

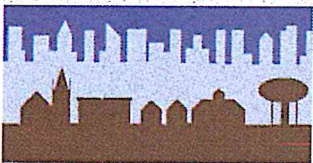
Prepared for



City of Westminster

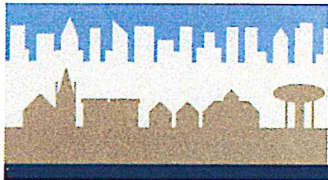
Water and Sewer Cost of Service Study Utility Basis

Prepared by



**Municipal & Financial
Services Group**
906-A Commerce Road
Annapolis, MD 21401
410.266.9101

September 2008



Municipal & Financial Services Group

22 September 2008

Mr. Gary Ehlers
Director - Administrative Services
Westminster City Hall
1838 Emerald Hill Lane
Westminster, MD 21158

Dear Mr. Ehlers:

We are pleased to submit our final report summarizing the work performed during the Water and Sewer Rate Study.

It has been a distinct pleasure working with and for the City of Westminster. The positive attitude, competence and cooperation of the City staff enabled us to complete this study without difficulty. We believe the financial model is a useful tool that can be used to monitor the financial health of the water and sewer enterprise funds and should be updated annually during the budget process.

We sincerely appreciate the opportunity to be of service to the City and look forward to an ongoing relationship with you.

Sincerely,

Lisa M. Zitomer
Manager

Edward J. Donahue III
President

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APPENDIX A - FINANCIAL MODEL

Water and Sewer Cost of Service Model consisting of the following schedules:

SCHEDULE 1A - OPERATING EXECUTIVE SNAPSHOT
SCHEDULE 1B - CAPITAL EXECUTIVE SNAPSHOT
SCHEDULE 2 - O&M EXPENSES
SCHEDULE 3 - EXISTING DEBT SERVICE
SCHEDULE 4 - CAPITAL IMPROVEMENT PROJECTS
SCHEDULE 5A - USER - CASH FUNDED CIP
SCHEDULE 5B - USER - BOND FUNDED CIP
SCHEDULE 5C - GROWTH - CASH FUNDED CIP
SCHEDULE 5D - GROWTH - BOND FUNDED CIP
SCHEDULE 6 - PROJECTED USER DEBT
SCHEDULE 7 - RETURN ON EQUITY
SCHEDULE 8 - OPERATING AND MAINTENANCE RESERVE
SCHEDULE 9A - REPAIR, RENEWAL AND REPLACEMENT RESERVE (3R RESERVE)
SCHEDULE 9B - SYSTEM INVESTMENT
SCHEDULE 10A - CONSUMPTION-CUSTOMERS
SCHEDULE 10B - CONSUMPTION-CUSTOMERS HISTORY AND PROJECTIONS
SCHEDULE 10C - CONSUMPTION-CUSTOMERS CHARTS
SCHEDULE 11 - INVESTMENTS
SCHEDULE 12 - MISCELLANEOUS REVENUES
SCHEDULE 13A - REVENUE REQUIREMENT - CASH
SCHEDULE 13B - REVENUE REQUIREMENT - UTILITY
SCHEDULE 14 - RATE ANALYSIS
SCHEDULE 15 - RATE PROJECTIONS
SCHEDULE 16 - SAMPLE BILLS
SCHEDULE 17 - OPERATING CASH FLOW PROJECTIONS
SCHEDULE 18 - WATER BENEFIT ASSESSMENT FEES
SCHEDULE 19 - SEWER BENEFIT ASSESSMENT FEES
SCHEDULE 20 - CAPITAL CASH FLOW
SCHEDULE 21 - CASH BALANCE

APPENDIX B

Cash Basis Inside-City Water and Sewer Rate Study

A. EXECUTIVE SUMMARY

This document was prepared to summarize the work performed by the Municipal & Financial Services Group (MFSG) during the water and sewer cost of service study authorized by the City of Westminster. The study is predicated on the use of a utility basis to support the pricing of utility services on a system-wide basis, treating all customers (whether inside-city or outside-city) on the same common basis as either residential or non-residential classes. With a clear segregation of costs and revenues identified to growth-related capital costs from the costs of operating the water and sewer systems and paying for non-growth capital costs. The cost of service analysis uses a planning period of 10 years (Fiscal Years 2009 - 2018). This portion of the report summarizes the conclusions and recommendations developed during the course of the study.

1. Findings

- Residential customers of the City's water system use on average 26,000 gallons of water each quarter. This is approximately 8,000 gallons more each quarter than the national average usage per quarter, which is based on an average of 6,000 gallons per month or 18,000 gallons quarterly.
- Current water rates do not produce sufficient revenue to cover utility basis revenue requirements for the Water Fund for Fiscal Year 2009 or the years following. Based on projected water sales, the current rates will produce revenues roughly 50% less than the utility basis required revenue in Fiscal Year 2009 with small shortfalls annually over the planning period.
- Current sewer rates do not produce sufficient revenue to cover utility basis revenue requirements for the Sewer Fund for Fiscal Year 2009 or the years following. Based on projected water sales, the current rates will produce revenues roughly 51% less than the utility basis required revenue in Fiscal Year 2009 with subsequent shortfalls over the planning period.
- The current declining block water rate structure does not achieve the objective of encouraging the wise use of water.
- The City does charge new customers a water and sewer benefit assessment for buying into the water and sewer systems.

2. Conclusion

- The City needs to increase water and sewer rates over the next five years to keep revenues in line with expenses.

3. Recommendations

- We recommend that the City adopt a water rate structure that includes a fixed fee based on meter size for all customers as well as an inclining block rate for residential

consumption and a unit cost rate for non-residential consumption (Alternative D). The structure and calculated utility-basis rates for the remainder of FY09 are shown below.

WATER		FY09
Quarterly Fixed Charge per EDU		\$20.96
<u>Residential</u> (per 1,000 gallons)		
-	18,000	\$2.41
Over	18,000	\$6.03
<u>Non-Residential</u> (per 1,000 gallons)		
		\$3.26

- We recommend that the City adopt a sewer rate structure that includes a fixed fee based on meter size and a unit rate for all usage, both residential and non-residential consumption (Alternative B). The structure and calculated utility-basis rates for the remainder of FY09 are shown below.

SEWER	FY09
Quarterly Fixed Charge per EDU	\$22.03
<u>Usage Charge</u> (per 1,000 gallons)	\$3.96

- In addition to the rates for Fiscal Year 2009, we recommend that the City adopt the rate increases outlined below for water and sewer for the four following years.

Fund	FY 2010	FY 2011	FY 2012	FY 2013
Water Rate Increases	5.00%	0.36%	1.63%	1.38%
Sewer Rate Increases	15.00%	0.00%	0.00%	0.00%

- It is recommended that the City develop and implement a general surcharge drought pricing structure for use during defined droughts and drought conditions.

B. BASIS FOR THE STUDY

1. Scope of Work

The scope of services set forth in the contract between the City of Westminster and the Municipal and Financial Services Group specifies several related tasks:

1. Determine the cost of service, identify revenue requirements and subsequently design a rate structure for water and sewer that is consistent with the City's goals and objectives.
 - a. Design a water and sewer rate structure that will encourage the community to use natural resources wisely.
 - b. Design a rate structure using the Utility Basis Methodology, complying with industry practice (AWWA Manual M1) and providing the City of Westminster adequate revenue for the financial, legal and operational risks that it takes to provide outside-City service.
2. Identify and document policy issues affecting the establishment of rates and fees for water and sewer service.
3. Develop a financial model by which the City can project cash flows and future water and sewer rates over a 10-year period using varying revenue, expense, capital project cost assumptions and customer growth rates.

2. Background

The City of Westminster operates its water and sewer utilities as an enterprise fund, meaning that the systems are designed to be self supporting via fees and charges collected from the users of the systems. It has been a number of years since the City conducted a cost of service study for the water and sewer systems. The City has historically increased water and sewer rates "across the board" based on annual cash needs. The last rate study performed by the City was completed over 30 years ago in the 1970's.

3. Assumptions Used in the Study

The following assumptions were used to guide the cost of service analysis and were developed with the assistance of the City staff:

- The water and sewer systems must each be self-supporting. It is assumed that the cost of operating and maintaining the water system must be supported by the water fees and charges collected from water customers. The same must be true of the sewer operations.
- Growth pays for Growth. That is, new customers should make a capital contribution—to reimburse the utility for the capital cost incurred in developing capacity to serve the new customers.

In addition to the guiding assumptions for the study, it is necessary to make several assumptions regarding future economic conditions and growth within the City's service area, to project future revenue requirements and offsetting revenues from water and sewer rates. Assumptions (which can be varied as needed from year to year) made regarding various items are shown below:

<u>Element</u>	<u>FY 09 Percentage</u>
Inflation Rate – Water and Sewer O&M Expenses	3.00%
Customer Growth Rate – Water	1.30%
Consumption Growth Rate – Water	1.30%
Customer Growth Rate – Sewer	1.35%
Consumption Growth Rate – Sewer	1.35%
Interest Rate on Borrowing	5.00%

These assumptions were used after discussions with the City, utilizing our experience and the City's knowledge of its customer base and historical costs. The assumptions were applied to all customers, both inside-city and outside-city. The growth in customers and consumption is based upon projected housing unit growth estimates provided by City staff. A sensitivity analysis was conducted to determine the impacts of varying each assumption. The most significant drivers are the percentages used for inflation and the customer and consumption growth rates.

The study was conducted using Fiscal Year 2008 (July 1, 2007 to June 30, 2008) as the test year upon which forecasted figures were developed. The cost of service analysis considers what water and sewer rates need to be for the entire planning period (FY 2009 – 2018). For purposes of the report, all assets were treated as common to both inside-city and outside-city customers. Similarly, all expenses were treated as common, with the exclusion of growth-related revenue and capital expenses, which were excluded from rate calculations, but used to calculate benefit assessments.

C. USAGE, DEMAND AND SYSTEM CHARACTERISTICS

1. Customer Counts

For Fiscal Year 2007, the City's water and sewer system customer base included approximately 6,006 inside city and 3,583 outside city water and sewer customers. Inside accounts consist of 5,179 residential customers and 803 non-residential customers while outside accounts consist of 3,311 residential customers and 272 non-residential customers.

In order to project the growth in customers, the current number of water customers was increased by an annual growth rate of 1.30% in FY 09 gradually decreasing to 1.15% in FY 18 (based on projected growth determined by City staff) while growth in sewer customers ranged from 1.35% in FY 09 to 1.20% in FY 18. Customer count analysis, projections and supporting charts are shown in Appendix A to this report as Schedules 10A, 10B and 10C.

2. Consumption Data

The City delivered approximately 872.31 million gallons of water to its inside city customers and 440.96 million gallons (34% % of total water used) to its outside city customers during FY 2007. FY 2007 sewer amounts are approximately 875.56 million gallons (68% of sewage billed) for inside customers and 411.51 million gallons (32% of sewage billed) for outside customers.

Approximately 45% of total water consumption is consumed by inside city residential customers, with 25% being consumed by outside city residential customers, 22% by inside city non-residential customers and the remaining 8% by outside non-residential customers.

According to the City's FY 2007 customer and consumption data, the inside city residential customers use an average of 27,000 gallons per quarter. This is approximately 9,000 gallons more than the national average of 18,000 gallons per quarter for a residential dwelling. Similarly, the outside city residential customers use an average of 24,000 gallons per quarter; 6,000 gallons more than the national average.

Water shortages and water conservation have been high on the list of priorities for the City of Westminster and surrounding areas for some time. In June 2008, a water conservation resolution was signed by the City of Westminster and other Mayors and Officials of Carroll County.

In order to project future water demand and sewer production, historical demand and production numbers were reviewed. Consumption growth rates used in the analysis are the same as those used to project customer growth.

The detailed review of the consumption patterns are shown in Appendix A to this report as Schedule 10A.

D. OPERATING AND MAINTENANCE EXPENSES

The day-to-day operating and maintenance expenses for the City's water system are broken down into five categories: Source of Supply, Water Treatment & Pumping, Transmission & Distribution, Customer Accounts, and Administrative & General. The expenses for the sewer system are broken into four categories: Sewerage Treatment, Collection and Conveyance, Customer Accounts, and Administrative & General. Each category contains budgetary items for salary and operating expenses.

Budget 2006-2007, Actual 5/31/2007 and Budget 2007-2008 expenses were used as the basis for estimating future operating and maintenance expenses. For the years after 2009 through 2018, water and sewer O&M expenses were inflated by 3% per year. Changes from 2008 expenses to 2009 expenses included the addition of two Senior Equipment Operators (split between the water and sewer Transmission & Distribution/collection categories) and GASB 43 Retiree Health Benefits (with one third allocated to the Administrative & General category of both the water and sewer departments – the remainder is expensed through the General Fund).

1. Water System Expenses

The Fiscal Year 2009 O&M expenses for the water system have been forecasted as \$3.62 million. The amount allocated for Source of Supply is \$0.52 million, for Water Treatment & Pumping is \$0.77 million, for Transmission & Distribution is \$0.57 million, with the remaining \$1.75 million allocated for Administrative & General and Customer Account expenses. The majority of water system operating expenses were assumed to increase annually by 3% resulting in expenses of approximately \$4.72 million by Fiscal Year 2018.

2. Sewer System Expenses

The budgetary Fiscal Year 2009 O&M expenses for the sewer system total \$3.55 million. Approximately \$1.55 million of total O&M expenses is attributed to Sewer Treatment, while \$0.50 million is attributed to Collection, and \$1.48 million to Administrative & General and Customer Accounts. The sewer system operating expenses were assumed to increase annually by 3% resulting in expenses of approximately \$4.63 million by Fiscal Year 2018.

Operating and maintenance costs for the water and sewer systems are presented on Schedule 2 in Appendix A of this report.

E. REVENUE REQUIREMENTS FROM USER RATES

The gross revenue requirement on a utility basis includes the following categories of expenses: operating and maintenance costs (as explained above), allowance for working capital, depreciation, return on equity and return on debt. The total of these costs, less the amount of miscellaneous income, is the amount that needs to be recovered from user fees.

1. Depreciation

Rather than including the principal portion of water and sewer expenditures on debt service, the utility basis uses depreciation of system assets as a means of recovering capital costs. The City budgets an annual amount for depreciation of system assets based upon the useful life of each system asset or set of assets. The depreciation projected for FY 09 for the water system is about \$0.53 million approximately \$0.93 million for the sewer system. The projected annual depreciation for both systems is shown on Schedule 7 in Appendix A of this report.

2. Return on Equity

The utility basis allows for a return on equity which is based upon the historical investments made in the system by the City. The return on equity is calculated beginning with the value of the gross system assets, less principal on existing intended debt, less contributed assets/grants (net of depreciation), less cumulative depreciation of the assets, plus a working capital reserve resulting in the net equity. A rate of return is applied to the net equity resulting in an annual return on equity. For purposes of this study, a 10% rate of return was used to calculate the return on equity. A cursory review of rates of returns for regulated water utilities in Maryland reveals rates of return anywhere between 7% and 16%. The Fiscal Year 2009 return on equity for the water system was calculated to be approximately \$1.67 million and approximately \$2.02 million for the sewer system. The projected annual return on equity for both systems is shown on Schedule 7 in Appendix A of this report.

3. Return on Debt

The return on debt included in the utility basis is the cost of debt financing incurred by the City and is simply the annual interest payments on existing and projected non-growth related debt service. The Fiscal Year 2009 return on debt for the water system is about \$0.13 million and roughly \$0.03 million for the sewer system.

4. Revenue Requirement

The following tables show the utility basis revenue requirements, miscellaneous (non user charges) revenue and the net revenue requirement from user rates for water and sewer operations.

	FY 09	FY 10	FY 11	FY 12	FY 13
Total Operating Expenses	3,620,391	3,729,003	3,840,873	3,956,099	4,074,782
Depreciation	528,165	544,010	560,331	577,141	594,455
Return on Equity	1,673,607	1,460,929	1,506,477	1,529,172	1,565,926
Interest on Debt	125,431	242,330	221,872	243,806	233,015
Total Revenue Requirement	5,947,594	5,976,272	6,129,553	6,306,218	6,468,177
Less Miscellaneous Revenue	158,454	172,038	172,393	178,610	181,246
Net Revenue Requirement	5,789,139	5,804,233	5,957,160	6,127,608	6,286,931
Projected Revenue with Current Water Rates	2,898,495	2,935,568	2,973,115	3,011,142	3,049,656
Net Surplus (Shortfall)	(2,890,645)	(2,868,666)	(2,984,045)	(3,116,465)	(3,237,275)

The table above shows the anticipated utility basis net revenue requirement for water in the fiscal years spanning 2009-2013. The table also demonstrates the significant shortfall that the fund will experience in FY 2009 and the following four years under the current rates and rate structure. Future chapters in this report will discuss the rate increases required for the fund to breakeven during this period.

	FY 09	FY 10	FY 11	FY 12	FY 13
Total Operating Expenses	3,550,407	3,656,919	3,766,627	3,879,626	3,996,014
Depreciation	934,747	962,789	991,673	1,021,423	1,052,066
Return on Equity	2,014,187	1,825,669	1,869,053	3,132,794	4,372,991
Interest on Debt	26,166	67,191	59,341	66,535	64,288
Total Revenue Requirement	6,525,506	6,512,568	6,686,694	8,100,377	9,485,358
Less Miscellaneous Revenue	181,020	206,940	233,461	262,872	285,118
Net Revenue Requirement	6,344,487	6,305,628	6,453,232	7,837,505	9,200,240
Projected Revenue with Current Water Rates	3,142,096	3,182,285	3,222,988	3,264,211	3,305,962
Net Surplus (Shortfall)	(3,202,391)	(3,123,343)	(3,230,245)	(4,573,294)	(5,894,278)

The table above shows the anticipated utility basis net revenue requirement for sewer in the fiscal years spanning 2009-2013. The table also demonstrates the significant shortfall that the fund will experience in FY 2009 and the following four years under the current rates and rate structure. Future chapters in this report will discuss the rate increases required for the fund to breakeven during this period.

It should be noted that in the analysis we did depart from a “pure” utility basis revenue requirement in two instances:

- by excluding growth-related capital costs from the revenue requirement for user rates, the growth-related costs are recovered from common benefit charges paid by new customers both inside-City and outside-City, resulting in lower bills for all customers; and
- as there is little fluctuation in year-to-year expenses (other than normal inflation), we used specific costs for year of the planning period, rather than developing a typical “test year.”

The effect of these actions is a fair and equitable outcome for all customers, both inside City and outside City.

F. RATE ALTERNATIVES

The current rate design methodology and cost allocations were evaluated to determine if they reasonably reflect how costs are currently incurred by the City and to determine if the current rates adequately cover the total estimated costs of providing water and sewer service.

1. Current Rate Design

The City's current water rate design is composed of a quarterly minimum charge which includes 6,000 gallons of usage (which varies by use type) with a declining block rate volume charge for six customer use types: Dwelling, Apartment or Living Unit, Schools and College (students and staff), Hospitals, Care Homes and Nursing Homes, Hotels and Motels, and Retail and Business. Rates also vary for inside city and outside city customers and by usage subcategories (e.g., by number of rooms for hotels or motels, etc.). The current sewer rate design also consists of a quarterly minimum charge which includes 6,000 gallons of usage (which varies by use type), with a unit rate volume charge for six customer use types. Sewer rates vary for inside city, outside city and outside city – Carroll County customers. The current rates are detailed in the following tables.

Type of Use	Quarterly Minimum Gallonage Per Unit Basis (6,000 gallons)	Within the City			Outside the City		
		Quarterly Minimum Rate Per Minimum Gallonage (Per \$22.32 Unit Basis)	Next 39,000 Gallons or Less Per Quarter Above the Minimum Gallonage (rate per 1,000 gallons)	Over 45,000 Gallons Per Quarter or Over the Minimum Gallonage Plus the Next 39,000 gallons (rate per 1,000 gallons)	Quarterly Minimum Rate Per Minimum Gallonage (Per \$27.96 Unit Basis)	Next 39,000 Gallons or Less Per Quarter Above the Minimum Gallonage (rate per 1,000 gallons)	Over 45,000 Gallons Per Quarter or Over the Minimum Gallonage Plus the Next 39,000 gallons (rate per 1,000 gallons)
Dwelling, Apartment or Living Unit	6,000	\$ 22.32	\$ 2.76	\$ 2.00	\$ 27.96	\$ 3.20	\$ 2.24
Industrial							
1 to 10 persons	6,000	\$ 22.32	\$ 2.76	\$ 2.00	\$ 27.96	\$ 3.20	\$ 2.24
11 to 50 persons	30,000	\$ 111.60	\$ 2.76	\$ 2.00	\$ 139.80	\$ 3.20	\$ 2.24
51 to 100 persons	60,000	\$ 223.20	\$ 2.76	\$ 2.00	\$ 279.60	\$ 3.20	\$ 2.24
Over 100 persons	90,000	\$ 334.80	\$ 2.76	\$ 2.00	\$ 419.40	\$ 3.20	\$ 2.24
Schools and College (students and staff)							
1 to 100 persons	18,000	\$ 66.96	\$ 2.76	\$ 2.00	\$ 83.88	\$ 3.20	\$ 2.24
101 to 250 persons	30,000	\$ 111.60	\$ 2.76	\$ 2.00	\$ 139.80	\$ 3.20	\$ 2.24
251 to 400 persons	60,000	\$ 223.20	\$ 2.76	\$ 2.00	\$ 279.60	\$ 3.20	\$ 2.24
401 to 1,000 persons	120,000	\$ 446.40	\$ 2.76	\$ 2.00	\$ 559.20	\$ 3.20	\$ 2.24
Over 1,000 persons	180,000	\$ 669.60	\$ 2.76	\$ 2.00	\$ 838.80	\$ 3.20	\$ 2.24
Hospitals, Care Homes and Nursing Homes							
1 to 20 beds	42,000	\$ 156.24	\$ 2.76	\$ 2.00	\$ 195.72	\$ 3.20	\$ 2.24
21 to 60 beds	120,000	\$ 446.40	\$ 2.76	\$ 2.00	\$ 559.20	\$ 3.20	\$ 2.24
Over 60 beds	198,000	\$ 736.56	\$ 2.76	\$ 2.00	\$ 922.68	\$ 3.20	\$ 2.24
Hotels and Motels							
1 to 10 rooms	18,000	\$ 66.96	\$ 2.76	\$ 2.00	\$ 83.88	\$ 3.20	\$ 2.24
11 to 50 rooms	90,000	\$ 334.80	\$ 2.76	\$ 2.00	\$ 419.40	\$ 3.20	\$ 2.24
Over 50 beds	132,000	\$ 491.04	\$ 2.76	\$ 2.00	\$ 615.12	\$ 3.20	\$ 2.24
Retail and Business							
1 to 10 persons	6,000	\$ 22.32	\$ 2.76	\$ 2.00	\$ 27.96	\$ 3.20	\$ 2.24
11 to 30 persons	18,000	\$ 66.96	\$ 2.76	\$ 2.00	\$ 83.88	\$ 3.20	\$ 2.24
Over 30 persons	30,000	\$ 111.60	\$ 2.76	\$ 2.00	\$ 139.80	\$ 3.20	\$ 2.24

Type of Use	Quarterly Minimum Gallonage Per Unit Basis (6,000 gallons)	Within the City		Outside City		Outside City - Carroll County	
		Quarterly Minimum Rate Per Minimum Gallonage (Per \$25.44 Unit Basis)	Charge Per 1,000 Gallons Water Consumed Over the Minimum Gallonage	Quarterly Minimum Rate Per Minimum Gallonage (Per \$34.14 Unit Basis)	Charge Per 1,000 Gallons Water Consumed Over the Minimum Gallonage	Quarterly Minimum Rate Per Minimum Gallonage (Per \$28.02 Unit Basis)	Charge Per 1,000 Gallons Water Consumed Over the Minimum Gallonage
Dwelling, Apartment or Living Unit	6,000	\$ 25.44	\$ 2.33	\$ 34.14	\$ 4.66	\$ 28.02	\$ 2.64
Industrial							
1 to 10 persons	6,000	\$ 25.44	\$ 2.33	\$ 34.14	\$ 4.66	\$ 28.02	\$ 2.64
11 to 50 persons	30,000	\$ 127.20	\$ 2.33	\$ 170.70	\$ 4.66	\$ 140.10	\$ 2.64
51 to 100 persons	60,000	\$ 254.40	\$ 2.33	\$ 341.40	\$ 4.66	\$ 280.20	\$ 2.64
Over 100 persons	90,000	\$ 381.60	\$ 2.33	\$ 512.10	\$ 4.66	\$ 420.30	\$ 2.64
Schools and College (students and staff)		\$ -					
1 to 100 persons	18,000	\$ 76.32	\$ 2.33	\$ 102.42	\$ 4.66	\$ 84.06	\$ 2.64
101 to 250 persons	30,000	\$ 127.20	\$ 2.33	\$ 170.70	\$ 4.66	\$ 140.10	\$ 2.64
251 to 400 persons	60,000	\$ 254.40	\$ 2.33	\$ 341.40	\$ 4.66	\$ 280.20	\$ 2.64
401 to 1,000 persons	120,000	\$ 508.80	\$ 2.33	\$ 682.80	\$ 4.66	\$ 560.40	\$ 2.64
Over 1,000 persons	180,000	\$ 763.20	\$ 2.33	\$ 1,024.20	\$ 4.66	\$ 840.60	\$ 2.64
Hospitals, Care Homes and Nursing Homes		\$ -		\$ -		\$ -	
1 to 20 beds	42,000	\$ 178.08	\$ 2.33	\$ 238.98	\$ 4.66	\$ 196.14	\$ 2.64
21 to 60 beds	120,000	\$ 508.80	\$ 2.33	\$ 682.80	\$ 4.66	\$ 560.40	\$ 2.64
Over 60 beds	198,000	\$ 839.52	\$ 2.33	\$ 1,126.62	\$ 4.66	\$ 924.66	\$ 2.64
Hotels and Motels		\$ -		\$ -		\$ -	
1 to 10 rooms	18,000	\$ 76.32	\$ 2.33	\$ 102.42	\$ 4.66	\$ 84.06	\$ 2.64
11 to 50 rooms	90,000	\$ 381.60	\$ 2.33	\$ 512.10	\$ 4.66	\$ 420.30	\$ 2.64
Over 50 beds	132,000	\$ 559.68	\$ 2.33	\$ 751.08	\$ 4.66	\$ 616.44	\$ 2.64
Retail and Business		\$ -		\$ -		\$ -	
1 to 10 persons	6,000	\$ 25.44	\$ 2.33	\$ 34.14	\$ 4.66	\$ 28.02	\$ 2.64
11 to 30 persons	18,000	\$ 76.32	\$ 2.33	\$ 102.42	\$ 4.66	\$ 84.06	\$ 2.64
Over 30 persons	30,000	\$ 127.20	\$ 2.33	\$ 170.70	\$ 4.66	\$ 140.10	\$ 2.64

This alternative also discourages the wise use of water in two ways. By charging customers a minimum quarterly fee that includes a minimum usage, customers have no incentive to use less than the minimum quarterly consumption. Additionally, a declining block structure gives the user a benefit for using large amounts of water.

2. Water Rate Structure Alternatives

Having evaluated the current rate design, the financial model was used to develop alternative rate structures. The alternative rate designs were developed using methodologies which allocate costs fairly among various user classifications while meeting the City's goals and objectives which include equitable distribution of expenses among customers, environmental protection and encouraging wise use of water. The rate alternative calculations are shown on Schedule 14 in Appendix A of this report.

Four primary water rate structures were considered, each of which would produce the same amount of revenue for Fiscal Year 2009:

- **Alternative A** – Current Rate Structure (shown in the previous section), with updated cost data
- **Alternative B&C** – Ready-to-Serve Fixed Charge per meter size with an Inclining Block Rate Structure (“conservation” rate) at varying levels of consumption

- **Alternative D** – Ready-to-Serve Charge and Inclining Block Consumption Charge with Flat Rate Non-Residential

Alternative A (Current Rate Structure with "Across the Board" Rate Increases) – The first alternative utilizes the same rate design the City currently has in place: a minimum quarterly charge based on customer class and characteristics and included a minimum amount of consumption and a declining block rate structure. This alternative implements an “across the board” change in water and sewer rates.

Under the current rates and rate structure described above the water and sewer annual utility basis expenses will exceed the annual collected revenues. The following table shows the necessary annual rate increases, under the current rate structure, in order for forecasted annual revenues to meet the projected annual expenses for the next five years.

	<u>FY09</u> <u>% Increase</u>	<u>FY10</u> <u>% Increase</u>	<u>FY11</u> <u>% Increase</u>	<u>FY12</u> <u>% Increase</u>	<u>FY13</u> <u>% Increase</u>
Water	100.0%	0.0%	1.1%	1.4%	1.3%

Alternative B(&C) (Inclining Block Rate Structure) – The second group of alternatives employ a fixed fee based on meter size and an inclining block rate structure for water consumption for all customer classes. The following table shows the Fiscal Year 2009 water rates required for the water fund to “breakeven” under Alternative B.

The ready-to-serve charge is tied to meter size, with larger meters paying a high charge due to the demand they can place on the system. The meter size equivalents are taken from the American Water Works Association (AWWA) Manual M22 meter equivalents table. The AWWA meter equivalents are shown below.

Meter Size (inches)	AWWA Equivalent	Fixed Water Charge per Quarterly Bill FY09
5/8	1.00	\$22.01
3/4	1.50	\$22.01
1	2.50	\$55.03
1 1/2	5.00	\$110.05
2	8.00	\$176.08
3	16.00	\$352.16
4	25.00	\$550.25
6	50.00	\$1,100.50
8	80.00	\$1,760.80
10	120.00	\$2,641.20

The inclining block rates structure consists of two levels: Level 1 (0 - 18,000 gallons per quarter), Level 2 (Over 18,000 gallons per quarter). In this structure, customers are charged an incrementally higher rate for water used per quarter. The table below shows the amount of usage in each block using this structure for all customers.

Quarterly Water Usage (gallons)		% of All Customers	% of All Usage
-	18,000	12%	40%
Over	18,000	59%	60%

Alternative B(&C) uses this inclining block rate structures all year round for all customers at the same unit rates per 1,000 gallons at each level.

Quarterly Water Usage (gallons)		FY09 Rate per 1,000 gallons
-	18,000	\$2.69
Over	18,000	\$5.37

Alternative D (Ready Ready-to-Serve Charge and Inclining Block Consumption Charge with Flat Rate Non-Residential) – Alternative D is the same structure as Alternative B; however, all non-residential customers are not included within the inclining block structure. Non-residential customers are charged a separate flat-rate consumption charge.

The inclining block rates structure consists of two levels: Level 1 (0 - 18,000 gallons per quarter), Level 2 (Over 18,000 gallons per quarter). In this structure, customers are charged an incrementally higher rate for water used per quarter. The table below shows the amount of usage in each block using this structure for all customers.

Quarterly Water Usage (gallons)		% of Residential Customers Only	% of Residential Usage Only
-	18,000	41%	53%
Over	18,000	59%	47%

The following tables show the Fiscal Year 2009 water rates required for the water fund to “breakeven” under Alternative D.

Meter Size (inches)	AWWA Equivalent	Fixed Charge per Quarterly Bill FY09
5/8	1.00	\$22.01
3/4	1.50	\$22.01
1	2.50	\$55.03
1 1/2	5.00	\$110.05
2	8.00	\$176.08
3	16.00	\$352.16
4	25.00	\$550.25
6	50.00	\$1,100.50
8	80.00	\$1,760.80
10	120.00	\$2,641.20

Quarterly Water Usage (gallons)		FY09 Rate per 1,000 gallons
Residential		
-	18,000	\$2.53
Over	18,000	\$6.33
Non-Residential Unit Rate		\$3.42

3. Sewer Rate Structure Alternatives

Having evaluated the current rate design, the financial model was used to develop alternative rate structures. The alternative rate designs were developed using methodologies which allocate costs fairly among various user classifications while meeting the City's goals and objectives which include equitable distribution of expenses among customers, environmental protection and encouraging wise use of water. The rate alternative calculations are shown on Schedule 14 in Appendix A of this report.

Four primary water rate structures were considered, each of which would produce the same amount of revenue for Fiscal Year 2009:

- **Alternative A** – Current Rate Structure (shown in a previous section)

	<u>FY09</u> <u>% Increase</u>	<u>FY10</u> <u>% Increase</u>	<u>FY11</u> <u>% Increase</u>	<u>FY12</u> <u>% Increase</u>	<u>FY13</u> <u>% Increase</u>
Sewer	102.0%	0.0%	0.0%	20.0%	16.0%

- **Alternative B – Ready-to-Serve Fixed Charge and Unit Rate Usage**

The following tables show the Fiscal Year 2009 sewer rates required for the sewer fund to “breakeven” under Alternative B.

Meter Size (inches)	AWWA Equivalent	Fixed Charge per Quarterly Bill FY09
5/8	1.00	\$25.33
3/4	1.50	\$25.33
1	2.50	\$63.33
1 1/2	5.00	\$126.65
2	8.00	\$202.64
3	16.00	\$405.28
4	25.00	\$633.25
6	50.00	\$1,266.50
8	80.00	\$2,026.40
10	120.00	\$3,039.60

Quarterly Water Usage (gallons)	FY09 Rate per 1,000 gallons
Unit Rate for all customers	\$4.56

After discussions with the City and having evaluated the current rate design, it has been determined that the Water Rate Structure Alternative D and Sewer Rate Structure Alternative B best match the objectives and goals of the City. Water Structure Alternative D encourages the wise use of water for all customers. By charging a ready-to-serve fixed fee per meter size and eliminating the minimum usage included in the fixed fee, customers will see the cost of each 1,000 gallons of water and sewer they use on their quarterly bill. They will also be able to see “savings” based upon conservation efforts over time.

Residential customers will pay for their water through a two-step inclining block rate structure, which charges a higher rate for water used within the second step. This second step includes consumption that is over and above the national average household use of 6,000 gallons a month, and can be categorized as discretionary water use. Those users that reach this level are placing an additional demand on the system and they cause the system to incur additional costs. Therefore all residential consumption above the national average is charged a premium price.

Non-residential customers are also encouraged to use water wisely by eliminating the declining block rate structure and charging a unit rate. Non-residential and Industrial customers have a natural

incentive to conserve water – the profit margin. Eliminating a declining block rate structure and implementing a unit rate for this class of customer sends the message that water is a natural resource that requires protection and is not something to be wasted.

4. Projected Rates

The next step was to determine what water and sewer rate increases are required to ensure that the water and sewer funds are self-supporting. The proposed increases to water and sewer rates in FY 2009 along with additional modest increases in the following years are required for the water and sewer systems to recover the required revenue values shown in Section E of this report. The increases and rates are shown in the tables below. This table also demonstrates a two-year rate increase phase-in. The Breakeven rates for FY09, shown in the previous section, are not fully implemented until FY10. The proposed rates for FY09 and following four years are shown below.

WATER		FY09	FY10	FY11	FY12	FY13
Quarterly Fixed Charge per EDU		\$20.96	\$22.01	\$22.09	\$22.45	\$22.76
<u>Residential</u> (per 1,000 gallons)						
-	18,000	\$2.41	\$2.53	\$2.54	\$2.58	\$2.62
Over	18,000	\$6.03	\$6.33	\$6.35	\$6.46	\$6.55
<u>Non-Residential</u>						
Unit Rate (per 1,000 gallons)		\$3.26	\$3.42	\$3.43	\$3.49	\$3.54
% Increase		-	5.00%	0.36%	1.63%	1.38%

SEWER		FY09	FY10	FY11	FY12	FY13
Quarterly Fixed Charge per EDU		\$22.03	\$25.33	\$25.33	\$25.33	\$25.33
Unit Rate (per 1,000 gallons)		\$3.96	\$4.56	\$4.56	\$4.56	\$4.56
% Increase		-	15.00%	0.00%	0.00%	0.00%

5. Sample Bills

The following tables present sample bills for various customers for Fiscal Year 2009 and FY 2010 under the current and projected water and sewer rates.

WATER

Consumption	Meter Size	Current	Current	Proposed	Proposed
Residential		Inside	Outside	FY09	FY10
18,000	3/4	\$55	\$66	\$64	\$68
30,000	3/4	\$80	\$95	\$119	\$125
45,000	3/4	\$130	\$153	\$227	\$238

Non-residential					
25,000	3/4	\$75	\$89	\$102	\$108
100,000	2	\$281	\$334	\$494	\$518
500,000	3	\$1,257	\$1,477	\$1,965	\$2,062

SEWER

Consumption	Meter Size	Current	Current	Proposed	Proposed
Residential		Inside	Outside	FY09	FY10
18,000	3/4	\$53	\$90	\$93	\$107
30,000	3/4	\$74	\$132	\$129	\$148
45,000	3/4	\$116	\$216	\$200	\$231

Non-residential					
25,000	3/4	\$70	\$123	\$121	\$139
100,000	2	\$290	\$609	\$572	\$659
500,000	3	\$1,417	\$3,053	\$2,332	\$2,685

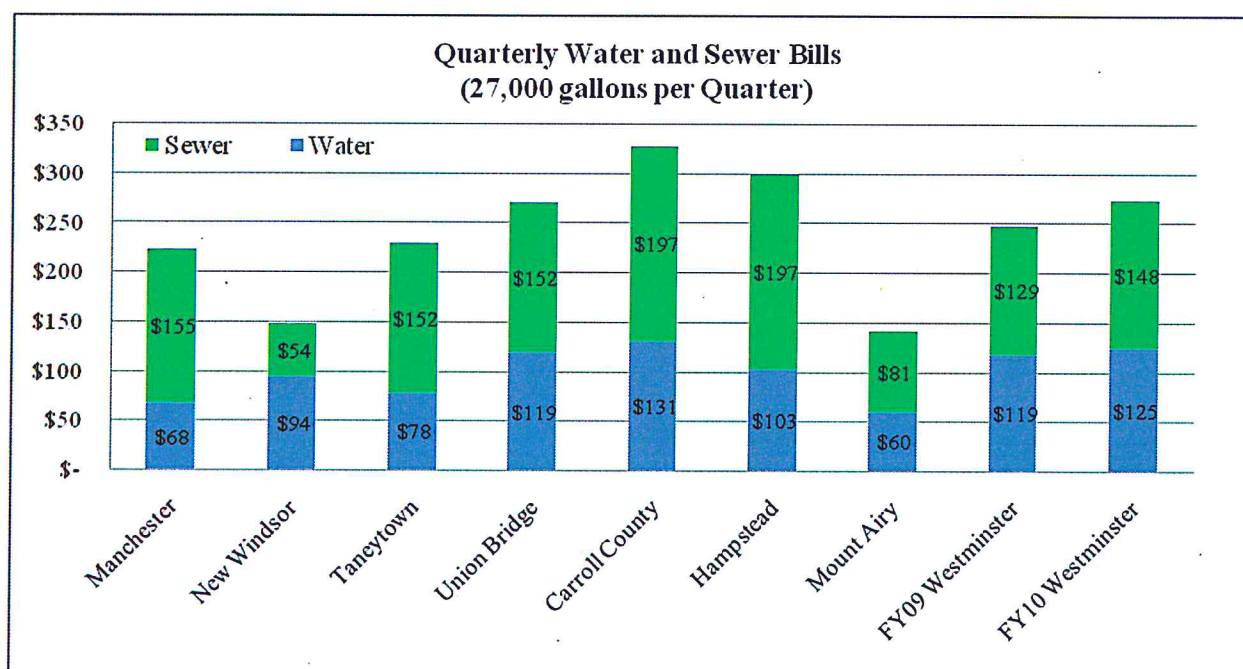
COMBINED

Consumption	Meter Size	Current	Current	Proposed	Proposed
Residential		Inside	Outside	FY09	FY10
18,000	3/4	\$109	\$156	\$158	\$175
30,000	3/4	\$155	\$227	\$248	\$273
45,000	3/4	\$246	\$369	\$427	\$469

Non-residential					
25,000	3/4	\$144	\$211	\$223	\$247
100,000	2	\$572	\$943	\$1,066	\$1,177
500,000	3	\$2,674	\$4,530	\$4,298	\$4,747

G. COMPARISONS

It may be useful for the City of Westminster to compare sample bills of various local utilities with a bill calculated using proposed utility basis rates for the City of Westminster water and sewer system treated as a whole (i.e. no differentiation between inside-City and outside-City customers). The following chart represents a comparison of an annual bill for a customer who uses 27,000 gallons per quarter for various water and sewer municipalities in the same geographical area as the City of Westminster (the most current rates were used in the comparison; the bills may not reflect unknown water and sewer rate increases within the comparison utilities). The chart presents the proposed FY 2009 and FY 2010 rates for water and sewer.



While the chart above may be helpful in observing what local utilities charge for water and sewer service, it may also be rather misleading and should not be used as a sole determinant when calculating future rates; there are many factors that have a role in determining rates such as the relative age and size of the general system, number of customers served, amount of investment in infrastructure, etc. The most important factor in determining rates is the cost of service – how much does it cost (per unit of service) to provide water and sewer service?

H. WATER AND SEWER BENEFIT ASSESSMENT

The City currently charges water and sewer benefit assessment fees to customers who join the water and sewer systems. The assessment fees are intended to recover the capital cost of capacity constructed to serve new customers.

Residential assessment fees are based on dwelling units. Each single-family residence, unit in a multi-family dwelling, apartment unit or living unit is counted as one dwelling unit. The minimum assessment for all residential dwelling units is \$4,370 and \$4,580 for water and sewer respectively. Each dwelling unit in a multi-family residence over and above the first unit will be charged an additional assessment for each unit, corresponding to the table below.

<u>Dwelling Unit</u>	<u>Additional Water Assessment</u>	<u>Additional Sewer Assessment</u>
1 - bedroom or efficiency	\$2,331	\$2,382
2 - bedroom	\$3,205	\$2,391
3 - bedroom	\$3,787	\$3,847
4 - bedroom	\$4,807	\$4,580

Industrial and commercial customers, schools, hospitals, and all other non-residential customers all pay a minimum assessment fee with additional charges for buildings and businesses exceeding certain minimum defined criteria. The following table summarizes the water and sewer benefit assessment for non-residential customers.

<u>Customer Type</u>	<u>Water Assessment</u>	<u>Sewer Assessment</u>
Industrial Manufacturing Minimum	\$4,370 includes 5,000 sq. ft.	\$4,580 includes 5,000 sq. ft.
Additional	\$0.75 - \$0.64 per sq. ft.	\$0.77 - \$0.62 per sq. ft.
Industrial Warehouse	\$3,205 includes 2,000 sq. ft.	\$2,391 includes 2,000 sq. ft.
Additional	\$0.83 - 0.38 per sq. ft.	\$0.85 - \$0.38 per sq. ft.
Institutional	\$10,051 (1-100 persons)	\$9,160 (1-100 persons)

Additional	\$23,743 to unlimited depending on number of staff and students	\$23,084 to unlimited depending on number of staff and students
Hospitals	\$7,574 includes 20 beds	\$7,328 includes 20 beds
Additional	\$18,936 includes 60 beds, each bed over 60, \$256	\$18,321 includes 60 beds, each bed over 60, \$275
Hotels	\$4,370 includes 1 - 10 rooms	\$4,580 includes 1 – 10 rooms
Additional	\$11,653 includes 50 rooms, each room over 50, \$364	\$11,542 includes 50 rooms, each room over 50, \$385
Commercial	\$4,370 includes \$5,000 sq. ft.	\$4,580 includes \$5,000 sq. ft.
Additional	\$0.75 - \$0.52 per sq. ft.	\$0.77 - \$0.47 per sq. ft.

The City's Water Treatment Plant treats water from two surface sources and has a capacity of 2.75 MGD. Currently, the City's Water Treatment Plant produces approximately 2 MGD of potable water daily. A series of wells supplement the water produced at the City's Water Treatment Plant to insure the needs of users are met. The Carfaro Well came online in 2000 and the Roop's Mill Well came online on an emergency basis during the summer of 2002. Approximately 77% of units are residential water customers (8,974) using an average of 289 gallons per day per equivalent dwelling unit, totaling 950MG annually. The remaining 23% of water customers (2,753) include a mix of commercial, industrial and institutional businesses that combined use approximately 400MG annually.

The City's Wastewater Treatment Plant is located on the Little Pipe Creek near the intersection of Old New Windsor Road and Maryland Route 31. The plant provides secondary treatment through an activated sludge process and advanced treatment with the addition of phosphorous removal. Treatment capacity of the plant is 5 MGD. The City currently provides sewer service to approximately 8,695 residential customers and 2,548 non-residential equivalent dwelling units.

1. Growth Related Capital Improvement Plan

A summary of the City's Water Capital Improvement Projects for FY 08 – FY 18 is shown below.

Project	Total Dollars	% Growth
Cranberry Water Treatment Plant Upgrade	\$11,047,190	75%
MD 140 Parallel Water Main	\$800,000	100%
Gesell Property Well	\$50,000	100%
Little Pipe Creek Intake	\$25,000	100%
Interzone Water Main	\$800,000	100%
Watershed Easement Purchase	\$550,000	100%
Ridge Road Water Main	\$205,000	50%
Park Avenue Water Main	\$100,000	34%
Main Street Water Main Upgrade	\$320,000	50%
New Water Storage Facility	\$640,000	100%
James Street Water Main	\$35,000	100%
John Street Water Main	\$50,000	34%
Ralph and Church Water Main	\$55,000	100%
West George Street Water Main	\$90,000	100%
Hollow Rock/City View Water Main	\$180,000	50%
Winter Street Water Main	\$195,000	34%
Avondale Well Pump	\$6,000	100%
Pump Testing Gesell and or Hydes	\$20,000	100%
New Water Supply Development	\$1,725,000	100%
Roop's Mill Well #11	\$375,000	100%
Wakefield Valley Wells	\$6,000	100%

The Cranberry Water Treatment Plant will add an addition 4MGD to the capacity of the water treatment plant. The combination of projects including New Water Supply Development, Roop's Mill Well #11, Gesell Property Well and Wakefield Valley Wells will provide an additional 2.4MGD of raw water for supply.

A summary of the City's Sewer Capital Improvement Projects for FY 08 – FY 18 is shown below.

Project	Total Dollars	% Growth
Plant Upgrade/Expansion	\$36,000,000	25%
Pump Station #12 Upgrade	\$500,000	50%
Pump Station #15 Rehabilitation	\$1,780,000	100%

The wastewater treatment plant expansion will be adding 2MGD of capacity to the wastewater system, as well as adding improvements to the chlorination/dechlorination system.

2. General Assessment Fee Methodology

Assessment fees are calculated based upon what it actually costs a utility to build capacity. The fees are not based upon annual cash needs but rather on the actual cost of capacity. Therefore the annual cash flow needs related to capital projects may not precisely match the annual revenues from assessment fees. In addition, assessment fees should be reviewed internally annually. While there are a variety of methods for calculating assessment fees to serve a customer in a water and sewer system, most methods of calculating these fees fall into three broad categories:

- *Buy-in capacity method* is tied to the historical cost of the system. The Buy-in capacity method is appropriate for mature utilities that have excess capacity in the water and/or sewer system.
- *Average cost* of capacity calculations are often used in a utility which is approaching its capacity, reflecting the situation that new customers are being served by the latest additions to the utility's infrastructure. It is a combination of the Buy-in capacity method and the next increment of capacity method.
- *Next increment of capacity* is used to calculate the costs of serving new customers in a utility that has little or no capacity and is being heavily stressed by growth. This approach estimates what it will cost to add capacity to serve new customers.

In addition to the broad categories, combinations of the methods are often utilized based upon the status of capacity within the water and sewer system respectively.

3. Water Benefit Assessment Fees

The City's water system is currently at capacity and there no available capacity for new customers. The next increment of capacity method is the appropriate calculation for the City of Westminster Water System and is calculated based upon the cost of the new capacity divided by the capacity it will add to the system.

The resulting total cost of capacity for the next increment of capacity in the water system is approximately \$32.5 million: imposes \$18.6M for treatment capacity, \$5.6M for supply capacity and \$8.2M for system expansion capacity. The assessment fees are calculated by dividing the total cost of capacity by the number of units the capacity will serve. The resulting water assessment fee is \$2,600 per equivalent dwelling unit.

All three methods were used to calculate the water benefit assessment fee. The calculations of the water assessment fee, under all three methods described in the previous section, are detailed in Appendix A on Schedule 18.

4. Sewer Benefit Assessment Fees

The City's current wastewater treatment plant is operating at just over half of its design capacity, leaving approximately 2MGD available for new customers. Although there is treatment capacity available at the wastewater plant, the sewer system will require additional infrastructure to be made available for new customers, including pump stations and sewer transmission mains.

Therefore, the average cost of capacity method is the appropriate calculation for the City of Westminster Sewer System and is calculated based upon an average of the historical cost of the sewer system and the cost of new capacity divided by the total combined capacity of the wastewater system. The resulting total cost of capacity for the average capacity in the sewer system is approximately \$64.0M. The resulting sewer benefit assessment fee is \$3,200 per equivalent dwelling unit.

All three methods were used to calculate the sewer benefit assessment fee. The calculations of the sewer benefit assessment fee, under both the buy-in and average cost method described in the previous section, are detailed in Appendix A on Schedule 19.

5. Recommendations

Based upon review of the actual cost of providing water capacity to its customers we recommend that the City keep the current minimum water and sewer benefit assessment fees of \$4,370 and \$4,580, respectively; however, we would suggest rounding the fees to \$4,400 per EDU and \$4,600 per EDU respectively

We recommend that the City base its water and sewer benefit assessments on equivalent dwelling units (EDUs), assuming that a typical single family home is one dwelling unit. The American Water Works Association uses meter size to determine EDUs. The size of a meter, and its corresponding equivalent dwelling unit, represents the possible demand that the customer may place on the water and sewer systems.

We recommend that the City adopt this methodology for collecting water and sewer benefit assessment fees in place of the existing system that is based upon the number of bedrooms, persons, hospital beds, hotel rooms and industrial/commercial square footage. The following table lists the proposed water and sewer assessment fees for each meter size, as well as lists the AWWA Equivalent Dwelling Unit number for each meter size.

Meter Size	AWWA EDUs for each meter size.	Water Assessment Fee	Sewer Assessment Fee
5/8"	1.00	\$4,370	\$4,580
3/4"	1.00	\$4,370	\$4,580
1"	2.50	\$10,925	\$11,450
1 1/2"	5.00	\$21,850	\$22,900
2"	8.00	\$34,960	\$36,640
3"	16.00	\$69,920	\$73,280
4"	25.00	\$109,250	\$114,500
6"	50.00	\$218,500	\$229,000
8"	80.00	\$349,600	\$366,400

The minimum benefit assessment fee for both water and sewer is shown above for a 5/8" meter. For this analysis, a 3/4" meter was given a 1.0 EDU, in place of the AWWA recommended 1.10 value. This change was made due to the fact that many of the single family residential water and sewer customer in the City have a 3/4" water meter.

6. Capital Cash Flow

A capital cash flow for the water and sewer benefit assessment funds was created to demonstrate the results of the forecasted capital expenses and revenues, and projected water and sewer customer growth rate over the 10-year planning period considered in the water and sewer cost of service study to which this memo is a part of. Capital expenses and revenues are summarized in previous sections of this chapter and the customer growth rate is assumed to be 150 EDUs annually. The capital cash flow is attached on Schedule 20 of Appendix A.

I. DROUGHT RATES

The City of Westminster and the surrounding areas have been experiencing drought conditions over the past several years and have already come together to encourage water conservation and the wise use of water for all the customers, both inside and outside, of the City's water system. In addition to the ongoing public education and relation activities, the City wants to be financially prepared for future drought periods.

During drought situations, a water utility typically has two overriding objectives. The first is to quickly reduce the volume of water used by its customers and second in maintain adequate revenues to meet system requirements.

Reducing water use can be accomplished by a combination of activities, some which are listed below.

1. Appealing to customers to voluntary reduce water demands
2. Limiting or discontinuing water supplied to interruptible customers of the system
3. Placing mandatory restrictions on discretionary water uses (usually outdoor uses such as irrigation and car washing)
4. Increasing rates or adding surcharges as incentives to reduce water demands

To the extent that the City is successful in reducing the water used, it becomes increasingly difficult to collected adequate revenues to cover normal operating expenses. Many utilities will draw on cash reserves that may be available through an operating and maintenance reserve fund or other available rate stabilization funds. Alternatively, utilities may also implement a drought pricing structure.

There are several methods used to calculate drought pricing; the most simple is to implement a general rate surcharge. All volume rates could be increased by a specific percentage or multiplier to generate an adequate amount of revenue as well as act as an additional incentive for customers to reduce water use. This method is likely to be the most easily accepted by the public due to the basic principle that all customers are being treated equally during the drought period. A general surcharge is also easy to implement for bill calculations.

It is recommended that the City develop and implement a surcharge drought pricing structure for use in formally defined droughts and drought conditions. The City must define these conditions and make them available and known to all customers. It is also recommended that drought rates be linked to existing policies and triggers related to voluntary and mandatory water restrictions. Public education and communication is a key element in the drought pricing implementation.

J. CONCLUSIONS AND RECOMMENDATIONS

1. Findings

- Residential customers of the City's water system use on average 26,000 gallons of water each quarter. This is approximately 8,000 gallons more each quarter than the national average usage per quarter, which is based on an average of 6,000 gallons per month or 18,000 gallons quarterly.
- Treating all customers the same, and treating all assets as common, current water rates do not produce sufficient revenue to cover utility basis revenue requirements for the Water Fund for Fiscal Year 2009 or the years following. Based on projected water sales, the current rates will produce revenues roughly 50% less than the utility basis required revenue in Fiscal Year 2009 with small shortfalls annually over the planning period.
- Treating all customers the same, and treating all assets as common, current sewer rates do not produce sufficient revenue to cover utility basis revenue requirements for the Sewer Fund for Fiscal Year 2009 or the years following. Based on projected sewer sales, the current rates will produce cash revenues roughly 51% less than the utility basis required revenue in Fiscal Year 2009 with subsequent shortfalls over the planning period.
- The current water rate structure does not achieve the objective of encouraging the wise use of water.
- The City does charge new customers a water and sewer benefit assessment for buying into the water and sewer systems.

2. Conclusions

- The City needs to increase water and sewer rates over the next five years to keep revenues in line with expenses.

3. Recommendations

- We recommend that the City adopt a utility basis outside-city water rate structure that includes a fixed fee based on meter size and an inclining block rate for residential consumption and a unit cost for non-residential consumption (Alternative D). The recommended structure and rates for the remainder of FY09 are shown below.

WATER		FY09
Quarterly Fixed Charge per EDU		\$20.96
<u>Residential</u> (per 1,000 gallons)		
-	18,000	\$2.41
Over	18,000	\$6.03
<u>Non-Residential</u> (per 1,000 gallons)		
		\$3.26

- We recommend that the City adopt a utility-basis outside-city sewer rate structure that includes a fixed fee based on meter size and a unit rate for all usage, both residential and non-residential consumption (Alternative B). The recommended structure and rates for the remainder of FY09 are shown below.

SEWER	FY09
Quarterly Fixed Charge per EDU	\$22.03
<u>Usage Charge</u> (per 1,000 gallons)	\$3.96

- In addition to the rates for Fiscal Year 2009, we recommend that the City adopt the rate increases outlined below for water and sewer over the four years.

Fund	FY 2010	FY 2011	FY 2012	FY 2013
Water Rate Increases	5.00%	0.36%	1.63%	1.38%
Sewer Rate Increases	15.00%	0.00%	0.00%	0.00%

- We recommend that the City use a net residual cash basis (including the additions of a dividend to the City's General Fund, to be charged to inside-City customers only) for setting inside-city water and sewer rates:

Total Revenue Requirement (Inside-City and Outside-City) Cash Basis*

Less: Estimated Revenues from Outside –City Customers Utility Basis

Residual Cash Revenue Requirement Inside City Customers*

More: Dividend to General Fund (Charged to Inside-City only customers)

Net Revenue Requirement Inside City Customers*

** Cash Basis Revenue Requirement and Inside City Water and Sewer Rates will be discussed in the supplement to this report found in Appendix B*

Appendix A



City of Westminster Water and Sewer Rate Model
Developed by: Municipal and Financial Services Group
September 2008

MODEL INDEX

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SCHEDULE 20 - CAPITAL CASH FLOW
SCHEDULE 21 - CASH BALANCE

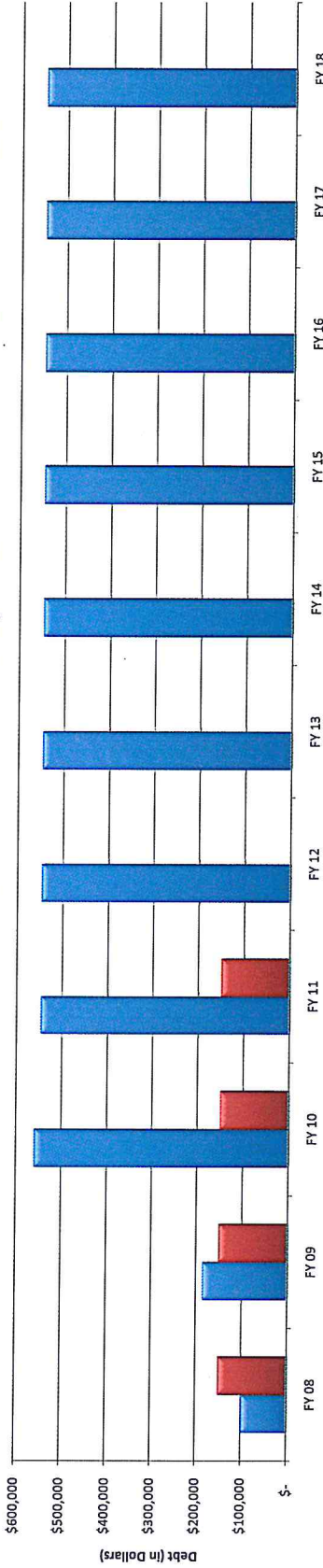
SCHEDULE 1A - OPERATING EXECUTIVE SNAPSHOT

		Base Year		Fiscal Year									
		Source	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
WATER	Inflation Rate	Industry Estimate	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
	Estimated Consumption (Gallons per Day - 1 EDU)	Industry Standard	250	250	250	250	250	250	250	250	250	250	250
	Customer Growth Rate	Population Growth (T3.1 Comp Plan)	1.30%	1.28%	1.26%	1.25%	1.23%	1.22%	1.20%	1.19%	1.17%	1.16%	1.15%
	Consumption Growth Rate	Population Growth (T3.1 Comp Plan)	1.30%	1.28%	1.26%	1.25%	1.23%	1.22%	1.20%	1.19%	1.17%	1.16%	1.15%
SEWER	Customer Growth Rate	Population Growth (T3.1 Comp Plan)	1.35%	1.33%	1.31%	1.30%	1.28%	1.27%	1.25%	1.24%	1.22%	1.21%	1.20%
	Production Growth Rate	Population Growth (T3.1 Comp Plan)	1.35%	1.33%	1.31%	1.30%	1.28%	1.27%	1.25%	1.24%	1.22%	1.21%	1.20%

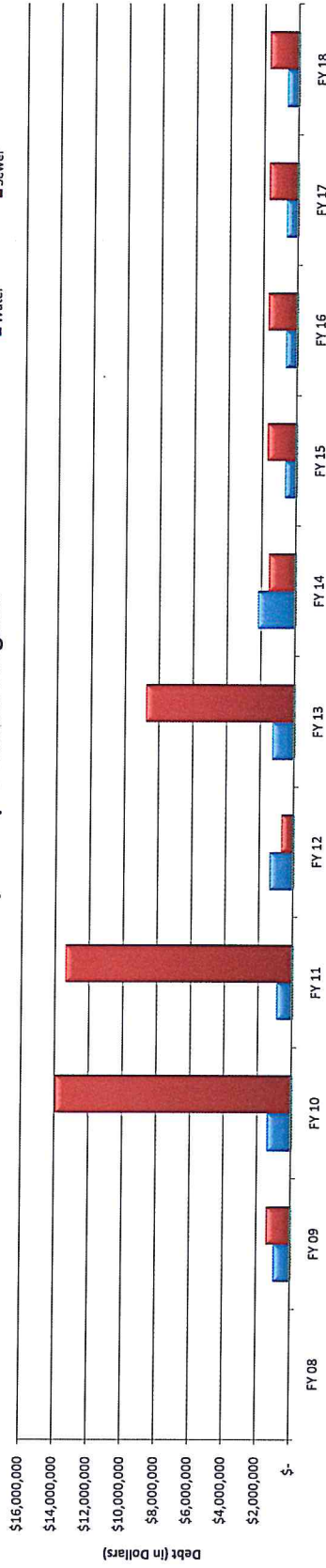
SCHEDULE 1B - CAPITAL EXECUTIVE SNAPSHOT

	Base Year		Fiscal Year									
	Source	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Interest Rate on Borrowings	Estimate	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Debt Admin Cost (% of debt)	Industry Standard	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
Debt Maturity		20	20	20	20	20	20	20	20	20	20	20
Interest Earned on Investments		3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%

Existing Annual Debt Service Payments



Capital Improvement Program



Show Inflation Rates		Place "x" in box to inflate item by inflation and growth rate											
Code		Description											
WATER FUND													
Source of Supply													
W-601	300.90.300.5312	12,000	176,000	181,280	186,718	192,320	198,090	204,032	210,153	216,458	222,952	229,640	
W-604	300.90.300.5530	20,000	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	
W-605	300.90.300.5121	1,500	1,800	1,854	1,910	1,967	2,026	2,087	2,149	2,214	2,280	2,349	
W-607	300.90.300.4111												
W-607	300.90.300.5639	23,389	205,438	211,601	217,949	224,488	231,222	238,159	245,304	252,663	260,243	268,050	
W-608-A	300.90.300.4111	10,000	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	
W-608-A	300.90.300.5525	15,000	110,000	113,300	116,699	120,200	123,806	127,520	131,346	135,286	139,345	143,525	
W-608-B	300.90.300.4111												
W-608-B	300.90.300.5525	10,305											
W-608-D	300.90.300.4111	41,000											
W-608-D	300.90.300.5525	4,770											
W-608-F	300.90.300.4111	23,000											
W-608-F	300.90.950.4111	6,514											
W-608-G	300.90.300.4111	16,500											
W-608-G	300.90.300.5525	5,890											
W-608-G	300.90.950.4111	16,000											
W-608-H	300.90.300.5525	8,355											
W-608-J	300.90.300.4111	37,000											
W-608-J	300.90.300.5525	7,455											
W-608-K	300.90.300.4111	40,000											
W-608-K	300.90.300.5525	7,243											
W-608-L	300.90.300.4111	34,000											
W-608-L	300.90.300.5525	6,776											
W-608-M	300.90.300.5525	34,000											
W-608-N	300.90.300.4111												
W-608-T1	300.90.300.4111	769											
W-608-T1	300.90.300.5525												
W-608-X	300.90.300.5525	10,000											
Source of Supply Subtotal		\$ 394,726	\$ 523,238	\$ 538,935	\$ 555,103	\$ 571,756	\$ 588,909	\$ 606,576	\$ 624,774	\$ 643,517	\$ 662,822	\$ 682,707	
Water Treatment & Pumping													
W-611	300.90.400.5121	2,500	3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	
W-612	300.90.400.5311	15,000	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095	
W-613	300.90.400.5312	162,000	147,000	151,410	155,952	160,631	165,450	170,413	175,526	180,791	186,215	191,802	
W-614	300.90.400.4111	252,857	309,563	318,850	328,415	338,268	348,416	358,868	369,634	380,723	392,145	403,910	
	Small Tools	1,000	1,200	1,236	1,273	1,311	1,351	1,391	1,433	1,476	1,520	1,566	
W-616	300.90.400.5300	5,913	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	
W-618	300.90.400.5400	32,000	32,000	32,960	33,949	34,967	36,016	37,097	38,210	39,356	40,537	41,753	
	Vehicle Repair/Mtce	10,000	3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	
	Chemicals	185,000	120,000	123,601	127,308	131,127	135,061	139,113	143,286	147,585	152,012	156,573	
	Clothing Allowance & Uniforms		6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	
	Engineering Studies	35,000	50,000	51,500	53,045	54,636	56,275	57,964	59,703	61,494	63,339	65,239	
W-620	300.90.400.5613		1,500	1,545	1,591	1,639	1,688	1,739	1,791	1,845	1,900	1,957	
W-621	300.90.400.5614	22,000	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	
	Laboratory Expense	25,000	50,000	51,500	53,045	54,636	56,275	57,964	59,703	61,494	63,339	65,239	
	Technical Services		3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	
	Safety Supplies		3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	
W-622	300.90.400.5570	11,000	4,000	4,120	4,244	4,371	4,502	4,637	4,776	4,919	5,067	5,219	
	Sludge Removal												
	Pagers		750	773	796	820	844	869	896	922	950	979	
Water Treatment & Pumping Subtotal		\$ 759,270	\$ 772,513	\$ 795,688	\$ 819,559	\$ 844,146	\$ 869,470	\$ 895,554	\$ 922,421	\$ 950,094	\$ 978,596	\$ 1,007,954	
Transmission & Distribution													
W-632	300.85.500.4111												
	Salaries												
	Water Storage Facilities												
	Telephone Expense	12,000	2,200	2,266	2,334	2,404	2,476	2,550	2,627	2,706	2,787	2,871	
	Housekeeping Supplies		950	979	1,008	1,038	1,069	1,101	1,134	1,168	1,203	1,240	
	Safety Supplies	52,500	500	515	530	546	563	580	597	615	633	652	
	Cellular & Mobile	1,500	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	
W-635	300.85.500.5122		750	773	796	820	844	869	896	922	950	979	
	Lateral Line Maintenance	15,000	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448	19,002	19,572	
	Grounds Maintenance		300	309	318	328	338	348	358	369	380	391	
W-636	300.85.500.5537		25,500	26,265	27,053	27,865	28,700	29,561	30,448	31,362	32,303	33,272	
	Main Maintenance		900	927	955	983	1,013	1,043	1,075	1,107	1,140	1,174	
	Pagers												

Show Inflation Rates

Show Inflation Rates

Show Inflation Rates

SCHEDULE 2 - O&M EXPENSES

Show Inflation Rates		Place "x" in box to inflate item by inflation and growth rate											
Code		Description											
300.90.200.5400		Vehicle Operation											
W-655		Customer Account Subtotal											
		\$ -	\$ 15,000	\$ 15,450	\$ 15,914	\$ 16,391	\$ 16,883	\$ 17,389	\$ 17,911	\$ 18,448	\$ 19,002	\$ 19,572	
Administrative & General													
300.90.100.5649		2,000	2,750	2,833	2,917	3,005	3,095	3,188	3,284	3,382	3,484	3,588	
W-660		-	3,300	3,399	3,501	3,606	3,714	3,826	3,940	4,059	4,180	4,306	
W-662		65,507	148,287	152,736	157,318	162,037	166,898	171,905	177,062	182,374	187,846	193,481	
W-663		13,000	2,700	2,781	2,864	2,950	3,039	3,130	3,224	3,321	3,420	3,523	
W-663		-	700	721	743	765	788	811	836	861	887	913	
W-664		-	125	129	133	137	141	145	149	154	158	163	
W-664		7,600	1,100	1,133	1,167	1,202	1,238	1,275	1,313	1,353	1,393	1,435	
W-666-A		13,000	16,500	16,995	17,505	18,030	18,571	19,128	19,702	20,293	20,902	21,529	
		-	160	165	170	175	180	185	191	197	203	209	
W-666-L		-	8,902	9,169	9,444	9,727	10,019	10,320	10,629	10,948	11,277	11,615	
W-667		12,000	38,440	39,593	40,781	42,004	43,265	44,562	45,899	47,276	48,695	50,155	
		37,225	60,456	62,270	64,138	66,062	68,044	70,085	72,188	74,353	76,584	78,881	
		133,530	90,793	93,517	96,322	99,212	102,188	105,254	108,412	111,664	115,014	118,464	
		16,812	415,640	428,109	440,952	454,181	467,806	481,841	496,296	511,185	526,520	542,316	
		500	1,980	2,039	2,101	2,164	2,229	2,295	2,364	2,435	2,508	2,583	
		264,972	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	
		4,374	-	-	-	-	-	-	-	-	-	-	
		3,646	3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567	
		14,513	7,500	7,725	7,957	8,195	8,441	8,695	8,955	9,224	9,501	9,786	
W-670		145,328	96,765	99,668	102,658	105,738	108,910	112,177	115,542	119,009	122,579	126,256	
		3,696	17,228	17,745	18,277	18,826	19,390	19,972	20,571	21,188	21,824	22,479	
		111,726	202	208	214	221	227	234	241	248	256	264	
		-	4,606	4,744	4,887	5,033	5,184	5,340	5,500	5,665	5,835	6,010	
W-677		-	5,762	5,935	6,113	6,296	6,485	6,680	6,880	7,087	7,299	7,518	
		26,042	26,709	27,510	28,336	29,186	30,061	30,963	31,892	32,849	33,834	34,849	
		-	102,115	105,178	108,334	111,584	114,931	118,379	121,931	125,589	129,356	133,237	
		-	53,890	55,507	57,172	58,887	60,654	62,473	64,347	66,278	68,266	70,314	
W-682		459,127	516,408	531,900	547,857	564,293	581,222	598,658	616,618	635,117	654,170	673,795	
		-	-	-	-	-	-	-	-	-	-	-	
		-	33,911	34,928	35,976	37,055	38,167	39,312	40,492	41,706	42,957	44,246	
		-	4,950	5,099	5,251	5,409	5,571	5,738	5,911	6,088	6,271	6,459	
		100,000	23,237	23,934	24,652	25,392	26,153	26,938	27,746	28,579	29,436	30,319	
Newly Added		-	46,667	48,067	49,509	50,994	52,524	54,100	55,723	57,395	59,116	60,890	
		\$ 1,434,598	\$ 1,740,283	\$ 1,792,491	\$ 1,846,266	\$ 1,901,654	\$ 1,958,704	\$ 2,017,465	\$ 2,077,989	\$ 2,140,329	\$ 2,204,538	\$ 2,270,675	
TOTAL WATER FUND													
		\$ 3,048,210	\$ 3,620,391	\$ 3,729,003	\$ 3,840,873	\$ 3,956,099	\$ 4,074,782	\$ 4,197,025	\$ 4,322,936	\$ 4,452,624	\$ 4,586,203	\$ 4,723,789	
SEWER FUND													
Sewer Treatment													
200.80.400.5121		2,500	2,500	2,575	2,652	2,732	2,814	2,898	2,985	3,075	3,167	3,262	
S-611		-	365,000	375,950	387,229	398,845	410,811	423,135	435,829	448,904	462,371	476,242	
S-613		275,442	537,160	553,275	569,873	586,969	604,578	622,716	641,397	660,639	680,458	700,872	
S-614		3,000	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690	3,800	3,914	
S-615		7,000	9,000	9,270	9,548	9,835	10,130	10,433	10,746	11,069	11,401	11,743	
S-615		-	1,200	1,236	1,273	1,311	1,351	1,391	1,433	1,476	1,520	1,566	
S-616		82,600	40,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191	
		-	5,300	5,459	5,623	5,791	5,965	6,144	6,328	6,518	6,714	6,915	
200.80.400.5300		-	600	618	637	656	675	696	716	738	760	783	
S-617		18,000	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690	3,800	3,914	
200.80.400.5638		-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	
S-618		275,000	283,250	291,748	300,500	309,515	318,800	328,364	338,215	348,362	358,813	369,670	
200.80.400.5521		10,676	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	
200.80.400.5522		41,800	32,960	33,949	34,967	36,016	37,097	38,210	39,356	40,537	41,753	43,004	
200.80.400.5674		87,851	9,300	9,579	9,866	10,162	10,467	10,781	11,101	11,431	11,771	12,121	
S-620		200.80.400.5570	210,000	216,300	222,789	229,473	236,357	243,448	250,751	258,274	266,022	274,002	
S-621		12,000	12,000	12,360	12,731	13,113	13,506	13,911	14,329	14,758	15,201	15,657	
200.80.400.5599		4,000	4,000	4,120	4,244	4,371	4,502	4,637	4,776	4,919	5,067	5,219	
S-622		-	6,500	6,695	6,896	7,103	7,316	7,535	7,761	7,994	8,234	8,481	
200.80.400.5637		-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	
S-624		22,000	22,000	22,660	23,340	24,040	24,761	25,504	26,269	27,057	27,869	28,705	
200.80.400.5614		-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	
Sewer Treatment Subtotal		\$ 1,416,869	\$ 1,552,560	\$ 1,599,137	\$ 1,647,111	\$ 1,696,524	\$ 1,747,420	\$ 1,799,843	\$ 1,853,838	\$ 1,909,453	\$ 1,966,737	\$ 2,025,739	

SCHEDULE 2 - O&M EXPENSES

Show Inflation Rates		Place "x" in box to inflate item by inflation and growth rate											
Code		Description											
Transmission & Distribution		Budget FY 08	Budget FY 09	Forecast FY 10	Forecast FY 11	Forecast FY 12	Forecast FY 13	Forecast FY 14	Forecast FY 15	Forecast FY 16	Forecast FY 17	Forecast FY 18	
200.85.500.5121	S-631	2,100	3,700	3,811	3,925	4,043	4,164	4,289	4,418	4,551	4,687	4,828	
200.85.500.5312	S-632	85,000	85,000	87,550	90,177	92,882	95,668	98,538	101,494	104,539	107,675	110,906	
200.85.400.5637	Safety Supplies	-	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524	
200.85.500.5199	Meter Install & Maintenance	52,500	-	-	-	-	-	-	-	-	-	-	
200.85.500.9410	Meter Install & Maintenance	-	-	-	-	-	-	-	-	-	-	-	
200.85.500.5814	Rents	1,500	-	-	-	-	-	-	-	-	-	-	
200.85.500.5122	Cellular and Mobile	-	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305	
200.85.500.5198	Lateral Line Maintenance	8,000	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	
200.85.500.5xxx		-	-	-	-	-	-	-	-	-	-	-	
200.85.500.5197	Main Maintenance	4,000	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	
200.85.500.9410	Main Maintenance	-	-	-	-	-	-	-	-	-	-	-	
200.85.500.5196	Service Building	2,000	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610	
200.85.500.4111	Salaries	270,116	279,371	287,752	296,385	305,276	314,435	323,868	333,584	343,591	353,899	364,516	
200.85.500.5561	Miss Utility Service	30,600	2,000	2,060	2,122	2,185	2,251	2,319	2,388	2,460	2,534	2,610	
200.85.500.5674	Clothing & Uniforms	-	6,000	6,180	6,365	6,556	6,753	6,956	7,164	7,379	7,601	7,829	
200.85.500.5530	Repairs - Mach'y. & Equip.	16,000	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048	
200.85.500.9910	Repairs - Mach'y. & Equip.	-	-	-	-	-	-	-	-	-	-	-	
200.85.500.4111	Maintenance Pump Station	-	-	-	-	-	-	-	-	-	-	-	
200.85.500.5526	Maintenance Pump Station	40,000	25,000	25,750	26,523	27,318	28,138	28,982	29,851	30,747	31,669	32,619	
200.85.500.5400	Vehicle Operation	27,000	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448	19,002	19,572	
200.85.500.5300	Gas	-	7,000	7,210	7,426	7,649	7,879	8,115	8,358	8,609	8,867	9,133	
200.85.500.5677	Tools	3,000	3,000	3,090	3,183	3,278	3,377	3,478	3,582	3,690	3,800	3,914	
Two Senior Equipment Operators		-	-	-	-	-	-	-	-	-	-	-	
Transmission & Distribution Subtotal		\$ 541,816	\$ 508,111	\$ 523,354	\$ 539,055	\$ 555,227	\$ 571,883	\$ 589,040	\$ 606,711	\$ 624,912	\$ 643,660	\$ 662,970	
Newly Added - Split between W/S		-	-	-	-	-	-	-	-	-	-	-	

Newly Added - Split between W/S Two Senior Equipment Operators
Transmission & Distribution Subtotal

SCHEDULE 4 - CAPITAL IMPROVEMENT PROJECTS

Project	Priority	Code	Allocation (%)			Non-Growth		Growth		Budget FY 09	Projected FY 10	Projected FY 11	Projected FY 12	Projected FY 13	Projected FY 14	Projected FY 15	Projected FY 16	Projected FY 17	Projected FY 18	Total FY 09-18							
			Non Growth	Growth	Grant	Funding Source		Funding Source																			
						Cash	Bond	Cash	Bond																		
Water																											
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			100%	0%	0%	0%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	
			15,000	200,000	200,000	34,000																					415,000
			50,000	72,000	62,000																						218,000
					20,000																						20,000
				175,000	86,000																						347,000
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SCHEDULE 5A - USER - CASH FUNDED CIP

Project	Code	Budget FY 08	Budget FY 09	Projected FY 10	Projected FY 11	Projected FY 12	Projected FY 13	Projected FY 14	Projected FY 15	Projected FY 16	Projected FY 17	Projected FY 18	Total FY 09-18
Water													
Cranberry Water Treatment Plant Upgrade	PS	-	-	-	-	-	-	-	-	-	-	-	-
Route 27 Water Main Replacement	WM	-	-	-	-	-	-	-	-	-	-	-	-
Vehicle/Equipment Replacement	ME	-	-	-	-	-	-	-	-	-	-	-	-
Gas Chlorination Equipment	ME	-	-	-	20,000	-	-	-	-	-	-	-	20,000
Radon Removal	ME	-	-	-	-	-	-	-	-	-	-	-	-
MD 140 Parallel Water Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
Gesell Property Well	SF	-	-	-	-	-	-	-	-	-	-	-	-
Little Pipe Creek Intake	SF	-	-	-	-	-	-	-	-	-	-	-	-
Interzone Water Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
Watershed Easement Purchase	SF	-	-	-	-	-	-	-	-	-	-	-	-
Ridge Road Water Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
Park Avenue Water Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
Main Street Water Main Upgrade	WM	-	-	-	-	-	-	-	-	-	-	-	-
New Water Storage Facility	WM	-	-	-	-	-	-	-	-	-	-	-	-
Rehabilitation of Wells	SF	-	-	-	-	-	-	-	-	-	-	-	-
James Street Water Main	SF	-	-	-	-	-	-	-	-	-	-	-	-
John Street Water Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
Ralph and Church Water Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
West George Street Water Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
Sophia Avenue Water Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
Hollow Rock/City View Water Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
Winter Street Water Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
Repair Dam Breast, Engineering and Construction	SF	-	-	-	-	-	-	-	-	-	-	-	-
Avondale Well Pump	SF	-	-	-	-	-	-	-	-	-	-	-	-
Krider's Well #5, New Regenerator, Pump and Motor	SF	-	-	-	-	-	-	-	-	-	-	-	-
Pump Testing Gesell and or Hyles	SF	-	-	-	-	-	-	-	-	-	-	-	-
Medford Quarry Main	WM	-	-	-	-	-	-	-	-	-	-	-	-
Water Meter Replacement	ME	-	-	-	-	-	-	-	-	-	-	-	-
New Water Supply Development	SF	-	-	-	-	-	-	-	-	-	-	-	-
Conservation Project	SF	-	-	-	-	-	-	-	-	-	-	-	-
Roop's Mill Well #11	SF	-	-	-	-	-	-	-	-	-	-	-	-
Wakefield Valley Wells	SF	-	-	-	-	-	-	-	-	-	-	-	-
Wakefield Tank Painting	SF	-	-	-	-	-	-	-	-	-	-	-	-
Capital Investment in System for Years Beyond FY 14	ME	-	-	-	-	-	-	-	-	-	-	-	-
Total Cash Funded Water Capital Projects		-	-	-	20,000	-	6,600	26,400	-	-	-	-	53,000
Capital Projects by Type													
Pump Stations	PS	-	-	-	-	-	-	-	-	-	-	-	-
Storage Facilities	SF	-	-	-	-	-	-	-	-	-	-	-	-
Water Mains	WM	-	-	-	-	-	-	26,400	-	-	-	-	33,000
Machinery and Equipment	ME	-	-	-	20,000	-	6,600	-	-	-	-	-	20,000
Total		-	-	-	20,000	-	6,600	26,400	-	-	-	-	53,000
Sewer													
Variable Frequency Drive, Replace Forks	ME	-	25,000	25,000	25,000	25,000	-	-	-	-	-	-	100,000
Replace Auto Analyzer	ME	-	-	-	-	-	-	-	-	-	-	-	-
Plant Upgrade/Expansion	LS	-	-	-	-	-	-	-	-	-	-	-	-
Meter Replacement	ME	-	-	-	-	-	-	-	-	-	-	-	-
Sewer System Rehab Work in Progress	ME	-	-	-	-	-	-	-	-	-	-	-	-
Pump Station #12 Upgrade	LS	-	-	-	-	-	-	-	-	-	-	-	-
Aeration Tanks #3 & #4 Air System	ME	-	-	-	-	-	-	-	-	-	-	-	-
Vehicle/Equipment Replacement	ME	-	-	-	-	-	-	-	-	-	-	-	-
Pump Station #15 Rehabilitation	LS	-	-	-	-	-	-	-	-	-	-	-	-
Coat Odor Control System	ME	-	-	-	-	-	-	-	-	-	-	-	-
Capital Investment in System for Years Beyond FY 13	ME	-	-	-	-	-	-	-	-	-	-	-	-
Total Cash Funded Sewer Capital Projects		-	25,000	25,000	25,000	25,000	-	-	-	-	-	-	100,000
Capital Projects by Type													
Lift Stations	LS	-	-	-	-	-	-	-	-	-	-	-	-
Sewer Mains	SM	-	-	-	-	-	-	-	-	-	-	-	-
Machinery and Equipment	ME	-	25,000	25,000	25,000	25,000	-	-	-	-	-	-	100,000
Total		-	25,000	25,000	25,000	25,000	-	-	-	-	-	-	100,000

Project	Code	Budget FY 09	Projected FY 10	Projected FY 11	Projected FY 12	Projected FY 13	Projected FY 14	Projected FY 15	Projected FY 16	Projected FY 17	Projected FY 18	Total FY 09-18
Water												
Canberry Water Treatment Plant Upgrade	PS	-	-	-	-	-	-	-	-	-	-	-
Route 27 Water Main Replacement	WM	15,000	200,000	200,000	-	-	-	-	-	-	-	415,000
Vehicle/Equipment Replacement	ME	50,000	72,000	62,000	34,000	-	-	-	-	-	-	218,000
Gas Chlorination Equipment	ME	-	-	-	-	-	-	-	-	-	-	-
Radon Removal	ME	-	175,000	86,000	86,000	-	-	-	-	-	-	347,000
MD 140 Parallel Water Main	WM	-	-	-	-	-	-	-	-	-	-	-
Gesell Property Well	SF	-	-	-	-	-	-	-	-	-	-	-
Little Pipe Creek Intake	SF	-	-	-	-	-	-	-	-	-	-	-
Innerzone Water Main	WM	-	-	-	-	-	-	-	-	-	-	-
Watershed Easement Purchase	SF	-	-	-	-	-	-	-	-	-	-	-
Ridge Road Water Main	WM	-	-	12,500	30,000	30,000	30,000	-	-	-	-	102,500
Park Avenue Water Main	WM	-	-	13,200	26,400	26,400	-	-	-	-	-	66,000
Main Street Water Main Upgrade	WM	-	160,000	-	-	-	-	-	-	-	-	160,000
New Water Storage Facility	WM	-	-	-	-	-	-	-	-	-	-	-
Rehabilitation of Wells	SF	-	-	-	-	-	-	-	-	-	-	-
James Street Water Main	SF	40,000	40,000	40,000	-	-	-	-	-	-	-	120,000
John Street Water Main	WM	-	-	-	-	-	-	-	-	-	-	-
Ralph and Church Water Main	WM	-	-	-	-	-	-	-	-	-	-	-
West George Street Water Main	WM	-	-	-	-	-	-	-	-	-	-	-
Sophia Avenue Water Main	WM	-	-	-	-	25,000	150,000	-	-	-	-	175,000
Hollow Rock/City View Water Main	WM	-	-	-	10,000	40,000	40,000	-	-	-	-	90,000
Winter Street Water Main	WM	-	-	-	-	33,000	95,700	-	-	-	-	128,700
Repair Dam Breast, Engineering and Construction	SF	-	-	-	-	-	-	-	-	-	-	-
Avondale Well Pump	SF	-	-	-	-	-	-	-	-	-	-	-
Kridler's Well #5, New Regenerator, Pump and Motor	SF	-	-	-	-	-	-	-	-	-	-	-
Pump Testing Gesell and or Hydes	SF	-	-	-	-	-	-	-	-	-	-	-
Medford Quarry Main	ME	-	-	-	-	-	-	-	-	-	-	-
Water Meter Replacement	WM	-	-	-	-	-	-	-	-	-	-	-
New Water Supply Development	ME	175,000	-	-	-	-	-	-	-	-	-	175,000
Conservation Project	SF	-	-	-	-	-	-	-	-	-	-	-
Roop's Mill Well #11	SF	-	-	-	-	-	-	-	-	-	-	-
Wakefield Valley Wells	SF	-	-	-	-	-	-	-	-	-	-	-
Wakefield Tank Painting	SF	100,000	200,000	-	-	-	-	-	-	-	-	300,000
Capital Investment in System for Years Beyond FY 14	ME	-	-	-	-	-	-	-	-	-	-	-
Total Bond Funded Water Capital Projects		380,000	847,000	413,700	186,400	154,400	315,700	-	-	-	-	2,297,200
Capital Projects by Type												
Pump Stations	PS	-	-	-	-	-	-	-	-	-	-	-
Storage Facilities	SF	140,000	240,000	40,000	-	-	-	-	-	-	-	420,000
Water Mains	WM	15,000	360,000	225,700	66,400	154,400	315,700	-	-	-	-	1,137,200
Machinery and Equipment	ME	225,000	247,000	148,000	120,000	-	-	-	-	-	-	740,000
Total		380,000	847,000	413,700	186,400	154,400	315,700	-	-	-	-	2,297,200
Sewer												
Variable Frequency Drive, Replace Forks	ME	-	-	-	-	-	-	-	-	-	-	-
Replace Auto Analyzer	ME	-	-	-	-	-	-	-	-	-	-	-
Plant Upgrade/Expansion	LS	-	-	-	-	-	-	-	-	-	-	-
Meter Replacement	ME	175,000	-	-	-	-	-	-	-	-	-	175,000
Sewer System Rehab Work in Progress	ME	125,000	125,000	125,000	125,000	-	-	-	-	-	-	625,000
Pump Station #12 Upgrade	LS	-	250,000	-	-	-	-	-	-	-	-	250,000
Aeration Tanks #3 & #4 Air System	ME	-	35,000	75,000	-	-	-	-	-	-	-	110,000
Vehicle/Equipment Replacement	ME	50,000	108,000	35,000	35,000	-	-	-	-	-	-	228,000
Pump Station #15 Rehabilitation	LS	-	-	-	-	-	-	-	-	-	-	-
Coat Odor Control System	ME	-	30,000	30,000	-	-	-	-	-	-	-	60,000
Capital Investment in System for Years Beyond FY 13	ME	-	-	-	-	-	-	-	-	-	-	-
Total Bond Funded Sewer Capital Projects		350,000	548,000	265,000	160,000	125,000	-	-	-	-	-	1,448,000
Capital Projects by Type												
Lift Stations	LS	-	250,000	-	-	-	-	-	-	-	-	250,000
Sewer Mains	SM	-	-	-	-	-	-	-	-	-	-	-
Machinery and Equipment	ME	350,000	298,000	265,000	160,000	125,000	-	-	-	-	-	1,198,000
Total		350,000	548,000	265,000	160,000	125,000	-	-	-	-	-	1,448,000

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SCHEDULE 5D - GROWTH - BOND FUNDED CIP

Project	Budget FY 09	Projected FY 10	Projected FY 11	Projected FY 12	Projected FY 13	Projected FY 14	Projected FY 15	Projected FY 16	Projected FY 17	Projected FY 18	Total FY 09-18
Water											
Cranberry Water Treatment Plant Upgrade	-	-	-	-	-	-	-	-	-	-	-
Route 27 Water Main Replacement	-	-	-	-	-	-	-	-	-	-	-
Vehicle/Equipment Replacement	-	-	-	-	-	-	-	-	-	-	-
Gas Chlorination Equipment	-	-	-	-	-	-	-	-	-	-	-
Radon Removal	-	-	-	-	-	-	-	-	-	-	-
MD 140 Parallel Water Main	-	-	-	-	-	750,000	-	-	-	-	-
Gesell Property Well	-	-	-	-	50,000	-	-	-	-	-	800,000
Little Pipe Creek Inlet	50,000	-	-	-	-	-	-	-	-	-	50,000
Interzone Water Main	-	-	50,000	-	-	-	-	-	-	-	-
Watershed Easement Purchase	-	-	100,000	750,000	-	-	-	-	-	-	800,000
Ridge Road Water Main	-	150,000	100,000	100,000	100,000	100,000	-	-	-	-	550,000
Park Avenue Water Main	-	-	12,500	30,000	30,000	30,000	-	-	-	-	102,500
Main Street Water Main Upgrade	-	-	6,800	13,600	13,600	-	-	-	-	-	34,000
New Water Storage Facility	-	160,000	-	-	-	-	-	-	-	-	160,000
Rehabilitation of Wells	-	-	-	40,000	300,000	300,000	-	-	-	-	640,000
James Street Water Main	-	-	-	-	-	-	-	-	-	-	-
John Street Water Main	-	-	-	-	-	-	-	-	-	-	-
Ralph and Church Water Main	-	-	-	-	-	-	-	-	-	-	-
West George Street Water Main	-	10,000	45,000	-	-	-	-	-	-	-	55,000
Sophia Avenue Water Main	-	-	-	10,000	40,000	40,000	-	-	-	-	90,000
Hollow Rock/City View Water Main	-	-	-	10,000	40,000	40,000	-	-	-	-	90,000
Winnier Street Water Main	-	-	-	17,000	49,300	49,300	-	-	-	-	66,300
Repair Dam Breast, Engineering and Construction	-	-	-	-	-	-	-	-	-	-	-
Avondale Well Pump	-	-	-	-	-	-	-	-	-	-	-
Krider's Well #5, New Regenerator, Pump and Motor	-	-	-	-	-	-	-	-	-	-	-
Pump Testing Gesell and/or Hydes	-	-	-	-	-	-	-	-	-	-	-
Medford Quarry Main	-	-	-	-	-	-	-	-	-	-	-
Water Meter Replacement	-	-	-	-	-	-	-	-	-	-	-
New Water Supply Development	-	-	-	200,000	500,000	500,000	-	-	-	-	1,725,000
Conservation Project	125,000	200,000	200,000	-	-	-	-	-	-	-	-
Roop's Mill Well #11	375,000	-	-	-	-	-	-	-	-	-	375,000
Wakefield Valley Wells	-	-	-	-	-	-	-	-	-	-	-
Wakefield Tank Painting	-	-	-	-	-	-	-	-	-	-	-
Capital Investment in System for Years Beyond FY 14	-	-	-	-	-	-	663,750	663,750	663,750	663,750	2,655,000
Total Bond Funded Water Capital Projects	550,000	520,000	414,300	1,153,600	1,090,600	1,809,300	663,750	663,750	663,750	663,750	8,192,800
Capital Projects by Type											
Pump Stations	-	-	-	-	-	-	-	-	-	-	-
Storage Facilities	550,000	350,000	300,000	340,000	900,000	900,000	-	-	-	-	3,340,000
Water Mains	-	170,000	114,300	813,600	190,600	909,300	-	-	-	-	2,197,800
Machinery and Equipment	-	-	-	-	-	-	663,750	663,750	663,750	663,750	2,655,000
Total	550,000	520,000	414,300	1,153,600	1,090,600	1,809,300	663,750	663,750	663,750	663,750	8,192,800
Sewer											
Variable Frequency Drive, Replace Forks	-	-	-	-	-	-	-	-	-	-	-
Replace Auto Analyzer	-	-	-	-	-	-	-	-	-	-	-
Plant Upgrade/Expansion	250,000	3,250,000	3,250,000	125,000	2,125,000	-	-	-	-	-	9,000,000
Meter Replacement	-	-	-	-	-	-	-	-	-	-	-
Sewer System Rehab Work in Progress	-	-	-	-	-	-	-	-	-	-	-
Pump Station #12 Upgrade	-	250,000	-	-	-	-	-	-	-	-	250,000
Aeration Tanks #3 & #4 Air System	-	-	-	-	-	-	-	-	-	-	-
Vehicle/Equipment Replacement	-	-	-	-	-	-	-	-	-	-	-
Pump Station #15 Rehabilitation	-	90,000	90,000	-	100,000	1,500,000	-	-	-	-	1,780,000
Coat Odor Control System	-	-	-	-	-	-	-	-	-	-	-
Capital Investment in System for Years Beyond FY 13	-	-	-	-	-	-	1,649,083	1,649,083	1,649,083	1,649,083	6,596,333
Total Bond Funded Sewer Capital Projects	250,000	3,590,000	3,340,000	125,000	2,225,000	1,500,000	1,649,083	1,649,083	1,649,083	1,649,083	17,626,333
Capital Projects by Type											
Lift Stations	-	-	-	-	-	-	-	-	-	-	-
Sewer Mains	250,000	3,590,000	3,340,000	125,000	2,225,000	1,500,000	-	-	-	-	11,030,000
Machinery and Equipment	-	-	-	-	-	-	1,649,083	1,649,083	1,649,083	1,649,083	6,596,333
Total	250,000	3,590,000	3,340,000	125,000	2,225,000	1,500,000	1,649,083	1,649,083	1,649,083	1,649,083	17,626,333

SCHEDULE 6A - PROJECTED USER DEBT

Water	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Projected Non-Growth Debt	380,000	847,000	413,700	186,400	154,400	315,700	-	-	-	-
Bond Issue Timing	1,227,000	-	600,100	-	470,100	-	-	-	-	-
Administrative Costs (% of debt service)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Administrative Costs Subtotal	61,350	30,003	30,003	23,505	23,505	-	-	-	-	-
Total Debt	1,288,350	630,105	630,105	493,605	493,605	-	-	-	-	-
Debt Service										
Interest Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Period (years)	20	20	20	20	20	20	20	20	20	20
Total Debt Service by Fiscal Year	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
	103,381	103,381	103,381	103,381	103,381	103,381	103,381	103,381	103,381	103,381
Water Debt Service Payment Schedule										
Payment										
Interest										
Principal										
Balance										
FY 09										
FY 10										
FY 11										
FY 12										
FY 13										
FY 14										
FY 15										
FY 16										
FY 17										
FY 18										
Water										
Total Annual Debt Service	-	1,288,350	1,249,387	1,838,581	1,776,568	2,205,060	2,121,763	2,034,301	1,942,466	1,846,039
Total Annual Interest	-	64,418	62,469	91,929	88,828	110,253	106,088	101,715	97,123	92,302
Total Annual Principal	-	38,963	40,911	62,013	65,113	83,297	87,462	91,835	96,427	101,248
Total Outstanding Principal Balance	-	1,288,350	1,249,387	1,838,581	1,776,568	2,205,060	2,121,763	2,034,301	1,942,466	1,846,039

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Sewer										
Projected Non-Growth Debt	350,000	548,000	265,000	160,000	125,000	-	-	-	-	-
Bond Issue Timing	898,000		425,000		125,000					
Administrative Costs (% of debt service)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Administrative Costs Subtotal	44,900	21,250	6,250							
Total Debt	942,900	446,250	131,250							
Debt Service										
Interest Rate	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Period (years)	20	20	20	20	20	20	20	20	20	20
Total Debt Service by Fiscal Year	75,661	-	35,808	10,532	-	-	-	-	-	-
Sewer Debt Service Payment Schedule										
Payment										
Interest										
Principal										
Balance										
FY 09										
FY 10	75,661	45,719	75,661	75,661	75,661	75,661	75,661	75,661	75,661	75,661
FY 11	47,145	29,942	44,222	31,439	33,011	34,661	36,394	38,214	40,125	42,131
FY 12	28,516	884,443	853,004	819,994	785,333	748,938	710,725	670,600	628,469	586,338
FY 13	914,384	-	-	-	-	-	-	-	-	-
FY 14	-	-	-	-	-	-	-	-	-	-
FY 15	-	-	-	-	-	-	-	-	-	-
FY 16	-	-	-	-	-	-	-	-	-	-
FY 17	-	-	-	-	-	-	-	-	-	-
FY 18	-	-	-	-	-	-	-	-	-	-
Sewer										
Total Annual Debt Service	-	75,661	111,469	111,469	111,469	122,001	122,001	122,001	122,001	122,001
Total Annual Interest	-	47,145	66,535	68,491	68,491	65,816	63,007	60,057	56,960	53,816
Total Annual Principal	-	28,516	29,942	44,934	47,181	53,509	56,185	58,994	61,944	65,041
Total Outstanding Principal Balance	-	942,900	914,384	1,330,693	1,285,758	1,369,827	1,316,318	1,260,133	1,201,139	1,139,195

SCHEDULE 6B - PROJECTED GROWTH DEBT

Total Outstanding Principal Balance

City of Westminster Water and Sewer Rate Study

Sewer	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Projected Growth Debt	250,000	3,590,000	3,340,000	125,000	2,225,000	1,500,000	1,649,083	1,649,083	1,649,083	1,649,083
Bond Issue Timing	3,840,000		3,465,000		3,725,000		3,298,167		3,298,167	
Administrative Costs (% of debt service)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Administrative Costs Subtotal	192,000	173,250	173,250	186,250	186,250	164,908	164,908	164,908	164,908	164,908
Total Debt	4,032,000	3,638,250	3,911,250	3,911,250	3,911,250	3,463,075	3,463,075	3,463,075	3,463,075	3,463,075
Debt Service										
Interest Rate		5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Period (years)		20	20	20	20	20	20	20	20	20
Total Debt Service by Fiscal Year	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
		323,538	-	291,943	-	313,849	-	277,886	-	277,886
Sewer Debt Service Payment Schedule										
FY 09										
Payment										
Interest										
Principal										
Balance										
FY 10										
Payment		323,538	323,538	323,538	323,538	323,538	323,538	323,538	323,538	323,538
Interest		201,600	195,503	189,101	182,380	175,322	167,911	160,129	151,959	143,380
Principal		121,938	128,035	134,437	141,159	148,217	155,627	163,409	171,579	180,158
Balance		3,910,062	3,782,027	3,647,590	3,506,431	3,358,215	3,202,588	3,039,179	2,867,600	2,687,442
FY 11										
Payment										
Interest										
Principal										
Balance										
FY 12										
Payment				291,943	291,943	291,943	291,943	291,943	291,943	291,943
Interest				181,913	176,411	170,634	164,569	158,200	151,513	144,492
Principal				110,030	115,532	121,308	127,374	133,742	140,429	147,451
Balance				3,528,220	3,412,688	3,291,380	3,164,007	3,030,264	2,889,835	2,742,384
FY 13										
Payment										
Interest										
Principal										
Balance										
FY 14										
Payment										
Interest										
Principal										
Balance										
FY 15										
Payment										
Interest										
Principal										
Balance										
FY 16										
Payment										
Interest										
Principal										
Balance										
FY 17										
Payment										
Interest										
Principal										
Balance										
FY 18										
Payment										
Interest										
Principal										
Balance										
Sewer										
Total Annual Debt Service	-	323,538	323,538	615,481	615,481	929,330	929,330	1,207,216	1,207,216	1,485,102
Total Annual Interest	-	201,600	195,503	371,014	358,791	541,518	522,138	674,922	648,307	793,515
Total Annual Principal	-	121,938	128,035	244,467	256,690	387,811	407,202	532,294	558,909	691,586
Total Outstanding Principal Balance	-	4,032,000	3,910,062	7,420,277	7,175,810	10,830,370	10,442,559	13,498,432	12,966,138	15,870,304

SCHEDULE 7 - RETURN ON EQUITY

Annual Depreciation

WATER

	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Starting Balance		512,782	528,165	544,010	560,331	577,141	594,455	612,289	630,657	649,577	669,064	689,136
Annual Gross Depreciation												
Cumulative Gross Depreciation	\$ 7,928,015	8,440,797	8,968,963	9,512,973	10,073,304	10,650,444	11,244,899	11,857,188	12,487,845	13,137,422	13,806,486	14,495,622

SEWER

	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Starting Balance		907,521	934,747	962,789	991,673	1,021,423	1,052,066	1,083,628	1,116,136	1,149,620	1,184,109	1,219,632
Annual Gross Depreciation												
Cumulative Gross Depreciation	\$ 14,499,273	15,406,794	16,341,541	17,304,330	18,296,002	19,317,425	20,369,491	21,453,118	22,569,255	23,718,875	24,902,984	26,122,616
Annual Total Gross Depreciation		1,420,303	1,462,912	1,506,799	1,552,003	1,598,564	1,646,520	1,695,916	1,746,794	1,799,197	1,853,173	1,908,768

Calculation of Return on Equity

WATER

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Gross Water System Assets	24,858,831	24,858,831	25,813,831	27,185,831	28,063,831	29,403,831	30,658,831	32,823,831	33,487,581	34,151,331
Less Outstanding Principal on Debt										
Less Contributed Assets/Grants (Net of Depreciation)	58,899	1,668,823	1,635,974	2,232,694	2,178,372	2,614,723	2,539,459	2,460,207	2,376,763	2,288,912
Less Cumulative Depreciation										
Allowance for Working Capital (Percentage of O&M)	8,968,963	9,512,973	10,073,304	10,650,444	11,244,899	11,857,188	12,487,845	13,137,422	13,806,486	14,495,622
Net Equity	905,098	932,251	960,218	989,025	1,018,695	1,049,256	1,080,734	1,113,156	1,146,551	1,180,947
Rate of Return	16,736,067	14,609,286	15,064,771	15,291,717	15,659,255	15,981,176	16,712,261	18,339,358	18,450,883	18,547,744

25%

10%

Return on Equity

	1,673,607	1,460,929	1,506,477	1,529,172	1,565,926	1,598,118	1,671,226	1,833,936	1,843,088	1,854,774
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SEWER

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Gross Sewer System Assets	35,718,151	35,718,151	37,093,151	51,006,151	64,386,151	65,071,151	73,796,151	75,296,151	76,945,234	78,594,318
Less Outstanding Principal on Debt	122,347	1,071,366	1,048,274	1,330,693	1,285,758	1,369,827	1,316,318	1,260,133	1,201,139	1,139,195
Less Contributed Assets/Grants (Net of Depreciation)										
Less Cumulative Depreciation	16,341,541	17,304,330	18,296,002	19,317,425	20,369,491	21,453,118	22,569,255	23,718,875	24,902,984	26,122,616
Allowance for Working Capital (Percentage of O&M)	887,602	914,230	941,657	969,906	999,004	1,028,974	1,059,843	1,091,638	1,124,387	1,158,119
Net Equity	20,141,865	18,256,685	18,690,531	31,327,939	43,729,905	43,277,179	50,970,421	51,408,781	51,965,499	52,490,625
Rate of Return										

25%

10%

Return on Equity

	2,014,187	1,825,669	1,869,053	3,132,794	4,372,991	4,327,718	5,097,042	5,140,878	5,196,550	5,249,063
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SCHEDULE 8 - OPERATING AND MAINTENANCE RESERVE

Water O&M Reserve	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Water O&M Expenses	3,048,210	3,620,391	3,729,003	3,840,873	3,956,099	4,074,782	4,197,025	4,322,936	4,452,624	4,586,203	4,723,789
Target Balance (90 days operating) Less Reserve Withdrawal	751,613	892,699	919,480	947,065	975,476	1,004,741	1,034,883	1,065,929	1,097,907	1,130,845	1,164,770
Current Balance*	86,926	86,926	86,926	186,926	286,926	386,926	486,926	586,926	686,926	786,926	886,926
Water O&M Reserve Contribution		\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000
Sewer O&M Reserve	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Sewer O&M Expenses	3,427,734	3,550,407	3,656,919	3,766,627	3,879,626	3,996,014	4,115,895	4,239,372	4,366,553	4,497,549	4,632,476
Target Balance (90 days operating) Less Reserve Withdrawal	845,195	875,443	901,706	928,757	956,620	985,319	1,014,878	1,045,325	1,076,684	1,108,985	1,142,254
Current Balance*	434,424	434,424	434,424	534,424	634,424	734,424	834,424	934,424	1,034,424	1,076,684	1,108,985
Sewer O&M Reserve Contribution		\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 42,260	\$ 32,301	\$ 33,270

Assumes full funding in first year

SCHEDULE 9A - REPAIR, RENEWAL AND REPLACEMENT RESERVE (3R RESERVE)

BOOK VALUE METHOD

		FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Water System Capital Improvements (Planned Reinvestment)		380,000	847,000	433,700	186,400	161,000	342,100	-	-	-	-
Book Value of Fixed Water System Assets		\$ 24,858,831	\$ 25,813,831	\$ 27,185,831	\$ 28,063,831	\$ 29,403,831	\$ 30,658,831	\$ 32,823,831	\$ 33,487,581	\$ 34,151,331	\$ 34,815,081
Water 3R Reserve Contribution											
Less Reserve Withdrawal											
Current Balance		\$ -	\$ -	\$ -	\$ 94,238	\$ 133,038	\$ -	\$ 328,238	\$ 334,876	\$ 341,513	\$ 348,151
Useful Life		100									
Rate of Reinvestment		1.00%									
					94,238	227,277	227,277	555,515	890,391	1,231,904	1,580,055
Sewer System Capital Improvements (Planned Reinvestment)		375,000	573,000	290,000	185,000	125,000	-	-	-	-	-
Book Value of Fixed Sewer System Assets		\$ 35,718,151	\$ 37,093,151	\$ 51,006,151	\$ 64,386,151	\$ 65,071,151	\$ 73,796,151	\$ 75,296,151	\$ 76,945,234	\$ 78,594,318	\$ 80,243,401
Sewer 3R Reserve Contribution											
Less Reserve Withdrawal											
Current Balance		\$ -	\$ -	\$ 220,062	\$ 458,862	\$ 525,712	\$ 737,962	\$ 752,962	\$ 769,452	\$ 785,943	\$ 802,434
Useful Life		100									
Rate of Reinvestment		1.00%									
					678,923	1,204,635	1,942,596	2,695,558	3,465,010	4,250,953	5,033,387

SCHEDULE 9A - REPAIR, RENEWAL AND REPLACEMENT RESERVE (3R RESERVE)

DETAILED SYSTEM INFORMATION METHOD

WATER

Analysis Year:		PIPE INVENTORY - LINEAR FEET BY DECADE										
		2009										
Material	Useful Life (years)	2020	1930	1940	1950	1960	1970	1980	1990	2000	TOTAL	
		1920	1930	1940	1950	1960	1970	1980	1990	2000		
		1920	1930	1940	1950	1960	1970	1980	1990	2000		
		1920	1930	1940	1950	1960	1970	1980	1990	2000		
		1920	1930	1940	1950	1960	1970	1980	1990	2000		
Asbestos Concrete	75											
Cast Iron	75	10,000	10,000	10,000	455	60,054	20,396	1,971	2,884	3,613	89,373	
Ductile	75				10,000	62,618	44,637	-	-	494	147,749	
Other	75				-	31,469	92,619	102,048	109,887	54,915	390,937	
					-	5,714	8,194	3,351	-	-	17,259	
	75	10,000	10,000	10,000	10,455	159,855	165,846	107,370	112,771	59,022	645,319	

SCHEDULE 10A - CONSUMPTION-CUSTOMERS

From utility sys36 data

Inside City - Both Water and Sewer - Total Consumption (in 1,000 gallons)

Meter Size	CY 06				CY 07				FY 07		
	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Qtr 1	Qtr 2	Qtr 3	Total	Annual	Summer
5/8	4,662	5,284	11,084	4,525	25,555	4,600	34,029	4,791	1,662	45,082	45,113
3/4	89,957	87,022	215,804	85,804	479,187	89,203	88,234	91,934	34,540	304,038	175,007
1	19,003	10,081	10,521	53,535	83,140	11,175	22,030	10,654	37,356	54,380	21,696
1 1/2	19,331	18,311	30,250	16,438	84,330	37,107	20,013	19,014	13,389	89,523	50,263
2	25,181	23,184	51,164	25,697	125,226	27,120	25,821	25,402	17,187	129,802	52,817
3	4,016	4,042	7,725	5,560	21,343	7,278	7,741	7,660	7,229	29,908	15,466
4											
8	3,234	1,438	4,407	4,646	13,725	1,620	1,960	2,199	2,188	7,967	6,367
90010											
90011											
90099											
Total	157,284	149,962	342,464	153,191	802,901	178,103	188,452	161,601	81,121	609,277	530,916

Taken Out
Billed a Minimum Charge?
Summary Accounts
Non-billed Accounts

Res	107,826	103,807	253,259	100,962	565,854	128,055	107,087	110,958	43,177	389,277	589,363
Com	49,458	46,155	89,205	52,229	237,047	50,048	81,365	50,643	37,944	220,000	272,847
Total	157,284	149,962	342,464	153,191	802,901	178,103	188,452	161,601	81,121	609,277	862,210

Inside City - Water Only - Total Consumption (in 1,000 gallons)

Meter Size	CY 06				CY 07				FY 07		
	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Qtr 1	Qtr 2	Qtr 3	Total	Annual	Summer
5/8	11	10	41	15	77	12	11	12	35	79	52
3/4	354	288	859	398	1,899	317	335	395	1,051	1,909	1,194
1	132	45	275	192	644	89	79	367	244	635	354
1 1/2	29	30	94	1,407	1,560	278	47	144	113	582	281
2	362	729	1,479	2,473	5,043	436	965	1,596	623	3,620	1,411
3	-	-	-	-	-	-	-	-	-	-	-
4	248	-	190	19	457	87	-	-	147	234	190
8	-	-	-	-	-	-	-	-	-	-	-
90010											
90011											
90099											
Total	1,136	1,102	2,938	4,504	9,680	1,219	1,437	2,514	1,232	10,098	4,375

Res	214	209	655	257	1,335	238	248	306	86	878	1,398
Com	922	893	2,283	4,247	8,345	981	1,189	2,208	1,146	5,524	8,700
Total	1,136	1,102	2,938	4,504	9,680	1,219	1,437	2,514	1,232	6,402	10,098

Inside City - Sewer Only - Total Consumption (in 1,000 gallons)

Meter Size	CY 06				CY 07				FY 07		
	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Qtr 1	Qtr 2	Qtr 3	Total	Annual	Summer
5/8											
3/4	324	289	725	320	1,658	322	317	346	185	1,170	1,042
1											
1 1/2											
2											
3											
4											
8											
90010											
90011											
90099											
Total	324	289	725	320	1,658	322	317	346	185	1,170	1,042

Res	321	285	722	316	1,644	319	313	341	181	1,154	1,670
Com	3	4	3	4	14	3	4	5	16	14	14
Total	324	289	725	320	1,658	322	317	346	185	1,170	1,684

SCHEDULE 10A - CONSUMPTION-CUSTOMERS

Outside City - Both Water and Sewer - Total Consumption (in 1,000 gallons)

CY 06

CY 07

FY 07

Meter Size	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Annual	Summer	Winter
5/8	811	802	2,204	731	4,548	846	739	785	108	2,478	4,520	2,943	1,577
3/4	52,605	51,396	144,694	46,086	294,781	50,026	48,952	58,735	10,059	167,772	289,758	193,646	96,112
1	3,415	3,275	5,990	4,238	16,918	2,947	3,459	3,663	3,071	13,140	16,634	9,449	7,185
1 1/2	5,219	5,040	5,766	5,707	21,732	4,777	5,904	5,245	5,845	21,771	22,154	11,670	10,484
2	6,895	6,059	8,240	7,272	28,466	7,742	9,086	9,220	6,831	32,879	32,340	17,326	15,014
3	1,943	2,383	7,252	5,365	16,943	3,754	6,437	4,293	3,487	17,971	22,808	13,689	9,119
4	1,442	1,320	1,869	2,322	6,953	1,577	1,970	2,663	52,163	58,373	7,738	3,839	3,899
8	-	-	-	-	-	-	-	-	-	-	-	-	-
90010	-	-	-	-	-	-	-	-	-	-	-	-	-
90011	-	-	-	-	-	-	-	-	-	-	-	-	-
90099	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	72,330	70,275	176,015	71,721	390,341	71,669	76,547	84,604	81,564	314,384	395,952	252,562	143,390

Taken Out: Account 24-1411 CY07 Q1 600,000.015

Res	51,714	53,861	146,451	48,724	300,750	52,543	51,732	61,653	11,848	177,776	299,450	-	-
Com	20,616	16,414	29,564	22,997	89,591	19,126	24,815	22,951	69,716	136,608	96,502	-	-
Total	72,330	70,275	176,015	71,721	390,341	71,669	76,547	84,604	81,564	314,384	395,952	-	-

Outside City - Water Only - Total Consumption (in 1,000 gallons)

CY 06

CY 07

FY 07

Meter Size	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Annual	Summer	Winter
5/8	165	144	143	225	677	233	272	43	4	552	873	415	458
3/4	5,774	5,982	12,923	5,769	30,448	5,545	5,530	6,340	3,145	20,560	29,767	18,453	11,314
1	514	383	526	413	1,836	311	349	276	250	1,186	1,599	875	724
1 1/2	956	563	2,233	945	4,697	403	701	779	1,125	3,008	4,282	2,934	1,348
2	265	299	1,396	744	2,704	354	351	1,115	324	2,144	2,845	1,747	1,098
3	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-
90010	-	-	-	-	-	-	-	-	-	-	-	-	-
90011	-	-	-	-	-	-	-	-	-	-	-	-	-
90099	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	7,674	7,371	17,221	8,096	40,362	6,846	7,203	8,553	4,848	27,450	39,366	24,424	14,942

Res	6,293	6,321	13,730	6,250	32,594	6,093	6,105	6,576	3,400	22,174	32,178	-	-
Com	1,381	1,050	3,491	1,846	7,768	753	1,098	1,977	1,448	5,276	7,188	-	-
Total	7,674	7,371	17,221	8,096	40,362	6,846	7,203	8,553	4,848	27,450	39,366	-	-

Outside City - Sewer Only - Total Consumption (in 1,000 gallons)

CY 06

CY 07

FY 07

Meter Size	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Annual	Summer	Winter
5/8	-	5	10	5	20	-	-	-	-	-	-	15	5
3/4	1,210	1,264	2,517	1,228	6,219	1,138	1,108	1,139	679	4,064	5,991	3,625	2,366
1	829	1,078	1,089	1,193	4,189	701	1,087	1,075	863	3,726	4,070	2,176	1,894
1 1/2	-	-	-	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-
90010	-	-	-	-	-	-	-	-	-	-	-	-	-
90011	-	-	-	-	-	-	-	-	-	-	-	-	-
90099	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	2,039	2,347	3,616	2,426	10,428	1,839	2,195	2,214	1,542	7,790	10,076	5,811	4,265

Taken Out: Account 13-0080 CY06 Q1-4, CY07 Q1-3 5,421,360

SCHEDULE 10A - CONSUMPTION-CUSTOMERS

Res	1,077	1,135	2,298	991	5,501	911	847	892	3,188	5,047
Com	962	1,212	1,318	1,435	4,927	928	1,348	1,322	4,602	5,029
Total	2,039	2,347	3,616	2,426	10,428	1,839	2,195	2,214	7,790	10,076

All Meters CY 06, CY 07

Meter Size	AWWA Equivalents	Inside City			Outside City			Total
		Both	Water Only	Sewer Only	Both	Water Only	Sewer Only	
5/8	1.00	265	14	279	56	4	1	61
3/4	1.00	5,142	37	5,200	2,929	339	83	3,351
1	2.50	124	5	129	59	8	4	71
1 1/2	5.00	90	3	93	41	4		45
2	8.00	90	10	100	36	9		45
3	16.00	14	4	18	7			7
4	25.00	1	1	2				2
8	80.00	1	3	4				
90010								
90011								
90099								
Blank								
Total		5,726	259	21	6,006	3,130	365	3,583

Residential Meters CY 06, CY 07

Meter Size	AWWA Equivalents	Inside City			Outside City			Total
		Both	Water Only	Sewer Only	Both	Water Only	Sewer Only	
5/8	1.00	216	1	217	56	4	1	61
3/4	1.00	4,636	14	4,670	2,792	329	75	3,196
1	2.50	40		40	16	5		21
1 1/2	5.00	44		44	27			27
2	8.00	20		20	2	2		4
3	16.00	6		6	1			1
4	25.00							
8	80.00							
90010								
90011								
90099								
Blank								
Total		4,962	197	20	5,179	2,894	76	3,311

Commercial Meters CY 06, CY 07

Meter Size	AWWA Equivalents	Inside City			Outside City			Total
		Both	Water Only	Sewer Only	Both	Water Only	Sewer Only	
5/8	1.00	49		49	137	10	8	155
3/4	1.00	506	23	530	43	3	4	50
1	2.50	84	4	88	14	4		18
1 1/2	5.00	46	3	49	34	7		41
2	8.00	70	7	77	6			6
3	16.00	8		8	2			2
4	25.00							
8	80.00	1		1				
90010								
90011								
90099								
Blank								
Total		764	38	1	803	236	24	272

24 accounts that are not designated as Res or Com; these accounts have zero consumption. see utility sys36.xls

Residential EDUs CY 06, CY 07

Inside City EDUs		Outside City EDUs	
Water	Sewer	Water	Sewer
279	265	60	57
5,179	5,163	3,268	3,012
323	310	168	158
465	450	225	205
800	720	360	288
288	224	112	112
25	-	50	50
320	80	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
7,679	7,212	4,243	3,882

Residential EDUs CY 06, CY 07

Inside City EDUs		Outside City EDUs	
Water	Sewer	Water	Sewer
217	216	60	57
4,650	4,656	3,121	2,867
100	100	53	40
220	220	135	135
160	160	32	16
96	96	16	16
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
5,443	5,448	3,417	3,131

Commercial EDUs CY 06, CY 07

Inside City EDUs		Outside City EDUs	
Water	Sewer	Water	Sewer
49	49	-	-
529	507	147	145
220	210	115	118
245	230	90	70
616	560	328	272
128	128	96	96
25	-	50	50
80	80	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
1,892	1,764	826	751

SCHEDULE 10A - CONSUMPTION-CUSTOMERS

Residential

Annual - Q3, Q4 CY 06, Q1, Q2 CY 07

Inside City - Quarterly Average Customers - FY 07 (in gallons)		Block Usage		Users		Allocated		% Block		% Users		% Allocated	
From	To	From	To	From	To	From	To	From	To	From	To	From	To
-	18,000	21,893	21,893	2,171	72,401	15%	44%	49%					
Over	18,000	125,798	2,806	75,290	85%	56%	51%						
Total		147,690	4,977	147,690	100%	100%	100%						

Residential and Commercial

Annual - Q3, Q4 CY 06, Q1, Q2 CY 07

Inside City - Quarterly Average Customers - FY 07 (in gallons)		Block Usage		Users		Allocated		% Block		% Users		% Allocated	
From	To	From	To	From	To	From	To	From	To	From	To	From	To
-	18,000	24,446	2,796	81,848	11%	47%	38%						
Over	18,000	193,631	3,189	136,229	89%	53%	62%						
Total		218,077	5,985	218,077	100%	100%	100%						

Summer - Q2 CY 07, Q3 CY 06

Inside City - Quarterly Average Customers - FY 07 (in gallons)		Block Usage		Users		Allocated		% Block		% Users		% Allocated	
From	To	From	To	From	To	From	To	From	To	From	To	From	To
-	18,000	20,559	2,416	84,801	8%	40%	32%						
Over	18,000	247,087	3,569	182,845	92%	60%	68%						
Total		267,646	5,985	267,646	100%	100%	100%						

Winter - Q4 CY 06, Q1 CY 07

Inside City - Quarterly Average Customers - FY 07 (in gallons)		Block Usage		Users		Allocated		% Block		% Users		% Allocated	
From	To	From	To	From	To	From	To	From	To	From	To	From	To
-	18,000	32,369	3,739	72,797	19%	62%	43%						
Over	18,000	136,140	2,246	95,712	81%	38%	57%						
Total		168,509	5,985	168,509	100%	100%	100%						

Residential

Annual - Q3, Q4 CY 06, Q1, Q2 CY 07

Outside City - Quarterly Average Customers - FY 07 (in gallons)		Block Usage		Users		Allocated		% Block		% Users		% Allocated	
From	To	From	To	From	To	From	To	From	To	From	To	From	To
-	18,000	12,415	1,180	49,387	15%	36%	60%						
Over	18,000	70,492	2,054	33,520	85%	64%	40%						
Total		82,907	3,234	82,907	100%	100%	100%						

Annual - Q3, Q4 CY 06, Q1, Q2 CY 07

Outside City - Quarterly Average Customers - FY 07 (in gallons)		Block Usage		Users		Allocated		% Block		% Users		% Allocated	
From	To	From	To	From	To	From	To	From	To	From	To	From	To
-	18,000	13,497	1,317	52,701	12%	38%	45%						
Over	18,000	102,958	2,178	63,754	88%	62%	55%						
Total		116,455	3,495	116,455	100%	100%	100%						

Summer - Q2 CY 07, Q3 CY 06

Outside City - Quarterly Average Customers - FY 07 (in gallons)		Block Usage		Users		Allocated		% Block		% Users		% Allocated	
From	To	From	To	From	To	From	To	From	To	From	To	From	To
-	18,000	10,190	1,012	54,884	7%	29%	36%						
Over	18,000	143,554	2,483	98,860	93%	71%	64%						
Total		153,743	3,495	153,743	100%	100%	100%						

Winter - Q4 CY 06, Q1 CY 07

Outside City - Quarterly Average Customers - FY 07 (in gallons)		Block Usage		Users		Allocated		% Block		% Users		% Allocated	
From	To	From	To	From	To	From	To	From	To	From	To	From	To
-	18,000	22,154	2,200	45,464	28%	63%	57%						
Over	18,000	57,013	1,295	33,703	72%	37%	43%						
Total		79,166	3,495	79,166	100%	100%	100%						

SCHEDULE 10A - CONSUMPTION-CUSTOMERS

Inside City - Quarterly Average Water Customers - FY 07 (in gallons)										Outside City - Quarterly Average Water Customers - FY 07 (in gallons)									
Quarterly Averages					FY07 Percentage - Inside					Quarterly Averages					FY07 Percentage - Inside				
From	To	Usage	Customers	Allocated	Usage	Customers	Allocated	Usage	Customers	From	To	Usage	Customers	Allocated	Usage	Customers	Allocated		
1,000	424	5,605	44	5,605	0.02%	7.08%	2.57%	1,000	18	1,000	90	3,423	0.02%	2.58%	0.02%	2.58%	2.94%		
2,000	76	5,537	128	5,537	0.06%	1.27%	2.54%	2,000	48	2,000	30	3,393	0.04%	0.86%	0.04%	0.86%	2.91%		
3,000	275	5,454	102	5,454	0.13%	1.70%	2.50%	3,000	128	3,000	49	3,356	0.11%	1.40%	0.11%	1.40%	2.88%		
4,000	340	5,351	93	5,351	0.16%	1.55%	2.45%	4,000	101	4,000	28	3,315	0.09%	0.80%	0.09%	0.80%	2.85%		
5,000	536	5,251	115	5,251	0.25%	1.92%	2.41%	5,000	227	5,000	50	3,275	0.19%	1.43%	0.19%	1.43%	2.81%		
6,000	760	5,125	135	5,125	0.35%	2.26%	2.35%	6,000	358	6,000	64	3,222	0.31%	1.83%	0.31%	1.83%	2.77%		
7,000	1,054	4,981	159	4,981	0.48%	2.66%	2.28%	7,000	464	7,000	70	3,158	0.40%	2.00%	0.40%	2.00%	2.71%		
8,000	1,340	4,813	176	4,813	0.61%	2.94%	2.21%	8,000	513	8,000	86	3,091	0.44%	1.92%	0.44%	1.92%	2.65%		
9,000	1,290	4,645	150	4,645	0.59%	2.51%	2.13%	9,000	481	9,000	56	3,024	0.41%	1.60%	0.41%	1.60%	2.60%		
10,000	1,277	4,502	133	4,502	0.59%	2.22%	2.06%	10,000	831	10,000	86	2,962	0.41%	1.60%	0.41%	1.60%	2.54%		
11,000	1,744	4,362	164	4,362	0.80%	2.74%	1.93%	11,000	978	11,000	92	2,871	0.84%	2.63%	0.84%	2.63%	2.46%		
12,000	1,654	4,208	142	4,208	0.76%	2.37%	1.93%	12,000	1,049	12,000	90	2,782	0.84%	2.38%	0.90%	2.38%	2.39%		
13,000	2,073	4,057	164	4,057	0.95%	2.74%	1.86%	13,000	975	13,000	77	2,697	0.90%	2.00%	0.90%	2.00%	2.29%		
14,000	2,153	3,893	158	3,893	0.99%	2.64%	1.79%	14,000	1,194	14,000	88	2,608	0.90%	2.00%	0.90%	2.00%	2.09%		
15,000	2,153	3,742	147	3,742	0.99%	2.46%	1.72%	15,000	1,194	15,000	88	2,530	1.03%	2.24%	1.03%	2.24%	2.17%		
16,000	2,342	3,589	150	3,589	1.07%	2.51%	1.72%	16,000	1,247	16,000	85	2,430	1.07%	2.43%	1.07%	2.43%	2.09%		
17,000	2,449	3,447	147	3,447	1.12%	2.46%	1.58%	17,000	1,637	17,000	105	2,330	1.03%	2.24%	1.03%	2.24%	2.02%		
18,000	2,838	3,290	161	3,290	1.30%	2.69%	1.51%	18,000	1,560	18,000	94	2,235	1.03%	2.24%	1.03%	2.24%	2.02%		
19,000	3,181	3,121	171	3,121	1.46%	2.86%	1.43%	19,000	1,689	19,000	96	2,139	1.03%	2.24%	1.03%	2.24%	2.02%		
20,000	2,710	2,968	138	2,968	1.24%	2.31%	1.36%	20,000	1,804	20,000	101	2,045	1.03%	2.24%	1.03%	2.24%	2.02%		
21,000	3,112	2,821	151	2,821	1.43%	2.52%	1.29%	21,000	1,964	21,000	100	1,940	1.03%	2.24%	1.03%	2.24%	2.02%		
22,000	2,861	2,686	132	2,686	1.31%	2.21%	1.23%	22,000	2,080	22,000	110	1,848	1.03%	2.24%	1.03%	2.24%	2.02%		
23,000	3,171	2,548	140	2,548	1.45%	2.34%	1.17%	23,000	1,882	23,000	87	1,757	1.03%	2.24%	1.03%	2.24%	2.02%		
24,000	2,579	2,420	109	2,420	1.18%	1.82%	1.11%	24,000	2,057	24,000	91	1,668	1.03%	2.24%	1.03%	2.24%	2.02%		
25,000	3,371	2,294	137	2,294	1.55%	2.29%	1.05%	25,000	2,102	25,000	89	1,572	1.03%	2.24%	1.03%	2.24%	2.02%		
26,000	3,154	2,167	123	2,167	1.45%	2.06%	0.99%	26,000	2,209	26,000	115	1,460	1.03%	2.24%	1.03%	2.24%	2.02%		
27,000	3,007	2,044	113	2,044	1.38%	1.89%	0.94%	27,000	2,947	27,000	97	1,351	1.03%	2.24%	1.03%	2.24%	2.02%		
28,000	3,228	1,927	117	1,927	1.48%	1.95%	0.88%	28,000	2,582	28,000	74	1,263	1.03%	2.24%	1.03%	2.24%	2.02%		
29,000	3,386	1,822	118	1,822	1.55%	1.97%	0.84%	29,000	2,944	29,000	73	1,185	1.03%	2.24%	1.03%	2.24%	2.02%		
30,000	3,083	1,703	104	1,703	1.41%	1.74%	0.78%	30,000	2,372	30,000	81	1,041	1.03%	2.24%	1.03%	2.24%	2.02%		
31,000	2,878	1,600	94	1,600	1.32%	1.57%	0.73%	31,000	2,044	31,000	83	964	1.03%	2.24%	1.03%	2.24%	2.02%		
32,000	2,408	1,518	76	1,518	1.10%	1.27%	0.70%	32,000	2,375	32,000	74	891	1.03%	2.24%	1.03%	2.24%	2.02%		
33,000	2,674	1,434	82	1,434	1.23%	1.37%	0.66%	33,000	2,185	33,000	67	823	1.03%	2.24%	1.03%	2.24%	2.02%		
34,000	2,588	1,354	77	1,354	1.19%	1.29%	0.62%	34,000	2,319	34,000	69	765	1.03%	2.24%	1.03%	2.24%	2.02%		
35,000	2,667	1,279	77	1,279	1.22%	1.29%	0.59%	35,000	1,664	35,000	48	716	1.03%	2.24%	1.03%	2.24%	2.02%		
36,000	2,426	1,208	68	1,208	1.11%	1.14%	0.55%	36,000	1,999	36,000	56	657	1.03%	2.24%	1.03%	2.24%	2.02%		
37,000	2,049	1,139	56	1,139	0.94%	0.94%	0.52%	37,000	1,719	37,000	47	616	1.03%	2.24%	1.03%	2.24%	2.02%		
38,000	2,067	1,083	55	1,083	0.95%	0.92%	0.50%	38,000	1,658	38,000	44	574	1.03%	2.24%	1.03%	2.24%	2.02%		
39,000	2,049	1,033	53	1,033	0.94%	0.89%	0.47%	39,000	1,275	39,000	33	541	1.03%	2.24%	1.03%	2.24%	2.02%		
40,000	2,064	982	52	982	0.95%	0.87%	0.45%	40,000	1,508	40,000	38	506	1.03%	2.24%	1.03%	2.24%	2.02%		
50,000	15,436	7,646	345	7,646	7.08%	5.76%	3.51%	50,000	11,932	50,000	271	3,532	10.25%	7.75%	3.03%	3.03%	3.03%		
60,000	10,301	6,169	189	6,169	4.72%	3.16%	2.28%	60,000	4,870	60,000	89	1,970	4.18%	2.55%	1.69%	1.69%	1.69%		
70,000	6,169	3,639	95	3,639	2.83%	1.59%	1.67%	70,000	2,484	70,000	38	1,374	2.13%	1.09%	1.18%	1.18%	1.18%		
80,000	2,994	2,964	40	2,964	1.37%	0.67%	1.36%	80,000	1,663	80,000	22	1,073	1.43%	0.63%	0.92%	0.92%	0.92%		
90,000	2,982	2,602	35	2,602	1.37%	0.58%	1.19%	90,000	1,272	90,000	15	872	1.09%	0.43%	0.75%	0.75%	0.75%		
100,000	1,908	2,328	20	2,328	0.87%	0.33%	1.07%	100,000	958	100,000	10	758	0.82%	0.29%	0.65%	0.65%	0.65%		
200,000	12,414	8,954	89	8,954	5.69%	1.49%	7.71%	200,000	3,864	200,000	29	5,064	3.32%	0.83%	4.35%	4.35%	4.35%		
300,000	8,954	37	37	11,154	4.11%	0.62%	5.11%	300,000	6,074	300,000	22	4,100	3.52%	0.00%	3.52%	3.52%	3.52%		
400,000	11,835	34	34	7,835	5.43%	0.57%	3.59%	400,000	1,374	400,000	5	1,565	5.22%	0.00%	1.34%	1.34%	1.34%		
500,000	6,359	14	14	5,559	2.92%	0.23%	2.55%	500,000	2,165	500,000	3	1,191	1.86%	0.00%	0.00%	0.00%	0.00%		
600,000	6,628	12	12	4,228	3.04%	0.20%	1.94%	600,000	1,591	600,000	1	1,008	1.37%	0.00%	0.00%	0.00%	0.00%		
700,000	5,189	6	6	3,444	1.85%	0.10%	1.58%	700,000	608	700,000	1	927	0.52%	0.00%	0.00%	0.00%	0.00%		
800,000	5,189	7	7	2,589	2.38%	0.12%	1.19%	800,000	727	800,000	1	900	0.62%	0.00%	0.00%	0.00%	0.00%		
900,000	5,950	7	7	1,950	2.73%	0.12%	0.89%	900,000	927	900,000	1	872	0.62%	0.00%	0.00%	0.00%	0.00%		
1,000,000	3,769	4	4	1,369	1.73%	0.07%	0.63%	1,000,000	927	1,000,000	1	872	0.62%	0.00%	0.00%	0.00%	0.00%		
2,000,000	9,603	7	7	7,603	4.40%	0.12%	3.49%	2,000,000	927	2,000,000	7	4,278	3.32%	0.00%	0.00%	0.00%	0.00%		
3,000,000	7,867	3	3	3,867	3.61%	0.05%	1.77%	3,000,000	2										

SCHEDULE 10A - CONSUMPTION-CUSTOMERS

Summer - Q3 CY 07, Q3 CY 06

Average

36,437

Summer - Q3 CY 07, Q3 CY 06

Average

36,437

Inside City - Quarterly Average Water Customers - FY 07 (in gallons)

Quarterly Averages		FY07 Inside (in 1,000 gallons)		FY07 Percentage - Inside	
From	To	Usage	Customers	Usage	Customers
1,000	439	5,593	47	0.02%	7.34%
1,000	117	5,531	66	0.04%	2.07%
2,000	216	5,462	78	0.08%	1.30%
3,000	392	5,378	104	0.15%	2.01%
4,000	495	5,273	104	0.18%	1.74%
5,000	600	5,164	105	0.22%	1.93%
6,000	768	5,059	114	0.29%	1.89%
7,000	1,099	4,938	142	0.41%	2.37%
8,000	1,504	4,802	115	0.38%	1.92%
9,000	1,502	4,680	154	0.56%	2.57%
10,000	1,161	4,537	108	0.43%	1.80%
11,000	1,318	4,430	112	0.49%	1.87%
12,000	1,657	4,311	130	0.62%	2.17%
13,000	1,719	4,183	125	0.64%	2.09%
14,000	1,789	4,063	121	0.67%	2.02%
15,000	2,142	3,934	136	0.80%	2.27%
16,000	2,210	3,798	132	0.83%	2.21%
17,000	2,328	3,670	131	0.87%	2.19%
18,000	2,232	3,540	119	0.83%	1.99%
19,000	1,992	3,422	101	0.74%	1.69%
20,000	2,273	3,312	110	0.85%	1.84%
21,000	2,525	3,212	116	0.94%	1.94%
22,000	2,705	3,091	119	1.01%	1.99%
23,000	2,398	2,978	101	0.90%	1.69%
24,000	2,574	2,877	104	0.96%	1.74%
25,000	2,833	2,772	110	1.06%	1.84%
26,000	2,381	2,667	89	0.89%	1.49%
27,000	2,333	2,581	84	0.87%	1.40%
28,000	2,501	2,494	93	0.93%	1.45%
29,000	2,767	2,406	103	1.03%	1.55%
30,000	3,382	2,308	110	1.26%	1.84%
31,000	2,764	2,206	87	1.03%	1.45%
32,000	2,458	2,122	75	0.92%	1.25%
33,000	2,902	2,042	86	1.08%	1.44%
34,000	3,198	1,956	92	1.19%	1.54%
35,000	2,364	1,874	66	0.88%	1.10%
36,000	3,086	1,798	84	1.15%	1.40%
37,000	2,834	1,720	75	1.06%	1.25%
38,000	2,325	1,646	60	0.87%	1.00%
39,000	2,506	1,587	63	0.94%	1.05%
Over	189,759	128,239	1,538	70.90%	25.70%
Total	267,646	267,646	5,983	100.00%	47.91%

excludes 90000 accounts, Sewer only, and accounts taken out above

Summer - Q2 CY 07, Q3 CY 06

Average

33,320

Outside City - Quarterly Average Water Customers - FY 07 (in gallons)

Quarterly Averages		FY07 Outside (in 1,000 gallons)		FY07 Percentage - Inside	
From	To	Usage	Customers	Usage	Customers
1,000	21	3,421	95	0.01%	2.72%
1,000	50	3,394	28	0.03%	0.80%
2,000	77	3,368	27	0.05%	0.77%
3,000	128	3,337	34	0.08%	0.97%
4,000	198	3,304	41	0.13%	1.17%
5,000	201	3,261	35	0.20%	1.00%
6,000	312	3,225	46	0.32%	1.32%
7,000	466	3,175	60	0.46%	1.72%
8,000	490	3,115	56	0.58%	1.60%
9,000	558	3,061	57	0.73%	1.63%
10,000	589	3,000	55	0.81%	1.57%
11,000	682	2,947	58	0.91%	1.57%
12,000	780	2,890	61	1.02%	1.66%
13,000	1,115	2,823	81	1.10%	1.75%
14,000	886	2,747	60	1.28%	2.32%
15,000	1,195	2,680	76	1.43%	1.79%
16,000	1,239	2,606	74	1.58%	1.74%
17,000	1,208	2,535	68	1.74%	1.69%
18,000	1,027	2,465	55	1.91%	1.65%
19,000	1,284	2,412	65	2.09%	1.60%
20,000	1,665	2,348	80	2.29%	1.57%
21,000	1,569	2,268	72	2.50%	1.53%
22,000	1,685	2,194	74	2.72%	1.48%
23,000	1,143	2,128	48	2.96%	1.43%
24,000	1,736	2,075	70	3.21%	1.38%
25,000	1,775	2,000	69	3.47%	1.35%
26,000	2,112	1,929	79	3.74%	1.30%
27,000	2,055	1,854	74	4.01%	1.25%
28,000	1,727	1,784	60	4.29%	1.21%
29,000	1,545	1,722	52	4.57%	1.16%
30,000	1,940	1,672	63	4.85%	1.12%
31,000	2,477	1,603	78	5.13%	1.09%
32,000	2,199	1,532	67	5.41%	1.04%
33,000	2,530	1,457	75	5.69%	1.00%
34,000	2,050	1,387	59	5.97%	0.95%
35,000	1,932	1,331	54	6.25%	0.90%
36,000	2,754	1,268	75	6.53%	0.87%
37,000	2,342	1,200	62	6.81%	0.82%
38,000	1,628	1,142	42	7.09%	0.78%
39,000	2,264	1,094	57	7.37%	0.74%
Over	102,121	60,001	1,033	76.42%	39.03%
Total	153,743	153,743	3,495	100.00%	100.00%

excludes 90000 accounts, Sewer only, and accounts taken out above

SCHEDULE 10A - CONSUMPTION-CUSTOMERS

Winter - Q4 CY 06, Q1 CY 07

Average

44,719

Quarterly Averages		FY07 Inside (in 1,000 gallons)		FY07 Percentage - Inside	
From	To	Usage	Customers	Usage	Allocated
1,000	583	5,481	79	0.05%	9.74%
1,000	172	5,378	98	0.10%	1.64%
2,000	377	5,267	138	0.22%	3.19%
3,000	573	5,131	152	0.34%	2.31%
4,000	859	4,973	180	0.51%	3.04%
5,000	1,046	4,788	182	0.62%	2.95%
6,000	1,256	4,613	185	0.75%	3.04%
7,000	1,674	4,413	216	0.99%	2.74%
8,000	1,855	4,198	212	1.10%	2.62%
9,000	1,744	3,993	179	1.03%	2.49%
10,000	2,359	3,810	219	1.40%	2.37%
11,000	2,612	3,589	222	1.55%	2.26%
12,000	2,694	3,370	211	1.60%	2.13%
13,000	2,905	3,159	212	1.72%	2.00%
14,000	2,833	2,950	198	1.68%	1.87%
15,000	3,118	2,755	189	1.85%	1.75%
16,000	3,163	2,557	189	1.88%	1.63%
17,000	3,054	2,376	172	1.81%	1.52%
18,000	3,261	2,201	174	1.93%	1.41%
19,000	3,492	2,024	177	2.07%	1.31%
20,000	3,257	1,855	157	1.93%	1.20%
21,000	2,824	1,702	130	1.68%	1.10%
22,000	2,821	1,577	124	1.67%	1.01%
23,000	2,751	1,451	116	1.63%	0.94%
24,000	2,371	1,335	126	1.85%	0.86%
25,000	2,248	1,221	92	1.41%	0.79%
26,000	2,054	974	84	1.33%	0.72%
27,000	2,186	905	76	1.22%	0.67%
28,000	2,001	850	65	0.92%	0.58%
29,000	1,882	785	53	1.19%	0.54%
30,000	1,476	737	45	1.00%	0.50%
31,000	1,476	690	31	0.88%	0.47%
32,000	1,043	662	33	0.62%	0.44%
33,000	1,147	629	32	0.68%	0.41%
34,000	1,286	596	35	0.68%	0.39%
35,000	1,398	562	37	0.76%	0.37%
36,000	1,046	526	27	0.83%	0.35%
37,000	835	501	21	0.62%	0.33%
38,000	911,56	71,756	485	0.50%	0.31%
39,000	168,509	168,509	5,985	0.10%	0.30%
40,000	5,985	168,509	5,985	100.00%	42.58%
Over	Total	168,509	5,985	100.00%	100.00%
Average		excludes 90000 accounts, Sewer only, and accounts taken out above			
		28,155			

43,989

Average
Winter - Q4 CY 06, Q1 CY 07

Quarterly Averages		FY07 Outside (in 1,000 gallons)		FY07 Percentage - Outside	
From	To	Usage	Customers	Usage	Allocated
1,000	40	167	3,368	0.05%	4.25%
1,000	82	47	3,316	0.10%	4.19%
2,000	186	67	3,266	0.23%	4.13%
3,000	303	80	3,197	0.38%	4.04%
4,000	424	89	3,113	0.54%	3.93%
5,000	500	138	3,016	1.01%	3.81%
6,000	722	107	2,880	0.91%	3.64%
7,000	733	95	2,773	0.93%	3.50%
8,000	1,062	121	2,678	1.34%	3.38%
9,000	1,211	124	2,555	1.53%	3.38%
10,000	1,410	131	2,429	1.78%	3.27%
11,000	1,762	150	2,291	2.23%	2.89%
12,000	1,937	152	2,140	2.45%	2.70%
13,000	2,009	146	1,992	2.54%	2.52%
14,000	2,269	154	1,840	2.87%	2.32%
15,000	2,500	159	1,683	3.16%	2.13%
16,000	2,241	134	1,531	2.83%	1.93%
17,000	2,468	139	1,400	3.12%	1.77%
18,000	2,079	111	1,265	2.63%	1.60%
19,000	2,135	108	1,159	2.70%	1.46%
20,000	2,364	114	1,046	2.99%	1.32%
21,000	1,722	79	946	2.18%	1.19%
22,000	2,366	104	857	2.99%	1.08%
23,000	1,567	66	762	1.98%	0.96%
24,000	1,834	74	697	2.32%	0.88%
25,000	1,388	54	623	1.75%	0.79%
26,000	1,790	67	566	2.26%	0.71%
27,000	1,498	54	504	1.89%	0.64%
28,000	1,465	51	450	1.85%	0.57%
29,000	1,132	38	405	1.43%	0.51%
30,000	1,014	33	366	1.28%	0.46%
31,000	985	31	335	1.24%	0.42%
32,000	884	27	304	1.12%	0.38%
33,000	884	27	280	0.73%	0.35%
34,000	574	17	261	0.79%	0.33%
35,000	624	18	245	0.59%	0.31%
36,000	464	13	233	0.60%	0.29%
37,000	478	13	218	0.91%	0.27%
38,000	717	19	202	0.59%	0.25%
39,000	466	12	190	0.45%	0.24%
40,000	358	9	190	0.45%	0.24%
Over	Total	29,114	183	36.78%	27.53%
Average		excludes 90000 accounts, Sewer only, and accounts taken out above			
		22,651			

SCHEDULE 10B - CONSUMPTION-CUSTOMERS HISTORY AND PROJECTIONS

WATER

	Actual FY 07	Forecast FY 08	Forecast FY 09	Forecast FY 10	Forecast FY 11	Forecast FY 12	Forecast FY 13	Forecast FY 14	Forecast FY 15	Forecast FY 16	Forecast FY 17	Forecast FY 18
Inside EDUs												
Residential	5,443	5,514	5,584	5,655	5,725	5,796	5,866	5,937	6,007	6,078	6,148	6,219
Commercial	1,892	1,917	1,941	1,966	1,990	2,015	2,039	2,064	2,088	2,113	2,137	2,162
Total Inside EDUs	7,335	7,430	7,525	7,620	7,715	7,810	7,905	8,000	8,095	8,190	8,285	8,380
Outside EDUs												
Residential	3,417	3,461	3,505	3,549	3,594	3,638	3,682	3,726	3,771	3,815	3,859	3,903
Commercial	826	837	847	858	869	880	890	901	912	922	933	944
Total Outside EDUs	4,243	4,297	4,352	4,407	4,462	4,517	4,572	4,627	4,682	4,737	4,792	4,847

Consumption (1,000 gallons)

Inside City												
Residential	590,761	598,415	606,069	613,723	621,377	629,031	636,685	644,339	651,993	659,647	667,301	674,955
Commercial	281,547	285,195	288,843	292,490	296,138	299,786	303,434	307,081	310,729	314,377	318,025	321,672
Total	872,308	883,610	894,912	906,213	917,515	928,817	940,119	951,420	962,722	974,024	985,326	996,627
Outside City												
Residential	331,628	335,925	340,221	344,518	348,815	353,111	357,408	361,704	366,001	370,298	374,594	378,891
Commercial	103,690	105,033	106,377	107,720	109,064	110,407	111,751	113,094	114,437	115,781	117,124	118,468
Total	435,318	440,958	446,598	452,238	457,878	463,518	469,158	474,798	480,438	486,078	491,719	497,359
Total Consumption (1,000 gallons)	1,307,626	1,324,568	1,341,510	1,358,451	1,375,393	1,392,335	1,409,277	1,426,219	1,443,161	1,460,102	1,477,044	1,493,986

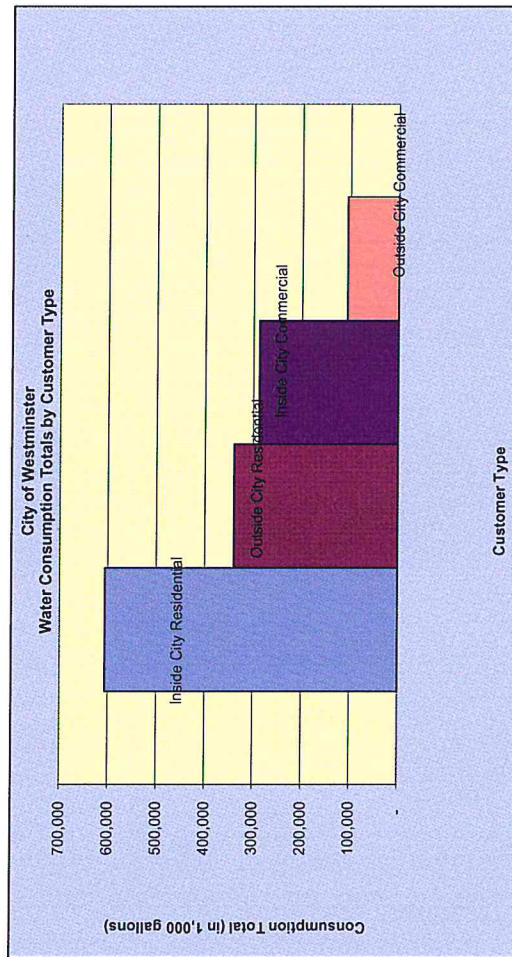
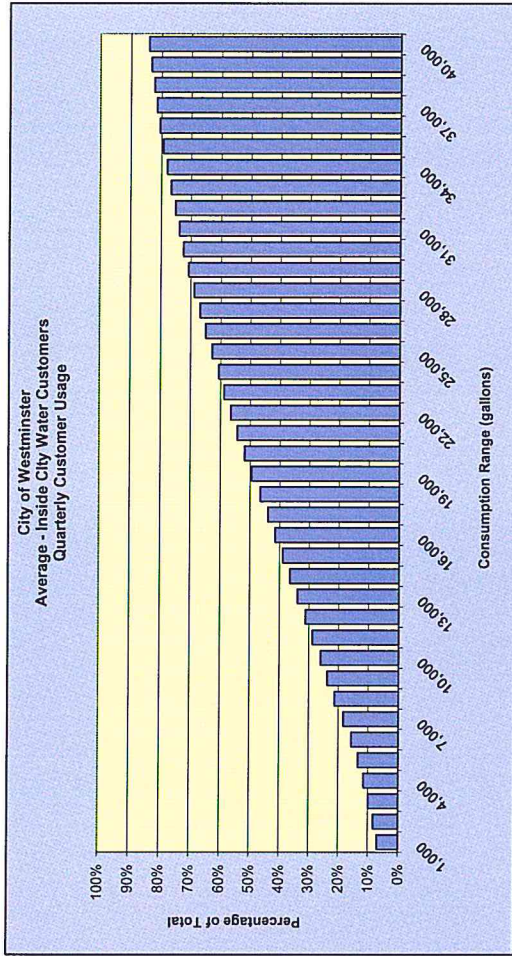
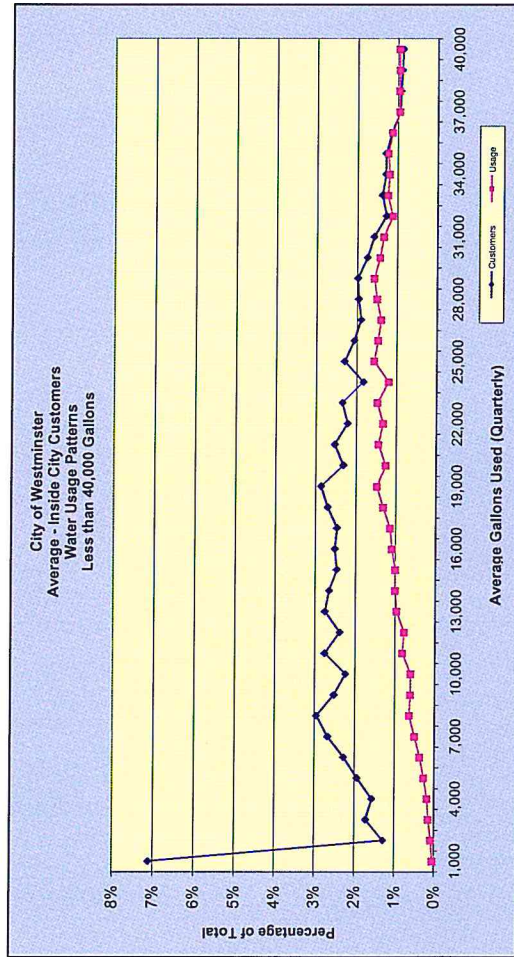
SEWER

Inside EDUs												
Residential	5,448	5,522	5,595	5,668	5,742	5,815	5,889	5,963	6,037	6,111	6,184	6,259
Commercial	1,764	1,788	1,812	1,835	1,859	1,883	1,907	1,931	1,955	1,979	2,002	2,026
Total Inside EDUs	7,212	7,309	7,407	7,504	7,601	7,698	7,796	7,894	7,992	8,089	8,187	8,285
Outside EDUs												
Residential	3,131	3,173	3,215	3,258	3,300	3,342	3,385	3,427	3,469	3,512	3,554	3,597
Commercial	751	761	771	781	791	801	811	821	832	842	852	862
Total Outside EDUs	3,882	3,934	3,986	4,038	4,091	4,143	4,196	4,248	4,301	4,354	4,406	4,459

Consumption (1,000 gallons)

Inside City												
Residential	591,033	599,012	606,979	614,930	622,924	630,898	638,910	646,897	654,918	662,908	670,929	678,980
Commercial	272,861	276,545	280,223	283,894	287,584	291,265	294,964	298,651	302,355	306,043	309,747	313,463
Total	863,894	875,557	887,201	898,824	910,509	922,163	933,874	945,548	957,273	968,951	980,676	992,444
Outside City												
Residential	304,497	308,608	312,712	316,809	320,927	325,035	329,163	333,278	337,410	341,527	345,659	349,807
Commercial	101,531	102,902	104,270	105,636	107,009	108,379	109,756	111,128	112,506	113,878	115,256	116,639
Total	406,028	411,509	416,982	422,445	427,937	433,414	438,919	444,405	449,916	455,405	460,915	466,446
Total Consumption (1,000 gallons)	1,269,922	1,287,066	1,304,184	1,321,269	1,338,445	1,355,577	1,372,793	1,389,953	1,407,188	1,424,356	1,441,591	1,458,890

SCHEDULE 10C - CONSUMPTION-CUSTOMERS CHARTS



SCHEDULE 11 - INVESTMENTS

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Water										
Interest Rate	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Total Investments*	4,035,341	4,417,160	4,420,935	4,592,094	4,660,877	4,719,839	4,566,961	4,438,575	4,201,442	4,001,266
Interest Income	\$ 141,237	\$ 154,601	\$ 154,733	\$ 160,723	\$ 163,131	\$ 165,194	\$ 159,844	\$ 155,350	\$ 147,050	\$ 140,044
Sewer										
Interest Rate	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Total Investments*	3,537,057	4,256,717	4,993,304	5,812,158	6,426,037	7,035,046	7,280,369	7,475,595	7,389,160	7,185,395
Interest Income	\$ 123,797	\$ 148,985	\$ 174,766	\$ 203,426	\$ 224,911	\$ 246,227	\$ 254,813	\$ 261,646	\$ 258,621	\$ 251,489

SCHEDULE 12 - MISCELLANEOUS REVENUES

Interest Income

SCHEDULE 13A - REVENUE REQUIREMENT - CASH

WATER

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Operating Costs										
Operating Expenses	3,620,391	3,729,003	3,840,873	3,956,099	4,074,782	4,197,025	4,322,936	4,452,624	4,586,203	4,723,789
Operating Reserve Contribution	-	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Operating Expenses Subtotal	3,620,391	3,829,003	3,940,873	4,056,099	4,174,782	4,297,025	4,422,936	4,552,624	4,686,203	4,823,789
Capital Costs										
Non-Growth Existing Debt Service	184,330	558,385	545,990	545,990	545,990	545,990	545,990	545,990	545,990	545,990
Non-Growth Cash Funded Capital Projects	-	-	20,000	6,600	26,400	-	-	-	-	-
Non-Growth Projected Debt Service	-	103,381	103,381	153,942	153,942	193,550	193,550	193,550	193,550	193,550
3R Reserve Contribution	-	-	-	-	-	-	63,514	64,715	65,952	67,227
Capital Expenses Subtotal	184,330	661,766	669,371	699,932	706,532	765,940	803,054	804,255	805,493	806,767
Total Revenue Requirement	3,804,721	4,490,769	4,610,244	4,756,031	4,881,314	5,062,966	5,225,990	5,356,880	5,491,696	5,630,556
Miscellaneous Other Revenues	158,454	172,038	172,393	178,610	181,246	183,541	178,425	174,170	166,111	159,348
Net Revenue Requirement	\$ 3,646,267	\$ 4,318,730	\$ 4,437,850	\$ 4,577,421	\$ 4,700,068	\$ 4,879,424	\$ 5,047,565	\$ 5,182,710	\$ 5,325,585	\$ 5,471,208
Current Revenues										
Surplus / (Shortfall)	2,898,495	2,935,568	2,973,115	3,011,142	3,049,656	3,088,663	3,128,168	3,168,179	3,208,701	3,249,742
Cumulative Surplus / (Shortfall)	(747,772)	(1,383,163)	(1,464,735)	(1,566,279)	(1,650,412)	(1,790,761)	(1,919,397)	(2,014,531)	(2,116,884)	(2,221,466)
Required Increase	25.80%	47.12%	49.27%	52.02%	54.12%	57.98%	61.36%	63.59%	65.97%	68.36%

SEWER

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Operating Costs										
Operating Expenses	3,550,407	3,656,919	3,766,627	3,879,626	3,996,014	4,115,895	4,239,372	4,366,553	4,497,549	4,632,476
Operating Reserve Contribution	-	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Operating Expenses Subtotal	3,550,407	3,756,919	3,866,627	3,979,626	4,096,014	4,215,895	4,339,372	4,466,553	4,597,549	4,732,476
Capital Costs										
Non-Growth Existing Debt Service	148,513	148,512	147,512	-	-	-	-	-	-	-
Non-Growth Cash Funded Capital Projects	25,000	25,000	25,000	25,000	111,469	122,001	122,001	122,001	122,001	122,001
Non-Growth Projected Debt Service	-	75,661	75,661	111,469	312,031	319,979	96,682	98,170	99,703	101,282
3R Reserve Contribution	-	289,548	296,822	304,314	312,031	319,979	96,682	98,170	99,703	101,282
Capital Expenses Subtotal	173,513	538,720	544,994	440,783	423,500	441,980	218,683	220,171	221,704	223,283
Total Revenue Requirement	3,723,920	4,295,640	4,411,621	4,420,408	4,519,514	4,657,875	4,558,055	4,628,984	4,751,554	4,889,028
Miscellaneous Other Revenues	181,020	206,940	233,461	262,872	285,118	307,204	316,570	324,193	321,967	315,646
Net Revenue Requirement	\$ 3,542,900	\$ 4,088,700	\$ 4,178,160	\$ 4,157,536	\$ 4,234,396	\$ 4,350,671	\$ 4,241,485	\$ 4,304,791	\$ 4,429,586	\$ 4,573,382
Current Revenues										
Surplus / (Shortfall)	3,142,096	3,182,285	3,222,988	3,264,211	3,305,962	3,348,247	3,391,072	3,434,446	3,478,374	3,522,864
Cumulative Surplus / (Shortfall)	(400,804)	(906,415)	(935,172)	(893,325)	(928,434)	(1,002,425)	(850,413)	(870,346)	(951,213)	(1,050,518)
Required Increase	12.76%	28.48%	29.64%	27.37%	28.08%	29.94%	25.08%	25.34%	27.35%	29.82%

Required Increase*
***Assuming no rate increases**

SCHEDULE 14 - RATE ANALYSIS

Base Line Data:

Net Revenue Requirement - Cash Basis- FY09			
Net Revenue Requirement - Utility Basis- FY09			
Projected Revenue with Current Rates - FY09			
Required Revenue Increase / (Decrease)	26%		13%

EDUs

Inside City	7,525		7,407
Outside City	4,352		3,986
Total Customers	11,878		11,393

CONSUMPTION (1,000 gallons)

Inside City			
Residential	606,069		606,979
With Assumed Percentage of Conservation Efforts	545,462	10%	546,281
Commercial	288,843		280,223
Total Inside City	834,305		826,504

Outside City

Residential	340,221		312,712
With Assumed Percentage of Conservation Efforts	306,199	10%	281,441
Commercial	106,377		104,270
Total Outside City	412,576		385,711

Total Consumption

	1,246,881		1,212,215
	2.32		2.59
Average Cost per 1,000 gallons	4.64		5.23

Average Cost per 1,000 gallons

	2.79		2.79
--	------	--	------

Comparison of Inside/Outside Rates
(Utility Basis Outside/Residual Cash Basis Inside)

	Water	Sewer	Total
Total Cash Basis Revenue Requirement (Inside and Outside City)	\$ 3,646,267	\$ 3,542,900	\$ 7,189,167
Outside City Revenue (Utility Basis)	\$ 1,915,548	\$ 2,018,734	\$ 3,934,283
Residual Revenue Requirement from Inside City Customers	\$ 1,730,718	\$ 1,524,166	\$ 3,254,884
Dividend	\$ 593,681	\$ 781,389	\$ 1,375,070
Inside City Rate per 1,000 gallons	\$ 2.79	\$ 2.79	

SCHEDULE 14 - RATE ANALYSIS

Alternative A - Current Rate Structure
WATER

Type of Use	Current Rates				Proposed Rates			
	Within the City		Outside the City		Within the City		Outside the City	
	Quarterly Minimum Gallonage Per Unit Basis (6,000 gallons)	Over 45,000 Gallons Per Quarter or Over the Minimum Gallonage Plus the Next 39,000 gallons (rate per 1,000 gallons)	Next 39,000 Gallons or Less Per Quarter Above the Minimum Gallonage (rate per 1,000 gallons)	Quarterly Minimum Rate Per Minimum Gallonage (Per \$27.96 Unit Basis)	Over 45,000 Gallons Per Quarter or Over the Minimum Gallonage Plus the Next 39,000 gallons (rate per 1,000 gallons)	Next 39,000 Gallons or Less Per Quarter Above the Minimum Gallonage (rate per 1,000 gallons)	Quarterly Minimum Rate Per Minimum Gallonage (Per \$28.08 Unit Basis)	Over 45,000 Gallons Per Quarter or Over the Minimum Gallonage Plus the Next 39,000 gallons (rate per 1,000 gallons)
1 Dwelling, Apartment or Living Unit	6,000	\$ 22.32	\$ 2.76	\$ 2.00	\$ 22.32	\$ 3.20	\$ 2.24	\$ 2.52
2 Industrial								
1 to 10 persons	6,000	\$ 22.32	\$ 2.76	\$ 2.00	\$ 22.32	\$ 3.20	\$ 2.24	\$ 2.52
11 to 50 persons	30,000	\$ 111.60	\$ 2.76	\$ 2.00	\$ 139.80	\$ 3.20	\$ 2.24	\$ 2.52
51 to 100 persons	60,000	\$ 223.20	\$ 2.76	\$ 2.00	\$ 279.60	\$ 3.20	\$ 2.24	\$ 2.52
Over 100 persons	90,000	\$ 334.80	\$ 2.76	\$ 2.00	\$ 419.40	\$ 3.20	\$ 2.24	\$ 2.52
3 Schools and College (students and staff)								
1 to 100 persons	18,000	\$ 66.96	\$ 2.76	\$ 2.00	\$ 83.88	\$ 3.20	\$ 2.24	\$ 2.52
101 to 250 persons	30,000	\$ 111.60	\$ 2.76	\$ 2.00	\$ 139.80	\$ 3.20	\$ 2.24	\$ 2.52
251 to 400 persons	60,000	\$ 223.20	\$ 2.76	\$ 2.00	\$ 279.60	\$ 3.20	\$ 2.24	\$ 2.52
401 to 1,000 persons	120,000	\$ 446.40	\$ 2.76	\$ 2.00	\$ 559.20	\$ 3.20	\$ 2.24	\$ 2.52
Over 1,000 persons	180,000	\$ 669.60	\$ 2.76	\$ 2.00	\$ 838.80	\$ 3.20	\$ 2.24	\$ 2.52
4 Hospitals, Care Homes and Nursing Homes								
1 to 20 beds	42,000	\$ 156.24	\$ 2.76	\$ 2.00	\$ 195.72	\$ 3.20	\$ 2.24	\$ 2.52
21 to 60 beds	120,000	\$ 446.40	\$ 2.76	\$ 2.00	\$ 559.20	\$ 3.20	\$ 2.24	\$ 2.52
Over 60 beds	198,000	\$ 736.56	\$ 2.76	\$ 2.00	\$ 922.68	\$ 3.20	\$ 2.24	\$ 2.52
5 Hotels and Motels								
1 to 10 rooms	18,000	\$ 66.96	\$ 2.76	\$ 2.00	\$ 83.88	\$ 3.20	\$ 2.24	\$ 2.52
11 to 50 rooms	90,000	\$ 334.80	\$ 2.76	\$ 2.00	\$ 419.40	\$ 3.20	\$ 2.24	\$ 2.52
Over 50 beds	132,000	\$ 491.04	\$ 2.76	\$ 2.00	\$ 615.12	\$ 3.20	\$ 2.24	\$ 2.52
6 Retail and Business								
1 to 10 persons	6,000	\$ 22.32	\$ 2.76	\$ 2.00	\$ 27.96	\$ 3.20	\$ 2.24	\$ 2.52
11 to 30 persons	18,000	\$ 66.96	\$ 2.76	\$ 2.00	\$ 83.88	\$ 3.20	\$ 2.24	\$ 2.52
Over 30 persons	30,000	\$ 111.60	\$ 2.76	\$ 2.00	\$ 139.80	\$ 3.20	\$ 2.24	\$ 2.52

SEWER

Type of Use	Current Rates				Proposed Rates			
	Within the City		Outside the City		Within the City		Outside the City	
	Quarterly Minimum Gallonage Per Unit Basis (6,000 gallons)	Charge Per 1,000 Gallons Water Consumed Over the Minimum Gallonage (Per \$25.44 Unit Basis)	Quarterly Minimum Rate Per Minimum Gallonage (Per \$34.14 Unit Basis)	Charge Per 1,000 Gallons Water Consumed Over the Minimum Gallonage (Per \$28.02 Unit Basis)	Quarterly Minimum Rate Per Minimum Gallonage (Per \$28.69 Unit Basis)	Charge Per 1,000 Gallons Water Consumed Over the Minimum Gallonage (Per \$38.49 Unit Basis)	Quarterly Minimum Rate Per Minimum Gallonage (Per \$31.59 Unit Basis)	Charge Per 1,000 Gallons Water Consumed Over the Minimum Gallonage (Per \$31.59 Unit Basis)
1 Dwelling, Apartment or Living Unit	6,000	\$ 25.44	\$ 2.33	\$ 34.14	\$ 28.02	\$ 2.63	\$ 38.49	\$ 5.25
2 Industrial								
1 to 10 persons	6,000	\$ 25.44	\$ 2.33	\$ 34.14	\$ 28.02	\$ 2.63	\$ 38.49	\$ 5.25
11 to 50 persons	30,000	\$ 127.20	\$ 2.33	\$ 170.70	\$ 140.10	\$ 2.63	\$ 192.45	\$ 5.25
51 to 100 persons	60,000	\$ 254.40	\$ 2.33	\$ 341.40	\$ 280.20	\$ 2.63	\$ 384.90	\$ 5.25
Over 100 persons	90,000	\$ 381.60	\$ 2.33	\$ 512.10	\$ 420.30	\$ 2.63	\$ 577.35	\$ 5.25
Schools and College (students and staff)								
1 to 100 persons	18,000	\$ 76.32	\$ 2.33	\$ 102.42	\$ 84.06	\$ 2.63	\$ 115.47	\$ 5.25
101 to 250 persons	30,000	\$ 127.20	\$ 2.33	\$ 170.70	\$ 140.10	\$ 2.63	\$ 192.45	\$ 5.25
251 to 400 persons	60,000	\$ 254.40	\$ 2.33	\$ 341.40	\$ 280.20	\$ 2.63	\$ 384.90	\$ 5.25
401 to 1,000 persons	120,000	\$ 508.80	\$ 2.33	\$ 682.80	\$ 560.40	\$ 2.63	\$ 769.80	\$ 5.25
Over 1,000 persons	180,000	\$ 763.20	\$ 2.33	\$ 1,024.20	\$ 840.60	\$ 2.63	\$ 1,154.70	\$ 5.25
Hospitals, Care Homes and Nursing Homes								
1 to 20 beds	42,000	\$ 178.08	\$ 2.33	\$ 238.98	\$ 196.14	\$ 2.63	\$ 269.43	\$ 5.25
21 to 60 beds	120,000	\$ 508.80	\$ 2.33	\$ 682.80	\$ 560.40	\$ 2.63	\$ 769.80	\$ 5.25
Over 60 beds	198,000	\$ 839.52	\$ 2.33	\$ 1,126.62	\$ 924.66	\$ 2.63	\$ 1,270.17	\$ 5.25
Hotels and Motels								
1 to 10 rooms	18,000	\$ 76.32	\$ 2.33	\$ 102.42	\$ 84.06	\$ 2.63	\$ 115.47	\$ 5.25
11 to 50 rooms	90,000	\$ 381.60	\$ 2.33	\$ 512.10	\$ 420.30	\$ 2.63	\$ 577.35	\$ 5.25
Over 50 beds	132,000	\$ 559.68	\$ 2.33	\$ 751.08	\$ 616.44	\$ 2.63	\$ 846.78	\$ 5.25
Retail and Business								
1 to 10 persons	6,000	\$ 25.44	\$ 2.33	\$ 34.14	\$ 28.02	\$ 2.63	\$ 38.49	\$ 5.25
11 to 30 persons	18,000	\$ 76.32	\$ 2.33	\$ 102.42	\$ 84.06	\$ 2.63	\$ 115.47	\$ 5.25
Over 30 persons	30,000	\$ 127.20	\$ 2.33	\$ 170.70	\$ 140.10	\$ 2.63	\$ 192.45	\$ 5.25

SCHEDULE 14 - RATE ANALYSIS

Alternative B - Fixed Charge with Inclining Block Rates (Cash Basis)
Cash Basis for Both Inside and Outside City Customers - 2.0 differential for outside city customers

Residential and Commercial

Inside City - Average Quarterly Customers and Usage - FY07 (in 1,000 gallons)

	From	To	Block Usage	Users	Allocated	% Block	% Users	% Allocated
		18,000	24,446	2,796	81,848	11%	47%	38%
Over		18,000	193,631	3,189	136,229	89%	53%	62%
		Total	218,077	5,985	218,077	100%	100%	100%

Outside City - Quarterly Average Customers - FY07 (in 1,000 gallons)

	From	To	Block Usage	Users	Allocated	% Block	% Users	% Allocated
		18,000	13,497	1,317	52,701	12%	38%	45%
Over		18,000	102,958	2,178	63,754	88%	62%	55%
	Total		116,455	3,495	116,455	100%	100%	100%

Cost Allocated to Fixed Charges 20.00% \$ 729,253
Cost Allocated to Volume Charges 80.00% \$ 2,917,013

Inside City Customers

Quarterly Fixed Charge		FY 08 Proposed	FY 07 Current	Difference	Quarterly Fixed Charge		FY 08 Proposed	FY 07 Current	Difference
Annual EDUs Billed		30,100			Annual EDUs Billed		29,626		
Cost Allocated =		\$ 390,479			Cost Allocated =		\$ 392,065		
Fixed Charge per EDU =		\$ 12.97	\$ 22.32	\$ (9.35)	Fixed Charge per EDU =		\$ 13.23	\$ 25.44	\$ (12.21)
Cost Allocated to Volume Charges		58.55% \$ 1,707,789			Cost Allocated to Volume Charges		58.65% \$ 1,662,354		
Assumed Conservation Efforts		10.00%			Assumed Conservation Efforts		10.00%		
Water Volume Charge					Water Volume Charge				
Level 1: 0 - 18,000 gallons quarterly					Level 1: 0 - 18,000 gallons quarterly				
Consumption (1,000 gallons) =		\$ 1.38	\$ 2.76	\$ (1.38)	Consumption (1,000 gallons) =		\$ 2.17	\$ 2.33	\$ (0.16)
Cost Allocated =		\$ 313,129			Cost Allocated =		\$ 765,806		
Level 2		\$ 433,259			Level 2		\$ 1,662,354		
Differential				\$ -49,879%	Differential				\$ -6.84%
Level 2: Over 18,000 gallons quarterly					Level 2: Over 18,000 gallons quarterly				
Consumption (1,000 gallons) =		\$ 2.77	\$ 2.00	\$ 0.77	Consumption (1,000 gallons) =				
Cost Allocated =		\$ 460,569			Cost Allocated =				
Consumption		\$ 1,274,529			Consumption				
Projected Inside City Revenue - Volume Charges		\$ 773,698			Projected Inside City Revenue - Volume Charges		\$ 765,806		
Projected Inside City Revenue - Total		\$ 2,098,268			Projected Inside City Revenue - Total		\$ 2,054,419		

Outside City Customers

Quarterly Fixed Charge		FY 08 Proposed	FY 07 Current	Difference	Quarterly Fixed Charge		FY 08 Proposed	FY 07 Current	Difference
Annual EDUs Billed		17,410			Annual EDUs Billed		15,945		
Cost Allocated =		\$ 338,774			Cost Allocated =		\$ 316,515		
Fixed Charge per EDU =		\$ 19.46	\$ 27.96	\$ (8.50)	Fixed Charge per EDU =		\$ 19.85	\$ 34.14	\$ (14.29)
Cost Allocated to Volume Charges		41.45% \$ 1,209,224			Cost Allocated to Volume Charges		41.35% \$ 1,171,966		
Assumed Conservation Efforts		10.00%			Assumed Conservation Efforts		10.00%		
Water Volume Charge					Water Volume Charge				
Level 1: 0 - 18,000 gallons quarterly					Level 1: 0 - 18,000 gallons quarterly				
Consumption (1,000 gallons) =		\$ 2.12	\$ 3.20	\$ (1.08)	Consumption (1,000 gallons) =		\$ 3.31	\$ 4.66	\$ (1.35)
Cost Allocated =		\$ 186,709			Cost Allocated =		\$ 354,440		
Level 2		\$ 395,815			Level 2		\$ 1,171,966		
Differential				\$ -33.75%	Differential				\$ -29.04%
Level 2: Over 18,000 gallons quarterly					Level 2: Over 18,000 gallons quarterly				
Consumption (1,000 gallons) =		\$ 4.24	\$ 2.24	\$ 2.00	Consumption (1,000 gallons) =				
Cost Allocated =		\$ 191,845			Cost Allocated =				
Consumption		\$ 813,409			Consumption				
Projected Outside City Revenue - Volume Charges		\$ 378,554			Projected Outside City Revenue - Volume Charges		\$ 354,440		
Projected Outside City Revenue - Total		\$ 1,209,224			Projected Outside City Revenue - Total		\$ 1,488,481		
Total Consumption		\$ 1,152,252			Total Consumption		\$ 1,120,246		
Total Projected Revenue		\$ 3,646,267			Total Projected Revenue		\$ 3,542,900		
Check		\$ 3,646,267			Check		\$ 3,542,900		

SCHEDULE 14 - RATE ANALYSIS

Alternative C - Fixed Charge with Inclining Block Rates (Utility Basis)
(Cash Basis + Dividend for Inside; Utility Basis for Outside City Customers)

Residential and Commercial

Inside City - Quarterly Average Customers - FY07 (in gallons)

From	To	Block Usage	Users	Allocated	% Block	% Users	% Allocated
18,000	24,446	2,796		81,848	11%	47%	38%
Over	18,000	193,631	3,189	136,229	89%	53%	62%
Total		218,077	5,985	218,077	100%	100%	100%

Outside City - Quarterly Average Customers - FY07 (in gallons)

From	To	Block Usage	Users	Allocated	% Block	% Users	% Allocated
18,000	13,497	1,317		52,701	12%	38%	48%
Over	18,000	102,958	2,178	63,754	88%	62%	52%
Total		116,455	3,495	116,455	100%	100%	100%

Inside City Customers

Water

Cost Allocated to Inside City Customers

Quarterly Fixed Charge

Cost Allocated to Inside City Customers

Quarterly Fixed Charge

Cost Allocated to Inside City Customers

Quarterly Fixed Charge

Cost Allocated to Inside City Customers

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Outside City Customers

Water

Cost Allocated to Outside City Customers

Quarterly Fixed Charge

Cost Allocated to Residential Customers

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Cost Allocated to Residential Customers

Quarterly Fixed Charge

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Cost Allocated to Residential Customers

Quarterly Fixed Charge

Cost Allocated to Residential Customers

Quarterly Fixed Charge

Total Consumption

Total Projected Revenue

Check

Total Production

Total Projected Revenue

Check

TABLE 14 - RATE ANALYSIS

Alternative D - Fixed Charge with Residential Inclinable Block Rates and Commercial Unit Rate (Utility Basis)
 (Cash Basis + Dividend for Inside; Utility Basis for Outside City Customers)

Residential

Inside City - Quarterly Average Customers - FY07 (in gallons)					
	From	To	Black Usage	Users	% Allocated
	18,000	21,893	2,171	72,401	15%
Over	18,000	125,798	2,806	75,290	85%
			4,977	147,690	100%
Total					100%

Outside City - Quarterly Average Customers - FY07 (in gallons)					
	From	To	Black Usage	Users	% Allocated
	18,000	12,415	1,180	49,387	15%
Over	18,000	70,492	2,054	33,520	85%
			82,907	82,907	100%
Total					100%

Inside City Customers					
Water					
Cost Allocated to Inside City Customers					
Quarterly Fixed Charge					
Annual EDUs Billed					
Cost Allocated =					
Fixed Charge per EDU =					
Residential					
Cost Allocated to Residential Volume Charges					
Assumed Conservation Efforts					
Water Volume Charge					
Level 1: 0 - 18,000 gallons quarterly					
Consumption (1,000 gallons) =					
Cost Allocated =					
Level 2: Over 18,000 gallons quarterly					
Consumption (1,000 gallons) =					
Cost Allocated =					
Commercial					
Cost Allocated to Commercial					
Assumed Conservation Efforts					
Rate (1,000 gallons) =					
Consumption (1,000 gallons) =					
Cost Allocated =					
Consumption					
Revenue Requirement					

Outside City Customers					
Water					
Cost Allocated to Outside City Customers					
Quarterly Fixed Charge					
Annual EDUs Billed					
Cost Allocated =					
Fixed Charge per EDU =					
Residential					
Cost Allocated to Volume Charges					
Assumed Conservation Efforts					
Water Volume Charge					
Level 1: 0 - 18,000 gallons quarterly					
Consumption (1,000 gallons) =					
Cost Allocated =					
Level 2: Over 18,000 gallons quarterly					
Consumption (1,000 gallons) =					
Cost Allocated =					
Commercial					
Cost Allocated to Commercial					
Assumed Conservation Efforts					
Rate (1,000 gallons) =					
Consumption (1,000 gallons) =					
Cost Allocated =					
Consumption					
Revenue Requirement					

SEDULE 15 - RATE PROJECTIONS

	FY 08 (Current)	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
UTER											
h Basis Net Revenue Requirement		\$ 3,646,267	\$ 4,318,730	\$ 4,437,850	\$ 4,577,421	\$ 4,700,068	\$ 4,879,424	\$ 5,047,665	\$ 5,182,710	\$ 5,325,585	\$ 5,471,208
ity Basis Net Revenue Requirement		\$ 5,789,139	\$ 5,804,233	\$ 5,957,160	\$ 6,127,608	\$ 6,286,931	\$ 6,470,470	\$ 6,680,776	\$ 6,983,767	\$ 7,143,062	\$ 7,303,771
rage Cost per 1,000 gallons under Utility Basis		\$ 4.64	\$ 4.60	\$ 4.66	\$ 4.73	\$ 4.80	\$ 4.88	\$ 4.98	\$ 5.15	\$ 5.30	\$ 5.36
side City Revenue (Utility Basis)		\$ 1,915,548	\$ 1,920,543	\$ 1,971,144	\$ 2,027,543	\$ 2,080,261	\$ 2,140,991	\$ 2,210,579	\$ 2,310,834	\$ 2,363,543	\$ 2,416,719
idial Revenue Requirement from Inside City Customers		\$ 1,770,718	\$ 2,398,188	\$ 2,466,706	\$ 2,540,878	\$ 2,619,807	\$ 2,738,433	\$ 2,836,986	\$ 2,971,876	\$ 3,054,488	\$ 3,146,775
de City Rate per 1,000 gallons		\$ 2.79	\$ 3.26	\$ 3.31	\$ 3.37	\$ 3.42	\$ 3.51	\$ 3.59	\$ 3.64	\$ 3.70	\$ 3.75
ident (Break-even Proposed Rates)		\$ 593,681	\$ 354,890	\$ 363,207	\$ 368,107	\$ 376,363	\$ 372,072	\$ 380,704	\$ 431,966	\$ 432,879	\$ 433,263
al Required Revenue from Inside City Customers		\$ 2,334,399	\$ 2,753,077	\$ 2,829,013	\$ 2,917,986	\$ 2,996,170	\$ 3,110,505	\$ 3,217,690	\$ 3,303,842	\$ 3,394,921	\$ 3,487,751
Us											
de City	74%	\$ 7,525	\$ 7,620	\$ 7,715	\$ 7,810	\$ 7,905	\$ 8,000	\$ 8,095	\$ 8,190	\$ 8,285	\$ 8,380
side City	81%	\$ 4,352	\$ 4,407	\$ 4,462	\$ 4,517	\$ 4,572	\$ 4,627	\$ 4,682	\$ 4,737	\$ 4,792	\$ 4,847
al EDUs		\$ 11,878	\$ 12,028	\$ 12,178	\$ 12,328	\$ 12,478	\$ 12,628	\$ 12,778	\$ 12,928	\$ 13,078	\$ 13,228
assumption (1,000 gallons)											
ide City											
identical	10%	\$ 606,069	\$ 613,723	\$ 621,377	\$ 629,031	\$ 636,685	\$ 644,339	\$ 651,993	\$ 659,647	\$ 667,301	\$ 674,955
h Assumed Percentage of Conservation Efforts		\$ 545,462	\$ 552,351	\$ 559,239	\$ 566,128	\$ 573,016	\$ 579,905	\$ 586,794	\$ 593,682	\$ 600,571	\$ 607,459
merical		\$ 280,843	\$ 282,490	\$ 284,138	\$ 285,786	\$ 287,434	\$ 289,081	\$ 290,729	\$ 292,377	\$ 294,025	\$ 295,672
al Inside City		\$ 834,305	\$ 844,841	\$ 855,377	\$ 865,914	\$ 876,450	\$ 886,986	\$ 897,523	\$ 908,059	\$ 918,596	\$ 929,132
side City											
identical	10%	\$ 340,221	\$ 344,518	\$ 348,815	\$ 353,111	\$ 357,408	\$ 361,704	\$ 366,001	\$ 370,298	\$ 374,594	\$ 378,891
h Assumed Percentage of Conservation Efforts		\$ 306,199	\$ 310,066	\$ 313,933	\$ 317,800	\$ 321,667	\$ 325,534	\$ 329,401	\$ 333,268	\$ 337,135	\$ 341,002
merical		\$ 106,377	\$ 107,750	\$ 109,123	\$ 110,496	\$ 111,870	\$ 113,243	\$ 114,617	\$ 115,990	\$ 117,363	\$ 118,736
al Outside City		\$ 412,576	\$ 417,786	\$ 422,997	\$ 428,207	\$ 433,418	\$ 438,628	\$ 443,838	\$ 449,049	\$ 454,259	\$ 459,469
al Consumption (1,000 gallons)		\$ 1,246,881	\$ 1,262,627	\$ 1,278,374	\$ 1,294,121	\$ 1,309,868	\$ 1,325,614	\$ 1,341,361	\$ 1,357,108	\$ 1,372,855	\$ 1,388,601
WER											
h Basis Net Revenue Requirement		\$ 3,542,900	\$ 4,088,700	\$ 4,178,160	\$ 4,157,536	\$ 4,234,396	\$ 4,350,671	\$ 4,241,485	\$ 4,304,791	\$ 4,429,586	\$ 4,573,382
ity Basis Net Revenue Requirement		\$ 6,344,887	\$ 6,305,628	\$ 6,453,232	\$ 7,837,405	\$ 9,200,240	\$ 9,288,578	\$ 10,201,796	\$ 10,395,865	\$ 10,616,298	\$ 10,842,485
rage Cost per 1,000 gallons		\$ 5.23	\$ 5.13	\$ 5.19	\$ 6.32	\$ 7.21	\$ 7.19	\$ 7.80	\$ 7.85	\$ 7.92	\$ 8.00
side City Revenue (Utility Basis)		\$ 2,018,734	\$ 2,006,370	\$ 2,053,336	\$ 2,493,794	\$ 2,927,399	\$ 2,955,491	\$ 3,246,081	\$ 3,307,831	\$ 3,377,970	\$ 3,449,540
idial Revenue Requirement from Inside City Customers		\$ 1,524,166	\$ 2,082,330	\$ 2,124,824	\$ 1,663,743	\$ 1,306,997	\$ 1,395,181	\$ 995,404	\$ 996,960	\$ 1,051,616	\$ 1,121,442
de City Rate per 1,000 gallons		\$ 2.79	\$ 3.18	\$ 3.21	\$ 3.15	\$ 3.17	\$ 3.21	\$ 3.10	\$ 3.10	\$ 3.16	\$ 3.22
ident (Break-even Proposed Rates)		\$ 781,389	\$ 578,406	\$ 594,129	\$ 1,041,789	\$ 1,448,551	\$ 1,436,034	\$ 1,764,758	\$ 1,804,598	\$ 1,830,953	\$ 1,852,702
Us											
de City	76%	\$ 7,407	\$ 7,504	\$ 7,601	\$ 7,698	\$ 7,796	\$ 7,894	\$ 7,992	\$ 8,089	\$ 8,187	\$ 8,285
side City	81%	\$ 3,986	\$ 4,038	\$ 4,091	\$ 4,143	\$ 4,196	\$ 4,248	\$ 4,301	\$ 4,354	\$ 4,406	\$ 4,459
al EDUs		\$ 11,393	\$ 11,542	\$ 11,692	\$ 11,842	\$ 11,992	\$ 12,142	\$ 12,293	\$ 12,443	\$ 12,593	\$ 12,744
assumption (1,000 gallons)											
ide City											
identical	10%	\$ 606,979	\$ 614,920	\$ 622,924	\$ 630,898	\$ 638,910	\$ 646,897	\$ 654,918	\$ 662,908	\$ 670,929	\$ 678,980
h Assumed Percentage of Conservation Efforts		\$ 546,281	\$ 553,437	\$ 560,632	\$ 567,808	\$ 575,019	\$ 582,207	\$ 589,426	\$ 596,617	\$ 603,836	\$ 611,082
merical		\$ 280,223	\$ 283,894	\$ 287,584	\$ 291,265	\$ 294,964	\$ 298,651	\$ 302,355	\$ 306,043	\$ 309,747	\$ 313,463
al Inside City		\$ 826,504	\$ 837,331	\$ 848,216	\$ 859,073	\$ 869,983	\$ 880,858	\$ 891,781	\$ 902,661	\$ 913,583	\$ 924,546
side City											
identical	10%	\$ 312,712	\$ 316,809	\$ 320,927	\$ 325,035	\$ 329,163	\$ 333,278	\$ 337,410	\$ 341,527	\$ 345,659	\$ 349,807
h Assumed Percentage of Conservation Efforts		\$ 281,441	\$ 285,128	\$ 288,835	\$ 292,532	\$ 296,247	\$ 299,950	\$ 303,669	\$ 307,374	\$ 311,093	\$ 314,826
merical		\$ 104,270	\$ 105,636	\$ 107,009	\$ 108,379	\$ 109,756	\$ 111,128	\$ 112,506	\$ 113,878	\$ 115,256	\$ 116,639
al Outside City		\$ 365,711	\$ 390,764	\$ 395,844	\$ 400,911	\$ 406,002	\$ 411,077	\$ 416,175	\$ 421,252	\$ 426,349	\$ 431,465
al Consumption (1,000 gallons)		\$ 1,212,215	\$ 1,228,095	\$ 1,244,060	\$ 1,259,984	\$ 1,275,986	\$ 1,291,936	\$ 1,307,956	\$ 1,323,913	\$ 1,339,932	\$ 1,356,011

Estimated Sewer

Estimated Sewer

SCHEDULE 15 - RATE PROJECTIONS

Alternative B - Fixed Charge with Inclining Block Rates (Cash Basis)	FY 08 (Current)	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
sewer Rates											
side City											
later Fixed Charge	\$ 22.32	\$ 12.97	\$ 15.17	\$ 15.40	\$ 15.69	\$ 15.92	\$ 16.33	\$ 16.69	\$ 16.94	\$ 17.21	\$ 17.48
later Volume Charge	\$ 2.76	\$ 1.38	\$ 1.62	\$ 1.64	\$ 1.67	\$ 1.70	\$ 1.74	\$ 1.78	\$ 1.81	\$ 1.84	\$ 1.86
vol 1:0 - 18,000 gallons quarterly	\$ 2.00	\$ 2.77	\$ 3.24	\$ 3.29	\$ 3.35	\$ 3.40	\$ 3.48	\$ 3.56	\$ 3.61	\$ 3.67	\$ 3.73
vol 2: Over 18,000 gallons quarterly											
side City											
later Fixed Charge	\$ 27.96	\$ 19.46	\$ 22.76	\$ 23.10	\$ 23.54	\$ 23.88	\$ 24.49	\$ 25.04	\$ 25.41	\$ 25.81	\$ 26.22
later Volume Charge	\$ 3.20	\$ 2.12	\$ 2.48	\$ 2.52	\$ 2.56	\$ 2.60	\$ 2.67	\$ 2.73	\$ 2.77	\$ 2.81	\$ 2.86
vol 1:0 - 18,000 gallons quarterly	\$ 2.24	\$ 4.24	\$ 4.96	\$ 5.03	\$ 5.13	\$ 5.20	\$ 5.34	\$ 5.46	\$ 5.54	\$ 5.62	\$ 5.71
vol 2: Over 18,000 gallons quarterly											
wer											
side City											
later Fixed Charge	\$ 25.44	\$ 13.23	\$ 15.07	\$ 15.21	\$ 14.94	\$ 15.03	\$ 15.25	\$ 14.68	\$ 14.72	\$ 14.97	\$ 15.27
later Volume Charge	\$ 2.33	\$ 2.17	\$ 2.47	\$ 2.49	\$ 2.45	\$ 2.46	\$ 2.50	\$ 2.41	\$ 2.42	\$ 2.46	\$ 2.50
vol 1:0 - 18,000 gallons quarterly											
vol 2: Over 18,000 gallons quarterly											
side City											
later Fixed Charge	\$ 34.14	\$ 19.85	\$ 22.61	\$ 22.81	\$ 22.41	\$ 22.54	\$ 22.87	\$ 22.03	\$ 22.08	\$ 22.45	\$ 22.91
later Volume Charge	\$ 4.66	\$ 3.31	\$ 3.77	\$ 3.80	\$ 3.73	\$ 3.75	\$ 3.81	\$ 3.67	\$ 3.68	\$ 3.74	\$ 3.82
vol 1:0 - 18,000 gallons quarterly											
vol 2: Over 18,000 gallons quarterly											
er Defined Rates											
side City											
later Fixed Charge	\$ 13.62	\$ 5.00%	\$ 14.30	\$ 15.02	\$ 15.77	\$ 15.77	\$ 15.77	\$ 15.77	\$ 15.77	\$ 15.77	\$ 15.77
later Volume Charge	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%
vol 1:0 - 18,000 gallons quarterly	\$ 1.45	\$ 1.53	\$ 1.68	\$ 1.68	\$ 1.68	\$ 1.68	\$ 1.68	\$ 1.68	\$ 1.68	\$ 1.68	\$ 1.68
vol 2: Over 18,000 gallons quarterly	\$ 2.91	\$ 3.05	\$ 3.20	\$ 3.20	\$ 3.36	\$ 3.36	\$ 3.36	\$ 3.36	\$ 3.36	\$ 3.36	\$ 3.36
side City											
later Fixed Charge	\$ 20.43	\$ 21.45	\$ 22.53	\$ 22.53	\$ 23.65	\$ 23.65	\$ 23.65	\$ 23.65	\$ 23.65	\$ 23.65	\$ 23.65
later Volume Charge	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%	\$ 5.00%
vol 1:0 - 18,000 gallons quarterly	\$ 2.23	\$ 2.29	\$ 2.40	\$ 2.40	\$ 2.52	\$ 2.52	\$ 2.52	\$ 2.52	\$ 2.52	\$ 2.52	\$ 2.52
vol 2: Over 18,000 gallons quarterly	\$ 4.45	\$ 4.58	\$ 4.81	\$ 4.81	\$ 5.05	\$ 5.05	\$ 5.05	\$ 5.05	\$ 5.05	\$ 5.05	\$ 5.05
wer											
side City											
later Fixed Charge	\$ 14.03	\$ 14.87	\$ 15.76	\$ 15.76	\$ 16.71	\$ 17.71	\$ 18.24	\$ 18.79	\$ 18.79	\$ 18.79	\$ 18.79
later Volume Charge	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%
vol 1:0 - 18,000 gallons quarterly	\$ 2.30	\$ 2.44	\$ 2.59	\$ 2.59	\$ 2.74	\$ 2.99	\$ 3.08	\$ 3.08	\$ 3.08	\$ 3.08	\$ 3.08
vol 2: Over 18,000 gallons quarterly	\$ 21.04	\$ 22.30	\$ 23.64	\$ 23.64	\$ 25.06	\$ 26.36	\$ 27.36	\$ 28.18	\$ 28.18	\$ 28.18	\$ 28.18
side City											
later Fixed Charge	\$ 3.50	\$ 3.72	\$ 3.94	\$ 3.94	\$ 4.17	\$ 4.42	\$ 4.69	\$ 4.69	\$ 4.69	\$ 4.69	\$ 4.69
later Volume Charge	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%	\$ 6.00%
vol 1:0 - 18,000 gallons quarterly	\$ 3.66	\$ 3.67	\$ 4.18	\$ 4.17	\$ 4.57	\$ 4.56	\$ 4.87	\$ 4.87	\$ 4.87	\$ 4.87	\$ 4.87
vol 2: Over 18,000 gallons quarterly	\$ 3.82	\$ 3.80	\$ 4.02	\$ 4.02	\$ 4.29	\$ 4.29	\$ 4.53	\$ 4.53	\$ 4.53	\$ 4.53	\$ 4.53
er Defined Water Revenue	\$ 182.313	\$ (276.266)	\$ (140.348)	\$ (140.348)	\$ (94.861)	\$ (76.536)	\$ (203.29)	\$ (312.857)	\$ (392.420)	\$ (475.712)	\$ (509.153)
er Defined Sewer Revenue	\$ 182.313	\$ (93.973)	\$ (234.321)	\$ (234.321)	\$ (243.782)	\$ (330.308)	\$ (320.607)	\$ (833.467)	\$ (1,225.865)	\$ (1,705.597)	\$ (2,273.550)
er Defined Requirement	\$ 3,542,900	\$ 4,088,700	\$ 4,178,160	\$ 4,178,160	\$ 4,157,536	\$ 4,234,396	\$ 4,350,671	\$ 4,231,485	\$ 4,304,701	\$ 4,429,586	\$ 4,573,382
er Defined Water Revenue	\$ 3,755,474	\$ 4,032,951	\$ 4,330,503	\$ 4,330,503	\$ 4,640,089	\$ 4,990,620	\$ 5,304,935	\$ 5,207,204	\$ 5,207,416	\$ 5,359,886	\$ 5,628,605
er Defined Sewer Revenue	\$ 212,574	\$ (55,749)	\$ 152,443	\$ 152,443	\$ 401,533	\$ 766,324	\$ 853,022	\$ 1,185,719	\$ 1,185,625	\$ 1,185,625	\$ 1,185,625
er Defined Requirement	\$ 212,574	\$ 156,826	\$ 309,168	\$ 309,168	\$ 800,721	\$ 1,556,945	\$ 2,410,867	\$ 3,596,586	\$ 4,785,211	\$ 5,915,511	\$ 6,968,734

HEDULE 15 - RATE PROJECTIONS

	FY 08 (Current)	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Alternative C - Fixed Charge with Inclining Block Rates (Utility Basis)											
Water											
Idle City											
artery Fixed Charge	\$ 22.32	\$ 15.44	\$ 18.06	\$ 18.33	\$ 18.68	\$ 18.95	\$ 19.44	\$ 19.87	\$ 20.17	\$ 20.49	\$ 20.81
Idle Volume Charge											
vel 1: 0 - 18,000 gallons quarterly	\$ 2.76	\$ 1.51	\$ 1.76	\$ 1.79	\$ 1.82	\$ 1.85	\$ 1.90	\$ 1.94	\$ 1.97	\$ 2.00	\$ 2.03
vel 2: Over 18,000 gallons quarterly	\$ 2.00	\$ 3.01	\$ 3.52	\$ 3.58	\$ 3.64	\$ 3.70	\$ 3.79	\$ 3.88	\$ 3.93	\$ 4.00	\$ 4.06
Idle City											
artery Fixed Charge	\$ 27.96	\$ 22.01	\$ 21.79	\$ 22.09	\$ 22.44	\$ 22.75	\$ 23.13	\$ 23.61	\$ 24.39	\$ 24.66	\$ 24.93
Idle Volume Charge											
vel 1: 0 - 18,000 gallons quarterly	\$ 3.20	\$ 2.69	\$ 2.66	\$ 2.70	\$ 2.74	\$ 2.78	\$ 2.82	\$ 2.88	\$ 2.98	\$ 3.01	\$ 3.04
vel 2: Over 18,000 gallons quarterly	\$ 2.24	\$ 5.37	\$ 5.32	\$ 5.39	\$ 5.48	\$ 5.55	\$ 5.65	\$ 5.76	\$ 5.96	\$ 6.02	\$ 6.09
sewer											
Idle City											
artery Fixed Charge	\$ 25.44	\$ 15.56	\$ 17.73	\$ 17.89	\$ 17.57	\$ 17.67	\$ 17.93	\$ 17.27	\$ 17.32	\$ 17.60	\$ 17.96
Idle Volume Charge											
vel 1: 0 - 18,000 gallons quarterly	\$ 2.33	\$ 2.41	\$ 2.74	\$ 2.77	\$ 2.72	\$ 2.73	\$ 2.78	\$ 2.67	\$ 2.68	\$ 2.72	\$ 2.78
Idle City											
artery Fixed Charge	\$ 34.14	\$ 25.32	\$ 24.84	\$ 25.10	\$ 30.09	\$ 34.88	\$ 34.78	\$ 37.74	\$ 37.99	\$ 38.33	\$ 38.68
Idle Volume Charge											
vel 1: 0 - 18,000 gallons quarterly	\$ 4.66	\$ 4.56	\$ 4.47	\$ 4.52	\$ 5.42	\$ 6.28	\$ 6.26	\$ 6.79	\$ 6.84	\$ 6.90	\$ 6.96
or Defined Rates											
Water											
Idle City											
artery Fixed Charge	\$ 16.22	\$ 5.00%	\$ 17.03	\$ 2.00%	\$ 17.72	\$ 2.00%	\$ 18.07	\$ 2.00%	\$ 18.07	\$ 2.00%	\$ 18.07
Idle Volume Charge											
vel 1: 0 - 18,000 gallons quarterly	\$ 1.38	\$ 5.00%	\$ 1.69	\$ 2.00%	\$ 1.73	\$ 2.00%	\$ 1.76	\$ 2.00%	\$ 1.76	\$ 2.00%	\$ 1.76
vel 2: Over 18,000 gallons quarterly	\$ 3.16	\$ 5.00%	\$ 3.32	\$ 3.39	\$ 3.46	\$ 3.53	\$ 3.53	\$ 3.53	\$ 3.53	\$ 3.53	\$ 3.53
Idle City											
artery Fixed Charge	\$ 23.11	\$ 5.00%	\$ 24.26	\$ 2.00%	\$ 25.24	\$ 2.00%	\$ 25.75	\$ 2.00%	\$ 25.75	\$ 2.00%	\$ 25.75
Idle Volume Charge											
vel 1: 0 - 18,000 gallons quarterly	\$ 2.82	\$ 5.00%	\$ 3.06	\$ 3.02	\$ 3.08	\$ 3.14	\$ 3.14	\$ 3.14	\$ 3.14	\$ 3.14	\$ 3.14
vel 2: Over 18,000 gallons quarterly	\$ 5.64	\$ 5.00%	\$ 5.92	\$ 6.04	\$ 6.16	\$ 6.29	\$ 6.29	\$ 6.29	\$ 6.29	\$ 6.29	\$ 6.29
sewer											
Idle City											
artery Fixed Charge	\$ 15.56	\$ 0.00%	\$ 15.56	\$ 0.00%	\$ 15.56	\$ 0.00%	\$ 15.56	\$ 0.00%	\$ 15.56	\$ 0.00%	\$ 15.56
Idle Volume Charge											
vel 1: 0 - 18,000 gallons quarterly	\$ 2.41	\$ 0.00%	\$ 2.41	\$ 0.00%	\$ 2.41	\$ 0.00%	\$ 2.41	\$ 0.00%	\$ 2.41	\$ 0.00%	\$ 2.41
vel 2: Over 18,000 gallons quarterly	\$ 25.32	\$ 0.00%	\$ 25.32	\$ 0.00%	\$ 25.32	\$ 0.00%	\$ 25.32	\$ 0.00%	\$ 25.32	\$ 0.00%	\$ 25.32
Idle Volume Charge											
vel 1: 0 - 18,000 gallons quarterly	\$ 4.56	\$ 0.00%	\$ 4.56	\$ 0.00%	\$ 4.56	\$ 0.00%	\$ 4.56	\$ 0.00%	\$ 4.56	\$ 0.00%	\$ 4.56
vel 2: Over 18,000 gallons quarterly	\$ 4.56	\$ 0.00%	\$ 4.56	\$ 0.00%	\$ 4.56	\$ 0.00%	\$ 4.56	\$ 0.00%	\$ 4.56	\$ 0.00%	\$ 4.56
Revenue Requirement											
Defined Water Revenue	\$ 4,239,947	\$ 4,673,620	\$ 4,800,157	\$ 4,800,157	\$ 4,945,529	\$ 5,076,431	\$ 5,251,496	\$ 5,438,369	\$ 5,614,676	\$ 5,758,464	\$ 5,904,471
plus (Shortfall)	\$ 4,451,945	\$ 4,733,576	\$ 4,888,463	\$ 4,888,463	\$ 5,047,652	\$ 5,211,253	\$ 5,273,900	\$ 5,336,548	\$ 5,399,196	\$ 5,461,844	\$ 5,524,492
Revenue Requirement	\$ 211,997	\$ 59,957	\$ 88,306	\$ 88,306	\$ 102,123	\$ 134,822	\$ 22,404	\$ (91,721)	\$ (215,480)	\$ (296,630)	\$ (370,979)
Revenue Requirement	\$ 211,997	\$ 271,954	\$ 360,260	\$ 360,260	\$ 462,383	\$ 597,205	\$ 619,610	\$ 527,889	\$ 312,409	\$ 15,789	\$ (364,190)
Revenue Requirement											
Defined Sewer Revenue	\$ 4,324,289	\$ 4,667,106	\$ 4,772,288	\$ 4,772,288	\$ 5,199,325	\$ 5,682,947	\$ 5,786,706	\$ 6,006,242	\$ 6,109,190	\$ 6,260,539	\$ 6,426,085
plus (Shortfall)	\$ 4,324,289	\$ 4,380,938	\$ 4,437,890	\$ 4,437,890	\$ 4,944,695	\$ 4,551,777	\$ 4,608,675	\$ 4,665,822	\$ 4,722,745	\$ 4,779,891	\$ 4,837,249
Revenue Requirement	\$ -	\$ (286,169)	\$ (334,398)	\$ (334,398)	\$ (704,630)	\$ (1,131,169)	\$ (1,178,031)	\$ (1,340,420)	\$ (1,386,444)	\$ (1,480,649)	\$ (1,588,835)
Revenue Requirement	\$ -	\$ (286,169)	\$ (620,507)	\$ (620,507)	\$ (1,325,197)	\$ (2,456,367)	\$ (3,634,398)	\$ (4,974,818)	\$ (6,361,262)	\$ (7,841,911)	\$ (9,430,740)

SCHEDULE 15 - RATE PROJECTIONS

[illegible]

City of Westminster Water and Sewer Rate Study

SCHEDULE 16 - SAMPLE BILLS

Alternative A - Current Rate Structure

Water	Current	FY 09	FY 10
Inside City			
Quarterly Minimum Charge (per 6,000 gallon increments includ	\$ 22.32	\$ 28.08	\$ 41.31
Next 39,000 gallons (per 1,000 gallons)	\$ 2.76	\$ 3.47	\$ 5.11
Over Minimum plus Next 39,000 gallons (per 1,000 gallons)	\$ 2.00	\$ 2.52	\$ 3.70
Outside City			
Quarterly Minimum Charge (per 6,000 gallon increments includ	\$ 27.96	\$ 35.17	\$ 51.75
Next 39,000 gallons (per 1,000 gallons)	\$ 3.20	\$ 4.03	\$ 5.92
Over Minimum plus Next 39,000 gallons (per 1,000 gallons)	\$ 2.24	\$ 2.82	\$ 4.15
Sewer	Current	FY 09	FY 10
Inside City			
Quarterly Minimum Charge (per 6,000 gallon increments includ	\$ 25.44	\$ 28.69	\$ 36.86
Over Minimum (per 1,000 gallons)	\$ 2.33	\$ 2.63	\$ 3.38
Outside City			
Quarterly Minimum Charge (per 6,000 gallon increments includ	\$ 34.14	\$ 38.49	\$ 49.46
Over Minimum (per 1,000 gallons)	\$ 4.66	\$ 5.25	\$ 6.75
Outside City - Carroll County			
Quarterly Minimum Charge (per 6,000 gallon increments includ	\$ 28.02	\$ 31.59	\$ 40.59
Over Minimum (per 1,000 gallons)	\$ 2.64	\$ 2.98	\$ 3.82

City of Westminster Water and Sewer Rate Study

SCHEDULE 16 - SAMPLE BILLS

Alternative D - Fixed Charge with Residential Inclining Block Rates and Commercial Unit Rate (Utility Basis)

Water	Current	FY 09	FY 10
Inside City			
Quarterly Fixed Charge for 3/4" Meter	\$22.32	\$14.67	\$15.44
	Current	FY 09	FY 10
5/8		\$14.67	\$15.44
3/4		\$14.67	\$15.44
1		\$36.68	\$38.60
1 1/2		\$73.35	\$77.20
2		\$117.36	\$123.52
3		\$234.72	\$247.04
4		\$366.75	\$386.00
8		\$1,173.60	\$1,235.20
<u>Residential Water Volume Charge</u>			
Level 1: 0 - 18,000 gallons quarterly	\$2.76	\$1.35	\$1.42
Level 2: Over 18,000 gallons quarterly	\$2.00	\$3.38	\$3.55
<u>Commercial Water Volume Charge</u>			
All gallons quarterly	\$2.00	\$1.82	\$1.92
Outside City			
Quarterly Fixed Charge for 3/4" Meter	\$27.96	\$20.96	\$22.01
	Current	FY 09	FY 10
5/8		\$20.96	\$22.01
3/4		\$20.96	\$22.01
1		\$52.40	\$55.03
1 1/2		\$104.80	\$110.05
2		\$167.68	\$176.08
3		\$335.36	\$352.16
4		\$524.00	\$550.25
8		\$1,676.80	\$1,760.80
<u>Water Volume Charge</u>			
Level 1: 0 - 18,000 gallons quarterly	\$3.20	\$2.41	\$2.53
Level 2: Over 18,000 gallons quarterly	\$2.24	\$6.03	\$6.33
<u>Commercial Water Volume Charge</u>			
All gallons quarterly	\$2.24	\$3.26	\$3.42

City of Westminster Water and Sewer Rate Study

SCHEDULE 16 - SAMPLE BILLS

Sewer	Current	FY 09	FY 10
Inside City			
Quarterly Fixed Charge for a 3/4" Meter	\$25.44	\$13.54	\$15.57
	Current	FY 09	FY 10
5/8		\$13.54	\$15.57
3/4		\$13.54	\$15.57
1		\$33.85	\$38.93
1 1/2		\$67.70	\$77.85
2		\$108.32	\$124.56
3		\$216.64	\$249.12
4		\$338.50	\$389.25
8		\$1,083.20	\$1,245.60
<u>Sewer Volume Charge</u>			
All gallons quarterly	\$2.33	\$2.10	\$2.41
Outside City			
Quarterly Fixed Charge for a 3/4" Meter	\$34.14	\$22.03	\$25.33
	Current	FY 09	FY 10
5/8		\$22.03	\$25.33
3/4		\$22.03	\$25.33
1		\$55.08	\$63.33
1 1/2		\$110.15	\$126.65
2		\$176.24	\$202.64
3		\$352.48	\$405.28
4		\$550.75	\$633.25
8		\$1,762.40	\$2,026.40
<u>Sewer Volume Charge</u>			
All gallons quarterly	\$4.66	\$3.96	\$4.56

City of Westminster Water and Sewer Rate Study

SCHEDULE 16 - SAMPLE BILLS

Alternative D - Fixed Charge with Residential Inclining Block Rates and Commercial Unit Rate (Utility Basis)

WATER

	Consumption	Meter Size	% Increase Current - FY10	Current	FY 09	FY 10
Residential Inside						
	18,000	3/4	-26%	\$ 55.44	\$38.97	\$41.00
	27,000	3/4	-9%	\$ 80.28	\$69.39	\$72.95
	45,000	3/4	5%	\$ 129.96	\$130.23	\$136.85
Residential Outside						
	18,000	3/4	2%	\$ 66.36	\$64.34	\$67.55
	27,000	3/4	31%	\$ 95.16	\$118.61	\$124.52
	45,000	3/4	56%	\$ 152.76	\$227.15	\$238.46
Commercial Inside						
	25,000	3/4	-16%	\$ 74.76	\$60.17	\$62.67
	100,000	2	10%	\$ 281.24	\$299.36	\$309.36
	500,000	3	-5%	\$ 1,256.68	\$1,144.72	\$1,194.72
Commercial Outside						
	25,000	3/4	21%	\$ 88.76	\$102.46	\$107.51
	100,000	2	55%	\$ 334.04	\$493.68	\$518.08
	500,000	3	40%	\$ 1,476.88	\$1,965.36	\$2,062.16

SEWER

	Consumption	Meter Size	% Increase Current - FY10	Current	FY 09	FY 10
Inside						
R	18,000	3/4	10%	\$ 53.40	\$51.34	\$58.95
R	27,000	3/4	8%	\$ 74.37	\$70.24	\$80.64
R	45,000	3/4	7%	\$ 116.31	\$108.04	\$124.02
C	25,000	3/4	9%	\$ 69.71	\$66.04	\$75.82
C	100,000	2	26%	\$ 290.30	\$318.32	\$365.56
C	500,000	3	3%	\$ 1,417.12	\$1,266.64	\$1,454.12
Outside						
R	18,000	3/4	19%	\$ 90.06	\$93.31	\$107.41
R	27,000	3/4	12%	\$ 132.00	\$128.95	\$148.45
R	45,000	3/4	7%	\$ 215.88	\$200.23	\$230.53
C	25,000	3/4	14%	\$ 122.68	\$121.03	\$139.33
C	100,000	2	8%	\$ 608.74	\$572.24	\$658.64
C	500,000	3	-12%	\$ 3,053.12	\$2,332.48	\$2,685.28

COMBINED

	Consumption	Meter Size	% Increase Current - FY10	Current	FY 09	FY 10
Residential Inside						
	18,000	3/4	-8%	\$ 108.84	\$90.31	\$99.95
	27,000	3/4	-1%	\$ 154.65	\$139.63	\$153.59
	45,000	3/4	6%	\$ 246.27	\$238.27	\$260.87
Residential Outside						
	18,000	3/4	12%	\$ 156.42	\$157.65	\$174.96
	27,000	3/4	20%	\$ 227.16	\$247.56	\$272.97
	45,000	3/4	27%	\$ 368.64	\$427.38	\$468.99
Commercial Inside						
	25,000	3/4	-4%	\$144.47	\$126.21	\$138.49
	100,000	2	18%	\$571.54	\$617.68	\$674.92
	500,000	3	-1%	\$2,673.80	\$2,411.36	\$2,648.84
Commercial Outside						
	25,000	3/4	17%	\$ 211.44	\$223.49	\$246.84
	100,000	2	25%	\$ 942.78	\$1,065.92	\$1,176.72
	500,000	3	5%	\$ 4,530.00	\$4,297.84	\$4,747.44

SCHEDULE 17 - OPERATING CASH FLOW PROJECTIONS

WATER	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Revenues:										
Usage Charges (User Defined Rates)	3,465,808	4,292,731	4,591,576	4,945,875	5,078,700	5,293,947	5,463,970	5,638,676	5,818,184	6,002,618
Misc. Other Revenues	158,454	172,038	172,393	178,610	181,246	183,541	178,425	174,170	166,111	159,348
Total Revenues	3,624,263	4,464,769	4,763,969	5,124,485	5,259,946	5,477,489	5,642,395	5,812,845	5,984,295	6,161,966
Expenses:										
Total Operating Expenses	3,620,391	3,729,003	3,840,873	3,956,099	4,074,782	4,197,025	4,322,936	4,452,624	4,586,203	4,723,789
Existing Debt Service	184,330	558,385	545,990	545,990	545,990	545,990	545,990	545,990	545,990	545,990
Projected Debt Service	-	103,381	103,381	153,942	153,942	193,550	193,550	193,550	193,550	193,550
Cash Funded Capital Projects	-	-	20,000	-	6,600	26,400	-	-	-	-
Operating Reserve Contribution	-	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
3R Reserve Contribution	-	-	-	-	-	-	63,514	64,715	65,952	67,227
Total Expenses	3,804,721	4,490,769	4,610,244	4,756,031	4,881,314	5,062,966	5,225,990	5,356,880	5,491,696	5,630,556
Less Payment to General Fund	-	-	140,000	300,000	350,000	350,000	380,704	431,966	432,879	433,263
Net Surplus / (Deficit)	\$ (180,458)	\$ (25,999)	\$ 13,726	\$ 68,454	\$ 28,632	\$ 64,523	\$ 35,701	\$ 24,000	\$ 59,721	\$ 98,147
SEWER										
Revenues:										
Usage Charges (User Defined Rates)	3,577,688	4,675,733	4,736,517	4,797,145	4,858,068	4,918,794	4,979,787	5,040,541	5,101,531	5,162,750
Misc. Other Revenues	181,020	206,940	233,461	262,872	285,118	307,204	316,570	324,193	321,967	315,646
Total Revenues	3,758,708	4,882,672	4,969,979	5,060,017	5,143,187	5,225,998	5,296,357	5,364,733	5,423,499	5,478,395
Expenses:										
Total Operating Expenses	3,550,407	3,656,919	3,766,627	3,879,626	3,996,014	4,115,895	4,239,372	4,366,553	4,497,549	4,632,476
Existing Debt Service	148,513	148,512	147,512	-	-	-	-	-	-	-
Projected Debt Service	-	75,661	75,661	111,469	111,469	122,001	122,001	122,001	122,001	122,001
Cash Funded Capital Projects	25,000	25,000	25,000	25,000	-	-	-	-	-	-
Operating Reserve Contribution	-	100,000	100,000	100,000	100,000	100,000	100,000	42,260	32,301	33,270
3R Reserve Contribution	-	289,548	296,822	304,314	312,031	319,979	96,682	98,170	99,703	101,282
Total Expenses	3,723,920	4,295,640	4,411,621	4,420,408	4,519,514	4,657,875	4,558,055	4,628,984	4,751,554	4,889,028
Less Payment to General Fund	-	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
Net Surplus / (Deficit)	\$ 34,788	\$ 87,033	\$ 58,358	\$ 139,608	\$ 123,672	\$ 68,123	\$ 238,302	\$ 235,749	\$ 171,945	\$ 89,367

Current Water System	Treatment Capacity (MGD)		Supply
	Current	Design	
Carfaro Plant	0.23	0.35	
Granberry	2.75	3.25	
Total System Capacity	2.98	3.60	

Average Day EDU Consumption	250 GPD	Treatment Capacity Added via CIP EDU's	4.0 MGD 16,000
Design Treatment Capacity System EDUs	14,400 EDU		
Total Current Systems EDUs (FY 09)	11,878 EDU	Supply Capacity Added via CIP EDU's	2.4 MGD 9,660
Available EDUs	2,523 EDU	System Expansion 5 Years Capital Costs via CIP EDU's	2.4 MGD 9,660

Original Cost of Fixed Assets	\$ 24,858,831
Design Capacity of System	3.6 MGD
Design Capacity System EDUs	14,400
Buy-In Method Benefit Assessment Fee	\$ 1,726

Capital Projects by Type (FY 09 - FY 18)

Capital Projects by Type (FY 02 - FY 16)	Cash Funded	Bond Funded	Total
Pump Stations	\$ -	\$ -	\$ -
Storage Facilities	\$ 25,000	\$ 3,340,000	\$ 3,365,000
Water Mains	\$ 52,000	\$ 2,197,800	\$ 2,249,800
Machinery and Equipment	\$ -	\$ 2,655,000	\$ 2,655,000
Total	\$ 77,000	\$ 8,192,800	\$ 8,269,800

Projected Borrowed Amount	Treatment		Supply		Expansion		Total
Total Cost to be Debt Funded (Principal)	\$ 11,047,190	\$ 3,340,000	\$ 4,852,800	\$ 19,239,990			
Admin Fees (% of debt service)	\$ 552,360	\$ 167,000	\$ 242,640	\$ 962,000			
Total Cost to be Debt Funded (Principal)	\$ 11,599,550	\$ 3,507,000	\$ 5,095,440	\$ 20,201,990			

Interest Rate	5.0%			
Period (years)	20			
Total Projected Debt Service	\$ 18,615,557	\$ 5,628,215	\$ 8,177,426	\$ 32,421,198
Total Cash Funded Projects	\$ -	\$ 25,000	\$ 52,000	\$ 77,000
Total Capital Cost	\$ 18,615,557	\$ 5,653,215	\$ 8,229,426	\$ 32,498,198
				Total
Capacity Added	4.0	2.4	2.4	
Capacity Added EDUs	16,000	9,660	9,660	
Next Increment Method Benefit Assessment Fee	\$ 1,163	\$ 585	\$ 852	\$ 2,601

SCHEDULE 18 - WATER BENEFIT ASSESSMENT FEES

Average Cost Method

<u>Projected Capital Expenses</u>	
Cash Funded Projects	FY09 - FY18
Projected Borrowed Amount	\$ 77,000
Total CIP	\$ 19,239,990
	\$ 19,316,990
Debt Service	
Total Debt Funded Projects	\$ 19,239,990
Admin Fees (% of principal)	\$ 962,000
Total Cost to be Debt Funded (Principal)	\$ 20,201,990
Interest Rate	5.0%
Period (years)	20
Total Projected Debt Service	\$ 32,421,198
Historical Value of System	\$ 24,858,831
Total Cost of Sewer System	\$ 57,280,029
Total Design Capacity System	24,060
Average Cost Method Benefit Assessment Fee	\$ 2,381

Meter Size	Equivalent	Buy-In	Average Cost	Next Increment	Current Fee
5/8	1.00	\$ 1,726	\$ 2,381	\$ 2,601	\$ 4,370
3/4	1.00	\$ 1,726	\$ 2,381	\$ 2,601	\$ 4,370
1	2.50	\$ 4,316	\$ 5,952	\$ 6,501	\$ 10,925
1 1/2	5.00	\$ 8,632	\$ 11,904	\$ 13,003	\$ 21,850
2	8.00	\$ 13,810	\$ 19,046	\$ 20,805	\$ 34,960
3	16.00	\$ 27,621	\$ 38,091	\$ 41,610	\$ 69,920
4	25.00	\$ 43,158	\$ 59,518	\$ 65,015	\$ 109,250
6	50.00	\$ 86,315	\$ 119,036	\$ 130,030	\$ 218,500
8	80.00	\$ 138,105	\$ 190,457	\$ 208,048	\$ 349,600

SCHEDULE 19 - SEWER BENEFIT ASSESSMENT FEES

SYSTEM CHARACTERISTICS

Current Sewer System Capacity (MGD)

Total WWTP System Capacity	Current	5.00
Average Day EDU Consumption	GPD	250
Design Capacity System EDUs	EDUs	20,000
Total Current Systems EDUs (FY 09)	EDUs	11,393
Available EDUs in Plant Capacity	EDUs	8,607

Buy-In Method

Original Cost of Fixed Assets	\$	35,718,151
Design Capacity of System		5.0 MGD
Design Capacity System EDUs		20,000
Buy-In Method Benefit Assessment Fee	\$	1,786

SCHEDULE 19 - SEWER BENEFIT ASSESSMENT FEES

Average Cost Method

Projected Capital Expenses	
Cash Funded Projects	FY09 - FY18
Projected Borrowed Amount	\$ -
Total CIP	\$ 17,626,333
Debt Service	\$ 17,626,333
Total Debt Funded Projects	\$ 881,317
Admin Fees (% of principal)	\$ 18,507,650
Total Cost to be Debt Funded (Principal)	
Interest Rate	5.0%
Period (years)	20
Total Projected Debt Service	\$ 29,702,034
Historical Value of System	\$ 35,718,151
Total Cost of Sewer System	\$ 65,420,185
Total Design Capacity System	20,000
Average Cost Method Benefit Assessment Fee	\$ 3,271

Meter Size	Equivalent	Buy-In	Average Cost	Current Fee
5/8	1.00	\$ 1,786	\$ 3,271	\$ 4,580
3/4	1.00	\$ 1,786	\$ 3,271	\$ 4,580
1	2.50	\$ 4,465	\$ 8,178	\$ 11,450
1 1/2	5.00	\$ 8,930	\$ 16,355	\$ 22,900
2	8.00	\$ 14,287	\$ 26,168	\$ 36,640
3	16.00	\$ 28,575	\$ 52,336	\$ 73,280
4	25.00	\$ 44,648	\$ 81,775	\$ 114,500
6	50.00	\$ 89,295	\$ 163,550	\$ 229,000
8	80.00	\$ 142,873	\$ 261,681	\$ 366,400

SCHEDULE 20 - CAPITAL CASH FLOW

Water Benefit Assessment Fund Balance
Sewer Benefit Assessment Fund Balance

3,948,414
3,102,632

WATER

Revenues:

Benefit Assessment

Total Revenues

Expenses:

Existing Debt Service

Projected Debt Service

Cash Funded Capital Projects

Total Expenses

Net Surplus / (Deficit)

Water Benefit Assessment Fund Balance

SEWER

Revenues:

Benefit Assessment

Total Revenues

Expenses:

Existing Debt Service

Projected Debt Service

Cash Funded Capital Projects

Total Expenses

Net Surplus / (Deficit)

Sewer Benefit Assessment Fund Balance

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Revenues:										
Benefit Assessment	655,500	655,500	655,500	655,500	655,500	655,500	655,500	655,500	655,500	655,500
Total Revenues	655,500	655,500	655,500	655,500	655,500	655,500	655,500	655,500	655,500	655,500
Expenses:										
Existing Debt Service	93,221	510,573	502,915	502,915	502,915	502,915	502,915	502,915	502,915	502,915
Projected Debt Service	-	90,153	90,153	222,256	222,256	466,586	466,586	578,434	578,434	690,282
Cash Funded Capital Projects	-	25,000	5,000	30,000	-	3,400	13,600	-	-	-
Total Expenses	93,221	625,726	598,067	755,170	725,170	972,901	983,101	1,081,349	1,081,349	1,193,197
Net Surplus / (Deficit)	\$ 562,279	\$ 29,774	\$ 57,433	\$ (99,670)	\$ (69,670)	\$ (317,401)	\$ (327,601)	\$ (425,849)	\$ (425,849)	\$ (537,697)
Water Benefit Assessment Fund Balance	4,510,693	4,540,467	4,597,900	4,498,229	4,428,559	4,111,159	3,783,558	3,357,709	2,931,861	2,394,164
SEWER										
Revenues:										
Benefit Assessment	684,872	683,545	687,213	685,437	688,787	686,550	689,571	686,861	689,542	692,118
Total Revenues	684,872	683,545	687,213	685,437	688,787	686,550	689,571	686,861	689,542	692,118
Expenses:										
Existing Debt Service	-	-	-	-	-	-	-	-	-	-
Projected Debt Service	-	323,538	323,538	615,481	615,481	929,330	929,330	1,207,216	1,207,216	1,485,102
Cash Funded Capital Projects	-	-	-	-	-	-	-	-	-	-
Total Expenses	-	323,538	323,538	615,481	615,481	929,330	929,330	1,207,216	1,207,216	1,485,102
Net Surplus / (Deficit)	\$ 684,872	\$ 360,007	\$ 363,675	\$ 69,956	\$ 73,306	\$ (242,780)	\$ (239,759)	\$ (520,354)	\$ (517,673)	\$ (792,983)
Sewer Benefit Assessment Fund Balance	\$ 3,787,504	\$ 4,147,511	\$ 4,511,186	\$ 4,581,143	\$ 4,654,449	\$ 4,411,670	\$ 4,171,911	\$ 3,651,557	\$ 3,133,883	\$ 2,340,900

SCHEDULE 21 - CASH BALANCE

WATER

	Beginning Balance FY 09	Ending Balance FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Operating and Maintenance Reserve Balance	86,926	86,926	86,926	186,926	286,926	386,926	486,926	586,926	686,926	786,926	886,926
Benefit Assessment Fund	3,948,414	4,510,693	4,540,467	4,597,900	4,498,229	4,428,559	4,111,159	3,783,558	3,357,709	2,931,861	2,394,164
3R Reserve Balance	-	-	-	-	-	-	-	63,514	128,229	194,181	261,408
Annual Operating Surplus (Deficit)	-	(180,458)	(25,999)	13,726	68,454	28,632	64,523	35,701	24,000	59,721	98,147
Total Water Fund Cash Balance - End of Year	\$ 4,035,340	\$ 4,417,160	\$ 4,420,935	\$ 4,592,094	\$ 4,660,877	\$ 4,719,839	\$ 4,566,961	\$ 4,438,575	\$ 4,201,442	\$ 4,001,266	\$ 3,728,943

SEWER

	Beginning Balance FY 09	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
Operating and Maintenance Reserve Balance	434,424	434,424	434,424	534,424	634,424	734,424	834,424	934,424	1,034,424	1,076,684	1,108,985
Benefit Assessment Fund	3,102,632	3,787,504	4,147,511	4,511,186	4,581,143	4,654,449	4,411,670	4,171,911	3,651,557	3,133,883	2,340,900
3R Reserve Balance	-	-	289,548	586,369	890,683	1,202,714	1,522,693	1,619,375	1,717,546	1,817,249	1,918,530
Annual Operating Surplus (Deficit)	-	34,788	87,033	58,358	139,608	123,672	68,123	238,302	235,749	171,945	89,367
Total Sewer Fund Cash Balance - End of Year	\$ 3,537,057	\$ 4,256,717	\$ 4,993,304	\$ 5,812,158	\$ 6,426,037	\$ 7,035,046	\$ 7,280,369	\$ 7,475,595	\$ 7,389,160	\$ 7,185,395	\$ 6,615,361
Total Water and Sewer Fund Cash Balance - End of Year	\$ 7,572,396	\$ 8,673,877	\$ 9,414,239	\$ 10,404,252	\$ 11,086,914	\$ 11,754,883	\$ 11,847,330	\$ 11,914,170	\$ 11,590,602	\$ 11,186,661	\$ 10,344,304

Prepared for



City of Westminster

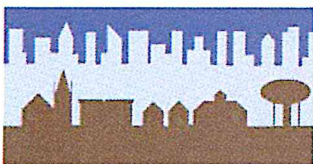
Water and Sewer Rate Study

Cost of Service

Appendix B:

Cash Basis and Inside-City Rates

Prepared by



**Municipal & Financial
Services Group**

906-A Commerce Road
Annapolis, MD 21401
410.266.9101

September 2008

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A. INTRODUCTION

The following report summarizes the residual cash basis required revenue and corresponding inside-city water and sewer rates.

B. OPERATING AND MAINTENANCE COSTS

As summarized in the main body of the City's Cost of Service Report, the Fiscal Year 2009 O&M expenses for the water system have been forecasted as \$3.62 million. The amount allocated for Source of Supply is \$0.52 million, for Water Treatment & Pumping is \$0.77 million, for Transmission & Distribution is \$0.57 million, with the remaining \$1.75 million allocated for Administrative & General and Customer Account expenses. The majority of water system operating expenses were assumed to increase annually by 3% resulting in expenses of approximately \$4.72 million by Fiscal Year 2018.

The budgetary Fiscal Year 2009 O&M expenses for the sewer system total \$3.55 million. Approximately \$1.55 million of total O&M expenses is attributed to Sewer Treatment, while \$0.50 million is attributed to collection, and \$1.48 million to Administrative & General and Customer Account. The sewer system operating expenses were assumed to increase annually by 3% resulting in expenses of approximately \$4.63 million by Fiscal Year 2018.

Operating and maintenance costs for the water and sewer systems are presented in Schedule 2 in Appendix A to the report.

C. CAPITAL COSTS

The annualized capital costs related to providing water and sewer service are generally derived by analyzing the capital costs of projects detailed in the City's capital improvement plans and then identifying which of those projects will be funded via the issuance of debt (typically bonds or similar financial instruments) and those which will be funded from cash on hand or cash derived from operations. The capital costs are also divided between those that are related to growth and those related to repair and rehabilitation of the system. Segregating capital projects between growth and non-growth is necessary to ensure the capital costs are recovered through the appropriate group of customers (i.e., growth pays for growth).

1. Existing Debt

The City water and sewer fund currently has approximately \$16.74 million in outstanding principal on debt. The existing debt consists of four separate bond issues including a 2007 loan for the Cranberry water treatment plant upgrade with outstanding principal of \$11.05 million retiring in FY

28, a Carfaro well water loan with outstanding principal of \$0.89 million retiring in FY 21, a 1990 series B sewer bond with outstanding principal of \$0.38 million retiring in FY 11 and a loan with \$4.42 million outstanding principal retiring in FY 28 for Medford Quarry emergency water connection. The principal and interest payment required in FY09 for the water and sewer system is approximately \$0.21 million and \$0.15 million, respectively.

2. Planned Capital Improvements

The City's water system has planned capital projects of approximately \$10.62 million for the period from Fiscal Year 2009 through Fiscal Year 2018. The majority of the capital projects are for improvements / replacements to the City's water mains. New water supply developments, totaling \$1.73 million for FY 09 through FY 14, are the most expensive capital improvements identified in the capital program.

The sewer system has a significantly higher amount of planned total capital costs, with approximately \$46.17 million for the period from Fiscal Year 2009 to Fiscal Year 2018. The largest sewer capital cost is for a plant upgrade/expansion, spanning from FY 09 through FY 13, of \$36.00 million, with 75 percent of the project being funded by the Bay Restoration Fund.

It should be noted that a key consideration for the review of the water and sewer systems for the City was the level of reinvestment in the water and sewer infrastructure planned for the City system. The projects mentioned above are representative of the current programmed level of funding.

3. System Reinvestment

The City has invested a significant amount of capital over the past 100 years to construct the water distribution and sewer collection systems. As the water and sewer systems age it is important that the City be actively managing these assets to ensure that the useful lives of the systems are maximized. Based on information from the City and industry estimates, water mains in the City system have a useful life of approximately 75 years, and sewer mains have a useful life of approximately 100 years. To assist the City in managing its capital assets, MFSG completed a detailed review of the water and sewer system assets. The goal of the review is to provide the City with an estimate of the annual investment required in each system to appropriately maintain the system and strive towards maximizing assets' useful lives. As part of the capital improvements program review, the ages and costs of various portions of the water and sewer systems were stratified by decade. The age groupings of distribution and collection systems together with useful life information and unit replacement costs were used to estimate the required reinvestment in the respective systems.

The City's water distribution system consists of approximately 645,300 linear feet of pipe. The majority of the water system was installed rather recently (in terms of exhausting useful life), during the 1960's and the 1970's. The City has water mains that were installed before 1960, but records as to the exact year these mains were installed are limited. Applying a useful life of 75 years to the water distribution system reveals that as of FY 2009, the City will have approximately 14,000 linear feet of pipe that has reached its useful life. Using average costs for replacement by linear foot of the various pipes within the City, the cost of replacing these pipes is approximately \$0.47 million in today's dollars.

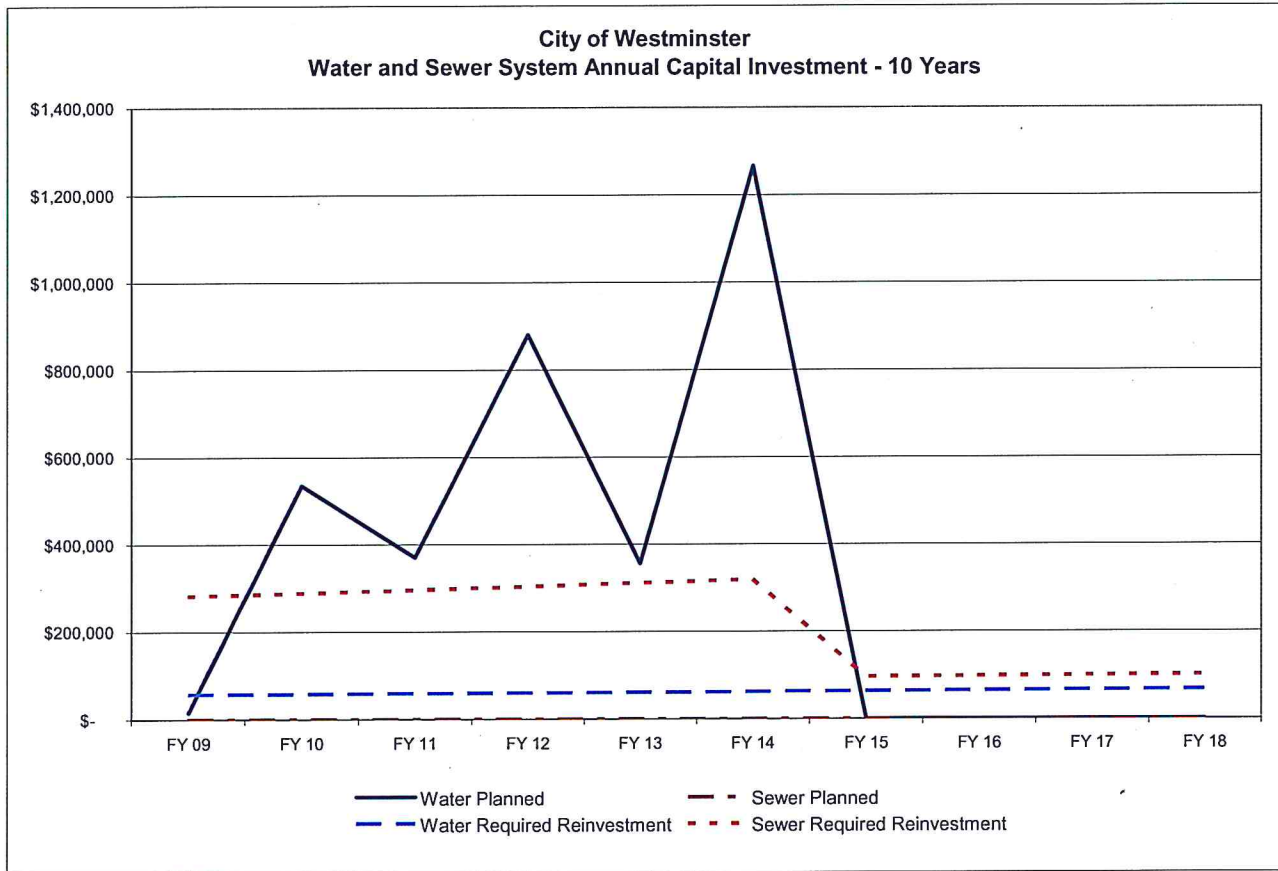
The City sewer collection system currently consists of approximately 626,400 linear feet of pipe. The majority of the collection system was installed in the 1970's and 1980's. Applying a useful life of 75 years to the sewer collection system reveals that as of FY 2009 the City will have approximately 25,100 linear feet of pipe that has reached its useful life. Using average costs for replacement by linear foot of the various pipes within the City, the cost of replacing this pipe is approximately \$0.94 million in today's dollars. The following table provides a summary of the analysis of the distribution and collection systems.

Table 1. System Reinvestment

	Water Distribution System	Sewer Collection System
Installed Pipe (Linear Feet)	645,300	626,400
Pipe Exceeding Useful Life (Linear Feet)	14,000	25,100
Replacement Cost of Pipe Exceeding Useful Life	\$469,000	\$942,000

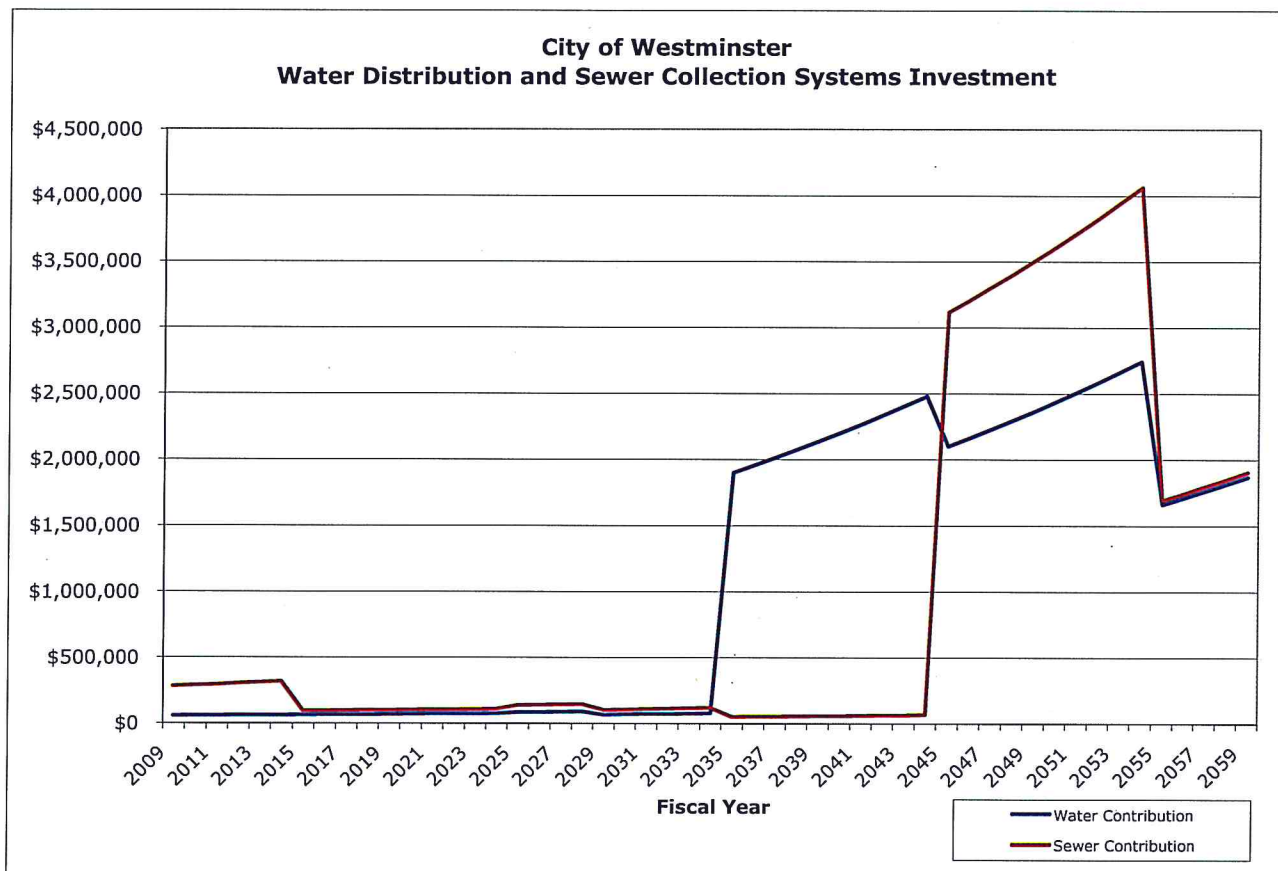
It is important to note that the useful life of water and sewer distribution and collection systems is highly dependent on a number of factors including pipe material, soil conditions and climate. Obviously the distribution and collection system that have exceeded their useful lives are still operational but as time passes the likelihood of failure increases.

For purposes of the system analysis it was assumed that the City would replace/renew the water and sewer pipe that has exceeded its useful life over the next 20 years. This period was selected in an attempt to minimize the rate impact but not extend the period so long as to greatly increase system failures. Additionally, it is assumed that as pipe that has not yet reached its useful life reaches its useful life, the City will begin working on these portions of the systems. Applying these assumptions provides an annual reinvestment rate for the water and sewer systems. The following graph demonstrates the current planned capital investments as mentioned above and the required investment based on the detailed system information.



The figure demonstrates that over the next ten years the City should be investing approximately \$0.05 million to \$0.07 million a year to replace water distribution pipe that has reached its useful life. The figure also shows that the City should be investing approximately \$0.10 million to \$0.30 million a year to replace/renew sewer collection system pipe that has reached its useful life.

To provide a longer-term view of the required investments in the water and sewer systems the following graph was developed which shows the required investment over the next 50 years.



The system reinvestment analysis can be found on Schedules 9A in the Appendix to the report.

4. Anticipated Debt Service

Historically, the City has utilized bond funding to finance the majority of water and sewer capital improvement projects in the capital improvements program. It is assumed that the City will continue to issue debt to fund the majority of capital improvement projects, including the recommended replacement and renewal of the water and sewer systems as discussed above. However to limit some interest expenses a small portion of the capital improvement program for water will be funded directly through user rates. Projects that average \$25,000 or less per year over the planning period from FY 09 to FY 18 are cash funded in the model through user rates while any projects with an amount over that are bond funded. For projects spanning Fiscal Year 2009 to Fiscal Year 2018, it is assumed that the City will debt fund approximately \$2.30 million worth of water capital projects. Over the same period, it is assumed that the City will debt fund approximately \$1.45 million worth of sewer capital projects. Based on the planned timing for the water capital projects, it is anticipated that the City will need to issue debt in Fiscal Years 2010, 2012 and 2014. The annual debt payments for the water system as a result of debt issuance range from \$0.10 million in FY 2010 to \$0.19 million in FY 2014 and years beyond that. The annual debt payments for the sewer system range

from \$0.08 million in FY 2009 to \$0.12 million in FY 2014 and years beyond that. Detailed Anticipated Debt Service calculations can be found on Schedule 6 of Appendix A.

D. RESERVES

Best management practices dictate that cash reserves be accumulated to provide for contingencies and unplanned major expenses. We recommend the establishment of two types of reserves for the City's water and sewer system: an Operating and Maintenance ("O&M") Reserve and a Repair, Renewal, and Rehabilitation ("3R") Reserve. Each is discussed below.

1. Operating and Maintenance ("O&M") Reserve

An operating reserve is important to provide funds for unplanned minor repairs or fluctuations in the budget. This type of reserve is also valuable during unusually wet or dry years, which could result in reduced revenues due to lower than anticipated consumption levels. As these reserves are accumulated, they can be used in future years to offset, decrease or defer rate increases. Operating reserves are typically established as a percentage of a system's O&M budget. We recommend that the City formally establish and maintain a 90-day operating reserve target balance (one fourth of current annual O&M expenses). An annual contribution to the reserve will need to be recovered through user fees each year to match the target reserve balance of 90 days annual operating expenses and replenishment. This annual contribution is the difference between the target balance (one fourth current annual O&M expenses) and the current balance (less any withdrawals from the reserve). The recommended O&M reserve for FY 2009 based on 90-days of operating expenses is \$1.13 million for water and sewer combined. It is estimated that the available cash fund balance at the beginning of FY 2009 will be \$0.79 million. Therefore in FY 2009 the City will be required to make an O&M reserve contribution of \$0.34 million to fully fund the reserve. The City will need to make further contributions in subsequent years to ensure that a 90-day balance is maintained.

2. Repair, Replacement and Rehabilitation ("3R") Reserve

The previous section of this report described the detailed system asset review completed as part of the cost of service study. This analysis provided a required system reinvestment amount for the water and sewer systems based on the useful life of each asset class. It is not uncommon for a utility to set aside funds for repair and replacement in addition to or in place of the actual capital projects completed to repair and replace the system. This is typically accomplished by establishing Repair, Replacement and Rehabilitation ("3R") reserves to provide funds to pay for unexpected major repairs and planned replacement or rehabilitation of equipment or other major fixed assets.

These reserves can be used to pay for capital costs in order to avoid or minimize the amount that would otherwise be recovered through user fees (and possibly result in a significant rate increase). Typically, the annual "3R" reserve contribution is calculated using a percentage based upon the useful life of each asset class applied to the original cost of each asset class. The "3R" contribution is offset by the actual amount of investment in each asset identified in the capital improvement program. Therefore a "3R" reserve makes up the difference between what is actually being invested in the systems and what should be invested based on the useful life of the assets. For Fiscal Year 2010, the expected "3R" reserve contribution for the water system is approximately \$0.2 million; a contribution is not required in FY 2009 due to the planned investment in the capital improvements program. In Fiscal Year 2009, the "3R" contribution for the sewer system is approximately \$0.1

million. The computation of the two types of reserves can be found on Schedules 7A and 7B in Appendix A of this report.

E. CASH BASIS REVENUE REQUIREMENTS

The gross cash basis revenue requirements (that is, the total cash needed for the water and sewer systems) can be classified into three major categories: operating and maintenance costs, capital costs (existing and planned debt service) and reserves. The total of these costs, less the amount of miscellaneous income, is the amount that needs to be recovered from user fees. The following table shows the revenue requirements, miscellaneous (non user charges) revenue and the net revenue requirement from user rates for water and sewer.

The following tables show the net residual cash basis (including the additions of a dividend to the City's General Fund, to be charged to inside-City customers only) for setting inside-city water and sewer rates.

Water Net Residual Cash Basis Revenue Requirements

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Operating Expenses	\$3.62	\$3.73	\$3.84	\$3.96	\$4.07
Operating Reserve Contribution	\$0.00	\$0.10	\$0.10	\$0.10	\$0.10
Existing Debt Service	\$0.18	\$0.56	\$0.55	\$0.55	\$0.55
Cash Funded Capital Projects	\$0.00	\$0.00	\$0.02	\$0.00	\$0.01
Projected Debt Service	\$0.00	\$0.10	\$0.10	\$0.15	\$0.15
3R Reserve	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Revenue Requirement	\$3.80	\$4.49	\$4.61	\$4.76	\$4.88
Less Miscellaneous Revenue	\$0.16	\$0.17	\$0.17	\$0.18	\$0.18
Less Revenue Collected via Outside-City Customers under Utility Basis Rates*	\$1.56	\$1.94	\$1.97	\$2.03	\$2.08
More Dividend to the General Fund	\$0.00	\$0.00	\$0.14	\$0.30	\$0.35
Net Revenue Requirement from Rates	\$2.09	\$2.38	\$2.61	\$2.85	\$2.97
Projected Revenue with Current Inside – City Water Rates	\$1.56	\$1.89	\$2.35	\$2.62	\$2.92
Net Surplus (Shortfall)	(\$0.52)	(\$0.49)	(\$0.25)	(\$0.23)	(\$0.05)
% Increase	33%	26%	11%	9%	2%

The table above shows the anticipated residual cash basis net revenue requirement for water in the fiscal years spanning 2009-2013. The table demonstrates the shortfall that the fund will experience in FY 2009 and the following four years under the current rates and rate structure. Future chapters in this report will discuss the rate increases required for the fund to breakeven during this period.

Sewer Cash Basis Revenue Requirements

	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Operating Expenses	\$3.55	\$3.66	\$3.77	\$3.88	\$4.00
Operating Reserve Contribution	\$0.00	\$0.10	\$0.10	\$0.10	\$0.10
Existing Debt Service	\$0.15	\$0.15	\$0.15	\$0.00	\$0.00
Cash Funded Capital Projects	\$0.03	\$0.03	\$0.03	\$0.03	\$0.00
Projected Debt Service	\$0.00	\$0.08	\$0.08	\$0.11	\$0.11
3R Reserve	\$0.00	\$0.29	\$0.30	\$0.30	\$0.31
Total Revenue Requirement	\$3.72	\$4.30	\$4.41	\$4.42	\$4.52
Less Miscellaneous Revenue	\$0.18	\$0.21	\$0.23	\$0.26	\$0.29
Less Revenue Collected via Outside-City Customers under Utility Basis Rates*	\$1.63	\$2.19	\$2.22	\$2.25	\$2.28
More Dividend to the General Fund	\$0.00	\$0.50	\$0.50	\$0.50	\$0.50
Net Revenue Requirement from Rates	\$1.91	\$2.40	\$2.46	\$2.41	\$2.46
Projected Revenue with Current Inside-City Sewer Rates	\$1.76	\$1.95	\$2.49	\$2.52	\$2.55
Net Surplus (Shortfall)	(\$0.15)	(\$0.45)	\$0.03	\$0.11	\$0.09
% Increase	8%	23%	-1%	-4%	-4%

The table above shows the anticipated utility basis net revenue requirement for sewer in the fiscal years spanning 2009-2013. The table also demonstrates the shortfall that the fund will experience in FY 2009 and the following four years under the current rates and rate structure. Future chapters in this report will discuss the rate increases required for the fund to breakeven during this period.

F. INSIDE-CITY RATES

Water Alternative D (Ready Ready-to-Serve Charge and Inclining Block Consumption Charge with Flat Rate Non-Residential) – Alternative D is the same structure as Alternative B; however, non-residential and tax-exempt customers are not included within the inclining block structure. Non-residential and exempt customers are charged a separate flat-rate consumption charge.

The following tables show the inside-city water rates necessary to for the water fund to “breakeven” in FY09 on a net residual cash basis.

Meter Size (inches)	AWWA Equivalent	Fixed Charge per Quarterly Bill Breakeven FY09
5/8	1.00	\$15.44
3/4	1.00	\$15.44
1	2.50	\$38.60
1 1/2	5.00	\$77.20
2	8.00	\$123.52
3	16.00	\$247.04
4	25.00	\$386.00
8	80.00	\$1,235.20

Quarterly Water Usage (gallons)		Breakeven FY09 Rate per 1,000 gallons
Residential		
-	18,000	\$1.42
Over	18,000	\$3.55
Non-Residential Unit Rate		\$1.92

Sewer Alternative B – Ready-to-Serve Fixed Charge and Unit Rate Usage

Meter Size (inches)	AWWA Equivalent	Fixed Charge per Quarterly Bill FY09
5/8	1.00	\$15.56
3/4	1.50	\$15.56
1	2.50	\$38.93
1 1/2	5.00	\$77.85
2	8.00	\$124.56
3	16.00	\$249.12
4	25.00	\$389.25
8	80.00	\$1,245.60

Quarterly Water Usage (gallons)	Breakeven FY09 Rate per 1,000 gallons
Unit Rate for all customers	\$2.41

1. Projected Rates

The next step was to determine what water and sewer rate increases are required to ensure that the water and sewer funds are self-supporting. The proposed increases to water and sewer rates in FY 2009 along with additional modest increases in the following years are required for the water and sewer systems to recover the required revenue values shown in a table in a previous section of this report. The increases and rates are shown in the tables below. This table also demonstrates a two-year rate increase phase-in. The Breakeven rates for FY09, shown in the previous section, are not fully implemented until FY10. The proposed rates for FY09 and following four years are shown below.

WATER		FY09	FY10	FY11	FY12	FY13
Quarterly Fixed Charge per EDU		\$14.67	\$15.44	\$16.98	\$18.68	\$18.96
<u>Residential</u> (per 1,000 gallons)						
-	18,000	\$1.35	\$1.42	\$1.56	\$1.72	\$1.75
Over	18,000	\$3.38	\$3.55	\$3.91	\$4.30	\$4.36
<u>Non-Residential</u>						
Unit Rate (per 1,000 gallons)		\$1.82	\$1.92	\$2.11	\$2.32	\$2.36
% Increase			5.20%	10.00%	10.00%	1.50%

SEWER		FY09	FY10	FY11	FY12	FY13
Quarterly Fixed Charge per EDU		\$13.54	\$15.57	\$15.57	\$15.57	\$15.57
Unit Rate (per 1,000 gallons)		\$2.10	\$2.41	\$2.41	\$2.41	\$2.41
% Increase			15.00%	0.00%	0.00%	0.00%

2. Sample Bills

WATER

Consumption	Meter Size	Current	Current	Proposed Inside	Proposed Inside
Residential		Inside	Outside	FY09	FY10
18,000	3/4	\$55	\$66	\$40	\$41
27,000	3/4	\$80	\$95	\$69	\$73
45,000	3/4	\$130	\$153	\$130	\$137

Non-residential					
25,000	3/4	\$75	\$89	\$60	\$63
100,000	2	\$281	\$334	\$299	\$309
500,000	3	\$1,257	\$1,477	\$1,145	\$1,195

SEWER

Consumption	Meter Size	Current	Current	Proposed Inside	Proposed Inside
Residential		Inside	Outside	FY09	FY10
18,000	3/4	\$53	\$90	\$51	\$59
27,000	3/4	\$74	\$132	\$70	\$81
45,000	3/4	\$116	\$216	\$108	\$124

Non-residential					
25,000	3/4	\$70	\$123	\$66	\$76
100,000	2	\$290	\$609	\$318	\$366
500,000	3	\$1,417	\$3,053	\$1,267	\$1,454

COMBINED

Consumption	Meter Size	Current	Current	Proposed Inside	Proposed Inside
Residential		Inside	Outside	FY09	FY10
18,000	3/4	\$109	\$156	\$90	\$100
27,000	3/4	\$155	\$227	\$140	\$154
45,000	3/4	\$246	\$369	\$238	\$261

Non-residential					
25,000	3/4	\$144	\$211	\$126	\$138
100,000	2	\$572	\$943	\$618	\$675
500,000	3	\$2,674	\$4,530	\$2,411	\$2,649

G. CONCLUSIONS AND RECOMMENDATIONS

1. Findings

- Residential customers of the City's water system use on average 26,000 gallons of water each quarter. This is approximately 8,000 gallons more each quarter than the national average usage per quarter, which is based on an average of 6,000 gallons per month or 18,000 gallons quarterly.
- Based on projected water sales, the current rates for inside-city customers will produce revenues roughly 33% less than the residual cash requirements Fiscal Year 2009 with small shortfalls annually over the planning period.
- Based on projected water sales, the current rates for inside-city customers will produce revenues roughly 8% less than the residual cash requirements Fiscal Year 2009.

2. Conclusions

- The City needs to increase water and sewer rates over the next five years to keep revenues in line with expenses.
- The City needs to plan on investing significantly in its water and sewer systems over the next 10 to 20 years. The systems are aging and require investment in order to avoid major failures and an inability of the City to provide reliable water and sewer service to its customers.

3. Recommendations

- We recommend that the City use a net residual cash basis (including the additions of a dividend to the City's General Fund, to be charged to inside-City customers only) for setting inside-city water and sewer rates.
- We recommend that the City adopt a water rate structure that includes a fixed fee based on meter size and an inclining block rate for residential consumption and a unit cost for non-residential consumption (Alternative D). The recommended structure and rates for the remainder of FY09 are shown below.

WATER		FY09
Quarterly Fixed Charge per EDU		\$14.67
<u>Residential</u> (per 1,000 gallons)		
-	18,000	\$1.35
Over	18,000	\$3.38
<u>Non-Residential</u> (per 1,000 gallons)		
		\$1.82

- We recommend that the City adopt a residual cash-basis inside-city sewer rate structure that includes a fixed fee based on meter size and a unit rate for all usage, both residential and non-residential consumption (Alternative B). The recommended structure and rates for the remainder of FY09 are shown below.

SEWER	FY09
Quarterly Fixed Charge per EDU	\$13.54
<u>Usage Charge</u> (per 1,000 gallons)	\$2.10

- In addition to the rates for Fiscal Year 2009, we recommend that the City adopt the rate increases for inside-city rates outlined below for water and sewer over the four years.

Fund	FY 2010	FY 2011	FY 2012	FY 2013
Water Rate Increases	5.20%	10.00%	10.00%	1.50%
Sewer Rate Increases	15.00%	0.00%	0.00%	0.00%

