

City of Pueblo

Wastewater Rates and Charges Study

Revised Final Report

December 2006



December 20, 2006

Mr. Gene Michael
Director
City of Pueblo
Wastewater Department
211 East "D" Street
Pueblo, CO 81003

Re: Wastewater Rate Study

Dear Mr. Michael:

On behalf of Red Oak Consulting, a division of Malcolm Pirnie, Inc., I am pleased to submit this final report regarding the Wastewater Rates and Charges Study completed for the City.

Thank you for this opportunity to be of service to the City. Please let me know if we can be of further assistance. Questions regarding this report can be directed to Mr. Todd Cristiano at (303) 369-3535.

Very truly yours,

RED OAK CONSULTING
A Division of Malcolm Pirnie, Inc.

Richard D. Giardina
Vice President

City of Pueblo

Wastewater Rates and Charges Study

Final Report

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City of Pueblo

Chapter 1: Executive Summary



1.0 Executive Summary

Red Oak Consulting (Red Oak), a division of Malcolm Pirnie, Inc., has completed this wastewater rates and charges study for the City of Pueblo’s (City) wastewater utility. The wastewater utility is maintained as an enterprise fund. The purpose of this rate study was to review the utility’s financial status, recommend rate adjustments as necessary, and provide rate structure alternatives that meet the utility’s financial performance measures and other objectives. The recommended revenues, rates, and fees for service are based on a financial plan, cost of service study, and rate design analysis completed by Red Oak.

The financial plan, rate design, and cost of service analysis for the wastewater utility are detailed in chapters 3 through 5, respectively. Red Oak developed financial plans using financial measures required by the utility’s 2003 State Revolving Fund (SRF) loan covenants; debt service coverage (DSC), and cash reserve targets. The City is required by SRF loan covenants to maintain a DSC ratio of at least 110 percent and an operating reserve equal to a minimum of 90 days of operation and maintenance expenses (O&M).

Red Oak used industry standard methodologies supported by the Water Environment Federation (WEF) for the study financial plan, cost of service analysis, and rate design.

1.1 Financial Plan Findings

Revenue under existing rates is insufficient to meet annual O&M, debt service, finance

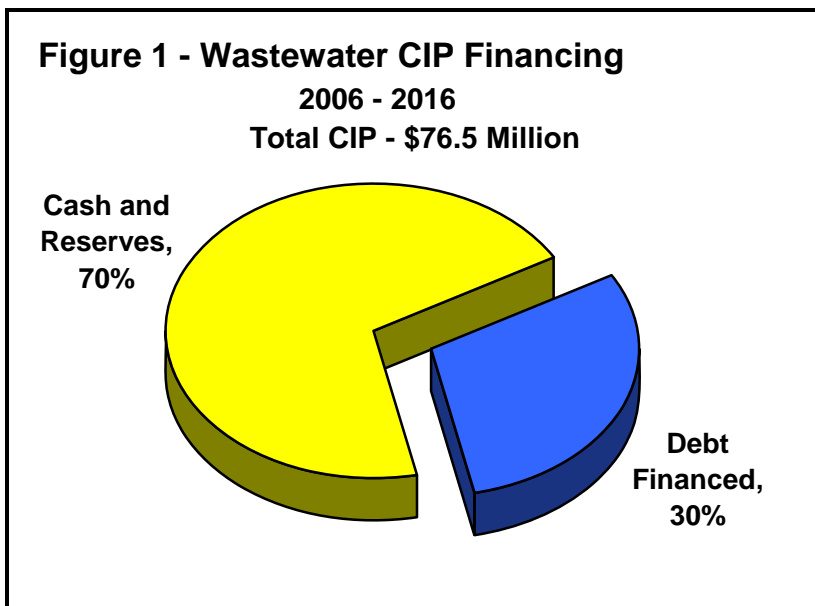
Year	Revenue From Existing Rates	Proposed Annual Adjustment	Revenue From Proposed Rates
2006	\$6,869,423	0.0%	\$6,869,423
2007	6,903,509	25.1%	8,203,100
2008	6,937,430	25.1%	10,857,100
2009	6,971,701	13.5%	12,383,600
2010	7,005,676	13.5%	14,123,900
2011	7,040,200	5.6%	14,988,300
2012	7,074,577	5.6%	15,905,000
2013	7,109,154	3.0%	16,462,400
2014	7,144,435	3.0%	17,040,100
2015	7,179,118	3.0%	17,636,700
2016	7,214,599	3.0%	18,255,600

the renewal, replacement, and depreciation (RR&D) capital improvement program (CIP), and maintain financial performance measures.

It is recommended the financial plan be updated annually to determine if the projected level of revenue is appropriate.

The City has developed a CIP identifying growth-related and non-growth-related (RR&D CIP) projects for the study period. The RR&D CIP is part of a continuing program to upgrade and replace aging collection system and water reclamation facility infrastructure. Carryover operating reserves of \$3.8 million will be used to mitigate rate increases and to fund a portion of the RR&D CIP. Bond proceeds and transfers from the operating subfund are proposed to assist in financing the remainder. Bond proceeds for RR&D projects total \$20.6 million during the study period and transfers total \$48.4 million for the study period. An interfund loan in 2012 and 2013 to the sanitary sewer collection system improvement subfund (SSCSIF) is needed to assist in paying for growth-related CIP. This loan totals \$2.4 million during the study period.

Growth-related CIP and annual debt service are funded through a combination of plant investment fees (PIFs) and sanitary sewer connection fees (SSCFs). PIF CIP totals \$600,000 during the study period and SSCF CIP totals \$7.5 million. Approximately \$2.1 million of these projects are funded through debt. Figure 1 shows the debt funding allocation for the utility.



1.2 Wastewater Rates

Existing and proposed cost of service rates are shown in Table 1-1. Proposed rates are assumed to be effective April 2007. Rates maintain the current rate structure: a monthly service charge that varies by water meter size and a volume charge that varies by customer class. The proposed rates are designed to recover the cost of providing wastewater service from each customer class.

Monthly bills will increase by an average of \$2.90 in 2007 for residential $\frac{3}{4}$ -inch water meter customers based on a billable volume of 5,000 gallons. Monthly bills will increase by an average of \$4.50 in 2007 for commercial 1-inch water meter customers based on a billable volume of 13,000 gallons. Table 1-2 shows typical residential and commercial monthly bills under existing and proposed rates for the study period based on the winter period water usage of 5,000 gallons and 13,000 gallons, respectively. Winter period water usage is calculated as the average monthly water use beginning with the water meter reading in January and ending in February.

**City of Pueblo, Colorado
Wastewater Utility
Comparison of Existing and Proposed Monthly Rates**

**Table 1-1
12/20/2006**

Service Charge, \$ per bill

**Water Meter
Size
inches**

	Proposed										
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
5/8 & 3/4	4.35	6.85	8.40	9.50	10.80	11.45	12.10	12.50	12.85	13.25	13.65
1	4.49	7.95	9.95	11.35	12.85	13.70	14.55	15.05	15.55	16.05	16.55
1-1/2	4.65	11.40	14.95	17.20	19.35	20.80	22.30	23.15	24.00	24.90	25.80
2	5.05	16.50	22.35	25.75	28.90	31.25	33.70	35.10	36.55	38.00	39.50
3	6.00	28.45	39.65	45.95	51.45	55.95	60.65	63.30	66.05	68.85	71.75
4	10.80	41.25	58.15	67.45	75.45	82.20	89.35	93.35	97.50	101.80	106.15
6	18.00	66.75	95.15	110.50	123.55	134.85	146.75	153.50	160.45	167.60	174.95
8	25.20	88.15	126.05	146.55	163.80	178.90	194.85	203.85	213.15	222.70	232.55

Volume Charge, \$ per 1,000 gallons

Customer Class

Residential	1.48	1.56	1.96	2.22	2.52	2.70	2.80	2.90	3.00	3.05	3.12
Commercial	1.48	1.56	1.96	2.22	2.52	2.70	2.80	2.90	3.00	3.05	3.12
Sanitation Companies	24.60	28.20	32.60	35.60	39.00	40.60	42.30	43.25	44.25	45.25	46.26
Non-Industrial	1.10	1.34	1.61	1.79	2.00	2.10	2.20	2.26	2.32	2.38	2.44
Industrial	1.12	1.34	1.61	1.79	2.00	2.10	2.20	2.26	2.32	2.38	2.44

Extra Strength Charges, \$ per pound

BOD	0.194	0.240	0.300	0.335	0.380	0.400	0.420	0.435	0.445	0.460	0.470
TSS	0.134	0.150	0.165	0.180	0.190	0.195	0.205	0.205	0.210	0.215	0.216

Monitoring Charge, \$ per bill

	170.00	176.30	184.20	189.50	195.50	198.30	201.30	203.00	204.75	206.55	208.35
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**City of Pueblo, Colorado
Wastewater Utility
Comparison of Typical Monthly Bills**

**Table 1-2
1/22/2007**

Year	Residential 3/4-inch Customer 5,000 Gallons Billable Water Volume		
	Service Charge	Total	Variance
	\$	\$	\$
Existing	4.35	11.75	
Proposed			
2007	6.85	14.65	2.90
2008	8.40	18.20	3.55
2009	9.50	20.60	2.40
2010	10.80	23.40	2.80
2011	11.45	24.95	1.55
2012	12.10	26.10	1.15
2013	12.50	27.00	0.90
2014	12.85	27.85	0.85
2015	13.25	28.50	0.65
2016	13.65	29.25	0.75

Year	Commercial 1-inch Customer 13,000 Gallons Billable Water Volume			
	Service Charge	Volume Charge	Total	Variance
	\$	\$	\$	\$
Existing	4.49	19.24	23.73	
Proposed				
2007	7.95	20.28	28.23	4.50
2008	9.95	25.48	35.43	7.20
2009	11.35	28.86	40.21	4.78
2010	12.85	32.76	45.61	5.40
2011	13.70	35.10	48.80	3.19
2012	14.55	36.40	50.95	2.15
2013	15.05	37.70	52.75	1.80
2014	15.55	39.00	54.55	1.80
2015	16.05	39.65	55.70	1.15
2016	16.55	40.56	57.11	1.41

City of Pueblo

Chapter 2: Introduction and Background



2.0 Introduction and Background

2.1 Purpose of the Study

The City retained Red Oak to conduct a comprehensive financial plan, cost of service, and rate design study for the wastewater utility. The primary goal of this study was to develop an 11-year financial plan for the utility and recommend charges and fees for wastewater service to support the respective plan. This study includes the following:

- ◆ Development of financial plan for the study period, 2006 through 2016.
- ◆ Analysis of cost of providing wastewater service to customer classes.
- ◆ Design of wastewater rates to be implemented in 2007 through 2016.

This report consists of the following sections:

- 1.0 ***Executive Summary.*** Contains the recommended revenue adjustments, charges, and fees for the utility.
- 2.0 ***Introduction and Background.*** Discusses the overall purpose of the study.
- 3.0 ***Financial Plan.*** Presents the wastewater utility financial plan and a discussion of revenues, expenditures, capital improvement projects and proposed CIP funding.
- 4.0 ***Rate Design.*** Presents the methodology used to develop the proposed user charges and fees.
- 5.0 ***Cost of Service.*** Presents the allocations of costs of providing wastewater service to the various customer classes.

2.2 Background

The City of Pueblo provides service to approximately 36,900 wastewater accounts. Growth in the number of accounts during the last several years has averaged about 0.5 percent annually, and is expected to continue at this rate through the study period.

The City's wastewater operations are financially self-sufficient with funding for capital and operating requirements derived primarily from rates, PIFs, SSCFs, interest income, and other miscellaneous sources. O&M expenditures and RR&D CIP are recovered through the City's monthly wastewater user charges and bond proceeds. Growth-related projects are funded through PIFs and SSCFs. User charge revenue is designed to meet

revenue requirements, debt service coverage, and maintain appropriate reserves. Revenue requirements include O&M, payments on existing and proposed debt, and RR&D CIP.

2.3 Reliance on City Provided Data

During the course of this project, the City provided Red Oak with financial reports and projected expenditures for the utility. Red Oak has reviewed the data for reasonableness and general representation of cost and related activities. Red Oak did not independently assess or verify the accuracy of such data – historic or projected. We have relied on this data in the formulation of our findings and subsequent recommendations, as well as in the preparation of this report. As is often the case, there will be differences between actual and projected data, and these differences may be significant.

2.4 Acknowledgements

The successful completion of this study depended on the efforts of the City of Pueblo staff. In particular, the Red Oak study team would like to thank Mr. Gene Michael, Director, and Mr. Paul Cozzetta, Pretreatment Coordinator, for their support and guidance throughout this study.

City of Pueblo

Chapter 3: Financial Plan



3.0 Financial Plan

The City's wastewater fund is a self-supporting enterprise fund as required by City Ordinance 4309, dated March 28, 1977. This fund has five subfunds: Plant Investment Fee (PIF), sanitary sewer collection system improvement (SSCSIF), RR&D, state revolving fund (SRF), and operating. For the purposes of this report, the PIF, SSCSIF, RR&D, and SRF subfunds are combined into a summary of capital subfunds cash flow. The individual subfunds and reserve requirements are shown in the Appendix at the end of this report. This section develops a financial plan forecast for the summary of capital subfunds and the operating subfund for the 11-year study period, 2006 through 2016.

3.1 Summary of Capital Subfunds

The summary of capital subfunds tracks financial activities associated with the collection and expenditure of PIFs and SSCFs assessed to new connections within the City limits and the Airport Industrial Park, and money reserved for the replacement and renewal of capital assets. A combined average target reserve of about \$1.3 million is recommended during the study period. Table 3-1 shows the summary of capital subfunds cash flow.

Beginning Balance

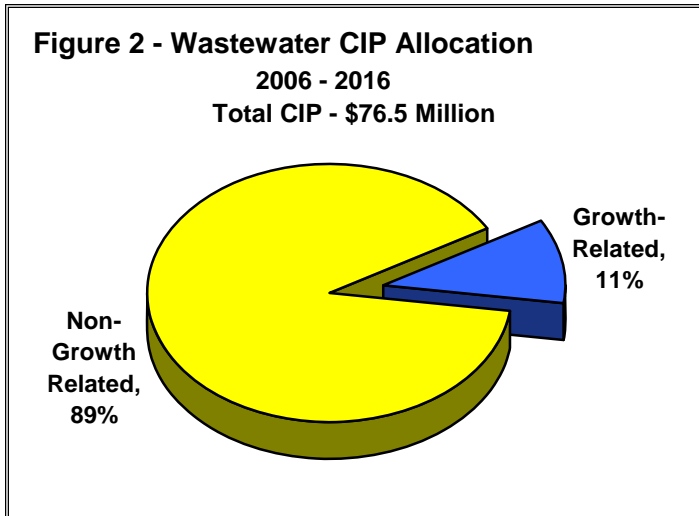
The capital subfund balance is \$2.8 million at the beginning of the study period.

Sources of Funds

Sources include PIFs from new connections in the Blende, Salt Creek, and St. Charles Mesa Sanitation Districts and the City, SSCFs assessed to new connections within the City limits and the Airport Industrial Park, SRF loans, transfers from the operating subfund to fund RR&D CIP, interfund loans to the PIF subfund, and investment income on current account balances.

Annual revenue from PIFs is projected to average \$200,000 per year during the study period based on the existing PIF schedule and an estimated growth in the City of 0.5 percent annually. Annual revenue from SSCFs is projected to average \$250,000 per year during the study period based on the existing SSCF schedule and an estimated growth of 0.5 percent annually. No significant growth is projected in the sanitation districts during the study period. Transfers from the operating fund totaling \$48.4 million are required to assist in the financing of RR&D CIP during the study period. Existing and proposed SRF loan proceeds

total \$22.7 million during the study period. Table 3-2 details existing and proposed loan disbursements. Investment income is calculated using a 2.5 percent annual interest rate applied to the average annual fund balance.



Uses of Funds

The wastewater CIP, shown in Table 3-3, includes \$7.5 million of growth-related collection system improvements, \$600,000 of treatment-related improvements, and \$68.4 million of capital improvement renewals and replacements. An annual inflation allowance of 4 percent is included in the projected cost of these projects. Figure 2 shows the allocation of growth-related and non-growth-related CIP.

3.2 Operating Subfund

The operating subfund tracks financial activities associated with annual operating revenues and revenue requirements. Table 3-4 summarizes the operating subfund cash flow.

Beginning Balance

The beginning balance is available to supplement annual revenue to meet expenditures in the operating subfund. The balance is \$3.8 million at the beginning of 2006.

Revenues

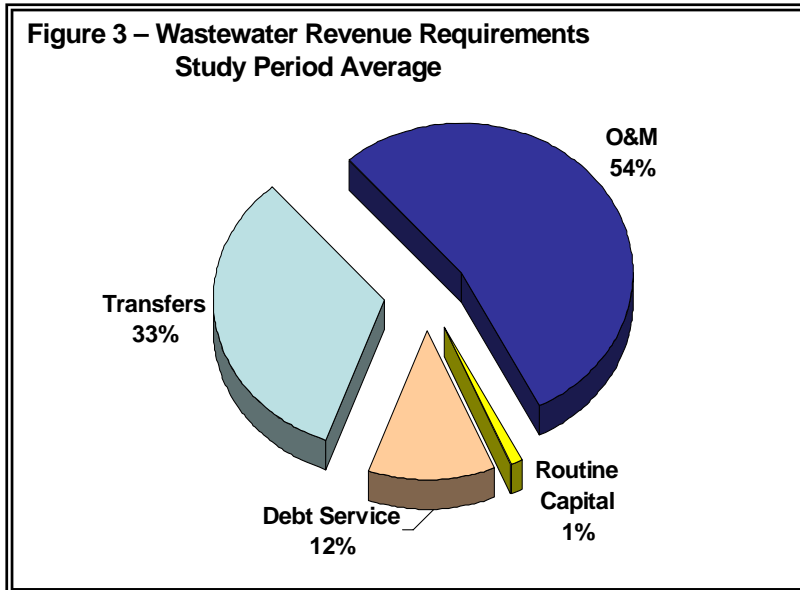
Operating subfund revenue is primarily derived from wastewater rates and investment income. Wastewater service revenue represents the most significant source of revenue to the operating subfund, averaging approximately 99 percent of total revenue. The remaining 1 percent is contributed from investment income.

Wastewater service revenue under existing and adopted rates is based on wastewater customer projections and a detailed analysis of historical utility billing records. The

number of wastewater customers is expected to increase annually at a rate of 0.5 percent throughout the study period. Investment income is calculated using a 2.5 percent annual interest rate applied to the average annual operating subfund balance.

Revenue Requirements

Operating subfund expenditures include O&M, routine capital outlay, non-growth related



debt service payments, and transfers. Figure 3 details the allocation of revenue requirements.

Projected O&M is summarized in Table 3-5 and consists of personnel, materials, supplies, and contractual services costs to collect, treat, and dispose of wastewater on a routine basis. An annual inflation allowance of 6 percent has been included for salaries and wages and

utility costs. The remainder of O&M categories include annual inflation of 3 percent. Routine capital improvements represent small capital outlays for equipment, furniture, fixtures, and vehicle fleet additions.

Annual debt service includes principal, interest, and administrative fee payments on Series 2003 SRF loans and proposed loans. Table 3-6 details existing and proposed annual debt service payments for the capital improvement program. Table 3-7 lists the interest during construction for each debt issue.

Interfund loans to the SSCSIF subfund are anticipated in 2012 and 2013 to assist in paying for SSCF CIP and to meet reserve requirements. These interfund loans total \$2.4 million during the study period. Transfers to the RR&D subfund are required to assist in financing RR&D CIP. RR&D transfers total \$48.4 million during the study period.

3.3 Financial Performance Measures

Financial performance measures for the water utility include debt service coverage (DSC) and operating reserves.

Debt Service Coverage

The City is required by Series 2003 SRF loan covenants to maintain annual coverage of at least 110 percent in coverage tests. Debt service coverage on existing and proposed bonds is calculated by taking gross revenues less O&M expenses divided by the current year's debt service requirements. Gross revenues consist of all wastewater service fees, including PIFs, SSCFs, high-strength charges, miscellaneous income, and investment income.

$$\text{DSC Ratio} = \text{Net Revenue Available for Debt Service} / \text{Total Debt Service}$$

Where:

$$\text{Net Revenues} = \text{Operating Revenues} - \text{O\&M Expenditures}$$

This coverage ratio states that for every \$1.00 of debt service, the utility needs to have \$1.10 available to pay debt service. DSC exceeds the minimum coverage requirement throughout the study period based on the proposed financial plan.

Operating Fund Reserves

The City is required by Series 2003 SRF loan covenants to maintain annual operating reserve of at least 90 days of O&M.

3.4 Indicated Wastewater Charges Revenue Adjustments

Revenue under existing rates is insufficient to meet annual O&M, debt service, finance the renewal, replacement, and depreciation (RR&D) capital improvement program (CIP), and maintain financial performance measures.

Year	Revenue From Existing Rates	Proposed Annual Adjustment	Revenue From Proposed Rates
2006	\$6,869,423	0.0%	\$6,869,423
2007	6,903,509	25.1%	8,203,100
2008	6,937,430	25.1%	10,857,100
2009	6,971,701	13.5%	12,383,600
2010	7,005,676	13.5%	14,123,900
2011	7,040,200	5.6%	14,988,300
2012	7,074,577	5.6%	15,905,000
2013	7,109,154	3.0%	16,462,400
2014	7,144,435	3.0%	17,040,100
2015	7,179,118	3.0%	17,636,700
2016	7,214,599	3.0%	18,255,600

It is recommended the financial plan be updated annually to determine if the projected level of revenue is appropriate.

City of Pueblo, Colorado
Wastewater Utility
Summary of Capital Subfunds

Table 3-1
12/20/2006

Line No.	Description	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Beginning Balance	2,829,200	3,613,100	4,108,600	4,587,000	4,093,900	3,131,500	3,521,400	5,119,300	3,322,200	3,760,500	3,931,700
Sources of Funds												
2	Plant Investment Fees (PIF)	155,700	161,100	164,700	165,500	179,500	184,000	226,500	227,500	230,900	229,600	232,000
3	Sanitary Sewer Connection Fees (SSCF)	205,700	213,900	231,700	238,400	255,200	266,100	266,100	267,300	271,300	269,800	272,600
4	Transfers From Operating Subfund	600,000	2,500,000	4,500,000	3,600,000	4,900,000	5,000,000	5,700,000	5,900,000	6,000,000	6,100,000	6,000,000
SRF Loans												
5	Existing	0	0	0	0	0	0	0	0	0	0	0
6	Proposed	0	0	216,000	18,761,000	350,000	375,000	401,000	0	0	0	2,590,000
7	Investment Income	80,500	96,500	106,000	0	85,900	78,500	103,000	105,500	88,500	96,200	70,700
8	Total Sources of Funds	1,041,900	2,971,500	5,218,400	22,764,900	5,770,600	5,903,600	6,696,600	6,500,300	6,590,700	6,695,600	9,165,300
Uses of Funds												
Capital Improvements												
9	SRF Loan Projects	0	0	216,000	18,761,000	350,000	375,000	401,000	0	0	0	2,590,000
10	Growth Related WWTP CIP (PIF)	160,000	0	0	0	0	0	0	0	0	327,000	0
11	Growth Related Collection System CIP (SSCF)	0	0	0	812,000	1,287,000	0	0	3,421,000	0	0	0
12	Renewals and Replacements CIP (RR&D)	98,000	2,476,000	4,524,000	3,545,000	4,920,000	4,971,000	4,530,000	4,704,000	5,980,000	6,025,000	6,023,000
13	Total Capital Improvements	258,000	2,476,000	4,740,000	23,118,000	6,557,000	5,346,000	4,931,000	8,125,000	5,980,000	6,352,000	8,613,000
Debt Service												
14	Annual Debt Payment	0	0	0	0	163,200	163,200	163,200	172,400	172,400	172,400	172,400
15	Interest During Construction	0	0	0	80,000	4,500	4,500	4,500	0	0	0	0
16	Debt Issuance Cost	0	0	0	60,000	8,300	0	0	0	0	0	0
17	Total Debt Service	0	0	0	140,000	176,000	167,700	167,700	172,400	172,400	172,400	172,400
18	Total Uses of Funds	258,000	2,476,000	4,740,000	23,258,000	6,733,000	5,513,700	5,098,700	8,297,400	6,152,400	6,524,400	8,785,400
19	Annual Surplus (Deficiency)	783,900	495,500	478,400	(493,100)	(962,400)	389,900	1,597,900	(1,797,100)	438,300	171,200	379,900
20	Ending Balance	3,613,100	4,108,600	4,587,000	4,093,900	3,131,500	3,521,400	5,119,300	3,322,200	3,760,500	3,931,700	4,311,600
21	Target Reserve	1,100,000	1,140,000	1,180,000	1,220,000	1,260,000	1,300,000	1,340,000	1,380,000	1,420,000	1,460,000	1,500,000

City of Pueblo, Colorado
Wastewater Utility
Loan Disbursements

Table 3-2
12/20/2006

Line No.	Description	Budget	Projected										Total
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2006-2016
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
SANITARY SEWER COLLECTION FEES (SSCF) PROJECTS													
Collection System													
1	Lake Avenue Upgrade North	0	0	0	0	0	0	0	0	0	0	0	0
2	Aster Avenue Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
3	Main Street/I-25 Upgrade	0	0	0	2,000,000	0	0	0	0	0	0	0	2,000,000
4	Total SSCF Projects	0	0	0	2,000,000	0	0	0	0	0	0	0	2,000,000
PLANT INVESTMENT FEE (PIF) PROJECTS													
Water Reclamation Facility													
5	Master Plan Update	0	0	0	0	0	0	0	0	0	0	0	0
6	Raw Sewage PS Pump Replacement	0	0	0	0	35,000	38,000	40,000	0	0	0	0	113,000
7	Effluent Clarifier Pipe Replacement	0	0	0	0	0	0	0	0	0	0	0	0
8	Total PIF Projects	0	0	0	0	35,000	38,000	40,000	0	0	0	0	113,000
RENEWAL, REPLACEMENT, AND DEPRECIATION (RR&D) PROJECTS													
Collection System													
9	Prairie Avenue Main Replacement	0	0	0	2,475,000	0	0	0	0	0	0	0	2,475,000
10	Prairie Avenue Main Replacement	0	0	0	0	0	0	0	0	0	0	2,590,000	2,590,000
11	Sewer Rehab and Replace <= 8" Diameter	0	0	0	0	0	0	0	0	0	0	0	0
12	Sewer Rehab and Replace > 8" Diameter	0	0	0	0	0	0	0	0	0	0	0	0
13	Manhole Adjustment Overlay	0	0	0	0	0	0	0	0	0	0	0	0
14	Portland Avenue Lift Station	0	0	0	0	0	0	0	0	0	0	0	0
15	Airport Industrial Park Lift Station Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
16	Interstate 25 Crossing, 30th Ave. to Hwy 47	0	0	0	0	0	0	0	0	0	0	0	0
17	Heavy Equipment	0	0	0	0	0	0	0	0	0	0	0	0
18	Arkansas River Trail Repair	0	0	0	0	0	0	0	0	0	0	0	0
19	Arkansas River Xing @ Moffat	0	0	0	0	0	0	0	0	0	0	0	0
20	Total Collection System	0	0	0	2,475,000	0	0	0	0	0	0	2,590,000	5,065,000
Water Reclamation Facility													
21	Dewatering System for Final Clarifiers	0	0	0	0	0	0	0	0	0	0	0	0
22	Secondary Clarifier Rehabilitation	0	0	0	0	0	0	0	0	0	0	0	0
23	WRF Chlorine Building Rehabilitation	0	0	0	0	0	0	0	0	0	0	0	0
24	Loader Replacement	0	0	0	0	0	0	0	0	0	0	0	0
25	Master Plan Update	0	0	0	0	0	0	0	0	0	0	0	0
26	Raw Sewage PS Pump Replacement	0	0	0	0	315,000	337,000	361,000	0	0	0	0	1,013,000
27	Land Purchase	0	0	0	0	0	0	0	0	0	0	0	0
28	Nutrient Removal-Aeration	0	0	0	14,286,000	0	0	0	0	0	0	0	14,286,000
29	Disinfection System Improvements	0	0	216,000	0	0	0	0	0	0	0	0	216,000
30	Effluent Clarifier Pipe Replacement	0	0	0	0	0	0	0	0	0	0	0	0
31	Roof Replacement	0	0	0	0	0	0	0	0	0	0	0	0
32	Disgester Covers Study	0	0	0	0	0	0	0	0	0	0	0	0
33	Reclamation Facility Rehab. and Replace.	0	0	0	0	0	0	0	0	0	0	0	0
34	Boiler 23 Replacement	0	0	0	0	0	0	0	0	0	0	0	0
35	Total Water Reclamation Facility	0	0	216,000	14,286,000	315,000	337,000	361,000	0	0	0	0	15,515,000
36	Total RR&D Projects	0	0	216,000	16,761,000	315,000	337,000	361,000	0	0	0	2,590,000	20,580,000
37	Total Loan Disbursements	0	0	216,000	18,761,000	350,000	375,000	401,000	0	0	0	2,590,000	22,693,000

City of Pueblo, Colorado
Wastewater Utility
Capital Improvement Program with 4.0% Annual Inflation Allowance

Table 3-3
12/20/2006

Line No.	Description	Budget										Total 2006-2016	Funding Source				
		2006	2007	2008	2009	2010	2011	Projected			2012		2013	2014	2015	2016	SRF Loan
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
SANITARY SEWER COLLECTION FEES (SSCF) PROJECTS																	
Collection System																	
1	Lake Avenue Upgrade North	0	0	0	0	0	0	0	3,421,000	0	0	0	3,421,000	0	3,421,000	0	3,421,000
2	Aster Avenue Upgrade	0	0	0	0	1,287,000	0	0	0	0	0	0	1,287,000	0	1,287,000	0	1,287,000
3	Main Street/I-25 Upgrade	0	0	0	2,812,000	0	0	0	0	0	0	0	2,812,000	2,000,000	812,000	0	812,000
4	Total SSCF Projects	0	0	0	2,812,000	1,287,000	0	0	3,421,000	0	0	0	7,520,000	2,000,000	5,520,000	0	5,520,000
PLANT INVESTMENT FEE (PIF) PROJECTS																	
Water Reclamation Facility																	
5	Master Plan Update	160,000	0	0	0	0	0	0	0	0	0	0	160,000	0	160,000	0	160,000
6	Raw Sewage PS Pump Replacement	0	0	0	0	35,000	38,000	40,000	0	0	0	0	113,000	113,000	0	0	0
7	Effluent Clarifier Pipe Replacement	0	0	0	0	0	0	0	0	0	327,000	0	327,000	0	327,000	0	327,000
8	Total PIF Projects	160,000	0	0	0	35,000	38,000	40,000	0	0	327,000	0	600,000	113,000	487,000	0	487,000
RENEWAL, REPLACEMENT, AND DEPRECIATION (RR&D) PROJECTS																	
Collection System																	
9	Prairie Avenue Main Replacement	0	0	0	2,475,000	0	0	0	0	0	0	0	2,475,000	2,475,000	0	0	0
10	Prairie Avenue Main Replacement	0	0	0	0	0	0	0	0	0	0	2,590,000	2,590,000	2,590,000	0	0	0
11	Sewer Rehab and Replace <= 8" Diameter	0	416,000	1,731,000	1,800,000	1,872,000	2,812,000	2,474,000	2,573,000	2,968,000	3,391,000	3,842,000	23,879,000	0	23,879,000	0	23,879,000
12	Sewer Rehab and Replace > 8" Diameter	0	104,000	433,000	450,000	468,000	703,000	619,000	643,000	742,000	848,000	961,000	5,971,000	0	5,971,000	0	5,971,000
13	Manhole Adjustment Overlay	58,000	69,000	79,000	84,000	91,000	97,000	104,000	112,000	119,000	0	0	813,000	0	813,000	0	813,000
14	Portland Avenue Lift Station	0	208,000	0	0	0	0	0	0	0	0	0	208,000	0	208,000	0	208,000
15	Airport Industrial Park Lift Station Upgrade	0	215,000	0	0	0	0	0	0	684,000	0	0	899,000	0	899,000	0	899,000
16	Interstate 25 Crossing, 30th Ave. to Hwy 47	0	0	0	0	836,000	0	0	0	0	0	0	836,000	0	836,000	0	836,000
17	Heavy Equipment	0	312,000	324,000	337,000	351,000	365,000	380,000	395,000	411,000	0	0	2,875,000	0	2,875,000	0	2,875,000
18	Arkansas River Trail Repair	0	260,000	0	0	0	0	0	0	0	0	0	260,000	0	260,000	0	260,000
19	Arkansas River Xing @ Moffat	0	0	0	0	0	0	0	0	0	569,000	0	569,000	0	569,000	0	569,000
20	Total Collection System	58,000	1,584,000	2,567,000	5,146,000	3,618,000	3,977,000	3,577,000	3,723,000	4,924,000	4,808,000	7,393,000	41,375,000	5,065,000	36,310,000	0	36,310,000
Water Reclamation Facility																	
21	Dewatering System for Final Clarifiers	0	0	649,000	0	0	0	0	0	0	0	0	649,000	0	649,000	0	649,000
22	Secondary Clarifier Rehabilitation	0	44,000	0	0	0	0	0	0	0	0	0	44,000	0	44,000	0	44,000
23	WRF Chlorine Building Rehabilitation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	Loader Replacement	0	0	324,000	0	0	0	0	0	0	0	0	324,000	0	324,000	0	324,000
25	Master Plan Update	40,000	0	0	0	0	0	0	0	0	0	0	40,000	0	40,000	0	40,000
26	Raw Sewage PS Pump Replacement	0	0	0	0	315,000	337,000	361,000	0	0	0	0	1,013,000	1,013,000	0	0	0
27	Land Purchase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	Nutrient Removal-Aeration	0	0	0	14,286,000	0	0	0	0	0	0	0	14,286,000	14,286,000	0	0	0
29	Disinfection System Improvements	0	0	216,000	0	0	0	0	0	0	0	0	216,000	216,000	0	0	0
30	Effluent Clarifier Pipe Replacement	0	0	0	0	0	0	0	0	0	81,000	0	81,000	0	81,000	0	81,000
31	Roof Replacement	0	0	193,000	62,000	58,000	0	0	0	0	0	0	313,000	0	313,000	0	313,000
32	Disgester Covers Study	0	78,000	0	0	0	0	0	0	0	0	0	78,000	0	78,000	0	78,000
33	Reclamation Facility Rehab. and Replace.	0	520,000	541,000	562,000	585,000	744,000	703,000	731,000	806,000	886,000	970,000	7,048,000	0	7,048,000	0	7,048,000
34	Municipal Complex	0	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	2,500,000	0	2,500,000	0	2,500,000
35	Boiler 23 Replacement	0	0	0	0	409,000	0	0	0	0	0	0	409,000	0	409,000	0	409,000
36	Total Water Reclamation Facility	40,000	892,000	2,173,000	15,160,000	1,617,000	1,331,000	1,314,000	981,000	1,056,000	1,217,000	1,220,000	27,001,000	15,515,000	11,486,000	0	11,486,000
37	Total RR&D Projects	98,000	2,476,000	4,740,000	20,306,000	5,235,000	5,308,000	4,891,000	4,704,000	5,980,000	6,025,000	8,613,000	68,376,000	20,580,000	47,796,000	0	47,796,000
38	Total Capital Improvements	258,000	2,476,000	4,740,000	23,118,000	6,557,000	5,346,000	4,931,000	8,125,000	5,980,000	6,352,000	8,613,000	76,496,000	22,693,000	53,803,000	0	53,803,000
Capital Improvements Summarized by Funding Source																	
39	SRF Loan	0	0	216,000	18,761,000	350,000	375,000	401,000	0	0	0	2,590,000	22,693,000	0	22,693,000	0	22,693,000
40	Other	258,000	2,476,000	4,524,000	4,357,000	6,207,000	4,971,000	4,530,000	8,125,000	5,980,000	6,352,000	6,023,000	53,803,000	22,693,000	53,803,000	0	53,803,000
41	Total	258,000	2,476,000	4,740,000	23,118,000	6,557,000	5,346,000	4,931,000	8,125,000	5,980,000	6,352,000	8,613,000	76,496,000	22,693,000	53,803,000	0	53,803,000

City of Pueblo, Colorado
Wastewater Utility
Operating Subfund Cash Flow Analysis

Table 3-4
12/20/2006

Line No.	Description	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Beginning Balance	3,812,800	3,366,400	2,331,100	1,608,700	1,812,400	1,876,600	2,109,250	2,184,750	2,184,650	2,239,850	2,348,050
	Revenues											
2	Revenue from Adopted Service Rates (a)	6,869,400	6,903,500	6,937,400	6,971,700	7,005,700	7,040,200	7,074,600	7,109,200	7,144,400	7,179,100	7,214,600
3	Additional Service Revenue Required	0	1,299,600	3,919,600	5,412,000	7,118,300	7,948,200	8,830,500	9,353,200	9,895,800	10,457,500	11,041,000
4	Total Wastewater Service Rate Revenue	6,869,400	8,203,100	10,857,000	12,383,700	14,124,000	14,988,400	15,905,100	16,462,400	17,040,200	17,636,600	18,255,600
5	Miscellaneous Revenue	0	0	0	0	0	0	0	0	0	0	0
6	Investment Income	89,700	71,200	49,200	42,800	46,100	49,800	53,700	54,600	55,300	57,300	60,900
7	Total Revenues	6,959,100	8,274,300	10,906,200	12,426,500	14,170,100	15,038,200	15,958,800	16,517,000	17,095,500	17,693,900	18,316,500
	Revenue Requirements											
8	Operation and Maintenance Expense	6,088,400	6,087,600	6,386,400	6,701,300	7,032,700	7,624,050	7,999,700	8,395,500	8,812,300	9,251,500	9,714,300
9	Routine Capital Outlay	169,300	174,400	179,700	185,100	190,700	196,500	202,400	208,600	214,900	221,400	228,100
	Debt Service											
	Existing											
10	Revenue Bond	0	0	0	0	0	0	0	0	0	0	0
11	SRF Loan	547,800	547,600	547,400	545,500	547,500	549,400	544,900	545,400	545,500	545,200	549,900
	Proposed											
12	RR&D SRF Debt Service	0	0	0	17,600	1,385,000	1,385,000	1,385,000	1,467,600	1,467,600	1,467,600	1,467,600
13	Debt Issuance Expense	0	0	6,500	502,900	9,500	10,100	10,800	0	0	0	77,700
14	Interest During Construction	0	0	8,600	670,400	40,500	40,500	40,500	0	0	0	103,600
15	Total Debt Service	547,800	547,600	562,500	1,736,400	1,982,500	1,985,000	1,981,200	2,013,000	2,013,100	2,012,800	2,198,800
	Internal Utility Fund Transfers											
16	To (From) Plant Investment Fee Fund	0	0	0	0	0	0	0	0	0	0	0
17	To (From) SSCS Improvement Fund	0	0	0	0	0	0	1,200,000	1,200,000	0	0	0
18	To (From) RR&D Fund	600,000	2,500,000	4,500,000	3,600,000	4,900,000	5,000,000	4,500,000	4,700,000	6,000,000	6,100,000	6,000,000
19	Net Transfers	600,000	2,500,000	4,500,000	3,600,000	4,900,000	5,000,000	5,700,000	5,900,000	6,000,000	6,100,000	6,000,000
20	Total Revenue Requirements	7,405,500	9,309,600	11,628,600	12,222,800	14,105,900	14,805,550	15,883,300	16,517,100	17,040,300	17,585,700	18,141,200
21	Annual Surplus (Deficiency)	(446,400)	(1,035,300)	(722,400)	203,700	64,200	232,650	75,500	(100)	55,200	108,200	175,300
22	Ending Balance	3,366,400	2,331,100	1,608,700	1,812,400	1,876,600	2,109,250	2,184,750	2,184,650	2,239,850	2,348,050	2,523,350
23	Operating Reserve Ratio (90 Days O&M - 25%)	55%	38%	25%	27%	27%	28%	27%	26%	25%	25%	26%
24	Debt Service Coverage (110%) (b)	225%	468%	874%	327%	351%	365%	393%	394%	402%	409%	384%
	Indicated Adjustments											
25	Months Effective	3	9	12	12	12	12	12	12	12	12	12
26	Annual Revenue Adjustment Required	0.0%	25.1%	25.1%	13.5%	13.5%	5.6%	5.6%	3.0%	3.0%	3.0%	3.0%
27	Cumulative Increase	0.0%	25.1%	56.5%	77.6%	101.6%	112.9%	124.8%	131.6%	138.5%	145.7%	153.0%

(a) Revenue developed based on rate increases listed in Ordinances 6903 and 6904 passed on November 11, 2002.

(b) Total operating revenue plus PIF revenue and SSCS revenue less operation and maintenance expense divided by total debt service.

City of Pueblo, Colorado
Wastewater Utility
Projected Operation and Maintenance Expense and Routine Capital Outlay

Table 3-5
12/20/2006

Line No.	Description	Budget	Projected									
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Administration												
1	Salaries, Wages, and Benefits	144,300	153,000	162,200	171,900	182,200	193,100	204,700	217,000	230,000	243,800	258,400
2	Professional Services	62,000	63,900	65,800	67,800	69,800	71,900	74,100	76,300	78,600	81,000	83,400
3	Administrative Services	455,900	469,600	483,700	498,200	513,100	528,500	544,400	560,700	577,500	594,800	612,600
4	Legal Fees	401,000	120,000	123,600	127,300	131,100	135,000	139,100	143,300	147,600	152,000	156,600
5	All Other	69,000	71,100	73,200	75,400	77,700	80,000	82,400	84,900	87,400	90,000	92,700
6	Total Administration	1,132,200	877,600	908,500	940,600	973,900	1,008,500	1,044,700	1,082,200	1,121,100	1,161,600	1,203,700
Treatment Plant												
7	Salaries, Wages, and Benefits	1,634,100	1,732,100	1,836,000	1,946,200	2,063,000	2,186,800	2,318,000	2,457,100	2,604,500	2,760,800	2,926,400
8	Professional Services	321,400	331,000	340,900	351,100	361,600	372,400	383,600	395,100	407,000	419,200	431,800
9	Utilities	315,100	334,000	354,000	375,200	397,700	421,600	446,900	473,700	502,100	532,200	564,100
10	Repairs and Maintenance	125,000	128,800	132,700	136,700	140,800	145,000	149,400	153,900	158,500	163,300	168,200
11	All Other	470,900	485,000	499,600	514,600	530,000	546,900	564,200	582,400	601,500	621,400	642,000
12	Total Treatment Plant	2,866,500	3,010,900	3,163,200	3,323,800	3,493,100	3,693,750	3,913,750	4,151,700	4,433,100	4,722,300	5,033,900
Collection												
13	Salaries, Wages, and Benefits	1,001,700	1,061,800	1,125,500	1,193,000	1,264,600	1,340,500	1,420,900	1,506,200	1,596,600	1,692,400	1,793,900
14	Professional Services	10,000	10,300	10,600	10,900	11,200	11,500	11,800	12,200	12,600	13,000	13,400
15	Utilities	110,600	117,200	124,200	131,700	139,600	148,000	156,900	166,300	176,300	186,900	198,100
16	Repairs and Maintenance	130,800	134,700	138,700	142,900	147,200	151,600	156,100	160,800	165,600	170,600	175,700
17	All Other	40,500	41,700	43,000	44,300	45,600	47,000	48,400	49,900	51,400	52,900	54,500
18	Total Collection	1,293,600	1,365,700	1,442,000	1,522,800	1,608,200	1,698,600	1,794,100	1,895,400	2,002,500	2,115,800	2,235,600
Pretreatment												
19	Salaries, Wages, and Benefits	217,400	230,400	244,200	258,900	274,400	290,900	308,400	326,900	346,500	367,300	389,300
20	Billing and Admin Services	314,500	323,900	333,600	343,600	353,900	364,500	375,400	386,700	398,300	410,200	422,500
21	Professional Services	6,600	6,800	7,000	7,200	7,400	7,600	7,800	8,000	8,200	8,400	8,700
22	Utilities	5,700	6,000	6,400	6,800	7,200	7,600	8,100	8,600	9,100	9,600	10,200
23	All Other	9,800	10,100	10,400	10,700	11,000	11,300	11,600	11,900	12,300	12,700	13,100
24	Total Pretreatment	554,000	577,200	601,600	627,200	653,900	681,900	711,300	742,100	774,400	808,200	843,800
Engineering												
25	Salaries, Wages, and Benefits	228,700	242,400	256,900	272,300	288,600	305,900	324,300	343,800	364,400	386,300	409,500
26	Professional Services	7,200	7,400	7,600	7,800	8,000	8,200	8,400	8,700	9,000	9,300	9,600
27	All Other	6,200	6,400	6,600	6,800	7,000	7,200	7,400	7,600	7,800	8,000	8,200
28	Total Engineering	242,100	256,200	271,100	286,900	303,600	321,300	340,100	360,100	381,200	403,600	427,300
29	Total Operation and Maintenance Expense	6,088,400	6,087,600	6,386,400	6,701,300	7,032,700	7,624,050	7,999,700	8,395,500	8,812,300	9,251,500	9,714,300
Routine Capital Outlay												
30	Treatment Plant	46,000	47,400	48,800	50,300	51,800	53,400	55,000	56,700	58,400	60,200	62,000
31	Collection	60,000	61,800	63,700	65,600	67,600	69,600	71,700	73,900	76,100	78,400	80,800
32	Pretreatment	2,300	2,400	2,500	2,600	2,700	2,800	2,900	3,000	3,100	3,200	3,300
33	Engineering	61,000	62,800	64,700	66,600	68,600	70,700	72,800	75,000	77,300	79,600	82,000
34	Total Capital Outlay	169,300	174,400	179,700	185,100	190,700	196,500	202,400	208,600	214,900	221,400	228,100

City of Pueblo, Colorado
Wastewater Utility
Proposed Debt Service

Table 3-6
12/20/2006

Line No.	Description	Budget	Projected										Total
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2006-2016
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
SANITARY SEWER COLLECTION FEES (SSCF) PROJECTS													
Collection System													
1	Lake Avenue Upgrade North	0	0	0	0	0	0	0	0	0	0	0	0
2	Aster Avenue Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
3	Main Street/-25 Upgrade	0	0	0	0	163,200	163,200	163,200	163,200	163,200	163,200	163,200	1,142,400
4	Total SSCF Debt Service	0	0	0	0	163,200	163,200	163,200	163,200	163,200	163,200	163,200	1,142,400
PLANT INVESTMENT FEE (PIF) PROJECTS													
Water Reclamation Facility													
5	Master Plan Update	0	0	0	0	0	0	0	0	0	0	0	0
6	Raw Sewage PS Pump Replacement	0	0	0	0	0	0	9,200	9,200	9,200	9,200	9,200	36,800
7	Effluent Clarifier Pipe Replacement	0	0	0	0	0	0	0	0	0	0	0	0
8	Total PIF Debt Service	0	0	0	0	0	0	9,200	9,200	9,200	9,200	9,200	36,800
RENEWAL, REPLACEMENT, AND DEPRECIATION (RR&D) PROJECTS													
Collection System													
9	Prairie Avenue Main Replacement	0	0	0	0	201,900	201,900	201,900	201,900	201,900	201,900	201,900	1,413,300
10	Prairie Avenue Main Replacement	0	0	0	0	0	0	0	0	0	0	0	0
11	Sewer Rehab and Replace <= 8" Diameter	0	0	0	0	0	0	0	0	0	0	0	0
12	Sewer Rehab and Replace > 8" Diameter	0	0	0	0	0	0	0	0	0	0	0	0
13	Manhole Adjustment Overlay	0	0	0	0	0	0	0	0	0	0	0	0
14	Portland Avenue Lift Station	0	0	0	0	0	0	0	0	0	0	0	0
15	Airport Industrial Park Lift Station Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
16	Interstate 25 Crossing, 30th Ave. to Hwy 47	0	0	0	0	0	0	0	0	0	0	0	0
17	Heavy Equipment	0	0	0	0	0	0	0	0	0	0	0	0
18	Arkansas River Trail Repair	0	0	0	0	0	0	0	0	0	0	0	0
19	Arkansas River Xing @ Moffat	0	0	0	0	0	0	0	0	0	0	0	0
20	Total Collection System	0	0	0	0	201,900	201,900	201,900	201,900	201,900	201,900	201,900	1,413,300
Water Reclamation Facility													
21	Dewatering System for Final Clarifiers	0	0	0	0	0	0	0	0	0	0	0	0
22	Secondary Clarifier Rehabilitation	0	0	0	0	0	0	0	0	0	0	0	0
23	WRF Chlorine Building Rehabilitation	0	0	0	0	0	0	0	0	0	0	0	0
24	Loader Replacement	0	0	0	0	0	0	0	0	0	0	0	0
25	Master Plan Update	0	0	0	0	0	0	0	0	0	0	0	0
26	Raw Sewage PS Pump Replacement	0	0	0	0	0	0	82,600	82,600	82,600	82,600	82,600	330,400
27	Land Purchase	0	0	0	0	0	0	0	0	0	0	0	0
28	Nutrient Removal-Aeration	0	0	0	0	1,165,500	1,165,500	1,165,500	1,165,500	1,165,500	1,165,500	1,165,500	8,158,500
29	Disinfection System Improvements	0	0	0	17,600	17,600	17,600	17,600	17,600	17,600	17,600	17,600	140,800
30	Effluent Clarifier Pipe Replacement	0	0	0	0	0	0	0	0	0	0	0	0
31	Roof Replacement	0	0	0	0	0	0	0	0	0	0	0	0
32	Disgester Covers Study	0	0	0	0	0	0	0	0	0	0	0	0
33	Reclamation Facility Rehab. and Replace.	0	0	0	0	0	0	0	0	0	0	0	0
34	Boiler 23 Replacement	0	0	0	0	0	0	0	0	0	0	0	0
35	Total Water Reclamation Facility	0	0	0	17,600	1,183,100	1,183,100	1,183,100	1,265,700	1,265,700	1,265,700	1,265,700	8,629,700
36	Total RR&D Debt Service	0	0	0	17,600	1,385,000	1,385,000	1,385,000	1,467,600	1,467,600	1,467,600	1,467,600	10,043,000
37	Total Annual Debt Service	0	0	0	17,600	1,548,200	1,548,200	1,548,200	1,640,000	1,640,000	1,640,000	1,640,000	11,222,200

Debt service payments include 0.8 percent annual administrative fee.

City of Pueblo, Colorado
Wastewater Utility
Interest During Construction

Table 3-7
12/20/2006

Line No.	Description	Budget	Projected										Total
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2006-2016
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
SANITARY SEWER COLLECTION FEES (SSCF) PROJECTS													
Collection System													
1	Lake Avenue Upgrade North	0	0	0	0	0	0	0	0	0	0	0	0
2	Aster Avenue Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
3	Main Street/I-25 Upgrade	0	0	0	80,000	0	0	0	0	0	0	0	80,000
4	Total SSCF Interest During Construction	0	0	0	80,000	0	0	0	0	0	0	0	80,000
PLANT INVESTMENT FEE (PIF) PROJECTS													
Water Reclamation Facility													
5	Master Plan Update	0	0	0	0	0	0	0	0	0	0	0	0
6	Raw Sewage PS Pump Replacement	0	0	0	0	4,500	4,500	4,500	0	0	0	0	13,500
7	Effluent Clarifier Pipe Replacement	0	0	0	0	0	0	0	0	0	0	0	0
8	Total PIF Interest During Construction	0	0	0	0	4,500	4,500	4,500	0	0	0	0	13,500
RENEWAL, REPLACEMENT, AND DEPRECIATION (RR&D) PROJECTS													
Collection System													
9	Prairie Avenue Main Replacement	0	0	0	99,000	0	0	0	0	0	0	0	99,000
10	Prairie Avenue Main Replacement	0	0	0	0	0	0	0	0	0	0	103,600	103,600
11	Sewer Rehab and Replace <= 8" Diameter	0	0	0	0	0	0	0	0	0	0	0	0
12	Sewer Rehab and Replace > 8" Diameter	0	0	0	0	0	0	0	0	0	0	0	0
13	Manhole Adjustment Overlay	0	0	0	0	0	0	0	0	0	0	0	0
14	Portland Avenue Lift Station	0	0	0	0	0	0	0	0	0	0	0	0
15	Airport Industrial Park Lift Station Upgrade	0	0	0	0	0	0	0	0	0	0	0	0
16	Interstate 25 Crossing, 30th Ave. to Hwy 47	0	0	0	0	0	0	0	0	0	0	0	0
17	Heavy Equipment	0	0	0	0	0	0	0	0	0	0	0	0
18	Arkansas River Trail Repair	0	0	0	0	0	0	0	0	0	0	0	0
19	Arkansas River Xing @ Moffat 0	0	0	0	0	0	0	0	0	0	0	0	0
20	Total Collection System	0	0	0	99,000	0	0	0	0	0	0	103,600	202,600
Water Reclamation Facility													
21	Dewatering System for Final Clarifiers	0	0	0	0	0	0	0	0	0	0	0	0
22	Secondary Clarifier Rehabilitation	0	0	0	0	0	0	0	0	0	0	0	0
23	WRF Chlorine Building Rehabilitation	0	0	0	0	0	0	0	0	0	0	0	0
24	Loader Replacement	0	0	0	0	0	0	0	0	0	0	0	0
25	Master Plan Update	0	0	0	0	0	0	0	0	0	0	0	0
26	Raw Sewage PS Pump Replacement	0	0	0	0	40,500	40,500	40,500	0	0	0	0	121,500
27	Land Purchase	0	0	0	0	0	0	0	0	0	0	0	0
28	Nutrient Removal-Aeration	0	0	0	571,400	0	0	0	0	0	0	0	571,400
29	Disinfection System Improvements	0	0	8,600	0	0	0	0	0	0	0	0	8,600
30	Effluent Clarifier Pipe Replacement	0	0	0	0	0	0	0	0	0	0	0	0
31	Roof Replacement	0	0	0	0	0	0	0	0	0	0	0	0
32	Disgester Covers Study	0	0	0	0	0	0	0	0	0	0	0	0
33	Reclamation Facility Rehab. and Replace.	0	0	0	0	0	0	0	0	0	0	0	0
34	Boiler 23 Replacement	0	0	0	0	0	0	0	0	0	0	0	0
35	Total Water Reclamation Facility	0	0	8,600	571,400	40,500	40,500	40,500	0	0	0	0	701,500
36	Total RR&D Interest During Construction	0	0	8,600	670,400	40,500	40,500	40,500	0	0	0	103,600	904,100
37	Total Interest During Construction	0	0	8,600	750,400	45,000	45,000	45,000	0	0	0	103,600	997,600

City of Pueblo

Chapter 4: Rate Design



4.0 Rate Design

The principal consideration in establishing wastewater rate schedules is to design rates that are reasonably commensurate with the cost of providing wastewater service. Theoretically, the only method of assessing entirely equitable rates for wastewater service would be the determination of each customer's bill based upon the customer's particular service requirements. Since this is impractical, schedules of rates are normally designed to meet average conditions for groups of customers having similar service requirements. Practicality also dictates the use of a rate schedule which is simple to apply, reasonably recovers costs from all classes, and is subject to as few misinterpretations as possible.

4.1 Proposed Cost of Service Rates

The proposed revenue adjustments described in the previous chapter and cost of service allocations described in Chapter 5 of this report provide the basis for designing wastewater rates. The revenue requirements show the need for adjustment in the level of revenue required. The allocations provide the unit costs of service used in the rate design process and a basis for determining whether proposed rates will reasonably recover cost of service from customer classes as well as provide the total level of revenue required.

Proposed cost of service rates (proposed rates) developed for the study period are shown in Table 4-1. Proposed rates retain the service charge which varies by meter size and a volume charge per thousand gallons which varies with the type of customer. The monthly service charge is designed to recover all customer-related costs, such as billing and collecting, and the costs associated with infiltration/inflow (I/I). The volume charge is designed to recover volume and normal strength related costs. The volume charge is applicable to the winter period water usage for all customers, excluding sanitation company customers. Winter period water usage is calculated as the average monthly water use beginning with the water meter reading in January and ending in February. This amount is then used for the next 10 months until a new average monthly water use is calculated. This is a commonly used practice to estimate water use that reaches the wastewater treatment plant. The volume charge for the "sanitation company" customer class is applied to all volume delivered at the treatment plant.

4.2 Typical Monthly Residential Bills

Monthly bills will increase by an average of \$2.90 in 2007 for residential $\frac{3}{4}$ -inch water meter customers based on a billable volume of 5,000 gallons. Monthly bills will increase by an average of \$4.50 in 2007 for commercial 1-inch water meter customers based on a billable volume of 13,000 gallons. Table 1-2 shows typical residential and commercial monthly bills under existing and proposed rates for the study period based on the winter period water usage of 5,000 gallons and 13,000 gallons, respectively.

**City of Pueblo, Colorado
Wastewater Utility
Comparison of Existing and Proposed Monthly Rates**

**Table 4-1
12/20/2006**

Service Charge, \$ per bill

**Water Meter
Size
inches**

	Proposed										
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
5/8 & 3/4	4.35	6.85	8.40	9.50	10.80	11.45	12.10	12.50	12.85	13.25	13.65
1	4.49	7.95	9.95	11.35	12.85	13.70	14.55	15.05	15.55	16.05	16.55
1-1/2	4.65	11.40	14.95	17.20	19.35	20.80	22.30	23.15	24.00	24.90	25.80
2	5.05	16.50	22.35	25.75	28.90	31.25	33.70	35.10	36.55	38.00	39.50
3	6.00	28.45	39.65	45.95	51.45	55.95	60.65	63.30	66.05	68.85	71.75
4	10.80	41.25	58.15	67.45	75.45	82.20	89.35	93.35	97.50	101.80	106.15
6	18.00	66.75	95.15	110.50	123.55	134.85	146.75	153.50	160.45	167.60	174.95
8	25.20	88.15	126.05	146.55	163.80	178.90	194.85	203.85	213.15	222.70	232.55

Volume Charge, \$ per 1,000 gallons

Customer Class

Residential	1.48	1.56	1.96	2.22	2.52	2.70	2.80	2.90	3.00	3.05	3.12
Commercial	1.48	1.56	1.96	2.22	2.52	2.70	2.80	2.90	3.00	3.05	3.12
Sanitation Companies	24.60	28.20	32.60	35.60	39.00	40.60	42.30	43.25	44.25	45.25	46.26
Non-Industrial	1.10	1.34	1.61	1.79	2.00	2.10	2.20	2.26	2.32	2.38	2.44
Industrial	1.12	1.34	1.61	1.79	2.00	2.10	2.20	2.26	2.32	2.38	2.44

Extra Strength Charges, \$ per pound

BOD	0.194	0.240	0.300	0.335	0.380	0.400	0.420	0.435	0.445	0.460	0.470
TSS	0.134	0.150	0.165	0.180	0.190	0.195	0.205	0.205	0.210	0.215	0.216

Monitoring Charge, \$ per bill	170.00	176.30	184.20	189.50	195.50	198.30	201.30	203.00	204.75	206.55	208.35
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**City of Pueblo, Colorado
Wastewater Utility
Comparison of Typical Monthly Bills**

**Table 4-2
1/22/2007**

Residential 3/4-inch Customer 5,000 Gallons Billable Water Volume				Commercial 1-inch Customer 13,000 Gallons Billable Water Volume				
Year	Service Charge \$	Total \$	Variance \$	Year	Service Charge \$	Volume Charge \$	Total \$	Variance \$
Existing	4.35	11.75		Existing	4.49	19.24	23.73	
Proposed				Proposed				
2007	6.85	14.65	2.90	2007	7.95	20.28	28.23	4.50
2008	8.40	18.20	3.55	2008	9.95	25.48	35.43	7.20
2009	9.50	20.60	2.40	2009	11.35	28.86	40.21	4.78
2010	10.80	23.40	2.80	2010	12.85	32.76	45.61	5.40
2011	11.45	24.95	1.55	2011	13.70	35.10	48.80	3.19
2012	12.10	26.10	1.15	2012	14.55	36.40	50.95	2.15
2013	12.50	27.00	0.90	2013	15.05	37.70	52.75	1.80
2014	12.85	27.85	0.85	2014	15.55	39.00	54.55	1.80
2015	13.25	28.50	0.65	2015	16.05	39.65	55.70	1.15
2016	13.65	29.25	0.75	2016	16.55	40.56	57.11	1.41

City of Pueblo

Chapter 5: Cost of Service



5.0 Cost of Service

In developing an equitable schedule of charges for wastewater service, cost of service is allocated to various customer classes according to service requirements of each class. Allocation of cost of service takes into account volume of wastewater contributed, strength of wastewater, number of customers, and other relevant factors. Cost of service allocations are made for a test year considered representative of the period in which resultant rates are expected to be in effect. The year 2016 was selected as the test year for this study.

5.1 Test Year Cost of Service

Total test year cost of service includes revenue requirements and annual operating reserve requirements, and is net of miscellaneous revenue and investment income. Cost of service equals \$18,255,600 for the test year. Table 5-1 summarizes the test year cost of service.

Functional Cost Components

Costs of wastewater service may be classified and assigned to volume, strength, and customer cost components. Volume costs, including backbone collection volume, vary with the quantity of wastewater contributed. Strength costs vary with the strength of wastewater contributed. Customer and monitoring costs vary in proportion to the number of customers served by the system.

Allocation to Cost Components

The separation of costs into functional components provides a means for distributing such costs to various classes of customers based on their respective responsibilities for each particular type of service. Table 5-2 shows allocation of O&M to functional cost components. The wastewater system assets allocations in Table 5-3 provide a reasonable basis for allocating annual capital costs. Table 5-4 shows the allocation of annual revenue requirement capital costs.

Revenue requirements are generally allocated to the functional cost component that best reflects the design parameter of the associated facility and has the most significant influence on the magnitude of that expense. For example, trunk sewer assets are allocated to the backbone collection cost component (mains greater than 10") since these facilities are designed to convey wastewater volume from customers that are served by large diameter mains. Some of the revenue requirements can be directly assigned to a specific cost

component. Billing and administrative services are directly allocated to billing. Wastewater monitoring expenses are identified with system facilities or activities to the extent possible to simplify the allocation process. Those expenses that are not specifically assigned are allocated in proportion to all other wastewater treatment and collection system maintenance expenses.

5.2 Allocation of Costs to Customer Classes

Wastewater customers have been separated into the following classes: residential, commercial, sanitation companies, Blende industrial, and Blende non-industrial. The classes group together customers with similar service requirement characteristics and provide a means for allocating costs to customers.

Units of Service

Estimated class units of service are summarized in Table 5-5. Historical data and information provided from utility records were used to estimate projected units of service. Wastewater collected and treated consists of two elements: (1) contributed sanitary and industrial wastewater flow, and (2) I/I of groundwater into the sewers. Contributed wastewater flow is that portion of annual water use or other discharge of each customer class that enters the wastewater system. Estimates of contributed volume of each class are generally based upon water billing records that exclude estimated water use not reaching the wastewater system, such as that used for lawn sprinkling and car washing or that included in manufactured products. The estimated total contributed wastewater volume for the test year is 3,428,200 thousand gallons. This yearly amount is based on an annualized monthly average of water usage during two winter months.

It is estimated that the amount of flow entering the sewers through I/I will average approximately 2 percent of total wastewater flow reaching the treatment plant, or about 70,000 thousand gallons. Each customer class should bear its proportionate share of the costs associated with I/I as the wastewater system must be adequate to convey and process the total wastewater flow. I/I is allocated to customer classes on the premise that two-thirds of the total is distributable on the basis of the number of customers with the remaining one-third allocated on the basis of contributed volume.

Total strength units are based on an estimate of projected strength of wastewater contributed to the wastewater treatment plant during the 2016 test year. Based upon an analysis of historical wastewater treatment plant data, the average wastewater biochemical oxygen demand concentration is estimated to be 250 milligrams per liter (mg/l) and the average total suspended solids concentration is estimated to be 280 mg/l.

The wastewater utility share of customer-related billing and collection costs associated with wastewater billing is allocated on the basis of the number of bills.

Unit Costs of Service

The development of test year unit cost of service for each functional cost component is shown in Table 5-6. The allocation of test year cost of service to functional cost components is summarized on Lines 1 through 5, and units of service are shown on Lines 6 through 8. Unit costs are shown on Lines 9 and 10 and are calculated by dividing functionalized cost of service by applicable units of service. Blende provides its own collection system to convey wastewater to the City's wastewater treatment plant; thus, it is not allocated any of the collection system costs.

Customer Class Cost of Service

The total unit costs of service applied to respective service requirements for each customer class results in total allocated cost of service for each customer class as shown in Table 5-7. Total cost of service for each class is based on unit costs of service from Table 5-6 and units of service from Table 5-5.

A comparison of class cost of service with revenue under existing rates and the indicated adjustment in the level of revenue for each class required to meet costs is shown in Table 5-8.

**City of Pueblo, Colorado
Wastewater Utility
Total Cost of Service
Test Year 2016**

**Table 5-1
12/20/2006**

Line No.	Description	(1) O&M Expense \$	(2) Capital Costs \$	(3) Total \$
Revenue Requirements				
1	Operation and Maintenance Expen:	9,714,300		9,714,300
2	Debt Service		2,198,800	2,198,800
3	Routine Capital Outlay		228,100	228,100
Transfers				
4	To (From) Plant Investment Fee Fund		0	0
5	To (From) SSCS Improvement Fund		0	0
6	To (From) RR&D Fund		6,000,000	6,000,000
7	To (From) General Fund	0		0
8	Total Revenue Requirements	9,714,300	8,426,900	18,141,200
Revenue Requirement Adjustments				
9	Miscellaneous Operating Fund Rev	0		0
10	Operating Fund Investment Income	(60,900)		(60,900)
11	Operating Fund Reserve Increase (175,300		175,300
12	Total Revenue Requirement Adju	114,400	0	114,400
13	Total Cost of Service	9,828,700	8,426,900	18,255,600

City of Pueblo, Colorado
Wastewater Utility
Allocation of Operation and Maintenance Expense
Test Year 2016

Table 5-2
12/20/2006

Line No.	Description	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Total	Volume	Strength		Customer		Backbone Collection	Monitoring
		\$	\$	BOD	TSS	Local Collector Sewers	Billing	Volume	\$
		\$	\$	\$	\$	\$	\$	\$	\$
Administration									
1	Salaries, Wages, and Benefits	258,400	70,400	59,000	43,400	61,500	13,500	10,000	600
2	Professional Services	83,400	22,800	19,000	14,000	19,800	4,400	3,200	200
3	Administrative Services	612,600					612,600		
4	Legal Fees	156,600					156,600		
5	All Other	92,700	25,200	21,200	15,600	22,100	4,800	3,600	200
6	Total Administration	1,203,700	118,400	99,200	73,000	103,400	791,900	16,800	1,000
Treatment Plant									
7	Salaries, Wages, and Benefits	2,926,400	1,199,800	995,000	731,600				
8	Professional Services	431,800	177,000	146,800	108,000				
9	Utilities	564,100	231,300	191,800	141,000				
10	Repairs and Maintenance	168,200	68,900	57,200	42,100				
11	All Other	913,400	356,900	310,600	228,400				17,500
12	Total Treatment Plant	5,003,900	2,033,900	1,701,400	1,251,100	0	0	0	17,500
Collection									
13	Salaries, Wages, and Benefits	1,793,900				1,543,400		250,500	
14	Professional Services	13,400				11,500		1,900	
15	Utilities	198,100				170,400		27,700	
16	Repairs and Maintenance	175,700				151,200		24,500	
17	All Other	54,500				46,900		7,600	
18	Total Collection	2,235,600	0	0	0	1,923,400	0	312,200	0
Pretreatment									
19	Salaries, Wages, and Benefits	389,300	159,600	132,400	97,300				
20	Billing and Admin Services	422,500					422,500		
21	Professional Services	8,700	3,500	3,000	2,200				
22	Utilities	10,200	4,100	3,500	2,600				
23	All Other	13,100	5,300	4,500	3,300				
24	Total Pretreatment	843,800	172,500	143,400	105,400	0	422,500	0	0
Engineering									
25	Salaries, Wages, and Benefits	409,500	111,800	93,500	68,700	97,400	21,400	15,800	900
26	Professional Services	9,600	2,600	2,200	1,600	2,300	500	400	0
27	All Other	8,200	2,200	1,900	1,400	2,000	400	300	0
28	Total Engineering	427,300	116,600	97,600	71,700	101,700	22,300	16,500	900
29	Total Operation and Maintenance	9,714,300	2,441,400	2,041,600	1,501,200	2,128,500	1,236,700	345,500	19,400
30	<i>Percent of Total</i>	<i>100.0%</i>	<i>25.1%</i>	<i>21.0%</i>	<i>15.5%</i>	<i>21.9%</i>	<i>12.7%</i>	<i>3.6%</i>	<i>0.2%</i>
31	Annual Operating Costs	9,714,300	2,441,400	2,041,600	1,501,200	2,128,500	1,236,700	345,500	19,400

City of Pueblo, Colorado
Wastewater Utility
Allocation of Wastewater System Assets (a)
Test Year 2016

Table 5-3
12/20/2006

Line No.	Description	(1)	(2)	(3)		(4)	(5)		(6)	(7)	(8)
		Total	Volume	Strength		BOD	TSS	Local Collector Sewers	Billing	Backbone Collection Volume	Monitoring
		\$	\$	\$	\$	\$	\$	\$	\$	\$	
Collection System											
1	Local Collector Sewers	36,616,487	0				36,616,487				
2	Trunk Sewers	21,755,823	0							21,755,823	
3	Pumping Stations	4,377,800	0							4,377,800	
4	Total Collection System	62,750,110	0	0	0	0	36,616,487	0	0	26,133,623	0
Treatment Plant											
5	Outfall	25,700	25,700								
6	Digesters, Deactivated Sludge, Gra	7,260,010	0	3,630,010	3,630,000						
7	Aeration, Blower Bldg	16,855,000	0	16,855,000							
8	Headworks, Grit Remover	5,425,500	5,425,500								
9	Trickling Filter	1,258,300	0	1,258,300							
10	Primary Clarifier	2,061,400	2,061,400								
11	Secondary Clarifier	2,246,600	2,246,600								
12	Disinfection	3,883,100	3,883,100								
13	General WWTP	5,588,890	1,779,890	3,331,392	477,608						
14	Total Treatment Plant	44,604,500	15,422,190	25,074,702	4,107,608	0	0	0	0	0	0
15	Subtotal of All Above	107,354,610	15,422,190	25,074,702	4,107,608	36,616,487	0	0	26,133,623	0	0
16	General System	13,048,300	4,155,484	7,777,752	1,115,064						
17	Total Plant	120,402,910	19,577,674	32,852,455	5,222,671	36,616,487	0	0	26,133,623	0	0
18	<i>Percent of Total</i>	<i>100.0%</i>	<i>16.3%</i>	<i>27.3%</i>	<i>4.3%</i>	<i>30.4%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>21.7%</i>	<i>0.0%</i>	<i>0.0%</i>

(a) Assets valued at original cost.

City of Pueblo, Colorado
Wastewater Utility
Allocation of Annual Capital Costs
Test Year 2016

Table 5-4
12/20/2006

Line No.	Description	(1)	(2)	(3)	(4)	Customer		(7)	(8)
		Total	Volume	Strength		Local Collector Sewers	Billing	Backbone Collection Volume	Monitoring
		\$	\$	\$	\$	\$	\$	\$	\$
Annual Capital Cost Allocation									
1	Debt Service								
2	Existing	549,900						549,900	
	Proposed								
3	Collection Related	383,200	0					383,200	
4	WRF Related	1,265,700	437,600	711,500	116,600				
5	Routine Capital	228,100	37,100	62,200	9,900	69,400	0	49,500	0
	Transfers								
6	To (From) Plant Investment Fee Fu	0	0	0	0				
7	To (From) SSCS Improvement Fun	0						0	
	RR&D Projects								
8	Sewer Rehabilitation and Replace	3,842,000				3,842,000			
9	Sewer Rehabilitation and Replace	961,000						961,000	
10	WRF Rehabilitation and Replacer	970,000	335,400	545,300	89,300				
11	All Other Miscellaneous R&R Proj	227,000	57,000	47,700	35,100	49,700	28,900	8,100	500
12	Total Annual Capital Costs	8,426,900	867,100	1,366,700	250,900	3,961,100	28,900	1,951,700	500

City of Pueblo, Colorado
Wastewater Utility
Estimated Units of Service
Test Year 2016

Table 5-5
12/20/2006

Line No.	Customer Class	(1)	(2)	(3)	Contributed Wastewater Strength				(8)	(9)	(10)
		Wastewater Volume			BOD		TSS		Bills	Equivalent Meters	Monitoring
		Billed/Contributed 1,000 gal	Infiltration/ Inflow 1,000 gal	Total 1,000 gal	Strength mg/L	Contribution lbs	Strength mg/L	Contribution lbs			
Inside City											
1	Residential	1,863,100	54,100	1,917,200	251	3,901,100	270	4,270,200	414,012	39,083	0
2	Commercial	1,523,200	15,600	1,538,800	251	3,190,400	270	3,492,300	52,224	8,275	12
3	Sanitation Companies	2,700	0	2,700	5,171	116,000	13,923	314,000	72		72
4	Total Inside City	3,389,000	69,700	3,458,700		7,207,500		8,076,500	466,308	47,358	84
Outside City											
5	Non-Industrial	38,700	300	39,000	251	81,000	270	88,700	12		
6	Industrial	500	0	500	1,320	5,500	910	3,800	12		12
7	Total Outside City	39,200	300	39,500		86,500		92,500	24	0	12
8	Total System	3,428,200	70,000	3,498,200	250	7,294,000	280	8,169,000	466,332	47,358	96

City of Pueblo, Colorado
Wastewater Utility
Development of Unit Costs of Service
Test Year 2016

Table 5-6
12/20/2006

Line No.	Description	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Total	Volume	Strength		Local Collector Sewers	Billing	Backbone Collection Volume	Monitoring
				BOD	TSS				
Revenue Requirements - \$									
1	Operation and Maintenance Expen	9,714,300	2,441,400	2,041,600	1,501,200	2,128,500	1,236,700	345,500	19,400
2	Capital Costs	8,426,900	867,100	1,366,700	250,900	3,961,100	28,900	1,951,700	500
3	Total Revenue Requirements	18,141,200	3,308,500	3,408,300	1,752,100	6,089,600	1,265,600	2,297,200	19,900
4	Adjustments	114,400	20,900	21,500	11,000	38,400	8,000	14,500	100
5	Total Cost of Service	18,255,600	3,329,400	3,429,800	1,763,100	6,128,000	1,273,600	2,311,700	20,000
Units of Service									
	Units		<u>1,000 gal</u>	<u>lbs</u>	<u>lbs</u>	Equivalent meters	<u># of bills</u>	<u>1,000 gal</u>	<u># of bills</u>
	Values								
6	Inside City		3,458,700	7,207,500	8,076,500	47,358	466,236	3,456,000	84
7	Outside City		39,500	86,500	92,500		24		12
8	Total Units of Service		3,498,200	7,294,000	8,169,000	47,358	466,260	3,456,000	96
9	Inside City Unit Costs - \$ per unit		0.952	0.470	0.216	129.397	2.732	0.669	208.333
10	Outside City Unit Costs - \$ per unit		0.952	0.470	0.216		2.732		208.333

City of Pueblo, Colorado
Wastewater Utility
Distribution of Costs to Customer Classes
Test Year 2016

Table 5-7
12/20/2006

Line No.	Description	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		Total	Volume	Strength BOD TSS		Local Collector Sewers	Billing	Backbone Collection Volume	Monitoring
Unit Costs of Service - \$/unit									
1	Inside City		0.952	0.470	0.216	129.397	2.732	0.669	208.333
2	Outside City		0.952	0.470	0.216	0.000	2.732	0.000	208.333
Inside City									
Residential									
3	Units		1,917,200	3,901,100	4,270,200	39,083	414,012	1,917,200	
4	Cost of Service - \$	12,051,300	1,824,700	1,834,400	921,700	5,057,200	1,130,900	1,282,400	
Commercial									
5	Units		1,538,800	3,190,400	3,492,300	8,275	52,224	1,538,800	12
6	Cost of Service - \$	5,963,700	1,464,500	1,500,200	753,700	1,070,800	142,700	1,029,300	2,500
Sanitation Companies									
7	Units		2,700	116,000	314,000				72
8	Cost of Service - \$	139,900	2,600	54,500	67,800				15,000
9	Total Inside City - \$	18,154,900	3,291,800	3,389,100	1,743,200	6,128,000	1,273,600	2,311,700	17,500
Outside City									
Non-Industrial									
10	Units		39,000	81,000	88,700	12	12	39,000	
11	Cost of Service - \$	94,300	37,100	38,100	19,100	0	0	0	
Industrial									
12	Units		500	5,500	3,800	12	12	500	12
13	Cost of Service - \$	6,400	500	2,600	800	0	0	0	2,500
14	Total Outside City - \$	100,700	37,600	40,700	19,900	0	0	0	2,500
15	Total System	18,255,600	3,329,400	3,429,800	1,763,100	6,128,000	1,273,600	2,311,700	20,000

**City of Pueblo, Colorado
Wastewater Utility
Comparison of Costs of Service
With Revenues Under Existing Rates
Test Year 2016**

**Table 5-8
12/20/2006**

Line No.	Customer Class	(1) Cost of Service \$	(2) Revenue at Existing Rates \$	(3) Indicated Revenue Adjustment \$
Inside City				
1	Residential	12,051,300	4,361,100	7,690,200
2	Commercial	5,963,700	2,383,300	3,580,400
3	Sanitation Companies	139,900	78,700	61,200
4	Total Inside City	18,154,900	6,823,100	11,331,800
Outside City				
5	Non-Industrial	94,300	42,600	51,700
6	Industrial	6,400	3,800	2,600
7	Total Outside City	100,700	46,400	117.0
8	Total System	18,255,600	6,869,500	11,386,100

City of Pueblo

Appendix



City of Pueblo, Colorado
Wastewater Utility
Plant Investment Fee Subfund Cash Flow Analysis

Table A
12/20/2006

Line No.	Description	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Beginning Balance	817,100	833,400	1,017,600	1,210,100	1,408,300	1,611,200	1,832,200	2,101,700	2,376,000	2,660,700	2,620,100
	Sources of Funds											
2	Plant Investment Fee (PIF) Revenue	155,700	161,100	164,700	165,500	179,500	184,000	226,500	227,500	230,900	229,600	232,000
3	SRF Loan	0	0	0	0	35,000	38,000	40,000	0	0	0	0
4	Investment Income	20,600	23,100	27,800	32,700	37,300	42,600	48,700	56,000	63,000	66,000	69,200
5	Total Sources	176,300	184,200	192,500	198,200	251,800	264,600	315,200	283,500	293,900	295,600	301,200
	Uses of Funds											
	Growth Related WWTP CIP											
6	SRF Fund Projects	0	0	0	0	35,000	38,000	40,000	0	0	0	0
7	All Other Projects	160,000	0	0	0	0	0	0	0	0	327,000	0
	Proposed Debt Service											
8	Debt Service	0	0	0	0	0	0	0	9,200	9,200	9,200	9,200
9	Interest During Construction	0	0	0	0	4,500	4,500	4,500	0	0	0	0
10	Debt Service Reserve	0	0	0	0	8,300	0	0	0	0	0	0
11	Debt Issuance Issuance Expense	0	0	0	0	1,100	1,100	1,200	0	0	0	0
12	Total Uses	160,000	0	0	0	48,900	43,600	45,700	9,200	9,200	336,200	9,200
13	Annual Surplus (Deficiency)	16,300	184,200	192,500	198,200	202,900	221,000	269,500	274,300	284,700	(40,600)	292,000
14	Ending Balance	833,400	1,017,600	1,210,100	1,408,300	1,611,200	1,832,200	2,101,700	2,376,000	2,660,700	2,620,100	2,912,100
15	Target Reserve	300,000	310,000	320,000	330,000	340,000	350,000	360,000	370,000	380,000	390,000	400,000

City of Pueblo, Colorado
Wastewater Utility
Sanitary Sewer Collection System Improvement Subfund Cash Flow Analysis

Table B
12/20/2006

Line No.	Description	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Beginning Balance	2,012,100	2,271,300	2,545,400	2,844,500	2,168,600	1,013,400	1,143,300	2,476,400	380,200	499,300	619,900
	Sources of Funds											
2	Sanitary Sewer Connec. Fee (SSCF) Revenue	205,700	213,900	231,700	238,400	255,200	266,100	266,100	267,300	271,300	269,800	272,600
3	SRF Loans	0	0	0	2,000,000	0	0	0	0	0	0	0
4	Transfer From/(To) Operating Subfund	0	0	0	0	0	0	1,200,000	1,200,000	0	0	0
5	Investment Income	53,500	60,200	67,400	37,700	39,800	27,000	30,200	20,700	11,000	14,000	17,100
6	Total Sources	259,200	274,100	299,100	2,276,100	295,000	293,100	1,496,300	1,488,000	282,300	283,800	289,700
	Uses of Funds											
	Growth Related Collection System CIP											
7	SRF Fund Projects	0	0	0	2,000,000	0	0	0	0	0	0	0
8	All Other Projects	0	0	0	812,000	1,287,000	0	0	3,421,000	0	0	0
	Proposed Debt Service											
9	Debt Service	0	0	0	0	163,200	163,200	163,200	163,200	163,200	163,200	163,200
10	Interest During Construction	0	0	0	80,000	0	0	0	0	0	0	0
11	Debt Service Reserve	0	0	0	0	0	0	0	0	0	0	0
12	Debt Issuance Expense	0	0	0	60,000	0	0	0	0	0	0	0
13	Total Uses	0	0	0	2,952,000	1,450,200	163,200	163,200	3,584,200	163,200	163,200	163,200
14	Annual Surplus (Deficiency)	259,200	274,100	299,100	(675,900)	(1,155,200)	129,900	1,333,100	(2,096,200)	119,100	120,600	126,500
15	Ending Balance	2,271,300	2,545,400	2,844,500	2,168,600	1,013,400	1,143,300	2,476,400	380,200	499,300	619,900	746,400
16	Target Reserve	300,000	310,000	320,000	330,000	340,000	350,000	360,000	370,000	380,000	390,000	400,000

City of Pueblo, Colorado
Wastewater Utility
Renewal, Replacement and Depreciation Subfund Cash Flow Analysis

Table C
12/20/2006

Line No.	Description	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
1	Beginning Balance	0	508,400	545,600	532,400	587,400	578,000	617,700	598,400	609,500	645,200	737,500
	Sources of Funds											
2	Transfer From/(To) Operating Subfund	600,000	2,500,000	4,500,000	3,600,000	4,900,000	5,000,000	4,500,000	4,700,000	6,000,000	6,100,000	6,000,000
3	SRF Loans	0	0	216,000	16,761,000	315,000	337,000	361,000	0	0	0	2,590,000
4	Investment Income	6,400	13,200	10,800	0	10,600	10,700	10,700	15,100	15,700	17,300	0
5	Total Sources	606,400	2,513,200	4,726,800	20,361,000	5,225,600	5,347,700	4,871,700	4,715,100	6,015,700	6,117,300	8,590,000
	Uses of Funds											
	Renewals, Replacements, and Improvements CIP											
6	SRF Fund Projects	0	0	216,000	16,761,000	315,000	337,000	361,000	0	0	0	2,590,000
7	All Other Projects	98,000	2,476,000	4,524,000	3,545,000	4,920,000	4,971,000	4,530,000	4,704,000	5,980,000	6,025,000	6,023,000
8	Total Uses	98,000	2,476,000	4,740,000	20,306,000	5,235,000	5,308,000	4,891,000	4,704,000	5,980,000	6,025,000	8,613,000
9	Annual Surplus (Deficiency)	508,400	37,200	(13,200)	55,000	(9,400)	39,700	(19,300)	11,100	35,700	92,300	(23,000)
10	Ending Balance	508,400	545,600	532,400	587,400	578,000	617,700	598,400	609,500	645,200	737,500	714,500
11	Target Balance	500,000	520,000	540,000	560,000	580,000	600,000	620,000	640,000	660,000	680,000	700,000

