

DRAFT

RATE STUDY UPDATE

Water, Wastewater and
Environmental Resources Divisions

B&V PROJECT NO. 169528

PREPARED FOR

City of Oxnard, CA

11 MAY 2012



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Introduction

This report was prepared for the City of Oxnard (City) to document the update of a multi-year financial plan, the cost of service analysis and the design of a rate structure for the City's Water, Wastewater, and Environmental Resources (ER) Divisions. The specific goals of the study were to:

- Review and evaluate existing policies and procedures affecting utility rates;
- Evaluate the adequacy of projected revenues under existing rates to meet projected revenue requirements;
- Develop a sound financial plan for the Water, Wastewater, and ER Divisions covering a ten-year study period for both ongoing operations and planned capital improvements;
- Allocate projected Fiscal Year 2012-2013 (FY 12/13) revenue requirements to the various customer class in accordance with the respective service requirements; and
- Develop a suitable rate schedule that produces revenues adequate to meet financial needs while recognizing customer costs of service and local and state policy considerations such as Proposition 218 and Senate Bill x7-7 (SBx7-7).

BACKGROUND

The City of Oxnard is located in western Ventura County, approximately 65 miles northwest of Los Angeles. The City is the largest city in the Ventura County with a population of roughly 198,000 (2010 US Census). The City owns and operates three self-supporting enterprises: Water, Wastewater, and Environmental Resources.

The Water Enterprise (Water) serves residential, commercial, industrial, and agricultural customers by providing potable water. To serve its customers, Water obtains water from two primary sources: local groundwater and from the Metropolitan Water District of Southern California through United Water and Calleguas Municipal Water District. It is anticipated that in 2012-2013, the City will begin producing recycled water for non-potable uses. Furthermore, Water owns and maintains an 18.6 million gallons per day (MGD) water treatment facility along with water storage facilities, supplemental facilities, booster pumping stations, and pipelines.

The Wastewater Enterprise (Wastewater) serves its customers by providing collection and treatment wastewater services. Wastewater owns and operates a regional wastewater treatment facility along with a collection system to serve all sanitary and storm runoff needs. The treatment facility, located in Oxnard, serves as regional treatment facility handling sanitary waste from the City of Port Hueneme and the U.S. Naval Base. The accompanying wastewater collection system is composed of pipeline, manholes, and other access structures.

The Environmental Resources Enterprise (ER) serves its customers by providing solid waste and recycling handling services. ER owns and operates a regional handling, recycling, and transfer station to serve the City and the surrounding communities. The Material Recovery Facility (MRF), located in Oxnard, separates solid waste, recyclables, and yard waste and then transfers it to local landfills. In addition, ER maintains a fleet of commercial vehicles for collection and disposal of waste and recyclables.

PURPOSE

The purpose of this report is to present the findings obtained from Black & Veatch Corporation's (Black & Veatch's) study of the Water, Wastewater, and ER Division's rate structure and alternatives, financing, and capital needs. The study develops a financial plan that projects operating revenue, expenses and capital financing costs for the City's Enterprise Funds over a ten-year planning period ending June 30, 2021. As part of the plan, future revenues under existing rates, operation and maintenance expense, principal and interest expense on bonded debt, and capital improvement requirements are considered. Annual projections of customers, water use, revenues, and expenditures have been made using historical data and estimates based on SBx7-7 requirements for the next ten years.

SCOPE OF WORK

Black & Veatch was retained by the City to update its 2009 cost of service and rate study on all three of its enterprises. The results of a study of the projected revenues, revenue requirements, costs of service, and rates for water service are presented herein. For purposes of this report, the study period is the ten fiscal years beginning July 1, 2011 and ending June 30, 2021. For this report, reference to the study period (Study Period) focuses on the period between July 1, 2011 and June 30, 2016. Based on Proposition 218, rates cannot be set in excess of 5-year increments. Unless otherwise noted, references in this report to a specific year are for the City's year ending June 30. To avoid confusion between calendar and fiscal years, the term FY refers to the year beginning July 1 and ending June 30. Revenues and revenue requirements for the study period were projected based on a review of historical factors and the Water Division's operating and capital budgets and financial policies. The study of revenue requirements recognizes projected operation and maintenance (O&M) expense, establishment and/or maintenance of reserve funds, and capital financing requirements. Capital financing requirements include payments on outstanding bond issues as well as capital improvement expenditures met from annual revenues and available reserve funds.

The Water Division's costs of service were allocated to customer classes utilizing a cost causative approach endorsed by the American Water Works Association (AWWA) M1 and the Water Environment Federation (WEF) wastewater charges manuals. This allocation methodology produces cost of service allocations recognizing the projected customer service requirements for the City. Proposed rates are designed in accordance with allocated cost of service and local policy considerations. The extent to which the existing rate structure recovers revenues from customer classes in accordance with cost of service allocations is also evaluated.

DISCLAIMER

In conducting our study, we reviewed the books, records, agreements, capital improvement programs, and customer sales and financial projections of the Water, Wastewater, and ER Divisions as we deemed necessary to express our opinion of the operating results and projections. While we consider such books, records, documents, and projections to be reliable, Black & Veatch has not verified the accuracy of these documents.

The projections set forth in this report below are intended as "forward-looking statements". In formulating these projections, Black & Veatch has made certain assumptions with respect to conditions, events, and circumstances that may occur in the future. The methodology utilized in performing the

analyses follows generally accepted practices for such projections. Such assumptions and methodologies are reasonable and appropriate for the purpose for which they are used. While we believe the assumptions are reasonable and the projection methodology valid, actual results may differ materially from those projected, as influenced by the conditions, events, and circumstances that actually occur. Such factors may include the City's ability to execute the capital improvement program as scheduled and within budget, regional climate and weather conditions affecting the demand for water, and adverse legislative, regulatory or legal decisions (including environmental laws and regulations) affecting the ability of any of the Divisions' ability to manage the system and meet water quality, waste discharge, and / or other regulatory or environmental requirements.

Water Rate Study

REVENUE AND REVENUE REQUIREMENTS

To meet the costs associated with providing water services to its customers, the Water Division derives revenue from a variety of sources including water user charges, connection fees, interest earned from the investment of available funds, meter installation fees, late penalties, and other miscellaneous revenues. The level of future revenue generated in the study is projected through a combination of an analysis of historical and future system growth in terms of number of accounts and water consumption.

With revenue derived from the various sources, the Water Division meets the cash requirements of operation and maintenance (O&M); principal, interest, and reserve payments on revenue and other bond indebtedness; and recurring annual capital expenditures for replacements, system betterments, and extensions not debt financed. Operation and maintenance expenses are those expenditures necessary to maintain the system in good working order. Routine annual capital expenditures, which include equipment replacements, consist of recurring annual replacements, minor extensions, and betterments which are normally revenue financed. Other capital costs include principal and interest payments, bond covenant-required payments, and cash financed capital improvements.

Customer and Water Usage Projections

To forecast revenue, customer bills and billed water sales volume needs to be determined within Water's service area. Growth is incorporated into the equation by projecting the number of bills as shown in Table 1.

Table 1 Average Number of Bills

Customer Class	BUDGET YR	PROJECTED			
	FY 11/12 (bills)	FY 12/13 (bills)	FY 13/14 (bills)	FY 14/15 (bills)	FY 15/16 (bills)
Single Family Residential	397,700	397,700	397,700	397,700	401,676
Multi-Family Residential	24,497	24,497	24,497	24,497	24,619
Commercial/Institutional	43,091	43,091	43,091	43,091	43,522
Industrial	1,900	1,900	1,900	1,900	1,900
Irrigation	12,149	12,149	12,149	12,149	12,393
Ocean View	610	610	610	610	623
Construction	2,864	2,864	2,864	2,864	2,864
Recycled Water	0	480	8,640	10,044	11,448
Private Firelines	9,491	9,491	9,491	9,491	9,586
Total	492,302	492,782	500,942	502,346	508,631

Based on discussions with City staff, the customer bill growth is estimated to increase from 492,302 in FY 11/12 to 508,631 in FY 15/16. This represents an average 5-year growth rate of less than 1 percent per year. The majority of the growth is expected to come from residential with new development on the outer edge of the City.

Using the projected number of bills and historical water usage patterns per customer class, the projected water sales volumes for Water were derived as shown in Table 2. Black & Veatch had several years of detailed information and thus historical patterns of customer water usage were determined. We recommend that as updated detailed information becomes available, Water should continue to average consumption levels by customer class to help normalize the effects of abnormal weather conditions. Using FY 10/11 water usage benchmarks, the projected water sales volumes are anticipated to increase as shown in Table 2. In FY 12/13, Water anticipates an increase of 1,524,600 hundred cubic feet (ccf) of water sales volume that will be produced by the Groundwater Recovery Enhancement and Treatment (GREAT) Program. Phase I of the GREAT will be completed in the late 2012/early 2013

Table 2 Projected Billed Volume

Customer Class	BUDGET YR	PROJECTED			
	FY 11/12 (ccf)	FY 12/13 (ccf)	FY 13/14 (ccf)	FY 14/15 (ccf)	FY 15/16 (ccf)
Single Family Residential	4,404,600	4,404,600	4,404,600	4,404,600	4,448,600
Multi-Family Residential	1,739,800	1,739,800	1,739,800	1,739,800	1,748,400
Commercial/Institutional	1,492,900	1,492,900	1,492,900	1,492,900	1,507,900
Industrial	510,200	510,200	510,200	510,200	510,200
Irrigation	1,210,100	1,210,100	1,210,100	1,210,100	1,234,400
Ocean View	442,300	442,300	442,300	442,300	451,700
Construction	1,700	1,700	1,700	1,700	1,700
Recycled Water	0	1,524,600	2,178,000	3,049,200	3,049,200
Total	9,801,600	11,326,200	11,979,600	12,850,800	12,952,100

Revenue Projections

Water generates revenue from water sales, meter installations, turn-on charges and other miscellaneous charges. Since revenue generated outside of water sales are not subject to rate increases, we have excluded them from this portion of the analysis. These additional revenue sources are incorporated later in the cash flow portion of the report.

Water's water sales are composed of two parts, a monthly service charge and a commodity charge. The monthly service charge is an amount based on meter size that is designed to recover fixed costs which do not vary with the volume of water used by a customer such as meter reading, customer billing, and debt service. The commodity charge is an amount based on units of consumption which is measured by

the number of hundred cubic feet of water consumed during the billing cycle. Included in the commodity charge are the costs associated with water purchases. In addition, Water carefully monitors and adjusts its rates as a result of increases imposed by the Metropolitan Water District (MWD), Calleguas Municipal Water District (CMWD), and United Water Conservation District (United) for purchased water. Table 3 summarizes the City's current water rates for all customer classes.

Table 3 Existing Rates (Effective February 13, 2012)

COMMODITY CHARGES (\$/CCF)							
Single Family		Multi-Family		Commercial / Institutional / Industrial / Fireline / Landscape Irrigation		Metered Construction	
Rate Block	Charge	Rate Block	Charge	Rate Block	Charge	Rate Block	Charge
0 - 6	\$2.54	0 - 17	\$2.07	0 - 17	\$2.07	0 - 13	\$4.17
7 - 12	\$2.82	18 - 32	\$2.31	18 - 32	\$2.31	14 - 23	\$4.61
Over 12	\$3.95	Over 32	\$3.44	Over 32	\$3.44	Over 23	\$6.90
Recycled Water in Lieu of Potable Water - Industry		Recycled Water in Lieu of Potable Water - Irrigation		Ocean View Residential / Commercial / Institutional / Industrial			
Rate Block	Charge	Rate Block	Charge	Rate Block	Charge		
0 - 13	\$1.76	0 - 17	\$1.76	0 - 17	\$2.07		
14 - 23	\$1.96	18-32	\$1.96	18-32	\$2.31		
Over 23	\$2.93	Over 32	\$2.93	Over 32	\$3.44		

Ocean View Agricultural Irrigation rate is \$0.90/ccf for all consumption

MONTHLY SERVICE CHARGE (\$/month)							
Meter Size	Single Family	Multi-Family	Commercial / Institutional / Industrial	Construction	Fireline	Unmetered Construction	Ocean View
3/4"	\$13.88	\$11.84	\$9.57		\$1.47	\$6.90	\$9.57
1"	\$21.88	\$18.66	\$14.72	\$24.38	\$2.54	\$10.15	\$14.72
1.5"	\$40.48	\$34.01	\$26.55		\$4.86	\$15.45	\$26.55
2"	\$67.52	\$52.70	\$41.26		\$7.82	\$20.28	\$41.26
3"	\$137.88	\$118.39	\$88.26	\$82.04	\$17.24	\$25.52	\$88.26
4"	\$234.04	\$192.43	\$150.94		\$29.48	\$30.75	\$150.94
6"	\$485.55	\$402.57	\$308.95		\$61.48	\$41.21	\$308.95
8"	\$697.48	\$578.39	\$450.70		\$88.44	\$51.68	\$450.70
10"	\$1,122.71	\$930.76	\$714.61		\$142.55	\$62.14	\$714.61

Incorporating the existing water rates with the customer usage projections, water sales revenue under existing rates is tabulated as shown in Table 4. The anticipated revenue generated is expected to increase from \$39,386,000 in FY 11/12 to \$39,779,300 in FY 15/16. In 2012, when Phase I of the GREAT Program is fully functional, a portion of potable water sales will be replaced recycled water sales. Recycled water will be used primarily to meet landscape irrigation needs for parks, schools and golf courses, and the River Park development. For FY 12/13, the City anticipates that revenues from recycled water sales in addition to MWD long range planning credits will offset projected recycled water system operational costs.

Table 4 Revenue under Existing Rates

Customer Class	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Single Family Residential	\$19,179,300	\$19,179,300	\$19,179,300	\$19,179,300	\$19,370,900
Multi-Family Residential	\$5,752,700	\$5,752,700	\$5,752,700	\$5,752,700	\$5,780,900
Commercial/Institutional	\$7,625,600	\$7,625,600	\$7,625,600	\$7,625,600	\$7,701,900
Industrial	\$1,790,000	\$1,790,000	\$1,790,000	\$1,790,000	\$1,790,000
Irrigation	\$4,118,100	\$4,118,100	\$4,118,100	\$4,118,100	\$4,200,900
Ocean View	\$489,400	\$489,400	\$489,400	\$489,400	\$499,800
Construction	\$22,200	\$22,200	\$22,200	\$22,200	\$22,200
Private Firelines	\$408,700	\$408,700	\$408,700	\$408,700	\$412,700
Recycled Water		\$1,757,600	\$3,701,200	\$5,342,800	\$5,342,800
Total	\$39,386,000	\$41,143,600	\$43,087,200	\$44,728,800	\$45,122,100

Operation and Maintenance Projections

In order to adequately adjust rates, it is necessary to project operation and maintenance (O&M) expenses. Summarized in Table 5 are Water’s projected O&M expenditures. These expenditures include costs related to personnel, contract services, operating supplies, utilities and general administrative. The forecasted expenditures are based Black & Veatch and City staff’s expertise and knowledge. The table to the right summarizes key assumptions for inflation rates used in the O&M expense projections. No escalation factor is applied to imported water sources because these cost

- *Personnel Services: 2% every year*
- *Operating Supplies: 2% beginning FY 14/15*
- *Maintenance: 4% beginning in FY 14/15*
- *Utilities: 3% (FY 12/13 and FY 13/14), then 5%*
- *G&A: 2% (FY 12/13 and FY 13/14), then 5%*

increases are handled through the City’s pass-through ordinance. The levels of adjustment illustrated on the right are consistent with recent increases seen throughout the area. Total O&M (less capital outlay

and the Infrastructure Use Fee) is projected to increase from \$29,494,200 in FY 11/12 to \$37,304,900 in FY 15/16.

Table 5 Operation and Maintenance Expenses

DESCRIPTION	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Production (Div 01)					
Salaries and Wages	\$640,700	\$653,400	\$666,600	\$679,900	\$693,500
Contractual Services	\$130,000	\$130,000	\$132,600	\$135,300	\$138,000
Operating Supplies					
Water Acquisition-UMCD	\$4,634,920	\$4,634,900	\$4,727,600	\$4,822,200	\$4,918,600
Water Acquisition-CMWD	\$12,800,000	\$12,800,000	\$13,056,000	\$13,317,100	\$13,583,400
Water Acquisition-City	\$906,000	\$906,000	\$924,100	\$942,600	\$961,500
Desalter Treatment Costs	\$0	\$1,876,400	\$1,876,400	\$1,876,400	\$1,876,400
All Other Operating Supplies	\$449,980	\$450,000	\$459,000	\$468,100	\$477,500
Utilities	\$460,000	\$473,800	\$497,500	\$522,400	\$548,500
General and Administrative	\$111,200	\$113,400	\$119,100	\$125,100	\$131,400
<i>Total Production</i>	<i>\$20,132,800</i>	<i>\$22,037,900</i>	<i>\$22,458,900</i>	<i>\$22,889,100</i>	<i>\$23,328,800</i>
Distribution (Div 02)					
Salaries and Wages	\$1,488,800	\$1,518,100	\$1,548,100	\$1,578,600	\$1,609,600
Contractual Services	\$50,000	\$50,000	\$51,000	\$52,000	\$53,000
Operating Supplies	\$120,000	\$120,000	\$122,400	\$124,800	\$127,300
General and Administrative	\$60,200	\$61,400	\$64,500	\$67,700	\$71,100
<i>Total Distribution</i>	<i>\$1,719,000</i>	<i>\$1,749,500</i>	<i>\$1,786,000</i>	<i>\$1,823,100</i>	<i>\$1,861,000</i>
Metering (Div 03)					
Salaries and Wages	\$1,094,200	\$1,116,000	\$1,138,300	\$1,161,000	\$1,184,200
Contractual Services	\$20,000	\$20,000	\$20,400	\$20,800	\$21,200
Operating Supplies	\$390,000	\$390,000	\$397,800	\$405,700	\$413,800
<i>Total Metering</i>	<i>\$1,504,200</i>	<i>\$1,526,000</i>	<i>\$1,556,500</i>	<i>\$1,587,500</i>	<i>\$1,619,200</i>
Procurement (Div 10)					
Salaries and Wages	\$522,400	\$532,300	\$542,300	\$552,500	\$563,000
Contractual Services	\$813,000	\$813,000	\$829,300	\$845,900	\$862,900

DESCRIPTION	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Operating Supplies	\$65,000	\$65,000	\$66,300	\$67,600	\$68,900
Utilities	\$59,000	\$60,800	\$63,800	\$67,000	\$70,400
General and Administrative	\$2,753,500	\$2,759,500	\$2,889,300	\$3,025,700	\$3,168,800
Repairs and Maintenance	\$433,600	\$433,600	\$450,900	\$468,900	\$487,700
<i>Total Procurement</i>	<i>\$4,646,500</i>	<i>\$4,664,200</i>	<i>\$4,841,900</i>	<i>\$5,027,600</i>	<i>\$5,221,700</i>
Conservation / Outreach (Div 11)					
Salaries and Wages	\$227,400	\$231,900	\$236,500	\$241,300	\$246,100
Contractual Services	\$25,000	\$25,000	\$25,500	\$26,000	\$26,500
Operating Supplies	\$30,000	\$30,000	\$30,600	\$31,200	\$31,800
General and Administrative	\$584,300	\$595,600	\$624,800	\$655,400	\$687,500
<i>Total Conservation / Outreach</i>	<i>\$866,700</i>	<i>\$882,500</i>	<i>\$917,400</i>	<i>\$953,900</i>	<i>\$991,900</i>
Ocean View (Div 12)					
Operating Supplies	\$443,100	\$443,100	\$443,100	\$443,100	\$443,100
<i>Total Ocean View</i>	<i>\$443,100</i>	<i>\$443,100</i>	<i>\$443,100</i>	<i>\$443,100</i>	<i>\$443,100</i>
Public Information (Div 45)					
Salaries and Wages	\$132,400	\$135,100	\$137,800	\$140,500	\$143,200
Contractual Services	\$23,900	\$23,900	\$24,400	\$24,900	\$25,400
Operating Supplies	\$10,400	\$10,500	\$10,700	\$10,900	\$11,100
General and Administrative	\$11,400	\$11,600	\$12,200	\$12,900	\$13,600
Repairs and Maintenance	\$3,800	\$3,900	\$4,100	\$4,300	\$4,500
<i>Total Public Information</i>	<i>\$181,900</i>	<i>\$185,000</i>	<i>\$189,200</i>	<i>\$193,500</i>	<i>\$197,800</i>
Total O&M Expense (Fund 601)	\$29,494,200	\$31,488,200	\$32,193,000	\$32,917,800	\$33,663,500
Recycled Water					
Salaries and Wages	\$0	\$1,750,000	\$3,500,000	\$3,570,000	\$3,641,400
Total Recycled Water	\$0	\$1,750,000	\$3,500,000	\$3,570,000	\$3,641,400
Total O&M Expense (ALL)	\$29,494,200	\$33,238,200	\$35,693,000	\$36,487,800	\$37,304,900

Capital Improvement Program

While O&M expenses cover day-to-day operations, Water incurs additional capital expenditures to replace existing water facilities or installed new facilities for planned future growth. As a result, Water has developed a long-term Capital Improvement Program (CIP) that identifies future water facilities needs. The CIP shown in Table 6 is for FY 12/13 through FY 15/16 and consists of capital improvement projects anticipated to be designed and constructed during the study period.

Table 6 Capital Improvement Program

DESCRIPTION	PROJECTED				TOTAL
	FY 12/13	FY 13/14	FY 14/15	FY 15/16	
Water Utility Capital Improvements					
Blending Station No.2 Rehab	\$0	\$0	\$0	\$597,100	\$597,100
Hydraulic Improvements	\$0	\$3,713,200	\$5,852,700	\$4,537,400	\$14,103,300
Communication Tower	\$250,000	\$0	\$0	\$0	\$250,000
Blending Station No. 3 Desalter	\$0	\$0	\$450,200	\$5,970,200	\$6,420,400
Hansen Computer Upgrade	\$0	\$0	\$222,900	\$236,500	\$459,400
<i>Subtotal Water Projects</i>	<i>\$250,000</i>	<i>\$3,713,200</i>	<i>\$6,525,800</i>	<i>\$11,341,200</i>	<i>\$21,830,200</i>
Asset Management Projects	\$3,025,000	\$3,209,300	\$5,683,800	\$6,030,000	\$17,948,100
Recycled Water Capital Improvement Projects					
Recycled Water Distribution - Phase 1B	\$0	\$2,000,000	\$2,000,000	\$2,000,000	\$6,000,000
Recycled Water Customer Retrofits	\$0	\$500,000	\$250,000	\$250,000	\$1,000,000
<i>Subtotal Recycled Water Projects</i>	<i>\$0</i>	<i>\$2,500,000</i>	<i>\$2,250,000</i>	<i>\$2,250,000</i>	<i>\$7,000,000</i>
Total CIP without Asset Management	\$250,000	\$6,213,200	\$8,775,800	\$13,591,200	\$28,830,200

From FY 12/13 through FY 15/16, Water is projecting expenditures of \$28,830,200 in water and recycled water capital improvement projects, which include capital and replacement. Over the 10-yr planning period, the City is expecting a total of \$158,959,000 of capital projects. As part of the financial plan analyses, an annual inflation allowance of 3 percent beginning in FY 13/14 was included in the above capital improvement project costs.

Capital Fund Financing

A proposed financing plan for the Water's CIP is shown in Table 7. Financing for the CIP is anticipated to come from a combination of funds on hand, transfers from water sales revenues derived from rates, grants, and bond proceeds. Water currently maintains a capital fund that is used to finance CIP projects as well as to separate the commingling of rate and connection funds. The capital fund generates revenue from capital facility charges, water resource development fees, developer connection fees,

transfers and debt proceeds. With new development in City slowing dramatically, Water will depend on rate revenue and bond proceeds to execute planned CIP projects. It is anticipated that during the study period, the Water Enterprise will received payment from the Wastewater and ER for prior loans.

Table 7 CIP Financing Plan

DESCRIPTION	PROJECTED			
	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Beginning Balance	\$0	\$0	\$20,277,700	\$12,157,300
Sources of Funds				
Revenue Bonds Proceeds	\$0	\$28,000,000	\$0	\$20,000,000
Transfer from Fund 601	\$250,000	\$0	\$0	\$0
Interest Income	\$0	\$253,500	\$405,400	\$371,600
Total Sources of Funds	\$250,000	\$28,253,500	\$405,400	\$20,371,600
Uses of Funds				
Capital Improvements - Water	\$250,000	\$3,713,200	\$6,525,800	\$11,341,200
Capital Improvements - RW	\$0	\$2,000,000	\$2,000,000	\$2,000,000
Bond Issuance Expense	\$0	\$336,000	\$0	\$240,000
Bond Reserve Fund Requirement	\$0	\$1,926,600	\$0	\$1,376,100
Total Uses of Funds	\$250,000	\$7,975,800	\$8,525,800	\$14,957,300
Ending Balance	\$0	\$20,277,700	\$12,157,300	\$17,571,600

Based on the proposed CIP, Water will need to issue debt through revenue bonds in FY 13/14 and FY 15/16. Beyond the first 5 years of the CIP plan, additional debt is also required in FY 17/18 and FY 19/20. The proposed debts is indicated above assume the following service terms: 30-year payment period, 5.5 percent annual interest rate, 1.25 percent issuance expense, and a debt service reserve equal to one years' debt service. Capitalized interest for any debt issuances is also expected.

Operating Fund Financing

Summarized in Table 8 is the proposed long-term operating financial plan for Water. This financial plan is designed to generate sufficient funds to cover short-term and long-term expenses. Sources of revenue include water sales under existing rates, additional revenues realized from proposed rate adjustments, miscellaneous revenue and interest earnings on available balances. As mentioned, other miscellaneous revenue includes meter installations and turn-on charges, trust agency revenue, and security fee charges. Uses of funds include operation and maintenance expenses (including water purchases), routine capital outlay, debt service payments, and transfers to other funds such as the capital fund.

Table 8 Operating Fund Financing Plan

LINE NO.	DESCRIPTION	BUDGET YR		PROJECTED		
		FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Water Operating Fund 601						
Revenue						
1	Water Revenue Under Existing Rates	\$39,386,000	\$39,386,000	\$39,386,000	\$39,386,000	\$39,779,300
2	RW Revenue Under Existing Rates		\$1,757,600	\$3,701,200	\$5,342,800	\$5,342,800
	Additional Revenue Required:					
	<u>Year</u>	<u>Percent</u>	<u>Months Effective</u>			
3	FY11/12	0.0%	0	\$0	\$0	\$0
4	FY12/13	3.0%	11		\$1,131,400	\$1,184,900
5	FY13/14	3.0%	12			\$1,331,400
6	FY14/15	8.0%	12			\$3,787,000
7	FY15/16	8.0%	12			\$4,125,900
8	Total Revenue From Rates	\$39,386,000	\$42,275,000	\$45,600,300	\$51,124,600	\$55,700,100
9	P&G Water Supply Agreement	\$2,379,200	\$2,241,700	\$2,241,700	\$2,241,700	\$2,241,700
	<u>Non-Operating Revenue</u>					
10	Miscellaneous Sources	\$1,598,400	\$1,598,400	\$1,598,400	\$1,598,400	\$1,598,400
11	Interest	\$543,600	\$454,000	\$373,600	\$307,000	\$259,500
12	ER Repayment of Loan	\$1,194,400	\$1,194,400	\$1,194,400	\$1,194,400	\$1,194,400
13	WW Repayment of Loan	\$873,400	\$873,400	\$873,400	\$873,400	\$0
14	Total Non-Operating	\$4,209,800	\$4,120,200	\$4,039,800	\$3,973,200	\$3,052,300
15	Total Revenue	\$45,975,000	\$48,636,900	\$51,881,800	\$57,339,500	\$60,994,100
Revenue Requirements						
	O&M Expenses					
16	Production (Div 01)	\$20,132,800	\$22,037,900	\$22,458,900	\$22,889,100	\$23,328,800
17	Distribution (Div 02)	\$1,719,000	\$1,749,500	\$1,786,000	\$1,823,100	\$1,861,000
18	Metering (Div 03)	\$1,504,200	\$1,526,000	\$1,556,500	\$1,587,500	\$1,619,200
19	Procurement (Div 10)	\$4,646,500	\$4,664,200	\$4,841,900	\$5,027,600	\$5,221,700
20	Conservation (Div 11)	\$866,700	\$882,500	\$917,400	\$953,900	\$991,900
21	Ocean View (Div 12)	\$443,100	\$443,100	\$443,100	\$443,100	\$443,100
22	Public Info (Div 45)	\$181,900	\$185,000	\$189,200	\$193,500	\$197,800

LINE NO.	DESCRIPTION	BUDGET YR	PROJECTED			
		FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
23	Recycled Water (Div 20)	\$0	\$1,750,000	\$3,500,000	\$3,570,000	\$3,641,400
24	Total O&M Expense	\$29,494,200	\$33,238,200	\$35,693,000	\$36,487,800	\$37,304,900
25	Routine Capital	\$2,650,000	\$400,000	\$400,000	\$400,000	\$400,000
26	Asset Management - Water	\$0	\$3,025,000	\$3,209,300	\$5,683,800	\$6,030,000
	Debt Service					
	Existing					
27	2001 Water Revenue Refunding	\$808,300	\$809,100	\$808,800	\$807,100	\$804,500
28	2004 Water Revenue Bond	\$3,028,000	\$3,023,900	\$3,024,200	\$3,023,900	\$3,024,900
29	2006 Water Revenue Bond	\$3,426,400	\$3,427,600	\$3,426,600	\$3,428,400	\$3,430,200
30	2010A Water Revenue Bond	\$1,967,500	\$1,971,000	\$1,970,300	\$1,971,300	\$1,974,300
31	2010B Water Revenue Bond	\$5,786,200	\$5,786,200	\$5,786,200	\$5,786,200	\$5,786,200
32	Ferro Pit Debt	\$585,000	\$585,000	\$585,000	\$585,000	\$585,000
	Proposed					
33	Water Revenue Bonds	\$0	\$0	\$1,926,600	\$1,926,600	\$2,729,300
34	Total Debt Service	\$15,601,400	\$15,602,800	\$17,527,700	\$17,528,500	\$18,334,400
	Transfers					
35	Infrastructure Use Fee	\$790,900	\$731,500	\$731,500	\$731,500	\$731,500
36	Transfer to Fund 6XX	\$0	\$250,000	\$0	\$0	\$0
37	Transfer to Fund 608	\$0	\$0	\$0	\$0	\$110,000
38	Total Transfers	\$790,900	\$981,500	\$731,500	\$731,500	\$841,500
39	Total Revenue Requirements	\$48,536,500	\$53,247,500	\$57,561,500	\$60,831,600	\$62,910,800
	Operating Fund Balance					
40	Net Annual Cash Balance	(\$2,561,500)	(\$4,610,600)	(\$5,679,700)	(\$3,492,100)	(\$1,916,700)
41	Beginning Cash Balance	\$23,026,100	\$20,464,600	\$15,854,000	\$10,174,300	\$6,682,200
42	Net Cumulative Cash Balance	\$20,464,600	\$15,854,000	\$10,174,300	\$6,682,200	\$4,765,500
43	Target Reserve (25% of O&M)	\$7,373,600	\$7,840,500	\$8,923,300	\$9,122,000	\$9,326,200

The projected water revenue under existing rates represents service and commodity charges at current rate levels that are subject to rate adjustments. Based on the existing revenue indicated, additional annual revenue adjustments are necessary to meet operating fund requirements and fiscal policy

objectives. Adjustments are typically assumed to become effective July 1 of each fiscal year, although for the current study, the first increase is projected to occur in August. Initial analyses indicate that steady rate increases are needed for the next five years as shown on Lines 3 through 7. Any changes to the capital-financing policies and/or CIP may alter these results since the operating fund helps supplement funds for traditional repair and replace projects. The resulting dollar impact of the proposed revenue adjustments are illustrated on Line 8.

In addition to rate revenue, other operating and non-operating charges contribute to the income of the Water Enterprise. Typically, these revenue sources are minimal and volatile and are thus considered a constant in the revenue projections. Non-operating sources include trust agency income, meter installation revenue and interest income from the operating fund. Interest income is calculated using an interest rate of 2.5 percent in order to be conservative.

Projected total O&M expense is shown on Line 24. The O&M expenses shown represent expenses associated with operating the water system minus the water purchases. Since water purchases represent a significant amount of O&M expense when utilized, it is recommended that it be extracted from O&M expenditures to demonstrate the significance. Routine capital outlay is shown on Line 25. Routine capital outlay is typically set aside to purchase minor equipment, less than \$5,000, such as furniture, parts, and minor equipment. For larger routine capital outlay that is represented in the CIP, it is common practice by utilities is to set in reserve approximately the equivalent of annual depreciation for routine capital assets. Based on historical water depreciation, Water should set aside approximately \$2,400,000. This amount will grow as the GREAT is built. Line 26 represents the level of replacement and rehabilitation (R&R) that the City is reinvesting back into the water system under its Asset Management program.

Debt service on proposed bond issues is shown on Line 34. All proposed bond issues are forecasted with 30-year terms at an initial 5.5 percent. To date, Water has five outstanding bond debt obligations and one long-term note with respect to the Water Enterprise. The total current debt service payment is \$16,919,000 per year. Transfers to the capital and other funds are shown on Lines 35 through 38. Funds transferred to the capital fund are used for capital projects. Lines 41 through 43 summarize the impact to the ending fund balance for Water. A minimum target of 25 percent of O&M expenses plus any encumbrances serves as the minimum level of working capital that Water sets to have on hand for operational purposes.

Summary of Revenues, Expenditures, and Obligations

Based on the analyses of revenues and revenue requirements, it is evident that Water needs a rate revenue increase in order to meet revenue requirements and working capital reserve as a standalone enterprise. The suggested adjustments are 3 percent per year from FY 12/13 through FY 15/16 as shown on Lines 3 through 8. With this adjustment, Water should be able to accomplish its objectives under the assumption that no significant change occurs. While the financial plan should be a working document, Water will need to re-examine the rate structure prior to FY 15/16 to verify it is still adequate.

The revenue requirements of Water consist of system O&M expenses, routine capital outlay for minor expenditures on equipment not financed from bond proceeds, debt service requirements on existing

and proposed bonded debt, transfers to other funds, and reserve requirements to ensure that debt service coverage, rate covenant requirements, and adequate levels of working capital are met.

As shown on Line 39 in Table 8, total revenue requirements for Water increase during the study period and can be correlated with inflationary factors and additional debt service requirements. The total revenue requirements will increase from \$48,536,500 in FY 11/12 to \$62,910,800 in FY 15/16, assuming the revenue adjustment is implemented. Subtracting total revenue requirements from total revenues results in the projected annual operating fund surpluses or deficits shown on Line 40.

As of July 1, 2010, it was estimated that a beginning balance of \$23.03 million was available for use in this fund. The ending balance is shown on Line 42, while the minimum ending balance of 25 percent of operation and maintenance expense is shown on Line 43. Applying a cumulative revenue adjustment of approximately 23.7 percent over the 5 year period should allow Water to achieve the desired target level of ending year-end balances, meet minimum working capital and satisfy minimum debt service requirements.

It should be recognized that the indicated percentage revenue increase discussed above are overall revenue increase. The results of the cost of service analysis presented later in this report may indicate that rate increases may vary from this average for the various customer classes with some classes receiving a greater than average increase, while others receive a less than average increase or perhaps a decrease.

Test Year Revenue Requirements

In analyzing Water's cost of service for allocation to customer classes, the annual revenue requirements for FY 12/13 is selected as the Test Year (TY) requirements to demonstrate the development of cost-of-service water rates. The total cost of service to be recovered from rates is \$40,567,600.

COST OF SERVICE ALLOCATIONS

The revenue requirements to be derived from rates and charges for water service are summarized in Lines 1 through 14 of Table 9. In analyzing the Water's cost of service for allocation to customer classes, the annual revenue requirements for FY 12/13 are selected as the Test Year requirements to demonstrate the development of cost of service water rates. In determining the cost of service to be met from charges for water service, we deduct income received from other sources that not subject to rate adjustments from the total revenue requirements. As a result, the total cost of service to be recovered from rates is shown on Line 14, Column 3.

Table 9 Total Costs to be Recovered From Rates for TY 12/13

LINE NO.	DESCRIPTION	OPERATING EXPENSE	CAPITAL COST	TOTAL
Revenue Requirements				
Fund 601				
1	O&M Expense	\$33,238,200		\$33,238,200
2	Routine Capital Outlay		\$400,000	\$400,000
3	Asset Management		\$3,025,000	\$3,025,000
Transfers & Debt Service				
4	Infrastructure Use Fee	\$731,500		\$731,500
5	Transfer to Funds , 6XX, 603 & 605		\$250,000	\$250,000
6	Debt Service		\$15,602,800	\$15,602,800
7	Subtotal	\$33,969,700	\$19,277,800	\$53,247,500
Less Revenues From Other Sources				
8	P&G Income	\$2,241,700		\$2,241,700
9	Other Operating Income	\$3,666,200		\$3,666,200
10	Interest Income	\$454,000		\$454,000
11	Change in Funds Available	\$4,610,600		\$4,610,600
12	Annualized Rate Increase	\$1,707,400		\$1,707,400
13	Subtotal	\$12,679,900		\$12,679,900
14	Cost of Service to be Recovered from Rates	\$21,289,800	\$19,277,800	\$40,567,600

Functional Cost Components

In developing an equitable rate structure, revenue requirements are allocated to the various customer classifications according to the cost of service rendered. Allocations of these requirements to customer classes of Water should take into account water flow, the number of customers, and other relevant factors.

Customers are classified to reflect groups of customers with similar service requirements who can be served at similar cost. Each class represents a particular type of service requirement. For the purposes of the cost of service analysis, the customer classifications in this study include single family and multi-family residential, commercial, industrial, irrigation, Ocean View, recycled water, and private fire protection. These customer classes were assumed to exhibit similar types of system load characteristics.

As a basis for allocating costs of service among customer classes, costs are first allocated to functional cost components, then allocated to cost categories, and subsequently distributed to customer classes. In this analysis, there are seven primary cost components: (1) base flow, or volume costs, (2) maximum day cost, (3) peak hour costs, (4) customer billing costs, (5) fire protection, (6) Ocean View and (7) Recycled Water.

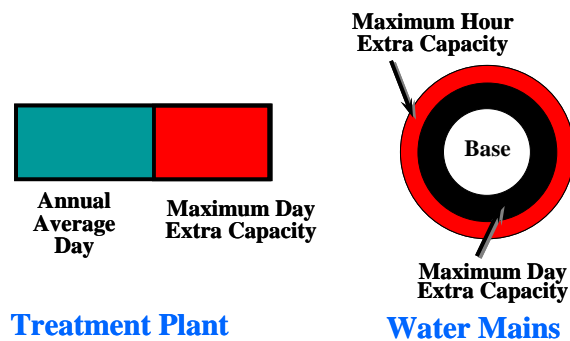
Allocation to Cost Components

Each element of cost is allocated by the base-extra capacity method. In the base-extra capacity method, costs of service are separated into four primary cost components: (1) base costs, (2) extra capacity costs, (3) customer costs, and (4) direct costs. The direct costs are further separated into fire protection, Ocean View, and recycled water.

According to the *Principles of Water Rates, Fees, and Charges, M1 Manual* as published by the American Water Works Association:

“Base costs are costs that tend to vary with the total quantity of water used without the elements of cost incurred to meet water use variations and resulting peaks in demand. Extra capacity costs are costs associated with meeting variations of cost over average load conditions and include O&M expenses and capital costs for system capacity beyond those required for average rate of use. These costs are further divided into costs

Water Cost of Service Concepts



necessary to meet maximum-day extra and peak-hour demand. Customer costs comprise those costs associated with serving customers. They include meter reading, billing, and customer accounting and collection expense, as well as maintenance and capital costs related to meters and services. Direct fire-protection costs are those costs that are applicable solely to the fire-protection function. Usually, such costs are simply those directly related to public fire hydrants and related branch mains and valves.

The separation of the costs of service into these principal components provides a means for further allocation of such costs to the various customer classes on the basis of the respective base, extra capacity, and customer cost requirements of each particular type of service.”

Allocation of Operation and Maintenance Expenses

The allocation of O&M expense to cost functions is shown in Table 10. The net operation and maintenance expense to be recovered for water sales is derived by deducting funds available from other sources from the total Test Year expense. Net Test Year operation and maintenance expense of \$21,289,800 is shown allocated to the cost components on Line 43. Note that routine capital outlay is excluded from O&M expenses as these expenses can be deferred based on the financial state of the enterprise.

Table 10 Allocation of O&M to Functional Cost Components (in \$000s)

	LINE ITEM	TOTAL	BASE	EXTRA CAPACITY		CUSTOMER		DIRECT		
				MAX DAY	MAX HR	METERS & SERVICES	BILLING	FIRE PROTECTION	OCEAN VIEW	RECYCLED WATER
Production (Div 01)										
1	Salaries / Wages	\$653.4	\$465.2	\$188.2						
2	Contract Services	\$130.0	\$92.6	\$37.4						
3	Water-UMCD	\$4,634.9	\$3,337.1	\$1,297.8						
4	Water-CMWD	\$12,800.0	\$9,216.0	\$3,584.0						
5	Water-City	\$906.0	\$652.3	\$253.7						
6	Desalter Treatment	\$1,876.4	\$1,351.0	\$525.4						
7	Operating Supplies	\$450.0	\$324.0	\$126.0						
8	Utilities	\$473.8	\$473.8	\$0						
9	G&A	\$113.4	\$80.7	\$32.7						
10	Total	\$22,037.9	\$15,992.7	\$6,045.2						
Distribution (Div 02)										
11	Salaries / Wages	\$1,518.1	\$800.0	\$324.9	\$393.2					
12	Contract Services	\$50.0	\$26.3	\$10.7	\$13.00					
13	Operating Supplies	\$120.0	\$63.2	\$25.7	\$31.1					
14	G&A	\$61.4	\$32.4	\$13.1	\$15.9					

	LINE ITEM	TOTAL	BASE	EXTRA CAPACITY		CUSTOMER		DIRECT		
				MAX DAY	MAX HR	METERS & SERVICES	BILLING	FIRE PROTECTION	OCEAN VIEW	RECYCLED WATER
15	Total	\$1,749.5	\$921.9	\$374.4	\$453.2					
Metering (Div 03)										
16	Salaries / Wages	\$1,116.0				\$1,116.6				
17	Contract Services	\$20.0				\$20.0				
18	Operating Supplies	\$390.0				\$390.0				
19	Total	\$1,526.0				\$1,526.0				
Procurement (Div 10)										
20	Salaries / Wages	\$532.3	\$335.4	\$133.1	\$10.6	\$16.0	\$10.6	\$26.6		
21	Contract Services	\$813.0	\$512.0	\$203.3	\$16.3	\$24.4	\$16.3	\$40.7		
22	Operating Supplies	\$65.0	\$40.8	\$16.3	\$1.3	\$2.0	\$1.3	\$3.3		
23	Utilities	\$60.8	\$38.4	\$15.2	\$1.2	\$1.8	\$1.2	\$3.0		
24	G&A and Repairs	\$3,193.1	\$1,738.4	\$689.9	\$55.2	\$516.4	\$55.2	\$138.0		
25	Total	\$4,664.2	\$2,665.0	\$1,057.8	\$84.6	\$560.6	\$84.6	\$211.6		
Conservation / Outreach (Div 11)										
26	Salaries / Wages	\$231.9	\$115.9			\$116.0				
27	Contract Services	\$25.0	\$12.5			\$12.5				
28	Operating Supplies	\$30.0	\$15.0			\$15.0				
29	G&A	\$595.6	\$297.8			\$297.8				

	LINE ITEM	TOTAL	BASE	EXTRA CAPACITY		CUSTOMER		DIRECT		
				MAX DAY	MAX HR	METERS & SERVICES	BILLING	FIRE PROTECTION	OCEAN VIEW	RECYCLED WATER
30	Total	\$882.5	\$441.2			\$441.3				
Ocean View (Div 12)										
31	Operating Supplies	\$443.1							\$443.1	
32	Total	\$443.1							\$443.1	
Public Information (Div 45)										
33	Salaries / Wages	\$135.1					\$135.1			
34	Contract Services	\$23.9					\$23.9			
35	Operating Supplies	\$10.5					\$10.5			
36	G&A and Repairs	\$11.6					\$11.6			
37	Total	\$185.0					\$185.0			
Recycled Water (Div XX)										
38	Salaries / Wages	\$1,750.0								\$1,750.0
39	Total	\$1,750.0								\$1,750.0
40	Total O&M	\$33,238.20	\$20,020.80	\$7,477.40	\$537.80	\$2,527.90	\$269.60	\$211.60	\$443.10	\$1,750.00
41	Less Other Revenues	(\$12,679.90)	(\$5,202.70)	(\$2,332.10)	(\$2,416.00)	(\$887.80)			(\$91.30)	(\$1,750.00)
42	Plus Required Transfers	\$731.50	\$72.40	\$182.90	\$182.90	\$146.30	\$146.30		\$0.70	
43	Net O&M	\$21,289.8	\$14,890.5	\$5,328.2	(\$1,695.3)	\$1,786.4	\$415.9	\$211.6	\$352.5	\$0.0

Allocation of Capital Costs

The estimated investment in water and recycled system facilities is allocated to appropriate cost components as a basis for the further distribution of capital related costs to the various customer classes. The allocation of estimated plant investment serving water customers for the Test Year is shown in Table 11. The total plant investment of \$225,519,400 shown on Line 9 represents the estimated Test Year original cost less accumulated depreciation of plant in service.

The allocation of specific items of investment to the cost categories, as shown, is made on the basis previously described. For example, source of supply items are related to flow and these investment costs are assigned to the volume cost component and further delineated by whether the asset is common-to-all or primarily serves specific customers. The water treatment is designed primarily on the basis of treatment plant flow and is also assigned to the volume cost function. Elements within this category, such as storage facilities are assigned to the max hour category because such facilities are designed for this purpose.

Units of Service

The total cost responsibility of each class of service may be established by developing unit costs of service for each cost function and assigning those costs to the customer classes based on the respective service requirements of each. To properly recognize the cost of service, each customer class is allocated its share of base, maximum day and peak hour costs. The number of units of service required by each customer class provides a means for the proportionate distribution of costs previously allocated to respective cost categories. Summarized in Table 12 are the estimated units of service for the various customer classes.

The cost of service responsibility for base costs varies with the volume of water requirements and may be distributed to customer classes on that basis. Extra-capacity costs are those costs associated with meeting peak rates of water use, and are distributed to customer classes based on their respective system capacity requirements in excess of average requirement rates. Customer costs, which consist of meter related costs, billing, collection and accounting costs, are allocated based on the number of equivalent meters and bills. Private fire protection costs are allocated on the basis of equivalent fire hydrants.

The estimated units of service for the various customer classifications are shown below. Estimates of test year annual water requirements, shown in Column 1, are based on the projections of total water sales previously developed in this report. Average daily use of all water sales is presented in Column 2. Columns 3 through 8 represent the estimated maximum day and peak hour capacity factors for each customer class.

Table 11 Allocation of Net Capital Costs to Functional Cost Components (in \$000s)

	LINE ITEM	TOTAL	BASE	EXTRA CAPACITY		CUSTOMER		DIRECT		
				MAX DAY	MAX HR	METERS & SERVICES	BILLING	FIRE PROTECTION	OCEAN VIEW	RECYCLED WATER
1	Source of Supply	\$7,657.8	\$7,657.8							
2	Pumping Plant	\$10,086.9	\$5,315.8	\$2,158.6	\$2,612.5					
3	Treatment	\$130,589.0	\$92,979.4	\$37,609.6						
4	Transmission/Distribution	\$67,704.1	\$35,680.0	\$14,488.7	\$17,535.4					
5	Meters & Services	\$3,055.5				\$3,055.5				
6	Hydrants	\$1,447.7						\$1,447.7		
7	Customer Billing	\$917.4					\$917.4			
8	General Plant	\$4,061.0	\$2,639.6	\$812.2	\$406.1	\$203.1	\$0.0			
9	Total Plant Investment	\$225,519.4	\$144,272.6	\$55,069.1	\$20,554.0	\$3,258.6	\$917.4	\$1,447.7		
Capital Cost Allocation										
10	Routine Capital Outlay	\$400.0	\$35.2	\$100.0	\$100.0	\$120.0		\$32.8	\$12.0	
11	Capital Expenditures	\$3,025.0	\$266.0	\$756.3	\$756.3	\$907.5		\$248.1	\$90.8	
12	Transfers	\$250.0	\$160.0	\$61.0	\$22.8	\$3.6	\$1.0	\$1.6		
13	Debt Service	\$15,602.8	\$9,981.6	\$3,810.0	\$1,422.1	\$225.4	\$63.5	\$100.2		
14	Less Other Revenues	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
15	Net Capital Costs	\$19,277.8	\$10,442.8	\$4,727.3	\$2,301.2	\$1,256.5	\$64.5	\$382.7	\$102.8	\$0.0

Table 12 Units of Service for TY 12/13

CUSTOMER CLASS	ANNUAL USAGE (CCF)	AVERAGE DAILY USE (CCF/DAY)	MAX DAY REQUIREMENTS			MAX HOUR REQUIREMENTS			NO. OF ACCTS	NO. OF METERS (EQ. METERS)	NO. OF BILLS (BILLS)	FIRE PROTECTION (EQ. HYDRANTS)
			CAPACITY FACTOR	TOTAL CAPACITY (CCF/DAY)	EXTRA CAPACITY (CCF/DAY)	CAPACITY FACTOR	TOTAL CAPACITY (CCF/DAY)	EXTRA CAPACITY (CCF/DAY)				
Single Family Residential	4,404,600	12,067	175%	21,117	9,050	200%	24,134	3,017	33,142	41,400	397,700	
Multi-Family Residential	1,739,800	4,767	148%	7,055	2,288	180%	8,581	1,526	2,041	5,095	24,497	
Commercial & Institutional	1,492,900	4,090	245%	10,021	5,931	275%	11,248	1,227	3,591	29,741	43,091	
Industrial	510,200	1,398	170%	2,377	979	195%	2,726	349	158	826	1,900	
Irrigation	1,210,100	3,315	155%	5,138	1,823	300%	9,945	4,807	1,012	3,605	12,149	
Ocean View	442,300	1,212	225%	2,727	1,515	350%	4,242	1,515	51	901	610	
Construction	1,700	5	225%	11	6	450%	23	12	239	342	2,864	
Subtotal	9,801,600	26,854		48,446	21,592		60,899	12,453	40,234	81,910	482,811	
Fire Protection												
Public				1,034	1,034		6,202	5,169				6,282
Private				410	410		2,461	2,051	791		9,491	2,492
Subtotal Fire				1,444	1,444		8,663	7,219	791		9,491	8,774
Total System	9,801,600	26,854		49,890	23,036		69,562	19,672	41,025	81,910	492,302	8,774

In the overall rate setting process there is a need to establish a base level of cost for which the cost of larger customers can be measured. Customer-related meter and service costs are allocated based on the number of equivalent 5/8" meters because the 5/8" meter is the most prevalent meter size found in many water utilities. Included in the development of meter cost ratios is the direct cost of the various categories of labor involved in the installation, fringe benefit related overheads and other appropriate administrative overheads applicable to the labor costs, all direct materials and supplies costs, and the cost of equipment used in the installation.

Generally, equivalent meter cost ratios should be used when assigning elements of costs specifically related to meters among the various sizes of meters used by the customer in the system. The Water's base meter size is a ¾" meter, so the equivalent meter ratios use the base unit of a ¾" meter. Customer billing and accounting costs are distributed to classes based on number of bills for each customer class in Columns 9 through 11. Direct charges for fire protection are found in Column 12.

In accordance with M1 standards and typical engineering design, the provision of the maximum hour component addresses peak system needs, in addition to those posed by fire protection requirements. To the extent possible, actual system and billing data by customer class to derive maximum day capacity factors. Generating maximum hour data can be time consuming and may not be readily available. For the purposes of the analyses, we used a peak hour to average day ratio of 1.35 to calculate the maximum hour capacity factor. As a check on the validity of our assumptions, we calculated a diversity ratio for the system. This ratio is a measure of the total non-coincidental to coincidental demand. Based on the projections for FY 12/13, the max day ratio of non-coincidental to coincidental demand is 1.28 and the max hour ratio is 1.39. The calculated system diversity ratio is within this typical range.

Cost of Service Allocations

Costs of service are allocated to the customer classes by application of unit costs of service to respective service requirements. Unit costs of service are based upon the total costs previously allocated to functional components and the total number of applicable units of service. Dividing the costs allocated to functional cost components by the respective total units of service requirements develops unit costs of operation and maintenance expense, and net capital costs.

Unit Costs of Service

Table 13 presents total Test Year O&M expense and net capital costs allocated to functional cost component as taken from Tables 10 and 11.

Distribution of Costs of Service to Customer Classes

The customer class responsibility for service is obtained by applying the unit costs of service to the number of units for which the customer class is responsible. This process is illustrated in Table 14, in which the unit costs of service are applied to the customer class units of service.

Table 13 Unit Costs of Service

LINE ITEM	TOTAL	BASE	EXTRA CAPACITY		CUSTOMER		DIRECT	
			MAX DAY	MAX HR	METERS & SERVICES	BILLING	FIRE PROTECTION	OCEAN VIEW
Net Operating Expense	\$21,289,800	\$14,890,500	\$5,328,200	(\$1,695,300)	\$1,786,400	\$415,900	\$211,600	\$352,500
Capital Costs	\$19,277,800	\$10,442,800	\$4,727,300	\$2,301,200	\$1,256,500	\$64,500	\$382,700	\$102,800
Total Cost of Service	\$40,567,600	\$25,333,300	\$10,055,500	\$605,900	\$3,042,900	\$480,400	\$594,300	\$455,300
Total Units of Service		9,801,600	23,036	19,672	81,910	492,302	8,774	Direct
Units of Measure		ccf	ccf/day	ccf/day	Eq. Meters	Bills	Hydrants	Direct
Total Unit Cost of Service		\$2.5846	\$436.5153	\$30.7997	\$37.1495	\$0.9758	\$67.7327	\$455,300

Table 14 Allocation of COS to Customer Classes

LINE ITEM	TOTAL	BASE	EXTRA CAPACITY		CUSTOMER		DIRECT	
			MAX DAY	MAX HR	METERS & SERVICES	BILLING	FIRE PROTECTION	OCEAN VIEW
Number of Units								
Unit Cost of Service		\$2.5846	\$436.5153	\$30.7997	\$37.1495	\$0.9758	\$67.7327	\$455,300
Unit of Measure		ccf	ccf/day	ccf/day	Equiv Mtrs	Equiv Bills	Hydrants	Direct
Single Family Residential								
Units		4,404,600	9,050	3,017	41,400	397,700		
Costs	\$19,204,700	\$12,527,300	\$4,611,900	\$139,500	\$1,538,000	\$388,000		
Multi-Family Residential								
Units		1,739,800	2,288	1,526	5,095	24,497		
Costs	\$5,755,600	\$4,496,700	\$998,700	\$47,000	\$189,300	\$23,900		
Commercial/Institutional								
Units		1,492,900	5,931	1,227	29,741	43,091		
Costs	\$7,632,200	\$3,858,600	\$2,589,000	\$37,800	\$1,104,800	\$42,000		
Industrial								
Units		510,200	979	349	826	1,900		
Costs	\$1,789,300	\$1,318,700	\$427,300	\$10,700	\$30,700	\$1,900		

LINE ITEM	TOTAL	BASE	EXTRA CAPACITY		CUSTOMER		DIRECT	
			MAX DAY	MAX HR	METERS & SERVICES	BILLING	FIRE PROTECTION	OCEAN VIEW
Irrigation								
Units		1,210,100	1,823	4,807	3,605	12,149		
Costs	\$4,217,300	\$3,127,600	\$795,800	\$148,100	\$133,900	\$11,900		
Ocean View								
Units					901	610		
Costs	\$489,400				\$33,500	\$600		\$455,300
Construction								
Units		1,700	6	12	342	2,864		
Costs	\$22,900	\$4,400	\$2,600	\$400	\$12,700	\$2,800		
Fire Protection								
Public								
Units			1,034	5,169			6,282	
Costs	\$1,035,900		\$451,200	\$159,200			425,500	
Private								
Units			410	2,051		9,491	2,492	
Costs	\$420,300		\$179,000	\$63,200		\$9,300	\$168,800	
Total Cost of Service	\$40,567,600	\$25,333,300	\$10,055,500	\$605,900	\$3,042,900	\$480,400	\$594,300	\$455,300

Adequacy of Existing Rates to Meet Costs of Service

Presented in Table 15 is a comparison of the allocated cost of service and revenue under existing rates for the system in total. Adjustments to the allocated cost of service take place in Column 2. For the Water Enterprise, the cost of public fire protection is allocated to all customers because it is viewed as a general benefit to all. Additionally, recycled water also provides beneficial uses to all water system users. The last column indicates the approximate adjustment rate levels necessary to recover 100 percent of the allocated costs of service.

Table 15 Comparison of Adjusted COS with Revenues under Existing Rates

LINE NO.	CUSTOMER CLASS	ALLOCATED COST OF SERVICE	ALLOCATION OF PUBLIC FIRE	ADJUSTED COST OF SERVICE	REVENUE UNDER EXISTING RATES	INDICATED REVENUE INCREASE
1	Residential	\$24,960,300	\$741,500	\$25,701,800	\$24,932,000	3.1%
2	Non Residential	\$13,661,700	\$279,900	\$13,941,600	\$13,555,900	2.8%
3	Ocean View	\$489,400	\$14,500	\$503,900	\$489,400	3.0%
Fire Protection						
4	Public	\$1,035,900	(\$1,035,900)	\$0	\$0	0.0%
5	Private	\$420,300	\$0	\$420,300	\$408,700	2.8%
6	Total System	\$40,567,600	\$0	\$40,567,600	\$39,386,000	3.0%

PROPOSED RATE ADJUSTMENTS

The initial consideration in the derivation of water rate schedules for utility service is the establishment of equitable charges to the customers commensurate with the cost of providing that service. While the cost of service allocations to customer classes should not be construed as literal or exact determinations, they offer a guide to the necessity for, and the extent of, rate adjustments. Practical considerations sometimes modify rate adjustments by taking into account additional factors such as the extent of change from previous rate levels, existing contracts, and past local policies and practices.

Existing Rates

A summary of existing water rates was presented earlier in Table 3. The existing rates consist of a service charge, which varies by customer class and meter size, and a separate commodity charge for each customer class applicable to each hundred cubic feet of billed water sales. The commodity charge uses a tier structure for all customer classes.

Proposed Rates

The costs of service analysis described in preceding sections of this report provide a basis for the design of rates. The rate schedule shown in Table 16 takes into consideration City policies and shows rates reflecting some modifications to the existing tier structure in order to better recover costs of service.

Table 16 Proposed Rates for TY 12/13 (Effective August 2012)

COMMODITY CHARGES (\$/CCF)							
Single Family		Multi-Family		Commercial / Institutional / Industrial / Fireline / Landscape Irrigation		Metered Construction	
Rate Block	Charge	Rate Block	Charge	Rate Block	Charge	Rate Block	Charge
0 - 6	\$2.62	0 - 17	\$2.13	0 - 17	\$2.13	0 - 13	\$4.30
7 - 12	\$2.90	18 - 32	\$2.38	18 - 32	\$2.38	14 - 23	\$4.75
Over 12	\$4.07	Over 32	\$3.54	Over 32	\$3.54	Over 23	\$7.11
Recycled Water in Lieu of Potable Water - Industry		Recycled Water in Lieu of Potable Water - Irrigation		Ocean View Residential / Commercial / Institutional / Industrial			
Rate Block	Charge	Rate Block	Charge	Rate Block	Charge		
0 - 13	\$1.81	0 - 17	\$1.81	0 - 17	\$2.13		
14 - 23	\$2.02	18-32	\$2.02	18 - 32	\$2.38		
Over 23	\$3.01	Over 32	\$3.01	Over 32	\$3.54		

Ocean View Agricultural Irrigation rate is \$0.93 per ccf for all consumption

MONTHLY SERVICE CHARGE (\$/month)							
Meter Size	Single Family	Multi-Family	Commercial / Institutional / Industrial	Construction	Fireline	Unmetered Construction	Ocean View
3/4"	\$14.30	\$12.20	\$9.86		\$1.51	\$7.11	\$9.86
1"	\$22.54	\$19.22	\$15.16	\$25.11	\$2.62	\$10.45	\$15.16
1.5"	\$41.69	\$35.03	\$27.35		\$5.01	\$15.91	\$27.35
2"	\$69.55	\$54.28	\$42.50		\$8.05	\$20.89	\$42.50
3"	\$142.02	\$121.94	\$90.91	\$84.50	\$17.76	\$26.29	\$90.91
4"	\$241.06	\$198.20	\$155.47		\$30.36	\$31.67	\$155.47
6"	\$500.12	\$414.65	\$318.22		\$63.32	\$42.45	\$318.22
8"	\$718.40	\$595.74	\$464.22		\$91.09	\$53.23	\$464.22
10"	\$1,156.39	\$958.68	\$736.05		\$146.83	\$64.00	\$736.05

Revenue Sufficiency

Presented in Table 17 is a comparison of Test Year allocated cost of service with revenues under the suggested water rate structure. Test year costs of service are obtained from Table 15 and the proposed rates recover essentially 100 percent of the total cost of service.

Table 17 Revenues under Proposed Rates for TY 12/13 (Effective August 2012)

LINE NO.	CUSTOMER CLASS	ADJUSTED COST OF SERVICE	ESTIMATED REVENUES UNDER PROPOSED RATES	TOTAL PERCENT RECOVERY
1	Residential	\$25,701,800	\$25,664,800	99.9%
2	Non Residential	\$13,941,600	\$13,956,800	100.1%
3	Ocean View	\$503,900	\$510,300	101.3%
Fire Protection				
4	Private Fire	\$420,300	\$420,300	100.0%
5	Total System	\$40,567,600	\$40,552,200	100.0%

Wastewater Rate Study

REVENUE AND REVENUE REQUIREMENTS

To meet the costs associated with providing water services to its customers, the Wastewater Division derives revenue from a variety of sources including water user charges, wholesale treatment charges, connection fees, interest earned from the investment of available funds, meter installation fees, late penalties, and other miscellaneous revenues. The level of future revenue generated in the study is projected through a combination of an analysis of historical and future system growth in terms of number of accounts and wastewater production.

With revenue derived from the various sources, the Wastewater Division meets the cash requirements of operation and maintenance (O&M); principal, interest, and reserve payments on revenue and other bond indebtedness; and recurring annual capital expenditures for replacements, system betterments, and extensions not debt financed. Operation and maintenance expenses are those expenditures necessary to maintain the system in good working order. Routine annual capital expenditures, which include equipment replacements, consist of recurring annual replacements, minor extensions, and betterments which are normally revenue financed. Other capital costs include principal and interest payments, bond covenant-required payments, and cash financed capital improvements.

Customer Usage Projections

To forecast revenue, the number of accounts and billed wastewater sales volume needs to be determined within Wastewater's service area. Growth is incorporated into the equation by projecting the number of accounts as shown in Table 18. Based on the wastewater master plan and discussions with City staff, customer account growth is estimated to increase from 45,353 in FY 11/12 to 46,263 in FY 15/16. This represents an estimated annual growth rate of less than ½ percent per year.

Table 18 Average Number of Accounts

Customer Class	BUDGET YR	PROJECTED			
	FY 11/12 (accounts)	FY 12/13 (accounts)	FY 13/14 (accounts)	FY 14/15 (accounts)	FY 15/16 (accounts)
Single Family Residential & Large Lots	39,409	39,605	39,802	40,000	40,199
Multi Family Residential	2,218	2,235	2,252	2,269	2,286
Single Family / Multi Family – Non Metered	939	939	939	939	939
Outside / Contract Customers	321	322	323	324	325
Commercial/Restaurants/Laundry/Schools	2,463	2,475	2,487	2,499	2,511
Water Purifiers/Desalter	4	4	4	4	4
Industrial	23	23	23	23	23
Regional	3	3	3	3	3
Total	45,353	45,579	45,806	46,034	46,263

Using the projected number of accounts, historical equivalent dwelling units (EDUs) and wastewater usage patterns per customer class, the projected EDUs and wastewater sales volumes for the City were derived as shown in Table 19. Since the treatment plant is a regional facility, it was important to determine the contribution of volume and strength for specific customers. Using FY 11/12 wastewater EDUs and usage/strength benchmarks, Table 19 summarizes the projected wastewater EDUs and billed volumes in hundred cubic feet (ccf). For formula customers (Industrial class and Regional Treatment customers), the table presents billed volumes in millions of gallons (MG) and pollutant strengths loadings for biological oxygen demand (BOD) and total suspended solids (TSS) in thousands of pounds.

Table 19 EDUs, Billed Volume and Strength

CUSTOMER CLASS	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
EDUs					
Single Family Residential	38,967	39,162	39,358	39,555	39,753
Multi Family Residential	17,349	17,479	17,610	17,742	17,875
Single Family - Large Lots	442	443	444	445	446
Single Family – Non Metered	592	592	592	592	592
Multi Family – Non Metered	347	347	347	347	347
Total	57,697	58,023	58,351	58,681	59,013
Projected Billed Volumes (ccf)					
Single Family Residential	3,424,100	3,441,200	3,458,400	3,475,700	3,493,100
Multi Family Residential	1,520,700	1,532,100	1,543,600	1,555,200	1,566,900
Single Family - Large Lots	36,900	37,100	37,300	37,500	37,700
Commercial	715,000	718,600	722,200	725,800	729,400
Restaurants	204,900	205,900	206,900	207,900	208,900
Schools	60,000	60,000	60,000	60,000	60,000
Laundry	117,400	117,400	117,400	117,400	117,400
Total	6,079,000	6,112,300	6,145,800	6,179,500	6,213,400
Projected Billed Volumes (MG)					
Water Purifiers	33	33	33	33	33
Desalters	417	417	417	417	417
Industrial	1,009	1,009	1,009	1,009	1,009
USN Pt. Mugu	132	132	132	132	132
USN CBC	237	237	237	237	237

CUSTOMER CLASS	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Port Hueneme	821	821	821	821	821
Total	2,649	2,649	2,649	2,649	2,649
BOD Loadings (1,000 lbs)					
Water Purifiers	27.3	27.3	27.3	27.3	27.3
Desalters	347.4	347.4	347.4	347.4	347.4
Industrial	1,571.0	1,571.0	1,571.0	1,571.0	1,571.0
USN Pt. Mugu	106.5	106.5	106.5	106.5	106.5
USN CBC	368.7	368.7	368.7	368.7	368.7
Port Hueneme	2,635.7	2,635.7	2,635.7	2,635.7	2,635.7
Total	5,056.5	5,056.5	5,056.5	5,056.5	5,056.5
TSS Loadings (1,000 lbs)					
Water Purifiers	34.2	34.2	34.2	34.2	34.2
Desalters	434.2	434.2	434.2	434.2	434.2
Industrial	1,567.4	1,567.4	1,567.4	1,567.4	1,567.4
USN Pt. Mugu	104.9	104.9	104.9	104.9	104.9
USN CBC	450.7	450.7	450.7	450.7	450.7
Port Hueneme	2,635.7	2,635.7	2,635.7	2,635.7	2,635.7
Total	5,227.1	5,227.1	5,227.1	5,227.1	5,227.1

Revenue Projections

The City generates revenue from wastewater services, sewer enforcement fees, maintenance charges, and other miscellaneous charges. Since revenue generated outside of wastewater sales are not subject to rate increases, we have excluded them from this portion of the analysis. These additional revenue sources are incorporated later in the cash flow portion of the report.

Wastewater's revenues are composed of three parts, depending on the type of customer class. There is a flat monthly service charge, a commodity charge, and a strength charge. The monthly service charge is a flat amount charged to customers based on EDUs. EDU customer classes predominately consist of residential customers that have uniform strength characteristics. In 2009, the City moved from a flat rate structure to one whereby customers are charged a monthly base charge plus a commodity rate based on metered use. Allowances for system return are incorporated into the fee calculations and differ by customer class. This adjustment factor recognizes that not all water consumed is discharged to the wastewater system. The strength charge is a fee based charge for BOD and TSS. These two

pollutants must be treated prior to wastewater stream discharge. Industrial and Regional customers are monitored for strength loading. In general, all fees are designed to recover fixed and variable costs with collecting and treating the wastewater.

Summarized in Table 20 are the Wastewater's current rates for all customer classes.

Table 20 Existing Rates (Effective July 2010)

COMMODITY CHARGES (\$/CCF)					
Single Family & Large Lots		Multi-Family		Las Posas	
Rate Block	Charge	Rate Block	Charge	Rate Block	Charge
0 - 9	\$1.03	0 - 17	\$1.03	0 – 50	\$4.43
10 - 18	\$1.13	18 - 32	\$1.13	51 – 930	\$5.53
Over 18	\$1.59	Over 32	\$1.59	Over 930	\$11.08
Commercial		Restaurants		Laundries	
Rate Block	Charge	Rate Block	Charge	Rate Block	Charge
0 - 50	\$2.21	0 – 20	\$3.40	0 – 105	\$2.17
51 - 930	\$2.76	21 – 60	\$4.26	106 – 525	\$2.41
Over 930	\$5.54	Over 60	\$8.51	Over 525	\$3.00
Minimum Monthly Fee - \$11.70		Minimum Monthly Fee - \$10.85		Minimum Monthly Fee - \$11.50	
MONTHLY BASE CHARGE (\$/month)					
Single Family	Multi Family Per Unit	Single Family – Large Lots	Outside City Residential	Outside City Multi Family	Non Metered
\$17.77	\$12.99 – Each of first 6 units \$6.48 – After 6 units	\$17.77	\$61.02	\$40.89	\$30.51
FORMULA USERS AND REGIONAL CUSTOMERS					
Formula Users			Regional Customers		
Volume (MG)	BOD (1,000 lbs)	TSS (1,000 lbs)	Volume (MG)	BOD (1,000 lbs)	TSS (1,000 lbs)
\$1,919.43	\$615.31	\$391.24	\$343.34	\$257.87	\$324.22

Incorporating the existing wastewater rates with the EDUs, customer usage projections, and strength characteristics, wastewater sales revenue under existing rates is tabulated as shown in Table 20. The anticipated revenue generated is expected to increase from \$25,872,200 in FY 11/12 to \$27,312,500 in FY 15/16.

Table 21 Revenues under Existing Rates

Customer Class	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Single Family	\$11,897,500	\$11,955,800	\$12,014,400	\$12,073,700	\$12,133,000
Multi Family	\$4,200,200	\$4,230,800	\$4,261,500	\$4,292,600	\$4,323,800
Single Family – Large Lots	\$137,700	\$138,100	\$138,500	\$138,900	\$139,300
Contract Customers	\$243,000	\$243,800	\$244,500	\$245,200	\$246,000
Commercial	\$2,099,200	\$2,110,100	\$2,120,200	\$2,131,000	\$2,141,100
Restaurant	\$1,020,700	\$1,026,400	\$1,031,300	\$1,036,200	\$1,041,200
Laundry	\$284,100	\$284,100	\$284,100	\$284,100	\$284,100
Schools	\$169,300	\$169,300	\$169,300	\$169,300	\$169,300
Water Purifiers	\$147,600	\$147,600	\$147,600	\$147,600	\$147,600
Desalters	\$862,200	\$1,876,400	\$1,876,400	\$1,876,400	\$1,876,400
Industrial	\$3,516,600	\$3,516,600	\$3,516,600	\$3,516,600	\$3,516,600
USN Pt. Mugu	\$87,600	\$87,600	\$87,600	\$87,600	\$87,600
USN CBC	\$264,400	\$264,400	\$264,400	\$264,400	\$264,400
Port Hueneme	\$942,100	\$942,100	\$942,100	\$942,100	\$942,100
Total	\$25,872,200	\$26,993,100	\$27,098,500	\$27,205,700	\$27,312,500

Operation and Maintenance Projections

In order to adequately adjust rates, it is necessary to project operation and maintenance (O&M) expenses. Summarized in Table 22 are Wastewater’s projected O&M expenditures. These expenditures include costs related to personnel, contract services, operating supplies, utilities and general administrative. The forecasted expenditures are based Black & Veatch and City staff’s expertise and knowledge. The table to the right summarizes key assumptions for inflation rates used in the O&M expense projections. The levels of adjustment illustrated on the right are consistent with recent increases seen throughout the area. Total O&M (less capital outlay and transfers) is projected to increase from \$15,795,200 in FY 11/12 to \$17,325,600 in FY 15/16.

- *Personnel Services: 2% every year*
- *Operating Supplies: 2% beginning FY 14/15*
- *Maintenance: 4% beginning in FY 14/15*
- *Utilities: 3% (FY 12/13 and FY 13/14), then 4%*
- *G&A: 2% (FY 12/13 and FY 13/14), then 3%*

Table 22 Operation and Maintenance Expenses

DESCRIPTION	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Fund 611 Collections					
Div 01 Source Control / Services)					
Salaries and Wages	\$581,500	\$593,200	\$605,200	\$617,300	\$629,700
Contractual Services	\$32,000	\$32,000	\$32,600	\$33,200	\$33,800
Operating Supplies	\$10,000	\$10,000	\$10,200	\$10,400	\$10,600
Utilities	\$5,000	\$5,200	\$5,400	\$5,600	\$5,800
General and Administrative	\$943,600	\$962,500	\$991,200	\$1,020,900	\$1,051,400
Maintenance Services	\$14,000	\$14,000	\$14,600	\$15,200	\$15,800
<i>Total Source Control</i>	\$1,586,100	\$1,616,900	\$1,659,200	\$1,702,600	\$1,747,100
Div 02 Storm Water Quality Management					
Salaries and Wages	\$377,600	\$385,200	\$392,900	\$400,700	\$408,700
Contractual Services	\$301,000	\$301,000	\$307,000	\$313,100	\$319,300
Operating Supplies	\$25,000	\$25,000	\$25,500	\$26,000	\$26,500
General and Administrative	\$134,500	\$137,200	\$141,200	\$145,200	\$149,500
<i>Total Storm Water Quality Management</i>	\$838,100	\$848,400	\$866,600	\$885,000	\$904,000
Div 03 Collection System Main & Upgrade					
Salaries and Wages	\$880,000	\$896,700	\$913,900	\$931,400	\$880,000
Contractual Services	\$191,000	\$191,000	\$194,800	\$198,600	\$191,000
Operating Supplies	\$130,000	\$130,000	\$132,600	\$135,200	\$130,000
General and Administrative	\$699,300	\$717,300	\$743,100	\$769,700	\$699,300
Maintenance Services	\$19,000	\$19,000	\$19,700	\$20,400	\$19,000
<i>Total Collection</i>	\$1,919,300	\$1,954,000	\$2,004,100	\$2,055,300	\$1,919,300
Div 07 Storm Water Flood Control					
Salaries and Wages	\$186,300	\$190,000	\$193,600	\$197,400	\$201,200
Contractual Services	\$65,000	\$65,000	\$66,300	\$67,600	\$69,000
Operating Supplies	\$8,000	\$8,000	\$8,100	\$8,200	\$8,300
Utilities	\$167,600	\$172,600	\$179,500	\$186,700	\$194,200
General and Administrative	\$125,500	\$128,000	\$131,800	\$135,700	\$139,700

	BUDGET YR		PROJECTED		
DESCRIPTION	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Maintenance Services	\$4,000	\$4,000	\$4,200	\$4,400	\$4,600
<i>Total Storm Water Flood Control</i>	<i>\$556,400</i>	<i>\$567,600</i>	<i>\$583,500</i>	<i>\$600,000</i>	<i>\$617,000</i>
Div 45 Public Information					
Salaries and Wages	\$56,800	\$58,000	\$59,200	\$60,400	\$56,800
Contractual Services	\$13,500	\$13,500	\$13,800	\$14,100	\$13,500
Operating Supplies	\$300	\$300	\$300	\$300	\$300
General and Administrative	\$7,100	\$7,400	\$7,600	\$7,800	\$7,100
Maintenance Services	\$1,600	\$1,700	\$1,700	\$1,700	\$1,600
<i>Total Public Information</i>	<i>\$79,300</i>	<i>\$80,900</i>	<i>\$82,600</i>	<i>\$84,300</i>	<i>\$79,300</i>
Fund 621 Treatment					
Div 01 Laboratory Services)					
Salaries and Wages	\$486,100	\$495,900	\$505,700	\$515,800	\$526,100
Contractual Services	\$341,000	\$341,000	\$347,800	\$354,700	\$361,800
Operating Supplies	\$44,000	\$44,000	\$44,800	\$45,600	\$46,500
Utilities	\$4,400	\$4,500	\$4,700	\$4,900	\$5,100
General and Administrative	\$656,900	\$670,100	\$690,100	\$710,700	\$731,800
<i>Total Laboratory Services</i>	<i>\$1,536,400</i>	<i>\$1,559,500</i>	<i>\$1,597,300</i>	<i>\$1,636,100</i>	<i>\$1,675,900</i>
Div 02 Treatment Services					
Salaries and Wages	\$1,895,200	\$1,933,100	\$1,971,900	\$2,011,400	\$1,895,200
Contractual Services	\$78,000	\$78,000	\$79,500	\$81,000	\$78,000
Operating Supplies	\$1,017,000	\$1,017,000	\$1,037,300	\$1,058,000	\$1,017,000
Utilities	\$2,263,100	\$2,331,000	\$2,424,200	\$2,521,000	\$2,263,100
General and Administrative	\$638,400	\$651,100	\$670,700	\$690,800	\$638,400
Maintenance Services	\$5,000	\$5,000	\$5,200	\$5,400	\$5,000
<i>Total Treatment Services</i>	<i>\$5,896,700</i>	<i>\$6,015,200</i>	<i>\$6,188,800</i>	<i>\$6,367,600</i>	<i>\$5,896,700</i>
Div 05 Treatment System Maintenance-Upgrades					
Salaries and Wages	\$1,662,000	\$1,694,600	\$1,727,900	\$1,761,900	\$1,796,600
Contractual Services	\$152,300	\$152,300	\$155,400	\$158,600	\$161,800
Operating Supplies	\$495,000	\$495,000	\$504,900	\$515,000	\$525,300

DESCRIPTION	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Utilities	\$6,000	\$6,200	\$6,400	\$6,700	\$7,000
General and Administrative	\$483,000	\$492,400	\$507,200	\$522,500	\$538,200
Maintenance Services	\$50,200	\$50,200	\$52,100	\$54,200	\$56,300
<i>Total Treatment System Maintenance</i>	<i>\$2,848,500</i>	<i>\$2,890,700</i>	<i>\$2,953,900</i>	<i>\$3,018,900</i>	<i>\$3,085,200</i>
Div 45 Public Information					
Salaries and Wages	\$56,800	\$58,000	\$59,200	\$60,400	\$56,800
Contractual Services	\$13,500	\$13,500	\$13,800	\$14,100	\$13,500
Operating Supplies	\$300	\$0	\$0	\$0	\$300
General and Administrative	\$7,100	\$6,000	\$6,200	\$6,400	\$7,100
Maintenance Services	\$1,600	\$1,700	\$1,700	\$1,700	\$1,600
<i>Total Public Information</i>	<i>\$79,300</i>	<i>\$79,200</i>	<i>\$80,900</i>	<i>\$82,600</i>	<i>\$79,300</i>
Fund 628 Security and Contamination					
Div 01 Security & Contamination					
Salaries and Wages	\$455,100	\$457,700	\$460,200	\$462,800	\$465,400
<i>Total Security & Contamination</i>	<i>\$455,100</i>	<i>\$457,700</i>	<i>\$460,200</i>	<i>\$462,800</i>	<i>\$465,400</i>
Total O&M Expense (ALL)	\$15,795,200	\$16,070,100	\$16,477,100	\$16,895,200	\$17,325,600

Capital Improvement Program

While O&M expenses cover day-to-day operations, the Wastewater incurs additional capital expenditures to replace existing wastewater facilities or installed new facilities for planned future growth. As a result, Wastewater has developed a long-term Capital Improvement Program (CIP) that identifies future wastewater facilities needs. The CIP shown in Table 23 is for FY 12/13 through FY 15/16 and consists of capital improvement projects anticipated to be designed and constructed during the study period.

Excluding asset management (replacement and rehabilitation) projects, Wastewater is projecting expenditures of \$40,387,700 for collection, treatment and storm drain capital improvement projects over the next 5 years. Over this same time period, Wastewater is projecting to spend another \$14,159,600 on asset management related projects. Since storm drain has traditionally never been treated as a self-supporting enterprise, Wastewater handles are maintenance and capital needs. As part of the financial plan analyses, an annual inflation allowance of 3 percent was included in the above capital improvement project costs.

Table 23 Capital Improvement Program

DESCRIPTION	PROJECTED				TOTAL
	FY 12/13	FY 13/14	FY 14/15	FY 15/16	
Wastewater Collection System					
Development Project Infrastructure Report	\$0	\$100,000	\$0	\$106,100	\$206,100
Central Trunk Manhole Reconstruction Project (Phase 1)	\$0	\$1,000,000	\$0	\$0	\$1,000,000
Central Trunk Manhole Reconstruction Project (Phase 2)	\$0	\$0	\$1,030,000	\$0	\$1,030,000
Central Trunk Manhole Reconstruction Project (Phase 3)	\$0	\$0	\$0	\$1,060,900	\$1,060,900
WWC System Master Plan Update	\$0	\$300,000	\$0	\$0	\$300,000
Casden and Village Developments	\$0	\$500,000	\$515,000	\$0	\$1,015,000
Rice Ave Sewer Placement EX-1	\$0	\$1,200,000	\$0	\$0	\$1,200,000
Flow Monitoring System Expansion	\$0	\$300,000	\$0	\$0	\$300,000
Regulatory Compliance	\$0	\$100,000	\$103,000	\$106,100	\$309,100
Hansen Computer Upgrade	\$0	\$100,000	\$0	\$0	\$100,000
<i>Subtotal Collection Projects</i>	<i>\$0</i>	<i>\$3,600,000</i>	<i>\$1,648,000</i>	<i>\$1,273,100</i>	<i>\$6,521,100</i>
Asset Management Projects	\$750,000	\$1,000,000	\$2,060,000	\$2,121,800	\$5,931,800
Wastewater Treatment System					
WWTP SCADA Master Plan	\$0	\$500,000	\$0	\$0	\$500,000
WWTP EOM	\$0	\$100,000	\$103,000	\$106,100	\$309,100
WWTP Resurfacing	\$0	\$0	\$412,000	\$0	\$412,000
WWTP Effluent Pump Station Upgrade & Expansion	\$0	\$0	\$0	\$1,060,900	\$1,060,900
WWTP Headworks Backup Generator	\$0	\$800,000	\$824,000	\$0	\$1,624,000
WWTP Cogeneration Replacement	\$0	\$0	\$2,060,000	\$5,304,500	\$7,364,500
WWTP Prechlorination & Ferric System Project	\$0	\$0	\$0	\$0	\$0
WWTP AST Diffusers Replacement	\$0	\$0	\$5,768,000	\$0	\$5,768,000
WWTP Digesters	\$0	\$0	\$0	\$0	\$0
WWTP Bio Filter Recirculation & Interstage Pumps Replacement	\$0	\$0	\$0	\$0	\$0
WWTP Biosolid Storage	\$0	\$500,000	\$1,545,000	\$0	\$2,045,000

DESCRIPTION	PROJECTED				
	FY 12/13	FY 13/14	FY 14/15	FY 15/16	TOTAL
WWTP Biosolids Dewatering	\$0	\$0	\$0	\$0	\$0
WWTP PLCs / LCPs Replacement	\$0	\$300,000	\$2,060,000	\$0	\$2,360,000
WWTP Biotower Rebuild & Screens	\$0	\$1,250,000	\$0	\$0	\$1,250,000
Hansen Computer Upgrade	\$0	\$100,000	\$0	\$0	\$100,000
Plant Control Center Phase I & II	\$0	\$0	\$0	\$1,060,900	\$1,060,900
Crane	\$0	\$200,000	\$0	\$0	\$200,000
<i>Subtotal Collection Projects</i>	<i>\$0</i>	<i>\$3,750,000</i>	<i>\$12,772,000</i>	<i>\$7,532,400</i>	<i>\$24,054,400</i>
Asset Management Projects	\$1,500,000	\$1,000,000	\$1,030,000	\$2,652,300	\$6,182,300
Storm Drain System					
Mandalay Beach Road Stormwater	\$800,000	\$2,000,000	\$1,236,000	\$0	\$4,036,000
Tierra Vista Neighborhood - Sanford Storm Drain Phase 2	\$0	\$0	\$0	\$0	\$0
Blackstock North - Yucca St Storm Drain Phase 2	\$0	\$0	\$0	\$0	\$0
Storm Water Master Plan Update	\$100,000	\$0	\$0	\$0	\$100,000
Bartolo Square North Neighborhood Storm Drain	\$360,000	\$540,000	\$0	\$0	\$900,000
Commercial Central Neighborhood Storm Drain	\$0	\$0	\$0	\$1,273,100	\$1,273,100
Sierra Linda Neighborhood Storm Drain	\$0	\$140,000	\$576,800	\$0	\$716,800
Fifth St Storm Drain	\$0	\$160,000	\$659,200	\$0	\$819,200
Five Points Northeast Neighborhood Storm Drain	\$0	\$80,000	\$329,600	\$0	\$409,600
Blackstock South Neighborhood Storm Drain	\$0	\$100,000	\$412,000	\$0	\$512,000
Regulatory Compliance	\$0	\$0	\$515,000	\$530,500	\$1,045,500
<i>Subtotal Storm Drain Projects</i>	<i>\$1,260,000</i>	<i>\$3,020,000</i>	<i>\$3,728,600</i>	<i>\$1,803,600</i>	<i>\$9,812,200</i>
Asset Management Projects	\$500,000	\$500,000	\$515,000	\$530,500	\$2,045,500
Total CIP without Asset Management	\$1,260,000	\$10,370,000	\$18,148,600	\$10,609,100	\$40,387,700

Capital Fund Financing

A proposed financing plan for Wastewater's CIP is shown in Table 24. Financing for the CIP is anticipated to come from a combination of funds on hand, transfers from wastewater sales revenues derived from rates, and bond proceeds.

Similar to Water, Wastewater maintains two capital funds (collection and treatment) that are used to finance CIP projects as well as to separate the commingling of rate and connection funds. The capital funds generate revenue from developer connection fees, transfers and debt proceeds. With new development in City slowing dramatically, Wastewater will depend on rate revenue and bond proceeds to execute planned CIP projects in addition to a loan of \$4 million received from Water in FY 09/10.

Based on the proposed CIP, Wastewater will need to issue debt through revenue bonds in FY 13/14 and then again in FY 16/17. The proposed debts is indicated above assume the following service terms: 30-year payment period, 5.5 percent annual interest rate, 1.25 percent issuance expense, and a debt service reserve equal to one years' debt service.

Table 24 CIP Financing Plan

DESCRIPTION	PROJECTED			
	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Beginning Balance	\$194,600	\$199,500	\$19,992,400	\$7,183,500
Sources of Funds				
Revenue Bond Proceeds - WWC	\$0	\$13,000,000	\$0	\$0
Revenue Bond Proceeds - WWT	\$0	\$13,000,000	\$0	\$0
Transfer from Fund 611/621	\$1,260,000	\$5,000,000	\$5,000,000	\$5,000,000
Interest Income	\$4,900	\$252,400	\$339,700	\$110,900
Total Sources of Funds	\$1,264,900	\$31,252,400	\$5,339,700	\$5,110,900
Uses of Funds				
Collection Capital Improvement Projects	\$0	\$3,600,000	\$1,648,000	\$1,273,100
Storm Drain Capital Improvement Projects	\$1,260,000	\$3,020,000	\$3,728,600	\$1,803,600
Treatment Capital Improvement Projects	\$0	\$3,750,000	\$12,772,000	\$7,532,400
Bond Issuance Expense	\$0	\$195,000	\$0	\$0
Bond Reserve Fund Requirement	\$0	\$894,500	\$0	\$0
Total Uses of Funds	\$1,260,000	\$11,459,500	\$18,148,600	\$10,609,100
Ending Balance	\$199,500	\$19,992,400	\$7,183,500	\$1,685,300

Operating Fund Financing

Summarized in Table 25 is the proposed long-term operating financial plan for Wastewater. This financial plan is designed to generate sufficient funds to cover short-term and long-term expenses. Sources of revenue include wastewater sales under existing rates, additional revenues realized from proposed rate adjustments, miscellaneous revenue and interest earnings on available balances. As mentioned, other miscellaneous revenue includes sewer code enforcement, maintenance charges, permits fees, and a new security fee charge. Uses of funds include operation and maintenance expenses, routine capital outlay, debt service payments, and transfers to other funds such as the capital fund.

Table 25 Operating Fund Financing Plan

LINE NO.	DESCRIPTION	BUDGET YR		PROJECTED		
		FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Water Operating Fund 601						
Revenue						
1	WWC Revenue Under Existing Rates	\$8,419,200	\$8,457,000	\$8,494,400	\$8,532,500	\$8,570,400
2	WWT Revenue Under Existing Rates	\$17,453,000	\$18,536,100	\$18,604,100	\$18,673,300	\$18,742,100
	Additional Revenue Required:					
	<u>Year</u>	<u>Percent</u>	<u>Months Effective</u>			
3	FY11/12	0.0%				
4	FY12/13	12.0%	11	\$2,969,300	\$3,251,800	\$3,264,700
5	FY12/13	8.0%	7	\$1,398,300	\$2,428,000	\$2,437,600
6	FY13/14	5.0%	12		\$1,638,900	\$1,645,400
7	FY14/15	5.0%	12			\$1,727,600
8	FY15/16	5.0%	12			\$1,821,200
9	Total Revenue From Rates	\$25,872,200	\$31,360,700	\$34,417,200	\$36,281,100	\$38,244,700
10	Other WW Collection Revenue	\$761,600	\$769,000	\$769,000	\$769,000	\$769,000
11	Other WW Treatment Revenue	\$85,000	\$85,000	\$85,000	\$85,000	\$85,000
12	Security & Contamination Fee	\$452,600	\$455,100	\$457,700	\$460,200	\$462,800
13	Interest Income	\$678,200	\$680,600	\$681,600	\$665,100	\$657,000
14	Total Other Revenues	\$1,977,400	\$1,989,700	\$1,993,300	\$1,979,300	\$1,973,800
15	Total Revenue	\$27,849,600	\$33,350,400	\$36,410,500	\$38,260,400	\$40,218,500
Revenue Requirements						
	O&M Expenses					
16	WWC O&M Expenses	\$3,584,700	\$3,651,800	\$3,745,900	\$3,842,200	\$3,941,500
17	WWT O&M Expenses	\$10,360,900	\$10,544,600	\$10,820,900	\$11,105,200	\$11,397,700

LINE NO.	DESCRIPTION	BUDGET YR	PROJECTED			
		FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
18	Storm Water	\$1,394,500	\$1,416,000	\$1,450,100	\$1,485,000	\$1,521,000
19	Security & Contamination	\$455,100	\$457,700	\$460,200	\$462,800	\$465,400
20	Total O&M Expense	\$15,795,200	\$16,070,100	\$16,477,100	\$16,895,200	\$17,325,600
21	Routine Capital	\$0	\$0	\$0	\$0	\$0
22	Asset Management	\$0	\$2,750,000	\$2,500,000	\$3,605,000	\$5,304,600
	Debt Service					
	Existing					
23	2003 Wastewater Revenue Refunding	\$3,669,800	\$3,667,100	\$3,668,600	\$3,667,300	\$3,669,000
24	2004A Wastewater Revenue Bond	\$4,087,700	\$4,087,700	\$4,087,700	\$4,087,700	\$4,087,700
25	2004B Wastewater Revenue Bond	\$1,746,600	\$1,741,100	\$1,729,300	\$1,716,600	\$1,707,800
26	2006 Wastewater Revenue Bond	\$796,700	\$796,300	\$795,500	\$799,300	\$797,500
27	2009 Water Loan	\$873,400	\$873,400	\$873,400	\$873,400	\$0
	Proposed					
28	Wastewater Revenue Bonds	\$0	\$0	\$521,800	\$894,500	\$894,500
29	Total Debt Service	\$11,174,200	\$11,165,600	\$11,676,300	\$12,038,800	\$11,156,500
	Transfers					
30	Infrastructure Use Fees	\$920,200	\$920,000	\$920,000	\$920,000	\$920,000
31	Transfer to Fund 6XX	\$0	\$1,260,000	\$5,000,000	\$5,000,000	\$5,000,000
32	Transfer to Fund 625/628	\$452,600	\$455,100	\$457,700	\$460,200	\$462,800
33	Total Transfers	\$1,372,800	\$2,635,100	\$6,377,700	\$6,380,200	\$6,382,800
34	Total Revenue Requirements	\$28,342,200	\$32,620,800	\$37,031,100	\$38,919,200	\$40,169,500
	Operating Fund Balance					
35	Net Annual Cash Balance	(\$492,600)	\$729,600	(\$620,600)	(\$658,800)	\$49,000
36	Beginning Cash Balance	\$6,752,200	\$6,259,600	\$6,989,200	\$6,368,600	\$5,709,800
37	Net Cumulative Cash Balance	\$6,259,600	\$6,989,200	\$6,368,600	\$5,709,800	\$5,758,800
38	Target Reserve (25% of O&M)	\$3,948,800	\$4,017,500	\$4,119,300	\$4,223,800	\$4,331,400

The projected wastewater revenue under existing rates represents service, commodity, and strength charges at current rate levels that are subject to rate adjustments. Based on the existing revenue

indicated, additional annual revenue adjustments are necessary to meet operating fund requirements and fiscal policy objectives. Adjustments are typically assumed to become effective July 1 of each fiscal year. However, in FY 12/13, the initial revenue adjustments are planned for August 2012 and January 2013. Initial analyses indicate that rate increases are needed for the next five years as shown on Lines 3 through 8. Any changes to the capital-financing policies and/or CIP may alter these results since the operating fund helps supplement funds for traditional repair and replace projects. The resulting dollar impact of the proposed revenue adjustments are illustrated on Line 9.

In addition to rate revenue, other operating and non-operating charges contribute to the income of the Wastewater Enterprise. Typically, these revenue sources are minimal and volatile and are thus considered a constant in the revenue projections. A non-operating source includes interest income from the operating fund. Interest income is calculated using an interest rate of 2.5 percent in order to be conservative.

Projected total O&M expense is shown on Line 20. The O&M expenses shown represent expenses associated with operating the wastewater system. Routine capital outlays and asset management activities are on Lines 21 and 22. For larger routine capital outlay that is represented in the CIP, it is common practice by utilities is to set in reserve approximately the equivalent of annual depreciation for routine capital assets. Based on historical wastewater depreciation, Wastewater should build up to setting aside approximately \$4,100,000 per year.

Debt service on proposed bond issues is shown on Line 28 and total debt service is shown on Line 29. All proposed bond issues are forecasted with 30-year terms at an initial 5.5 percent. To date, Wastewater has four outstanding bond debt obligations plus the Water loan obligation. Transfers to the capital and other funds are shown on Lines 30 through 33. Funds transferred to the capital fund are used for capital projects. Funds transferred to the Fund 628 are for security/contamination activities. Lines 35 through 37 summarize the impact to the ending fund balance for Wastewater. A minimum target of 25 percent of O&M expenses plus any encumbrances serves as the minimum level of working capital that Wastewater sets to have on hand for operational purposes.

Summary of Revenues, Expenditures, and Obligations

Based on the analyses of revenues and revenue requirements, it is evident that Wastewater needs a rate revenue increase in order to meet revenue requirements and working capital reserve as a standalone enterprise. The suggested adjustments range from 12 percent for FY 12/13 effective August 2012, 8 percent for FY 12/13 effective January 2013, and then 5 percent in each of the next three years, as shown on Lines 3 through 8. With these adjustments, the City should be able to accomplish its objectives under the assumption that no significant change occurs. While the financial plan should be a working document, Wastewater will need to re-examine the rate structure prior to FY 15/16 to verify it is still adequate.

The revenue requirements of Wastewater consist of system O&M expenses, routine capital outlay for minor expenditures on equipment not financed from bond proceeds, debt service requirements on existing and proposed bonded debt, transfers to other funds, and reserve requirements to ensure that debt service coverage, rate covenant requirements, and adequate levels of working capital are met.

As shown on Line 34 in Table 25, total revenue requirements for Wastewater increase during the study period and can be correlated with inflationary factors and additional debt service requirements. The total revenue requirements will increase from \$28,342,200 in FY 11/12 to \$40,169,500 in FY 15/16, assuming the revenue adjustment is implemented. Subtracting total revenue requirements from total revenues results in the projected annual operating fund surpluses or deficits shown on Line 35.

As of July 1, 2010, it was estimated that a beginning balance of \$6.75 million was available for use in this fund. An additional \$194,600 was determined available for use in the capital funds. The ending balance is shown on Line 37, while the minimum ending balance of 25 percent of operation and maintenance expense is shown on Line 38. Applying a cumulative revenue adjustment of approximately 38.9 percent over the 5 year period should allow Wastewater to achieve the desired target level of ending year-end balances, meet minimum working capital and satisfy minimum debt service requirements.

It should be recognized that the indicated percentage revenue increase discussed above are overall revenue increase. The results of the cost of service analysis presented later in this report may indicate that rate increases may vary from this average for the various customer classes with some classes receiving a greater than average increase, while others receive a less than average increase or perhaps a decrease.

Test Year Revenue Requirements

In analyzing Wastewater's cost of service for allocation to customer classes, the annual revenue requirements for FY 12/13 is selected as the Test Year (TY) requirements to demonstrate the development of cost-of-service wastewater rates.

COST OF SERVICE ALLOCATIONS

The revenue requirements to be derived from rates and charges for wastewater service are summarized in Lines 1 through 13 of Table 26. In analyzing Wastewater's cost of service for allocation to customer classes, the annual revenue requirements for FY 12/13 are selected as the Test Year requirements to demonstrate the development of cost of service wastewater rates. In determining the cost of service to be met from charges for wastewater service, we deduct income received from other sources that not subject to rate adjustments from the total revenue requirements. As a result, the total cost of service to be recovered from rates is shown on Line 13, Column 3.

Table 26 Total Costs to be Recovered from Rates

INE NO.	DESCRIPTION	OPERATING EXPENSE	CAPITAL COST	TOTAL
Revenue Requirements				
Fund 611/621				
1	O&M Expense	\$16,070,100		\$16,070,100
2	Asset Management		\$2,750,000	\$2,750,000
4	Transfer to Funds , 6XX, 625 & 628		\$1,715,100	\$1,715,100
5	Debt Service		\$11,165,600	\$11,165,600
6	Infrastructure Use Fee	\$920,000		\$920,000
7	Subtotal	\$16,990,100	\$15,630,700	\$32,620,800
Less Revenues From Other Sources				
8	Other Operating Income	\$1,309,100		\$1,309,100
9	Interest Income	\$165,600	\$515,000	\$680,600
10	Change in Funds Available	(\$729,600)		(\$729,600)
11	Annualized Rate Increase	(\$1,031,000)		(\$1,031,000)
12	Subtotal	(\$285,900)	\$515,000	\$229,100
13	Cost of Service to be Recovered from Rates	\$17,276,000	\$15,115,700	\$32,391,700

Functional Cost Components

In developing an equitable rate structure, revenue requirements are allocated to the various customer classifications according to the cost of service rendered. Allocations of these requirements to customer classes of Wastewater should take into account flow, the number of customers, and other relevant factors.

Customers are classified to reflect groups of customers with similar service requirements who can be served at similar cost. Each class represents a particular type of service requirement. For the purposes of the cost of service analysis, the customer classifications in this study include single family and multi-family residential, commercial, restaurant, laundry, contract customers, industrial, and Regional (Outside City). These customer classes were assumed to exhibit similar types of system load characteristics. Since the completion of the 2009 study, the City has gathered consumptive data to assess whether further refinement of the customer classes is warranted. As part of the current study, with the help of the City's conservation group, Black & Veatch identified the subcategory of single family – large lots for those parcels greater than 7,000 square feet. In addition, the subcategory of water purifiers / desalters was added to the industrial class.

Allocation to Cost Components

As a basis for allocating costs of service among customer classes, costs are first allocated to functional cost components, then allocated to cost categories, and subsequently distributed to customer classes. In this analysis, there are five primary cost components: (1) base flow, or volume costs, (2) strength (BOD and TSS), (3) customer billing costs and administration, and (4) stormwater.

Each element of cost is allocated to functional cost components on the basis of the parameter or parameters having the most significant influence on the magnitude of that element of cost.

Allocation of Operation and Maintenance Expenses

The allocation of O&M expense to cost functions is shown in Table 27. The net operation and maintenance expense to be recovered for wastewater sales is derived by deducting funds available from other sources from the total Test Year expense. Net Test Year operation and maintenance expense of \$17,276,000 is shown allocated to the five primary cost components on Line 17. Note that routine capital outlay is excluded from O&M expenses as these expenses can be deferred based on the financial state of the enterprise. Additionally, adjustments to costs allocated to the Regional customers are made to address capacity agreements for the Wastewater Treatment Plant.

Allocation of Capital Costs

The estimated investment in wastewater and stormwater facilities is allocated to appropriate cost components as a basis for the further distribution of capital related costs to the various customer classes. The allocation of estimated plant investment serving wastewater customers for the Test Year is shown in Table 28. The total plant investment of \$122,665,200 shown on Line 6 represents the estimated Test Year original cost less accumulated depreciation of plant in service.

The allocation of specific items of investment to the cost categories, as shown, is made on the basis previously described. For example, collection items are related to flow and these investment costs are assigned to the volume cost component and further delineated by whether the asset is common-to-all or primarily serves specific customers. The treatment is designed primarily on the basis of treatment plant flow and is also assigned to the volume cost function. Elements within this category, such as pumping stations facilities are assigned to the volume category because such facilities are designed for this purpose.

Table 27 Allocation of O&M to Functional Cost Components

	LINE ITEM	TOTAL	COLLECTION VOLUME	TREATMENT VOLUME	TREATMENT BOD	TREATMENT TSS	STORMWATER	BILLING & COLLECTION	ADMIN	COUTSIDE CITY
Wastewater Collection										
1	Div 01 Source Control / Services	\$1,616,900	\$1,342,800					\$86,400	\$86,600	\$101,100
2	Div 02 Storm Water Quality Management	\$848,400	\$0				\$805,800		\$42,600	
3	Div 03 Collection System Main & Upgrade	\$1,954,000	\$1,602,100					\$97,800	\$97,800	\$156,300
4	Div 07 Storm Water Flood Control	\$567,600					\$539,200		\$28,400	
5	Div 45 Public Information	\$80,900							\$80,900	
6	Total	\$5,067,800	\$2,944,900	\$0	\$0	\$0	\$1,345,000	\$184,200	\$336,300	\$257,400
Wastewater Treatment										
7	Div 01 Laboratory Services	\$1,559,500		\$351,100	\$561,300	\$561,300		\$7,800	\$78,000	
8	Div 02 Treatment Services	\$6,015,200		\$3,254,000	\$1,953,700	\$807,500			\$0	
9	Div 05 Treatment System Maintenance	\$2,890,700		\$1,693,500	\$722,900	\$433,600			\$40,700	
10	Div 45 Public Information	\$79,200							\$79,200	
11	Total	\$10,544,600	\$0	\$5,298,600	\$3,237,900	\$1,802,400	\$0	\$7,800	\$197,900	\$0

	LINE ITEM	TOTAL	COLLECTION VOLUME	TREATMENT VOLUME	TREATMENT BOD	TREATMENT TSS	STORMWATER	BILLING & COLLECTION	ADMIN	COUTSIDE CITY
Security and Contamination										
12	Div 01 Security & Contamination	\$457,700		\$68,600	\$183,100	\$183,100			\$22,900	
13	Total	\$457,700	\$0	\$68,600	\$183,100	\$183,100	\$0	\$0	\$22,900	\$0
14	Total O&M	\$16,070,100	\$2,944,900	\$5,367,200	\$3,421,000	\$1,985,500	\$1,345,000	\$192,000	\$557,100	\$257,400
15	Plus Required Transfers	\$920,000	\$419,300	\$206,000	\$125,900	\$70,100	\$0	\$26,000	\$44,800	\$27,900
16	Less Other Revenues	\$285,900	\$1,020,400	(\$215,500)	(\$131,700)	(\$73,300)	(\$350,200)	\$25,500	\$10,700	\$0
17	Net O&M	\$17,276,000	\$4,384,600	\$5,357,700	\$3,415,200	\$1,982,300	\$994,800	\$243,500	\$612,600	\$285,300

Table 28 Allocation of Net Capital Costs to Functional Cost Components

	LINE ITEM	TOTAL	COLLECTION VOLUME	TREATMENT VOLUME	TREATMENT BOD	TREATMENT TSS	STORMWATER	BILLING & COLLECTION	ADMIN
1	Collection	\$33,564,900	\$30,208,400				\$3,356,500		
2	Pumping Plant	\$1,133,100	\$1,019,800				\$113,300		
3	Treatment	\$77,572,400		\$15,126,600	\$31,804,700	\$30,641,100			
4	Customer Billing	\$58,400						\$58,400	
5	General Plant	\$10,336,400	\$2,873,600	\$1,391,900	\$2,926,600	\$2,819,600	\$319,300	\$5,400	
6	Total Plant Investment	\$122,665,200	\$34,101,800	\$16,518,500	\$34,731,300	\$33,460,700	\$3,789,100	\$63,800	\$0
Capital Cost Allocations									
7	WWC Capital	\$750,000	\$750,000						
8	WWT Capital	\$1,500,000		\$292,500	\$615,000	\$592,500			
9	SW Capital	\$500,000					\$500,000		
10	Transfer to Other Funds	\$1,715,100		\$245,700	\$516,600	\$497,700			\$455,100
12	Debt Service - WWC	\$4,180,000	\$3,762,000				\$418,000		
13	Debt Service - WWT	\$6,985,600		\$1,362,200	\$2,864,100	\$2,759,300			
14	Less Other Revenues	\$515,000	\$448,500				\$51,500		\$15,000
15	Net Capital Costs	\$15,115,700	\$4,063,500	\$1,900,400	\$3,995,700	\$3,849,500	\$866,500	\$0	\$440,100

Units of Service

The total cost responsibility of each class of service may be established by developing unit costs of service for each cost function and assigning those costs to the customer classes based on the respective service requirements of each. To properly recognize the cost of service, each customer class is allocated its share of base, strength, and direct costs. The number of units of service required by each customer class provides a means for the proportionate distribution of costs previously allocated to respective cost categories. Summarized in Table 29 are the estimated units of service for the various customer classes.

Table 29 Units of Service for TY 12/13

CUSTOMER CLASS	RETURN FACTOR	WASTEWATER VOLUME	I/I	BOD	TSS	NO. OF ACCOUNTS	NO. OF UNITS
	%	(ccf)	(ccf)	(lbs)	(lbs)	Accounts	units
Single Family	80.0%	3,441,200	309,700	5,259,800	5,259,800	38,967	38,967
Multi Family	90.0%	1,532,100	137,900	2,341,800	2,341,800	2,565	17,349
Single Family – Large Lots	60.0%	37,100	3,300	56,700	56,700	442	442
Commercial	85.0%	718,600	64,700	896,600	896,600	2,016	
Restaurant	80.0%	205,900	18,500	1,156,100	770,700	387	
Laundry	90.0%	117,400	10,600	219,700	183,100	3	
Schools	85.0%	60,000	5,400	84,200	74,900	70	
Water Purifiers		43,800	3,900	27,300	34,200	4	
Desalters		556,800	50,100	347,400	434,200	1	
Industrial		1,348,900	121,400	1,570,900	1,567,400	22	
USN Pt. Mugu		176,800	15,900	106,530	104,850	1	
USN CBC		316,200	28,500	368,710	450,740	1	
Port Hueneme		1,724,400	155,200	2,635,700	2,635,700	1	

The wastewater collected and treated by Wastewater is made up of two elements: (1) sanitary flow and (2) infiltration/inflow (I/I) of storm runoff. Sanitary flow is that portion of the annual water use of each customer class estimated to enter the sanitary sewer system.

Based on discussions with staff, it is estimated that the amount of flow entering the collection system through I/I is approximately 10 percent of the total treated wastewater volume. Since I/I is not attributable to a specific customer class, each class will bear its proportionate share of the costs associated with I/I in an equitable manner. Most communities assign at least a portion of the responsibility to customers on the basis of contributed volume by customer class. This philosophy is

supported in Financing and Charges for Wastewater Systems published by the AWWA, American Society of Civil Engineers, and WEF. In this study, I/I is allocated 100 percent to customers based on volume.

For sanitary flow, a wastewater volume is estimated based water consumption. There is an approximate percent of water returned to the system for customer classes on flat and commodity rates. The contributions from industrial and contract users are monitored on a regular basis. The pollutant loadings indicated in Table 29 represent wastewater quality based on strengths indicated by that monitoring data. Loadings for commercial users are based on recommendations of the State Water Resources Control Board. Loadings for residential classifications are based on an average BOD and TSS concentrations of approximately 245 milligrams per liter (mg/l) based on an analysis of recent years' influent loadings at the treatment plant.

After the completion of the 2009 study, City Council directed Black & Veatch to examine the return factors for the single family residential class. Of specific concern was whether larger lots should have a different return factor. Black & Veatch examined data gathered over the last 3 years (since implementation of the new rate structure) and working with the City's conservation staff, identified a new customer subclass: single family residential – large lots. For this new category, customers with lot sizes larger than 7,000 square feet were determined to have a return factor that averaged 60 percent versus 80 percent for smaller lots. In addition to establishing a single family – large lot category, this study also recognizes a new customer class for water purifiers / desalters. This group of customers is part of the industrial class. The allocation of costs between regional customers and all other customers was reviewed in light of no contractual limitations. Finally, the cost allocation of O&M expenditures was updated to reflect current activities specifically as it relates to BOD and TSS elements.

The cost of service responsibility for base costs varies with the volume of wastewater requirements and may be distributed to customer classes on that basis. Strength costs are those costs associated with treating the constituents in the flow and is distributed to customer classes based on their respective loadings into the system. Customer costs, which consist of meter related costs, billing, collection and accounting costs. Stormwater is based on volume and is allocated on that basis.

Cost of Service Allocations

Costs of service are allocated to the customer classes by application of unit costs of service to respective service requirements. Unit costs of service are based upon the total costs previously allocated to functional components and the total number of applicable units of service. Dividing the costs allocated to functional cost components by the respective total units of service requirements develops unit costs of operation and maintenance expense, and net capital costs.

Unit Costs of Service

Table 30 presents total Test Year O&M expense and net capital costs allocated to functional cost component as taken from Tables 27 and 28.

Table 30 Unit Costs of Services

CUSTOMER CLASS	COLLECTION VOLUME	TREATMENT VOLUME	BOD	TSS	STORM WATER	BILLING & COLLECTION	ADMIN	OUTSIDE CITY
Net Operating Expense	\$17,276,000	\$2,915,600	\$5,788,700	\$3,678,600	\$2,128,900	\$192,500	\$591,200	\$285,300
Capital Costs	\$15,115,700	\$4,063,500	\$1,900,400	\$3,995,700	\$3,849,500	\$0	\$440,100	\$0
Total Cost of Service	\$32,391,700	\$6,979,100	\$7,689,100	\$7,674,300	\$5,978,400	\$192,500	\$1,031,300	\$285,300
Units of Measure	ccf	ccf	lbs	lbs	ccf	accounts	units	units
Total Units of Service – No Treatment	7,401,200	7,401,200	11,501,600	11,076,100	7,401,200	45,009	57,428	322
Total Units of Service – Treatment		10,279,200	15,071,440	14,810,690		44,991	57,409	322
Total Units of Service – Regional		2,217,400	3,110,940	3,191,290		3	3	
Total Unit Cost of Service - \$/unit	\$0.9430	\$0.7480	\$0.5092	\$0.4037	\$0.3461	\$4.2769	\$17.9581	\$886.0248

Table 31 Allocation of COS to Customer Classes

LINE ITEM	TOTAL	COLLECTION VOLUME	TREATMENT VOLUME	BOD	TSS	STORM WATER	BILLING & COLLECTION	ADMIN	OUTSIDE CITY
Number of Units									
Unit of Measure		ccf	ccf	lbs	lbs	ccf	Accounts	Accounts	Accounts
Unit Cost of Service - \$/unit O&M TREATMENT only - Oxnard w/o Industrial			\$0.6925	\$0.2772	\$0.1274			\$0.1534	\$3.0392
Unit Cost of Service - \$/unit O&M TREATMENT only - Industrial			\$0.3155	\$0.1658	\$0.0642			\$27.2727	\$686.3636
Unit Cost of Service - \$/unit O&M TREATMENT only - Regional			\$0.2914	\$0.1140	\$0.1770				\$8,033.3333
Unit Cost of Service - \$/unit, O&M w/o Treatment		\$0.3939				\$0.2290			\$3.2058
Unit Cost of Service - \$/unit, Capital w/o Treatment		\$0.5490	\$0.0332	\$0.0449	\$0.0449	\$0.1171			
Unit Cost of Service - \$/unit, Capital -Treatment - Oxnard			\$0.2016	\$0.2857	\$0.2834				
Unit Cost of Service - \$/unit, Capital -Treatment - Regional			\$0.0132	\$0.0198	\$0.0186				
Unit Cost of Service - \$/unit, Total		\$0.9430	\$0.7480	\$0.5092	\$0.4037	\$0.3461		\$4.2769	\$17.9581
Single Family Residential									
Units		3,441,200	3,441,200	5,259,800	5,259,800	309,700	39,162	39,162	
Costs	\$15,368,800	\$2,622,000	\$3,486,700	\$3,410,800	\$2,589,900	\$2,198,000	\$168,400	\$893,000	

LINE ITEM	TOTAL	COLLECTION VOLUME	TREATMENT VOLUME	BOD	TSS	STORM WATER	BILLING & COLLECTION	ADMIN	OUTSIDE CITY
Multi Family Residential									
Units		1,532,100	1,532,100	2,341,800	2,341,800	137,900	2,582	2,582	
Costs	\$5,461,100	\$1,444,700	\$1,420,700	\$1,423,500	\$1,067,100	\$47,700	\$11,000	\$46,400	
Single Family Residential – Large Lots									
Units		37,100	37,100	56,700	56,700	37,100	443	443	
Costs	\$152,400	\$35,000	\$34,400	\$34,500	\$25,800	\$12,800	\$1,900	\$8,000	
Commercial									
Units		718,600	718,600	896,600	896,600	64,700	2,026	2,026	
Costs	\$2,364,900	\$677,600	\$666,300	\$545,000	\$408,500	\$22,400	\$8,700	\$36,400	
Restaurants									
Units		205,900	205,900	1,156,100	770,700	18,500	376	376	
Costs	\$1,453,900	\$194,200	\$190,900	\$702,800	\$351,200	\$6,400	\$1,600	\$6,800	
Laundries									
Units		117,400	117,400	219,700	183,100	10,600	3	3	
Costs	\$440,400	\$110,700	\$108,900	\$133,600	\$83,400	\$3,700	\$0	\$100	
Schools									
Units		60,000	60,000	84,200	74,900	60,000	70	70	
Costs	\$183,200	\$56,600	\$33,000	\$41,800	\$29,400	\$20,800	\$300	\$1,300	

LINE ITEM	TOTAL	COLLECTION VOLUME	TREATMENT VOLUME	BOD	TSS	STORM WATER	BILLING & COLLECTION	ADMIN	OUTSIDE CITY
Water Purifiers									
Units		43,800	43,800	27,300	34,200	43,800	3	3	
Costs	\$107,700	\$41,300	\$24,100	\$13,600	\$13,400	\$15,200	\$0	\$100	
Desalters									
Units		556,800	556,800	347,400	434,200	556,800	1	1	
Costs	\$1,367,000	\$525,000	\$306,400	\$172,500	\$170,400	\$192,700	\$0	\$0	
Industrial									
Units		1,348,900	1,348,900	1,570,900	1,567,400	121,400	22	22	
Costs	\$3,467,300	\$1,272,000	\$742,300	\$779,900	\$615,300	\$42,000	\$600	\$15,200	
Outside City									
Units									322
Costs	\$285,300								\$285,300
Regional Customers									
Units		0	2,217,400	3,110,940	3,191,290		3	3	
Costs	\$1,739,700	\$0	\$675,400	\$416,300	\$624,000		\$0	\$24,000	
Total Cost of Service	\$32,391,700	\$6,979,100	\$7,689,100	\$7,674,300	\$5,978,400	\$2,561,700	\$192,500	\$1,031,300	\$285,300

Distribution of Costs of Service to Customer Classes

The customer class responsibility for service is obtained by applying the unit costs of service to the number of units for which the customer class is responsible. This process is illustrated in Table 31, in which the unit costs of service are applied to the customer class units of service.

Adequacy of Existing Rates to Meet Costs of Service

Presented in Table 32 is a comparison of the allocated cost of service and revenue under existing rates for the system in total. The last column indicates the approximate adjustment rate levels necessary to recover 100 percent of the allocated costs of service.

Table 32 Comparison of Adjusted COS with Revenues under Existing Rates

LINE NO.	CUSTOMER CLASS	ALLOCATED COST OF SERVICE	REVENUE UNDER EXISTING RATES	INDICATED REVENUE INCREASE
1	Residential	\$21,267,600	\$16,568,500	28.4%
2	Non-Residential	\$9,384,400	\$9,130,500	2.8%
3	Regional	\$1,739,500	\$1,294,100	34.4%
4	Total System	\$32,391,700	\$26,993,100	20.0%

PROPOSED RATE ADJUSTMENTS

The initial consideration in the derivation of wastewater rate schedules for utility service is the establishment of equitable charges to the customers commensurate with the cost of providing that service. While the cost of service allocations to customer classes should not be construed as literal or exact determinations, they offer a guide to the necessity for, and the extent of, rate adjustments. Practical considerations sometimes modify rate adjustments by taking into account additional factors such as the extent of change from previous rate levels, existing contracts, and past local policies and practices.

Existing Rates

A summary of existing wastewater rates was presented earlier in Table 20. The existing rates consist of a flat monthly base charge, a commodity charge for each customer class applicable to each hundred cubic feet of billed water sales, and a strength charge, which is based on monitored pollutant loading data.

Proposed Rates

The costs of service analysis described in preceding sections of this report provide a basis for the design of rates. The rate schedule shown in Table 33 reflects the rates effective August 2012 and takes into consideration City policies. Table 34 illustrates the rates effective January 2013.

Table 33 Proposed Rates for TY 12/13 (Effective August 2012)

COMMODITY CHARGES (\$/CCF)					
Single Family		Multi-Family PER UNIT		Single Family – Large Lots	
Rate Block	Charge	Rate Block	Charge	Rate Block	Charge
0 - 9	\$1.25	0 – 6	\$1.05	0 – 16	\$1.25
10 - 18	\$1.39	7 - 12	\$1.17	17 – 25	\$1.39
Over 18	\$1.94	Over 12	\$1.63	Over 25	\$1.94
Commercial		Restaurants		Laundries	
Rate Block	Charge	Rate Block	Charge	Rate Block	Charge
0 - 50	\$2.30	0 – 20	\$2.30	0 – 105	\$2.30
51 - 930	\$2.88	21 – 160	\$2.88	106 – 525	\$2.55
Over 930	\$5.75	Over 160	\$5.75	Over 525	\$3.17
Minimum Monthly Fee - \$13.10		Minimum Monthly Fee - \$12.15		Minimum Monthly Fee - \$57.50	
Schools		Las Posas			
Rate Block	Charge	Rate Block	Charge		
0 - 50	\$2.30	0 - 50	\$4.60		
51 - 930	\$2.88	51 - 930	\$5.76		
Over 930	\$5.75	Over 930	\$11.50		
Minimum Monthly Fee - \$46.00					
MONTHLY BASE CHARGE (\$/month)					
Single Family	Multi Family Per Unit	Single Family – Large Lots	Outside City Residential	Outside City Multi Family	Non Metered
\$19.72	\$14.42 – Each of first 6 units \$7.19 – After 6 units	\$19.72	\$68.34	\$45.80	\$33.86
FORMULA USERS AND REGIONAL CUSTOMERS					
Formula Users			Regional Customers		
Volume (MG)	BOD (1,000 lbs)	TSS (1,000 lbs)	Volume (MG)	BOD (1,000 lbs)	TSS (1,000 lbs)
\$2,016.56	\$459.48	\$363.40	\$1,090.98	\$123.60	\$181.13

Table 34 Proposed Rates for TY 12/13 (Effective January 2013)

COMMODITY CHARGES (\$/CCF)					
Single Family		Multi-Family PER UNIT		Single Family – Large Lots	
Rate Block	Charge	Rate Block	Charge	Rate Block	Charge
0 - 9	\$1.38	0 – 6	\$1.13	0 – 16	\$1.38
10 - 18	\$1.53	7 - 12	\$1.25	17 – 25	\$1.53
Over 18	\$2.14	Over 12	\$1.75	Over 25	\$2.14
Commercial		Restaurants		Laundries	
Rate Block	Charge	Rate Block	Charge	Rate Block	Charge
0 - 50	\$2.48	0 – 20	\$2.48	0 – 105	\$2.48
51 - 930	\$3.10	21 – 160	\$3.10	106 – 525	\$2.75
Over 930	\$6.20	Over 160	\$6.20	Over 525	\$3.42
Minimum Monthly Fee - \$14.15		Minimum Monthly Fee - \$13.12		Minimum Monthly Fee - \$62.10	
Schools		Las Posas			
Rate Block	Charge	Rate Block	Charge		
0 - 50	\$2.48	0 - 50	\$4.96		
51 - 930	\$3.10	51 - 930	\$6.20		
Over 930	\$6.20	Over 930	\$12.40		
Minimum Monthly Fee - \$49.68					
MONTHLY BASE CHARGE (\$/month)					
Single Family	Multi Family Per Unit	Single Family – Large Lots	Outside City Residential	Outside City Multi Family	Non Metered
\$21.30	\$15.57 – Each of first 6 units \$7.77 – After 6 units	\$21.30	\$75.91	\$50.36	\$36.57
FORMULA USERS AND REGIONAL CUSTOMERS					
Formula Users			Regional Customers		
Volume (MG)	BOD (1,000 lbs)	TSS (1,000 lbs)	Volume (MG)	BOD (1,000 lbs)	TSS (1,000 lbs)
\$2,177.88	\$496.24	\$392.47	\$1,178.25	\$133.48	\$195.62

Revenue Sufficiency

Presented in Table 35 is a comparison of Test Year allocated cost of service with revenues under the suggested water rate structure. Test year costs of service are obtained from Table 32 and the proposed rates recover essentially 100 percent of the total cost of service.

Table 35 Revenues under Proposed Rates for TY 12/13 (Effective January 2013)

LINE NO.	CUSTOMER CLASS	ALLOCATED COST OF SERVICE	ESTIMATED REVENUES UNDER PROPOSED RATES	TOTAL PERCENT RECOVERY
1	Residential	\$21,267,600	\$16,568,500	100.2%
2	Non-Residential	\$10,859,100	\$11,154,500	99.2%
3	Regional	\$1,739,700	\$1,294,100	99.9%
4	Total System	\$32,391,700	\$26,993,100	100.2%

Environmental Resources Rate Study

REVENUE AND REVENUE REQUIREMENTS

Customer Usage Projections

To forecast revenue, the number of units and tonnage needs to be determined within ER's service area. Growth is incorporated into the equation by projecting the number of units as shown in Table 35. Based on discussions with City staff, residential and commercial customer account growth is estimated to increase from 45,331 in FY 11/12 to 46,607 in FY 15/16. This represents an estimated annual growth rate of less than 1 percent per year. Similar to the other enterprises, the majority of the growth is expected to come from residential with new development on the outer edge of the City.

Using the historical tonnage patterns per customer class, the projected solid waste sales volumes for ER were derived. Black & Veatch had several years of detailed information and thus historical patterns of solid waste have been determined. We recommend that as updated detailed information becomes available, the City should average waste levels by customer class to help normalize the effects of abnormal conditions. Using FY 10/11 as the benchmark, the projected solid waste units are shown in Table 36. Growth for industrial customers is based on number of pickups as shown below.

Table 36 Average Number of Residential and Commercial Units and Industrial Pickups

CODE	CUSTOMER CLASS	PICKUP FREQ.	BUDGET YR	PROJECTED			
			FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Residential (Number of Units)							
T01	Single Unit		33,577	33,577	33,913	34,252	34,595
T022	Second Unit		804	804	812	820	828
T023	Third Unit		180	180	182	184	186
T04	Multi Unit		1,856	1,856	1,875	1,894	1,913
T60	65 Gal Cont.		1,825	1,825	1,843	1,861	1,880
EC	Extra Container		3,126	3,126	3,157	3,189	3,221
	<i>Subtotal Residential</i>		<i>41,368</i>	<i>41,368</i>	<i>41,782</i>	<i>42,200</i>	<i>42,623</i>
Commercial (Number of Units)							
D011	2 Cu. Yards	x1	641	641	643	645	647
D012		x2	407	407	408	409	410
D013		x3	158	158	158	158	158
D014		x4	41	41	41	41	41
D015		x5	31	31	31	31	31

CODE	CUSTOMER CLASS	PICKUP FREQ.	BUDGET YR	PROJECTED			
			FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
D016		x6	13	13	13	13	13
D021	4 Cu. Yards	x1	437	437	438	439	440
D022		x2	536	536	537	538	539
D023		x3	386	386	387	388	389
D024		x4	123	123	123	123	123
D025		x5	74	74	74	74	74
D026		x6	90	90	90	90	90
D041	95 Gal Cont.	1 Auto	280	280	281	282	283
D042		2 Auto	47	47	47	47	47
D043		3 Auto	12	12	12	12	12
D044		4 Auto	7	7	7	7	7
D045		5 Auto	1	1	1	1	1
D051	95 Gal Recycle	1 Auto	6	6	6	6	6
D101	2 Cu. Yards Compactor	x1	1	1	1	1	1
D102		x2	2	2	2	2	2
D103		x3	0	0	0	0	0
D104		x4	0	0	0	0	0
D105		x5	0	0	0	0	0
D106		x6	0	0	0	0	0
D111	2 Cu. Yards Shared	x1	4	4	4	4	4
D112		x2	25	25	25	25	25
D113		x3	11	11	11	11	11
D114		x4	78	78	78	78	78
D115		x5	0	0	0	0	0
D116		x6	0	0	0	0	0
D121	4 Cu. Yards Shared	x1	4	4	4	4	4
D122		x2	26	26	26	26	26
D123		x3	21	21	21	21	21
D124		x4	5	5	5	5	5

CODE	CUSTOMER CLASS	PICKUP FREQ.	BUDGET YR	PROJECTED			
			FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
D125		x5	0	0	0	0	0
D126		x6	4	4	4	4	4
D201	4 Cu. Yards Compactor	x1	3	3	3	3	3
D202		x2	1	1	1	1	1
D203		x3	1	1	1	1	1
D204		x4	0	0	0	0	0
D205		x5	0	0	0	0	0
D206		x6	1	1	1	1	1
D421	95 Gal Cont.	2 Auto	1	1	1	1	1
D452	105 Gal Cont.	5 Auto x2	1	1	1	1	1
RS11	2 Cu. Yards Recycle Shared	x1	2	2	2	2	2
RS12		x2	0	0	0	0	0
RS13		x3	0	0	0	0	0
RS14		x4	0	0	0	0	0
RS15		x5	0	0	0	0	0
RS16		x6	0	0	0	0	0
RS21	4 Cu. Yards Recycle Shared	x1	0	0	0	0	0
RS22		x2	5	5	5	5	5
RS23		x3	0	0	0	0	0
RS24		x4	0	0	0	0	0
RS25		x5	0	0	0	0	0
RS26		x6	0	0	0	0	0
R011	2 Cu. Yards Recycle	x1	167	167	167	167	167
R012		x2	52	52	52	52	52
R013		x3	16	16	16	16	16
R014		x4	2	2	2	2	2
R015		x5	0	0	0	0	0
R016		x6	1	1	1	1	1

CODE	CUSTOMER CLASS	PICKUP FREQ.	BUDGET YR	PROJECTED			
			FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
R021	4 Cu. Yards Recycle	x1	94	94	94	94	94
R022		x2	64	64	64	64	64
R023		x3	59	59	59	59	59
R024		x4	6	6	6	6	6
R025		x5	11	11	11	11	11
R026		x6	3	3	3	3	3
R111	2 Cu. Yards Recycle Compactor	x1	1	1	1	1	1
R112		x2	0	0	0	0	0
R113		x3	0	0	0	0	0
R114		x4	0	0	0	0	0
R115		x5	0	0	0	0	0
R116		x6	0	0	0	0	0
R221	4 Cu. Yards Recycle Compactor	x1	1	1	1	1	1
R222		x2	0	0	0	0	0
R223		x3	0	0	0	0	0
R224		x4	0	0	0	0	0
R225		x5	0	0	0	0	0
R226		x6	0	0	0	0	0
	<i>Subtotal Commercial</i>	<i>3,963</i>	<i>3,963</i>	<i>3,970</i>	<i>3,977</i>	<i>3,984</i>	<i>3,963</i>
	Total Residential & Commercial Units	45,331	45,331	45,752	46,177	46,607	45,331
Industrial (Number of Accounts)							
D05	13.4 Cu. Yards Recycle & GW		4	4	4	4	4
D07	30 Cu. Yards Compactor		19	19	19	19	19
	30 Cu. Yards Compactor Rec & GW		1	1	1	1	1
D08	30 Cu. Yards		63	63	63	63	63
	30 Cu. Yards Rec & GW		4	4	4	4	4
D09	13.4 Cu. Yards		18	18	18	18	18

CODE	CUSTOMER CLASS	PICKUP FREQ.	BUDGET YR	PROJECTED			
			FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
D10	10 Cu. Yards		1	1	1	1	1
D41	40 Cu. Yards Compactor		22	22	22	22	22
	<i>Subtotal Industrial</i>		137	137	137	137	137
Industrial (Number of Pickups)							
D05	13.4 Cu. Yards Recycle & GW		130	130	130	130	130
D07	30 Cu. Yards Compactor		769	769	769	769	769
	30 Cu. Yards Compactor Rec & GW		19	19	19	19	19
D08	30 Cu. Yards		3,369	3,369	3,369	3,369	3,369
	30 Cu. Yards Rec & GW		103	103	103	103	103
	(2) 30 Cu. Yards Single Pickup		0	0	0	0	0
	(2) 30 Cu. Yards Single Pickup Recycle & GW		0	0	0	0	0
D09	13.4 Cu. Yards		1,436	1,436	1,436	1,436	1,436
D10	10 Cu. Yards		33	33	33	33	33
	10 Cu. Yards Recycle & GW		0	0	0	0	0
D41	40 Cu. Yards Compactor		1,118	1,118	1,118	1,118	1,118
	Total Industrial Pickups		7,874	7,874	7,874	7,874	7,874

Revenue Projections

ER generates revenue from solid waste sales, special pick-ups, MRF reimbursements and other miscellaneous charges. Since revenue generated outside of solid waste sales are not subject to rate increases, we have excluded them from this portion of the analysis. These additional revenue sources are incorporated later in the cash flow portion of the report.

ER’s solid waste sales are composed of three parts, a unit charge, a pick-up charge, and a tonnage charge. The unit charge is an amount based on the number and type of trash receptacles. The pick-up charge is specific to commercial user and is based on the number of times ER picks up the waste from a specific location. The tonnage charge is specific to the industrial user and is based on the weight of waste within a specified container. In general, all fees are designed to recover fixed and variable costs with collecting, handling and disposing of refuse. Summarized in Table 37 are ER’s current solid waste rates for all customer classes.

Table 37 Existing Rates (Effective January 2011)

CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE	CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE
Residential (\$/Unit/Month)							
T01	Single Unit		\$29.56				
T022	Second Unit		\$26.61				
T023	Third Unit		\$25.14				
T04	Multi Unit		\$23.66				
T60	65 Gal Cont.		\$23.66				
EC	Extra Container		\$10.85				
Commercial (\$/Unit/Month)							
D011	2 Cu. Yards	x1	\$126.70	D421	95 Gal Cont.	2 Auto	\$72.51
D012		x2	\$221.73	D452	105 Gal Cont.	5 Auto x2	\$235.52
D013		x3	\$285.07	RS11	2 Cu. Yards Recycle Shared	x1	\$31.67
D014		x4	\$348.42	RS12		x2	\$55.43
D015		x5	\$411.78	RS13		x3	\$71.27
D016		x6	\$475.13	RS14		x4	\$87.10
D021	4 Cu. Yards	x1	\$220.40	RS15		x5	\$102.94
D022		x2	\$385.69	RS16		x6	\$118.77
D023		x3	\$495.88	RS21	4 Cu. Yards Recycle Shared	x1	\$55.10
D024		x4	\$606.08	RS22		x2	\$96.42
D025		x5	\$716.28	RS23		x3	\$123.98
D026		x6	\$826.48	RS24		x4	\$151.52
D041	95 Gal Cont.	1 Auto	\$41.46	RS25		x5	\$179.08
D042		2 Auto	\$72.51	RS26		x6	\$206.61
D043		3 Auto	\$93.21	R011	2 Cu. Yards Recycle	x1	\$63.35
D044		4 Auto	\$113.91	R012		x2	\$110.86
D045		5 Auto	\$134.61	R013		x3	\$142.55
D051	95 Gal Recycle	1 Auto	\$20.76	R014		x4	\$174.22
D101	2 Cu. Yards Compactor	x1	\$271.50	R015		x5	\$205.89
D102		x2	\$475.13	R016		x6	\$237.57

CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE	CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE
D103		x3	\$610.87	R021	4 Cu. Yards Recycle	x1	\$110.19
D104		x4	\$746.62	R022		x2	\$192.85
D105		x5	\$882.38	R023		x3	\$247.95
D106		x6	\$1,018.12	R024		x4	\$303.04
D111	2 Cu. Yards Shared	x1	\$63.35	R025		x5	\$358.14
D112		x2	\$110.86	R026		x6	\$413.24
D113		x3	\$142.55	R111	2 Cu. Yards Recycle Compactor	x1	\$135.75
D114		x4	\$174.22	R112		x2	\$237.57
D115		x5	\$205.89	R113		x3	\$305.44
D116		x6	\$237.57	R114		x4	\$373.32
D121	4 Cu. Yards Shared	x1	\$110.19	R115		x5	\$441.19
D122		x2	\$192.85	R116		x6	\$509.06
D123		x3	\$247.95	R221	4 Cu. Yards Recycle Compactor	x1	\$221.99
D124		x4	\$303.04	R222		x2	\$388.49
D125		x5	\$358.14	R223		x3	\$499.49
D126		x6	\$413.24	R224		x4	\$610.48
D201	4 Cu. Yards Compactor	x1	\$443.99	R225		x5	\$721.20
D202		x2	\$776.97	R226		x6	\$832.48
D203		x3	\$998.96				
D204		x4	\$1,220.95				
D205		x5	\$1,442.94				
D206		x6	\$1,664.93				

CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE	CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE
Industrial (Effective July 2010, \$/Pickup)							
D05	13.4 Cu. Yards Recycle & GW		\$75.04	D09	13.4 Cu. Yards		\$150.08
D07	30 Cu. Yards Compactor		\$222.53	D10	10 Cu. Yards		\$150.08
	30 Cu. Yards Compactor Rec & GW		\$111.26	D41	10 Cu. Yards Recycle & GW		\$75.04
	(2) 30 Cu. Yards Single Pickup		\$377.78		40 Cu. Yards Compactor		\$274.28
	(2) 30 Cu. Yards Single Pickup Recycle & GW		\$188.89		40 Cu. Yards Compactor Rec & GW		\$137.14
D08	30 Cu. Yards		\$196.65		Transfer Trailer		\$377.78
	30 Cu. Yards Rec & GW		\$98.33	W01			

Incorporating the existing rates with the customer projections, solid waste sales revenue under existing rates is tabulated as shown in Table 38. The anticipated revenue generated is expected to increase from \$27,631,200 in FY 11/12 to \$28,067,000 in FY 15/16.

Table 38 Revenue under Existing Rates

Customer Class	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Residential					
Residential Pickup	\$12,012,600	\$12,012,600	\$12,132,800	\$12,254,100	\$12,376,800
Extra Container	\$394,300	\$394,300	\$398,200	\$402,200	\$406,300
Commercial					
FEL - 2 Cu. Yards	\$3,542,400	\$3,542,400	\$3,548,300	\$3,554,100	\$3,560,000
FEL - 4 Cu. Yards	\$9,330,600	\$9,330,600	\$9,344,100	\$9,357,500	\$9,371,100
Commercial Hand Load 35-55 Gal	\$214,800	\$214,800	\$215,300	\$215,800	\$216,300
Industrial					
13.4 Cu. Yards	\$286,200	\$286,200	\$286,200	\$286,200	\$286,200
30 Cu. Yards	\$1,434,700	\$1,434,700	\$1,434,700	\$1,434,700	\$1,434,700
Transfer Trailer	\$415,600	\$415,600	\$415,600	\$415,600	\$415,600
Total	\$27,631,200	\$27,631,200	\$27,775,200	\$27,920,200	\$28,067,000

Operation and Maintenance Projections

In order to adequately adjust rates, it is necessary to project operation and maintenance (O&M) expenses. Summarized in Table 39 are ER’s projected O&M expenditures. These expenditures include costs related to personnel, contract services, operating supplies, utilities and general administrative. The forecasted expenditures are based Black & Veatch and City staff’s expertise and knowledge. The table to the right summarizes key assumptions for inflation rates used in the O&M expense projections. No escalation factor is applied to landfill (disposal) charges because these cost increases are handled through the City’s pass-through ordinance. These levels of adjustment are consistent with recent increases seen throughout the area. Total O&M (less transfers) is projected to increase from \$28,938,800 in FY 11/12 to \$30,792,200 in FY 15/16.

- *Personnel Services: 3% in FY 13/14, then 2% thereafter*
- *Operating Supplies: 2% beginning FY 13/14*
- *Maintenance: 1.5% beginning in FY 13/14*
- *Utilities: 4% beginning in FY 13/14*
- *G&A: 3% beginning in FY 13/14*

In discussions with City staff, there has been mention of an internal evaluation with regards to taking over operation of the MRF. In 2013, the contract with Republic Services will conclude at which point ER has the option to renew the contract or devise an alternative. To date, there has been no decision on the matter and thus we have escalated O&M costs accordingly.

Table 39 Operation and Maintenance Expenses

DESCRIPTION	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Div 01 Solid Waste Planning					
Salaries and Wages	\$1,085,700	\$1,085,700	\$1,118,200	\$1,140,600	\$1,163,400
Contractual Services	\$400,000	\$400,000	\$408,000	\$416,200	\$424,500
Operating Supplies	\$5,000	\$5,000	\$5,100	\$5,200	\$5,300
Utilities	\$24,000	\$24,000	\$25,000	\$26,000	\$27,000
General and Administrative	\$675,600	\$675,700	\$695,800	\$716,500	\$737,800
Maintenance Services	\$15,900	\$15,900	\$16,100	\$16,300	\$16,500
<i>Total Planning</i>	<i>\$2,206,200</i>	<i>\$2,206,300</i>	<i>\$2,268,200</i>	<i>\$2,320,800</i>	<i>\$2,374,500</i>
Div 02 Waste Reduction & Education					
Salaries and Wages	\$137,800	\$137,800	\$142,000	\$144,800	\$147,600
Contractual Services	\$62,800	\$62,800	\$64,000	\$65,300	\$66,600
General and Administrative	\$145,400	\$145,400	\$149,600	\$154,100	\$158,700
<i>Total Waste Reduction</i>	<i>\$346,000</i>	<i>\$346,000</i>	<i>\$355,600</i>	<i>\$364,200</i>	<i>\$372,900</i>

DESCRIPTION	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Div 04 Processing (formerly part Processing and Disposal)					
Contractual Services					
Del Norte Related	\$6,045,000	\$6,045,000	\$6,045,000	\$6,045,000	\$6,045,000
All Other	\$703,000	\$703,000	\$703,000	\$703,000	\$703,000
Operating Supplies	\$2,100	\$2,100	\$2,100	\$2,100	\$2,100
Utilities	\$6,663,100	\$6,663,100	\$6,929,600	\$7,206,800	\$7,495,100
General and Administrative	\$819,300	\$819,300	\$844,000	\$869,400	\$895,600
<i>Total Processing</i>	<i>\$14,232,500</i>	<i>\$14,232,500</i>	<i>\$14,523,700</i>	<i>\$14,826,300</i>	<i>\$15,140,800</i>
Div 07 Residential Collection					
Salaries and Wages	\$1,195,700	\$1,195,700	\$1,231,600	\$1,256,200	\$1,281,400
Contractual Services	\$65,000	\$65,000	\$66,300	\$67,600	\$68,900
Operating Supplies	\$142,900	\$142,900	\$145,800	\$148,700	\$151,700
General and Administrative	\$269,500	\$269,400	\$277,500	\$285,800	\$294,400
Customer Billing Charges	\$341,900	\$341,900	\$352,200	\$362,800	\$373,700
Maintenance Services	\$1,553,700	\$1,553,700	\$1,577,000	\$1,600,700	\$1,624,700
<i>Total Residential Collection</i>	<i>\$3,568,700</i>	<i>\$3,568,600</i>	<i>\$3,650,400</i>	<i>\$3,721,800</i>	<i>\$3,794,800</i>
Div 08 Commercial Collection					
Salaries and Wages	\$1,514,800	\$1,514,900	\$1,560,300	\$1,591,500	\$1,623,400
Contractual Services	\$51,000	\$51,000	\$52,000	\$53,000	\$54,000
Operating Supplies	\$62,600	\$62,600	\$63,800	\$65,100	\$66,400
General and Administrative	\$183,700	\$183,700	\$189,200	\$194,800	\$200,700
Customer Billing Charges	\$106,800	\$106,800	\$110,000	\$113,300	\$116,700
Maintenance Services	\$1,042,700	\$1,042,700	\$1,058,300	\$1,074,200	\$1,090,300
<i>Total Commercial Collection</i>	<i>\$2,961,600</i>	<i>\$2,961,700</i>	<i>\$3,033,600</i>	<i>\$3,091,900</i>	<i>\$3,151,500</i>
Div 09 Industrial Collection					
Salaries and Wages	\$464,800	\$464,700	\$478,700	\$488,300	\$498,100
Contractual Services	\$13,000	\$13,000	\$13,300	\$13,600	\$13,900
Operating Supplies	\$22,800	\$22,800	\$23,200	\$23,600	\$24,000
General and Administrative	\$126,700	\$126,600	\$130,400	\$134,300	\$138,400

DESCRIPTION	BUDGET YR	PROJECTED			
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Customer Billing Charges	\$112,400	\$112,400	\$115,800	\$119,300	\$122,900
Maintenance Services	\$324,200	\$324,200	\$329,100	\$334,000	\$339,000
<i>Total Industrial Collection</i>	<i>\$1,063,900</i>	<i>\$1,063,700</i>	<i>\$1,090,500</i>	<i>\$1,113,100</i>	<i>\$1,136,300</i>
Div 10 Inspection Services					
Salaries and Wages	\$632,900	\$632,800	\$651,800	\$664,900	\$678,300
Operating Supplies	\$7,700	\$7,700	\$7,800	\$7,900	\$8,000
General and Administrative	\$84,300	\$84,300	\$86,800	\$89,300	\$92,000
Maintenance Services	\$17,200	\$17,200	\$17,500	\$17,800	\$18,100
<i>Total Inspection Services</i>	<i>\$742,100</i>	<i>\$742,000</i>	<i>\$763,900</i>	<i>\$779,900</i>	<i>\$796,400</i>
Div 11 Container Maintenance					
Salaries and Wages	\$413,000	\$413,100	\$425,500	\$434,000	\$442,700
Operating Supplies	\$56,700	\$56,700	\$57,800	\$58,900	\$60,000
General and Administrative	\$64,300	\$64,300	\$66,300	\$68,300	\$70,400
Maintenance Services	\$18,300	\$18,300	\$18,600	\$18,900	\$19,200
<i>Total Container Maintenance</i>	<i>\$552,300</i>	<i>\$552,400</i>	<i>\$568,200</i>	<i>\$580,100</i>	<i>\$592,300</i>
Div 12 Hauling (formerly part of Processing and Disposal)					
Salaries and Wages	\$1,093,300	\$1,093,300	\$1,126,100	\$1,148,600	\$1,171,600
Contractual Services	\$330,000	\$330,000	\$330,000	\$330,000	\$330,000
Maintenance Services	\$1,655,700	\$1,655,700	\$1,680,500	\$1,705,700	\$1,731,300
<i>Total Hauling</i>	<i>\$3,079,000</i>	<i>\$3,079,000</i>	<i>\$3,136,600</i>	<i>\$3,184,300</i>	<i>\$3,232,900</i>
Div 45 Public Information and Public Outreach Programs					
Salaries and Wages	\$132,400	\$132,500	\$136,500	\$139,200	\$141,900
Contractual Services	\$29,100	\$29,100	\$29,600	\$30,200	\$30,800
General and Administrative	\$25,000	\$25,300	\$25,900	\$26,500	\$27,100
<i>Total :Public Information</i>	<i>\$186,500</i>	<i>\$186,900</i>	<i>\$192,000</i>	<i>\$195,900</i>	<i>\$199,800</i>
Total O&M Expense	\$28,938,800	\$28,939,100	\$29,582,700	\$30,178,300	\$30,792,200

Capital Improvement Program

While O&M expenses cover day-to-day operations, the City incurs additional capital expenditures to replace existing facilities and equipment or installed new facilities for planned future growth. As a result,

ER has developed a long-term Capital Improvement Program (CIP) that identifies future equipment and facilities needs. The CIP shown in Table 40 is for FY 11/12 through FY 15/16 and consists of capital improvement projects anticipated to be acquired, designed and constructed during the study period.

ER is projecting expenditures of \$10.3 million in capital improvement projects, which include capital and replacement. As part of the financial plan analyses, an annual inflation allowance of 3 percent was included in the above capital improvement project costs.

Table 40 Capital Improvement Program

DESCRIPTION	PROJECTED					
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16	TOTAL
Asset Management - ER	\$300,000	\$304,500	\$309,100	\$418,300	\$530,700	\$1,862,600
Residential Side-Loader		\$865,800	\$968,400	\$1,066,600	\$1,082,600	\$3,983,400
Commercial Front-Loaders		\$583,600	\$700,600	\$732,000	\$743,000	\$2,759,200
Roll-offs & Rocket		\$279,100	\$82,400	\$104,600	\$106,100	\$572,200
Tractor Transfer Vehicle					\$318,400	\$318,400
Passenger Vehicles		\$101,500	\$103,000	\$104,600	\$106,100	\$415,200
Hansen Computer Upgrade		\$201,000	\$204,000			\$405,000
Total CIP	\$300,000	\$2,335,500	\$2,367,500	\$2,426,100	\$2,886,900	\$10,316,000

Capital Fund Financing

A proposed financing plan for ER's CIP is shown in Table 41. Financing for the CIP is anticipated to come from a combination of funds on hand, transfers from solid waste sales revenues derived from rates, and new impact fees.

Similar to the other enterprises, ER maintains a capital fund that is used to finance CIP projects as well as to separate the commingling of rate and developer funds. The capital fund generates revenue from development fees, transfers and debt proceeds (if issued).

Table 41 CIP Financing Plan

DESCRIPTION	PROJECTED				
	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Beginning Balance	\$0	\$0	\$0	\$0	\$0
Sources of Funds					
Transfer from Fund 631	\$300,000	\$2,335,500	\$2,367,500	\$2,426,100	\$2,886,900
Total Sources of Funds	\$300,000	\$2,335,500	\$2,367,500	\$2,426,100	\$2,886,900
Uses of Funds					
Capital Improvements	\$300,000	\$2,335,500	\$2,367,500	\$2,426,100	\$2,886,900
Total Uses of Funds	\$300,000	\$2,335,500	\$2,367,500	\$2,426,100	\$2,886,900
Ending Balance	\$0	\$0	\$0	\$0	\$0

Operating Fund Financing

Summarized in Table 42 is the proposed long-term operating financial plan for ER. This financial plan is designed to generate sufficient funds to cover short-term and long-term expenses. Sources of revenue include solid waste sales under existing rates, additional revenues realized from proposed rate adjustments, miscellaneous revenue and interest earnings on available balances. As mentioned, other miscellaneous revenue includes MRF reimbursement, special pick-up fees, and rental charges. Uses of funds include operation and maintenance expenses, routine capital outlay, debt service payments, and transfers to other funds such as the capital fund.

The projected solid waste revenue under existing rates represents service and commodity charges at current rate levels that are subject to rate adjustments. Based on the existing revenue indicated, additional annual revenue adjustments are necessary to meet operating fund requirements and fiscal policy objectives. Adjustments are typically assumed to become effective July 1 of each fiscal year, with the exception of FY 11/12, for which a June 2012 date is expected and for FY 12/13, for which a January 2013 adjustment is planned. Initial analyses indicate that steady rate increases are needed for the next five years as shown on Lines 2 through 6. Any changes to the capital-financing policies and/or CIP may alter these results since the operating fund helps supplement funds for traditional repair and replace projects. The resulting dollar impact of the proposed revenue adjustments are illustrated on Line 7.

In addition to rate revenue, other operating and non-operating charges contribute to the income of the ER Enterprise. Typically, these revenue sources are minimal and volatile and are thus considered a constant in the revenue projections. Interest income is calculated using an interest rate of 2.5 percent in order to be conservative.

Table 42 Operating Fund Financing Plan

LINE NO.	DESCRIPTION	BUDGET YR		PROJECTED		
		FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
ER Operating Fund 631						
Revenue						
1	Revenue Under Existing Rates	\$27,631,200	\$27,631,200	\$27,775,200	\$27,920,200	\$28,067,000
	Additional Revenue Required:					
	<u>Year</u>	<u>Percent</u>	<u>Months Effective</u>			
2	FY12/13	1.0%	5	\$115,100	\$277,800	\$279,200
3	FY12/13	1.0%	7	\$161,900	\$280,500	\$282,000
4	FY13/14	2.0%	12		\$566,700	\$569,600
5	FY14/15	2.0%	12			\$581,000
6	FY15/16	2.0%	12			\$595,800
7	Total Revenue From Rates	\$27,631,200	\$27,908,200	\$28,900,200	\$29,632,000	\$30,383,700
8	Waste Reduction & Education	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
9	Processing & Disposal	\$5,185,000	\$5,185,000	\$5,185,000	\$5,185,000	\$5,185,000
10	Residential Collection	\$350,000	\$350,000	\$350,000	\$350,000	\$350,000
11	Commercial Collection	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
12	Industrial Collection	\$271,200	\$271,200	\$271,200	\$271,200	\$271,200
13	Container Maintenance	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
14	Tonnage - Pass-through	\$1,672,400	\$1,672,400	\$1,672,400	\$1,672,400	\$1,672,400
15	Interest	\$60,800	\$185,600	\$169,000	\$159,400	\$159,300
16	Total Other Revenues	\$7,619,400	\$7,744,200	\$7,727,600	\$7,718,000	\$7,717,900
17	Total Revenue	\$35,250,600	\$35,652,400	\$36,627,800	\$37,350,000	\$38,101,600
Revenue Requirements						
	O&M Expenses					
18	Solid Waste Planning	\$2,206,200	\$2,206,300	\$2,268,200	\$2,320,800	\$2,374,500
19	Waste Reduction & Education	\$346,000	\$346,000	\$355,600	\$364,200	\$372,900
20	Processing	\$14,232,500	\$14,232,500	\$14,523,700	\$14,826,300	\$15,140,800
21	Residential Collection	\$3,568,700	\$3,568,600	\$3,650,400	\$3,721,800	\$3,794,800
22	Commercial Collection	\$2,961,600	\$2,961,700	\$3,033,600	\$3,091,900	\$3,151,500
23	Industrial Collection	\$1,063,900	\$1,063,700	\$1,090,500	\$1,113,100	\$1,136,300

LINE NO.	DESCRIPTION	BUDGET YR	PROJECTED			
		FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
24	Inspection Services	\$742,100	\$742,000	\$763,900	\$779,900	\$796,400
25	Container Maintenance	\$552,300	\$552,400	\$568,200	\$580,100	\$592,300
26	Disposal	\$3,079,000	\$3,079,000	\$3,136,600	\$3,184,300	\$3,232,900
27	Public Outreach	\$186,500	\$186,900	\$192,000	\$195,900	\$199,800
28	Total O&M Expense	\$28,938,800	\$28,939,100	\$29,582,700	\$30,178,300	\$30,792,200
29	Routine Capital	\$300,000	\$505,500	\$513,100	\$418,300	\$530,700
	Debt Service					
	Existing					
30	2005 Revenue Refunding Bond	\$86,700	\$48,300			
31	Zions Bank - Del Norte Improvements	\$134,600	\$155,600			
32	Zions Bank - Del Norte Land Acquisition	\$422,900	\$422,900	\$422,900	\$422,900	\$422,900
33	Upton & Oliver Funding Corp (Lease)	\$1,194,400	\$1,194,400	\$1,194,400	\$1,194,400	\$1,194,400
34	2009 Water Loan	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
35	DNF Parcel per A-5586	\$86,700	\$48,300			
36	Total Debt Service	\$4,473,400	\$4,452,700	\$4,250,600	\$4,251,800	\$3,242,300
	Transfers					
37	Infrastructure Use Fee	\$660,400	\$660,400	\$660,400	\$660,400	\$660,400
38	Infrastructure Use Fee - Others	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000
39	Transfer to COFA	\$25,400	\$25,400	\$25,400	\$25,400	\$25,400
40	Transfer to General Fund	\$36,800	\$36,800	\$36,800	\$36,800	\$36,800
41	Transfer to Fund 6XX	\$0	\$1,830,000	\$1,854,400	\$2,007,800	\$2,356,200
42	Total Transfers	\$842,600	\$2,672,600	\$2,697,000	\$2,850,400	\$3,198,800
43	Total Revenue Requirements	\$34,554,800	\$36,569,900	\$37,043,400	\$37,698,800	\$37,764,000
	Operating Fund Balance					
44	Net Annual Cash Balance	\$695,800	(\$917,500)	(\$415,600)	(\$348,800)	\$337,600
45	Beginning Cash Balance	\$2,921,000	\$3,616,800	\$2,699,300	\$2,283,700	\$1,934,900
46	Net Cumulative Cash Balance	\$3,616,800	\$2,699,300	\$2,283,700	\$1,934,900	\$2,272,500
47	Target Reserve (9% of O&M)	\$2,604,500	\$2,604,500	\$2,662,400	\$2,716,000	\$2,771,300

Projected total O&M expense is shown on Line 28. The O&M expenses shown represent expenses associated with operating the solid waste system. Routine capital outlay is shown on Line 29. Routine capital outlay is typically set aside to purchase minor equipment, less than \$5,000, such as furniture, parts, and minor equipment. For larger routine capital outlay that is represented in the CIP, it is common practice by utilities is to set in reserve approximately the equivalent of annual depreciation for routine capital assets. Based on historical solid waste depreciation, when the ER Division is financially stable, the City should set aside approximately \$1,500,000 per year for a large equipment replacement fund.

Debt service on existing bond issues and other debt obligations are shown on Lines 30 through 36. To date, the City has one outstanding bond debt obligations with respect to the ER Enterprise. Transfers to the capital and other funds are shown on Lines 37 through 42. Funds transferred to the capital fund are used for capital projects. Lines 44 through 46 summarize the impact to the ending fund balance for the City. A minimum target of 9 percent of O&M expenses plus any encumbrances serves as the minimum level of working capital that the City sets to have on hand for operational purposes.

Summary of Revenues, Expenditures, and Obligations

Based on the analyses of revenues and revenue requirements, it is evident that the City needs a rate revenue increase in order to meet revenue requirements and working capital reserve as a standalone enterprise. The suggested adjustments range from 1 to 2 percent per year from FY 12/13 to FY 15/16 as shown on Lines 2 through 7. The first adjustment is proposed for August 2012 and the second is planned for January 2013. Thereafter, annual 2 percent adjustments are proposed for the remainder of the planning period. With these adjustments, the City should be able to begin accomplishing its objectives under the assumption that no significant change occurs. While the financial plan should be a working document, the City will need to re-examine the rate structure prior to FY 15/16 to verify it is still adequate.

The revenue requirements of the City consist of system O&M expenses, routine capital outlay for minor expenditures on equipment not financed from bond proceeds, debt service requirements on existing and proposed bonded debt, transfers to other funds, and reserve requirements to ensure that debt service coverage, rate covenant requirements, and adequate levels of working capital are met.

As shown on Line 43 in Table 41, total revenue requirements for the City increase during the study period and can be correlated with inflationary factors and debt obligations. The total revenue requirements will increase from \$34,554,800 in FY 11/12 to \$37,764,000 in FY 15/16, assuming the revenue adjustment is implemented. Subtracting total revenue requirements from total revenues results in the projected annual operating fund surpluses or deficits shown on Line 44.

As of July 1, 2010, it was estimated that a beginning balance of \$2.9 million was available for use in this fund. There was no additional money available for use in the capital fund. The ending balance is shown on Line 46, while the minimum ending balance of 9 percent of operation and maintenance expense is shown on Line 47. Applying a cumulative revenue adjustment of approximately 8.2 percent over the 5 year period allows the ER Division to maintain its progress on establishing financial stability.

It should be recognized that the indicated percentage revenue increase discussed above are overall revenue increase. The results of the cost of service analysis presented later in this report may indicate that rate increases may vary from this average for the various customer classes with some classes receiving a greater than average increase, while others receive a less than average increase or perhaps a decrease.

Test Year Revenue Requirements

In analyzing ER's cost of service for allocation to customer classes, the annual revenue requirements for FY 12/13 is selected as the Test Year (TY) requirements to demonstrate the development of cost-of-service solid waste rates. The total cost of service to be recovered from rates is \$28,183,800.

COST OF SERVICE ALLOCATIONS

The revenue requirements to be derived from rates and charges for solid waste service are summarized in Lines 1 through 11 of Table 43. In analyzing the City's cost of service for allocation to customer classes, the annual revenue requirements for FY 12/13 are selected as the Test Year requirements to demonstrate the development of cost of service solid waste rates. In determining the cost of service to be met from charges for solid waste service, we deduct income received from other sources that not subject to rate adjustments from the total revenue requirements. As a result, the total cost of service to be recovered from rates is shown on Line 12, Column 3.

Table 43 Total Costs to be Recovered from Rates

LINE NO.	DESCRIPTION	OPERATING EXPENSE	CAPITAL COST	TOTAL
Revenue Requirements				
Fund 631				
1	O&M Expense	\$28,939,100		\$28,939,100
2	Routine Capital Outlay		\$505,500	\$505,500
Transfers & Debt Service				
3	Infrastructure Use Fee & Transfer to Other Funds	\$842,600	\$1,830,000	\$2,672,600
4	Debt Service		\$4,452,700	\$4,452,700
5	Subtotal	\$29,781,400	\$4,773,400	\$34,554,800
Less Revenues From Other Sources				
6	Other Operating Income	\$7,558,600		\$7,558,600
7	Interest Income	\$56,400	\$129,200	\$185,600
8	Change in Funds Available	\$917,500		\$917,500
9	Annualized Rate Increase	(\$275,600)		(\$275,600)
10	Subtotal	\$8,256,900	\$129,200	\$8,386,100
11	Cost of Service to be Recovered from Rates	\$21,524,800	\$6,659,000	\$28,183,800

Functional Cost Components

In developing an equitable rate structure, revenue requirements are allocated to the various customer classifications according to the cost of service rendered. Allocations of these requirements to customer classes of the City should take into account the number of units, the number of pick-ups, tonnage, and other relevant factors.

Customers are classified to reflect groups of customers with similar service requirements who can be served at similar cost. Each class represents a particular type of service requirement. For the purposes of the cost of service analysis, the customer classifications in this study include residential, commercial, and industrial. These customer classes were assumed to exhibit similar types of system load characteristics.

As a basis for allocating costs of service among customer classes, costs are first allocated to functional cost components, then allocated to cost categories, and subsequently distributed to customer classes. In this analysis, there are six primary cost components: (1) collection, (2) disposal, (3) customer billing costs, (4) administrative, (5) outside city, and (6) Del Norte.

Allocation to Cost Components

Allocation of Operation and Maintenance Expenses

The allocation of O&M expense to cost functions is shown in Table 44. The net operation and maintenance expense to be recovered for solid waste sales is derived by deducting funds available from other sources from the total Test Year expense. Net Test Year operation and maintenance expense of \$21,524,800 is shown allocated to the six primary cost components on Line 9.

Allocation of Capital Costs

The estimated investment in solid waste facilities is allocated to appropriate cost components as a basis for the further distribution of capital related costs to the various customer classes. The allocation of estimated plant investment serving solid waste customers for the Test Year is shown in Table 45. The total plant investment of \$20,226,800 shown on Line 4 represents the estimated Test Year original cost less accumulated depreciation of plant in service.

The allocation of specific items of investment to the cost categories, as shown, is made on the basis previously described. For example, trash cans are related to collection and these investment costs are assigned to the specific customer class within the collection component.

Table 44 Allocation of O&M Expense to Functional Cost Components

DESCRIPTION	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
Div 01 Solid Waste Planning									
Salaries and Wages	\$1,085,700				\$434,300		\$162,900		\$488,600
Contractual Services	\$400,000				\$160,000		\$60,000		\$180,000
Operating Supplies	\$5,000				\$2,000		\$800		\$2,300
Utilities	\$24,000				\$9,600		\$3,600		\$10,800
General and Administrative	\$675,700				\$270,300		\$101,400		\$304,100
Maintenance Services	\$15,900				\$6,400		\$2,400		\$7,200
<i>Total Planning</i>	<i>\$2,206,300</i>				<i>\$882,600</i>		<i>\$331,000</i>		<i>\$993,000</i>
Div 02 Waste Reduction & Education									
Salaries and Wages	\$137,800	\$41,300	\$89,600	\$6,900					
Contractual Services	\$62,800	\$18,900	\$40,800	\$3,100					
General and Administrative	\$145,400						\$145,400		
<i>Total Waste Reduction</i>	<i>\$346,000</i>	<i>\$60,200</i>	<i>\$130,400</i>	<i>\$10,000</i>			<i>\$145,400</i>		
Div 04 Processing (formerly part Processing and Disposal)									
Contractual Services									
Del Norte Related	\$6,045,000	\$604,400		\$604,500	\$1,209,000			\$906,800	\$2,720,300
All Other	\$703,000	\$70,200		\$70,300	\$140,600			\$105,500	\$316,400

DESCRIPTION	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
Operating Supplies	\$2,100	\$300		\$200	\$400			\$300	\$900
Utilities	\$6,663,100	\$666,300		\$666,300	\$1,332,600			\$999,500	\$2,998,400
General and Administrative	\$819,300	\$81,900		\$81,900	\$163,900			\$122,900	\$368,700
<i>Total Processing</i>	\$14,232,500	\$1,423,100		\$1,423,200	\$2,846,500			\$2,135,000	\$6,404,700
Div 07 Residential Collection									
Salaries and Wages	\$1,195,700	\$1,135,900	\$59,800						
Contractual Services	\$65,000	\$61,700	\$3,300						
Operating Supplies	\$142,900	\$135,800	\$7,100						
General and Administrative	\$269,400						\$269,400		
Customer Billing Charges	\$341,900					\$341,900			
Maintenance Services	\$1,553,700	\$1,476,000	\$77,700						
<i>Total Residential Collection</i>	\$3,568,600	\$2,809,400	\$147,900			\$341,900	\$269,400		
Div 08 Commercial Collection									
Salaries and Wages	\$1,514,800		\$1,514,800						
Contractual Services	\$51,000		\$51,000						
Operating Supplies	\$62,600		\$62,600						
General and Administrative	\$183,700		\$183,700						
Customer Billing Charges	\$106,800					\$106,800			

DESCRIPTION	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
Maintenance Services	\$1,042,700	\$0	\$1,042,700						
<i>Total Commercial Collection</i>	<i>\$2,961,600</i>	<i>\$0</i>	<i>\$2,854,800</i>	<i>\$0</i>	<i>\$0</i>	<i>\$106,800</i>			
Div 09 Industrial Collection									
Salaries and Wages	\$464,700			\$464,700					
Contractual Services	\$13,000			\$13,000					
Operating Supplies	\$22,800			\$22,800					
General and Administrative	\$126,600			\$63,300			\$63,300		
Customer Billing Charges	\$112,400			\$0		\$112,400			
Maintenance Services	\$324,200			\$324,200					
<i>Total Industrial Collection</i>	<i>\$1,063,700</i>			<i>\$888,000</i>		<i>\$112,400</i>	<i>\$63,300</i>		
Div 10 Inspection Services									
Salaries and Wages	\$632,800	\$31,700	\$411,400				\$0		\$189,900
Operating Supplies	\$7,700	\$400	\$5,000				\$0		\$2,300
General and Administrative	\$84,300						\$84,300		\$0
Maintenance Services	\$17,200	\$800	\$11,200				\$0		\$5,200
<i>Total Inspection Services</i>	<i>\$742,000</i>	<i>\$32,900</i>	<i>\$427,600</i>				<i>\$84,300</i>		<i>\$197,400</i>

DESCRIPTION	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
Div 11 Container Maintenance									
Salaries and Wages	\$413,100	\$136,300	\$268,500	\$8,300					
Operating Supplies	\$56,700	\$18,700	\$36,900	\$1,100					
General and Administrative	\$64,300	\$21,200	\$41,800	\$1,300					
Maintenance Services	\$18,300	\$6,000	\$11,900	\$400					
<i>Total Container Maintenance</i>	<i>\$552,400</i>	<i>\$182,200</i>	<i>\$359,100</i>	<i>\$11,100</i>					
Div 12 Hauling (formerly part of Processing and Disposal)									
Salaries and Wages	\$1,093,300	\$0	\$0	\$0	\$656,000	\$0	\$0	\$109,300	\$328,000
Contractual Services	\$330,000	\$0	\$0	\$0	\$198,000	\$0	\$0	\$33,000	\$99,000
Maintenance Services	\$1,655,700	\$0	\$0	\$0	\$993,400	\$0	\$0	\$165,600	\$496,700
<i>Total Hauling</i>	<i>\$3,079,000</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$1,847,400</i>	<i>\$0</i>	<i>\$0</i>	<i>\$307,900</i>	<i>\$923,700</i>
Div 45 Public Information and Public Outreach Programs									
Salaries and Wages	\$132,500	\$0	\$0	\$0	\$0	\$0	\$132,500		
Contractual Services	\$29,100	\$0	\$0	\$0	\$0	\$0	\$29,100		
General and Administrative	\$25,300	\$0	\$0	\$0	\$0	\$0	\$25,300		
<i>Total :Public Information</i>	<i>\$186,900</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$186,900</i>		
Total O&M Expense	\$28,939,100	\$4,507,800	\$3,919,800	\$2,332,300	\$5,576,500	\$561,100	\$1,080,400	\$2,442,900	\$8,518,700

DESCRIPTION	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
Plus Required Transfers	\$842,600	\$42,100	\$337,000	\$21,100					\$442,400
Less Other Revenues - Process & Disposal	(\$565,000)				(\$565,000)				
Less Other Revenues - Residential	(\$350,000)	(\$350,000)							
Less Other Revenues - Commercial	(\$10,000)		(\$10,000)						
Less Other Revenues - Industrial	(\$271,200)			(\$271,200)					
Less Other Revenues - Tipping Fees	(\$4,620,000)			(\$800,000)				(\$2,442,900)	(\$1,377,100)
Less Other Revenues - Other	(\$1,798,800)	(\$391,900)	(\$45,000)	(\$1,272,000)			(\$89,900)		
Less Change in Available Funds	(\$641,900)	(\$446,300)	(\$195,600)						
Net O&M	\$21,524,800	\$3,361,700	\$4,006,200	\$10,200	\$5,011,500	\$561,100	\$990,500	\$0	\$7,584,000

Table 45 Allocation of Net Capital Costs to Functional Cost Components

DESCRIPTION	TOTAL	RESIDENTIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
Collection	\$1,830,000	\$640,500	\$823,500	\$366,000					
Processing and Disposal	\$18,195,800				\$5,458,700				\$12,737,100
General Plant	\$201,000				\$60,300				\$140,700
<i>Total Plant Investment</i>	<i>\$20,226,800</i>	<i>\$640,500</i>	<i>\$823,500</i>	<i>\$366,000</i>	<i>\$5,519,000</i>				<i>\$12,877,800</i>
Capital Cost Allocations									
Debt Service									
2005 Bonds	\$2,581,500	\$258,100	\$2,194,300						\$129,100
Zions Bank - Del Norte Improvements	\$48,300								\$48,300
Zions Bank - Del Norte Land Acquisition	\$155,600								\$155,600
Upton & Oliver Funding Corp (Lease)	\$422,900	\$422,900							
2009 Water Loan	\$1,194,400	\$298,700	\$716,600	\$119,400					\$59,700
DNF Parcel per A-5586	\$50,000						\$50,000		
Routine Capital Outlay	\$505,500	\$16,100	\$20,600	\$9,100	\$137,900	\$0	\$0	\$0	\$321,800
Plus Transfers to Other Funds	\$1,830,000	\$58,000	\$74,500	\$33,100	\$499,300	\$0	\$0	\$0	\$1,165,100
Less Interest Income	(\$129,200)	(\$4,000)	(\$5,300)	(\$2,300)	(\$35,300)	\$0	\$0	\$0	(\$82,300)
Net Capital Costs	\$6,659,000	\$1,049,800	\$3,000,700	\$159,300	\$601,900	\$0	\$50,000	\$0	\$1,797,300

Units of Service

The total cost responsibility of each class of service may be established by developing unit costs of service for each cost function and assigning those costs to the customer classes based on the respective service requirements of each. To properly recognize the cost of service, each customer class is allocated its share of units, pick-up, and tonnage costs. The number of units of service required by each customer class provides a means for the proportionate distribution of costs previously allocated to respective cost categories. As part of the current study, the City requested that Black & Veatch incorporate free pickup service for residential and a limited number of commercial customers. Specifically, these customers would receive up to 2 free pickups per year – limited to bulky items such as Christmas trees. As a result, the units and tonnage in Table 46 reflects this request. Finally, as part of the review of ER activities, staff noted that there are a number of residential pickups that occur as part of the commercial areas. Consequently, these containers have been moved into the residential classification. Summarized in Table 45 are the estimated units of service for the various customer classes.

Table 46 Units of Service for TY 12/13

CUSTOMER CLASS	PICKUP FREQ. OR NO. OF PICKUPS	NO. OF CONTAINERS (CONTAINERS)	NO. OF BILLS (BILLS)	TONNAGE (TONS)
Single Unit		100,731	402,924	116,639
Second Unit		2,412	9,648	2,793
Third Unit		540	2,160	625
Multi Unit		5,568	22,272	6,447
65 Gal Cont.		5,475	21,900	6,340
Extra Container		9,378	37,512	10,859
95 Gal Cont.	1 Auto	840	3,360	973
	2 Auto	141	564	163
	3 Auto	36	144	42
	4 Auto	21	84	24
	5 Auto	3	12	3
95 Gal Recycle	1 Auto	18	72	21
95 Gal Cont.	2 Auto	3	12	3
105 Gal Cont.	5 Auto x2	6	24	7
<i>Subtotal Residential</i>		<i>125,172</i>	<i>500,688</i>	<i>144,940</i>
2 Cu. Yards	x1	1,923	7,692	26,475
	x2	1,221	4,884	16,810
	x3	474	1,896	6,526

CUSTOMER CLASS	PICKUP FREQ. OR NO. OF PICKUPS	NO. OF CONTAINERS (CONTAINERS)	NO. OF BILLS (BILLS)	TONNAGE (TONS)
	x4	123	492	1,693
	x5	93	372	1,280
	x6	39	156	537
4 Cu. Yards	x1	1,311	5,244	18,050
	x2	1,608	6,432	22,139
	x3	1,158	4,632	15,943
	x4	369	1,476	5,080
	x5	222	888	3,056
	x6	270	1,080	3,717
2 Cu. Yards Compactor	x1	1	12	19
	x2	2	24	39
2 Cu. Yards Shared	x1	4	48	78
	x2	25	300	485
	x3	11	132	213
	x4	78	936	1,513
4 Cu. Yards Shared	x1	4	48	78
	x2	26	312	504
	x3	21	252	407
	x4	5	60	97
	x6	4	48	78
4 Cu. Yards Compactor	x1	3	36	58
	x2	1	12	19
	x3	1	12	19
	x6	1	12	19
2 Cu. Yards Recycle Shared	x1	2	24	14
4 Cu. Yards Recycle Shared	x1		0	0
	x2	5	60	36
2 Cu. Yards Recycle	x1	167	2,004	1,198
	x2	52	624	373

CUSTOMER CLASS	PICKUP FREQ. OR NO. OF PICKUPS	NO. OF CONTAINERS (CONTAINERS)	NO. OF BILLS (BILLS)	TONNAGE (TONS)
	x3	16	192	115
	x4	2	24	14
	x6	1	12	7
4 Cu. Yards Recycle	x1	94	1,128	674
	x2	64	768	459
	x3	59	708	423
	x4	6	72	43
	x5	11	132	79
	x6	3	36	22
2 Cu. Yards Recycle Compactor	x1	1	12	7
4 Cu. Yards Recycle Compactor	x1	1	12	7
<i>Subtotal Commercial</i>		9,482	43,296	128,406
Total Residential & Commercial Units		134,654	543,984	273,346
13.4 Cu. Yards Recycle & GW	130	4	48	20
30 Cu. Yards Compactor	769	19	228	6,275
30 Cu. Yards Compactor Rec & GW	19	1	12	44
30 Cu. Yards	3,369	63	756	6,275
30 Cu. Yards Rec & GW	103	4	48	44
13.4 Cu. Yards	1,436	18	216	2,803
10 Cu. Yards	33	1	12	2,092
40 Cu. Yards Compactor	1,118	22	264	8,367
40 Cu. Yards Compactor Recycle & GW	12	2	24	58
Transfer Trailer	885	3	36	16,063
<i>Subtotal Industrial</i>		137	1,644	42,040
Total Units of Service		134,791	545,628	315,386

Cost of Service Allocations

Costs of service are allocated to the customer classes by application of unit costs of service to respective service requirements. Unit costs of service are based upon the total costs previously allocated to functional components and the total number of applicable units of service. Dividing the costs allocated to functional cost components by the respective total units of service requirements develops unit costs of operation and maintenance expense, and net capital costs.

Unit Costs of Service

Table 47 presents total Test Year O&M expense and net capital costs allocated to functional cost component as taken from Tables 44 and 45. As noted earlier, there are some commercial services provided to customers that are located within the residential service area. While these customers have been moved into the residential class, recognition of the additional costs to serve these customers is noted. Based on discussions with City staff, the cost allocations recognize that accessing these properties is more difficult and special routes are set up to handle these accounts. The additional costs for these customers are noted under the Residential/Commercial column.

Distribution of Costs of Service to Customer Classes

The customer class responsibility for service is obtained by applying the unit costs of service to the number of units for which the customer class is responsible. This process is illustrated in Table 48, in which the unit costs of service are applied to the customer class units of service.

Table 47 Unit Costs of Service

DESCRIPTION	TOTAL	RESIDENTIAL	RESIDENTIAL / COMMERCIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
Net Operating Expense	\$21,524,800	\$3,361,300	\$147,900	\$3,858,300	\$10,200	\$5,011,500	\$561,100	\$990,500	\$0	\$7,584,000
Capital Costs	\$6,659,000	\$1,049,800		\$3,000,700	\$159,300	\$601,900	\$0	\$50,000	\$0	\$1,797,300
Total Cost of Service	\$28,183,800	\$4,411,100	\$147,900	\$7,006,900	\$169,500	\$5,613,400	\$561,100	\$1,040,500	\$0	\$9,381,300
Total Units of Service		125,172	1,068	9,482	7,874	315,386	545,628	45,469	125,153	315,386
Units of Measure		containers	containers	containers	pickups	tonnage	Eqv. Bills	containers	tonnage	tonnage
Total Unit Cost of Service - \$/unit		\$35.24	\$138.48	\$738.97	\$21.53	\$17.80	\$1.03	\$22.88	\$0.00	\$29.75

Table 48 Allocation of COS to Customer Classes

DESCRIPTION	TOTAL	RESIDENTIAL	RESIDENTIAL / COMMERCIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
Number of Units										
Unit Cost of Service		\$35.24	\$138.48	\$723.37	\$21.53	\$17.80	\$1.03	\$22.88	\$0.00	\$29.75
Units of Measure		containers	containers	containers	pickups	tonnage	Eqv. Bills	containers	tonnage	tonnage
Residential										
<i>Single Unit</i>										
Units		100,731				116,639	402,924	33,577		116,639
Costs	\$10,278,800	\$3,549,900				\$2,076,000	\$414,700	\$768,800		\$3,469,400
<i>Second Unit</i>										
Units		2,412				2,793	9,648	804		2,793
Costs	\$246,100	\$85,000				\$49,700	\$9,900	\$18,400		\$83,100
<i>Third Unit</i>										
Units		540				625	2,160	180		625
Costs	\$55,000	\$19,000				\$11,100	\$2,200	\$4,100		\$18,600
<i>Multi Unit</i>										
Units		5,568				6,447	22,272	1,856		6,447
Costs	\$568,200	\$196,200				\$114,800	\$22,900	\$42,500		\$191,800

DESCRIPTION	TOTAL	RESIDENTIAL	RESIDENTIAL / COMMERCIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
<i>65 Gal Container</i>										
Units		5,475				6,340	21,900	1,825		6,340
Costs	\$558,600	\$192,900				\$112,800	\$22,500	\$41,800		\$188,600
<i>Extra Container</i>										
Units		9,378				10,859	37,512	3,126		10,859
Costs	\$956,900	\$330,500				\$193,300	\$38,600	\$71,500		\$323,000
<i>95 Gal Container</i>										
Units		1,041	1,041			1,205	4,164	347		1,205
Costs	\$250,500	\$36,700	\$144,200			\$21,500	\$4,300	\$7,900		\$35,900
<i>95 Gal Recycle</i>										
Units		18	18			21	72	6		21
Costs	\$4,300	\$600	\$2,500			\$400	\$100	\$100		\$600
<i>95 Gal Container 2 Auto</i>										
Units		3	3			3	12	1		3
Costs	\$700	\$100	\$400			\$100	\$0	\$0		\$100

DESCRIPTION	TOTAL	RESIDENTIAL	RESIDENTIAL / COMMERCIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
<i>105 Gal Container 5 Auto x2</i>										
Units		6	6			7	24	2		7
Costs	\$1,300	\$200	\$800			\$100	\$0	\$0		\$200
Commercial										
<i>2 Cubic Yards</i>										
Units				3,873		53,323	15,492	1,291		53,323
Costs	\$5,382,200			\$2,801,700		\$949,100	\$15,900	\$29,500		\$1,586,000
<i>4 Cubic Yards</i>										
Units				4,938		67,985	19,752	1,646		67,985
Costs	\$6,862,200			\$3,572,000		\$1,210,000	\$20,300	\$37,700		\$2,022,200
<i>2 Cubic Yards Compactor</i>										
Units				3		58	36	3		58
Costs	\$5,000			\$2,200		\$1,000	\$0	\$100		\$1,700
<i>2 Cubic Yards Shared</i>										
Units				118		2,288	1,416	118		2,288
Costs	\$198,400			\$85,400		\$40,700	\$1,500	\$2,700		\$68,100

DESCRIPTION	TOTAL	RESIDENTIAL	RESIDENTIAL / COMMERCIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
<i>4 Cubic Yards Shared</i>										
Units				60		1,163	720	60		1,163
Costs	\$100,800			\$43,400		\$20,700	\$700	\$1,400		\$34,600
<i>4 Cubic Yards Compactor</i>										
Units				6		116	72	6		116
Costs	\$10,100			\$4,300		\$2,100	\$100	\$100		\$3,500
<i>2 Cubic Yards Recycled Shared</i>										
Units				2		14	24	2		14
Costs	\$2,100			\$1,400		\$300	\$0	\$0		\$400
<i>4 Cubic Yards Recycled Shared</i>										
Units				5		36	60	5		36
Costs	\$5,500			\$3,600		\$600	\$100	\$100		\$1,100
<i>2 Cubic Yards Recycled</i>										
Units				238		1,708	2,856	238		1,708
Costs	\$261,700			\$172,200		\$30,400	\$2,900	\$5,400		\$50,800

DESCRIPTION	TOTAL	RESIDENTIAL	RESIDENTIAL / COMMERCIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
<i>4 Cubic Yards Recycled</i>										
Units				237		1,700	2,844	237		1,700
Costs	\$260,600			\$171,400		\$30,300	\$2,900	\$5,400		\$50,600
<i>2 Cubic Yards Recycled Compactor</i>										
Units				1		7	12	1		7
Costs	\$1,000			\$700		\$100	\$0	\$0		\$200
<i>4 Cubic Yards Recycled Compactor</i>										
Units				1		7	12	1		7
Costs	\$1,000			\$700		\$100	\$0	\$0		\$200
Industrial										
<i>13.4 Cubic Yards Recycle & Green Waste</i>										
Units					130	20	48	4		20
Costs	\$3,800				\$2,800	\$300	\$0	\$100		\$600
<i>30 Cubic Yards Compactor</i>										
Units					769	6,275	228	19		6,275
Costs	\$315,600				\$16,600	\$111,700	\$200	\$400		\$186,700

DESCRIPTION	TOTAL	RESIDENTIAL	RESIDENTIAL / COMMERCIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
<i>30 Cubic Yards Compactor Recycle & GW</i>										
Units					19	44	12	1		44
Costs	\$2,500				\$400	\$800	\$0	\$0		\$1,300
<i>30 Cubic Yards</i>										
Units					3,369	6,275	756	63		6,275
Costs	\$373,100				\$72,500	\$111,700	\$800	\$1,400		\$186,700
<i>30 Cubic Yards Recycle & GW</i>										
Units					103	44	48	4		44
Costs	\$4,400				\$2,200	\$800	\$0	\$100		\$1,300
<i>13.4 Cubic Yards</i>										
Units					1,436	2,803	216	18		2,803
Costs	\$164,700				\$30,800	\$49,900	\$200	\$400		\$83,400
<i>10 Cubic Yards</i>										
Units					33	2,092	12	1		2,092
Costs	\$100,100				\$700	\$37,200	\$0	\$0		\$62,200

DESCRIPTION	TOTAL	RESIDENTIAL	RESIDENTIAL / COMMERCIAL	COMMERCIAL	INDUSTRIAL	DISPOSAL	BILLING	ADMIN	OUTSIDE CITY	DEL NORTE
<i>40 Cubic Yards Compactor</i>										
Units					1,118	8,367	264	22		8,367
Costs	\$422,700				\$24,100	\$148,900	\$300	\$500		\$248,900
<i>40 Cubic Yards Compactor Recycled & GW</i>										
Units					12	58	24	2		58
Costs	\$3,000				\$300	\$1,000	\$0	\$0		\$1,700
<i>Transfer Trailer</i>										
Units					885	16,063	36	3		16,063
Costs	\$782,900				\$19,100	\$285,900	\$0	\$100		\$477,800
Total Cost of Service	\$28,183,800	\$4,411,100	\$147,900	\$6,859,000	\$169,500	\$5,613,400	\$561,100	\$1,040,500	\$0	\$9,381,300

Adequacy of Existing Rates to Meet Costs of Service

Presented in Table 49 is a comparison of the allocated cost of service and revenue under existing rates for the system in total. The last column indicates the approximate adjustment rate levels necessary to recover 100 percent of the allocated costs of service.

Table 49 Comparison of Allocated COS with Revenues under Existing Rates

CUSTOMER CLASS	ALLOCATED COST OF SERVICE	REVENUE UNDER EXISTING RATES	INDICATED REVENUE INCREASE
Residential	\$12,920,300	\$12,621,700	2.4%
Commercial	\$13,090,500	\$12,873,000	1.7%
Industrial	\$2,172,800	\$2,136,500	1.7%
Total System	\$28,183,600	\$27,631,200	2.0%

PROPOSED RATE ADJUSTMENTS

The initial consideration in the derivation of the rate schedules for utility service is the establishment of equitable charges to the customers commensurate with the cost of providing that service. While the cost of service allocations to customer classes should not be construed as literal or exact determinations, they offer a guide to the necessity for, and the extent of, rate adjustments. Practical considerations sometimes modify rate adjustments by taking into account additional factors such as the extent of change from previous rate levels, existing contracts, and past local policies and practices.

Existing Rates

A summary of existing solid waste rates was presented earlier in Table 36. The existing rates consist of a unit's charge, which varies by customer class, a pick-up charge and a tonnage charge for each customer class applicable.

Proposed Rates

The costs of service analysis described in preceding sections of this report provide a basis for the design of rates. The rate schedule shown in Table 50 is effective August 2012 and takes into consideration City policies. The proposed rates effective January 2013 are summarized in Table 51.

Table 50 Proposed Rates for TY 12/13 (Effective August 2012)

ODE	CUSTOMER CLASS	PICKUP FREQ.	RATE	CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE
Residential (\$/Unit/Month)							
T01	Single Unit		\$29.86		95 Gal Cont.	1 Auto	\$41.87
T022	Second Unit		\$26.88			2 Auto	\$73.24
T023	Third Unit		\$25.39			3 Auto	\$94.14
T04	Multi Unit		\$23.90			4 Auto	\$115.05
T60	65 Gal Cont.		\$23.90			5 Auto	\$135.96
EC	Extra Container		\$10.96		95 Gal Recycle	1 Auto	\$20.97
					95 Gal Cont.	2 Auto	\$51.73
					105 Gal Cont.	5 Auto x2	\$237.88
Commercial (\$/Unit/Month)							
D011	2 Cu. Yards	x1	\$127.97	RS11	2 Cu. Yards Recycle Shared	x1	\$31.99
D012		x2	\$223.95	RS12		x2	\$55.98
D013		x3	\$287.92	RS13		x3	\$71.98
D014		x4	\$351.90	RS14		x4	\$87.97
D015		x5	\$415.90	RS15		x5	\$103.97
D016		x6	\$479.88	RS16		x6	\$119.96
D021	4 Cu. Yards	x1	\$222.60	RS21	4 Cu. Yards Recycle Shared	x1	\$55.65
D022		x2	\$389.55	RS22		x2	\$97.38
D023		x3	\$500.84	RS23		x3	\$125.22
D024		x4	\$612.14	RS24		x4	\$153.04
D025		x5	\$723.44	RS25		x5	\$180.87
D026		x6	\$834.74	RS26		x6	\$208.68
D101	2 Cu. Yards Compactor	x1	\$274.22	R011	2 Cu. Yards Recycle	x1	\$63.98
D102		x2	\$479.88	R012		x2	\$111.97
D103		x3	\$616.98	R013		x3	\$143.98
D104		x4	\$754.09	R014		x4	\$175.96
D105		x5	\$891.20	R015		x5	\$207.95
D106		x6	\$1,028.30	R016		x6	\$239.95

ODE	CUSTOMER CLASS	PICKUP FREQ.	RATE	CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE
D111	2 Cu. Yards Shared	x1	\$63.98	R021	4 Cu. Yards Recycle	x1	\$111.29
D112		x2	\$111.97	R022		x2	\$194.78
D113		x3	\$143.98	R023		x3	\$250.43
D114		x4	\$175.96	R024		x4	\$306.07
D115		x5	\$207.95	R025		x5	\$361.72
D116		x6	\$239.95	R026		x6	\$417.37
D121	4 Cu. Yards Shared	x1	\$111.29	R111	2 Cu. Yards Recycle Compactor	x1	\$137.11
D122		x2	\$194.78	R112		x2	\$239.95
D123		x3	\$250.43	R113		x3	\$308.49
D124		x4	\$306.07	R114		x4	\$377.05
D125		x5	\$361.72	R115		x5	\$445.60
D126		x6	\$417.37	R116		x6	\$514.15
D201	4 Cu. Yards Compactor	x1	\$448.43	R221	4 Cu. Yards Recycle Compactor	x1	\$224.21
D202		x2	\$784.74	R222		x2	\$392.37
D203		x3	\$1,008.95	R223		x3	\$504.48
D204		x4	\$1,233.16	R224		x4	\$616.58
D205		x5	\$1,457.37	R225		x5	\$728.41
D206		x6	\$1,681.58	R226		x6	\$840.80

ODE	CUSTOMER CLASS	PICKUP FREQ.	RATE	CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE
Industrial \$/Pickup)							
D05	13.4 Cu. Yards Recycle & GW		\$75.79	D09	13.4 Cu. Yards		\$151.58
D07	30 Cu. Yards Compactor		\$224.76	D10	10 Cu. Yards		\$151.58
	30 Cu. Yards Compactor Rec & GW		\$112.37	D41	10 Cu. Yards Recycle & GW		\$75.79
	(2) 30 Cu. Yards Single Pickup		\$381.56		40 Cu. Yards Compactor		\$277.02
	(2) 30 Cu. Yards Single Pickup Recycle & GW		\$190.78		40 Cu. Yards Compactor Rec & GW		\$138.51
D08	30 Cu. Yards		\$198.62		Transfer Trailer		\$381.56
	30 Cu. Yards Rec & GW		\$99.31	W01			

Table 51 Proposed Rates (Effective January 2013)

ODE	CUSTOMER CLASS	PICKUP FREQ.	RATE	CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE
Residential (\$/Unit/Month)							
T01	Single Unit		\$30.15		95 Gal Cont.	1 Auto	\$42.29
T022	Second Unit		\$27.13			2 Auto	\$73.96
T023	Third Unit		\$25.64			3 Auto	\$95.07
T04	Multi Unit		\$24.13			4 Auto	\$116.19
T60	65 Gal Cont.		\$24.13			5 Auto	\$137.30
EC	Extra Container		\$11.07		95 Gal Recycle	1 Auto	\$21.18
					95 Gal Cont.	2 Auto	\$52.24
					105 Gal Cont.	5 Auto x2	\$240.23
Commercial (\$/Unit/Month)							
D011	2 Cu. Yards	x1	\$129.23	RS11	2 Cu. Yards Recycle Shared	x1	\$32.30
D012		x2	\$226.16	RS12		x2	\$56.54
D013		x3	\$290.77	RS13		x3	\$72.70
D014		x4	\$355.39	RS14		x4	\$88.84

ODE	CUSTOMER CLASS	PICKUP FREQ.	RATE	CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE
D015		x5	\$420.02	RS15		x5	\$105.00
D016		x6	\$484.63	RS16		x6	\$121.15
D021	4 Cu. Yards	x1	\$224.81	RS21	4 Cu. Yards Recycle Shared	x1	\$56.20
D022		x2	\$393.40	RS22		x2	\$98.35
D023		x3	\$505.80	RS23		x3	\$126.46
D024		x4	\$618.20	RS24		x4	\$154.55
D025		x5	\$730.61	RS25		x5	\$182.66
D026		x6	\$843.01	RS26		x6	\$210.74
D101	2 Cu. Yards Compactor	x1	\$276.93	R011	2 Cu. Yards Recycle	x1	\$64.62
D102		x2	\$484.63	R012		x2	\$113.08
D103		x3	\$623.09	R013		x3	\$145.40
D104		x4	\$761.55	R014		x4	\$177.70
D105		x5	\$900.03	R015		x5	\$210.01
D106		x6	\$1,038.48	R016		x6	\$242.32
D111	2 Cu. Yards Shared	x1	\$64.62	R021	4 Cu. Yards Recycle	x1	\$112.39
D112		x2	\$113.08	R022		x2	\$196.71
D113		x3	\$145.40	R023		x3	\$252.91
D114		x4	\$177.70	R024		x4	\$309.10
D115		x5	\$210.01	R025		x5	\$365.30
D116		x6	\$242.32	R026		x6	\$421.50
D121	4 Cu. Yards Shared	x1	\$112.39	R111	2 Cu. Yards Recycle Compactor	x1	\$138.47
D122		x2	\$196.71	R112		x2	\$242.32
D123		x3	\$252.91	R113		x3	\$311.55
D124		x4	\$309.10	R114		x4	\$380.79
D125		x5	\$365.30	R115		x5	\$450.01
D126		x6	\$421.50	R116		x6	\$519.24
D201	4 Cu. Yards Compactor	x1	\$452.87	R221	4 Cu. Yards Recycle Compactor	x1	\$226.43

ODE	CUSTOMER CLASS	PICKUP FREQ.	RATE	CODE	CUSTOMER CLASS	PICKUP FREQ.	RATE
D202		x2	\$792.51	R222		x2	\$396.26
D203		x3	\$1,018.94	R223		x3	\$509.48
D204		x4	\$1,245.37	R224		x4	\$622.69
D205		x5	\$1,471.80	R225		x5	\$735.62
D206		x6	\$1,698.23	R226		x6	\$849.13
Industrial \$/Pickup)							
D05	13.4 Cu. Yards Recycle & GW		\$76.54	D09	13.4 Cu. Yards		\$153.08
D07	30 Cu. Yards Compactor		\$226.98	D10	10 Cu. Yards		\$153.08
	30 Cu. Yards Compactor Rec & GW		\$113.49	D41	10 Cu. Yards Recycle & GW		\$76.54
	(2) 30 Cu. Yards Single Pickup		\$385.34		40 Cu. Yards Compactor		\$279.77
	(2) 30 Cu. Yards Single Pickup Recycle & GW		\$192.67		40 Cu. Yards Compactor Rec & GW		\$139.88
D08	30 Cu. Yards		\$200.58		Transfer Trailer		\$385.34
	30 Cu. Yards Rec & GW		\$100.30	W01			

Revenue Sufficiency

Presented in Table 52 is a comparison of Test Year allocated cost of service with revenues under the suggested water rate structure. Test year costs of service are obtained from Table 43 and the proposed rates recover essentially 100 percent of the total cost of service.

Table 52 Revenues under Proposed Rates for TY 12/13

CUSTOMER CLASS	ALLOCATED COST OF SERVICE	REVENUE UNDER PROPOSED RATES	TOTAL PERCENT RECOVERY
Residential	\$12,920,400	\$12,920,400	100.0%
Commercial	\$13,090,600	\$13,089,200	100.0%
Industrial	\$2,172,800	\$2,171,600	99.9%
Total System	\$28,183,800	\$28,181,200	100.0%