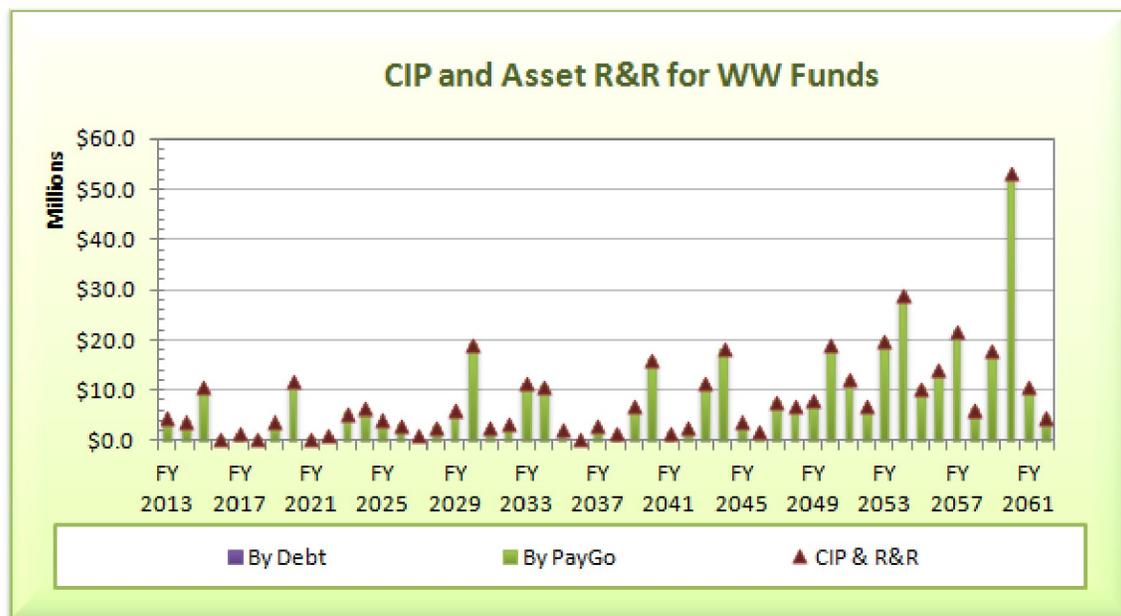


Figure 3-1: Projected 50-year CIP and Asset R&R for Wastewater Funds⁴

³ Provided by GHD based on Asset Management Plan Study conducted concurrently with Financial Plan Study

⁴ Though this study proposes a debt issuance in FY 2020, no debt is shown here because this figure represents the status quo. The cost of capital R&R is escalated at two percent annually.

3.2.1 Proposed Wastewater Reserve Policy

Table 3-2 summarizes the recommended reserve policy for WW Funds for adequate operating working capital, emergency use and capital working capital for future R&R projects.

Table 3-2: Recommended Wastewater Reserve Policy

Reserve	Recommended Policy	2013 Target Level
Fund 621 – WW Operating Fund		
Operating	25% of Operating Budget	\$3.7M
Fund 624 – WW Capital Fund		
Emergency	Replacement cost of Chlorine Contact Chamber and Filter Influent Pumps	\$2.4M
Capital R&R	2.5% of Asset Value	\$9.1M
Total WW Fund	~ 355 days of cash (AA Rating)	\$15.2M

4 Wastewater System – Financial Plan and Rates

4.1 Revenue Requirements

A review of a utility’s revenue requirements is a key first step in the rate design process. The review involves an analysis of annual operating revenues under the current rates, operation and maintenance (O&M) expenses, capital expenditures, transfers between funds, and reserve requirements. This section of the report provides a discussion of the projected revenues, O&M and capital expenditures, capital improvement financing plan, debt service requirements, and revenue adjustments required to ensure the fiscal sustainability and solvency of the wastewater enterprise.

4.1.1 O&M Expenses

O&M expenses include the cost of operating and maintaining wastewater collection, treatment, and disposal facilities, as well as the costs of providing technical services such as laboratory services and other administrative costs of the wastewater system, such as customer service and billing. The City’s FY 2013 budget values and the assumed inflation factors for the study period were used as the basis for projecting O&M costs. Table 4-1 summarizes budgeted and projected O&M expenses for the wastewater fund. The WW O&M expenses are projected to increase at approximately 3.4 percent per year.

Table 4-1: Projected WW O&M Expenses

WW FUNDS O&M	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Salaries	\$4,381,204	\$4,512,640	\$4,648,019	\$4,787,460	\$4,931,084	\$5,079,016
Benefits	\$1,943,986	\$2,041,185	\$2,143,245	\$2,250,407	\$2,362,927	\$2,481,073
Maintenance & Operations	\$8,668,802	\$8,954,731	\$9,249,399	\$9,554,224	\$9,869,577	\$10,195,844
Capital Outlay	\$473,182	\$504,538	\$519,674	\$535,265	\$551,323	\$567,862
Total O&M Expenses	\$15,467,174	\$16,013,095	\$16,560,337	\$17,127,355	\$17,714,910	\$18,323,796
% Change		3.5%	3.4%	3.4%	3.4%	3.4%

4.1.2 Capital Improvement Plan and Asset R&R

The City has adopted a 5-year CIP through FY 2018 to address future WW enterprise needs. This is based on the Asset Management Plan Study provided by GHD a 100-year asset R&R plan through FY 2113 to address the R&R needs of existing WW infrastructure as they come due, also provided to the City.

The CIP and R&R represented in Figure 4-1 include projected 15-year expenditures for WW enterprise. The proposed plan includes major rehabilitation and replacement projects at the HCTP, which contributes in large part to the spike in projected cost for FY 2020. The proposed plan will be funded through a combination of proposed rate revenues (PAYGO) and additional debt issuances, as approved.

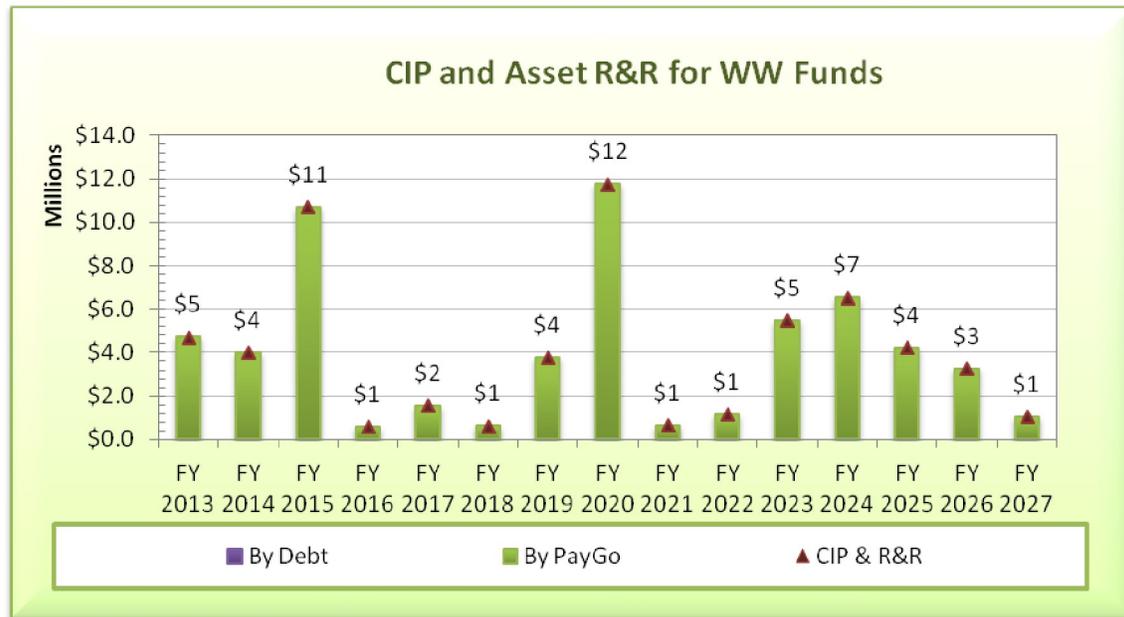


Figure 4-1: Projected 15-year WW Capital Expenditures⁵

4.2 Status Quo Financial Plan

Table 4-2 displays the pro forma of the City’s Wastewater Funds under current rates over the forecast period. All projections shown in the table are based upon current rate structure and do not include any rate adjustments or proceeds from additional debt issuances.

Under the ‘status-quo’ scenario, revenues generated from rates and other miscellaneous revenues are adequate to sufficiently recover total operating expenses and current debt service of the wastewater enterprise in FY 2013. However, the demands placed on the aggregated funds of projected CIP/R&R requirements cause rapid annual drawdown from the WW fund balance. Total fund balance does not meet reserve targets by FY 2016.

To ensure compliance with the current debt coverage requirement for the 2010 WW Revenue Refunding Bond (2010 Refunding Bond), the City needs to establish Restricted Debt Coverage Reserve and set aside \$1.75M from its current fund balance by the end of FY 2013. The Reserve will be dissolved at the retirement of the 2010 Refunding Bond.

⁵ Though this study proposes a debt issuance in FY 2020, no debt is shown here because this figure represents the status quo.

Table 4-2: Status Quo Financial Plan Pro-forma

TOTAL WW FUNDS	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
REVENUES						
Revenues from Rates	\$16,947,658	\$16,964,484	\$16,971,215	\$16,977,946	\$16,984,676	\$16,991,411
Revenue Adjustments	\$0	\$0	\$0	\$0	\$0	\$0
Other Revenues	\$2,197,700	\$1,806,834	\$1,758,696	\$1,637,303	\$1,610,417	\$1,567,696
TOTAL REVENUES	\$19,145,358	\$18,771,318	\$18,729,911	\$18,615,249	\$18,595,093	\$18,559,107
O&M EXPENSES						
Maintenance & Operations	\$14,993,992	\$15,508,557	\$16,040,663	\$16,592,091	\$17,163,588	\$17,755,934
Capital Outlay	\$473,182	\$504,538	\$519,674	\$535,265	\$551,323	\$567,862
TOTAL O&M EXPENSES	\$15,467,174	\$16,013,095	\$16,560,337	\$17,127,355	\$17,714,910	\$18,323,796
NET REVENUES	\$3,678,184	\$2,758,223	\$2,169,573	\$1,487,894	\$880,183	\$235,310
NEW DEBT						
Proposed Debt Issue	\$0	\$0	\$0	\$0	\$0	\$0
Issuance Expenses	\$0	\$0	\$0	\$0	\$0	\$0
Debt Proceeds	\$0	\$0	\$0	\$0	\$0	\$0
DEBT SERVICE						
Existing Debt Service - 2010 Refunding	\$1,398,138	\$1,396,263	\$1,396,425	\$1,398,488	\$1,398,988	\$1,396,488
Existing Debt Service - SRF Loans	\$2,170,524	\$2,172,287	\$2,183,787	\$2,183,787	\$2,183,787	\$2,183,787
Proposed Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
CIP and R&R EXPENDITURES	\$4,728,000	\$4,003,500	\$10,728,605	\$594,276	\$1,569,527	\$623,806
PAYGO	\$4,728,000	\$4,003,500	\$10,728,605	\$594,276	\$1,569,527	\$623,806
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Transfers from / (to) Debt Coverage Reserve	-\$1,750,000	\$0	\$0	\$0	\$0	\$0
NET CASH BALANCES	-\$6,368,478	-\$4,813,826	-\$12,139,243	-\$2,688,657	-\$4,272,118	-\$3,968,770
BEGINNING BALANCES	\$40,281,883	\$33,913,406	\$29,099,580	\$16,960,336	\$14,271,679	\$9,999,561
ENDING BALANCES	\$33,913,406	\$29,099,580	\$16,960,336	\$14,271,679	\$9,999,561	\$6,030,791
ENDING BALANCES W/O DEBT PROCEEDS	\$33,913,406	\$29,099,580	\$16,960,336	\$14,271,679	\$9,999,561	\$6,030,791
TARGET BALANCES	\$15,073,241	\$15,430,890	\$15,793,204	\$16,164,881	\$16,546,196	\$16,937,435

4.3 Recommendations and Proposed Financial Plan

4.3.1 Proposed Revenue Adjustments

To ensure financial solvency for the wastewater enterprise, it is recommended that the City implement the following revenue adjustments each year, with the first increase scheduled for February 2014. The proposed revenue adjustments would enable the enterprise to complete the planned capital projects for the Study period while maintaining the wastewater fund at the recommended reserve level.

Table 4-3: Proposed Wastewater Revenue Adjustments

Effective Date	Proposed WW Revenue Adjustments
February 2014	4 percent
January 2015	5 percent
January 2016	5 percent
January 2017	5 percent
January 2018	5 percent

4.3.2 Recommendations

4.3.2.1 *Allocation of revenues from rates to individual funds and capital R&R funding*

It is recommended that the City collect all rate revenue through its O&M Fund 621 and make annual transfers to Capital Fund 624 to contribute toward capital R&R expenditures. Under the proposed financial plan, the City would begin transfers in FY 2019 in the amount of \$2M, \$3.5M in FY 2020, and \$5.25M each year thereafter through FY 2027 to contribute funding toward WW capital R&R.

4.3.2.2 *Proposed debt issues (if any)*

The proposed financial plan for the City’s WW enterprise does not include debt issuances in the short term (five-year period of FY 2014 through FY 2018).

4.3.3 Proposed Financial Plan

A pro forma of the proposed 5-year financial plan is shown in Table 4-4.

The proposed financial plan successfully meets the City’s financial needs, exceeding target reserve balances throughout the study period with the exception of a slight dip below for FY 2017 and 2018 while addressing the City’s O&M and CIP needs throughout the study period.

Note that the proposed financial plan schedules for a re-examination of the true cost of projected CIP before FY 2015, and that the financial plan will be revised accordingly at that time. For example, the CIP cost spikes to \$10.7M in FY 2015, and the projected costs for related projects may be revised when re-evaluated.

Table 4-4: Five-year Financial Plan Pro-forma for Wastewater Funds

TOTAL WW FUNDS	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
REVENUES						
Revenues from Rates	\$16,947,658	\$16,964,484	\$16,971,215	\$16,977,946	\$16,984,676	\$16,991,411
Revenue Adjustments	\$0	\$339,290	\$1,120,100	\$2,025,469	\$2,976,819	\$3,976,470
Other Revenues	\$2,197,700	\$1,806,834	\$1,762,089	\$1,651,931	\$1,645,446	\$1,632,843
TOTAL REVENUES	\$19,145,358	\$19,110,608	\$19,853,404	\$20,655,346	\$21,606,941	\$22,600,724
O&M EXPENSES						
Maintenance & Operations	\$14,993,992	\$15,508,557	\$16,040,663	\$16,592,091	\$17,163,588	\$17,755,934
Capital Outlay	\$473,182	\$504,538	\$519,674	\$535,265	\$551,323	\$567,862
TOTAL O&M EXPENSES	\$15,467,174	\$16,013,095	\$16,560,337	\$17,127,355	\$17,714,910	\$18,323,796
NET REVENUES	\$3,678,184	\$3,097,513	\$3,293,066	\$3,527,991	\$3,892,031	\$4,276,928
NEW DEBT						
Proposed Debt Issue	\$0	\$0	\$0	\$0	\$0	\$0
Issuance Expenses	\$0	\$0	\$0	\$0	\$0	\$0
Debt Proceeds	\$0	\$0	\$0	\$0	\$0	\$0
DEBT SERVICE						
Existing Debt Service - 2010 Refunding	\$1,398,138	\$1,396,263	\$1,396,425	\$1,398,488	\$1,398,988	\$1,396,488
Existing Debt Service - SRF Loans	\$2,170,524	\$2,172,287	\$2,183,787	\$2,183,787	\$2,183,787	\$2,183,787
Proposed Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
CIP and R&R EXPENDITURES	\$4,728,000	\$4,003,500	\$10,728,605	\$594,276	\$1,569,527	\$623,806
PAYGO	\$4,728,000	\$4,003,500	\$10,728,605	\$594,276	\$1,569,527	\$623,806
Debt	\$0	\$0	\$0	\$0	\$0	\$0
Transfers from / (to) Debt Coverage Reserve	-\$1,750,000	\$0	\$0	\$0	\$0	\$0
NET CASH BALANCES	-\$6,368,478	-\$4,474,536	-\$11,015,750	-\$648,560	-\$1,260,270	\$72,847
BEGINNING BALANCES	\$40,281,883	\$33,913,406	\$29,438,870	\$18,423,119	\$17,774,559	\$16,514,289
ENDING BALANCES	\$33,913,406	\$29,438,870	\$18,423,119	\$17,774,559	\$16,514,289	\$16,587,136
ENDING BALANCES W/O DEBT PROCEEDS	\$33,913,406	\$29,438,870	\$18,423,119	\$17,774,559	\$16,514,289	\$16,587,136
TARGET BALANCES	\$15,073,241	\$15,430,890	\$15,793,204	\$16,164,881	\$16,546,196	\$16,937,435

Figures 4-2, 4-3, 4-4 and 4-5 illustrate the projected 15-year financial plan for WW enterprise. Figure 4-2 displays the proposed revenue adjustments until FY 2027. Figure 4-3 illustrates the operating position of the WW enterprise, where the expenses, including debt service and reserve funding are shown by stacked bars and total revenues at current rates and proposed rates are shown by red and green lines, respectively. Figure 4-4 summarizes the projected CIP and Asset R&R expenditures and its funding sources as debt (purple bars) or PAYGO (green bars). The ending fund balance for the WW utility is projected and shown in Figure 4-5, where the red line indicates the target reserve balance as recommended by the reserve policy discussed in Section 3.

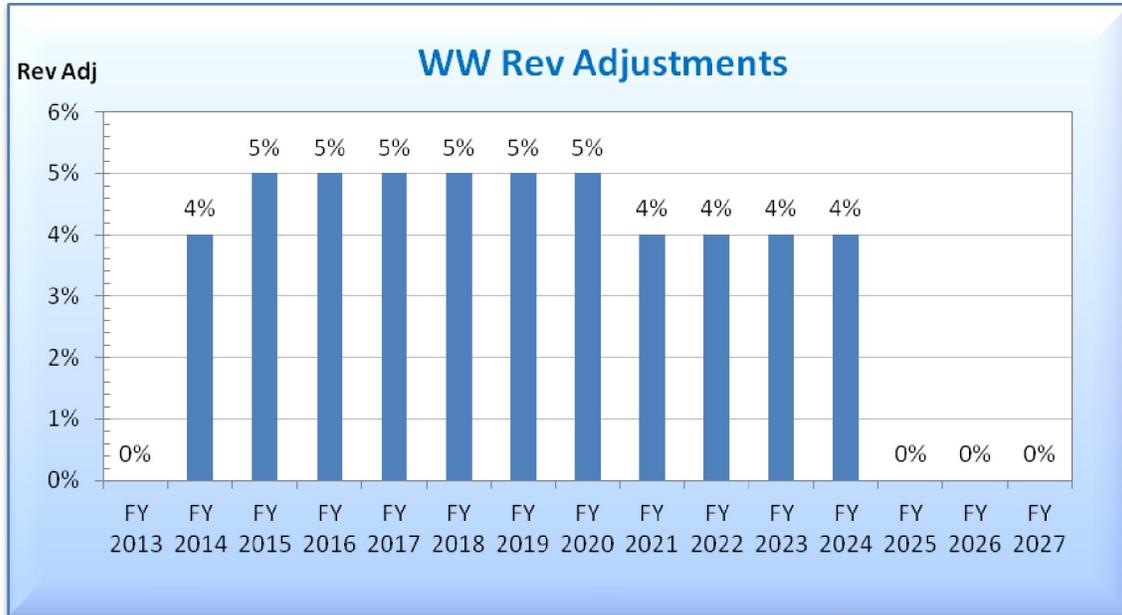


Figure 4-2: Proposed 15-year WW Revenue Adjustments

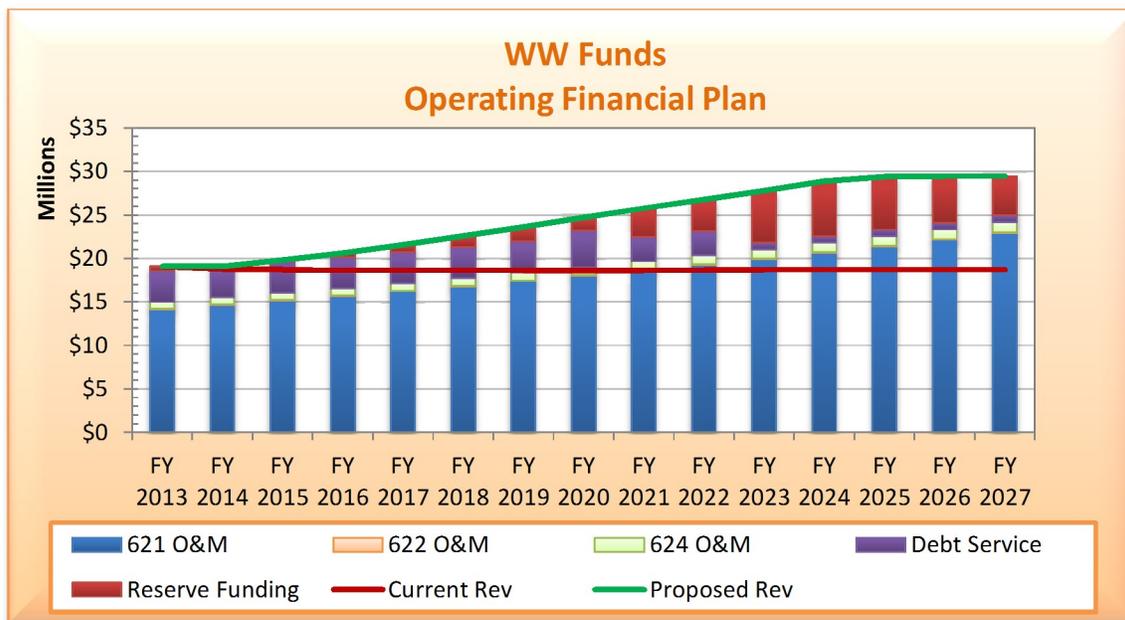


Figure 4-3: 15-year WW Operating Financial Plan

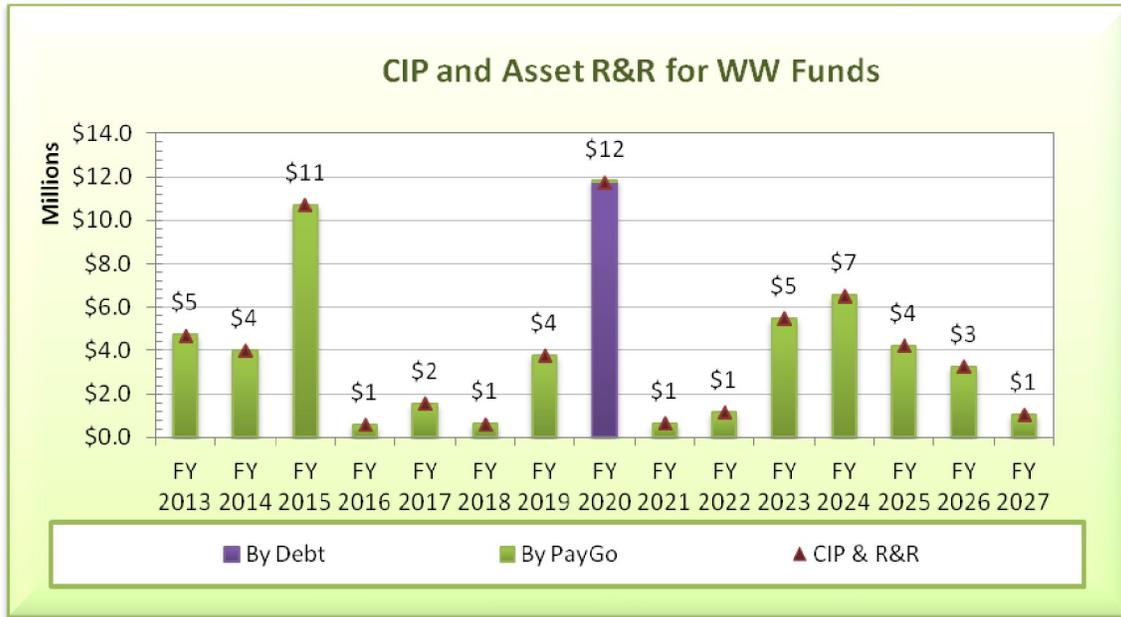


Figure 4-4: Projected CIP and Asset R&R Expenditures and Funding Sources for WW Funds

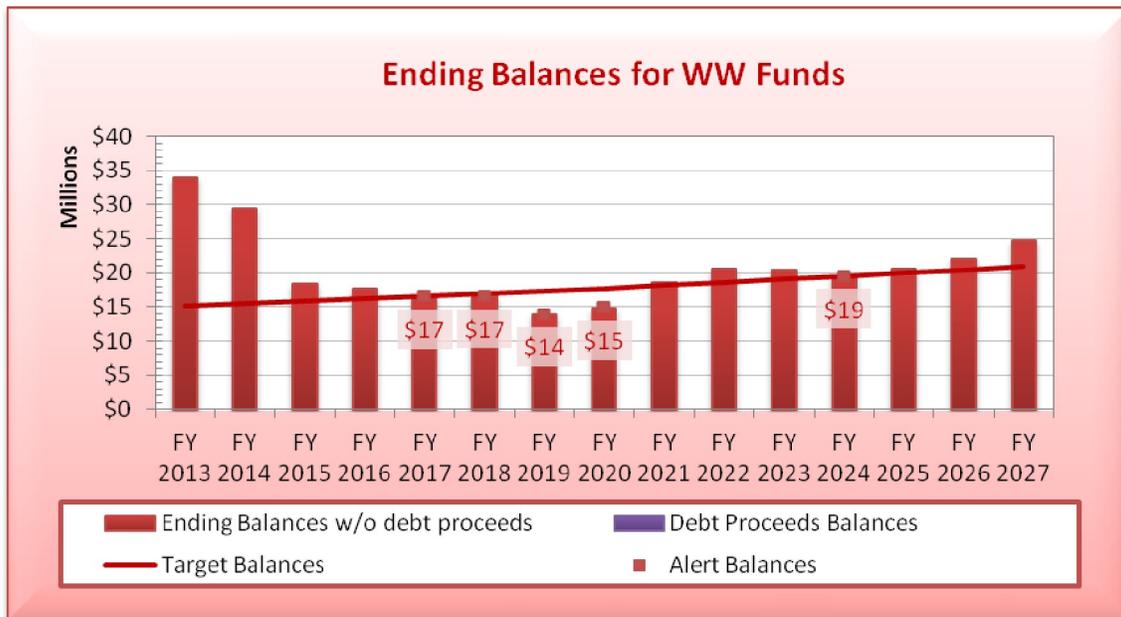


Figure 4-5: Projected Ending Balances for WW Funds⁶

⁶ Debt proceeds for the FY 2020 debt issuance do not show because all debt proceeds are applied toward capital projects within the same fiscal year.

4.4 Cost of Service Analysis

Government Code Section 54999 requires agencies to perform a cost of service analysis at least once every ten years. A cost of service analysis ensures that rates properly reflect the cost of providing service to the customer, and are thus fair to customers.

As a part of this study, RFC performed a cost of service analysis for the City’s wastewater enterprise. The cost of service analysis for the wastewater enterprise was based on loading factors as well as the revenue requirements developed through the operating and cash flow analysis. The following section describes the methodology used to allocate operating and capital costs to Wastewater Flow, Total Suspended Solids (TSS) and Biochemical Oxygen Demand (BOD) parameters and the calculation of resulting rates.

The net cost of providing service is determined by the total revenue requirements of the enterprise. In a cost of service analysis, the total cost of service is proportionally allocated to customer classes based on services rendered, which takes into account the flow (Flow parameter) and strength of such wastewater (BOD and TSS parameters).

Please refer to the technical appendix for further detail on the cost of service such as the mass balance analysis.

4.5 Proposed WW Rates

Minor increases (1.4 percent) will apply for residential customers based on the results of cost of service analysis before any revenue adjustment in FY 2014 to ensure equitable cost allocations among customer classes as required by Proposition 218 and Government Code 54999. The proposed rates per revised service unit⁷ for the FY 2014 and FY 2015 are shown in Table 4-3 reflecting rates inclusive of proposed revenue adjustments for the City’s wastewater customers for FY 2014 and FY 2015. Table 4-4 applies the WW service unit rate to each customer class. Table 4-5 shows the actual impacts to each customer class by total dollar amount billed to each class.

Please refer to the technical appendix for a more detailed breakdown of the proposed WW rates.

Table 4-2: Proposed Monthly WW Rates per Revised Service Unit (\$ / SU)

	Current	1/1/2014	1/1/2015
WW Service Unit Rate	\$25.45 / SU	\$26.85 / SU	\$28.20 / SU
Impact		\$1.40 / SU	\$1.35 / SU

⁷ As defined in Section 5.4.4

Table 4-3: Proposed Monthly WW Rates per ERU after Revenue Adjustment in FY 2014

WW Rate Customer Class	Current \$ / ERU	1/1/2014 \$ / ERU	\$ Impact per ERU	% Impact
Residential	\$25.45	\$26.85	\$1.40	5.5%
Multi Family	\$25.45	\$26.85	\$1.40	5.5%
Commercial	\$25.45	\$26.85	\$1.40	5.5%
School	\$17.05	\$18.81	\$1.76	10.3%
Market / Mortuary	\$50.90	\$49.61	-\$1.29	-2.5%
Restaurant (grease traps)	\$63.63	\$32.11	-\$31.52	-49.5%
Restaurant / Bakery	\$63.63	\$49.54	-\$14.09	-22.1%
Industrial High Flow	\$25.45	\$17.54	-\$7.91	-31.1%
Car Wash	\$25.45	\$18.84	-\$6.61	-26.0%

Table 4-4: Customer Class Impacts

WW Rate Customer Class	Current Revenue	Proposed Revenue	Impact
Residential	\$11,438,786	\$12,068,032	5.5%
Multi Family	\$2,011,670	\$2,122,331	5.5%
Commercial	\$1,659,762	\$1,751,065	5.5%
School	\$250,371	\$207,144	-17.3%
Market / Mortuary	\$84,352	\$82,214	-2.5%
Restaurant (grease traps)	\$269,709	\$136,116	-49.5%
Restaurant / Bakery	\$271,012	\$211,017	-22.1%
Industrial High Flow	\$952,282	\$1,039,153	9.1%
Car Wash	\$26,541	\$31,109	17.2%

5 Connection Fees

5.1 Overview of Connection Fees

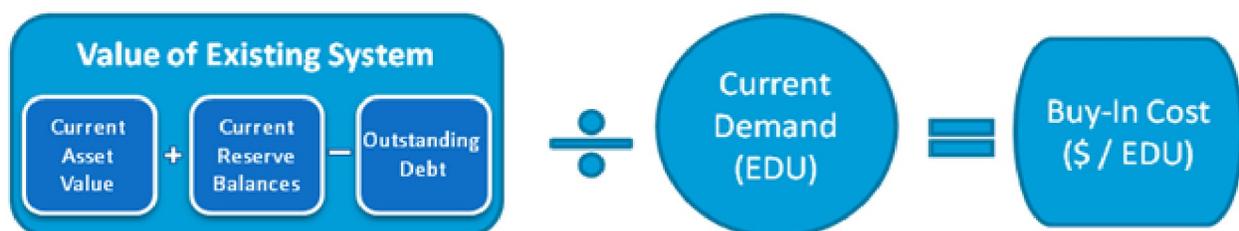
Connection fees are the one-time capital charges that City of Thousand Oaks imposes on customers that demand new or expanded connections to the City’s wastewater system facilities. The fees should generally reflect the estimated reasonable cost to the City of providing existing or additional system capacity to new development. Other common designations for these fees are impact, system development, developer, capital facilities, or capacity fees.

Currently, the City assesses a one-time connection fee on new users that request connection to the City’s wastewater system. The charges are intended to reflect either: 1) the cost of system capacity that is required to provide service to new customers; or 2) increased demand for system capacity that results from renovations and/or additions to existing establishments. For single-family residential dwelling units, the current connection fee is \$10,264 per Service Unit (SU) for wastewater connections.

For publicly owned wastewater systems, most of the assets are typically paid for by the contributions of existing customers through rates and charges. In service areas that incorporate new customers, the infrastructure developed by previous customers is generally extended towards the service of new customers. Existing customers’ investment in the existing system capacity allows newly connecting customers to take advantage of unused surplus capacity. To further economic equality among new and existing customers, in turn, new connectors will typically refund to existing customers the value of the existing system capacity to existing customers, effectively putting them on par with existing customers. In other words, the new users are buying into the existing system through a refund to the existing customers for the portion that has already been invested in.

The most appropriate approach to connection fees for the City is the equity buy-in approach. Because the City’s water and wastewater infrastructure is substantially built-out, new customers will largely be served by existing infrastructure in which existing customers have invested a considerable amount of economic resources through wastewater rates.

The basic methodology for the equity buy-in approach is to take the total current and planned values and of the City’s wastewater system and divide by the system’s current demands. The resulting “unit facility value of capacity per dollar” is in turn converted into a “connection fee per single-family customer” by dividing by a daily single-family customer’s usage. The unit capacity value of capacity in dollars can similarly be applied to the City’s various customer types based on their levels of average actual usage.



5.2 WW Connection Fees

The Replacement Cost (RC) of wastewater assets was determined for the entire wastewater system, cash reserves were added and outstanding debt principal was subtracted to determine the net asset value. This is done because new users benefit from any additional reserves, but will also contribute for principal payments via rates on the City’s existing debts (2010 Refunding Bond and SRF loans). Once the net assets value has been determined, the connection fee unit cost can be determined (dividing the net assets value by the current capacity of the wastewater system), and the unit cost can be allocated based on estimated wastewater flows and strengths for each new customer to determine the appropriate connection fees. A summary of asset values is shown in Table 5-1 and the resulting connection fees are shown in Table 5-2. The City currently applies automatic adjustments based on ENR CCI for its connection fees. RFC recommends that the City continue the annual adjustments of water connection fees using ENR CCI to adjust for the change in construction costs.

Table 5-1: Current WW Asset Value using Replacement Cost Approach

Asset Type	Replacement Cost
Building and Land	\$1,553,045
Improvements	\$36,429,381
Equipment	\$3,942,893
Collection System	\$156,012,402
Plant	\$166,160,982
Total WW Asset Value	\$364,098,703

Table 5-2: Calculation of Proposed WW Connection Fees

Asset Value	\$364,098,703
Reserves	\$40,281,883
Less Outstanding Par	(\$28,209,287)
Total WW System Value (in 2012 Dollars)	\$376,171,299
Current WWSU (2012)	54,744
Current Fees	\$10,264
WW Connection Fees (\$ / SU) in 2012 Dollars	\$6,868
WW Connection Fees (\$ / SU) in 2014 Dollars⁸	\$7,288

⁸ Escalated to 2014 using estimated Engineering New Records Construction Cost Index (ENR CCI) for 20-City in 2014 using 30-year historical average. Proposed Connection Fees are in 2012 dollars based on asset listing current as of FY 2012 year end.

6 Conclusion

This Study was conducted to address the environment of revenues from rates being outpaced by operating expenditures and costs to maintain existing infrastructure. In determining future revenue requirements for the City's wastewater enterprise, RFC developed efficient and sufficient reserve policies, and ensured fair and equitable rates that minimized rate impact to its customers.

RFC recommends that the City take steps to implement the revised rates. Because the financial landscape including customer usage, revised CIP estimates, and other estimates is continuously changing, RFC further recommends that the City revisit its financial plan and its inputs on a periodic basis.

7 Technical Appendix on Cost of Service and Rates

For the analysis, a “test” year was established in which revenue requirements for that year were evaluated and the resulting rates for that year were calculated. The following analysis uses FY 2014 as the test year.

7.1 Mass Balance

In addition to establishing flow, total suspended solids (TSS) and Biochemical Oxygen Demand (BOD) cost allocation parameters, a general parameter was created as well. TSS and BOD parameters are used to measure the strength component of wastewater discharge.

The design method of allocations process is the method used in determining percentage values for each parameter by which wastewater costs are assigned. This methodology involves breaking down O&M and capital expenditures by individual expenses, categorizing such expenses into functional cost categories (i.e. collection, treatment) and then allocating the functional cost categories.

In order to allocate costs of service to the different user classes, unit costs of service were calculated for flow and strength parameters, with the general parameter re-allocated to the other parameters. The unit costs of service are developed by dividing the total annual costs allocated to each parameter by the total annual loadings or number of accounts for the respective parameter (BOD, TSS, and customer service). Table 7-1 shows the total flow and loadings of each customer class in the system, calculated using strength factors for each customer class.

Table 7-1: Wastewater Mass Balance⁹

		Flow (mgd)	BOD (mg/L)	TSS (mg/L)	BOD lbs/yr	TSS lbs/yr
Total Plant		10.35	311	292	9,807,636	9,208,456
Less: I&I	2.1%	0.21	1,998	1,329	1,291,834	859,431
Net Plant		10.14	276	270	8,515,802	8,349,025
	ERU (w/o strength factor)					
Residential	37,455	6.74	290	290	5,955,547	5,955,547
Multi Family	6,587	1.19	290	290	1,047,366	1,047,366
Commercial	5,435	0.98	290	290	864,147	864,147
School	918	0.17	130	80	65,412	40,254
Market / Mortuary	138	0.02	815	815	61,711	61,711
Restaurant (grease traps)	353	0.06	525	300	101,685	58,106
Restaurant / Bakery	355	0.06	980	650	190,730	126,504
Industrial High Flow	4,937	0.89	83	68	224,678	184,073
Car Wash	138	0.02	60	150	4,527	11,317
TOTAL	56,315	10.14	276	270	8,515,802	8,349,025
Revised ERU Definition		180 (gpd)	290 (mg/L)	290 (mg/L)		

⁹ Inflow & Infiltration (I&I) is based on industry standards.

The previous ERU definition of 285 gpd of flow and 200 mg/L of strength for annual loadings (BOD, TSS) was established more than 20 years ago for the single-family residential customer class. During that time, and increasingly over the last ten years, increased focus on water conservation and more efficient appliances and fixtures have driven indoor water usage down significantly.

Based on the City's 2010 Population and Housing report, current household size is approximately 2.8. Assuming 65 gallons per capita per day, a residential household is estimated to use approximately 180 gpd. This figure aligns with current usage in comparable areas.¹⁰

Strengths of annual loadings move inversely with respect to daily flow, because while total loadings remain the same (overall mass), the concentration of those loadings has gone up. The strength factors used for the Study are taken from Characteristic Sewage Generation Factors published by the City of Los Angeles and adjusted to reflect the unique characteristics of the City based on discussions with City staff. Range of 275 mg/L to 315 mg/L for residential strength is considered normal within today's industry standards. Because actual residential strengths are fluctuating, 290 mg/L is a best estimate for the City of Thousand Oaks. Based on the similarity in density of SFR and multi-family residential in the City, RFC recommended that SFR and MFR adopt the same flows and strengths figures. Based on schools operating eight months out of the year, RFC recommends that their annual flow count as 70 percent of SFR flow. This recommendation corroborates with industry standards as followed by the Los Angeles Unified School District. Industrial, Car Wash, Market/Mortuary, and Restaurant strengths are based on industry standards, also with slight modifications to match the unique characteristics of the City's wastewater system.

RFC notes that City staff was interested in creating a new customer class for restaurants with grease traps in order to incentivize their installing grease traps that would reduce the strength load on the wastewater system by approximately 40-50 percent. A new customer class called 'Restaurant (grease traps)' was created so that it could be charged a lower rate than the standard 'Restaurant/Bakery' class.

7.2 Allocation of Revenue Requirements

Allocation factors used for allocating WW O&M and capital expenses were based on discussions with City staff, and are listed in Tables 7-2 and 7-3, respectively.

¹⁰ 65 gallons per capita per day is based on industry standards.

Table 7-2: Allocation Factors for WW O&M Expenses

O&M Allocation	Flow	BOD	TSS	General
Salaries & Benefits	60.0%	20.0%	20.0%	
Supplies & Equipment	50.0%	25.0%	25.0%	
Repairs & Maintenance	50.0%	25.0%	25.0%	
Professional/Contractual Services	50.0%	25.0%	25.0%	
Utilities	50.0%	25.0%	25.0%	
Insurance & Claims				100%
Equipment/Building Rental				100%
Training & Memberships				100%
Asset Replacement Funding	70.7%	13.9%	13.9%	1.5%
Capital Outlay	70.7%	13.9%	13.9%	1.5%

Table 7-3: Allocation Factors for WW Capital Expenditures

Capital Allocation	Flow	BOD	TSS	General
Building and Land				100.0%
Improvements	50.0%	25.0%	25.0%	
Equipment				100.0%
Collection System	100.0%			
Plant	50.0%	25.0%	25.0%	

7.3 Unit Cost of Service

Tables 7-4 and 7-5 show the total units of service and the development of the FY 2014 unit costs for each parameter (Flow, BOD and TSS), respectively.

Table 7-4: Net Revenue Requirements from WW Rates (FY 2014)

	Operating	Capital	Total
Revenue Requirements			
O&M Expenses	\$16,013,095		\$16,013,095
Existing Debt Service		\$3,568,549	\$3,568,549
Proposed Debt Service		\$0	\$0
Capital Projects Expenses		\$4,003,500	\$4,003,500
Subtotal:	\$16,013,095	\$7,572,049	\$23,585,144
(Less) Revenue Requirements Met from Other Sources			
Plan Checking/Filing Fee	\$1,000		\$1,000
Inspection Fees	\$13,100		\$13,100
Interest Income	\$339,134		\$339,134
Miscellaneous Revenue	\$953,600		\$953,600
Residential Connection Fees		\$100,000	\$100,000
Commercial Connection Fees		\$400,000	\$400,000
Subtotal:	\$1,306,834	\$500,000	\$1,806,834
(Less) Adjustments			
Adjustments for Annual Cash Balance	(\$3,097,513)	\$7,572,049	\$4,474,536
Adjustments to Annualize Rate Increase	(\$339,290)		(\$339,290)
Subtotal:	(\$3,436,803)	\$7,572,049	\$4,135,246
Net Revenue to be Recovered from Rates	\$18,143,064	(\$500,000)	\$17,643,064

Table 7-5: Unit Cost of Service Calculation

	Flow	BOD	TSS	General	Total
Operating Cost	\$9,756,269	\$3,972,417	\$3,972,417	\$441,960	\$18,143,064
Capital Cost	-\$353,349	-\$69,552	-\$69,552	-\$7,547	-\$500,000
Total	\$9,402,921	\$3,902,865	\$3,902,865	\$434,413	\$17,643,064
Allocation of General Cost	\$237,366	\$98,523	\$98,523	-\$434,413	\$0
Total Cost of Service	\$9,640,287	\$4,001,388	\$4,001,388	\$0	\$17,643,064
	<u>54.64%</u>	<u>22.68%</u>	<u>22.68%</u>		
Unit of Service	10.14	8,515,802	8,349,025		
Unit	mgd	lbs/yr	lbs/yr		
Unit Cost of Service	\$951,020	\$0.47	\$0.48		
	mgd	lbs/yr	lbs/yr		

7.4 Revised Service Unit Definition

The below formula represents the revised service unit definition, and is derived parallel to the City’s prior format. Note that the City’s method for determining Equivalent Residential Unit (ERU) equivalents between customer classes was retained with the revised formula. The ERU unit for commercial accounts is defined as 20 commercial fixture units’ equivalent to one residential ERU. For schools, 20 fixture units is equivalent only to 0.7 ERU based on the academic year representing only 70 percent of the calendar year.

$$1 \text{ SU} = \frac{\text{Daily Flow}}{180} \left[0.54 + 0.23 \times \frac{\text{BOD}}{290} + 0.23 \times \frac{\text{SS}}{290} \right]$$

SU = Service Unit

Daily Flow = Wastewater flow in gallons per day (gpd)

BOD = Biochemical Oxygen Demand (mg/L)

SS = Suspended Solid (mg/L)

7.5 Detailed Proposed Rates Schedules

Table 7-6 summarizes the proposed combined factors for each WW customer class under assumed flows and strengths. Tables 7-7 and 7-8 show the proposed WW rates per ERU before and after a revenue adjustment in FY 2014, respectively. Table 7-10 summarizes the proposed WW rates (\$/ERU) by customer classes for FY 2014 and FY 2015. Note that although the proposed combined factor for Schools increases, the total ERUs for Schools is decreasing, the combined result for which is a 17.3 percent decrease in bills to Schools, shown in Table 7-9 below.

Table 7-6: WW Combined Factors for Strengths and Flows for Different Customer Classes

WW Rate Customer Class	Combined Factor	
	Current	Proposed
Residential	1.00	1.00
Multi Family	1.00	1.00
Commercial	1.00	1.00
School	0.67	0.70
Market / Mortuary	2.00	1.85
Restaurant (grease traps)	2.50	1.20
Restaurant / Bakery	2.50	1.85
Industrial High Flow	1.00	0.65
Car Wash	1.00	0.70

Table 7-7: Proposed Monthly WW Rates per ERU before Revenue Adjustment in FY 2014

WW Rate Customer Class	Current \$ / ERU	1/1/2014 \$ / ERU	\$ Impact per ERU	% Impact
Residential	\$11,438,786	\$25.81	\$0.36	1.4%
Multi Family	\$2,011,670	\$25.81	\$0.36	1.4%
Commercial	\$1,659,762	\$25.81	\$0.36	1.4%
School	\$250,371	\$18.09	\$1.04	6.1%
Market / Mortuary	\$84,352	\$47.72	-\$3.18	-6.2%
Restaurant (grease traps)	\$269,709	\$30.88	-\$32.75	-51.5%
Restaurant / Bakery	\$271,012	\$47.65	-\$15.98	-25.1%
Industrial High Flow	\$952,282	\$16.86	-\$8.59	-33.8%
Car Wash	\$26,541	\$18.12	-\$7.33	-28.8%

Table 7-8: Proposed Monthly WW Rates (\$/ERU) by Customer Classes

WW Rate Customer Class	Current \$ / ERU	1/1/2014 \$ / ERU	Change (\$)	Change (%)	1/1/2015 \$ / ERU
Residential	\$25.45	\$26.85	\$1.40	5.5%	\$28.20
Multi Family	\$25.45	\$26.85	\$1.40	5.5%	\$28.20
Commercial	\$25.45	\$26.85	\$1.40	5.5%	\$28.20
School	\$17.05	\$18.81	\$1.76	10.3%	\$19.76
Market / Mortuary	\$50.90	\$49.61	(\$1.29)	-2.5%	\$52.10
Restaurant (grease traps)	\$63.63	\$32.11	(\$31.52)	-49.5%	\$33.72
Restaurant / Bakery	\$63.63	\$49.54	(\$14.09)	-22.1%	\$52.02
Industrial High Flow	\$25.45	\$17.54	(\$7.91)	-31.1%	\$18.42
Car Wash	\$25.45	\$18.84	(\$6.61)	-26.0%	\$19.79

7.6 Customer Class Impact

Upon developing the proposed monthly WW rates as shown in Table 7-8, customer class costs can be determined by applying unit costs to the projected FY 2014 flows and loadings for each user class. Cost responsibilities for each customer class are shown in Table 7-9.

Table 7-9: Customer Class Impacts

Customer Class	Flow	BOD	TSS	Total FY 2014	Current FY 2013	%
Residential	\$6,411,697	\$2,798,381	\$2,854,280	\$12,064,358	\$11,438,786	5.5%
Multi Family	\$1,127,586	\$492,134	\$501,965	\$2,121,685	\$2,011,670	5.5%
Commercial	\$930,334	\$406,044	\$414,155	\$1,750,532	\$1,659,762	5.5%
School	\$157,095	\$30,736	\$19,292	\$207,123	\$250,371	-17.3%
Market / Mortuary	\$23,640	\$28,997	\$29,576	\$82,213	\$84,352	-2.5%
Restaurant (grease traps)	\$60,471	\$47,780	\$27,848	\$136,099	\$269,709	-49.5%
Restaurant / Bakery	\$60,763	\$89,620	\$60,629	\$211,012	\$271,012	-22.1%
Industrial High Flow	\$845,144	\$105,571	\$88,220	\$1,038,935	\$952,282	9.1%
Car Wash	\$23,555	\$2,127	\$5,424	\$31,106	\$26,541	17.2%
TOTAL	\$9,640,287	\$4,001,388	\$4,001,388	\$17,643,064	\$16,964,484	4%