Salt Lake City Department of Public Utilities
1530 South West Temple • Salt Lake City, UT 84115

Water Rate and Fee Study

April 2009

Report Prepared By:

REDDAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

100 Fillmore Street
Suite 200
Denver, CO 80206
303-316-6500

5504003

RED OAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

April 21, 2009

Mr. James M. Lewis, CPA
Finance Administrator
Salt Lake City Department of Public Utilities
1530 South West Temple
Salt Lake City, UT 84115

Dear Mr. Lewis:

Red Oak Consulting is pleased to submit this report on the Water Rate and Fee Study prepared for the Salt Lake City Department of Public Utilities. We have greatly appreciated the insight and assistance provided by you and your staff during the completion of this study.

Thank you for this opportunity to again be of service to the Department and the City.

Very truly yours,

RED OAK CONSULTING
A Division of Malcolm Pirnie, Inc.

Richard D. Giardina
Vice President

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Acronyms Used in the Report

AWC	Average Winter Consumption
AWWA	American Water Works Association
ccf	Hundred cubit feet
COS	Cost of Service
FY	Fiscal Year
O&M	Operations and Maintenance Expense
ROE	Return on Equity
ROR	Return on Rate Base
SIF	System Impact Fees
WEF	Water Environment Federation
WRF	Water Resource Fees
WRS	Water Rate Subcommittee

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

SECTION

1

Executive Summary

RED OAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

1. Executive Summary

1.1. Introduction

The Salt Lake City Department of Public Utilities (Department) retained Red Oak Consulting (Red Oak) to conduct a water rate and system impact fee study to ensure that revenues from rates and fees are maintained to finance daily utility operations as well as future capital improvements. This study included the following:

- Development of a 10-year financial plan, FY10 through FY19[1]
- Analysis of the cost to provide water service to customer classes
- Design of water rates for FY10
- Development of water resource fees (WRF); water, wastewater, and stormwater system impact fees (SIF)
- Engage a citizens' committee to discuss and evaluate alternative rate structures

Department Staff assembled a water rate subcommittee (WRS) to participate in the rate study process. Red Oak facilitated five meetings with the assistance of Department Staff to guide the WRS members through the rate setting process. This included identification and ranking of pricing objectives, providing input on alternative rate structures, and recommending a rate structure for FY10 implementation designed to meet the City's goals and objectives.

Red Oak applied industry standard methodologies supported by the American Water Works Association (AWWA) *Principles of Water, Rates, Fees, and Charges* M1 manual and the Water Environment Federation *Financing and Charges for Wastewater Systems Manual of Practice, No. 27.*

1.2. Study Findings and Recommendations

1.2.1. Water Rate Subcommittee

Appendix A contains the *Water Rate Subcommittee 2008 Water Rate Study Recommendations* report summarizing the water rate structure recommendations. The objectives deemed the most important by the WRS in considering the new rate structure included:

[1] Fiscal year (FY) ending June 30.

- Water conservation
- Revenue stability
- Affordability

To meet these objectives, the WRS recommended the following modifications to the water rate structure:

- Retain existing base fees at the current FY08 levels to reflect affordability goals
- Retain the current Tier 1 rate of $0.88 per hundred cubic feet (ccf)
- Retain a fixed-tier rate structure for residential and the average winter consumption (AWC) based rate structure for nonresidential customers
- Include an additional tier to the existing 2-tiered budget-based irrigation rate structure. The irrigation rate structure begins with Tier 2 since these customers do not have indoor water usage. Irrigation budgets are based upon Department assessment of irrigated area
- Add a fourth tier to residential customers (for water use over 50 ccf for single family customers), nonresidential customers (for water use over 500% of AWC), and irrigation customers (for water use over 300% of their individual budget) to provide a greater conservation pricing signal to higher peak water users
- Increase the residential volume allowance in Tier 1 and Tier 2 by 1.0 ccf to 10 ccf and 30 ccf, respectively, in support of the water rate affordability goal
- Retain the existing County rate differential factor of 1.35.

1.2.2. Financial Plan

Projected revenues under existing water rates are inadequate to meet revenue requirements, finance the capital improvement program, maintain appropriate reserves, and meet debt service coverage requirements throughout the study period, FY09 through FY19. Table 1-1 shows the annual revenue adjustments necessary and the resulting debt service coverage and operating reserve performance measures.

Table 1-1.
Financial Plan Revenue Adjustments

	Projected			
FY Ending	Revenue Adjustments	Water Sales	Cash Reserve[1]	Debt Service Coverage Ratio[2]
2010	7.0%	$52,161,284	4.1%	4.0
2011	7.0	56,334,186	23.5	4.9
2012	7.0	60,840,921	5.6	3.5
2013	8.0	66,316,604	18.5	3.7
2014	8.0	72,285,099	32.1	4.2
2015	6.0	77,345,056	21.0	4.4
2016	6.0	82,759,210	25.3	5.0
2017	6.0	88,552,354	36.0	5.6
2018	6.0	94,751,019	69.6	6.5
2019	6.0	101,383,590	14.7	6.5

(1) Target operating reserve is 10 – 20%. Based on total utility fund ending balance.
(2) Debt service coverage ratio requirement is 2.0. Coverage calculation excludes impact fee revenue.

It is recommended that the water utility's financial plan be updated annually to reflect current estimates of revenues, operating expenses, capital improvement needs, and financing requirements.

1.2.3. Water Rates

Proposed water rates for FY10 are based on the projected water revenue increase of 7.0%, a cost of service analysis, and recommendations from the WRS. The proposed rates are designed to generate the additional revenue required in FY10.

The proposed monthly base fee varies by meter size and remains unchanged from the existing FY08 monthly base fee. Table 1-2 shows the proposed monthly base fee.

Table 1-2.
Proposed Monthly Base Fee

Meter Size *(inches)*	$ per Bill
¾ & 1	$ 7.44
1 ½	8.87
2	9.67
3	16.54
4	17.74
6	25.81
8	46.77
10	87.11

Proposed volumetric rates retain the conservation-based tiered structure. A fourth tier was recommended by the WRS to promote further water conservation. The 4-tiered residential structure is based on fixed tier thresholds and the 4-tiered nonresidential structure is based on customers' average winter consumption (AWC). The irrigation rate structure includes an additional tier. Since irrigation customers do not have any indoor usage, the irrigation structure begins with Tier 2. Tier 2 includes an individualized budget based on water consumed per acre, which is established by Department Staff. Tier 3 and Tier 4 are based on a percentage of the total budget. Table 1-3 compares existing and proposed residential, nonresidential, and irrigation rates.

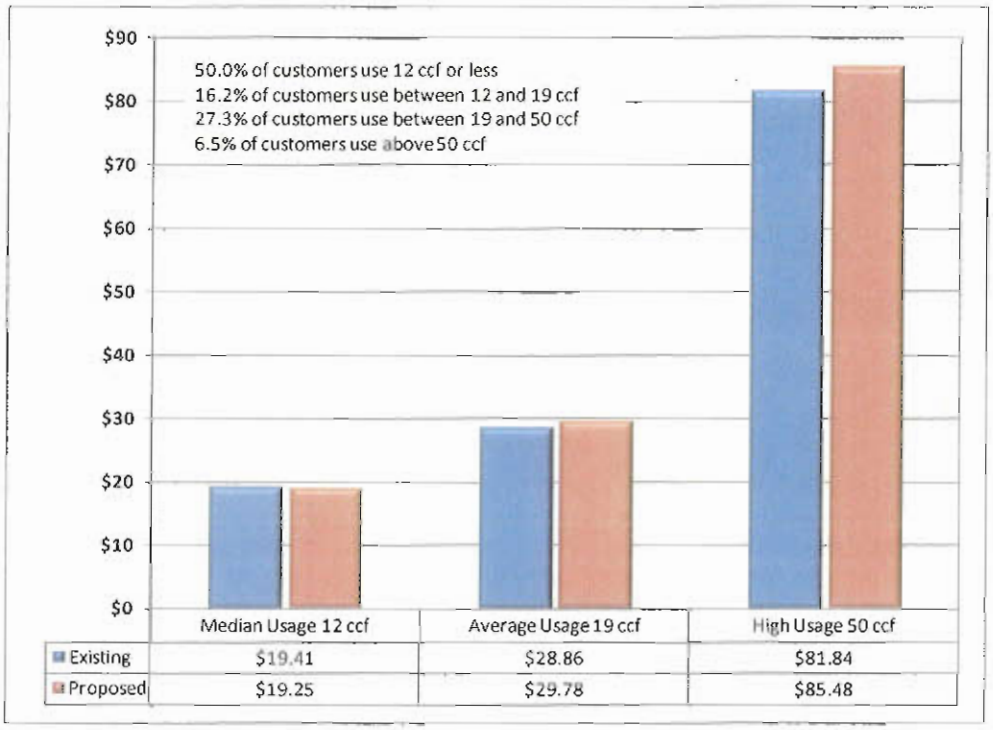
Table 1-3.
Comparison of Existing and Proposed Volumetric Rates[1]

	Existing		Proposed	
Tier	**Threshold (ccf)[2]**	**$ per ccf**	**Threshold (ccf)**	**$ per ccf**
Residential[3]				
1	First 9	$0.88	First 10	$0.88
2	Next 20	1.35	Next 20	1.50
3	Over 29	1.88	Next 20	1.96
4			Over 50	2.54
Nonresidential				
1	0 – 100% AWC	$0.88	0 – 100% AWC	$0.88
2	101% - 300% AWC	1.35	101% - 300% AWC	1.50
3	Over 300% AWC	1.88	300% - 500% AWC	1.96
4			Over 500% AWC	2.54
Irrigation[4]				
2	0 – Budget Allowance	1.35	0 – Budget Allowance	$1.50
3	Over Budget	1.88	Budget – 300% Budget	1.96
4			Over 300% Budget	2.54

(1) County rates are 1.35 times City rates.
(2) ccf – hundred cubic feet
(3) Duplex Tier 1: First 12 ccf
Triplex Tier 1: First 15 ccf
(4) The irrigation rate structure begins in Tier 2 since irrigation customers do not have indoor usage.

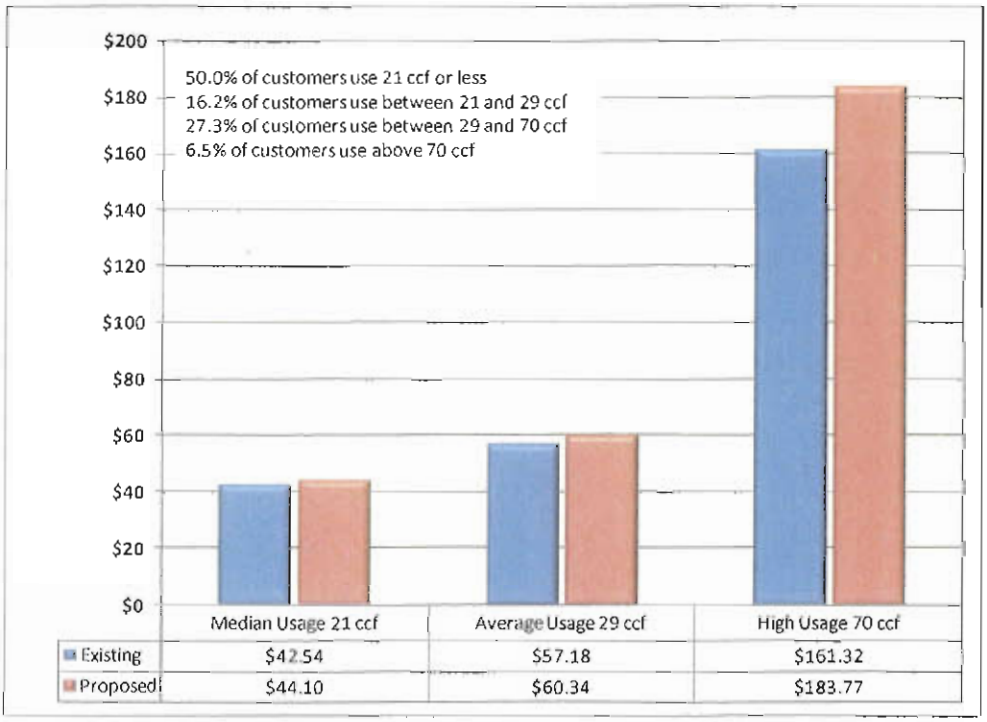
1.2.4. Water Bill Impacts

Figure 1-1 compares residential City bills under existing proposed rates for three consumption levels; median, average, and high usage. Figure 1-2 compares residential County bills under existing proposed rates for three consumption levels; median, average, and high usage. Appendix A, page 27, contains a table comparing bills under existing and proposed rates at incremental levels of consumption.



	Median Usage 12 ccf	Average Usage 19 ccf	High Usage 50 ccf
Existing	$19.41	$28.86	$81.84
Proposed	$19.25	$29.78	$85.48

Figure 1-1: Comparison of Monthly Bills Under Existing and Proposed Rates City Residential – Summer Usage



	Median Usage 21 ccf	Average Usage 29 ccf	High Usage 70 ccf
Existing	$42.54	$57.18	$161.32
Proposed	$44.10	$60.34	$183.77

Figure 1-2: Comparison of Monthly Bills Under Existing and Proposed Rates County Residential – Summer Usage

1.2.5. System Impact Fees (SIF)

SIFs are a one-time charge assessed to new development to recover each new customer's proportionate share of system capacity required to serve them. Red Oak evaluated SIFs for the water, wastewater and stormwater utilities. In addition, Red Oak developed WRFs for the water utility. Tables 1-4 through Table 1-6 detail the proposed fees for the water, wastewater, and stormwater utility, respectively. The proposed SIFs for each utility retain the existing fee structure.

Table 1-4.
Comparison of Existing and Proposed Water Impact and Resource Fees

	Existing			Proposed		
Customer Class	**Impact Fee**	**Resource Fee(1)**	**Total**	**Impact Fee**	**Resource Fee(1)**	**Total**
Residential						
Meter Size, inches						
¾	$ 1,642	$ 229	$ 1,871	$ 2,250	$ 495	$ 2,745
1	2,736	561	3,297	3,750	1,150	4,900
1 ½	5,472	1,353	6,825	7,500	2,513	10,013
Multifamily						
Duplex	2,014	310	2,324	2,942	607	3,549
Triplex	2,024	347	2,371	3,504	690	4,194
4-Plex	2,891	510	3,401	4,704	907	5,611
Nonresidential						
Meter Size, inches						
¾	1,642	358	2,000	2,250	598	2,848
1	2,736	1,094	3,830	3,750	2,454	6,204
1 ½	5,472	2,112	7,584	7,500	3,687	11,187
2	8,755	3,021	11,776	12,000	7,202	19,202
3	17,510	6,168	23,678	24,000	14,112	38,112

(1) County fees are 1.35 times City fees.

Table 1-5.
Comparison of Existing and Proposed Wastewater System Impact Fees

Customer Class	Existing	Proposed
Residential	$ 545	$ 741
Multifamily		
Duplex	818	1,112
Triplex	1,226	1,667
Townhome	409	556
Hotels and Motels, per dwelling unit		
Without Kitchen or Restaurant	273	371
With Kitchen or Restaurant	363	494
With Kitchen and a Restaurant	363	494
General Commercial, per equivalent fixture[1]	27	37
Trailer Parks[2]	545	741
Recreation Parks per Equivalent Unit[3]	545	741

(1) Based on Utah Plumbing Code.
(2) 3 trailer spaces shall equal 1 residential.
(3) 6 trailer spaces shall equal 1 residential dwelling unit.

Table 1-6.
Comparison of Existing and Proposed Stormwater Impact Fees

Description	Existing	Proposed
All Customers, $ per ¼ acre	$374	$755

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

SECTION

2

Introduction and Background

REDOAK CONSULTING
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2. Introduction and Background

2.1. Introduction

The Salt Lake City Department of Public Utilities (Department) retained Red Oak Consulting to review the water utility's financial plan, conduct a cost of service analysis, and update the rate structure. The Department also requested that Red Oak evaluate water system impact fees, water resource fees, wastewater system impact fees, and stormwater impact fees.

The current water rate structure has been in effect since 2003. The Department wanted a review of the water rate structure and suggestions for changes to the structure and rates based on current City goals and objectives. Red Oak reviewed revenues and expenses to determine the level of revenue required to meet annual revenue requirements. The cost of service analysis included a comprehensive review of customer usage characteristics from FY01 through FY07, system production data to determine peaking factors, and cost allocation to function components to assign costs based on the type of water usage (e.g. winter usage and summer usage). Modifications to the existing rate structure were reviewed by Staff and the Water Rate Subcommittee. The final rate structure alternative was selected by the WRS in a show-of-hands vote. The Water Rate Subcommittee's *2008 Water Rate Recommendations* report summarizes the rate structure recommendations. The WRS report was submitted to the Salt Lake City Public Advisory Committee in January 2009 for review and approval. The full report is included in Appendix A.

The report contains the following sections:

- **Executive Summary.** Summarizes the study results for the water financial plan, cost of service analysis, rate design, and water system impact and resource fees. Also includes summary of proposed wastewater and stormwater system impact fees.
- **Section 2 – Introduction and Background** Provides an overview and purpose of study as well as those involved in the study process.
- **Section 3 – Financial Plan.** Summarizes the water operating and impact fee subfund cash flows and rate revenue increases required to meet revenue requirements.
- **Section 4 – Cost of Service Analysis.** Determines the cost to provide service to City and County customers. This included the determination of the rate of return required from County customers.
- **Section 5 – Rate Design.** Summarizes the results of the recommended rate structure and the bill impacts to City and County customers.

- **Section 6 – System Impact Fees.** Details the methodology and calculation of water system impact fees, wastewater and stormwater system impact fees, and water resource fees.

2.2. Reliance on City-Provided Data

During the course of this project, the Department (and/or its representatives) provided Red Oak with a variety of technical information, including cost and revenue data. Red Oak did not independently assess or test for the accuracy of this data, whether historic or projected. We have relied on this data in the formulation of our findings and subsequent recommendations, as well as in the preparation of this report.

There are often differences between actual and projected data. Some of the assumptions used in this report will not be realized, and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the data or results projected in this report and actual results achieved, and those differences may be material. As a result, we take no responsibility for the accuracy of data or projections provided by or prepared on behalf of the Department, nor do we have any responsibility for updating this report for events occurring after the date of this report.

2.3. Acknowledgement

The successful completion of this study depended on the efforts of several staff members of the Water Department, Mayor's office, and Council office. In particular, the Red Oak study team would like to thank Mr. Jeff Niermeyer, Mr. James Lewis, Mr. Tom Ward, and Ms. Stephanie Duer for their support and guidance throughout this study process.

The Department of Public Utilities and Red Oak would also like to thank the WRS members for participating in this study. Table 2-1 lists the 2008 WRS members.

Table 2-1.
2008 Water Rate Subcommittee Participants

Cullen Battle	Kevin Pace
Dwight Butler	Gail Piccoli
Kim Hibbert	Gregg Smith
Cory Higgins	Grace Sperry
Holly Hilton	Jan Striefel
Bruce Jones	James D. Tangaro
Eldon Marshall	Dustin Thomas
Steve Mecham	Ron Vance
Kent Moore	Lehua Weaver
Larry Myers	Mike Wilson
Allen Orr	Ted Wilson
	Nancy V. Young

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

SECTION

3

Financial Plan

REDOAK CONSULTING
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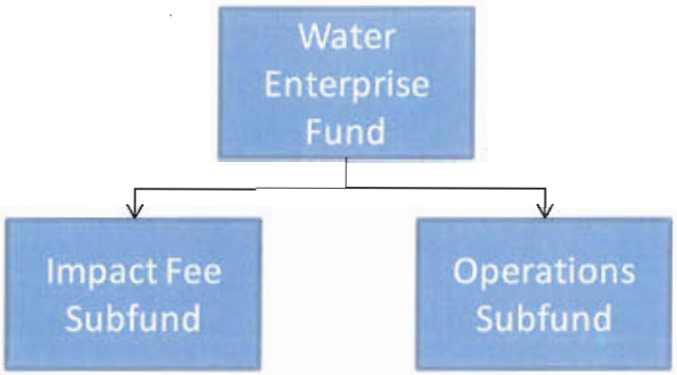
3. Financial Plan

3.1. Introduction

The water utility is a self-supporting enterprise fund, with funding for annual operations and maintenance expenses, capital projects, and debt service met primarily through water rates, system impact fees (SIF), and water resource fees (WRF). For the purposes of this study, water utility financials have been subdivided into two subfunds: operations and impact fees. Separate financial forecasts have been made for these funds for the 10-year study period, FY10 through FY18 to determine the adequacy of revenues under existing rates and fees to meet revenue requirements. Appendix B details the water utility financial plan tables.



3.2. Water Impact Fee Subfund

The impact fee subfund tracks financial activities associated with funding growth-related capital improvements.

3.2.1. Beginning Subfund Balance

The impact fee subfund projected balance is $0 at the beginning of FY10.

3.2.2. Sources of Funds

Revenue sources for the impact fee subfund include system impact fee revenue, water resource fee revenue, growth-related bond proceeds, transfers from the operating fund, and interest income. Impact fee revenue is based on the proposed water SIF and WRF developed in Section 6 of this report. Proposed SIF revenue averages $2.7 million annually. SIF revenue is based on a projected annual growth rate of 1.0% per year. Bond issues of $9.0 million, $12.5 million, $12.5 million, and $60.0 million are projected in FY11, and FY16 through FY18, respectively. Interest income is calculated using a 2.0%

annual interest rate applied to the average fund balance. SIF revenue and miscellaneous revenue are used strictly for growth-related capital and debt service.

3.2.3. Uses of Funds

The Department's capital expansion program for the study period totals $99.0 million. This program includes new distribution system expansions, wells, and a water reuse facility to expand the current water supply. Growth-related capital improvements include an annual inflation allowance of 3%. Existing debt service payments on growth-related debt average $280,000 annually through FY17 and proposed debt payments average $542,000 annually and increase to $8.0 million at the end of the study period.

3.3. Operations Subfund

The operating fund tracks financial activities associated with annual operating revenues and revenue requirements.

3.3.1. Beginning Subfund Balance

The operating subfund projected balance is $8.8 million at the beginning of FY10.

3.3.2. Sources of Funds

Operating fund revenue is derived from water sales, late payment penalties, connect/disconnect fees, late fees on past due accounts and interest income. Water sales revenue under existing rates is based on Red Oak's analysis of historical and projected water sales for the study period. This includes the projected number of accounts and usage amount for each customer class applied to the existing rate structure. Annual revenue from existing water rates assumes an annual growth rate of 1% per year throughout the study period. Revenue from existing rates averages $50.5 million annually during the study period. Grant revenue to assist in funding capital improvement projects averages $905,000 annually. Interest income is calculated using a 2.0% annual interest rate applied to the average fund balance.

3.3.3. Indicated Water Sales Revenue Adjustments

Revenue should be sufficient to meet revenue requirements, finance the capital improvement program, maintain adequate reserves, and meet debt service coverage requirements. A minimum operating reserve equal to 10% of O&M is required by the Department.

Revenues should also be sufficient to meet debt service coverage requirements. The Department's water utility debt service coverage requirement is 2x net revenue. Debt service coverage is calculated as the sum of total rate revenues less operations and maintenance expenses divided by the annual debt service payment. The calculated debt service coverage exceeds the requirement in each year of the study period.

Table 3-1 shows the annual revenue adjustments necessary and the resulting debt service coverage and operating reserve performance measures. Revenue increases for FY10 are required primarily to reduce the annual deficiency in revenues over expenses. Revenue increases in future years are required to meet the annual debt service on projected bond issues totaling $36.0 million during the study period. Payments on proposed debt service are $2.0 million beginning in FY11 and increase to $3.0 million in FY15. It is recommended that the financial plan be updated annually to determine if the projected increases are appropriate.

Table 3-1.
Financial Plan Revenue Adjustments

	Projected			
FY Ending	Revenue Adjustments	Water Sales	Cash Reserve[1]	Debt Service Coverage Ratio[2]
2010	7.0%	$52,161,284	4.1%	4.0
2011	7.0	56,334,186	23.5	4.9
2012	7.0	60,840,921	5.6	3.5
2013	8.0	66,316,604	18.5	3.7
2014	8.0	72,285,099	32.1	4.2
2015	6.0	77,345,056	21.0	4.4
2016	6.0	82,759,210	25.3	5.0
2017	6.0	88,552,354	36.0	5.6
2018	6.0	94,751,019	69.6	6.5
2019	6.0	101,383,590	14.7	6.5

(1) Target operating reserve is 10 – 20%. Based on total utility fund ending balance.
(2) Debt service coverage ratio requirement is 2.0. Coverage calculation excludes impact fee revenue.

3.3.4. Uses of Funds

Operating fund revenue requirements include operation and maintenance expense (O&M), payments to the Metropolitan Water District, repair and replacement capital, and payments on existing and proposed debt.

O&M consists of personnel, utilities, and supply costs needed to supply, treat, and distribute water. O&M averages $49.5 million annually during the study period. Capital expenditures include repair and replacement capital projects, routine capital outlay, water rights, and watershed purchases. Capital improvements and outlays average $19 million annually during the study period. Growth-related capital improvements include an annual inflation allowance of 3%. Existing debt payments on 2008 Revenue Bonds average $2.2 million annually, and proposed debt payments average $2.0 million annually beginning in FY12 and increase to $3.0 million in FY15. A five-year water utility cash flow analysis is presented in Table 3-2 on the following page.

Table 3-2.
Water Utility Cash Flow Analysis

Description	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
Revenues					
Water Sales	$52,161,284	$56,334,186	$60,840,921	$66,316,604	$72,285,099
Other Income	2,308,000	2,126,425	2,166,878	2,166,878	2,166,878
Interest Income	350,000	0	264,322	123,100	373,428
Subtotal	**$54,819,284**	**$58,460,611**	**$63,272,122**	**$68,606,583**	**$74,825,405**
Operating Expenditures					
Metropolitan Water Assessment	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892
Metropolitan Water Purchases	10,224,000	11,169,000	11,752,000	12,349,000	12,960,000
Operating Expenditures	26,547,739	26,916,548	27,686,771	28,483,591	29,308,225
Subtotal	$43,793,631	$45,107,440	$46,460,663	$47,854,483	$49,290,117
Net Operating Income	**$11,025,653**	**$13,353,172**	**$16,811,459**	**$20,752,100**	**$25,535,288**
Other Cash Inflows					
Impact Fees	2,644,220	2,666,028	2,696,014	2,723,274	2,747,808
Grants & Other Related	905,000	905,000	905,000	905,000	905,000
Other Contributions	50,000	50,000	50,000	50,000	50,000
Bond Proceeds	0	33,000,000	0	6,000,000	6,000,000
Subtotal	**$3,599,220**	**$36,621,028**	**$3,651,014**	**$9,678,274**	**$9,702,808**
Other Expenditures					
Capital Outlays	2,180,000	2,565,000	2,100,000	2,165,000	2,000,000
Capital Improvements	15,770,495	34,838,492	19,794,750	15,492,629	19,174,393
Watershed Purchases	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Debt Service - Existing (1)	2,743,713	2,747,838	2,737,888	2,729,938	2,743,988
Debt Service - New	0	0	2,816,922	2,816,922	3,329,090
Subtotal	**$21,694,207**	**$41,151,329**	**$28,449,559**	**$24,204,489**	**$28,247,471**
Annual Surplus/(Deficiency)	(7,069,334)	8,822,870	(7,987,087)	6,225,885	6,990,625
Beginning Cash Balance	8,848,063	1,778,728	10,601,599	2,614,512	8,840,397
End of Year Cash Balance	**$1,778,728**	**$10,601,599**	**$2,614,512**	**$8,840,397**	**$15,831,023**
Annual Increases	7.0%	7.0%	7.0%	8.0%	8.0%
Cash Reserve Ratio	4.1%	23.5%	5.6%	18.5%	32.1%
DSC (with Impact Fees)	5.0	5.8	4.1	4.2	4.6
DSC (w/o Impact Fees)	4.0	4.9	3.5	3.7	4.2

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

SECTION

4

Cost of Service Analysis

RED OAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

5504003 / DEN

4. Cost of Service Analysis

4.1. Introduction

A cost of service analysis determines the cost to provide service to groups of customers with similar use characteristics. Allocation of cost of service to customer classes is necessary to develop equitable water rates. Cost allocations recognize class usage, peak rates of demand, number of customers, fire protection requirements, and other relevant factors. The test year FY10 was selected for the cost of service analysis because it is representative of the period in which resultant rates are effective. Appendix C contains the cost of service analysis tables.

4.2. Revenue Requirement Cost Basis

4.2.1. Cash Basis

Cost allocations commonly incorporate either the cash-basis or the utility basis of determining annual revenue requirements. Public utilities commonly use the cash-basis since it relies on traditional cash-oriented budgeting. Cash-basis revenue requirements include O&M, debt service, and capital expenditures financed from annual rate revenues. Cash-based cost of service is equal to total revenue requirements net of adjustments from non-rate sources.

4.2.2. Utility Basis

The utility-basis is generally applicable to investor-owned utilities and public systems under the jurisdiction of state commissions or other regulatory bodies. It is also an appropriate method for municipal utilities that serve customers outside of their corporate limits. This situation is similar to the relationship of an investor-owned utility to its customers in that the owner (municipality) provides service to non-owner customers (customers outside corporate limits).

Utility-basis revenue requirements include O&M, depreciation expense, and a return on rate base (investment). Utility-based cost of service is equal to total revenue requirements net of adjustments from non-rate sources. The utility basis is used in this study since it provides an equitable basis for determining water rates for County customers.

The primary difference among the cash and utility-basis is the concept of ownership and the method of consumer protection. Under the cash-basis, consumer protection is provided by the budgeting oversight of the elected officials. These officials act as a representative of the customers and the utility. These officials are typically elected by the citizens that act as the owners of the utility. Under this approach, ownership and consumer protection are combined into one elected body.

Under the utility-basis, consumer protection is often provided by state public utility or service commissions. These regulatory bodies establish financial and rate development rules and regulations and authorize rates of return that provide consumer protection. In addition, consumer protection can be provided by contractual agreements that define the basis of utility rates where municipally-owned utilities provide services to customers outside their corporate jurisdictions. This is the situation most commonly found when the utility basis method is used.

4.2.3. Utility Basis for County Customers

The Department serves customers located both within and outside the City limits–City and County customers, respectively. Ownership and utility system development risks reside with the City and the citizens and taxpayers located in the City. To recognize these circumstances and to quantify the associated costs, the City uses a generally accepted, industry costing approach to establish rates for inside (City) and outside (County) customer groups; the cash-basis for City rates, and the utility-basis for County rates. This results in a differential in rates for City and County customers, with higher rates for County customers.

Additionally, customers within the City pay property taxes to the Metropolitan Water District of Salt Lake and Sandy (MWDSL&S); County customers do not. The funds received by the MWDSL&S are used to develop and acquire water resources and provide treated water for both the City and County customers served by the Department. City customers approve the issuance of bonds to fund water utility capital improvements which benefit all customers, including County customers. As previously noted, a portion of City customers' property taxes are reserved to acquire water to meet the needs of both City and County customers. Long before the Department and City operated the utility as a stand-alone, self-sufficient enterprise, property taxes (paid only by City customers) were used to acquire and construct water service assets.

The utility-basis of revenue requirements provides a means for County customers to reimburse City customers for this risk. This is done through assessing a higher return on investment to County customers.

4.2.4. Return on Rate Base

A fair rate of return is a rate that could be earned by investing the owner's money in a comparable investment which has similar risk. The rate of return is calculated using a weighted average of the utility's cost of debt and equity. The rate base is not a user charge revenue requirement under the utility basis. The rate base is simply the value of the assets that are used and useful to a particular customer class or group of customer classes. Table 4-1 shows the summary return on rate base calculation. The calculated return on rate base is 9.42% which considers a return on equity (ROE) of 10.0% based on an aggregate ROE of large investor-owned utilities. This return yields a City-County

differential of 1.50. Since the Department's water utility is not publically traded and is not susceptible to the same market risks as an investor-owned water utility, Department staff determined that a return on equity of 8.1% and a corresponding return on rate base of 7.7% (or a City-County differential of 1.35) sufficiently represented the risk for serving County customers. Table 4-2 details the adjusted cost of capital calculation.

Table 4-1.
Cost of Capital

Item	Rate Base	Weight	Return[1]	Weighted Return on Rate Base[2]
Debt	$ 24,905,000	11.1%	4.5%	0.5%
Equity	199,147,644	88.9%	10.0%	8.9%
Total	**$224,052,644**	**100.0%**		**9.4%**

(1) Debt return is based on current outstanding debt; equity return is based on allowed return on equity for large, investor-owned (regulated) water utilities.
(2) Rate of return or weighted cost of capital.

Table 4-2.
Adjusted Cost of Capital

Item	Rate Base	Weight	Return[1]	Weighted Return on Rate Base[1]
Debt	$ 24,905,000	11.1%	4.5%	0.5%
Equity	199,147,644	88.9%	8.1%	7.2%
Total	**$224,052,644**	**100.0%**		**7.7%**

(1) Rate of return or weighted cost of capital.

4.3. Test Year Cost of Service

The cost of service analysis is conducted for a test year (FY10) considered representative of the period in which resultant rates are expected to be in effect. Table 3-2 summarizes FY10 test year cost of service. Test year revenue requirements total $62 million. These costs are met from $52 million of water sales revenue and $10 million from miscellaneous revenue sources.

4.3.1. Test Year Cost of Service Summary

Since the Department's budget is cash-based, reconciling the utility basis cost of service to the cash basis cost of service helps determine the cash needs adjustment that will be applied the City's return. This adjustment is applied to the cost to provide service to City customers. Table 4-3 summarizes the cash basis and utility basis cost of service.

Table 4-3.
FY10 Test Year Cost of Service (COS)

Description	Cash Basis	Utility Basis
Gross Operation and Maintenance Expense	$43,793,631	$43,793,631
Capital Costs		
Depreciation Expense	0	6,768,656
Capital Expenditures	16,101,160	0
Debt Service	2,452,508	0
Return on Rate Base	0	17,263,001
Total Capital Costs	18,553,668	24,031,657
Total Revenue Requirements	**$62,347,299**	**$67,825,288**
***Less*: Revenue Requirement Adjustments**		
Grants & Other Related	$905,000	$905,000
Other Sources	50,000	50,000
Interest Income	300,000	300,000
Other Income	2,308,000	2,308,000
Use of Cash Balance	6,623,014	6,623,014
Total Revenue Requirement Adjustments	**$10,186,014**	**$10,186,014**
FY10 Cost of Service (COS)	**$52,161,284**	**$57,639,273**
Cash Needs Adjustment *(Utility Basis COS – Cash Basis COS)*		**$5,477,989**

The cash needs adjustment is the net of the utility basis cost of service less cash basis cost of service and is applied to the City customers revenue requirements. This ensures that the total cost of service meets the City's balanced budget. Table 4-4 summarizes the application of the cash needs adjustment to develop the adjusted rate of return for City customers.

Table 4-4.
Cash Needs Adjustment

Line No.	Description	FY10 Cost
1	Utility Basis Cost of Service	$ 57,639,273
2	Cash Basis Cost of Service	52,161,284
3	**Cash Needs Adjustment**	**$5,477,989**
	Rate Base	
4	City	$155,009,588
5	County	69,043,057
6	**Total Rate Base**	**$224,052,644**
	Return on Rate Base @ 7.7%	
7	City	$ 11,943,311
8	County	5,319,688
9	**Total Return on Rate Base**	**$ 17,263,001**
	Adjusted Return	
10	City	$ 6,465,323
11	County	5,319,688
12	**Total Adjusted Return**	**$ 11,785,011**
13	**Adjusted Rate of Return**	
14	***City***	***4.2%***
15	***County***	***7.7%***

The adjusted rate of return values shown in Line 14 and Line 15 are used to determine the allocation of test year cost of service to City and County customers.

4.4. Cost Allocation

Allocation of the costs of service takes into account the volume of water used, peak rates of demand, number of customers, and other relevant factors.

4.4.1. Functional Cost Components

Water service cost components include base, extra capacity, customer, and direct fire protection. Base costs vary directly with the quantity of water used under average day load conditions. Extra capacity costs represent those costs incurred due to customer peak demands for water in excess of average day usage. Total extra capacity costs include costs associated with maximum day and maximum hour demands. Customer costs vary in proportion to the number of customers and number and size of meters served by the system. Customer costs include local distribution lines, meters and services, and billing expenses. Direct fire protection costs consist of maintenance of fire hydrants.

4.4.2. Determination of Allocation Factors

The City's water utility provides water resources to satisfy the total water demands of its customers. It also meets customer peak demands through its treated water facilities. Since all customers do not exert their maximum demand for water at the same time, water facilities are designed to meet coincidental demands of all customers. For every facility on the system, there is an underlying average demand or uniform rate of usage exerted coincidentally by customers for which the base cost component applies. The calculation of maximum day to average day ratios and maximum hour to average day ratios serve as the basis for allocating costs associated with meeting maximum day and maximum hour requirements.

Comparison of historical system coincidental maximum day and maximum hour demands to average day demands results in appropriate ratios for allocation of capital costs and operating expenses to base and extra capacity cost components. Extra capacity is the incremental capacity between average day and maximum day demands or the incremental capacity between maximum hour and maximum day requirements. A maximum day to average day ratio of 2.28 is used based on demands experienced in the City's system.

This indicates that approximately 44% of the capacity (the incremental capacity between maximum day and average day) of facilities designed and operated for maximum day demand is needed for average or base use. Accordingly, 56% remains for maximum day extra capacity requirements.

Since maximum hour water usage also utilizes facilities designed and operated for average day and maximum day demands, costs associated with meeting maximum hour demand are allocated to base, maximum day extra capacity, and maximum hour extra capacity. A ratio of maximum hour to average day water use of 2.85 is based on demands experienced in the City's system. This ratio indicates that 35% of the capacity, (the incremental capacity between maximum hour and maximum day) of facilities designed and operated for maximum hour demand is needed for average or base use, 45% is required to meet maximum day extra capacity demand, 20% remains for maximum hour extra capacity demand.

4.4.3. Allocation of Cost of Service

Cost of service is allocated to functional cost components using either water system demand ratios developed above, customer costs, or by direct assignment. Function demand components include average day, maximum day, and maximum hour. Customer functional components include meter costs, billing and administration costs. The separation of costs into functional components provides a means for distributing such costs to account for the way customers use their water. For example, the average day component represents the indoor or winter water usage. Maximum day and maximum hour represent the outdoor component of water use. The water system asset allocations

provide a reasonable basis for allocating annual capital costs such as accumulated depreciation and annual depreciation expense.

4.4.4. Water System Asset Allocation

The water system asset allocations provide a reasonable basis for allocating annual capital costs such as accumulated depreciation and annual depreciation expense. System assets are typically allocated based on design parameters of that particular facility. For example, distribution mains are designed to meet maximum hour requirements. Capital costs associated with these mains are allocated to the average day, maximum day, and maximum hour cost components. The allocation is based on the peaking parameters discussed in Section 4.4.2.

In a similar manner, pipes are associated with providing service to individual customers connected to a distribution system of smaller mains and are sized to meet maximum day service requirements. Other assets are assigned directly to their respective cost components. These include water rights, meters and services, and direct fire protection. General plant assets are allocated based on a weighted average allocation of all other assets.

4.4.5. Water Operation and Maintenance Expense Allocation

Water Operation & Maintenance (O&M) costs are generally allocated to functional cost components that best reflect the function associated with that particular expense. For example, administration costs are associated with providing service to individual customers and are allocated to the billing portion of the customer cost component. City Creek water purification costs are associated with the maximum day demands and are allocated to the average day and maximum day cost component. Distribution main expenses are associated with the transmission of treated water and are allocated to the average day, maximum day, and maximum hour cost components. Other expenses not specifically assigned to a cost component are allocated in proportion to all other expense allocation components.

4.4.6. Allocation of Costs to Customer Classes

Water customers have been separated into City, County and fire protection classes. The classes group together customers with similar service requirement characteristics and provide a means for allocating costs to customers. Table 4-4 shows the allocation of costs to City and County.

Table 4-5.
Allocation of Costs to City and County Customers

Class	Average Day	Maximum Day	Maximum Hour	Meters & Services	Billing & Collecting	Fire Protection	Total
City	$14,350,387	$10,829,577	$4,158,941	$906,190	$3,190,190	$ 911,709	$34,346,993
County	6,292,954	6,702,771	2,031,415	468,882	1,510,481	625,659	17,632,162
Private Fire	0	0	0	0	0	182,128	182,128
Total	**$20,643,341**	**$17,532,093**	**$6,190,309**	**$1,375,072**	**$4,700,670**	**$1,719,799**	**$52,161,284**

4.4.7. Units of Service

Table 4-5 summarizes estimated class units of service. Class service requirements include average daily water use projections, maximum day and maximum hour demands, and metering and billing requirements. Class average day cost responsibility relates to the quantity of water used under average day load conditions. Class responsibility for extra capacity costs varies maximum day and maximum hour demands. Average day usage and capacity factors, representing the estimated relationship between individual class peak demand and average day usage, are used to develop extra capacity requirements for maximum day and maximum hour demands. The estimated capacity factors are based on an analysis of each class' monthly usage characteristics.

Fire protection costs are either direct or demand related. Direct costs include maintenance of fire hydrants. Demand related costs represent the portion of extra capacity costs related to meeting potential fire demands. System peak fire flow requirements of 16,700 gallons per minute is assumed based on water utility's storage capacity.

Table 4-6.
Units of Service

Class	Average Day *ccf*	Maximum Day *ccf/day*	Maximum Hour *ccf/day*	Meters & Services *Equiv. Meters*	Billing & Collecting *Bills*	Fire Protection *Hydrants*
City	22,502,474	72,541	95,198	68,629	633,180	6,203
County	8,556,592	37,704	38,729	29,356	299,796	3,593
Private Fire						1,161
Total	**31,059,0-66**	**110,245**	**133,928**	**97,985**	**932,976**	**10,957**

4.4.8. Unit Costs of Service

Table 4-6 develops test year unit cost of service for each functional cost component. Unit costs are calculated by dividing functionalized costs of service by applicable units of service.

Table 4-7.
Unit Cost of Service

Class	Average Day *$/ccf*	Maximum Day *$/ccf/day*	Maximum Hour *$/ccf/day*	Meters & Services *$/Equiv. Meters*	Billing & Collecting *$/Bill*	Fire Protection *$/Hydrant*	Total $/ccf
City	$0.64	$149.29	$43.69	$13.20	$5.04	$146.98	$1.53
County	0.74	177.77	52.45	15.97	5.04	174.12	2.06
Private Fire						156.93	

4.4.9. County Differential

The allocated City and County cost of service from Table 4-4 and allocated units of service from Table 4-5 are used to determine the County rate differential. Table 4-7 summarizes City and County rate differential calculation.

Table 4-8.
City - County Rate Differential

Line No.	Description	Units
1	City Cost of Service	$34,346,993
2	City Annual Usage, ccf	22,502,474
3	***Unit Cost, $ per ccf (Line 1 / Line 2)***	***$1.53***
4	County Cost of Service	$17,632,162
5	County Annual Usage, ccf	8,556,592
6	***Unit Cost, $ per ccf (Line 4 / Line 5)***	***$2.06***
7	***City-County Rate Differential (Line 3 / Line 6)***	***1.35***

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

SECTION

5

Rate Design

REDOAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

5504003 / DEN

5. Rate Design

5.1. Introduction

The City's existing rate setting methodology reflects a balance of many objectives including water conservation, peak usage reduction, and legal compliance[2]. These objectives are embodied in the use of a two-part (fixed and volume) rate structure. The fixed monthly charge varies by meter size while the volume rate structure varies for residential and nonresidential customers. The residential volume rate is a fixed 3-tier structure and the nonresidential volume rate is 3-tiered structure based on average winter consumption. Each nonresidential customer's (AWC) (November through March) determines the application of the increasing unit prices and, therefore, the customer's water bill. The determination of the unit prices (volume and fixed) is consistent with the cost-of-service methodology discussed in Section 4. Appendix D summarizes the rate design calculations for City and County customers.

5.2. Water Rate Subcommittee Rate Recommendations

Red Oak and Department Staff facilitated five committee meetings to identify and rank pricing objectives, and to make recommendations regarding rates and fees for water service. The principal objectives deemed the most important by the WRS in considering adjustments to the rate structure are as follows in 5.2.1 through 5.2.3.1.

5.2.1. Water Conservation

Sustainable water conservation encompasses the two pricing objectives ranked by the WRS as most important; water conservation and peak usage reduction. Both objectives focus on annual water use reduction and reduction in peak day summer use, respectively. Annual water use relates to availability, management and cost of water resources based upon precipitation, reservoir and snowpack storage. Peak water use drives capacity, size and cost of treatment plants, pumps stations and pipe to convey the maximum flow to customers during peak hour and peak day consumption of the year.

To be effective with regards to these objectives, the rate structure was designed to promote the efficient use of resources on a year-round basis as well as during periods of peak use. The rate structure also aligns the cost of providing peaking facilities to those customers having significant peak to average water use patterns, and discourage the use of water during peak demand periods.

[2] 2003 Water Rate and Fee Study, Rick Giardina & Associates, Executive Summary, Page 1.

5.2.2. Affordability

This objective was to allow the opportunity for low income or fixed income customers to afford water for essential purposes.

5.2.3. Revenue Stability

This objective identified a need for the water rate structure to effectively provide a stable revenue stream to recover revenue requirements for reliable and safe water supply, in the face of variable external factors such as economy fluctuations and the weather and price elasticity of demand.

5.2.3.1. Price Elasticity of Demand

Red Oak reviewed the price elasticity of demand to determine if the impact from the projected revenue increase and the rate structure change would significantly impact water sales revenue. Price elasticity is a measure on how consumers react to a change in price. In the case of water rates, price elasticity measures the change in water demand resulting from a change in price for water. Red Oak used industry standard elasticity values, ranging from -0.10 to -0.20, to determine the potential water sales revenue reduction. The results showed that summer usage, April through October, could decrease by up to 2%. This represents approximately 1.0% of total water sales revenue. Since 52% of total water sales revenue is derived from the monthly base fee and Tier 1 water sales, the Department's revenue stream would not be adversely affected by this impact.

5.3. Rate Structure Recommendations

To meet these objectives, the committee recommended a rate structure which includes the following:

- Retain existing base fees at the current FY08 levels; this is consistent with the stated affordability goals. The current base fee is $7.44 per account per month for the smallest meter and service line (3/4-inch size meter, which is the size used by most single family residential customers). The base fee increases as the service size increases.
- Retain the current Tier 1 rate of $0.88 per ccf. Tier 1 consumption is intended to include indoor use for most single family residential customers.
- Retain the fixed-tier rate structure for residential and the AWC based rate structure for nonresidential customers
- Add a fourth tier to residential customers (for water use over 50 ccf for single family customers) and nonresidential customers (for water use over 500% of AWC) to provide a greater conservation pricing signal to higher, peak water users.

- The current and proposed single family three-tiered rate structure follows:

Tier	Existing	Proposed
1	0 – 9 ccf	0 – 10 ccf
2	10 – 29 ccf	10 – 30 ccf
3	Over 29 ccf	30 - 50ccf
4		> 50 ccf

- Retain the existing City-County rate differential factor of 1.35. Some committee representatives supported an increase to 1.50 whereas some supported a factor of 1.0 equal rates for all customers). The 1.35 differential factor remains justified based upon review of industry accepted cost-of-service principles relative to City customer ownership.
- Include an additional tier to the existing 2-tiered budget-based irrigation rate structure. The irrigation rate structure begins with Tier 2 since these customers do not have indoor water usage. Irrigation budgets are based upon Department assessment of irrigated area.
- The proposed base fees and volume rates are intended to generate an additional annual 7% water revenue based on projected needs. Changes or impacts to individual customers will vary based on the re-design of the rates.

5.4. Proposed Rates

Proposed water rates for FY10 are based on the projected water revenue increase of 7.0%, a cost of service analysis, and recommendations from the WRS. The proposed rates are designed to generate the additional revenue required in FY10.

The proposed monthly base fee varies by meter size and remains unchanged from the existing FY08 monthly base fee. Table 5-1 shows the proposed monthly base fee.

Table 5-1.
Existing and Proposed FY10 Monthly Base Fee

Meter Size *(inches)*	$ per Bill
¾ & 1	$ 7.44
1 ½	8.87
2	9.67
3	16.54
4	17.74
6	25.81
8	46.77
10	87.11

Proposed volumetric rates retain the conservation-based tiered structure. A fourth tier has been added based on WRS committee recommendations to promote further water conservation. The 4-tiered residential structure is based on fixed tier thresholds and the 4-tiered nonresidential structure is based on AWC. Table 5-2 compares existing and proposed residential rates. Table 1-4 compares existing and proposed nonresidential rates.

Table 5-2.
Comparison of Existing and Proposed FY10 Volumetric Rates[1]

	Existing		Proposed	
Tier	**Threshold (ccf)**	**$ per ccf**	**Threshold (ccf)**	**$ per ccf**
Residential[2]				
1	First 9	$0.88	First 10	$0.88
2	Next 20	1.35	Next 20	1.50
3	Over 29	1.88	Next 20	1.96
4			Over 50	2.54
Nonresidential				
1	0 – 100% AWC	$0.88	0 – 100% AWC	$0.88
2	101% - 300% AWC	1.35	101% - 300% AWC	1.50
3	Over 300% AWC	1.88	300% - 500% AWC	1.96
4			Over 500% AWC	2.54
Irrigation				
2	0 – Budget Allowance	$1.35	0 – Budget Allowance	$1.50
3	Over Budget	1.88	Budget – 300% Budget	1.96
4			Over 300% Budge	2.54

(1) County rates are 1.35 times City rates.
(2) ccf – hundred cubic feet
(3) Duplex Tier 1: First 12 ccf
Triplex Tier 1: First 15 ccf
(4) The irrigation rate structure begins in Tier 2 since irrigation customers do not have indoor usage.

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

SECTION

6

System Impact Fees and Water Resource Fees (SIF & WRF)

REDOAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

6. System Impact Fees and Water Resource Fees (SIF & WRF)

6.1. Introduction

Impact fees are one-time charges assessed to new development to recover the proportionate share of capacity in a water, wastewater, or stormwater system required to serve them. The Department assesses water, wastewater, and stormwater SIFs to all new customers to connect to the City's utility systems. The fees are intended to recover the new connector's proportionate share of the facility costs required to serve them. The current water fees have been in effect since FY07. Appendix E contains the SIFs and WRF calculations.

6.2. Water System Impact Fees (SIF)

Water SIFs were calculated using the incremental method. The incremental cost method to determining SIFs is a forward-looking approach, which ignores past investment in the system. The incremental cost is defined as the cost of the next increment of capacity to serve new growth. Growth-related costs of capital improvement projects are estimated based on applying the proportionate share of new capacity to total capacity to the capital project cost. Since expansion facilities are often sized to meet long-term capacity requirements, SIF revenues may be insufficient to meet expansion costs. Loans are typically issued to assist in funding these projects. The interest paid on these debt instruments are an additional cost to the utility and are included in the system impact fee calculation.

6.2.1. Capital Expansion Projects

The water impact fee is based on the value of future projects that will increase capacity of the water system. Growth-related expansion projects total $97.0 million for the study period.

6.2.2. Capacity Valuation

The incremental method uses the incremental capacity to be added from the growth-related projects. For example, if the next increment of capacity will provide treatment and transport for 10 million gallons per day (mgd), the appropriate capacity to use for unit cost calculation is 10 mgd. Capacity added by growth-related project totals 36 mgd.

6.2.3. Unit Fee Calculation

Capacity units used to develop SIFs for individual customers are determined by dividing the growth-related capital by the capacity valuation that represents the future system. Capacity units are then applied to an assessment schedule or schedules to determine the

impact fee for each new connection. Table 6-1 summarizes the water SIF unit cost calculation.

Table 6-1.
Calculation of Proposed Water System Impact Fee

Line No.	Description	Units
1	Growth-Related Capital Additions	$98,843,625
2	Debt Carrying Costs	515,520
3	**Total System Valuation**	**$99,359,145**
4	Total Added Capacity, gpd[1]	36,000,000
5	Unit Cost, $ per gpd	$2.76
6	SFE Capacity, gpd	815
7	**¾-inch SIF - $ (Line 5 x 6)**	**$2,250**

(1) Gallons per day

6.3. Water Resource Fees (WRF)

The water resource impact fees are developed using the buy-in method. This method is based on the concept that existing customers, through rates and other assessments, have developed a valuable water portfolio. A new customer must "buy-in" to this portfolio by making a contribution equal to the amount of equity a similar existing customer has in the system.

To compute the water resource fee using the system buy-in method, the following general procedure is used:

- Determine water resource water stock equity
- Estimate remaining water resource capacity
- Calculate unit equity cost
- Calculate resource fee

Implementation of fees designed using the system buy-in method results in new customers paying their proportionate share of facility costs incurred to serve them. The fees are dependent on the amount required to serve a customer and the unit equity cost of existing facilities expressed as dollars per unit of capacity. Fees using the buy-in method can readily be calculated using utility fixed asset records. Because fees can be traced to such records, they are generally understood by customers and supported on an engineering economic basis.

6.3.1. Water Resource and Water Stock Portfolio

The existing water stock portfolio is valued at current market rates. The water resource portfolio current value is based on the ratio of current water stock value to original cost

water stock value. Since water resources and water stock are similar goods, the ratio serves as a proxy for valuing the water resource portfolio.

6.3.2. Remaining Capacity

Remaining capacity in the water resource portfolio is calculated using the net of projected FY09 supply yield to be delivered less the current demand divided by the FY09 supply yield.

6.3.3. Unit Fee Calculation

In order to apply an equitable fee to new customers, all customer classes and meter sizes need to be expressed in common capacity units. The standard capacity unit is defined as having the average summer water characteristics of an existing customer with a ¾-inch meter. The impact fee unit cost is the result of dividing the equity of remaining water portfolio assets by the total remaining capacity units. Table 6-2 summarizes the water resource fee unit cost calculation.

Table 6-2.
Calculation of the Water Resource Impact Fee

Line No.	Description	Units	Units
1	Water Resource Value		$82,567,447
2	Water Stock Value		13,877,428
3	**Total Water Resources Value**		**$96,444,875**
4	FY09 Supply Yield, acre-feet	109,585	
5	Current Demand, acre-feet	94,770	
6	Remaining Capacity (Line 4/Line 5)		13.5%
7	Remaining Asset Valuation (Line 3 x Line 6)		$13,039,347
8	Remaining Asset Capacity (Line 4 – Line 3)		14,816
9	¾-inch Summer Water Usage		502
10	Usage per Acre-Foot		1.7776
11	**WRF, $ per Single Family Equivalent (Line 10 x Line 9)**		**$495**

6.4. Combined Water Impact and Resource Fee Schedule

Table 6-3 compares the existing and proposed water system impact and resource fees.

Table 6-3.
Comparison and Existing and Proposed Water Impact and Resource Fees

	Existing			Proposed		
Customer Class	**Impact Fee**	**Resource Fee[1]**	**Total**	**Impact Fee**	**Resource Fee[1]**	**Total**
Residential						
Meter Size, inches						
¾	$ 1,642	$ 229	$ 1,871	$ 2,250	$ 495	$ 2,745
1	2,736	561	3,297	3,750	1,150	4,900
1 ½	5,472	1,353	6,825	7,500	2,513	10,013
Multifamily, per unit						
Duplex	$ 2,014	$ 310	$ 2,324	2,942	607	3,549
Triplex	2,024	347	2,371	3,504	690	4,194
4-Plex	2,891	510	3,401	4,704	907	5,611
Nonresidential[2]						
Meter Size, inches						
¾	$ 1,642	$ 358	$ 2,000	$2,250	598	2,848
1	2,736	1,094	3,830	3,750	2,454	6,204
1 ½	5,472	2,112	7,584	7,500	3,687	11,187
2	8,755	3,021	11,776	12,000	7,202	19,202
3	17,510	6,168	23,678	24,000	14,112	38,112

(1) County fees are 1.35 times City fees
(2) Meter sizes greater than 3-inches are detailed in Appendix D

6.5. Wastewater System Impact Fees

The wastewater SIFs are calculated using the buy-in method. This method is based on the concept that existing customers, through rates and other assessments, have developed a valuable water system. A new customer must "buy-in" to this system by making a contribution equal to the amount of equity a similar existing customer has in the system.

To compute the wastewater system impact fee using the system buy-in method, the following general procedure is used:

- Determine existing wastewater system value
- Estimate system capacity
- Calculate unit equity cost
- Calculate system impact fee

Implementation of fees designed using the system buy-in method results in a new customer paying their proportionate share of facility costs incurred to serve them. The fees are dependent on the capacity required to serve a customer and the unit equity cost of existing facilities expressed as dollars per unit of capacity. Fees using the system buy-in

method can readily be calculated using utility fixed asset records. Because fees can be traced to such records, they are generally understood by customers and supported on an engineering economic basis.

6.5.1. System Value

System value is calculated by determining the replacement cost of existing in-service assets less replacement cost accumulated depreciation, or book value replacement cost. Replacement cost represents the cost of duplicating existing facilities at current prices. The cost to replace the City's wastewater system was developed using historical cost information from fixed asset records and restating these costs in current dollars using the 20-Cities Construction Cost Index (CCI) published by Engineering News-Record (ENR). Accumulated depreciation from the Department's accounting records are adjusted to current values using the ENR CCI index and deducted from the replacement cost of each asset.

This methodology recognizes current cost to replace assets; however, subtracts the value of the depleted portion of the asset. This depleted portion of the asset value is typically recovered through user rates as part of a repair and replacement program. The wastewater system includes all major wastewater collection and treatment facilities.

To determine net equity in the system, replacement cost of the existing wastewater system assets is reduced by the outstanding debt on related facilities. Once a new customer connects to the wastewater system, that customer begins paying charges for service like all existing customers. These charges typically include payment for retirement of outstanding debt. For this reason, it is necessary to deduct outstanding debt from system value before developing these fees.

6.5.2. System Capacity

The buy-in methodology considers the total design capacity of the existing system assets. The wastewater system design capacity is based on average day of the peak month flow to the treatment plant and is 35 mgd.

6.5.3. Unit Fee Calculation

In order to apply an equitable fee to new customers, the unit cost needs to be expressed in common capacity units. The standard capacity unit is defined as the peak flow for a single family customer. The wastewater system impact fee unit cost is the result of dividing the replacement cost of the wastewater system assets by the system capacity. Table 6-4 summarizes the wastewater system impact fee calculation.

Table 6-4.
Development of Proposed Wastewater System Impact Fee

Line No.	Description	Units
1	Replacement Cost Less Depreciation of Existing Assets	$134,119,418
2	Less: Outstanding Principal	(6,177,600)
3	**Net Asset Value**	**$127,941,818**
4	Total Existing Capacity, gpd	35,000,000
5	Unit Cost, $ per gpd	$3.66
6	SFE Capacity, gpd	202.8
7	**¾-inch Impact Fee - $**	**$741**

6.5.4. Wastewater System Impact Fee Schedule

Wastewater SIFs for residential and nonresidential customers are summarized in Table 6-5. The fees retain the existing structure.

Table 6-5.
Comparison of Existing and Proposed Wastewater System Impact Fees

Customer Class	Existing	Proposed
Residential	$ 545	$ 741
Multifamily		
Duplex	818	1,112
Triplex	1,226	1,667
Townhome	409	556
Hotels and Motels, per dwelling unit		
Without Kitchen or Restaurant	273	371
With Kitchen or Restaurant	363	494
With Kitchen and a Restaurant	363	494
General Commercial, per equivalent fixture[1]	27	37
Trailer Parks[2]	545	741
Recreation Parks per Equivalent Unit[3]	545	741

(1) Based on Utah Plumbing Code
(2) 3 trailer spaces shall equal 1 equivalent residential
(3) 6 trailer spaces shall equal 1 equivalent unit residential dwelling unit

6.6. Stormwater System Impact Fees

The stormwater SIFs are calculated using the buy-in method. This method is based on the concept that existing customers, through rates and other assessments, have developed a valuable water system. A new customer must "buy-in" to this system by making a contribution equal to the amount of equity a similar existing customer has in the system.

To compute the wastewater system impact fee using the system buy-in method, the following general procedure is used:

- Determine existing stormwater system value
- Estimate system capacity
- Calculate unit equity cost
- Calculate system impact fee

Implementation of fees designed using the system buy-in method results in a new customer paying their proportionate share of facility costs incurred to serve them. The fees are dependent on the capacity required to serve a customer and the unit equity cost of existing facilities expressed as dollars per unit of capacity. Fees using the system buy-in method can readily be calculated using utility fixed asset records. Because fees can be traced to such records, they are generally understood by customers and supported on an engineering economic basis.

6.6.1. System Value

System value is calculated by determining the replacement cost of existing in-service assets less replacement cost accumulated depreciation, or book value replacement cost. Replacement cost represents the cost of duplicating existing facilities at current prices. The cost to replace the City's stormwater system was developed using historical cost information from fixed asset records and restating these costs in current dollars using the 20-Cities CC) published by ENR. Accumulated depreciation from the Department's accounting records are adjusted to current values using the ENR CCI index and deducted from the replacement cost of each asset.

This methodology recognizes current cost to replace assets; however, subtracts the value of the depleted portion of the asset. This depleted portion of the asset value is typically recovered through user rates as part of a repair and replacement program. The stormwater system includes all major basins, canals, ditches, curbs, and gutters.

To determine net equity in the system, replacement cost of the existing stormwater system assets is reduced by the outstanding debt on related facilities. Once a new customer connects to the stormwater system, that customer begins paying charges for service like all existing customers. These charges typically include payment for retirement of outstanding debt. For this reason, it is necessary to deduct outstanding debt from system value before developing these fees.

6.6.2. System Capacity

The buy-in methodology considers the total design capacity of the existing system assets. The stormwater system design capacity is based on total acres that can be served by the stormwater system. Stormwater capacity units total 42,699 acres.

6.6.3. Unit Fee Calculation

In order to apply an equitable fee to new customers, the unit cost needs to be expressed in common capacity units. The standard capacity unit is defined as a ¼-acre lot. The stormwater system impact fee unit cost is the result of dividing the replacement cost of the stormwater system assets by the system capacity. Table 6-6 summarizes the stormwater system impact fee calculation and Table 6-7 compares the existing and proposed stormwater SIF .

Table 6-6.
Calculation of the Proposed Stormwater System Impact Fee

Line No.	Description	Units
1	Replacement Cost Less Depreciation of Existing Assets	$148,462,640
2	Less: Outstanding Principal	(19,562,400)
3	**Net Asset Value**	**$128,900,240**
4	Total Acreage	42,699
5	Unit Cost, $ per acre	$3,019
6	**Unit Cost, $ per ¼ acre**	**$755**

Table 6-7.
Comparison of Existing and Proposed Stormwater System Impact Fees

Description	Existing	Proposed
All Customers, $ per ¼ acre	$374	$755

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

Appendix A
Water Rate Subcommittee - 2008 Water Rate Study Recommendations

RED OAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

5504003 / DEN

Salt Lake City Department of Public Utilities

Water Rate Subcommittee

2008 Water Rate Study Recommendations

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1.0 Executive Summary

Salt Lake City Department of Public Utilities reviews and updates the water rate structure and fees every five years to assure adequate water revenue for sustainable, safe, and reliable drinking water service to meet customer level of service needs. Similar to the last rate study conducted in 2003, the City solicited public input through a Water Rate Subcommittee (WRS or the committee) who participated in a process to identify and rank pricing objectives, and to make recommendations regarding rates and fees for water service. The principal objectives deemed the most important by the WRS in considering adjustments to the rate structure were:

- Sustainable water conservation
- Revenue stability
- Affordability

To meet these objectives, the committee recommended a rate structure which includes the following:

- Retain existing base fees at the current FY08 levels to reflect affordability goals. The current base fee is $7.44 per account per month for the smallest meter and service line (3/4 inch, which is the size used by most single family residential customers). The base fee increases as the service size increases.
- Retain the current Tier 1 rate of $0.88 per hundred cubic feet (ccf). Tier 1 consumption includes indoor use for most single family residential customers.
- Retain the fixed-tier rate structure for residential and the average winter consumption (AWC) based rate structure for nonresidential customers
- Add a fourth tier to residential customers (for water use over 50 ccf for single family customers) and nonresidential customers (for water use over 500% of AWC) to provide a greater conservation pricing signal to higher peak water users. Currently these customer groups are assessed for water use under a three-tiered rate approach, e.g.:
  - Tier 1 0-9 ccf
  - Tier 2 10-29 ccf
  - Tier 3 over 29 ccf
- Increase the volume allowance in Tier 1 and Tier 2 by 1.0 ccf to 10 ccf and 30 ccf, respectively, in support of the water rate affordability goal.
- Retain the existing City-County rate differential factor of 1.35. Some committee representatives supported an increase to 1.50 whereas some supported a factor of 1.0 (i.e., removing the differential). The 1.35 differential factor remains justified based upon review of industry accepted cost-of-service principles relative to City customer ownership. Retain the existing

"irrigation budget" based rate structure for irrigation only accounts. Irrigation budgets are based upon Department assessment of irrigated area.

- The proposed base fees and volume rates are intended to generate additional 7% water revenue based on projected needs. Changes or impacts to individual customers will vary based on the re-design of the rates (the rates shown in Table 1 and the fact that there is no change recommended for the base charge)

These changes previously summarized are based on information provided at the five committee meetings and represent the majority opinion of the subcommittee. Tables 1 and 2 are a comparison of the current and proposed volume rate structure for single family and nonresidential customers, respectively. The dollar per ccf rates apply to all customers.

Table 1
Current and Proposed
Single Family Volume Rate Structure

	City		County	
Description	**Current**	**Proposed**	**Current**	**Proposed**
	$ per ccf	**$ per ccf**	**$ per ccf**	**$ per ccf**
Winter Period (Nov-Mar)	0.88	0.88	$1.19	$1.19
Summer Period (Apr-Oct)				
Tier 1(a)	0.88	0.88	1.19	1.19
Tier 2	1.35	1.50	1.83	2.03
Tier 3	1.88	1.96	2.54	2.64
Tier 4	NA	2.54	NA	3.43

(a) Single family residential Tier 1: 0 to 10 ccf
Duplex Tier 1: 0 to 13 ccf
Triplex Tier 1: 0 to 16 ccf

Table 2 Current and Proposed Nonresidential Volume Rate Structure				
	City		County	
Description	Current	Proposed	Current	Proposed
	$ per ccf	$ per ccf	$ per ccf	$ per ccf
Winter Period (Nov-Mar)	0.88	0.88	$1.19	$1.19
Summer Period (Apr-Oct)				
0 to 100% of AWC[(a)]	0.88	0.88	1.19	1.19
100% - 300% of AWC	1.35	1.50	1.83	2.03
300% to 500% of AWC	1.88	1.96	2.54	2.64
>500% AWC	NA	2.54	NA	3.43
(a) Average Winter Consumption				

2.0 Introduction

The Salt Lake City Department of Public Utilities (the Department) conducts a comprehensive water rate study every five years. The City retained Red Oak Consulting (Red Oak) as the consultant of record for the 2008 water rate study. The rate study included a review of water revenue requirements, the development of a cost of service analysis, and rate design for the fiscal year (FY) 2010 (the 12 months ending June 30, 2010; referred to as FY10).

The rate study process included formation of a Water Rate Subcommittee (the WRS or "committee") comprised of stakeholders representing a number of community groups and the public at-large. Committee members were selected by the City Council and are listed in Appendix A. The committee participated in a series of meetings, providing input and suggestions for adjustments to the existing rate structure that best represented the needs, goals and objectives of the community. Red Oak led the detailed analysis for the study and facilitated the WRS meetings with Public Utility Staff.

3.0 WRS Committee Meetings

Red Oak and Department Staff facilitated five WRS meetings. The agenda and goals from each meeting are listed below. Additional information from each meeting is available on the City web site at www.slcgov/utilities.

3.1 Meeting #1

- Role of WRS in rate study process
- Water system review
- Introduction of cost of service concepts and rate making process

3.2 Meeting #2

- Review of historical system water demands, water supply, and projected water demand
- Review of FY07 monthly usage residential and nonresidential usage characteristics
- Review of FY07 summer usage residential and nonresidential usage characteristics
- Introduction of rate structure pricing objectives

3.3 Meeting #3

- Rank pricing objectives
- Review of customer class bill frequency analysis: accounts and water use volumes billed in each tier and revenue generated in each tier
- Compare historical water use, precipitation, and evapotranspiration (ET) index
- Comparison of historical SLC demand to State conservation goal through the year 2025.
- Finalize pricing objectives

3.4 Meeting #4

- FY05 billing data selected as basis for FY10 rate design
- Introduced rate structure alternatives including:
    - 4-tier structure for residential and nonresidential
    - A residential 4-tier structure based on AWC
    - Adjustments to base fee to include costs associated with annual Metropolitan Water District capital assessment payments
- Compared rate structure alternatives to meeting pricing objectives

3.5 Meeting #5

- Reviewed two additional rate structures each based on the 4-tier structures
- Review bill impacts associated with each alternative
- Reviewed adjustments to rate structures in "real-time" modeling to show impacts to customer classes

4.0 Pricing Objectives

The City's current rate structure was implemented as a result of a similar WRS process in 2003. The current rate structure consists of a 3-tier (block) structure for the residential and nonresidential customer classes for the summer period and a uniform rate for the winter period. The residential tier structure is based on fixed usage tiers, i.e. tier thresholds are the same for each customer. The nonresidential 3-tiered structure is based on AWC, i.e., each customer's 1 threshold is based on their individual average winter consumption. The current structure for all customers was designed to encourage conservation and reduce system peak demands.

The role of the committee for the 2008 rate study was to review the effectiveness of the existing rate structure and provide recommendations for adjustments to the structure. The committee identified and ranked 11 pricing objectives to assist in aligning the water rate structure with community values. The pricing objectives, ranked in ascending order, are listed in Table 3 below:

Table 3
Pricing Objectives

Rank	Objective
1	Water Conservation
2	Growth Pays for Growth
3	Peak Usage Reduction
4	Fixed Income/Affordability
5	Revenue Stability
6	Cost of Service Equity
7	Customer Acceptance
8	Customer Impact
9	Compliance with Legal Authority
10	Administrative Ease
11	Concern for Large Volume Customers

The pricing objective, Growth Pays for Growth, relates to the collection of impact fees assessed to new customers to pay for their proportionate share of water system capacity. The Public Utilities current impact fees are intended to fund growth-related projects. Therefore, this pricing objective is met through these fees and is not part of the base charge and volume rate structure; the purview of the committee as part of the 2008 rate study. Each of the highest ranked pricing objectives is discussed below.

1. ***Water Conservation/Peak Usage Reduction*** – These two related objectives focus on annual water use reduction and reduction in peak day summer use, respectively. Annual water use relates to availability, management and cost of water resources based upon precipitation, reservoir and snowpack storage. Peak water use drives capacity, size and cost of treatment plants, pumps stations and pipe to convey the maximum flow to customers during peak hour and peak day consumption of the year.

   Water conservation and peak usage reduction objectives were combined for the purpose of assessing impacts of changes to the rate structure on water use. To be effective with regards to these objectives, the rate structure should be designed to promote the efficient use of resources on a year-round basis as well as during periods of peak use. The rate structure should assign the cost of providing peaking facilities to those customers having significant peak to average water use patterns, and discourage the use of water during peak demand periods.

2. ***Fixed Income/Affordability*** – This objective was to allow the opportunity for low income or fixed income customers to afford water for essential purposes.

3. ***Revenue Stability*** – This objective identified a need for the water rate structure to be effective in providing stable revenue stream to recover revenue requirements for reliable and safe water supply in the face of variable external factors such as economy fluctuations and the weather.

With regard to these pricing objectives, the WRS then sought to evaluate rate structure refinements and adjustments in terms of how effective these adjustments were in achieving the objectives. The WRS was presented with an extensive amount of customer characteristic and water use data to consider in assessing the rate structure options.

4.1 Water Conservation

Red Oak analyzed customer billing data from FY01 through FY07. Overall water demand has decreased by 15% since FY01 as a result of increased conservation measures including customer education and the FY03 change in rate structures. For the purposes of this study, Red Oak conducted a price elasticity analysis on customer billing data to determine what impact a 4-tiered summer rate structure would have on consumption. The analysis showed that the addition of a fourth tier combined with a budgeted 7% revenue increase resulted in a summer water savings of up to 2% or 500,000 ccf for the period from April through October.

The addition of the fourth tier is also intended to target those customers who may have not been influenced by the existing price signals. Red Oak developed a bill distribution for the residential and nonresidential classes. A bill distribution shows the number of bills rendered at incremental levels of consumption. Information from the bill distribution assisted in selecting the fourth tier consumption threshold. Based on this information and the elasticity calculation, it is estimated that water usage at 50 ccf and greater for residential customers and greater than 500% of AWC would result in further conservation from customers with consumption in a fourth tier.

Table 4 shows the percent of residential customers billed in each tier during summer months under the proposed rate structure. Approximately 7% of City residential customers would have bills with usage in the fourth tier. In a similar manner, approximately 17% of County residential customers have usage in the fourth tier. The rates have been set to send a pricing signal to encourage additional water savings to those customers with usage in the fourth tier (greater than 50 ccf).

Table 4
Percentage of Residential Accounts Billed in Each Tier Under Proposed Rate Structure

Tier	City	County
1[(a)]	43.8%	29.6%
2	37.6%	32.6%
3	12.0%	21.0%
4	6.6%	16.7%

(a) Single family residential Tier 1: 0 to 10 ccf
Duplex Tier 1: 0 to 13 ccf
Triplex Tier 1: 0 to 16 ccf

In a similar manner, Table 5 shows the percentage of nonresidential customers with bills greater than 500% of their individual AWC.

Table 5 Percentage of Nonresidential Accounts Billed in Each Tier Under Existing Rate Structure			
Tier	**Threshold**	**City**	**County**
1	0 – AWC	50.5%	44.0%
2	AWC – 300% of AWC	34.2%	32.9%
3	300% - 500% of AWC	6.2%	8.3%
4	>500% of AWC	9.1%	14.8%

4.2 Fixed Income/Affordability

In measuring water utility affordability it is common to look at the annual water bill for a typical single family residential customer as compared to the median household income (MHI). MHI was obtained from the 2007 United States Census. Water bills used to calculate the percentage of MHI for the United States and the Western United States is based on a 2006 national study. These bills have been adjusted to 2008 values using the consumer price index (CPI). Accepted industry standards state that annual water bills greater than 2% of MHI are considered burdensome to low income families. Table 6 below compares the percentage of annual water bill to MHI for Salt Lake City, the United States, and the Western United States. The proposed percentage increase in the MHI is the effect of the proposed 7% rate increase included in the rate proposal.

Table 6 Annual Water Bill as a Percentage of MHI[a]		
Median Household Income	**MHI**	**Percentage of MHI**
United States[b]	$50,740	0.81%
Western United States[b]	$64,592	0.60%
Salt Lake City[b]	$43,000	0.76%
Salt Lake City – Proposed[b]	**$43,000**	**0.81%**

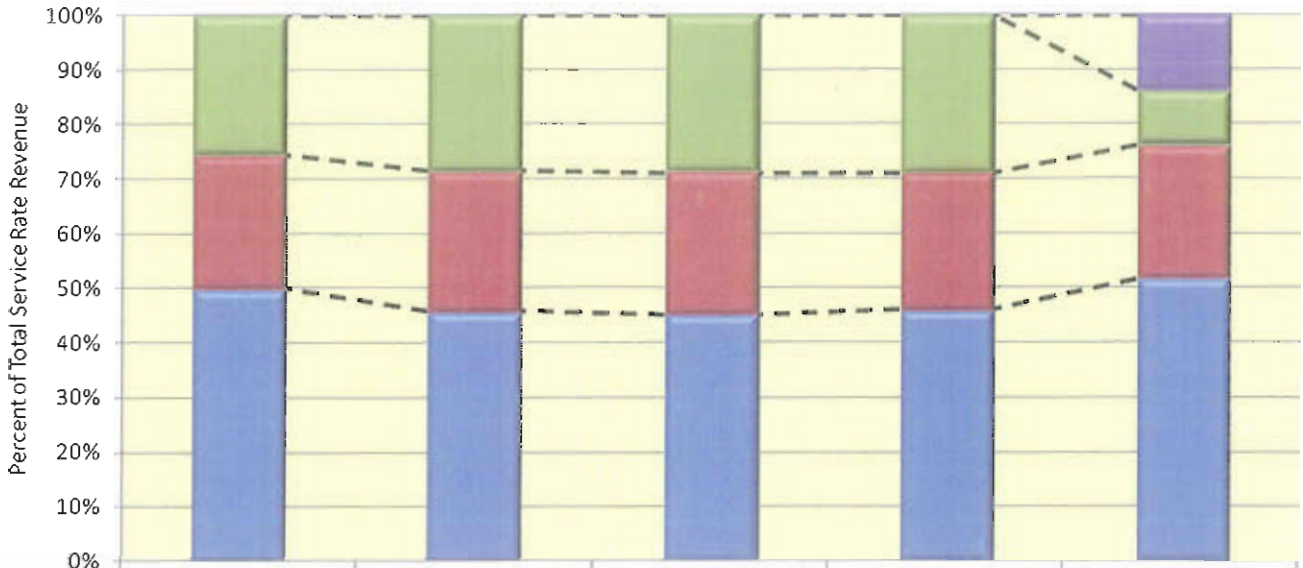
(a) Data source: 2007 Census; www.census.gov
(b) Based on 2006 data adjusted for 2008 using CPI.
(c) The recommended rate structure includes a budget 7% revenue adjustment.

4.3 Revenue Stability

The Department has historically received approximately 45% to 50% of total annual revenue through the monthly fixed base charges, and the summertime Tier 1 and winter volume rate revenue. Whereas increasing base charges would enhance revenue stability, low volume users would be negatively impacted. In addition,

revenue collected through higher base charges reduces the revenue required from volume rates, thus reducing the water conservation pricing signal. For these reasons, the committee concluded that the current level of revenue stability was sufficient; i.e. revenue from the existing base charges plus the revenue from Tier 1 (as well as the winter volume rate revenue) would maintain the current, acceptable level of revenue stability. Figure 1 below depicts the percent of revenue received from the base fees and rate tiers.

Figure 1
Comparison of Revenue Recovered From Base Fees and Each Tier



	2005	2006	2007	2008	Proposed
Tier 4	0%	0%	0%	0%	14%
Tier 3	26%	28%	29%	29%	10%
Tier 2	25%	26%	26%	25%	25%
Base Fee & Tier 1	50%	46%	45%	46%	52%

Whereas there is no industry standard for measuring revenue stability, Department Staff expressed a need to increase revenue stability from prior years. The Department stated that summer revenue currently can fluctuate as much as five million per month depending on weather changes. The committee reviewed options of enhancing revenue stability through increased base fees, but decided that it might conflict with conservation goals. A rate structure with higher base fees requires less revenue from the volume rate. Reduced volume revenue results in lower unit prices for consumption which weakens the conservation pricing signal through volumetric

rates, specifically for higher volume customers. Conversely, a higher base fee and lower volume charges may negatively impact low volume users since the base fee is assessed regardless of usage. To address this dichotomy, proposed base fees remain at current values and the Tier 1 threshold captures an additional 1.0 ccf of volume for the residential classes.

5.0 Proposed Rates

Proposed FY10 base fees are detailed in Table 7 for each customer class. The base fee is the same for all classes. The proposed rate structure maintains the existing base fee, which includes $0.50 per account for all meter sizes and another $0.50 prorated by meter size for watershed purchases.

Table 7
Proposed Base Fees
$ per monthly bill

Meter Size	City	County
3/4" and 1"	$ 7.44	$ 9.87
1.5"	8.87	11.80
2"	9.67	12.88
3"	16.54	22.15
4"	17.74	23.77
6"	25.81	34.67
8"	46.77	62.96

Table 8 and Table 9 detail the proposed rates for FY10.

Table 8
Proposed Residential Volume Rates
$ per ccf

Description	City	County
Winter Period (Nov-Mar)	0.88	1.19
Summer Period (Apr-Oct)		
Tier 1[(a)]	0.88	1.19
Tier 2	1.50	2.03
Tier 3	1.96	2.64
Tier 4	2.54	3.43

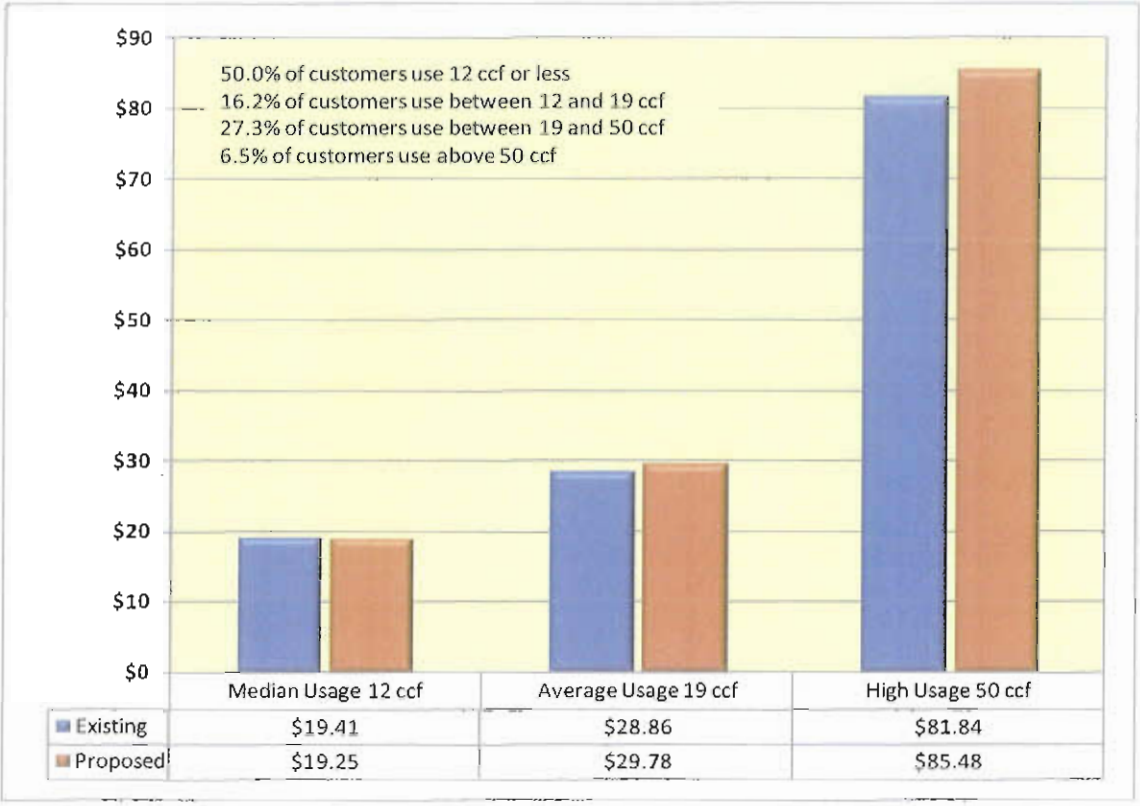
(b) Single family residential Tier 1: 0 to 10 ccf
Duplex Tier 1: 0 to 13 ccf
Triplex Tier 1: 0 to 16 ccf

Table 9 Proposed Nonresidential Volume Rates $ per ccf		
Description	**City**	**County**
	$ per ccf	$ per ccf
Winter Period (Nov-Mar)	0.88	1.19
Summer Period (Apr-Oct)		
0 to 100% of AWC[(a)]	0.88	1.19
100% - 300% of AWC	1.50	2.03
300% to 500% of AWC	1.96	2.64
>500% AWC	2.54	3.43
(a) Average Winter Consumption		

6.0 Typical Monthly Bills

Figure 2 below compares typical monthly summer bills for a City residential customer under existing and proposed rates at three levels of consumption.

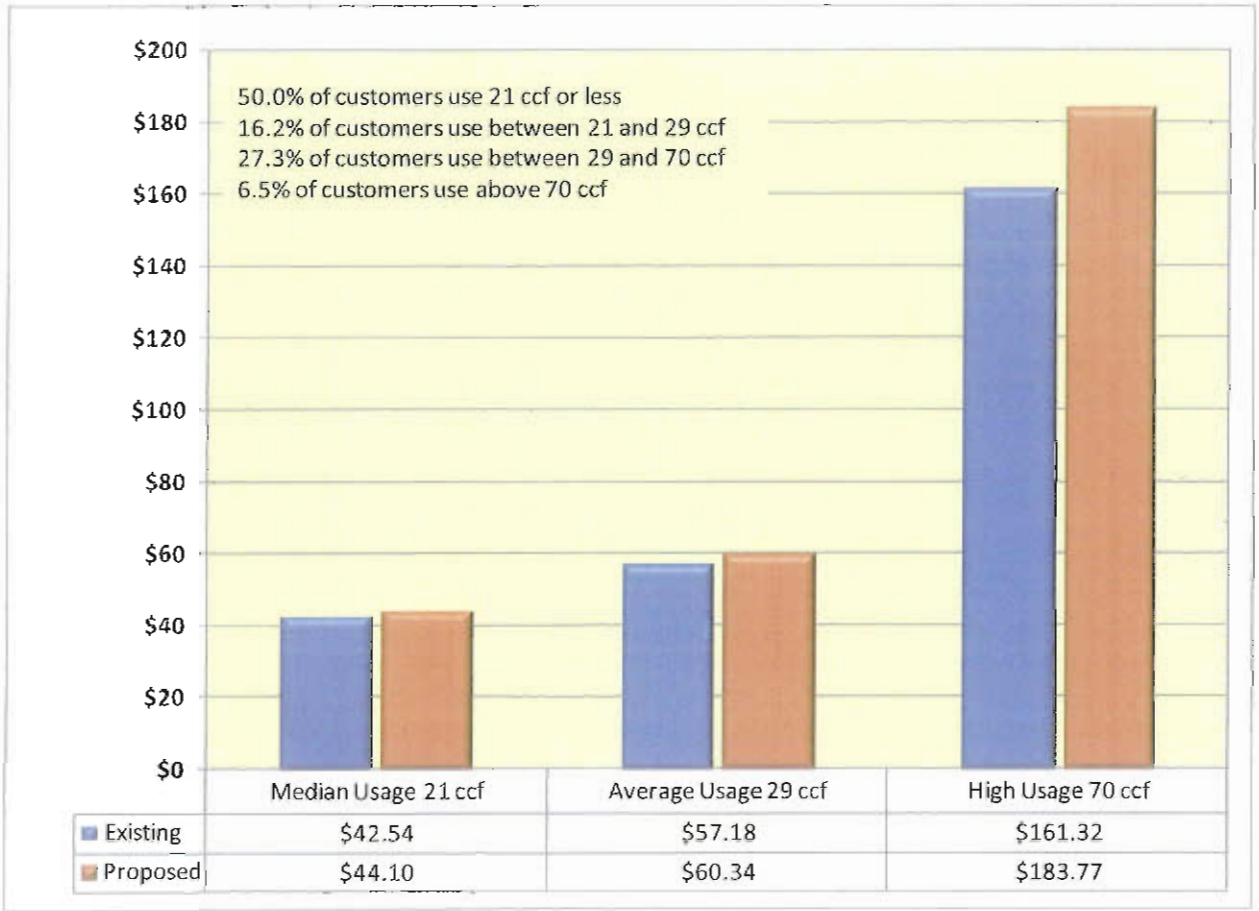
Figure 2
Comparison of Monthly Bills Under Existing and Proposed Rates
City Residential - Summer Usage



	Median Usage 12 ccf	Average Usage 19 ccf	High Usage 50 ccf
Existing	$19.41	$28.86	$81.84
Proposed	$19.25	$29.78	$85.48

Figure 3 below compares typical monthly summer bills for a County residential customer under existing and proposed rates at three levels of consumption.

Figure 3
Comparison of Monthly Bills Under Existing and Proposed Rates
County Residential - Summer Usage



	Median Usage 21 ccf	Average Usage 29 ccf	High Usage 70 ccf
Existing	$42.54	$57.18	$161.32
Proposed	$44.10	$60.34	$183.77

Appendix B includes figures comparing typical monthly summer bills under existing and proposed rates for varying levels of consumption for City and County residential customers.

7.0 Annual Bill Comparison

Figures 4 and 5 compare the total annual bill for a typical residential customer under existing and proposed rates for City and County customers.

Figure 4
Comparison of Annual Bill Under Existing and Proposed Rates
City Residential

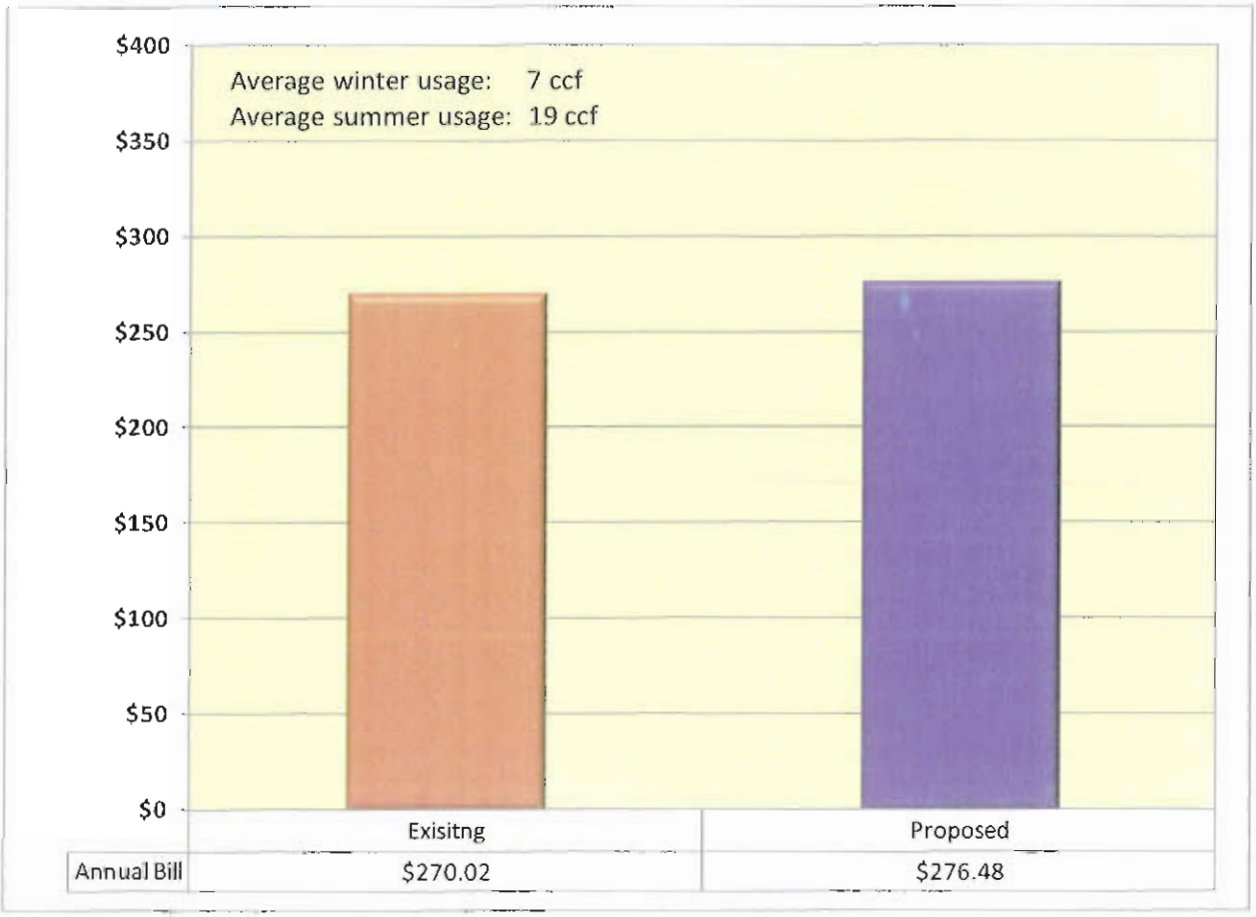
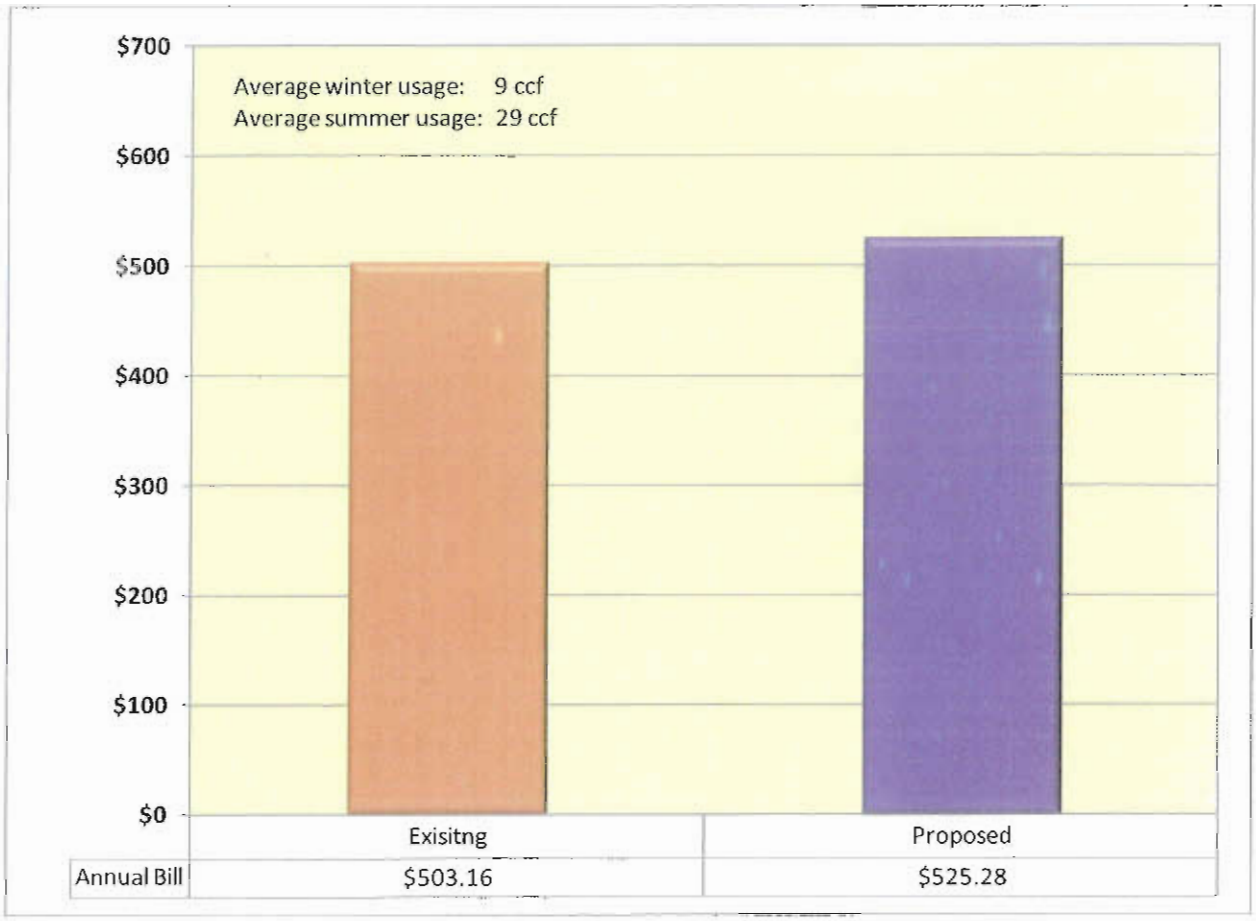


Figure 5
Comparison of Annual Bill Under Existing and Proposed Rates
County Residential



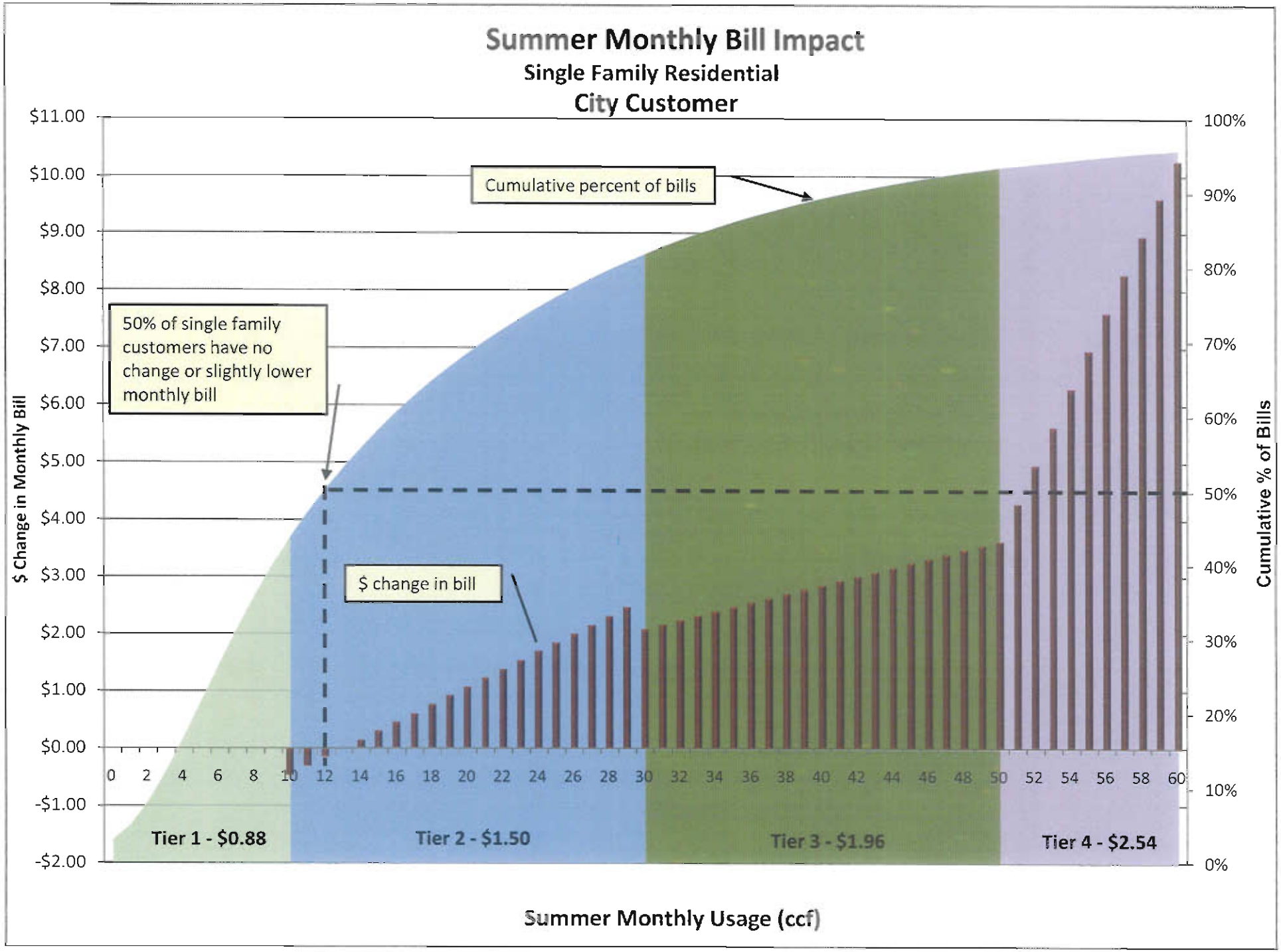
APPENDIX A

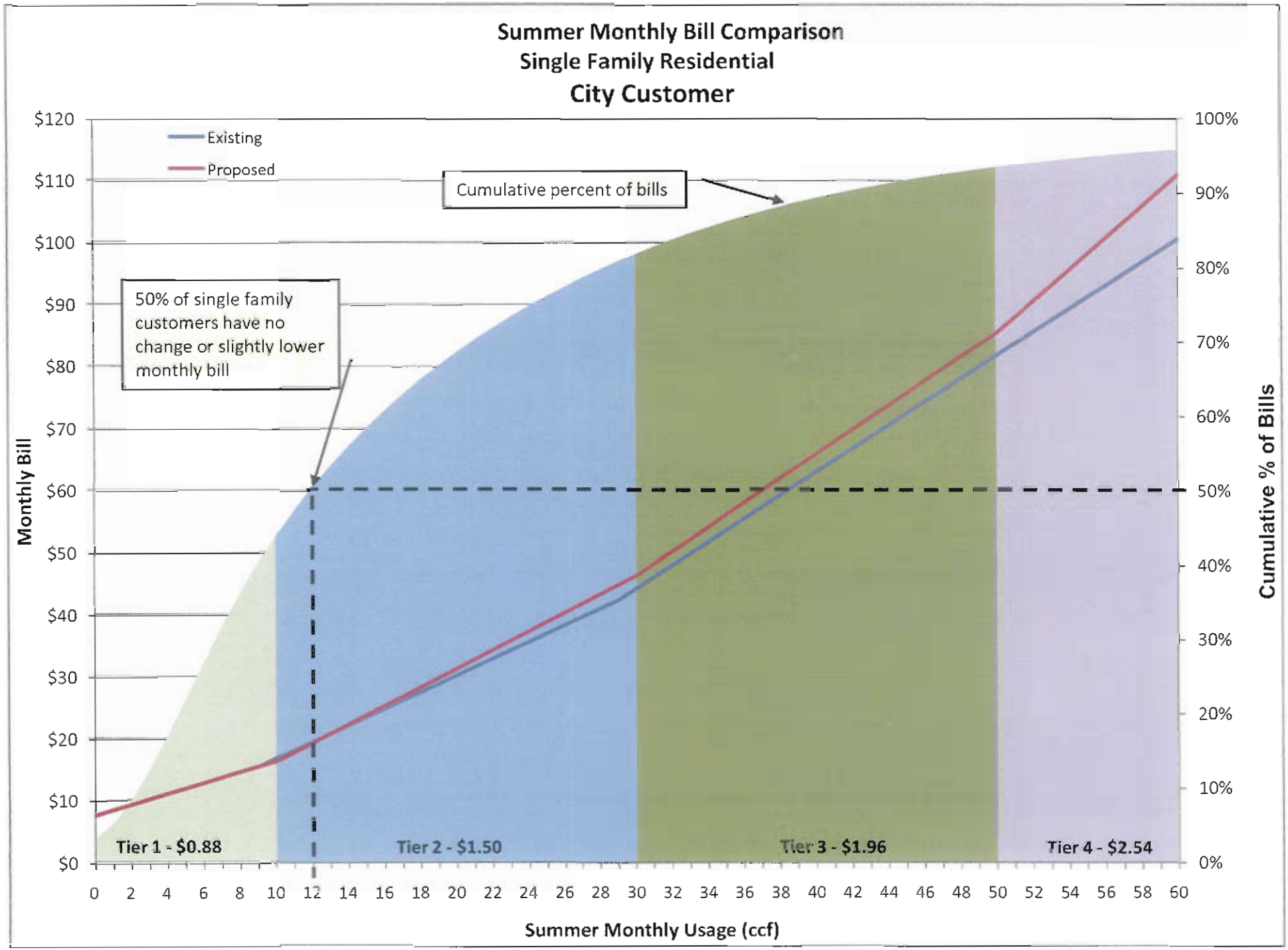
Appendix A

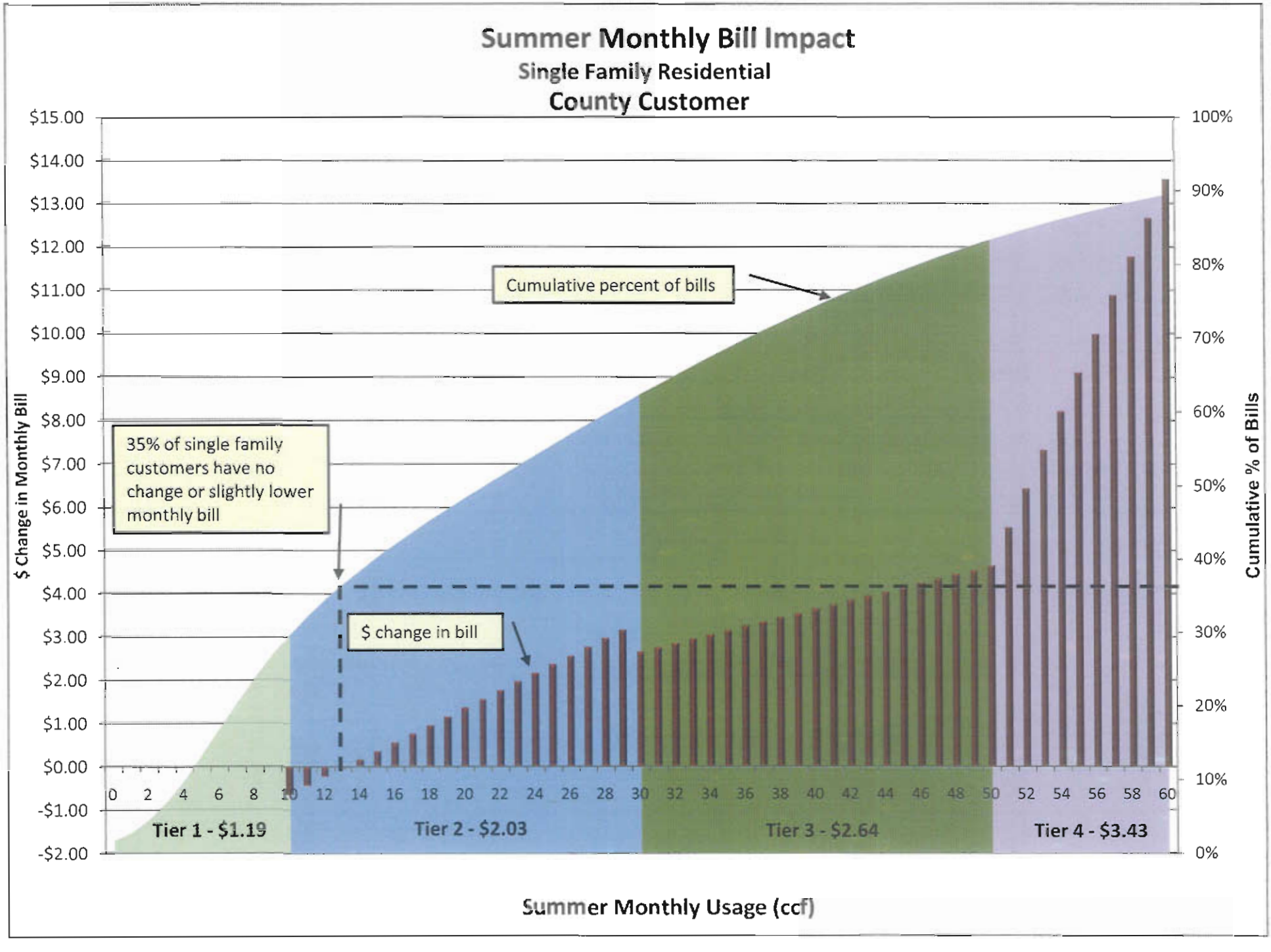
Water Rate Subcommittee Members

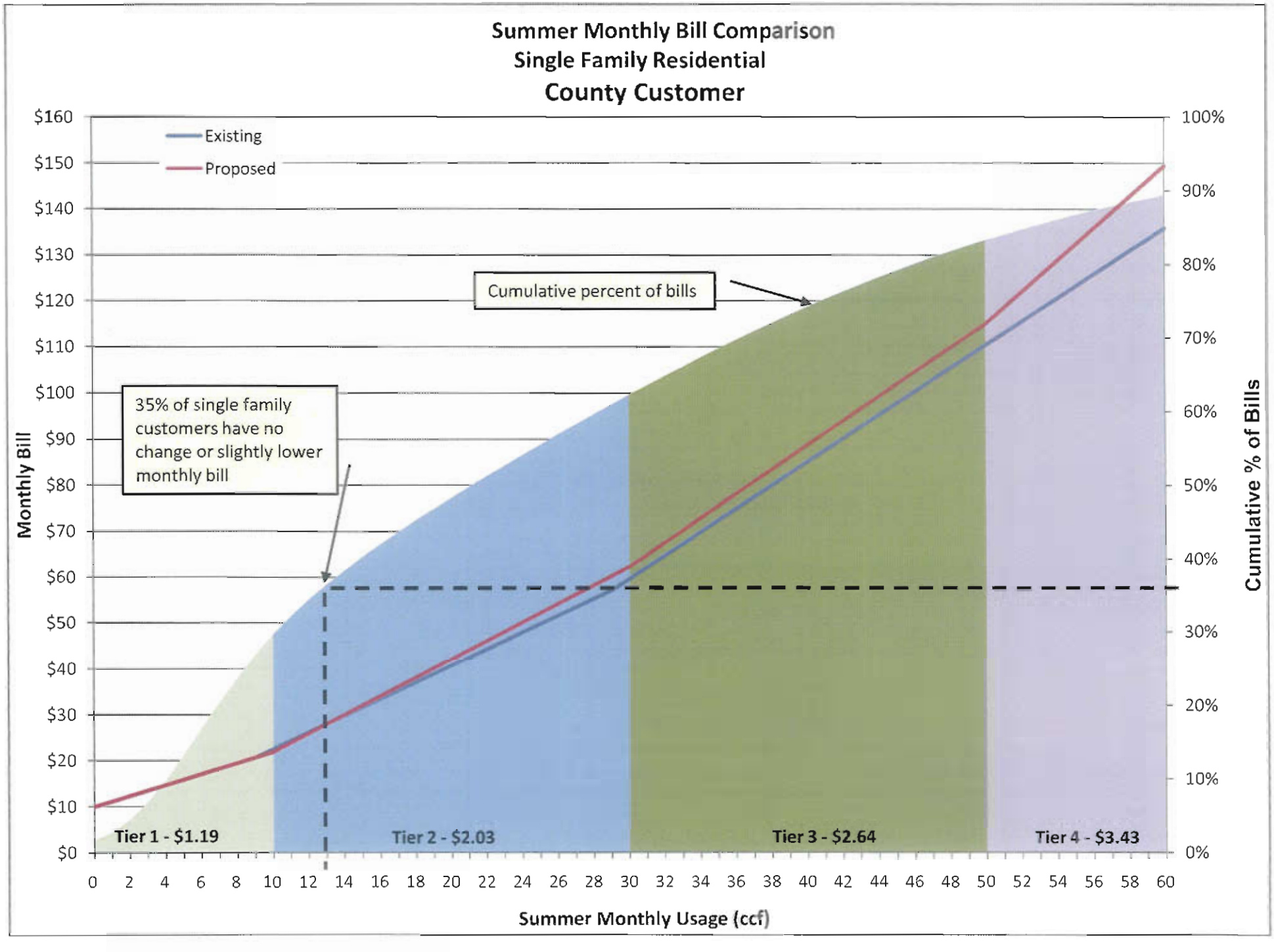
Name	Rep Area / Organization
Cullen Battle	Salt Lake County
Dwight Butler	PUAC
Kim Hibbert	International Center
Cory Higgins	University of Utah
Holly Hilton	Mayor's Office
Bruce Jones	Salt Lake County
Eldon Marshall	District 2
Steve Mecham	District 3
Kent Moore	District 1
Larry Myers	PUAC
Allen Orr	PUAC
Kevin Pace	LDS Church
Gail Piccoli	District 5
Gregg Smith	Salt Lake City School District
Grace Sperry	District 7
Jan Striefel	PUAC
James D. Tangaro	Industrial / Tesoro Refining and Marketing
Dustin Thomas	District 4
Ron Vance	Salt Lake County
Lehua Weaver	Salt Lake City Council
Mike Wilson	Metropolitan Water District of Salt Lake & Sandy
Ted Wilson	Director, Utah Rivers Council
Nancy V. Young	Utah League of Women Voters

APPENDIX B


Summer Monthly Bill Impact
Single Family Residential
City Customer
$11.00
$10.00
$9.00
$8.00
$7.00
$6.00
$5.00
$4.00
$3.00
$2.00
$1.00
$0.00
-$1.00
-$2.00
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Cumulative percent of bills
50% of single family customers have no change or slightly lower monthly bill
$ change in bill
$ Change in Monthly Bill
Cumulative % of Bills
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60
Tier 1 - $0.88
Tier 2 - $1.50
Tier 3 - $1.96
Tier 4 - $2.54
Summer Monthly Usage (ccf)


Summer Monthly Bill Comparison
Single Family Residential
City Customer
Existing
Proposed
Cumulative percent of bills
50% of single family customers have no change or slightly lower monthly bill
Tier 1 - $0.88
Tier 2 - $1.50
Tier 3 - $1.96
Tier 4 - $2.54
Monthly Bill
Cumulative % of Bills
Summer Monthly Usage (ccf)
$0
$10
$20
$30
$40
$50
$60
$70
$80
$90
$100
$110
$120
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60


Summer Monthly Bill Impact
Single Family Residential
County Customer
$ Change in Monthly Bill
Cumulative % of Bills
$15.00
$14.00
$13.00
$12.00
$11.00
$10.00
$9.00
$8.00
$7.00
$6.00
$5.00
$4.00
$3.00
$2.00
$1.00
$0.00
-$1.00
-$2.00
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Cumulative percent of bills
35% of single family customers have no change or slightly lower monthly bill
$ change in bill
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60
Tier 1 - $1.19
Tier 2 - $2.03
Tier 3 - $2.64
Tier 4 - $3.43
Summer Monthly Usage (ccf)


Summer Monthly Bill Comparison
Single Family Residential
County Customer
Existing
Proposed
Cumulative percent of bills
35% of single family customers have no change or slightly lower monthly bill
Tier 1 - $1.19
Tier 2 - $2.03
Tier 3 - $2.64
Tier 4 - $3.43
Monthly Bill
Cumulative % of Bills
Summer Monthly Usage (ccf)
$0 $10 $20 $30 $40 $50 $60 $70 $80 $90 $100 $110 $120 $130 $140 $150 $160
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60

Salt Lake City
2008 Water Rate Study
Comparison of Bills Under Existing and Proposed Rates
Summer Usage

Table 1

Usage Block (ccf)	CITY				COUNTY			
	Existing	Proposed	$ Increase	% of Bills	Existing	Proposed	$ Increase	% of Bills
0	7.44	7.44	0.00	3.15%	9.87	9.87	0.00	1.68%
1	8.32	8.32	0.00	5.16%	11.06	11.06	0.00	2.74%
2	9.20	9.20	0.00	8.35%	12.25	12.25	0.00	4.51%
3	10.08	10.08	0.00	12.46%	13.44	13.44	0.00	6.91%
4	10.96	10.96	0.00	17.10%	14.63	14.63	0.00	9.88%
5	11.84	11.84	0.00	22.02%	15.82	15.82	0.00	13.39%
6	12.72	12.72	0.00	26.95%	17.01	17.01	0.00	16.94%
7	13.60	13.60	0.00	31.74%	18.20	18.20	0.00	20.47%
8	14.48	14.48	0.00	36.18%	19.39	19.39	0.00	23.81%
9	15.36	15.36	0.00	40.25%	20.58	20.58	0.00	26.91%
10	16.71	16.24	(0.47)	43.87%	22.41	21.77	(0.64)	29.67%
11	18.06	17.74	(0.32)	47.27%	24.24	23.80	(0.44)	32.19%
12	19.41	19.25	(0.16)	50.39%	26.07	25.83	(0.24)	34.47%
13	20.76	20.75	(0.01)	53.20%	27.90	27.86	(0.04)	36.53%
14	22.11	22.26	0.15	55.82%	29.73	29.89	0.16	38.42%
15	23.46	23.76	0.30	58.32%	31.56	31.92	0.36	40.29%
16	24.81	25.27	0.46	60.63%	33.39	33.95	0.56	41.99%
17	26.16	26.77	0.61	62.78%	35.22	35.98	0.76	43.65%
18	27.51	28.28	0.77	64.80%	37.05	38.01	0.96	45.28%
19	28.86	29.78	0.92	66.65%	38.88	40.04	1.16	46.78%
20	30.21	31.29	1.08	68.45%	40.71	42.07	1.36	48.31%
21	31.56	32.79	1.23	70.13%	42.54	44.10	1.56	49.79%
22	32.91	34.30	1.39	71.72%	44.37	46.13	1.76	51.25%
23	34.26	35.80	1.54	73.26%	46.20	48.16	1.96	52.67%
24	35.61	37.31	1.70	74.68%	48.03	50.19	2.16	54.08%
25	36.96	38.81	1.85	76.02%	49.86	52.22	2.36	55.48%
26	38.31	40.32	2.01	77.29%	51.69	54.25	2.56	56.93%
27	39.66	41.82	2.16	78.55%	53.52	56.28	2.76	58.27%
28	41.01	43.33	2.32	79.69%	55.35	58.31	2.96	59.60%
29	42.36	44.83	2.47	80.76%	57.18	60.34	3.16	60.94%
30	44.24	46.34	2.10	81.79%	59.72	62.37	2.65	62.29%
31	46.12	48.29	2.17	82.77%	62.26	65.01	2.75	63.52%
32	48.00	50.25	2.25	83.71%	64.80	67.65	2.85	64.81%
33	49.88	52.21	2.33	84.57%	67.34	70.29	2.95	66.05%
34	51.76	54.16	2.40	85.34%	69.88	72.93	3.05	67.31%
35	53.64	56.12	2.48	86.12%	72.42	75.57	3.15	68.51%
36	55.52	58.08	2.56	86.85%	74.96	78.21	3.25	69.73%
37	57.40	60.03	2.63	87.50%	77.50	80.85	3.35	70.90%
38	59.28	61.99	2.71	88.14%	80.04	83.49	3.45	72.00%
39	61.16	63.95	2.79	88.77%	82.58	86.13	3.55	73.15%
40	63.04	65.91	2.87	89.36%	85.12	88.77	3.65	74.23%
41	64.92	67.86	2.94	89.88%	87.66	91.41	3.75	75.28%
42	66.80	69.82	3.02	90.37%	90.20	94.05	3.85	76.29%

Salt Lake City
2008 Water Rate Study
Comparison of Bills Under Existing and Proposed Rates
Summer Usage

Table 1

Usage Block (ccf)	CITY				COUNTY			
	Existing	Proposed	$ Increase	% of Bills	Existing	Proposed	$ Increase	% of Bills
43	68.68	71.78	3.10	90.84%	92.74	96.69	3.95	77.25%
44	70.56	73.73	3.17	91.29%	95.28	99.33	4.05	78.24%
45	72.44	75.69	3.25	91.72%	97.82	101.97	4.15	79.13%
46	74.32	77.65	3.33	92.12%	100.36	104.61	4.25	80.04%
47	76.20	79.60	3.40	92.48%	102.90	107.25	4.35	80.93%
48	78.08	81.56	3.48	92.85%	105.44	109.89	4.45	81.75%
49	79.96	83.52	3.56	93.18%	107.98	112.53	4.55	82.55%
50	81.84	85.48	3.64	93.51%	110.52	115.17	4.65	83.32%
51	83.72	88.02	4.30	93.81%	113.06	118.60	5.54	84.05%
52	85.60	90.56	4.96	94.08%	115.60	122.03	6.43	84.76%
53	87.48	93.11	5.63	94.34%	118.14	125.46	7.32	85.44%
54	89.36	95.65	6.29	94.60%	120.68	128.89	8.21	86.12%
55	91.24	98.20	6.96	94.86%	123.22	132.32	9.10	86.75%
56	93.12	100.74	7.62	95.09%	125.76	135.75	9.99	87.35%
57	95.00	103.28	8.28	95.31%	128.30	139.18	10.88	87.89%
58	96.88	105.83	8.95	95.52%	130.84	142.61	11.77	88.45%
59	98.76	108.37	9.61	95.70%	133.38	146.04	12.66	88.95%
60	100.64	110.92	10.28	95.88%	135.92	149.47	13.55	89.48%

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

Appendix B
Water Utility Financial Plan

REDOAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

5504003 / DEN

Salt Lake City
Water Rate Study
Capital Improvement Plan

Table B-1

Line No.	Capital Improvements	For the Year Ending June 30											Total Amount
		FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	
1	Treatment Plants	$1,400,000	$300,000	$1,525,000	$2,855,000	$0	$150,000	$8,000,000	$825,000	$3,000,000	$5,370,000	$2,150,000	$25,575,000
2	Master Plan Projects	6,450,000	4,190,000	10,775,000	800,000	0	2,500,000	900,000	9,745,000	750,000	23,965,000	23,357,500	83,432,500
3	Water Service Connections	2,650,000	3,350,000	3,350,000	3,350,000	3,350,000	3,350,000	3,350,000	3,350,000	3,350,000	3,350,000	3,350,000	36,150,000
4	Water Rights & Supply	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	330,000
5	Water Main Replacements	3,411,500	3,521,160	7,838,620	6,500,000	6,750,000	7,000,000	7,500,000	7,650,000	7,900,000	8,115,000	8,400,000	74,586,280
6	Water Main Miscellaneous Projects	1,240,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	19,240,000
7	Storage Reservoirs	600,000	0	100,000	90,000	0	0	0	100,000	0	4,000,000	0	4,890,000
8	Pumping Plants And Pump Houses	677,000	650,000	1,800,000	650,000	50,000	50,000	550,000	1,250,000	1,850,000	50,000	1,050,000	8,627,000
9	Maintenance & Repair Shops	885,000	490,000	200,000	0	0	40,000	0	0	0	40,000	0	1,655,000
10	Landscaping	270,000	30,000	0	0	0	0	0	0	0	450,000	0	750,000
11	Land [1]	2,900,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	12,900,000
12	Distribution Reservoirs	2,150,000	250,000	4,050,000	550,000	550,000	550,000	550,000	550,000	5,550,000	2,550,000	3,550,000	20,850,000
13	Distribution Mains & Hydrants	239,400	200,000	200,000	500,000	300,000	200,000	200,000	200,000	200,000	200,000	200,000	2,639,400
14	Deep Pump Wells	300,000	400,000	750,000	840,000	785,000	820,000	700,000	4,500,000	4,500,000	8,500,000	4,500,000	26,595,000
15	Culverts Flumes & Bridges	550,000	100,000	420,000	150,000	150,000	50,000	300,000	50,000	50,000	50,000	50,000	1,920,000
16	**Total Capital Improvements**	23,752,900	16,311,160	33,838,620	19,115,000	14,765,000	17,540,000	24,880,000	31,050,000	29,980,000	59,470,000	49,437,500	320,140,180
17	**Subtotal Growth CIP**	3,660,000	2,390,000	10,000,000	200,000	0	0	0	9,195,000	13,650,000	30,609,250	29,139,375	98,843,625
18	**Subtotal Non-Growth CIP**	20,092,900	13,921,160	23,838,620	18,915,000	14,765,000	17,540,000	24,880,000	21,855,000	16,330,000	28,860,750	20,298,125	221,296,555
	Capital Outlays												
19	Automobiles & Trucks	1,443,700	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	13,443,700
20	Field Maintenance Equipment - Motive	463,900	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	3,463,900
21	Pump Plant Equipment	327,000	230,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,457,000
22	Treatment Plant Equipment	512,000	175,000	495,000	300,000	365,000	200,000	225,000	200,000	200,000	200,000	225,000	3,097,000
23	Telemetry Equipment	50,000	50,000	250,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	750,000
24	Office Furniture & Equipment	180,000	95,000	150,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	1,065,000
25	Other Non-Motive Equipment	589,800	130,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	1,349,800
26	**Total Capital Outlay**	3,566,400	2,180,000	2,565,000	2,100,000	2,165,000	2,000,000	2,025,000	2,000,000	2,000,000	2,000,000	2,025,000	24,626,400
27	**Total Capital**	$27,319,300	$18,491,160	$36,403,620	$21,215,000	$16,930,000	$19,540,000	$26,905,000	$33,050,000	$31,980,000	$61,470,000	$51,462,500	$344,766,580

(1) Land is a separate line item in the cash flow tables, and thus excluded from the totals in the detailed schedule.

Salt Lake City
Water Rate Study
Capital Improvement Program

Table B-2

Line No.		% Growth	% Non-Growth	For the Year Ending June 30 FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Total
	LAND														
1	WATERSHED PROPERTY [1]	0%	100%	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	11,000,000
2	WASATCH ELECTRIC PROPERTY [1]	0%	100%	1,900,000											1,900,000
	WATER RIGHTS & SUPPLY														
3	WATER STOCK PURCHASES	0%	100%	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	330,000
	MAINTENANCE & REPAIR SHOPS - WIP 51-01301-2772.10														
4	VARIOUS RESTROOM REPLACEMENTS	0%	100%	40,000	40,000				40,000				40,000		160,000
5	SHOPS CONVERSION-ROOF REPLACEMENT	0%	100%	300,000											300,000
6	SHOPS CONVERSION-INTERIOR PIPING	0%	100%	500,000											500,000
7	ROTARY PARK RECONSTRUCTION	0%	100%	45,000											45,000
8	ESCO BUILDING IMPROVEMENTS	0%	100%		200,000	200,000									400,000
9	WASATCH PROPERTY REBUILD	0%	100%		250,000										250,000
10	ARTESIAN BASIN AREA ASPHALT	0%	100%												0
	TREATMENT PLANTS - WIP 51-01301-2772.10														
11	**CITY CREEK**														
12	NEW PLUMBING OF CLARIFIER FOR OVERFLOW	0%	100%	70,000											70,000
13	SEDIMENTATION BASIN ROOF REPAIR	0%	100%	80,000											80,000
14	DRAINAGE AND SLUDGE LINE SEPARATION AND REHAB	0%	100%	200,000											200,000
15	CITY CREEK BIKE TRAIL FROM GUARD STATION TO PLANT (4 MI - 12 FT WIDE)	0%	100%	50,000			300,000								350,000
16	SED BASINS - SEISMIC - COLLECTORS	0%	100%							8,000,000					8,000,000
17	UV SYSTEM	0%	100%										500,000		500,000
18	REPLACE ALL OLD LARGE LINES	0%	100%											500,000	500,000
19	CITY CREEK SLUDGE LINE CIPP	0%	100%			80,000									80,000
20	CITY CREEK - CDAG AND FILTER BUILDING ROOF REPAIRS – MEMBRANE	0%	100%			40,000									40,000
21	CITY CREEK - INTAKE STRUCTURE IMPROVEMENTS	0%	100%			10,000									10,000
22	CITY CREEK - PIPE GALLERY LEAD PAINT MITIGATION AND REPAINTING	0%	100%			150,000									150,000
23	CITY CREEK - FLOCCULATION BASIN INSTRUMENTATION PANEL	0%	100%				25,000								25,000
24	CITY CREEK - CLARIFIER OVERFLOW PIPING MODIFICATIONS	0%	100%				120,000								120,000
25	CITY CREEK - POWER AND TELE. TO DRYING BEDS INC. GATE/CONTROL DEVICES	0%	100%				60,000								60,000
26	FACILITY STUDY		100%		100,000										100,000
27	DRYING BED STUDY AND POTENTIAL CONSTRUCTION	0%	100%				100,000								100,000
	PARLEY'S TREATMENT PLANT														
28	SLUDGE LINE	0%	100%	500,000											500,000
29	DAM SLEEVE VALVE	0%	100%			1,000,000	2,000,000								3,000,000
30	SLUDGE BEDS - LINING & VALVES	0%	100%												0
31	UV SYSTEM	0%	100%										800,000		800,000
32	PRECURSOR/ TASTE & ODOR CONTROL	0%	100%												0
33	5-10 MG FINISHED WATER RESERVOIR - NEW	100%	0%									3,000,000	3,000,000		6,000,000
34	LABORATORY UPGRADE	0%	100%						50,000						50,000
35	MAIN PARKING LOT, BOAT HOUSE ROAD & PARK LOT ASPHALT	0%	100%						50,000						50,000
36	BOAT HOUSE NEW RAMP OR REPLACE OF BOAT LAUNCH SYS. W/ WINCH.	0%	100%												0
37	CONDUIT FROM DAM TO OLD ICB TO PLANT.	0%	100%												0
38	REFURBISH ALL FILTER VALVES	0%	100%			100,000									100,000
39	REPLACE KMNO4 FEEDER	0%	100%			45,000									45,000
40	INSTALL CARBON FEED SYSTEM	0%	100%												0
41	REPLACE ALL POST STORAGE TANK HYPO PLUMBING	0%	100%												0
42	REPLACE STAIRS ON MT. DELL DAM	0%	100%												0
43	NEW I/O AND PLC FOR NEW INST & FLUORIDE AND ALARM SYS	0%	100%												0

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Line No.		% Growth	% Non-Growth	For the Year Ending June 30 FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Total
44	FLOC. BASIN MIXING PADDLE REPLACEMENT AND BAFFLING MODs	0%	100%				250,000								250,000
45	FACILITY STUDY		100%		100,000										100,000
46	SEDIMENTATION BASIN SKIMMER PUMPS AND SYSTEM R&R	0%	100%								500,000				500,000
	BIG COTTONWOOD														
47	BIG COTTONWOOD CHEMICAL FEEDER REPLACMENT	0%	100%												0
48	BIG COTTONWOOD HYPOCHLORINE SYSTEM	0%	100%	500,000											500,000
49	SLUDGE BEDS - LINING & VALVES	0%	100%											900,000	900,000
50	SEISMIC UPGRADE (SEDIMENTATION BASIN)	0%	100%												0
51	BIG COTTONWOOD INTAKE REPLACEMENT	0%	100%											750,000	750,000
52	PLC, I/O & DATA HWY CONVERSION TO ETHERNET AND PLC REPLACE	0%	100%			100,000									100,000
53	REPLACE PANEL VIEW FILTER CNTRLS W/ MANUAL/AUTO SYSTEM	0%	100%										70,000		70,000
54	RELOCATE FILTER GALLERY I/O PANELS	0%	100%						50,000						50,000
55	REFURBISH ALL FILTER VALVES	0%	100%								250,000				250,000
56	FINISHED WATER SAMPLING STATION –	0%	100%								75,000				75,000
57	UV SYSTEM	0%	100%										1,000,000		1,000,000
58	FACILITY STUDY		100%		100,000										100,000
59	MILLCREEK TREATMENT PLANT	0%	100%												0
	PUMPING PLANTS AND PUMP HOUSES - 2720.35														
60	UPGRADE BUILDING STRUCTURES - ONE PER YEAR		100%	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	550,000
61	7000 SOUTH PUMP PLANT #PS0420		100%												0
62	LITTLE WILLOW PUMP STATION EXPANSION	100%	0%	500,000											500,000
63	AUTO GRATE CLEANING SYSTEM FOR PUMP STA. INTAKE - 6200 S.		100%	30,000											30,000
64	UV UPGRADE 6200 SOUTH PUMP STATION		100%				300,000								300,000
65	MOTOR RESEARCH PARK PUMP STATION	0%	100%	12,000											12,000
66	AUXILIARY POWER FOR EAST BENCH PUMP STATION		100%	85,000											85,000
67	OLYMPUS COVE PUMP STATION FROM PARLEY'S COVE - NEW	100%	0%		600,000										600,000
68	NORTH BENCH PUMP STATION - ADDITIONAL PUMPS	50%	50%											1,000,000	1,000,000
69	VICTORY ROAD - ADDITIONAL PUMPS	50%	50%									1,800,000			1,800,000
70	UPPER BOUNDARY SPRINGS		100%			500,000									500,000
71	AUXILIARY POWER – EAST BENCH PRESSURE ZONE		100%								700,000				700,000
72	AUXILIARY POWER – 7800 SOUTH PRESSURE ZONE		100%							500,000					500,000
73	AUXILIARY POWER – CARRIGAN COVE PRESSURE ZONE		100%				25,000								25,000
74	AUXILIARY POWER – GOLDEN HILLS PRESSURE ZONE		100%				25,000								25,000
75	AUXILIARY POWER – 4500 SOUTH PRESSURE ZONE		100%								500,000				500,000
76	MT. OLYMPUS PUMP STATION - FULL BACKUP POWER		100%			500,000									500,000
77	MILITARY PUMP STATION - FULL BACKUP POWER		100%			500,000									500,000
78	OAKHILLLS PUMP STATION - MOTOR CONTROL CENTER		100%			250,000									250,000
79	39TH & BIRCH PUMP STATION - MOTOR CONTROL CENTER		100%				250,000								250,000
	CULVERTS FLUMES & BRIDGES - 2730.02														
80	REPLACE DIVERSION FLUME AT POINT OF MTN/CAMP WILLIAMS		100%	200,000											200,000
81	WILMINGTON DIVERSION		100%	200,000											200,000
82	LITTLE COTTONWOOD/TANNER DIVERSION		100%	100,000											100,000
83	MEASURING DEVICES FOR JSL AND EJ CANALS		100%			70,000									70,000
84	LITTLE COTTONWOOD PARSHAL FLUME		100%							250,000					250,000
85	JORDAN SALT LAKE DUMP AT 13500 SOUTH		100%		50,000	200,000									250,000
86	2100 SOUTH TO 1700 SOUTH		100%			100,000	100,000	100,000							300,000
87	VARIOUS LOCATIONS		100%	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	550,000
	DEEP PUMP WELLS - 2730.04														

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88	UPGRADE BUILDING STRUCTURES - ONE PER YEAR		100%	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,100,000
89	4TH AVENUE WELL IMPROVEMENT		100%	200,000											200,000
90	MICK RILEY & PIPELINES		100%										4,000,000		4,000,000
91	RED BUTTE	100%	0%												0
92	NEW WELLS TO COVER 10 CFS WATER RIGHTS	100%	0%								4,000,000	4,000,000	4,000,000	4,000,000	16,000,000
93	6200 SOUTH REHAB		100%			250,000									250,000
94	FONTAINE BLEU - MOTOR CONTROL CENTER		100%		250,000										250,000
95	FONTAINE BLEU - VFD		100%		50,000										50,000
96	BRITON SPRINGS - VFD		100%				50,000								50,000
97	48TH AND 9TH BOOSTER - VFD		100%				20,000								20,000
98	MILLCREEK WELL - VFD		100%												0
99	EDGEWOOD WELL - VFD		100%				20,000								20,000
100	GREENFIELD VILLAGE WELL - VFD		100%				50,000								50,000
101	NILA WAY WELL - VFD		100%					25,000							25,000
102	NEFFS DRAW - VFD		100%					25,000							25,000
103	WELL14 - VFD		100%					35,000							35,000
104	SUGARHOUSE PARK WELL - VFD		100%						60,000						60,000
105	19TH AND 27TH SOUTH WELL - VFD		100%						60,000						60,000
106	13TH AND 27TH SOUTH WELL - REHAB		100%			200,000									200,000
107	FONTAINE BLEU - REHAB		100%			200,000									200,000
108	BRITON SPRINGS - REHAB		100%				200,000								200,000
109	EDGEWOOD WELL - REHAB		100%				200,000								200,000
110	GREENFIELD VILLAGE WELL - REHAB		100%				200,000								200,000
111	NILA WAY WELL - REHAB		100%					200,000							200,000
112	NEFFS DRAW - REHAB		100%					200,000							200,000
113	WELL 14 - REHAB		100%					200,000							200,000
114	SUGARHOUSE PARK WELL - REHAB		100%						200,000						200,000
115	19TH AND 27TH SOUTH WELL - REHAB		100%						200,000						200,000
116	6200 SOUTH WELL - REHAB		100%						200,000						200,000
117	5TH & 5TH WELL - REHAB		100%							200,000					200,000
118	ELLISON WELL - REHAB		100%							200,000					200,000
119	DYERS INN WELL - REHAB		100%							200,000					200,000
120	ARTESIAN WELL 1 - REHAB		100%								200,000				200,000
121	ARTESIAN WELL 2 - REHAB		100%								200,000				200,000
122	ARTESIAN WELL 1 - REHAB		100%									200,000			200,000
123	ARTESIAN WELL 2 - REHAB		100%									200,000			200,000
124	ARTESIAN WELL 1 - REHAB		100%										200,000		200,000
125	ARTESIAN WELL 2 - REHAB		100%										200,000		200,000
126	ARTESIAN WELL 1 - REHAB		100%											200,000	200,000
127	ARTESIAN WELL 2 - REHAB		100%											200,000	200,000
			100%												
	STORAGE RESERVOIRS - 2730.06		100%												
128	LITTLE DELL FLOW METER	0%	100%	20,000											20,000
129	LITTLE DELL PAINTING OF CONDUIT	0%	100%	500,000											500,000
130	LITTLE DELL GUNITE REPAIR	0%	100%	60,000											60,000
131	MT DELL CONCRETE STUDY	0%	100%	20,000											20,000
132	LITTLE DELL SCADA	0%	100%			100,000					100,000				200,000
133	RED PINE DAM REHAB CORE WALL	0%	100%				90,000								90,000
134	RESURFACE DAM FACE - LAKE MARY	0%	100%												0
135	RESURFACE DAM FACE - MT DELL		100%										4,000,000		4,000,000
136	INSTALL A DIRECT PIPE INTO PARLEYS TP FROM LITTLE DELL	0%	100%												0
137	LAKE MARY REHAB	0%	100%												0

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	DISTRIBUTION RESERVOIRS - 2730.07		100%												
138	PARK RESERVOIR	0%	100%												0
139	MOUNT OLYMPUS, EAST - FULL INTERIOR PAINTING & STRUCTURE	0%	100%												0
140	EASTWOOD RESERVIOR -- 300,000 GAL. - SOUTH TANK	100%	0%												0
141	GRANITE OAKS RESERVIOR	100%	0%	700,000											700,000
142	MILITARY RESERVOIR REPLACEMENT	0%	100%	250,000		4,000,000									4,250,000
143	RESERVOIR INSPECTION OF TEN SITES (CORROSION CNTRL)	0%	100%	50,000											50,000
144	TANK PAINTING AND RESTORATION PROJECT	0%	100%				500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	4,000,000
145	BASKIN RESERVOIR ROOF REPAINTING	0%	100%	800,000											800,000
146	1300 EAST RESERVOIR DEMOLITION	0%	100%	300,000											300,000
147	FT. DOUGLAS SEISMIC UPGRADE	0%	100%										2,000,000		2,000,000
148	STORAGE FOR NORTH WEST QUADRANT	100%	0%									5,000,000			5,000,000
149	7800 S. PRESSURE ZONE - 4.3 MG RESERVOIR	100%	0%											3,000,000	3,000,000
150	UPPER BOUNDARY TANK REPAINTING	0%	100%		200,000										200,000
151	MISCELLANEOUS REPAIRS	0%	100%	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	550,000
	CITY, COUNTY, STATE AND MISC. DRIVEN PROJECTS		100%												
153	RAMBLER RD. (1100 W) - SIGNORA DR TO AMERICAN BEAUTY DR	0%	100%												0
154	1300 SOUTH VIADUCT - 500 WEST TO 700 WEST	0%	100%												0
155	900 EAST - 900 SOUTH TO 2100 SOUTH (8" DOUBLE MAINED - OLD PIPE, 7 BREAKS TOTAL)	0%	100%												0
156	500 EAST - 900 SOUTH TO 1300 SOUTH	0%	100%												0
157	TRAX INTERMODAL HUB	0%	100%												0
158	WESTSIDE RAILROAD REALIGNMENT	0%	100%												0
159	ALPINE PLACE (930 S) - GILMER DRIVE (1120 E) TO CUL-DE-SAC END	0%	100%	21,000											21,000
160	DOUGLAS STREET (1240 E) - 400 SOUTH TO 500 SOUTH	0%	100%												0
161	HARVARD AVE. (1110 S) - 1300 E. TO 80 FT W. OF NORMANDIE CIR.	0%	100%	24,400											24,400
162	HERBERT AVENUE (1045 S) - 200 EAST TO 300 EAST	0%	100%	62,000											62,000
163	PRINCETON AVENUE (1125S) - 700 EAST TO 800 EAST	0%	100%												0
164	YALE AVENUE (1080 S) - 1700 EAST TO 1900 EAST	0%	100%												0
165	YALE AVENUE (1080S) - 700 EAST TO 800 EAST	0%	100%	32,000											32,000
166	YALECREST AVENUE (1080 S) - 1500 EAST TO 1700 EAST	0%	100%												0
167	900 SOUTH - 700 EAST TO 1100 EAST	0%	100%				200,000								200,000
168	700 SOUTH - 4400 WEST TO 5600 WEST	0%	100%				100,000								100,000
169	100 SOUTH - 500 WEST TO 600 WEST	0%	100%					100,000							100,000
170	CALIFORNIA AVENUE (1330 S) - 4800 WEST TO 5600 WEST	0%	100%												0
171	1300 EAST - SOUTH TEMPLE TO 500 SOUTH	0%	100%												0
172	GLADIOLA ST. (3400 W) - 500 SOUTH TO CALIFORNIA AVE. (1330 S)	25%	75%												0
173	1300 SOUTH - GLENDALE DRIVE (1350 W) TO APPROX. 1380 WEST	0%	100%												0
174	WATKINS CONSTRUCTION SHARE OF 20 INCH LINE 5600 WEST	50%	50%												0
175	500 EAST - 1300 SOUTH TO 2100 SOUTH (CED JOB NO. 102038)	0%	100%												0
178	VARIOUS PROJECTS		100%	100,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,100,000
	WATER MAIN MISCELLANEOUS PROJECTS		100%												
177	NEW MAINLINE VALVES - COUNTY	0%	100%	65,000	138,000	138,000	138,000	138,000	138,000	138,000	138,000	138,000	138,000	138,000	1,445,000
176	WATER MAIN REPLACEMENTS	0%	100%	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,100,000
179	DONATED LINES	0%	100%	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,100,000
180	NEW MAINLINE VALVES - CITY	0%	100%	125,000	262,000	262,000	262,000	262,000	262,000	262,000	262,000	262,000	262,000	262,000	2,745,000
181	FIRE HYDRANT REPLACEMENTS	0%	100%	250,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	4,250,000
182	REGULATOR REPLACEMENT	0%	100%	100,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	3,100,000
183	CONTRIBUTIONS BY DEVELOPERS	0%	100%	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	5,500,000

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Line No.		% Growth	% Non-Growth	For the Year Ending June 30 FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Total
	WATER MAIN REPLACEMENTS		100%												
184	SANDPIPER WAY (1370 E) - 1390 EAST TO SPRING LANE (5150 S)	0%	100%												0
185	CREEK ROAD (WILLOW STREAM DRIVE (2105 E) TO APPROX. 3296 EAST)	0%	100%												0
186	G4-3 1200 EAST - MILTON AVE (1595 S) TO LOGAN AVE (1610 S)	0%	100%												0
187	MARMALADE SUDIVISION	0%	100%												0
188	2000 EAST - EVERGREEN AVENUE (TO 2700 SOUTH & TREATMENT	0%	100%												0
189	SOUTH TEMPLE (I-15 TO 900 WEST)	0%	100%												0
190	CARRY OVER PROJECTS		100%	200,000											200,000
191	VARIOUS		100%												0
192	300 WEST - 500 NORTH TO 600 NORTH		100%	325,000											325,000
193	G4-6 500 WEST - 450 NORTH TO 500 NORTH		100%	120,000											120,000
194	G4-6 200 NORTH - 400 WEST TO 500 WEST		100%	250,000											250,000
195	MATHEWS WAY (4115 E) - ZARAHEMLA DRIVE (4215 E) TO CUMORAH DRIVE (4400 S)	0%	100%	120,000											120,000
196	G5-4 BROADMOOR (2640 E) - WASATCH DR. (1920 S) TO 2100 S.	0%	100%	120,000											120,000
197	G5-4 BELAIR DR. (2910 E) - SCENIC DR. (2278 S) TO GLENOAKS DR. (2180 S)	0%	100%	128,000											128,000
198	PARLEY'S POINT	0%	100%	50,000											50,000
199	CREEK ROAD (8200 S) - ROYAL LANE (2400 E) TO APPROX. 3296 E	50%	50%	1,720,000											1,720,000
200	NORTH TEMPLE - REDWOOD ROAD TO ORANGE STREET - DESIGNED	0%	100%	140,500											140,500
201	VARIOUS		100%	238,000											238,000
202	G5-2 BONNEVILLE DRIVE (2700 E) - ST. MARY'S WAY (1200 S) TO OAKILLS WY (1078 S) - DESIGNED	0%	100%		65,400										65,400
203	HUNTSMAN RESEARCH HOSPITAL - HANOVER DRIVE (350 NORTH) TO FORT DOUGLAS LINE	100%	0%		750,000										750,000
204	G5-2 STANBBURY WAY (2554 E) - OQUIRRH DRIVE (1186 S) TO CRESTVIEW DRIVE (1010 S) - DESIGNED	0%	100%		115,200										115,200
205	G5-2 ALTON WAY (2620 E) - OQUIRRH DRIVE (1186 S) TO 1146 SOUTH - DESIGNED	0%	100%		75,960										75,960
206	G5-2 OAKHILLS WAY (2745 E) - CRESTVIEW DRIVE (1010 S) TO ST MARYS WAY (1200 S) - DESIGNED	0%	100%		211,080										211,080
207	G5-2 OQUIRRH DRIVE (1186 S) - ST MARYS WAY (2912 E) TO OAKHILLS WAY (2745 E) - DESIGNED	0%	100%		177,720										177,720
208	G9-1 "I" STREET (600 E) - ALOHA AVENUE (710 N) TO THIRTEENTH AVENUE (650 N)	0%	100%		66,400										68,400
209	G9-1 NORTHCREST DRIVE (816 N) - ALOHA STREET (710 N) TO TERRACE HILLS DRIVE (950 E)	0%	100%		246,000										246,000
210	G9-1 SIXTEENTH AVENUE (820 N) - "J" STREET TO LITTLE VALLEY ROAD (860 E)	0%	100%		213,600										213,600
211	G9-1 17TH AVENUE (850 N) - HILLTOP ROAD (645 E) TO LITTLE VALLEY ROAD (860 E)	0%	100%		262,800										262,800
212	G9-1 18TH AVENUE (900 N) - 670 EAST TO LITTLE VALLEY ROAD (860 E)	0%	100%		199,800										199,800
213	G9-1 "G" STREET (500 E) - THIRTEENTH AVENUE (650 N) TO FOURTEENTH AVENUE (700 N)	0%	100%		40,000										40,000
214	G9-2 DESOTO STREET (45 E) - ZANE AVENUE (530 N) NORTH TO THE END	0%	100%		166,200										166,200
215	G9-2 COLUMBUS STREET (1 E) - GIRARD AVENUE (540 N) NORTH TO THE END	0%	100%		132,000										132,000
216	G9-3 CUMORAH DRIVE (4420 S) - ABINADI ROAD (4160 E) TO HELAMAN CIRCLE (4430 S)	0%	100%		67,200										67,200
217	G9-3 GILEAD WAY (4480 S) - ZARAHEMLA DRIVE (4215 E) TO END OF STREET	0%	100%		170,400										170,400
218	G9-3 ZARAHEMLA DRIVE (4215 S) - CUMORAH DRIVE (4420 E) TO 4490 S)	0%	100%		114,000										114,000
219	G9-5 MACINTOSH LANE (7335 S) - WINESAP ROAD (7330 S) TO RACQUET CLUB DRIVE (3665 E)	0%	100%		210,000										210,000
220	VARIOUS		100%		235,400										235,400
221	G11-4 SANTA ROSA AVENUE (3325 S) - SANTA ROSA DRIVE (3275 E) TO EL SERRITO DRIVE (3425 E)	0%	100%			122,500									122,500
222	G11-4 LOS ALTOS STREET (3370 E) - SANTA ROSA AVENUE (3325 S) TO DEL VERDE AVENUE (3410 S)	0%	100%			92,500									92,500
223	G11-4 PLAZA WAY (3320 E) - SANTA ROSA AVENUE (3325 S) TO APPROX. 3375 SOUTH (8" VAL)	0%	100%			60,000									60,000
224	G11-4 MONZA DRIVE (3580 S) - WASATCH BOULEVARD (3565 E) TO MILLCREST ROAD (3500 E)	0%	100%			63,750									63,750
225	CUMMINGS ROAD (3450 S) - EL SERRITO DRIVE (3425 E) TO VIRGINIA STREET (3470 E)	0%	100%			61,875									61,875
226	VIRGINIA STREET (3470 E) - CUMMINGS ROAD (3450 S) TO MILLCREEK CANYON ROAD (3500 S)	0%	100%			86,250									86,250
227	LAURELCREST STREET (3185 E) - CRAIG DRIVE (3840 S) TO UPLAND DRIVE (3760 S)	0%	100%			137,500									137,500
228	2930 EAST/2955 EAST - FORT UNION BOULEVARD (7000 S) TO 7230 SOUTH	0%	100%			191,250									191,250
229	JONATHON DRIVE (7310 S) - PIPPIN DRIVE (3570 E) TO THE END OF WINESAP CIRCLE	0%	100%			120,750									120,750
230	HOLLY HOCK AVENUE (7160 S) - SAGEBRUSH WAY (3185 E) TO WATERMILL WAY (3230 E)	0%	100%			71,250									71,250
231	WATERMILL WAY (3230 E) - HOLLY HOCK HILL (7160 S) TO END OF WATERMILL CIRCLE	0%	100%			72,450									72,450
232	SUNDRIFT CIRCLE (7230 S) - 2890 EAST TO END OF THE CIRCLE	0%	100%			100,000									100,000
233	3050 EAST - FORT UNION BOULEVARD (7000 S) TO 7070 SOUTH	0%	100%			47,500									47,500
234	NUTMEG STREET (7145 S) - NUTREE DRIVE (3325 E) TO PINE CONE STREET (3250 E)	0%	100%			55,625									55,625

Salt Lake City
Water Rate Study
Capital Improvement Program

Table B-2

Line No.		% Growth	% Non-Growth	For the Year Ending June 30 FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Total
235	DEARBORN STREET (1480 E) - PARKWAY AVENUE (2455 S) TO STRATFORD AVENUE (2560 S)	0%	100%			127,500									127,500
236	BEVERLY STREET (1380 E) - STRATFORD AVENUE (2560 E) TO 2700 SOUTH	0%	100%			127,500									127,500
237	CHADWICK STREET (1420 E) - PARKWAY AVENUE (2455 S) TO STRATFORD AVENUE (2560 S)	0%	100%			126,250									126,250
238	4135 SOUTH/SHANNA STREET - 2700 EAST TO 4140 SOUTH	0%	100%			150,000									150,000
239	OLYMPUS DRIVE (4155 S) - CORAL STREET (2600 E) TO 2700 EAST	0%	100%			82,500									82,500
240	3100 EAST - UPLAND DRIVE (3760 S) TO DEL MAR DRIVE (3825 S)	0%	100%			71,875									71,875
241	EVERGREEN AVENUE (3435 S) - 3170 EAST TO 2890 EAST	0%	100%			218,750									218,750
242	3175 EAST - 3300 SOUTH TO EVERGREEN AVENUE (3435 S)	0%	100%			256,250									256,250
243	CELESTE WAY (3370 S) - 3175 EAST TO EVERGREEN AVENUE (3435 S)	0%	100%			127,500									127,500
244	APOLLO DRIVE (4135 S)/4100 SOUTH - WASATCH BOULEVARD (3565 E) TO JUPITER DRIVE (3735 E)	0%	100%			172,500									172,500
245	ACHILLES DRIVE (3565 E) - APOLLO DRIVE (4135 S) TO HERMES DRIVE (4175 S)	0%	100%			93,750									93,750
246	DIANA WAY (3535 E) - APOLLO DRIVE (4135 S) TO HERMES DRIVE (4175 S)	0%	100%			101,250									101,250
247	MARS WAY (3610 E) - APOLLO DRIVE (4135 S) TO HERMES DRIVE (4175 S)	0%	100%			76,250									76,250
248	3075 EAST - 3900 SOUTH TO 3960 SOUTH	0%	100%			62,500									62,500
249	3960 SOUTH - 3030 EAST T 3075 EAST	0%	100%			40,000									40,000
250	3030 EAST - 3960 SOUTH TO THE END OF THE STREET	0%	100%			26,250									26,250
251	LISA DRIVE (3215 E) - DELSA DRIVE (3990 S) TO OLYMPIC WAY (3250 E)	0%	100%			120,000									120,000
252	OLYMPIC WAY (3250 E) - SPLENDER WAY (3315 E) TO HAMPTON COURT (4080 S)	0%	100%			76,250									76,250
253	WANDA WAY (4475 S) - PEACH STREET (2910 E) TO THE END OF THE STREET	0%	100%			190,000									190,000
254	APPLE BLOSSOM LANE (4600 S) - 2760 EAST TO PEACH STREET) 2810 E	0%	100%			120,000									120,000
255	7590 SOUTH - 3395 EAST TO 3500 EAST	0%	100%			88,750									88,750
256	DEL VERDE AVENUE (3410 S) - TERRACE VIEW DRIVE TO 3175 EAST	0%	100%			59,375									59,375
257	3170 EAST - EVERGREEN AVENUE (3435 S) TO MILLCREEK CANYON ROAD (3500 S)	0%	100%			104,375									104,375
258	3125 EAST - EVERGREEN AVENUE (3435 S) TO END OF THE STREET	0%	100%			67,500									67,500
259	BARBEY ORIVE (2800 S) - 2570 EAST TO 2700 EAST	0%	100%			128,750									128,750
260	WAINWRIGHT ROAD (2605 E) - BARSEY DRIVE (2800 S) TO 2900 SOUTH	0%	100%			120,000									120,000
261	DEVEREAUX WAY (2550 E) - WAINWRIGHT ROAD (2605 S) TO 2900 SOUTH	0%	100%			98,750									98,750
262	2570 EAST - HERITAGE WAY (2760 S) TO BARBEY DRIVE (2800 S)	0%	100%			37,500									37,500
263	4" WATER MAIN APPROX. 2572 EAST - BARBEY DRIVE TO HERITAGE WAY	0%	100%			35,400									35,400
264	HERITAGE WAY (2760 S) - 2520 EAST TO APPROX. 2575 EAST	0%	100%			39,000									39,000
265	2900 SOUTH - DEVEREAUX WAY (2550 E) TO 2700 EAST	0%	100%			90,000									90,000
266	2880 SOUTH - 2870 EAST TO APPROX. 2730 EAST/SOUTH TO LOUISE AVENUE (2020 S)	0%	100%			156,250									156,250
267	2960/2965 SOUTH - 2790 EAST TO GRACE STREET (3100 E)	0%	100%			262,500									262,500
268	U OF U - 22" WSP IN FRONT OF OSBORNE HALL NORTH THROUGH PARKING LOT	0%	100%			250,000									250,000
269	VIRGINIA STREET (1345 E) - CRESTLINE CIRCLE (350 N) TO FIFTH AVENUE (250 N)	0%	100%			90,000									90,000
270	BISCAYNE DRIVE (2975 E) - BENGAL BOULEVARD (7800 S) TO OAKVIEW CIRCLE (7725 S)	0%	100%			80,600									80,600
271	AVONDALE DRIVE (3700 E) - 7650 SOUTH TO APPROX. 3623 EAST (END OF EXTENSION)	0%	100%			115,700									115,700
272	CREST OAK DRIVE (3660 E) - BROCKBANK DRIVE (4435 S) TO EAST CLIFF DRIVE (4385 S)	0%	100%			141,180									141,180
273	PIN OAK (3680 E) - OAKVIEW DRIVE (4275 S) TO SPRUCE DRIVE (4360 S)	0%	100%			79,300									79,300
274	PARK HILL ORIVE (3565 E) - EASTOAKS DRIVE (4450 S) TO FORTUNA WAY (4725 S)	0%	100%			49,400									49,400
275	FORTUNA WAY (4725 S) - PARK HILL DRIVE (3565 E) TO BROCKBANK ORIVE (3680 E)	0%	100%			157,300									157,300
278	200 EAST - 400 SOUTH TO 500 SOUTH (EAST SIDE)	0%	100%			86,450									86,450
277	MICHIGAN AVENUE (980 S) - 1300 EAST TO 1500 EAST	0%	100%			212,550									212,550
278	HIDDEN OAKS DRIVE (3370 E) - RUSSELL PARK DRIVE (8650 S) NORTH TO THE END OF THE STREET	0%	100%			163,800									163,800
279	GRAND OAK DRIVE (3485 E) - RUSSELL PARK ROAD (8350 S) TO 8740 SOUTH	0%	100%			98,150									98,150
280	SUPERNAL WAY (3815 E) - TOP OF THE WORLD DRIVE (3875 E) TO LORA LEE CIRCLE (8340 S)	0%	100%			105,300									105,300
281	2500 EAST - CHALET ROAD (8030 S) TO 8200 SOUTH	0%	100%			174,200									174,200
282	MORNINGSIDE DRIVE (4060 S) / 3075 E - DELSA DRIVE (3990 S) TO PINETREE DRIVE (2960 E)	0%	100%			117,000									117,000
283	ENCHANTED HILLS DRIVE (7510 S) - MAGIC HILLS DRIVE (3450 E), WEST TO END OF THE MAIN	0%	100%			221,000									221,000
284	MOUNTAIN ESTATES DRIVE (3395 E) - BENGAL SOULEVARD (7800 S) TO 7835 SOUTH	0%	100%			143,000									143,000
285	COUNTRY MANOR ROAD (7620 S) - 3500 EAST TO COUNTRY HOLLOW DRIVE (7510 S)	0%	100%			150,800									150,800
286	2700 EAST - 4215 SOUTH TO MAURICE DRIVE (4345 S)	0%	100%			189,800									189,800

Salt Lake City
Water Rate Study
Capital Improvement Program

Table B-2

Line No.		% Growth	% Non-Growth	For the Year Ending June 30 FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Total
287	4280 SOUTH (WELL HOUSE MAIN) - GLENNA ORIVE (2575 E) - TO 2700 EAST	0%	100%			52,000									52,000
288	VARIOUS		100%			222,865									222,865
289	VARIOUS WATER LINES		100%				6,500,000	6,750,000	7,000,000	7,500,000	7,650,000	7,900,000	8,115,000	8,400,000	59,815,000
			100%												
	MASTER PLAN PROJECTS		100%												
290	UPGRADE SYSTEM FOR FIRE PROTECTION - BIG COTTONWOOD	25%	75%	6,400,000											6,400,000
291	UPGRADE SYSTEM FOR FIRE PROTECTION - GREEN DITCH	25%	75%		4,000,000										4,000,000
292	300 EAST - 3300 SOUTH TO 3900 SOUTH - INSTALL MANHOLES ONLY		100%	50,000											50,000
293	PIPELINE FROM TERMINAL RESERVOIR TO 300 EAST ALONG I-80 (CONSULTANT)	100%	0%										6,000,000	6,500,000	12,500,000
294	PIPELINE FROM VICTORY RESERVOIR TO ENSIGN RESERVOIR	100%	0%								4,000,000				4,000,000
295	300 EAST - 3300 SOUTH TO 3900 SOUTH		100%			725,000									725,000
296	ARTESIAN BASIN LINES - MARCUS RESERVOIR TO ARTESIAN BASIN (CIPP LINER)		100%			50,000			2,500,000						2,550,000
297	VICTORY ROAD LINES - PUMP STATION TO ENSIGN DOWNS (18")	100%	0%										3,000,000		3,000,000
296	MILLCREEK TREATMENT PLANT LINE - TANK TO WASATCH BLVD (24")	100%	0%									750,000			750,000
299	CITY CREEK TREATMENT LINE TO MORRIS RESERVOIR (12" OR 16" MATCH EXISTING)	25%	75%				800,000								800,000
300	NORTH BENCH LINE TO PERRY'S HOLLOW (12") ????		100%											400,000	400,000
301	900 EAST - 5600 SOUTH TO APPROX. THREE FOUNTAINS DRIVE (4990 S)	25%	75%											500,000	500,000
302	5600 SOUTH - 850 EAST TO 900 EAST	25%	75%											57,500	57,500
303	HIGHLAND DRIVE - 3300 SOUTH TO 4500 SOUTH		100%							900,000				900,000	1,800,000
304	1300 EAST - VINE STREET (6085 S) TO 6400 SOUTH	25%	75%										279,000		279,000
305	LOWER PARLEY'S CONDUIT - PARLEY'S WAY TO APPROX. 1300 S. (SLIP EXISTING)	25%	75%								3,400,000				3,400,000
306	PCE TREATMENT PROJECT		100%		150,000										150,000
307	TREATMENT OF PCE AT WELLS		100%								2,000,000				2,000,000
308	FOOTHILL DRIVE (2100 E) - 900 SOUTH TO 1300 SOUTH		100%												0
309	WASTEWATER REUSE	100%	0%			10,000,000							13,000,000		23,000,000
310	TERMINAL RESERVOIR - 300 EAST TO 3400 WEST	100%	0%											15,000,000	15,000,000
311	BENGAL BOULEVARD (7600 S) - 2300 EAST TO BRIGHTON WAY (16" PIPE)	100%	0%										1,100,000		1,100,000
312	FT. UNION - 7000 SO PUMP STATION TO MCKELL COURT. - 12" PIPELINE	75%	25%										213,000		213,000
313	BRIGHTON WAY, 7800 SO. TO SILVER LAKE DRIVE - 12" PIPELINE	75%	25%										183,000		183,000
314	BENGAL BLVD. 7800 S PUMP STATION TO BRIGHTON WAY - 16" PIPELINE	75%	25%										190,000		190,000
315	700 NORTH - EAST CAPITOL BLVD. TO EAST CAPITOL STREET - 12" MAIN	100%	0%		40,000										40,000
316	TETON TO MT. OLYMPUS PUMP STATION	100%	0%								345,000				345,000
			100%												
	WATER SERVICE CONNECTIONS - 2730.09		100%												
317	LARGE METER REPLACEMENTS		100%	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	4,400,000
318	SERVICE LINE REPLACEMENTS		100%	1,200,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000	19,200,000
319	SMALL METER PROGRAM		100%	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	3,850,000
320	NEW SERVICE CONNECTIONS		100%	200,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	3,200,000
321	WATER METER REPLACEMENT PROGRAM		100%	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	5,500,000
			100%												
	LANDSCAPING - 2730.20		100%												
322	CITY CREEK AND ADA RESTROOM PAVING PROJECT		100%												0
323	BOAT RAMP & PIPE CULVER WORK LITTLE DELL		100%												0
324	ASPHALT SHOP YARD		100%	170,000									250,000		420,000
325	ASPHALT EMPLOYEE PARKING LOT		100%	100,000									200,000		300,000
326	ASPHALT PARLEYS PARKING LOT		100%		30,000										30,000
327	11TH AVENUE DEMONSTRATION GARDEN		100%												0
328	ADMINISTRATION BUILDING - CONSERVATION IMPROVEMENTS		100%												0
329	**TOTAL CAPITAL IMPROVEMENTS**			**23,752,900**	**16,311,160**	**33,838,620**	**19,115,000**	**14,765,000**	**17,540,000**	**24,880,000**	**31,050,000**	**29,980,000**	**59,470,000**	**49,437,500**	**320,140,180**
330	**CAPITAL OUTLAYS**														
331	AUTOMOBILES & TRUCKS	0%	100%	1,443,700	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	13,443,700

Salt Lake City
Water Rate Study
Capital Improvement Program

Table B-2

Line No.		% Growth	% Non-Growth	For the Year Ending June 30 FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Total
332	FIELD MAINT EQUIPMENT - MOTIVE	0%	100%	463,900	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	3,463,900
333	PUMP PLANT EQUIPMENT	0%	100%	327,000	230,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,457,000
334	TREATMENT PLANT EQUIPMENT	0%	100%	512,000	175,000	495,000	300,000	385,000	200,000	225,000	200,000	200,000	200,000	225,000	3,097,000
335	TELEMETRY EQUIPMENT	0%	100%	50,000	50,000	250,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	750,000
336	OFFICE FURNITURE & EQUIPMENT	0%	100%	180,000	95,000	150,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	1,065,000
337	OTHER NON-MOTIVE EQUIPMENT	0%	100%	589,800	130,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	1,349,800
338	**SubTotal - Capital Outlays**			**3,566,400**	**2,180,000**	**2,565,000**	**2,100,000**	**2,165,000**	**2,000,000**	**2,025,000**	**2,000,000**	**2,000,000**	**2,000,000**	**2,025,000**	**24,626,400**
339	**Total Capital Improvement Program**			**$27,319,300**	**$18,491,160**	**$36,403,820**	**$21,215,000**	**$16,930,000**	**$19,540,000**	**$26,905,000**	**$33,050,000**	**$31,980,000**	**$61,470,000**	**$51,462,500**	**$344,766,580**

	Weighted Percentages												
	Growth	Non-Growth	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Total
340		80.5%	17,192,900	12,921,160	22,836,620	17,915,000	13,765,000	16,540,000	23,880,000	20,855,000	15,330,000	27,860,750	19,298,125	208,396,555
341	19.5%		3,660,000	2,390,000	10,000,000	200,000	0	0	0	9,195,000	13,650,000	30,609,250	29,139,375	98,843,625
342	#########	##########	**$20,852,900**	**$15,311,160**	**$32,838,620**	**$18,115,000**	**$13,765,000**	**$16,540,000**	**$23,880,000**	**$30,050,000**	**$28,980,000**	**$58,470,000**	**$48,437,500**	**$307,240,180**
343			$17,192,900	$13,306,795	$24,229,492	$19,576,204	$15,492,629	$19,174,393	$28,513,969	$25,649,019	$19,419,585	$36,351,959	$25,935,068	244,844,012
344			$3,660,000	$2,461,700	$10,609,000	$218,545	$0	$0	$0	$11,308,690	$17,291,412	$39,938,129	$39,160,883	124,648,359
345			**$20,852,900**	**$15,770,495**	**$34,838,492**	**$19,794,750**	**$15,492,629**	**$19,174,393**	**$28,513,969**	**$36,957,710**	**$36,710,997**	**$76,290,088**	**$65,095,950**	**$369,492,371**

Salt Lake City
Water Rate Study
Operations and Maintenance Expense

Table B-3

Line No.	Cost Center	Projected Growth	Budgeted FY 2007-08	Requested FY 2008-09	Projected FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
	5101 Water Supply													
1	00100 Canal Maint	3.0%	$540,333	$547,660	$564,090	$581,012	$598,443	$616,396	$634,888	$653,935	$673,553	$693,759	$714,572	$736,009
2	00200 Source Of Water	3.0%	256,894	265,540	273,506	281,711	290,163	298,868	307,834	317,069	326,581	336,378	346,469	356,864
3	Subtotal		797,227	813,200	837,596	862,724	888,606	915,264	942,722	971,003	1,000,133	1,030,137	1,061,042	1,092,873
	5103 Water Power & Pumping													
4	00300 Deep Wells	3.0%	440,661	451,197	464,733	478,675	493,035	507,826	523,061	538,753	554,915	571,563	588,710	606,371
5	00400 Booster Pumping	3.0%	1,145,256	1,152,304	1,186,873	1,222,479	1,259,154	1,296,928	1,335,838	1,375,911	1,417,189	1,459,704	1,503,495	1,548,600
6	00500 Irrigation Pumping	3.0%	128,020	128,023	131,864	135,820	139,894	144,091	148,414	152,866	157,452	162,176	167,041	172,052
7	Subtotal		1,713,957	1,731,524	1,783,470	1,836,974	1,892,083	1,948,846	2,007,311	2,067,530	2,129,556	2,193,443	2,259,246	2,327,023
	5105 Water Purificetion													
8	00600 Watershed Patrol	3.0%	1,000,896	1,012,651	1,043,031	1,074,321	1,106,551	1,139,748	1,173,940	1,209,158	1,245,433	1,282,796	1,321,280	1,360,918
9	00700 City Creek	3.0%	780,846	832,124	857,088	882,800	909,284	936,563	964,680	993,600	1,023,408	1,054,110	1,085,733	1,118,305
10	00800 Parleys	3.0%	1,051,752	1,066,698	1,119,299	1,152,878	1,187,464	1,223,088	1,259,781	1,297,574	1,336,501	1,376,597	1,417,894	1,460,431
11	00900 Big Cottonwood	3.0%	1,067,716	1,200,720	1,236,742	1,273,644	1,312,059	1,351,421	1,391,964	1,433,722	1,476,734	1,521,036	1,566,667	1,613,667
12	01000 Cross Connection-Sample	3.0%	162,904	190,458	198,172	202,057	208,119	214,362	220,793	227,417	234,239	241,266	248,504	255,960
13	01100 Metropolitian Water	3.0%	16,085,693	16,621,893	17,120,550	17,634,166	18,163,191	18,708,087	19,269,330	19,847,410	20,442,832	21,056,117	21,887,800	22,338,434
14	01200 Little Dell Dam	3.0%	27,700	27,700	28,531	29,387	30,269	31,177	32,112	33,075	34,068	35,090	36,142	37,226
15	01800 Water Quality	3.0%	561,151	651,481	671,025	691,156	711,891	733,248	755,245	777,902	801,239	825,277	850,035	875,536
16	03500 Little Dell Recreation	3.0%	104,042	93,200	95,996	98,876	101,842	104,897	108,044	111,286	114,624	118,063	121,605	125,253
17	Subtotal		20,882,900	21,716,925	22,368,433	23,039,486	23,730,670	24,442,590	25,175,868	25,931,144	26,709,078	27,510,351	28,335,661	29,185,731
	5107 Transmission & Distribution													
18	01300 Engineering	3.0%	590,406	633,178	852,173	671,739	691,891	712,847	734,027	756,048	778,729	802,091	826,154	850,938
19	01400 Distribution	3.0%	2,371,503	2,488,315	2,562,964	2,639,853	2,719,049	2,800,620	2,884,639	2,971,178	3,060,314	3,152,123	3,246,687	3,344,087
20	01500 Computer	3.0%	263,431	276,619	284,918	293,465	302,289	311,337	320,677	330,298	340,206	350,413	360,925	371,753
21	01600 Emergency/ GIS In 2001	3.0%	618,678	667,674	687,704	708,335	729,585	751,473	774,017	797,238	821,155	845,789	871,163	897,298
22	01700 Maintenance	3.0%	3,226,860	3,315,763	3,415,236	3,517,693	3,623,224	3,731,920	3,843,878	3,959,194	4,077,970	4,200,309	4,326,319	4,456,108
23	Subtotal		7,070,878	7,381,549	7,602,995	7,831,085	8,066,018	8,307,998	8,557,238	8,813,956	9,078,374	9,350,725	9,631,247	9,920,185
	5109 Shops & Meint													
24	02000 Work Order Office	3.0%	218,000	221,244	227,881	234,716	241,759	249,012	256,482	264,177	272,102	280,265	288,673	297,333
25	02100 Storehouse	3.0%	275,327	291,730	300,482	309,498	316,781	328,345	338,195	348,341	358,791	369,555	380,641	392,081
26	02200 General Maint	3.0%	530,648	546,439	562,832	579,717	597,109	615,022	633,473	652,477	672,051	692,213	712,979	734,368
27	02300 Fleet Maint	3.0%	676,427	815,900	840,377	865,588	891,556	918,303	945,852	974,227	1,003,454	1,033,558	1,064,564	1,096,501
28	02400 Meter Repair	3.0%	498,131	495,188	510,044	525,345	541,105	557,338	574,059	591,280	609,019	627,289	846,108	665,491
29	02500 Elect. & Telmetry	3.0%	371,406	402,436	414,509	426,944	439,753	452,945	466,534	480,530	494,946	509,794	525,088	540,840
30	03000 Safety Program	3.0%	214,562	206,690	214,951	221,399	226,041	234,882	241,929	249,187	256,662	264,362	272,293	280,462
31	Subtotal		2,784,503	2,981,627	3,071,078	3,163,208	3,258,104	3,355,847	3,456,523	3,560,219	3,667,025	3,777,036	3,890,347	4,007,057
	5111 Water Customer Service													
32	02600 Meter Reading	3.0%	910,104	907,634	934,663	962,909	991,796	1,021,550	1,052,197	1,083,762	1,116,275	1,149,764	1,184,257	1,219,784
33	02700 Billing	3.0%	1,093,576	1,211,600	1,248,154	1,285,599	1,324,187	1,363,692	1,404,808	1,446,953	1,490,361	1,535,072	1,581,124	1,628,558
34	02800 Customer Service	3.0%	1,218,899	1,216,840	1,253,139	1,290,733	1,329,455	1,369,339	1,410,419	1,452,732	1,496,314	1,541,203	1,587,439	1,635,062
35	02900 Accounting	3.0%	559,352	613,067	631,459	650,403	689,915	690,012	710,713	732,034	753,995	776,615	799,913	823,911
36	Subtotal		3,779,731	3,949,141	4,067,815	4,189,644	4,315,333	4,444,793	4,578,137	4,715,481	4,856,945	5,002,654	5,152,733	5,307,315
	5113 Water Admin													
37	03100 Adminstration	3.0%	113,816	117,932	121,470	125,114	126,867	132,734	136,716	140,817	145,041	149,393	153,875	158,491
38	03200 Gnral Oprtions	3.0%	1,729,461	1,850,585	1,906,103	1,963,288	2,022,184	2,082,850	2,145,335	2,209,695	2,275,986	2,344,286	2,414,594	2,487,031
39	03300 Cntrcts & Const	3.0%	464,006	499,587	514,575	530,012	545,912	562,290	579,158	596,533	614,429	632,862	651,848	671,403
40	03400 Development & Review	3.0%	263,866	308,644	317,903	327,440	337,264	347,382	357,803	368,537	379,593	390,981	402,710	414,792
41	92090 Olympic Costs	3.0%	0	0	0	0	0	0	0	0	0	0	0	0
42	3600 Water Conservetion	3.0%	143,098	146,374	150,765	155,288	159,947	164,745	169,688	174,778	180,022	185,422	190,965	196,714
43	Subtotal		2,754,289	2,923,122	3,010,816	3,101,140	3,194,174	3,290,000	3,388,700	3,490,381	3,595,071	3,702,923	3,814,011	3,928,432

Salt Lake City
Water Rate Study
Operations and Maintenance Expense

Table B-3

Line No.	Cost Center	Projected Growth	Budgeted FY 2007-08	Requested FY 2008-09	Projected FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
	Other Operating Expenses													
44	2921.01 Contrib. To General Fund	3.0%	660,000	650,000	669,500	669,585	710,273	731,581	753,528	776,134	799,418	823,401	848,103	873,546
45	2995 Payment In Lieu Of Taxes	3.0%	320,700	371,000	382,130	393,594	405,402	417,564	430,091	442,993	456,283	469,972	484,071	498,593
46	2542 Uncollectable Accts	3.0%	0	0	0	0	0	0	0	0	0	0	0	0
47	Subtotal		980,700	1,021,000	1,051,630	1,083,179	1,115,674	1,149,144	1,183,619	1,219,127	1,255,701	1,293,372	1,332,173	1,372,139
48	**Total O&M Expense**		**$40,764,185**	**$42,518,088**	**$43,793,631**	**$45,107,440**	**$46,460,663**	**$47,854,483**	**$49,290,117**	**$50,768,821**	**$52,291,885**	**$53,860,642**	$55,476,461	**$57,140,755**

Salt Lake City
Water Rate Study
Existing Debt

Table B-4

Line No.	Description	Percent Growth	FY 2008-09	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
	2005 Series - Water Only												
1	Principal		$970,000	$1,015,000	$1,065,000	$1,100,000	$1,145,000	$1,100,000	$1,200,000	$1,225,000	$1,285,000	$0	$0
2	Interest		474,975	441,025	395,350	352,750	297,750	240,500	185,500	125,500	64,250	0	0
3	Subtotal	20.0%	1,444,975	1,456,025	1,460,350	1,452,750	1,442,750	1,340,500	1,385,500	1,350,500	1,349,250	0	0
	2008 Series - Water Only												
4	Principal		715,000	720,000	745,000	765,000	790,000	930,000	965,000	995,000	1,030,000	900,000	945,000
5	Interest		549,905	567,688	542,488	520,138	497,188	473,488	443,263	411,900	374,588	323,088	278,088
6	Subtotal	0.0%	1,264,905	1,287,688	1,287,488	1,285,138	1,287,188	1,403,488	1,408,263	1,406,900	1,404,588	1,223,088	1,223,088
	Bond Note Expense												
7	Total Debt Service		$2,709,880	$2,743,713	$2,747,838	$2,737,888	$2,729,938	$2,743,988	$2,793,763	$2,757,400	$2,753,838	$1,223,088	$1,223,088
8	Total Growth		288,995	291,205	292,070	290,550	288,550	268,100	277,100	270,100	269,850	-	-
9	Total Non-Growth		2,420,885	2,452,508	2,455,768	2,447,338	2,441,388	2,475,888	2,516,663	2,487,300	2,483,988	1,223,088	1,223,088

Salt Lake City
Water Rate Study
New Debt

Table B-5

Line No.	Description	Estimate FY 2009-10	Projected FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
	Bond Sizing										
1	Amount Funded per CIP	$2,500,000	$17,900,000	$3,150,000	$0	$600,000	$9,350,000	$700,000	$0	$13,000,000	$0
2	Amount to be Funded (Bundled)	0	33,000,000	0	6,000,000	6,000,000	0	12,500,000	12,500,000	60,000,000	0
3	Issuance Cost, 1%	0	330,000	0	60,000	60,000	0	125,000	125,000	600,000	0
4	Total Bond Size	$0	$33,330,000	$0	$6,060,000	$6,060,000	$0	$12,625,000	$12,625,000	$60,600,000	$0
	Debt Service Payment (1)										
	Impact Fee Subfund										
5	Bond Size	$0	$9,090,000	$0	$0	$0	$0	$12,625,000	$12,625,000	$60,600,000	$0
6	FY 2009-10 Series		$0	$0	$0	$0	$0	$0	$0	$0	$0
7	FY 2010-11 Series			768,252	768,252	768,252	768,252	768,252	768,252	768,252	768,252
8	FY 2011-12 Series				0	0	0	0	0	0	0
9	FY 2012-13 Series					0	0	0	0	0	0
10	FY 2013-14 Series						0	0	0	0	0
11	FY 2014-15 Series							0	0	0	0
12	FY 2015-16 Series								1,067,016	1,067,016	1,067,016
13	FY 2016-17 Series									1,067,016	1,067,016
14	FY 2017-18 Series										5,121,677
15	**Subtotal**	$0	$0	$768,252	$768,252	$768,252	$768,252	$768,252	$1,835,268	$2,902,284	$8,023,961
	Operations Subfund										
16	Bond Size	$0	$24,240,000	$0	$6,060,000	$6,060,000	$0	$0	$0	$0	$0
17	FY 2009-10 Series		$0	$0	$0	$0	$0	$0	$0	$0	$0
18	FY 2010-11 Series			2,048,671	2,048,671	2,048,671	2,048,671	2,048,671	2,048,671	2,048,671	2,048,671
19	FY 2011-12 Series				0	0	0	0	0	0	0
20	FY 2012-13 Series					512,168	512,168	512,168	512,168	512,168	512,168
21	FY 2013-14 Series						512,168	512,168	512,168	512,168	512,168
22	FY 2014-15 Series							0	0	0	0
23	FY 2015-16 Series								0	0	0
24	FY 2016-17 Series									0	0
25	FY 2017-18 Series										0
26	**Subtotal**	$0	$0	$2,048,671	$2,048,671	$2,560,839	$3,073,006	$3,073,006	$3,073,006	$3,073,006	$3,073,006
27	**Total Debt Service**	$0	$0	$2,816,922	$2,816,922	$3,329,090	$3,841,258	$3,841,258	$4,908,274	$5,975,290	$11,096,967

(1) Repayment begins 1-year after issuance.

Salt Lake City
Water Rate Study
Cash Flow Projection
Operations Subfund

Table B-6

Line No.	Description	Estimate FY 2009-10	Projected FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
	Operating Revenues										
1	Water Sales [1]	$52,161,284	$56,334,186	$60,840,921	$66,316,604	$72,285,099	$77,345,056	$82,759,210	$88,552,354	$94,751,019	$101,383,590
2	Other Income	2,308,000	2,126,425	2,166,878	2,166,878	2,166,878	2,166,878	2,166,878	2,166,878	2,166,878	2,221,050
3	Interest Income	300,000	0	206,542	0	176,366	254,488	100,576	292,781	478,923	0
4	**Subtotal**	54,769,284	58,460,611	63,214,342	68,483,482	74,628,343	79,766,421	85,026,664	91,012,013	97,396,820	103,604,640
	Operating Expenditures										
5	Metropolitan Water Assessment	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892
6	Metropolitan Water Purchases	10,224,000	11,169,000	11,752,000	12,349,000	12,960,000	13,585,000	14,244,000	14,934,000	15,660,000	16,402,000
7	Operating Expenditures	26,547,739	26,916,548	27,686,771	28,483,591	29,308,225	30,161,929	31,025,993	31,904,750	32,794,569	33,716,863
8	**Subtotal**	43,793,631	45,107,440	46,460,663	47,854,483	49,290,117	50,768,821	52,291,885	53,860,642	55,476,461	57,140,755
9	**Net Operating Income**	10,975,653	13,353,172	16,753,679	20,629,000	25,338,226	28,997,601	32,734,778	37,151,371	41,920,359	46,463,885
	Other Cash Inflows										
10	Grants & Other Related	905,000	905,000	905,000	905,000	905,000	905,000	905,000	905,000	905,000	905,000
11	Other Contributions	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
12	Bond Proceeds	0	24,000,000	0	6,000,000	6,000,000	0	0	0	0	0
13	**Subtotal**	955,000	24,955,000	955,000	6,955,000	6,955,000	955,000	955,000	955,000	955,000	955,000
	Other Expenditures										
14	Capital Outlays	2,180,000	2,565,000	2,100,000	2,165,000	2,000,000	2,025,000	2,000,000	2,000,000	2,050,000	2,101,250
15	Capital Improvements	13,308,795	24,229,492	19,576,204	15,492,629	19,174,393	28,513,969	25,649,019	19,419,585	36,351,959	25,935,066
16	Watershed Purchases	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
17	Intrafund Transfer TO Impact Fee Subfund	0	0	0	0	0	0	0	0	0	20,000,000
18	Debt Service - Existing (3)	2,452,508	2,455,768	2,447,338	2,441,388	2,475,888	2,516,663	2,487,300	2,483,988	1,223,088	1,223,088
19	Debt Service - New	0	0	2,048,671	2,048,671	2,560,839	3,073,006	3,073,006	3,073,006	3,073,006	3,073,006
20	**Subtotal**	18,941,302	30,250,259	27,172,213	23,147,687	27,211,119	37,128,638	34,209,326	27,976,579	43,698,053	53,332,410
21	**Increase (Decrease) in Cash Balance**	(7,010,649)	8,057,912	(9,463,534)	4,436,313	5,082,107	(7,176,037)	(519,547)	10,129,792	(822,694)	(5,913,525)
22	**Beginning of Year Cash Balance**	8,848,063	1,837,413	9,895,326	431,792	4,868,105	9,950,212	2,774,175	2,254,627	12,384,420	11,561,725
23	**End of Year Cash Balance**	$1,837,413	$9,895,326	$431,792	$4,868,105	$9,950,212	$2,774,175	$2,254,627	$12,384,420	$11,561,725	$5,648,201
	Revenue Increases										
24	Annual Increase	7.0%	7.0%	7.0%	8.0%	8.0%	6.0%	6.0%	6.0%	6.0%	6.0%
25	Cumulative Increase	7.0%	14.5%	22.5%	32.3%	42.9%	51.5%	60.6%	70.2%	80.4%	91.2%
26	Cash Reserve Ratio (Target: 10%-20%) (3)	4.2%	21.9%	0.9%	10.2%	20.2%	5.5%	4.3%	23.0%	20.8%	9.9%
27	Debt Service Coverage (with Impact Fees)	5.0	5.8	4.1	4.2	4.6	4.8	5.4	6.1	7.0	6.5
28	Debt Service Coverage (w/o Impact Fees)	4.0	4.9	3.5	3.7	4.2	4.4	5.0	5.6	6.5	6.5

(1) Water Sales Revenue through FY 2013-14 is based on the FY 2008-09 Budget
(2) Scheduled debt based on Bank documents titled 'SLC Water & Sewer Outstanding Debt Service'
(3) Line 22/ Line 8

Salt Lake City
Water Rate Study
Cash Flow Projection
Impact Fee Subfund

Table B-7

Line No.	Description	Budget FY 2008-09	Estimate FY 2009-10	Projected FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
	Revenues											
1	Impact Fees	$500,000	$2,644,220	$2,666,028	$2,696,014	$2,723,274	$2,747,808	$2,777,794	$2,799,602	$2,835,040	$2,862,300	$2,889,560
2	Interest Income	0	50,000	0	57,780	123,100	197,062	275,389	127,140	109,698	0	0
3	Intrafund Loan from Operations	0	0	0	0	0	0	0	0	0	0	20,000,000
4	**Subtotal**	500,000	2,694,220	2,666,028	2,753,794	2,846,374	2,944,870	3,053,183	2,926,742	2,944,738	2,862,300	22,889,560
	Other Cash Inflows											
5	Other Contributions	0	0	0	0	0	0	0	0	0	0	0
6	Bond Proceeds	0	0	9,000,000	0	0	0	0	12,500,000	12,500,000	60,000,000	0
7	**Subtotal**	0	0	9,000,000	0	0	0	0	12,500,000	12,500,000	60,000,000	0
	Expenditures											
8	Capital Improvements, Growth	3,660,000	2,461,700	10,609,000	218,545	0	0	0	11,308,690	17,291,412	39,938,129	39,160,883
9	Debt Service - Existing	288,995	291,205	292,070	290,550	288,550	268,100	277,100	270,100	269,850	0	0
10	Debt Service - New	0	0	0	768,252	768,252	768,252	768,252	768,252	1,835,268	2,902,284	8,023,961
11	**Subtotal**	3,948,995	2,752,905	10,901,070	1,277,347	1,056,802	1,036,352	1,045,352	12,347,042	19,396,529	42,840,412	47,184,844
12	**Increase (Decrease) in Cash Balance**	(3,448,995)	(58,685)	764,958	1,476,447	1,789,573	1,908,519	2,007,832	3,079,700	(3,951,791)	20,021,888	(24,295,284)
13	**Beginning of Year Cash Balance**	3,448,995	0	(58,685)	706,273	2,182,720	3,972,293	5,880,811	7,888,643	10,968,343	7,016,551	27,038,439
14	**End of Year Cash Balance**	$0	($58,685)	$706,273	$2,182,720	$3,972,293	$5,880,811	$7,888,643	$10,968,343	$7,016,551	$27,038,439	$2,743,155
15	**Total Fund End of Year Cash Balance**	$8,848,063	$1,778,728	$10,601,599	$2,614,512	$8,840,397	$15,831,023	$10,662,817	$13,222,970	$19,400,971	$38,600,164	$8,391,355

Salt Lake City
Water Rate Study
Cash Flow Projection
Total Fund

Table B-8

Line No.	Description	Estimate FY 2009-10	Projected FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
	Operating Revenues										
1	Water Sales	$52,161,284	$56,334,186	$60,840,921	$66,316,604	$72,285,099	$77,345,056	$82,759,210	$88,552,354	$94,751,019	$101,383,590
2	Other Income	2,308,000	2,126,425	2,166,878	2,166,878	2,166,878	2,166,878	2,166,878	2,166,878	2,166,878	2,221,050
3	Interest Income	350,000	0	264,322	123,100	373,428	529,877	227,716	402,479	478,923	0
4	**Subtotal**	54,819,284	58,460,611	63,272,122	68,606,583	74,825,405	80,041,810	85,153,803	91,121,711	97,396,820	103,604,640
	Operating Expenditures										
5	Metropolitan Water Assessment	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892	7,021,892
6	Metropolitan Water Purchases	10,224,000	11,169,000	11,752,000	12,349,000	12,960,000	13,585,000	14,244,000	14,934,000	15,660,000	16,402,000
7	Operating Expenditures	26,547,739	26,916,548	27,686,771	28,483,591	29,308,225	30,161,929	31,025,993	31,904,750	32,794,569	33,716,863
8	**Subtotal**	43,793,631	45,107,440	46,460,663	47,854,483	49,290,117	50,768,821	52,291,885	53,860,642	55,476,461	57,140,755
9	**Net Operating Income**	11,025,653	13,353,172	16,811,459	20,752,100	25,535,288	29,272,990	32,861,918	37,261,069	41,920,359	46,463,885
	Other Cash Inflows										
10	Impact Fees	2,644,220	2,666,028	2,696,014	2,723,274	2,747,808	2,777,794	2,799,602	2,835,040	2,862,300	2,889,560
11	Grants & Other Related	905,000	905,000	905,000	905,000	905,000	905,000	905,000	905,000	905,000	905,000
12	Other Contributions	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
13	Bond Proceeds	0	33,000,000	0	6,000,000	6,000,000	0	12,500,000	12,500,000	60,000,000	0
14	**Subtotal**	3,599,220	36,621,028	3,651,014	9,678,274	9,702,808	3,732,794	16,254,602	16,290,040	63,817,300	3,844,560
	Other Expenditures										
15	Capital Outlays	2,180,000	2,565,000	2,100,000	2,165,000	2,000,000	2,025,000	2,000,000	2,000,000	2,050,000	2,101,250
16	Capital Improvements	15,770,495	34,838,492	19,794,750	15,492,629	19,174,393	28,513,969	36,957,710	36,710,997	76,290,088	65,095,950
17	Watershed Purchases	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
18	Debt Service - Existing (1)	2,743,713	2,747,838	2,737,888	2,729,938	2,743,988	2,793,763	2,757,400	2,753,838	1,223,088	1,223,088
19	Debt Service - New	0	0	2,816,922	2,816,922	3,329,090	3,841,258	3,841,258	4,908,274	5,975,290	11,096,967
20	**Subtotal**	21,694,207	41,151,329	28,449,559	24,204,489	28,247,471	38,173,989	46,556,367	47,373,108	86,538,465	80,517,254
21	**Increase (Decrease) in Cash Balance**	(7,069,334)	8,822,870	(7,987,087)	6,225,885	6,990,625	(5,168,205)	2,560,153	6,178,001	19,199,193	(30,208,809)
22	**Beginning of Year Cash Balance**	8,848,063	1,778,728	10,601,599	2,614,512	8,840,397	15,831,023	10,662,817	13,222,970	19,400,971	38,600,164
23	**End of Year Cash Balance**	$1,778,728	$10,601,599	$2,614,512	$8,840,397	$15,831,023	$10,662,817	$13,222,970	$19,400,971	$38,600,164	$8,391,355
	Revenue Increases										
24	Annual Increase	7.0%	7.0%	7.0%	8.0%	8.0%	6.0%	6.0%	6.0%	6.0%	6.0%
25	Cumulative Increase	7.0%	14.5%	22.5%	32.3%	42.9%	51.5%	60.6%	70.2%	80.4%	91.2%
	Performance Measures										
26	Cash Reserve Ratio (Target: 10%-20%) (2)	4.1%	23.5%	5.6%	18.5%	32.1%	21.0%	25.3%	36.0%	69.6%	14.7%
27	Debt Service Coverage (with Impact Fees)	5.0	5.8	4.1	4.2	4.6	4.8	5.4	6.1	7.0	6.5
28	Debt Service Coverage (w/o Impact Fees)	4.0	4.9	3.5	3.7	4.2	4.4	5.0	5.6	6.5	6.5

(1) Scheduled debt based on Bank documents titled 'SLC Water & Sewer Outstanding Debt Service'
(2) Line 23 / Line 8
(3) Net Operating Income divided by total Debt Service.

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

Appendix C
Water Cost of Service Analysis

REDOAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

5504003 / DEN

Salt Lake City
Water Rate Study
Revenue Requirements

Table C-1
Feb-2009

Line No.	Expenditures	Cash Basis	Utility Basis
1	**Gross Operations & Maintenance Costs**	$43,793,631	$43,793,631
	Adjustments - Deductions		
2	Grants & Other Related	905,000	905,000
3	Other Sources	50,000	50,000
4	Interest Income	300,000	300,000
5	Other Income	2,308,000	2,308,000
6	Use of Cash Balance	6,623,014	6,623,014
7	**Adjusted O&M**	33,607,616	33,607,616
	Capital Costs		
8	Return Adjustment		
9	Depreciation Expense		6,768,656
10	Capital Expenditures	16,101,160	
11	Debt Service	2,452,508	
12	Return on Rate Base		17,263,001
13	**Subtotal**	18,553,668	24,031,657
14	**Net Revenue Requirement**	$52,161,284	$57,639,273

Salt Lake City
Water Rate Study
Cost Centers

Table C-2

Line No.	Cost Center	Projected Fiscal Year 2009-2010
	5101 Water Supply	
1	00100 Canal Maint	$564,090
2	00200 Source Of Water	273,506
3	Subtotal	837,596
	5103 Water Power & Pumping	
4	00300 Deep Wells	464,733
5	00400 Booster Pumping	1,186,873
6	00500 Irrigation Pumping	131,864
7	Subtotal	1,783,470
	5105 Water Purification	
8	00600 Watershed Patrol	1,043,031
9	00700 City Creek	857,088
10	00800 Parleys	1,119,299
11	00900 Big Cottonwood	1,236,742
12	01000 Cross Connection-Sample	196,172
13	01100 Metropolitian Water	10,098,658
14	01100 Metropolitian Capacity Assessment	7,021,892
15	01200 Little Dell Dam	28,531
16	01800 Water Quality	671,025
17	03500 Little Dell Recreation	95,996
18	Subtotal	22,368,433

Salt Lake City
Water Rate Study
Cost Centers

Table C-3

Line No.	Cost Center	Projected Fiscal Year 2009-2010
	5107 Transmission & Distribution	
1	01300 Engineering	652,173
2	01400 Distribution	2,562,964
3	01500 Computer	284,918
4	01600 Emergency / GIS	687,704
5	01700 Maintenance	3,415,236
6	Subtotal	7,602,995
	5109 Shops & Maint	
7	02000 Work Order Office	227,881
8	02100 Storehouse	300,482
9	02200 General Maint	562,832
10	02300 Fleet Maint	840,377
11	02400 Meter Repair	510,044
12	02500 Elect. & Telmetry	414,509
13	03000 Safety Program	214,951
14	Subtotal	3,071,076
	5111 Water Customer Service	
15	02600 Meter Reading	934,863
16	02700 Billing	1,248,154
17	02800 Customer Service	1,253,139
18	02900 Accounting	631,459
19	Subtotal	4,067,615

Salt Lake City
Water Rate Study
Cost Centers

Table C-4

Line No.	Cost Center	Projected Fiscal Year 2009-2010
	5113 Water Admin	
1	03100 Adminstration	121,470
2	03200 Gnral Oprtions	1,906,103
3	03300 Cntrcts & Const	514,575
4	03400 Development & Review	317,903
6	3600 Water Conservation	150,765
7	Subtotal	3,010,816
	Other Operating Expenses	
8	2921.01 Contrib. To General Fund	669,500
9	2995 Payment In Lieu Of Taxes	382,130
10	2542 Uncollectable Accts	0
11	Subtotal	1,051,630
12	**Grand Total**	**43,793,631**

Line No.	Description	Assets	Annual Depreciation	Period Allocations: Average Day Demand	Period Allocations: Maximum Day Demand	Period Allocations: Maximum Hour Demand	Allocated Costs: Average Day Demand	Allocated Costs: Maximum Day Demand	Allocated Costs: Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service
	Land											
1	Land	$9,722,158	0	1	0	0	$9,342,994	$0	$0			$379,164
2	Rights of Way	23,190	0	1	0	0	22,285	0	0			904
3	Water Rights	9,595,285	0	1	0	0	9,221,069	0	0			374,216
4	Canals	814,255	0	0	1	1	0	541,627	240,872			31,756
5	Total Land	20,154,888	0				18,566,348	541,627	240,872	0	0	786,041
	Buildings											
6	Treatment Plants	37,717,137	536,754	1	1	0	15,870,282	20,375,887	0			1,470,968
7	Pump Plants	3,215,711	60,094	0	1	1	0	2,139,031	951,268			125,413
8	Residences	63,183	796	1	1	0	26,586	34,133	0			2,464
9	Maintenance & Repair Shops	3,254,817	69,361	1	0	0	3,127,879	0	0			126,938
10	**Total Buildings**	44,250,849	667,005				19,024,746	22,549,052	951,268	0	0	1,725,783
	Improvements other than Buildings											
11	Culver, Plumes, & Bridges	2,158,962	40,122	0	1	1	0	1,436,101	638,661			84,200
12	Artesian Wells	96,222	710	0	1	1	0	64,005	28,464			3,753
13	Deep Pump Wells	4,125,610	128,999	0	1	1	0	2,744,279	1,220,433			160,899
14	Water Conduits & Supply Lines	33,420,994	344,136	1	1	1	11,250,071	14,443,989	6,423,515			1,303,419
15	Water Storage Reservoirs	4,112,917	41,771	1	0	0	3,921,416	0	0			191,501
16	Water Distribution Reservoirs	21,469,742	403,017	0	1	1	0	14,281,271	6,351,151			837,320
17	Distribution Mains & Hydrants	110,558,799	1,454,971	1	1	1	33,343,330	42,809,570	19,038,225	11,055,880		4,311,793
18	Water Service Connections	45,963,125	1,466,496	1	1	1	15,471,964	19,864,486	8,834,113			1,792,562
19	Landscaping	673,422	9,734	1	0	0	673,422	0	0			0
20	Drinking Fountains	25,794	68	1	0	0	25,794	0	0			0
21	Capitalized Interest	10,306,820	199,155	1	0	0	9,904,854	0	0			401,966
22	**Total Improvements**	232,912,407	4,089,180				74,590,851	95,643,702	42,534,562	11,055,880	0	9,087,412
	Equipment											
23	Automobiles & Trucks	6,258,877	523,175	1	1	1	2,192,345	2,814,756	1,251,775			0
24	Field Maintenance Equipment - Motive	1,855,445	172,584	1	1	1	649,921	834,435	371,089			0
25	Pump Plant Equipment	2,185,114	100,193	0	1	1	0	1,453,497	646,398			85,219
26	Treatment Plant Equipment	5,704,851	266,344	1	1	1	1,920,349	2,465,540	1,096,472			222,489
27	Telemetering Equipment	1,740,119	39,472	1	0	0	1,672,255	0	0			67,865
28	Office Equipment & Furniture	1,238,062	70,018	1	0	0	1,238,062	0	0			0
29	Other Equipment	2,541,546	183,687	1	0	0	2,541,546	0	0			0
30	**Total Equipment**	21,524,014	1,355,474				10,214,478	7,568,229	3,365,734	0	0	375,573

Line No.	Description	Assets	Annual Depreciation	Period Allocations: Average Day Demand	Period Allocations: Maximum Day Demand	Period Allocations: Maximum Hour Demand	Allocated Costs: Average Day Demand	Allocated Costs: Maximum Day Demand	Allocated Costs: Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service
	Construction Work in Progress											
1	Work in Process Buildings	731,235		1	1	1	246,146	316,027	140,543			28,518
2	Work in Process Improvements	2,917,726		1	1	1	982,156	1,260,992	560,787			113,791
3	WIP Pump Plant Equipment	24,587		0	1	1	0	16,355	7,273			959
4	WIP Treatment Plant	51,712		1	1	1	17,407	22,349	9,939			2,017
5	WIP Telemetry	0		1	0	0	0	0	0			0
6	WIP Furniture & Equipment	0		1	0	0	0	0	0			0
7	WIP Other Non-Motive	0		1	1	1	0	0	0			0
8	Capitalized Interest	181,273		1	1	1	61,020	78,343	34,841			7,070
9	**Total Work in Process**	3,906,532	0				1,306,728	1,694,066	753,383	0	0	152,355
10	**Total**	$322,748,690	$6,111,659				$123,723,152	$127,996,675	$47,845,819	$11,055,880	$0	$12,127,164
11	Percent Allocation					100.0%	38.3%	39.7%	14.8%	3.4%	0.0%	3.8%
12	**Accumulated Depreciation**	$86,110,779					28,370,389	34,026,399	13,254,239	7,407,776	0	3,051,975
13	**Net Assets**	$236,637,911					$95,352,763	$93,970,276	$34,591,580	$3,648,103	$0	$9,075,189

Salt Lake City
Water Rate Study
Asset Allocation
Balance 6/30/2008

Line No.	Description	Assets	Annual Depreciation	Period Allocations: Average Day Demand	Period Allocations: Maximum Day Demand	Period Allocations: Maximum Hour Demand	Allocated Costs: Average Day Demand	Allocated Costs: Maximum Day Demand	Allocated Costs: Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service
1	Annual Depreciation %	2.52%										
2	Average Life	40 years										
3												
4	**Asset Additions less WIP**	318,842,157										

Ratios for Allocations

System Ratios:	1.00	2.28	2.85
Incremental Ratio:	1.00	1.28	0.57
System Cost Percent Allocations:	35.0%	45.0%	20.0%

Line No.		Fiscal Year 2007-08	Projected Fiscal Year 2008-09	Projected Fiscal Year 2009-10
5	**Beginning Net Assets**	$236,637,911	$236,637,911	$253,743,759
6	Capital Outlays	0	3,566,400	2,180,000
7	Capital Improvement	0	17,192,900	12,921,160
8	Watershed Purchases	0	2,900,000	1,000,000
9	Assets, Subtotal	236,637,911	260,297,211	268,844,919
10	Depreciation, 2.79% average	0	6,553,452	**6,768,656**
11	Rate Base	$236,637,911	$253,743,759	$262,076,263

	Fiscal Year 2009-10
Test Year Depreciation	**$6,768,656**
Average Rate Base	$250,819,311

Salt Lake City
Water Rate Study
Depreciation Allocation
Balance 6/30/2008

Line No.	Description	Accumulated Depreciation	Allocated Depreciation: Average Day Demand	Allocated Depreciation: Maximum Day Demand	Allocated Depreciation: Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service
	Land							
1	Land	$0	$0	$0	$0	$0	$0	$0
2	Rights of Way		0	0	0			0
3	Water Rights		0	0	0			0
4	Canals		0	0	0			0
5	Total Land	0	0	0	0	0	0	0
	Buildings							
6	Treatment Plants	7,770,311	3,269,522	4,197,747	0			303,042
7	Pump Plants	1,075,190	0	715,196	318,061			41,932
8	Residences	46,314	19,487	25,020	0			1,806
9	Maintenance & Repair Shops	1,571,724	1,510,427	0	0			61,297
10	**Total Buildings**	10,463,539	4,799,436	4,937,963	318,061	0	0	408,078
	Improvements Other than Buildings							
11	Culver, Plumes, & Bridges	431,163	0	286,802	127,546			16,815
12	Artesian Wells	89,046	0	59,232	26,342			3,473
13	Deep Pump Wells	2,217,721	0	1,475,187	656,043			86,491
14	Water Conduits & Supply Lines	9,613,404	3,236,034	4,154,751	1,847,696			374,923
15	Water Storage Reservoirs	955,414	910,929	0	0			44,485
16	Water Distribution Reservoirs	8,067,150	0	5,366,117	2,386,414			314,619
17	Distribution Mains & Hydrants	21,165,076	4,529,743	5,815,746	2,586,372	7,407,776		825,438
18	Water Service Connections	15,237,552	5,129,217	6,585,413	2,928,658			594,265
19	Landscaping	102,475	102,475	0	0			0
20	Drinking Fountains	25,794	25,794	0	0			0
21	Capitalized Interest	2,529,672	2,431,015	0	0			98,657
22	**Total Improvements**	60,434,467	16,365,207	23,743,247	10,559,071	7,407,776	0	2,359,166

Salt Lake City
Water Rate Study
Depreciation Allocation
Balance 6/30/2008

Line No.	Description	Accumulated Depreciation	Allocated Depreciation: Average Day Demand	Allocated Depreciation: Maximum Day Demand	Allocated Depreciation: Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service
	Equipment							
1	Automobiles & Trucks	4,618,961	1,617,919	2,077,250	923,792			0
2	Field Maintenance Equipment - Motive	817,931	286,503	367,842	163,586			0
3	Pump Plant Equipment	1,951,635	0	1,298,191	577,330			76,114
4	Treatment Plant Equipment	3,706,546	1,247,686	1,601,906	712,398			144,555
5	Telemetering Equipment	1,642,625	1,578,563	0	0			64,062
6	Office Equipment & Furniture	1,116,258	1,116,258	0	0			0
7	Other Equipment	1,358,817	1,358,817	0	0			0
8	**Total Equipment**	15,212,773	7,205,746	5,345,189	2,377,107	0	0	284,731
	Construction Work in Progress							
9	Work in Process Buildings		0	0	0			0
10	Work in Process Improvements		0	0	0			0
11	WIP Pump Plant Equipment		0	0	0			0
12	WIP Treament Plant		0	0	0			0
13	WIP Telemetry		0	0	0			0
14	WIP Furniture & Equipment		0	0	0			0
15	WIP Other Non-Motive		0	0	0			0
16	Capitalized Interest		0	0	0			0
17	**Total Work in Process**	0	0	0	0			
18	**Total**	**$86,110,779**	**$28,370,389**	**$34,026,399**	**$13,254,239**	**$7,407,776**	**$0**	**$3,051,975**
19	Percent of Total	100.0%	32.9%	39.5%	15.4%	8.6%	0.0%	3.5%

Line No.	Description	System Allocations (1) Average Day Demand	Maximum Day Demand	Maximum Hour Demand
1	**MHD/MDD**			1.25
	Demands - mgd			
2	2000-01	98.17	222.63	278.29
3	2001-02	93.35	205.80	257.25
4	2002-03	82.41	193.98	242.48
5	2003-04	85.34	181.47	226.84
6	2004-05	78.83	180.04	225.05
7	2005-06	87.16	190.36	237.95
8	2006-07	89.28	190.36	237.95
9	**Average**	**87.79**	**194.95**	**243.69**
	Ratios			
10	2000-01	1.00	2.27	2.83
11	2001-02	1.00	2.20	2.76
12	2002-03	1.00	2.35	2.94
13	2003-04	1.00	2.13	2.66
14	2004-05	1.00	2.28	2.85
15	2005-06	1.00	2.18	2.73
16	2006-07	1.00	2.13	2.67
17	**Average**	**1.00**	**2.22**	**2.78**
18	**System Ratios Used (FY2004-05):**	**1.00**	**2.28**	**2.85**
19	**Incremental Ratio:**	**1.00**	**1.28**	**0.57**
20	**Incremental %:**	**35.03%**	**44.97%**	**20.00%**

(1) Factors from 2006-2007 Statistical Report, page 41.

Line No.	Description	System Allocations: Average Day Demand	Maximum Day Demand	Maximum Hour Demand	*Customer Costs*: Meters & Services	Billing & Collecting	Fire Protection Service
	5101 Water Supply						
1	00100 Canal Maint	0	1	0	0	0	1
2	00200 Source Of Wtr	1	1	0	0	0	1
	5103 Water Power & Pumping						
3	00300 Deep Wells	0	1	1	0	0	1
4	00400 Booster Pmpng	0	1	1	0	0	1
5	00500 Irrgtion Pmpng	0	1	0	0	0	1
	5105 Water Purification						
6	00600 Watershed Patrol	1	0	0	0	0	1
7	00700 City Creek	1	1	0	0	0	1
8	00800 Parleys	1	1	0	0	0	1
9	00900 Big Cottonwood	1	1	0	0	0	1
10	01000 Cross Connection-Sample	1	1	0	0	0	1
11	01100 Metropolitian Water	1	0	0	0	0	1
12	01100 Metropolitian Capacity Assessment	0	1	1	0	0	1
13	01200 Little Dell Dam	0	1	0	0	0	1
14	01800 Water Quality	1	1	0	0	0	1
15	03500 Little Dell Recreation	1	1	0	0	0	1
	5107 Transmission & Distribution						
16	01300 Engineering	1	0	0	0	0	1
17	01400 Distribution	1	1	1	0	0	1
18	01500 Computer	1	0	0	0	0	1
19	01600 Emergency / GIS	1	0	0	0	0	1
20	01700 Maintenance	0	1	1	0	0	1

Line No.	Description	System Allocations: Average Day Demand	Maximum Day Demand	Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service
	5109 Shops & Maintenance						
1	02000 Wrk Ordr Office	1	0	0	0	0	0
2	02100 Storehouse	1	0	0	0	0	0
3	02200 General Maint	1	0	0	0	0	0
4	02300 Fleet Maint	1	0	0	0	0	0
5	02400 Meter Repair	0	0	0	1	0	0
6	02500 Elect & Telmtry	1	0	0	0	0	1
7	03000 Safety Program	1	0	0	0	0	0
	5111 Water Customer Service						
8	02600 Meter Reading	0	0	0	0	1	0
9	02700 Billing	0	0	0	0	1	0
10	02800 Customer Serv	0	0	0	0	1	0
11	02900 Accounting	0	0	0	0	1	0
	5113 Water Administration						
12	03100 Administration	0	0	0	0	1	0
13	03200 Gnral Oprtions	1	1	1	0	1	0
14	03300 Cntrcts & Const	0	0	0	0	1	0
15	03400 Development & Review	0	0	0	0	1	0
17	3600 Water Conservation	0	0	0	0	1	0
	Other Operating Expenses						
18	2921.01 Contr To General Fund	1	1	1	0	0	1
19	2995 Pmnt In Lieu Of Taxes	1	1	1	0	0	1
20	2542 Uncollectable Accts	1	1	1	0	0	0

Service Category Allocation Percentages

Line No.	Demand Allocation Combinations	Total	Base: Average Day	Extra Capacity: Maximum Day	Extra Capacity: Maximum Hour
1	ADD/MDD/MHD	100.0%	35.0%	45.0%	20.0%
2	MDD/MHD	100.0%	0.0%	69.2%	30.8%
3	ADD	100.0%	100.0%	0.0%	0.0%
4	ADD/MDD	100.0%	43.8%	56.2%	0.0%
5	MDD	100.0%	0.0%	100.0%	0.0%
6	MHD	100.0%	0.0%	0.0%	100.0%
7	ADD/MHD	100.0%	63.7%	0.0%	36.3%

Cash Basis Allocation

			Capital Allocation Factors					
			Base	Extra Capacity		Customer Costs		Fire
	Description	Total	Average Day	Maximum Day	Maximum Hour	Meters & Services	Billing & Collecting	Protection Service
8	O&M Cost Factors	100%	41.6%	30.0%	10.2%	1.2%	14.0%	3.0%
9	Capital Expenditures	100%	38.3%	39.7%	14.8%	3.4%	0.0%	3.8%
10	Debt Service	100%	38.3%	39.7%	14.8%	3.4%	0.0%	3.8%

Utility Basis Allocation

			Capital Allocation Factors					
			Base	Extra Capacity		Customer Costs		Fire
	Description	Total	Average Day	Maximum Day	Maximum Hour	Meters & Services	Billing & Collecting	Protection Service
11	O&M Cost Factors	100%	41.6%	30.0%	10.2%	1.2%	14.0%	3.0%
12	Rate Base	100%	38.3%	39.7%	14.8%	3.4%	0.0%	3.8%
13	Depreciation Expense	100%	32.9%	39.5%	15.4%	8.6%	0.0%	3.5%
14	***Total Weighted Allocation Factors***		39.6%	33.6%	11.9%	2.6%	9.0%	3.3%
15	*Base/Extra Capacity Proportions*		44.8%	55.2%				

Fire Protection Cost Factors

All Categories excluding Storage	3.9%
Storage	4.7%

National Board of Fire Underwriters

16,762	gallons per minute fire fighting requirement
60	minutes
10	hours to stop fire
10,057,164	gallons per day capacity
216,000,000	gallons per day system capacity
4.7%	

G = 1020 sqrt(P) x (1-0.01x sqrt(P)) (1)

factor	population in 1000s
1020	330

G = gallons per minute = 16,761.9

(1) From Guidelines for Determining Fire Flow Requirements, AWWA.

Salt Lake City
Water Rate Study
Cost of Capital

Table C-15

Line No.	Description	Amount	Weight	Calculated Return	Calculated Weighted ROR	Policy Adjusted Return	Policy Adjusted Weighted ROR
1	Debt	$24,905,000	11.1%	4.50%	0.50%	4.50%	0.50%
2	* Equity	199,147,644	88.9%	10.04%	8.92%	8.11%	7.20%
3	Total	$224,052,644	100.0%		9.42%		7.70%

* Based on allowed return on equity for large water utilities.

Weighted Cost of Debt

	Bond Series	Debt	Weight	Rate	Weighted Cost of Debt
4	2005	$10,105,000	40.6%	4.89%	1.99%
5	2008	14,800,000	59.4%	4.23%	2.51%
6	Total	$24,905,000	100.0%		4.50%

	Date	Series 2005 Principal	Total Outstanding	Coupon
7	02/01/09	$970,000	$10,105,000	4.70%
8	02/01/10	1,015,000	9,135,000	4.83%
9	02/01/11	1,065,000	8,120,000	4.87%
10	02/01/12	1,100,000	7,055,000	5.00%
11	02/01/13	1,145,000	5,955,000	5.00%
12	02/01/14	1,100,000	4,810,000	5.00%
13	02/01/15	1,200,000	3,710,000	5.00%
14	02/01/16	1,225,000	2,510,000	5.00%
15	02/01/17	1,285,000	1,285,000	5.00%
16	02/01/18	0	0	0.00%
17	02/01/19	0	0	0.00%
18		**Average Cost**	**$10,105,000**	**4.89%**

	Date	Series 2008 Principal	Total Outstanding	Coupon
	02/01/09	$715,000	$14,800,000	3.72%
	02/01/10	720,000	14,085,000	4.03%
	02/01/11	745,000	13,365,000	4.06%
	02/01/12	765,000	12,620,000	4.12%
	02/01/13	790,000	11,855,000	4.19%
	02/01/14	930,000	11,065,000	4.28%
	02/01/15	965,000	10,135,000	4.37%
	02/01/16	995,000	9,170,000	4.49%
	02/01/17	1,030,000	8,175,000	4.58%
	02/01/18	900,000	7,145,000	4.52%
	02/01/19	945,000	6,245,000	4.45%
	02/01/20	1,000,000	5,300,000	4.44%
	02/01/21	1,000,000	4,300,000	4.43%
	02/01/22	1,055,000	3,300,000	4.50%
	02/01/23	1,100,000	2,245,000	4.50%
	02/01/24	1,145,000	1,145,000	4.50%
	Average Cost		**$14,800,000**	**4.23%**

Return on Equity

	Company Name	Decision Resolution Number	Rate of Return	Return on Equity
25	Southern California Water	06-01-025	9.35%	9.80%
26	Valencia	07-06-024	9.57%	10.19%
27	California American	07-08-030	9.69%	10.00%
28	California American	March 25, 2008	9.96%	10.15%
29	**Average**		**9.64%**	**10.04%**

Source: California Public Utilities Commission

Line No.	Revenue Requirement		
1	Utility Basis	$57,639,273	
2	Cash Basis	52,161,264	
3	Difference	$5,477,989	Adjustment for Cash Needs Revenue

Utility Return on Rate Base

		Average Day	Maximum Day	Maximum Hour	Meters	Fire Protection	Total
4	Rate Base	$85,888,805	$88,855,492	$33,214,642	$7,675,009	$8,418,696	$224,052,644
5	Rate of Return	7.70%	7.70%	7.70%	7.70%	7.70%	
6		$6,617,634	$6,846,214	$2,559,150	$591,351	$648,651	$17,263,001

Rate Base Allocation

		Average Day	Maximum Day	Maximum Hour	Fire Protection
7	Inside City	72.5%	65.8%	71.1%	63.3%
8	Outside City	27.5%	34.2%	28.9%	36.7%
9	Exchange	0.0%	0.0%	0.0%	0.0%
10	Total	100.0%	100.0%	100.0%	100.0%

		Average Day	Maximum Day	Maximum Hour	Meters	Fire Protection	Total	
11	Inside City	$62,226,939	$58,466,591	$23,609,590	$5,375,600	$5,330,867	$155,009,588	69.2%
12	Outside City	23,661,866	30,388,901	9,605,052	$2,299,409	3,087,829	69,043,057	30.8%
13	Exchange	0	0	0	0	0	0	0.0%
14	Total	$85,888,805	$86,855,492	$33,214,642	$7,675,009	$8,418,696	$224,052,644	
							$207,742,668	

		Average Day	Maximum Day	Maximum Hour	Meters	Fire Protection	Total
15	Inside City	$62,226,939	$58,466,591	$23,609,590	$5,375,600	$5,330,667	$155,009,588
16	Outside City	23,661,866	30,388,901	9,605,052	2,299,409	3,087,829	69,043,057
17	Total	$85,888,805	$86,855,492	$33,214,642	$7,675,009	$8,418,696	$224,052,644

Return on Rate Base

	Area	Average Day	Maximum Day	Maximum Hour	Meters	Fire Protection	Total	
18	Inside City	$4,794,515	$4,504,784	$1,819,092	$414,184	$410,737	$11,943,312	$13,079,416
19	Outside City	1,823,120	2,341,430	740,058	177,167	237,914	5,319,689	6,321,052
20	Total	$6,617,634	$6,846,214	$2,559,150	$591,351	$648,651	$17,263,001	

21	City Adjustment	(5,477,989)
22	Net Adjusted Return on Rate Base	$11,785,012
23	Inside City	$6,465,323
24	Outside City	$5,319,689
25	Total	$11,785,012
26	Inside City Adjusted ROR	4.17%
27	Outside City Adjusted ROR	7.70%

Adjusted Rate of Return

Item	Description		Amount
1	Utility Basis Revenue Requirement		$57,639,273
2	Cash Basis Revenue Requirement		52,161,284
3	Difference, Cash Needs Adjustment Amount		$5,477,989
4			
5	Rate Base		$224,052,644
6	Rate of Return		7.70%
7	Utility Return on Rate Base (Items 6 x Item 5)		$17,263,001
8			
9	**Rate Base Allocation**	(a)	(b)
10	Inside City	69.2%	$155,009,588
11	Outside City	30.8%	69,043,057
12	Total	100.0%	$224,052,644
13			
14	**Return on Rate Base**		
15	Inside City (Item 10b x Item 6)		$11,943,312
16	Outside City		5,319,689
17	Total Utility Return on Rate Base (Item 7)		17,263,001
18	Adjustment for Cash Needs Revenue		(5,477,989)
19	Net Adjusted Return on Rate Base		$11,785,012
20			
21	**Inside City Adjusted Rate of Return**		
22	Inside City Return on Rate Base		$6,465,323
23	Inside City Rate Base		$155,009,588
24	Adjusted ROR (Item 22 / Item 23)		4.17%
25	Outside City		$5,319,689
26	Outside City Rate Base		$69,043,057
27	Adjusted ROR (Item 26 / Item 27)		7.70%

Line No.	Description	Projected 2009-2010	Allocated Costs: Average Day Demand	Maximum Day Demand	Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service	Reallocation Public Fire Protection Service	Total Cost of Service
	5101 Water Supply									
1	00100 Canal Maint	$564,090	$0	$542,090	$0	$0	$0	$22,000	$0	
2	00200 Source of Wtr	273,506	115,084	147,756	0	0	0	10,667	0	
3	Subtotal	837,596	115,084	689,846	0	0	0	32,666	0	837,596
	5103 Water Power & Pumping									
4	00300 Deep Wells	464,733	0	309,132	137,477	0	0	18,125	0	
5	00400 Booster Pmpng	1,186,873	0	789,486	351,099	0	0	46,288	0	
6	00500 Irrgtion Pmpng	131,864	0	126,721	0	0	0	5,143	0	
7	Subtotal	1,783,470	0	1,225,338	488,576	0	0	69,555	0	1,783,470
	5105 Water Purification									
8	00600 Watershed Patrol	1,043,031	1,002,352	0	0	0	0	40,678	0	
9	00700 City Creek	857,088	360,638	463,024	0	0	0	33,426	0	
10	00800 Parleys	1,119,299	470,969	604,678	0	0	0	43,653	0	
11	00900 Big Cottonwood	1,236,742	520,385	668,124	0	0	0	48,233	0	
12	01000 Cross Connection-Sample	196,172	82,543	105,978	0	0	0	7,651	0	
13	01100 Metropolitian Water	10,098,658	9,704,810	0	0	0	0	393,848	0	
14	01100 Metropolitian Capacity Assessment	7,021,892	0	4,670,831	2,077,207	0	0	273,854	0	
15	01200 Little Dell Dam	28,531	0	27,418	0	0	0	1,113	0	
16	01800 Water Quality	671,025	282,348	362,507	0	0	0	26,170	0	
17	03500 Little Dell Recreation	95,996	40,392	51,860	0	0	0	3,744	0	
18	Subtotal	22,368,433	12,464,438	6,954,419	2,077,207	0	0	872,369	0	22,368,433
	5107 Transmission & Distribution									
19	01300 Engineering	652,173	626,739	0	0	0	0	25,435	0	
20	01400 Distribution	2,562,964	862,737	1,107,670	492,602	0	0	99,956	0	
21	01500 Computer	284,918	273,806	0	0	0	0	11,112	0	
22	01600 Emergency / GIS	687,704	660,884	0	0	0	0	26,820	0	
23	01700 Maintenance	3,415,236	0	2,271,751	1,010,291	0	0	133,194	0	
24	Subtotal	7,602,995	2,424,165	3,379,421	1,502,892	0	0	296,517	0	7,602,995

Line No.	Description	Projected 2009-2010	Allocated Costs: Average Day Demand	Maximum Day Demand	Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service	Reallocation Public Fire Protection Service	Total Cost of Service
	5109 Shops & Maintenance									
1	02000 Wrk Ordr Office	227,881	227,881	0	0	0	0	0	0	
2	02100 Storehouse	300,482	300,482	0	0	0	0	0	0	
3	02200 General Maint	562,832	562,832	0	0	0	0	0	0	
4	02300 Fleet Maint	840,377	840,377	0	0	0	0	0	0	
5	02400 Meter Repair	510,044	0	0	0	510,044	0	0	0	
6	02500 Elect & Telmtry	414,509	398,343	0	0	0	0	16,166	0	
7	03000 Safety Program	214,951	214,951	0	0	0	0	0	0	
8	Subtotal	3,071,076	2,544,866	0	0	510,044	0	16,166	0	3,071,076
	5111 Water Customer Service									
9	02600 Meter Reading	934,863	0	0	0	0	934,863	0	0	
10	02700 Billing	1,248,154	0	0	0	0	1,248,154	0	0	
11	02800 Customer Serv	1,253,139	0	0	0	0	1,253,139	0	0	
12	02900 Accounting	631,459	0	0	0	0	631,459	0	0	
13	Subtotal	4,067,615	0	0	0	0	4,067,615	0	0	4,067,615
	5113 Water Administration									
14	03100 Administration	121,470	0	0	0	0	121,470	0	0	
15	03200 Gnral Oprtions	1,906,103	333,833	428,608	190,610	0	953,051	0	0	
16	03300 Cntrcts & Const	514,575	0	0	0	0	514,575	0	0	
17	03400 Development & Review	317,903	0	0	0	0	317,903	0	0	
19	3600 Water Conservation	150,765	0	0	0	0	150,765	0	0	
20	Subtotal	3,010,816	333,833	428,608	190,610	0	2,057,764	0	0	3,010,816
	Other Operating Expenses									
21	2921.01 Contribution To General Fund	669,500	225,365	289,347	128,678	0	0	26,111	0	
22	2995 Payment In Lieu Of Taxes	382,130	128,631	165,150	73,445	0	0	14,903	0	
23	2542 Uncollectable Accts	0	0	0	0	0	0	0	0	
24	Subtotal	1,051,630	353,996	454,497	202,123	0	0	41,014	0	1,051,630
25	**Total**	**$43,793,631**	**$18,236,382**	**$13,132,130**	**$4,461,409**	**$510,044**	**$6,125,380**	**$1,328,287**	**$0**	**$43,793,631**
26	***Percent Allocation***		41.6%	30.0%	10.2%	1.2%	14.0%	3.0%		

Line No.	Description	Projected 2009-2010	Allocated Costs: Average Day Demand	Allocated Costs: Maximum Day Demand	Allocated Costs: Maximum Hour Demand	Allocated Costs: Customer Costs: Meters & Services	Allocated Costs: Customer Costs: Billing & Collecting	Fire Protection Service	Reallocation Public Fire Protection Service	Total Cost of Service
	Adjustments - Deductions									
1	Grants & Other Related	905,000	376,857	271,377	92,195	10,540	126,582	27,449	0	
2	Other Sources	50,000	20,821	14,993	5,094	582	6,993	1,517	0	
3	Interest Income	300,000	124,925	89,959	30,562	3,494	41,961	9,099	0	
4	Other Income	2,308,000	961,089	692,086	235,124	26,880	322,818	70,003	0	
5	Use of Cash Balance	6,623,014	2,757,931	1,986,003	674,709	77,135	926,356	200,880	0	
6	Subtotal	$10,186,014	$4,241,623	$3,054,418	$1,037,685	$118,632	$1,424,710	$308,948	$0	$10,186,014
7	**Adjusted O&M Revenue Requirements**	**$33,607,616**	**$13,994,759**	**$10,077,712**	**$3,423,724**	**$391,412**	**$4,700,670**	**$1,019,339**	**$0**	**$33,607,616**
	Capital Costs									
8	2700 Capital Expenditures	16,101,160	6,172,252	6,385,448	2,386,913	551,551	0	604,995	0	
9	2545 Depreciation Expense	0	0	0	0	0	0	0	0	
10	2811, 2821, 2825 Debt Service	2,452,508	940,149	972,623	363,572	84,012	0	92,152	0	
11	**Total Capital Costs**	18,553,668	7,112,402	7,358,071	2,750,485	635,563	0	697,147	0	18,553,668
12	**Net Revenue Requirement**	**$52,161,284**	**$21,107,161**	**$17,435,783**	**$6,174,209**	**$1,026,975**	**$4,700,670**	**$1,716,486**	**$0**	**$52,161,284**
13	***Percent Allocation (AD, MD, MH Only)***		41.6%	30.0%	10.2%	1.2%	14.0%	3.0%	0.0%	100.0%

Line No.	Description	Projected 2009-2010	Allocated Costs: Average Day Demand	Allocated Costs: Maximum Day Demand	Allocated Costs: Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service	Reallocation Public Fire Protection Service	Total Cost of Service
	5101 Water Supply									
1	00100 Canal Maint	$564,090	$0	$542,090	$0	$0	$0	$22,000	$0	
2	00200 Source of Wtr	273,506	115,084	147,756	0	0	0	10,667	0	
3	Subtotal	837,596	115,084	689,846	0	0	0	32,666	0	837,596
	5103 Water Power & Pumping									
4	00300 Deep Wells	464,733	0	309,132	137,477	0	0	18,125	0	
5	00400 Booster Pmpng	1,186,873	0	789,486	351,099	0	0	46,288	0	
6	00500 Irrgtion Pmpng	131,864	0	126,721	0	0	0	5,143	0	
7	Subtotal	1,783,470	0	1,225,338	488,576	0	0	69,555	0	1,783,470
	5105 Water Purification									
8	00600 Watershed Patrol	1,043,031	1,002,352	0	0	0	0	40,678	0	
9	00700 City Creek	857,088	360,638	463,024	0	0	0	33,426	0	
10	00800 Parleys	1,119,299	470,969	604,678	0	0	0	43,653	0	
11	00900 Big Cottonwood	1,236,742	520,385	668,124	0	0	0	48,233	0	
12	01000 Cross Connection-Sample	196,172	82,543	105,978	0	0	0	7,651	0	
13	01100 Metropolitian Water	10,098,658	9,704,810	0	0	0	0	393,848	0	
14	01100 Metropolitian Capacity Assessment	7,021,892	0	4,670,831	2,077,207	0	0	273,854	0	
15	01200 Little Dell Dam	28,531	0	27,418	0	0	0	1,113	0	
16	01800 Water Quality	671,025	282,348	362,507	0	0	0	26,170	0	
17	03500 Little Dell Recreation	95,996	40,392	51,860	0	0	0	3,744	0	
18	Subtotal	22,368,433	12,464,438	6,954,419	2,077,207	0	0	872,369	0	22,368,433
	5107 Transmission & Distribution									
19	01300 Engineering	652,173	626,739	0	0	0	0	25,435	0	
20	01400 Distribution	2,562,964	862,737	1,107,670	492,602	0	0	99,956	0	
21	01500 Computer	284,918	273,806	0	0	0	0	11,112	0	
22	01600 Emergency / GIS	687,704	660,884	0	0	0	0	26,820	0	
23	01700 Maintenance	3,415,236	0	2,271,751	1,010,291	0	0	133,194	0	
24	Subtotal	7,602,995	2,424,165	3,379,421	1,502,892	0	0	296,517	0	7,602,995

Line No.	Description	Projected 2009-2010	Allocated Costs: Average Day Demand	Allocated Costs: Maximum Day Demand	Allocated Costs: Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service	Reallocation Public Fire Protection Service	Total Cost of Service
	5109 Shops & Maintenance									
1	02000 Wrk Ordr Office	227,881	227,881	0	0	0	0	0	0	
2	02100 Storehouse	300,482	300,482	0	0	0	0	0	0	
3	02200 General Maint	562,832	562,832	0	0	0	0	0	0	
4	02300 Fleet Maint	840,377	840,377	0	0	0	0	0	0	
5	02400 Meter Repair	510,044	0	0	0	510,044	0	0	0	
6	02500 Elect & Telmtry	414,509	398,343	0	0	0	0	16,166	0	
7	03000 Safety Program	214,951	214,951	0	0	0	0	0	0	
8	Subtotal	3,071,076	2,544,866	0	0	510,044	0	16,166	0	3,071,076
	5111 Water Customer Service									
9	02600 Meter Reading	934,863	0	0	0	0	934,863	0	0	
10	02700 Billing	1,248,154	0	0	0	0	1,248,154	0	0	
11	02800 Customer Serv	1,253,139	0	0	0	0	1,253,139	0	0	
12	02900 Accounting	631,459	0	0	0	0	631,459	0	0	
13	Subtotal	4,067,615	0	0	0	0	4,067,615	0	0	4,067,615
	5113 Water Administration									
14	03100 Administration	121,470	0	0	0	0	121,470	0	0	
15	03200 Gnral Oprtions	1,906,103	333,833	428,608	190,610	0	953,051	0	0	
16	03300 Cntrcts & Const	514,575	0	0	0	0	514,575	0	0	
17	03400 Development & Review	317,903	0	0	0	0	317,903	0	0	
19	3600 Water Conservation	150,765	0	0	0	0	150,765	0	0	
20	Subtotal	3,010,816	333,833	428,608	190,610	0	2,057,764	0	0	3,010,816
	Other Operating Expenses									
21	2921.01 Contribution To General Fund	669,500	225,365	289,347	128,678	0	0	26,111	0	
22	2995 Payment In Lieu Of Taxes	382,130	128,631	165,150	73,445	0	0	14,903	0	
23	2542 Uncollectable Accts	0	0	0	0	0	0	0	0	
24	Subtotal	1,051,630	353,996	454,497	202,123	0	0	41,014	0	1,051,630
25	**Total**	**$43,793,631**	**$18,236,382**	**$13,132,130**	**$4,461,409**	**$510,044**	**$6,125,380**	**$1,328,287**	**$0**	**$43,793,631**

Line No.	Description	Projected 2009-2010	Allocated Costs: Average Day Demand	Allocated Costs: Maximum Day Demand	Allocated Costs: Maximum Hour Demand	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Fire Protection Service	Reallocation Public Fire Protection Service	Total Cost of Service
	Adjustments - Deductions									
1	Grants & Other Related Sources	905,000	376,857	271,377	92,195	10,540	126,582	27,449	0	
2	Other Sources	50,000	20,821	14,993	5,094	582	6,993	1,517	0	
3	Interest Income	300,000	124,925	89,959	30,562	3,494	41,961	9,099	0	
4	Other Income	2,308,000	961,089	692,086	235,124	26,880	322,818	70,003	0	
5	Use of Cash Balance	6,623,014	2,757,931	1,986,003	674,709	77,135	926,356	200,880	0	
6	Total	$10,186,014	$4,241,623	$3,054,418	$1,037,685	$118,632	$1,424,710	$308,948	$0	$10,186,014
7	**Adjusted O&M Revenue Requirements**	**$33,607,616**	**$13,994,759**	**$10,077,712**	**$3,423,724**	**$391,412**	**$4,700,670**	**$1,019,339**	**$0**	**$33,607,616**
	Capital Costs									
8	2545 Depreciation Expense	6,768,656	$2,230,028	$2,674,613	$1,041,837	$582,281	$0	$239,898		
9	Rate Base	$236,637,911								
10	Less: Exchange Customer Asset Rate Base (Est.)	($17,984,481)								
11	Working Capital (45 days of O&M)	5,399,215								
12	**Total Rate Base**	**224,052,644**	**85,888,805**	**88,855,492**	**33,214,642**	**7,675,009**	**0**	**8,418,696**		**224,052,644**
13	Rate of Return [1]	7.70%	7.70%	7.70%	7.70%	7.70%	7.70%	7.70%	7.70%	
14	Return on Rate Base	$17,263,001	$6,617,634	$6,846,214	$2,559,150	$591,351	$0	$648,651	$0	17,263,001
15	**Net Revenue Requirement**	**$57,639,273**	**$22,842,421**	**$19,598,539**	**$7,024,711**	**$1,565,044**	**$4,700,670**	**$1,907,887**	**$0**	**57,639,273**
16	**Adjusted Revenue Requirement for Cash Basis**	**$52,161,284**	**$20,643,341**	**$17,532,348**	**$6,190,356**	**$1,375,072**	**$4,700,670**	**$1,719,496**	**$0**	**$52,161,284**
17	***Percent Allocation (AD, MD, MH Only)***		41.6%	30.0%	10.2%	1.2%	14.0%	3.0%	0.0%	100.0%

Salt Lake City
Water Rate Study
Units of Service

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Base Capacity		Maximum Day			Maximum Hour				
Description	Projected FY2009-10 Annual Use (ccf)	Average Use	Capacity Factor	Total Capacity	Extra Capacity	Capacity Factor	Total Capacity	Extra Capacity	Equivalent Meters	Annual Bills
City	22,502,474	61,651	29	134,191	72,541	37	167,739	95,198	68,629	633,180
County	8,556,592	23,443	36.67	61,147	37,704	45.84	76,434	38,729	29,356	299,796
Total System	31,059,066	85,093			110,245			133,928	97,985	932,976

SALT LAKE CITY WATER UTILITIES
WATER RATE STUDY
UNIT COSTS

Table C-24

Line No.	Description	Total Cost	Average Day	Extra Capacity: Maximum Day	Extra Capacity: Maximum Hour	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Public Fire Protection Service	Total Cost of Service
	Total System Number of Units								
1	Amount		31,059,066	110,245	133,928	97,985	932,976	10,957	
2	Units		ccf	ccf	ccf	Equiv. Meter	Bills	Equiv. Connect.	
	Adjusted O&M Expense (1)								
3	Total	$33,607,616	$13,994,759	$10,077,712	$3,423,724	$391,412	$4,700,670	$1,019,339	$33,607,616
4	Unit Cost		0.4506	91.4120	25.5639	3.9946	5.0384	93.0350	
	Depreciation Expense								
5	Total	$6,768,656	$2,230,028	$2,674,613	$1,041,837	$582,281	$0	$239,898	$6,768,656
6	Unit Cost		0.0718	24.2606	7.7791	5.9426	0.0000	21.8954	
	Rate Base								
7	Total Rate Base	$224,052,644	$85,888,805	$88,855,492	$33,214,642	$7,675,009	$0	$8,418,696	$224,052,644
8	Unit rate base cost		2.7653	805.9821	248.0039	78.3284	0.0000	768.3739	
9	Inside City Return on Rate Base		4.17%	4.17%	4.17%	4.17%	4.17%	4.17%	4.17%
10	Outside City Return on Rate Base		7.70%	7.70%	7.70%	7.70%	7.70%	7.70%	7.70%
	Unit Return on Rate Base								
11	Inside City $/Unit		$0.1153	$33.6169	$10.3440	$3.2670	$0.0000	$32.0482	
12	Outside City $/Unit		$0.2131	$62.1000	$19.1084	$6.0351	$0.0000	$59.2023	
	Cost of Service								
13	Inside City $/Unit		$0.6377	$149.2894	$43.6871	$13.2042	$5.0384	$146.9787	$0.0000
14	Outside City $/Unit		$0.7355	$177.7726	$52.4514	$15.9723	$5.0384	$174.1328	$0.0000

(1) O&M expense less adjustments (including other revenue and anticipated change in fund balance)

Salt Lake City
Water Rate Study
Distribution of Costs to Customer Classes

Line No.	Description	Base	Extra Capacity: Maximum Day	Extra Capacity: Maximum Hour	Customer Costs: Meters & Services	Customer Costs: Billing & Collecting	Private Fire Protection	Public Fire Protection Service	Total Cost of Service
	City								
1	Units	22,502,474	72,541	95,198	68,629	633,180	0	6,203	
2	Unit Cost	$0.64	$149.29	$43.69	$13.20	$5.04	$0.00	$146.98	$1.53
3	**Cost of Service**	**$14,350,387**	**$10,829,577**	**$4,158,941**	**$906,190**	**$3,190,190**	**$0**	**$911,709**	**$34,346,993**
	County								
4	Units	8,556,592	37,704	38,729	29,356	299,796	0	3,593	
5	Unit Cost	$0.74	$177.77	$52.45	$15.97	$5.04	$0.00	$174.13	$2.06
6	**Cost of Service**	**$6,292,954**	**$6,702,771**	**$2,031,415**	**$468,882**	**$1,510,481**	**$0**	**$625,659**	**$17,632,162**
	Private Fire Protection								
7	Units						1,161		
8	Unit Cost						$156.94		$156.94
9	**Cost of Service**	**$0**	**$0**	**$0**	**$0**	**$0**	**$182,128**	**$0**	**$182,128**
10	**Total Cost of Service**	**$20,643,341**	**$17,532,348**	**$6,190,356**	**$1,375,072**	**$4,700,670**	**$182,128**	**$1,537,368**	**$52,161,284**

Salt Lake City
Water Rate Study
Fire Protection Service

	Total	Public	Private
Costs to be Allocated	$1,719,496	$1,537,368	$182,128
Misc. Revenue Offset - Public Fire Protection	0	0	0
Total	$1,719,496	$1,537,368	$182,128

Description	Number	Equivalency Factor	Equivalent Connections	Percent Allocated	Allocated Amount
Inside City Hydrants	6,203				
Outside City Hydrants	3,593				
Total Hydrants	**9,796**	**1**	**9,796**	**89.4%**	**$1,537,368**
Private Fire Services					
Meter Size	**Connection Size**				
5/8"	0	0.02400	-	0.0%	-
3/4"	0	0.03200	-	0.0%	-
1"	0	0.04000	-	0.0%	-
1.5"	0	0.08000	-	0.0%	-
2"	3	0.12800	0.38	0.0%	60
2.5"	0	0.20585	-	0.0%	-
3"	0	0.28370	-	0.0%	-
4"	2	0.48000	0.96	0.0%	151
6"	202	1.00000	202.00	1.8%	31,702
8"	506	1.43630	726.77	6.6%	114,058
10"	83	2.32000	192.56	1.8%	30,220
12"	11	3.44000	37.84	0.3%	5,939
Total Private Fire Lines	**807**		**1,161**	**10.6%**	**$182,128**
Total Public and Private Fire Lines	**10,603**		**10,957**	100.0%	**$1,719,496**
			$182,128.49		
Cost per Equivalent 6" Connection					**$156.94**

Salt Lake City
Water Rate Study
Private Fire Lines

Connection Size	Rate			Revenue		
	Current Rate	Calculated Rate	Proposed Rate	Current Rate	Calculated Rate	Proposed Rate
3/4"	$0.75	$0.42	$0.75	$0	$0	$0
1"	$1.00	$0.52	$1.00	0.00	0.00	0.00
1.5"	$1.50	$1.05	$1.50	0.00	0.00	0.00
2"	$2.00	$1.67	$2.00	72.00	60.26	60.26
2.5"	$2.50	$2.69	$2.69	0.00	0.00	0.00
3"	$3.00	$3.71	$3.71	0.00	0.00	0.00
4"	$4.00	$6.28	$6.28	96.00	150.66	150.66
6"	$6.00	$13.08	$13.08	14,544.00	31,701.54	31,701.54
8"	$8.00	$18.78	$18.78	48,576.00	114,057.42	114,057.42
10"	$10.00	$30.34	$30.34	9,960.00	30,220.04	30,220.04
12"	$12.00	$44.99	$44.99	1,584.00	5,938.55	5,938.55
Total				$74,832.00	$182,128.48	$182,128.48

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

Appendix D
Rate Design

RED OAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

5504003 / DEN

Salt Lake City
Water Rate Study
Development of FY10 City Rates

Table D-1

Meter Size	Bills: Single Family	Duplex	Triplex	Non-Residential	Irrigation	Total Bills	Proposed Base Fee	Base Fee Revenue	Total Revenue
inches									
3/4"	34,282	3,382	448	3,496	303	41,911	$7.44	$3,741,783	
1"	4,607	506	61	2,305	630	8,109	7.44	724,007	
1-1/2"	40	0	1	697	95	832	8.87	88,568	
2"	10	2	0	892	235	1,139	9.67	132,120	
3"	1	0	0	215	50	266	16.54	52,767	
4"	0	0	0	260	44	304	17.74	64,632	
6"	0	0	0	119	13	133	25.81	41,079	
8"	0	0	0	51	3	54	46.77	30,253	
10"	0	0	0	15	3	18	87.11	19,108	
Total	**38,940**	**3,890**	**510**	**8,049**	**1,376**	**52,765**		**$4,894,317**	**$4,894,317**

Volume Revenue Development

Threshold	Volume Threshold (ccf)	Threshold Factor	Rate $ per ccf	Volume in Block (ccf)	% Volume in Block	Revenue in Block	
Single Family							
Block 1	*0*	10	1.00	$0.88	2,162,732	41.9%	$1,903,204
Block 2	*11*	30	1.71	1.50	1,861,601	36.0%	2,801,338
Block 3	*31*	50	1.30	1.96	625,409	12.1%	1,223,451
Block 4	*Over*	50	1.30	2.54	517,389	10.0%	1,315,777
Total Single Family City Summer Usage					5,167,131	100.0%	$7,243,770
Total Single Family City Winter Usage				$0.88	1,386,326		$1,219,967
Total Single Family					**6,553,457**		**$8,463,737**
Duplex							
Block 1	*0*	13	1.00	$0.88	291,439	49.0%	$256,466
Block 2	*14*	30	1.71	1.50	176,028	29.6%	264,887
Block 3	*31*	50	1.30	1.96	75,848	12.7%	148,378
Block 4	*Over*	50	1.30	2.54	51,670	8.7%	131,403
Total Duplex City Summer Usage					594,985	100.0%	$801,133
Total Duplex City Winter Usage				$0.88	217,437		$191,345
Total Duplex					**812,422**		**$992,478**
Triplex							
Block 1	*0*	16	1.00	$0.88	46,460	52.2%	$40,884
Block 2	*17*	30	1.71	1.50	19,956	22.4%	30,030
Block 3	*31*	50	1.30	1.96	12,679	14.2%	24,804
Block 4	*Over*	50	1.30	2.54	9,888	11.1%	25,146
Total Triplex City Summer Usage					88,983	100.0%	$120,864
Total Triplex City Winter Usage				$0.88	37,577		$33,068
Total Triplex					**126,560**		**$153,932**
Nonresidential							
Block 1	1-AWC	1.00	$0.88	5,418,028	58.1%	$4,767,865	
Block 2	AWC - 300%	1.71	1.50	2,493,623	26.7%	3,752,404	
Block 3	300% - 500%	1.30	1.96	556,460	6.0%	1,088,570	
Block 4	500% AWC+	1.30	2.54	858,223	9.2%	2,182,557	
Total Nonresidential City Summer Usage				9,326,335		$11,791,396	
Total Nonresidential City Winter Usage			$0.88	3,693,186		$3,250,004	
Total Nonresidential				**13,019,521**			**$15,041,400**
City Irrigation							
Block 1	1-Target	1.00	$1.50	1,306,851	70.3%	$1,966,550	
Block 2	Over Target	1.71	1.96	553,435	29.8%	1,082,652	
Block 3		1.30	2.54	-	0.0%	0	
Block 4		1.30	2.54	-	0.0%	0	
Total Irrigation City Summer Usage				1,860,287	100.0%	$3,049,202	
Total Irrigation City Winter Usage			$1.50	130,226		$195,965	
Total Irrigation				**1,990,513**			**$3,245,167**
Total City							**32,791,031**

Salt Lake City
Water Rate Study
Development of FY10 County Rates

Table D-2

Meter Size	Bills: Single Family	Duplex	Triplex	Non-Residential	Irrigation	Total Bills	Proposed Base Fee	Base Fee Revenue	Total Revenue
inches									
3/4"	17,666	384	3	328	86	18,468	$9.87	$2,187,304	
1"	5,401	136	5	257	167	5,966	9.87	706,616	
1-1/2"	8	1	0	110	8	127	11.80	18,006	
2"	19	0	1	184	43	247	12.88	38,127	
3"	0	0	0	44	4	48	22.15	12,769	
4"	0	0	0	22	8	31	23.77	8,765	
6"	1	0	0	62	2	65	34.67	27,119	
8"	0	0	0	24	0	24	62.96	18,467	
10"	0	0	0	7	0	7	117.42	10,045	
12"	0	0	0	0	0	0		0	
Total	**23,096**	**521**	**9**	**1,039**	**318**	**24,983**		**$3,027,219**	**$3,027,219**

Volume Revenue Development

Threshold	Volume Threshold (ccf)	Threshold Factor	Rate $ per ccf	Volume in Block (ccf)	% Volume in Block	Revenue in Block	
Single Family							
Block 1	*0*	10	1.00	$1.19	1,408,887	30.0%	$1,673,734
Block 2	*11*	30	1.71	2.03	1,716,629	36.6%	3,487,297
Block 3	*31*	50	1.30	2.64	865,328	18.5%	2,285,266
Block 4	*Over*	50	1.30	3.43	697,864	14.9%	2,395,221
Total Single Family County Summor Usage					4,688,488	100.0%	$9,841,518
Total Single Family County Winter Usage				$1.19	994,643		$1,181,636
Total Single Family					**5,683,131**		**$11,023,154**
Duplex							
Block 1	*0*	13	1.00	$1.19	43,342	37.1%	$51,490
Block 2	*14*	30	1.71	2.03	35,670	30.6%	72,463
Block 3	*31*	50	1.30	2.64	20,879	17.9%	55,140
Block 4	*Over*	50	1.30	3.43	16,813	14.4%	57,723
Total Duplex County Summer Usage					116,704	100.0%	$236,816
Total Duplox County Winter Usage				$1.19	41,860	-	$49,730
Total Duplex					**158,564**		**$286,546**
Triplex							
Block 1	*0*	16	1.00	$1.19	948	19.8%	$1,126
Block 2	*17*	30	1.71	2.03	820	13.0%	1,280
Block 3	*31*	50	1.30	2.64	643	13.5%	1,698
Block 4	*Over*	50	1.30	3.43	2,565	53.7%	8,806
Total Triplex County Summor Usage					4,776	100.0%	$12,890
Total Triplex County Winter Usage				$1.19	2,301		$2,734
Total Triplex					**7,077**		**$15,624**
Nonresidential							
Block 1	1-AWC	1.00	$1.19	844,848	46.9%	$1,003,679	
Block 2	AWC - 300%	1.71	2.03	515,453	28.6%	1,047,132	
Block 3	300% - 500%	1.30	2.64	139,302	7.7%	367,886	
Block 4	500% AWC+	1.30	3.43	300,339	16.7%	1,031,123	
Total Nonresidential County Summer Usage				1,799,941	100.0%	$3,449,820	
Total Nonresidential County Winter Usage			$1.19	571,073		$878,435	
Total Nonresidential				**2,371,015**			**$4,128,256**
City Irrigation							
Block 1	1-Target	1.00	$2.03	200,598	63.9%	$407,511	
Block 2	Over Target	1.30	2.64	113,425	36.1%	299,547	
Block 3		1.30	3.43	-	0.0%	0	
Block 4		1.00	3.43	-	0.0%	0	
Total Irrigation County Summer Usage				314,023	100.0%	$707,058	
Total Irrigation County Winter Usage			$2.03	22,782		$46,281	
Total Irrigation				**336,805**			**$753,338**
Total County							**19,234,137**

Revenue From Proposed Rates	
City	32,791,031
County	19,234,137
Private Fire Protection	182,128
Total Revenue from Proposed Rates	**52,207,296**
Total Cost of Service	**52,161,284**
Variance	***46,012***

Salt Lake City Department of Public Utilities
Water Rate and Fee Study

Appendix E
Water, Wastewater, and Stormwater System Impact Fees

RED OAK CONSULTING
A DIVISION OF MALCOLM PIRNIE

Salt Lake City
Water System Impact and Resource Fees
Growth-Related Capital Improvement Program

Table E-1

Line No	Decription	Fiscal Year Ending June 30 FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	Total	Growth Percent	Growth Amount
	Parley's														
1	5-10 MG Finished Water Reservoir - New	$0	$0	$0	$0	$0	$0	$0	$0	$3,000,000	$3,000,000	$0	**$6,000,000**	100%	**$6,000,000**
2	Little Willow Pump Station Expansion	500,000	-	-	-	-	-	-	-	-	-	-	**500,000**	100%	**500,000**
3	Olympue Cove Station From Parley's	-	600,000	-	-	-	-	-	-	-	-	-	**600,000**	100%	**600,000**
4	North Bench Pump Station - Additional Pumps	-	-	-	-	-	-	-	-	-	-	1,000,000	**1,000,000**	50%	**500,000**
5	Victory Road - Additional Pumps	-	-	-	-	-	-	-	-	1,800,000	-	-	**1,800,000**	50%	**900,000**
6	New Wells to Cover 10 CFS Water Rights	-	-	-	-	-	-	-	4,000,000	4,000,000	4,000,000	4,000,000	**16,000,000**	100%	**16,000,000**
7	Granite Oaks Reservior	700,000	-	-	-	-	-	-	-	-	-	-	**700,000**	100%	**700,000**
8	Storage for North West Quadrant	-	-	-	-	-	-	-	-	5,000,000	-	-	**5,000,000**	100%	**5,000,000**
9	7800 S. Pressure Zone - 4.3 MG Reservior	-	-	-	-	-	-	-	-	-	-	3,000,000	**3,000,000**	100%	**3,000,000**
10	Creek Road (8200 S) - Royal Lane (2400 E)	1,720,000	-	-	-	-	-	-	-	-	-	-	**1,720,000**	50%	**860,000**
11	Huntsman Research Hospital Line Extension	-	750,000	-	-	-	-	-	-	-	-	-	**750,000**	100%	**750,000**
	Master Plan Projects														
12	Upgrade System for Fire Protection - Big Cottonwood	6,400,000	0	0	0	0	0	0	0	0	0	0	**6,400,000**	25%	**1,600,000**
13	Upgrade System for Fire Protection - Green Ditch	-	4,000,000	-	-	-	-	-	-	-	-	-	**4,000,000**	25%	**1,000,000**
14	Pipeline From Terminal Reservoir to 300 E. Along I-80	-	-	-	-	-	-	-	-	-	6,000,000	6,500,000	**12,500,000**	100%	**12,500,000**
15	Pipeline from Victory Reservoir to Ensign Reservoir	-	-	-	-	-	-	-	4,000,000	-	-	-	**4,000,000**	100%	**4,000,000**
16	Victory Road - Pump Station to Ensign Downs (18")	-	-	-	-	-	-	-	-	-	3,000,000	-	**3,000,000**	100%	**3,000,000**
17	Millcreek Tratment Plant Line - (24")	-	-	-	-	-	-	-	-	750,000	-	-	**750,000**	100%	**750,000**
18	City Creek Treatment Line to Morris Reservoir	-	-	-	800,000	-	-	-	-	-	-	-	**800,000**	25%	**200,000**
19	900 E. - 5600 S. to Approx. Three Fountains Drive (4990 S)	-	-	-	-	-	-	-	-	-	-	500,000	**500,000**	25%	**125,000**
20	5600 South - 850 East to 900 East	-	-	-	-	-	-	-	-	-	-	57,500	**57,500**	25%	**14,375**
21	1300 East - Vine Street (6085 S) to 6400 South	-	-	-	-	-	-	-	-	-	279,000	-	**279,000**	25%	**69,750**
22	Lower Perley's Conduit - Parley's way to Approx. 1300 South	-	-	-	-	-	-	-	3,400,000	-	-	-	**3,400,000**	25%	**650,000**
23	Wastewater Reuse	-	-	10,000,000	-	-	-	-	-	-	13,000,000	-	**23,000,000**	100%	**23,000,000**
24	Terminal Reservoir - 300 East to 3400 West	-	-	-	-	-	-	-	-	-	-	15,000,000	**15,000,000**	100%	**15,000,000**
25	Bengal Blvd (7600 S) - 2300 E. to Brighton Way (16" Pipe)	-	-	-	-	-	-	-	-	-	1,100,000	-	**1,100,000**	100%	**1,100,000**
26	Ft. Union - 7000 S Pump Station to McKell Ct.-12' Pipeline	-	-	-	-	-	-	-	-	-	213,000	-	**213,000**	75%	**159,750**
27	Brighton Wy, 7800 S Pump Stat to Brighton Wy - 16"	-	-	-	-	-	-	-	-	-	183,000	-	**183,000**	75%	**137,250**
28	Bengel Blvd, 7800 S Pump Station to Brighton Way - 16"	-	-	-	-	-	-	-	-	-	190,000	-	**190,000**	75%	**142,500**
29	700 North - East Capitol Blvd. to East Capitol Street - 12"	-	40,000	-	-	-	-	-	-	-	-	-	**40,000**	100%	**40,000**
30	Teton to Mt. Olympus Pump Station	-	-	-	-	-	-	-	345,000	-	-	-	**345,000**	100%	**345,000**
31	**Total CIP**	**$9,320,000**	**$5,390,000**	**$10,000,000**	**$800,000**	**$0**	**$0**	**$0**	**$11,745,000**	**$14,550,000**	**$30,965,000**	**$30,057,500**	**$112,827,500**		**$98,843,625**

Salt Lake City
Water System Impact and Resource Fees
Existing Debt Service Schedule

Table E-2

Description	Percent Growth	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	Total
2005 Series - Water Only													
Principal		$970,000	$1,015,000	$1,065,000	$1,100,000	$1,145,000	$1,100,000	$1,200,000	$1,225,000	$1,285,000	$0	$0	$10,105,000
Interest		474,975	441,025	395,350	352,750	297,750	240,500	185,500	125,500	64,250	0	0	2,577,600
Subtotal	20.0%	$1,444,975	$1,456,025	$1,460,350	$1,452,750	$1,442,750	$1,340,500	$1,385,500	$1,350,500	$1,349,250	$0	$0	$12,682,600
Growth-Related Interest Costs		$94,995	$88,205	$79,070	$70,550	$59,550	$48,100	$37,100	$25,100	$12,850	$0	$0	$515,520
2008 Series - Water Only													
Principal		715,000	720,000	745,000	765,000	790,000	930,000	965,000	995,000	1,030,000	900,000	945,000	9,500,000
Interest		549,905	567,688	542,488	520,138	497,188	473,488	443,263	411,900	374,588	323,088	278,088	4,981,818
Subtotal	0.0%	$1,264,905	$1,287,688	$1,287,488	$1,285,138	$1,287,188	$1,403,488	$1,408,263	$1,406,900	$1,404,588	$1,223,088	$1,223,088	$14,481,818
Growth-Related Interest Costs		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Salt Lake City **Table E-3**
Water System Impact and Resource Fees
System Impact Fee Calculation

Line No	Description	Units
1	Total Growth-Related CIP (FY09-FY19)	98,843,625
2	2005 Debt Interest Costs[1]	515,520
3	**Total Growth-Related Capital Costs**	**99,359,145**
4	Capacity Added from Expansion Projects, mgd	36.00
5	Peak Day Unit Cost, $ per gpd	$2.76
6	3/4-inch Residential Average Usage, gpd	371
7	Coincidental Peak Demand Factor[2]	2.20
8	**3/4-inch Residential Peak Day Demand**	**815**
9	**3/4-inch Residential Water System Fee, $ per Meter**	**$2,250**

(1) Table 2.

(2) Based on production data from 2005 through 2007.

Salt Lake City
Water System Impact and Resource Fees
Current Water Stock Portfolio

Table E-4

Line No	Water Stock Company[1]	Outstanding Shares	Public Utilities Owned Shares	Public Utilities Owned Cost	Market Value Per Share[2]	Total Market Value
1	Big Cottonwood Lower Canal	800	29	$1,988	$300	$8,700
2	Big Ditch Irrigation Company	2,500	144	10,564	1,500	215,250
3	Boundry Springs Water Users	150	58	59,120	1,200	69,246
4	Brighton and North Point Irrigation Company	15,000	31	0	0	0
5	Burrows Spring Water	10,000	5,220	0	0	0
6	East Jordan Irrigation Company	10,000	2,489	492,254	2,500	6,221,875
7	East Millcreek Water Co. - Primary (A)	5,000	14	1,058	50	696
8	East Millcreek Water Co. - Secondary (B)	1,000	35	2,454	50	1,726
9	G. W. R. H. Irrigation Company	200	12	240	60	720
10	Green Ditch Water Company	2,280	158	84,645	13,000	2,047,500
11	Hill Ditch Company	5,000	1,304	297,220	500	652,000
12	Holiday Water Company - Culinary	7,200	80	19,930	5,000	400,000
13	Holiday Water Company - Irrigation	3,500	20	0	230	4,600
14	Kennedy Ditch Irrigation Company	0	1,072	0	50	53,623
15	Little Cottonwood Brown Ditch	2,160	4	8	2	8
16	Lower Millcreek Irrigation Company - A	1,500	13	9,490	1,500	20,025
17	Lower Millcreek Irrigation Company - B	1,500	321	469,860	4,131	1,325,891
18	Little Cottonwood Tanner Ditch	1,265	93	8,888	200	18,506
19	McGhie Irrigation Company	540	76	0	10	760
20	Richards Ditch	0	4	0	560	1,960
21	Silver Lake Company	50	1	100	100	100
22	Union and Jordan Irrigation Company	1,500	2	0	10	20
23	Upper Canal Irrigation Company	6,000	3,778	39,705	700	2,644,600
24	Walker Ditch	400	18	900	50	900
25	Wasatch Resort Water Company	0	150	0	50	7,500
26	White Ditch Irrigation Company - A	197	0	0	1,500	0
27	White Ditch Irrigation Company - B	788	59	79,540	3,072	181,222
28	**Total**	**78,530**	**15,183**	**$1,577,962**		**$ 13,877,428**
29	**Replacement Cost : Original Cost Ratio**					**8.79**

(1) 2006-2007 Statistical Report, page 53. Market share updated by Department Staff.

(2) Market share price updated by Department Staff.

Salt Lake City **Table E-5**
Water System Impact and Resource Fees
Water Resource Portfolio

Line No.	Year	Original Cost [1]
1	1900	$5,827
2	1900	217,311
3	1900	256,167
4	1900	399,661
5	1900	203,591
6	1900	885,153
7	1900	404,941
8	1900	1,602,262
9	1902	15,082
10	1970	25,981
11	1972	38,500
12	1974	154,400
13	1979	1,120
14	1980	2,400
15	1985	8,888
16	1998	803,552
17	1999	4,327,660
18	2002	28,010
19	2004	8,000
20	**Total Water Resources**	**$9,388,507**

(1) Excludes land.

(2) 2008 ENR CCI Index = 8,288

Salt Lake City
Water System Impact and Resource Fees **Table E-6**
Water Resouce Fee Calculation

Line No.	Description	Units
1	Water Resource Original Cost (Table 5, Line 20)	$9,388,507
2	Water Stock Ratio (Table 4, Line 28)	8.79
3	Replacement Cost Water Resources	$82,567,447
4	Water Stock	13,877,428
5	**Total Water Resources and Rights**	**$96,444,875**
6	Current supply yield in 2009, acre-feet(1)	109,585
7	Current demand, acre-feet(2)	94,770
8	Ratio of current supply to current demand (Line 6 / Line 7)	86.48%
9	Ratio future demand to current supply (1 - Line 8)	13.52%
10	Resources and Rights for Growth (Line 5 x Line 9)	$13,039,347
11	Supply Yield Available for Growth (Line 6 x Line 9)	14,816
12	**Unit Cost, $ per acre-foot**	**$880**
13	Summer Usage (April - October), gallons per day (gpd)	452
14	10% Water Losses	50
15	Summer Usage Plus 10% Water Loss, gpd	502
16	Usage Per Equivalent per Acre Foot(3)	1.7776
17	**Water Resources Fee, $ per SFE (Line 12 / Line 16)**	**$495**

(1) Fig 2-7 Revised.xls Excel spreadsheet

(2) 5-yr. avg. supplied at conduit. 2006-07 Statistical Report, page 41.

*(3) (325,800 sq ft/acre foot) / (Summer Usage * 365 days per year)*

Salt Lake City **Table E-7**
Water System Impact and Resource Fees
Average Usage by Customer Class

Customer Class[1,2]	Average Annual Customer Class Usage[3] ccf	Kgal	Total Bills	Usage per Unit cf/day	gpd	Including 10% Water Loss Adj gpd
Single Family Residential						
Annual	5,464,567	4,087,496	402,466	44.6	334	371
Summer	4,313,199	3,226,273	234,563	60.5	452	502
Winter	1,151,368	861,223	167,903	22.5	169	187
Multifamily Residential						
Duplex, per unit						
Annual	704,568	527,017	39,674	29.19	218	243
Summer	521,384	389,995	23,123	37.07	277	308
Winter	183,184	137,022	16,550	18.19	136	151
Triplex, per unit						
Annual	110,812	82,888	5,239	23.18	173	193
Summer	78,148	58,455	3,051	28.07	210	233
Winter	32,664	24,433	2,188	16.36	122	136
Four-Plex, per unit						
Annual	198,125	148,198	6,976	23.34	175	194
Summer	136,733	102,277	4,063	27.66	207	230
Winter	61,392	45,921	2,913	17.32	130	144
Nonresidential, Summer Only						
Meter Size, inches						
3/4"	439,228	328,542	19,775	73.0	546	607
1-0"	1,144,193	855,856	12,562	299.5	2,240	2,489
1-1/2"	638,638	477,701	4,666	450.0	3,366	3,740
2-0"	1,583,772	1,184,662	5,924	878.9	6,574	7,305
3-0"	752,620	562,960	1,437	1,722.3	12,883	14,314

(1) 3-year average for FY03 through FY07.

(2) Summer: April through October
Winter: November through March

Salt Lake City **Table E-8**

Water System Impact and Resource Fees

Proposed Fee Schedule[1]

Line No	Customer Clas		Meter Capacity[2]	Ave. Summer Usage[3]	Peak Day[4]	Water System[5]	Water Resource[6,7]	Total
			gpm	gpd	gpd	$	$	$
	Single Family Residential, Meter Size (inches)							
1	3/4"	Disc	30	502	815	$2,250	$495	$2,745
2	1-0"	"	50	1,167	1,359	3,750	1,150	4,900
3	1-1/2"	"	100	2,549	2,717	7,500	2,513	10,013
	Multifamily Residential, per unit							
4	Duplex			308	533	$1,471	$304	$1,775
5	Triplex			233	423	1,168	230	1,398
6	Fourplex			230	426	1,176	227	1,403
	Commercial / Industrial, Meter Size (inches)							
7	3/4"	Disc	30	607	815	$2,250	$598	$2,848
8	1-0"	"	50	2,489	1,359	3,750	2,454	6,204
9	1-1/2"	"	100	3,740	2,717	7,500	3,687	11,187
10	2-0"	"	160	7,305	4,348	12,000	7,202	19,202
11	3-0"	Compound	320	14,314	8,696	24,000	14,112	38,112
12	4-0"	"	500	(6)	13,587	37,500	(6)	37,500
13	6-0"	"	1,000	(6)	27,174	75,001	(6)	75,001
14	8-0"	"	1,600	(6)	43,479	120,001	(6)	120,001
15	10-0"	"	2,300	(6)	62,501	172,502	(6)	172,502

(1) County water resource fees are 1.35 times greater than City impact fees.

(2) gpm - gallon per minute from AWWA M6 Water Meters–Selection, Installation, Testing, and Maintenance, pg. 28-29, 1986.

(3) Average summer usage for the months April though October. Adjusted for 10% water losses.

(4) 3/4-inch peak day based on system coincidental peaking factor of 2.20; average of 2005 through 2007. From 2007 Statistical Report, Page 49. All other meter sizes based on 3/4-inch meter capacity ratios.

(5) Meter sizes greater than 3/4-inch based on meter capacity ratios.

(6) Based on average summer usage by meter size.

(7) For meters 4-0" and larger, the water resource fee would be determined based on the ratio of projected annual usage (gpd) to the ERU usage amount of 502 gpd.

Salt Lake City
Water System Impact and Resource Fees
Comparison of Existing and Proposed Impact and Resource Fees

Table E-9

Line No	Customer Class		Current System	Current Resource[(1)]	Current Total	Proposed System	Proposed Resource[(1)]	Proposed Total	Difference Amount	Difference Percent
	Single Family Residential									
	Meter Size, in.	**Type**								
1	3/4"	"	$1,642	$229	$1,871	$2,250	$495	$2,745	$874	47%
2	1-0"	"	2,736	561	3,297	3,750	1,150	4,900	1,603	49%
3	1-1/2"	"	5,472	1,353	6,825	7,500	2,513	10,013	3,188	47%
	Multifamily									
4	Duplex		2,014	310	2,324	2,942	607	3,549	$1,225	53%
5	Triplex		2,024	347	2,371	3,504	690	4,194	$1,823	77%
6	Fourplex		2,891	510	3,401	4,704	907	5,611	$2,210	65%
	Commercial / Industrial									
	Meter Size, in.	**Type**								
7	3/4"	Disc	1,642	358	2,000	2,250	598	2,848	848	42%
8	1-0"	"	2,736	1,094	3,830	3,750	2,454	6,204	2,374	62%
9	1-1/2"	"	5,472	2,112	7,584	7,500	3,687	11,187	3,603	48%
10	2-0"	"	8,755	3,021	11,776	12,000	7,202	19,202	7,426	63%
11	3-0"	Compound	17,510	6,168	23,678	24,000	14,112	38,112	14,434	61%
12	4-0"	"	27,359	(2)	27,359	37,500	(2)	37,500		
13	6-0"	"	54,718	(2)	54,718	75,001	(2)	75,001		
14	8-0"	"	87,549	(2)	87,549	120,001	(2)	120,001		
15	10-0"	"	125,851	(2)	125,851	172,502	(2)	172,502		

(1) County water resource fees are 1.35 times greater than City impact fees.

(2) For meters 4-0" and larger, the water resource fee would be determined based on the ratio of projected annual usage (gpd) to the ERU usage amount of 502 gpd.

Salt Lake City
Wastewater Impact Fees
Wastewater Asset Summary by Cateory

Table E-10

Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
1	Actuator	71,723	64,324	7,399	101,887	10,912
2	Alarm	18,500	16,342	2,159	42,173	4,921
3	Analyzer	213,481	43,150	170,331	327,041	257,979
4	ATV	11,356	11,356	0	15,129	0
5	Backhoe	128,812	53,183	75,629	144,557	76,754
6	Band Saw	6,805	6,805	0	12,800	0
7	Bender	3,054	3,054	0	5,600	0
8	Blower	12,650	12,650	0	102,889	0
9	Blower Gas	4,242	4,242	0	6,501	0
10	Boiler	205,211	128,756	76,455	353,869	130,338
11	Building	4,979,701	2,216,947	2,762,753	15,500,380	5,049,993
12	Cabinetry	3,500	3,500	0	6,286	0
13	Cabinets	7,879	7,879	0	13,506	0
14	Camera	52,990	18,559	34,431	58,422	36,815
15	Cart	8,555	8,555	0	14,220	0
16	Centerwell	31,465	10,383	21,081	52,313	35,050
17	Chambers	31,423	8,118	23,305	49,988	37,074
18	Clarifier	978,380	525,503	452,878	3,786,444	681,182
19	Clarifiers	145,197	42,349	102,848	248,894	176,300
20	Cleaner	5,752	5,752	0	10,329	0
21	Collection	2,740,553	1,517,087	1,223,466	5,234,441	2,333,975
22	Compressor	476,142	317,555	158,588	831,113	275,265
23	Computer	91,232	91,232	0	137,778	0
24	Controls	560,823	453,490	107,333	1,063,542	192,759
25	Conversion	8,650	2,595	6,055	9,249	6,474
26	Conveyor	9,312	9,312	0	32,146	0
27	Copier	29,066	27,758	1,309	37,768	1,457
28	Crane	99,820	95,042	4,778	162,589	8,581
29	Cutter	3,769	3,769	0	5,776	0
30	Deaerator	70,909	46,091	24,818	127,345	44,571
31	Deionized	5,654	5,654	0	10,154	0
32	Density	12,138	12,138	0	28,458	0
33	Detector	13,166	13,166	0	24,303	0
34	Digester	12,346	11,420	926	21,624	1,622
35	Drive	9,490	7,355	2,135	15,097	3,397
36	Dryblaster	3,379	3,379	0	5,792	0
37	Drying Bed	123,356	29,811	93,545	189,049	143,363
38	Earthquake	62,996	20,789	42,207	104,737	70,174
39	Enclosure	4,835	4,835	0	6,879	0
40	Engine	3,409	2,983	426	5,844	731
41	Equipment	11,287,561	8,272,000	3,015,561	19,637,464	5,123,251
42	Evaporator	21,894	21,444	450	125,710	1,054
43	Exchanger	169,573	159,572	10,001	563,884	17,961
44	Farm	58,931	22,400	36,531	104,927	64,607

Salt Lake City
Wastewater Impact Fees
Wastewater Asset Summary by Cateory

Table E-10

Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
45	Fence	33,391	11,019	22,372	55,516	37,196
46	Field	13,680	13,680	0	22,744	0
47	Fileserver	28,991	28,991	0	44,123	0
48	Filter	955,728	859,058	96,669	3,845,341	197,049
49	Filterarms	51,761	45,722	6,039	121,357	14,158
50	Filtration	19,098	19,098	0	27,173	0
51	Flare	16,715	16,715	0	26,590	0
52	Floor Tile	27,357	9,028	18,329	45,484	30,474
53	Flow meter	21,361	18,961	2,400	38,169	2,566
54	Forklift	61,650	61,650	0	86,741	0
55	Fridge	3,179	3,179	0	5,569	0
56	Furniture	13,037	3,259	9,778	13,940	10,455
57	Garage	103,386	69,416	33,970	229,857	75,431
58	Gate	68,443	35,531	32,912	126,734	50,260
59	Generator	1,243,329	1,149,476	93,853	3,069,226	142,648
60	GIS	45,615	45,615	0	81,919	0
61	Golf Cart	4,400	4,400	0	7,902	0
62	Grease Pum	21,199	19,609	1,590	37,131	2,785
63	Greaseline	30,735	8,964	21,771	52,685	37,319
64	Grinder	12,091	11,459	632	25,677	1,482
65	Grit Screw	26,900	23,538	3,363	46,111	5,764
66	Gritter	7,184	7,184	0	24,798	0
67	Grooving	3,666	3,666	0	7,075	0
68	Hammer	15,739	15,739	0	26,979	0
69	Hand Brake	7,789	6,621	1,168	10,654	1,598
70	Homogenize	3,953	3,953	0	6,059	0
71	Hopper	30,581	30,581	0	132,624	0
72	Ifas	118,102	118,102	0	187,876	0
73	Interest	5,556,603	1,468,608	4,087,996	0	0
74	Ironworker	8,010	8,010	0	14,690	0
75	Irrigation	27,487	27,487	0	43,726	0
76	Laboratory	466,181	149,112	317,069	772,730	524,816
77	Lagoon	308,071	157,116	150,955	627,964	307,703
78	Land	4,185,949	0	4,185,949	4,185,949	4,185,949
79	Landscaping	2,601,595	1,054,551	1,547,044	4,524,567	2,675,148
80	Lathe	20,460	19,437	1,023	27,987	1,399
81	Lawnmower	7,498	4,820	2,678	9,031	3,225
82	Left	4,995	4,995	0	8,970	0
83	Level	14,870	14,870	0	26,303	0
84	Lift Station	3,048,028	627,130	2,420,898	4,011,230	3,108,541
85	Loader	187,270	187,270	0	338,057	0
86	Maint Shop	178,611	55,816	122,795	263,405	181,091
87	Meter	9,470	9,470	0	16,275	0
88	Meters	31,043	31,043	0	61,331	0

Salt Lake City
Wastewater Impact Fees
Wastewater Asset Summary by Cateory

Table E-10

Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
89	Microscope	4,204	4,204	0	5,982	0
90	Microwave	23,526	23,526	0	34,695	0
91	Mill	4,363	4,363	0	7,643	0
92	Milling	7,273	7,273	0	12,091	0
93	Mixer	288,395	288,395	0	568,276	0
94	Monitor	7,515	7,515	0	10,692	0
95	Monitoring	255,340	61,707	193,633	391,321	296,752
96	Monitors	15,423	15,423	0	23,636	0
97	Motor	10,184	10,184	0	41,833	0
98	Motors	1,681	735	945	2,881	1,621
99	Mower	43,948	41,805	2,143	86,022	2,716
100	Odor Control	53,994	29,599	24,395	74,925	32,500
101	Paging	3,788	3,788	0	5,389	0
102	Phone Sys	33,318	31,652	1,666	45,575	2,279
103	Piping	149,541	97,202	52,340	268,560	93,996
104	Plant	5,772,070	1,833,642	3,938,427	10,060,354	6,846,672
105	Power Unit	13,500	13,500	0	19,208	0
106	Powerplant	4,810	4,810	0	7,997	0
107	Press	6,619	6,619	0	11,887	0
108	Primary	44,862	41,497	3,365	78,575	5,893
109	Projector	20,232	20,232	0	27,676	0
110	Pump	895,072	734,617	160,455	1,831,098	207,021
111	Pump Sump	3,700	3,700	0	7,310	0
112	Pumps	110,995	6,910	104,084	170,677	157,678
113	Purifier	7,302	6,755	548	12,790	959
114	Quadrunner	5,100	5,100	0	9,354	0
115	Radio Base	56,255	56,255	0	112,455	0
116	Rag Rake	62,580	19,296	43,284	109,608	75,812
117	Reducer	21,346	10,139	11,207	29,199	15,329
118	Restroom	55,043	28,072	26,971	112,199	54,978
119	Retention	701,952	315,879	386,074	1,354,555	745,005
120	Right of Way	1,500	0	1,500	1,500	1,500
121	Rodder	17,704	17,704	0	29,435	0
122	Roof	27,046	9,889	17,157	46,048	29,272
123	Roto Bin	3,803	3,803	0	6,660	0
124	Sampler	78,337	40,131	38,206	112,451	46,929
125	Saw	10,720	9,112	1,608	14,282	2,142
126	Scales	9,174	9,174	0	21,509	0
127	Scanner	3,618	3,618	0	4,479	0
128	Scrubbers	322,289	233,660	88,630	493,926	135,829
129	Security	97,788	81,071	16,718	173,865	26,594
130	Seismac	20,000	6,600	13,400	33,252	22,279
131	Separator	11,840	11,840	0	40,871	0
132	Server	4,178	3,482	696	4,467	745

Salt Lake City
Wastewater Impact Fees
Wastewater Asset Summary by Cateory

Table E-10

Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
133	Service	12,281	11,360	921	21,509	1,613
134	Sewer	2,439,886	0	2,439,886	3,696,195	3,696,195
135	Sewer Lines	64,042,273	20,880,025	43,162,248	109,003,807	59,940,029
136	Shelter	12,585	0	12,585	19,066	19,066
137	Shelving	32,006	32,006	0	66,623	0
138	Shop	2,217	1,175	1,042	4,804	2,258
139	Sludge	3,383,960	1,351,087	2,032,873	5,735,579	3,505,716
140	Snow Plow	3,820	3,820	0	5,348	0
141	Snowplow	3,434	3,434	0	5,263	0
142	Software	36,820	36,820	0	53,021	0
143	Spreader	3,101	3,101	0	5,316	0
144	Station	878,987	400,320	478,666	1,466,862	801,434
145	Sterilizer	6,250	4,687	1,562	8,327	2,082
146	Storage	512,357	230,902	281,455	870,228	473,790
147	Streamer	3,625	3,625	0	6,510	0
148	Structure	1,424,731	584,140	840,591	2,613,021	1,541,682
149	Sweeper	18,986	18,986	0	27,014	0
150	Switch	4,060	3,045	1,015	5,306	1,326
151	System	1,038,647	1,011,961	26,685	7,891,631	47,924
152	Telemeter	37,686	37,686	0	74,456	0
153	Telemetering	28,573	28,573	0	39,084	0
154	Telemetry	222,630	220,763	1,867	379,245	2,367
155	Telephone	19,929	19,929	0	33,134	0
156	Tractor	26,575	26,575	0	40,728	0
157	Trailer	18,367	18,367	0	30,088	0
158	Transportation	7,900	7,900	0	13,135	0
159	Treatment Plant	24,644,670	8,603,224	16,041,446	70,378,624	27,474,037
160	Truck	156,936	121,888	35,049	193,946	43,270
161	Tv System	16,575	16,575	0	32,747	0
162	Unit	25,847	25,847	0	89,221	0
163	Util/Body	4,327	4,327	0	7,579	0
164	Utility	4,719	4,719	0	8,089	0
165	Vactor	94,504	33,751	60,753	101,049	64,960
166	Vactor Truck	376,045	349,185	26,860	476,702	34,050
167	Valve	8,700	8,700	0	13,840	0
168	Variable	121,477	112,366	9,111	212,765	15,957
169	Vehicle	3,219,653	2,640,821	578,832	4,154,766	631,923
170	Warehouse	285,254	124,799	160,455	488,976	275,049
171	Washer	15,236	7,330	7,907	23,638	11,978
172	Welder	11,397	10,184	1,214	17,006	1,660
173	Wetlands	330,502	130,445	200,057	565,367	342,933
174	**Total**	**$155,274,331**	**$62,105,150**	**$93,169,181**	**$298,073,988**	**$134,119,418**

Salt Lake City
Wastewater Impact Fees
Wastewater Impact Fee Calculation

Table E-11

Line	Description	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
1	Total Asset Valuation	$298,073,988	$134,119,418
2	Less: Outstanding Principal on Series 2004 Bonds[1]	(6,177,600)	(6,177,600)
3	**Net Asset Valuation**	**$291,896,388**	**$127,941,818**
4	System Capacity, gpd	35,000,000	35,000,000
5	Impact Fee, $ per gpd	$8.34	$3.66
6	3/4-inch meter Single Family Equivalent, Peak Flow, gpd	202.8	202.8
7	**3/4-inch Single Family Equivalent**	**$1,691**	**$741**
8	System Capacity, ccf/day	46,795	46,795
9	Impact Fee, $ per ccf/day	$6,238	$2,734
10	3/4-inch meter Single Family Equivalent, peak flow, ccf per day	0.271	0.271
11	**3/4-inch Single Family Equivalent**	**$1,691**	**$741**

(1) Series 2004 Bonds remaining principal totals $27,740,000 at the end of FY09. The Department allocated 24% of this bond to wastewater and 76% to stormwater.

Salt Lake City
Wastewater Impact Fees
Comparison of Existing and Proposed Wastewater Fees

Table E-12

Line No	Description	Residential Equivalent Ratio	Existing	Proposed	
				Replacement Cost New	Replacement Cost Less Accumulated Depreciation
1	**Residential, per unit**		$545	$1,691	$741
	Multifamily, per unit				
2	Duplex	1.50	818	2,538	1,112
3	Triplex	2.25	1,226	3,804	1,667
4	Townhome	0.75	409	1,269	556
	Hotels and Motels, per dwelling unit				
5	Without Kitchen or Restaurant	0.50	273	847	371
6	With Kitchen or Restaurant	0.67	363	1,126	494
7	With Kitchen and a Restaurant	0.67	363	1,126	494
8	**General Commercial, per equivalent fixture[1]**	0.05	27	84	37
9	**Trailer Parks[2]**	1.00	545	1,691	741
10	**Recreation Parks per Equivalent Unit[3]**	1.00	545	1,691	741

(1) Based on Utah Plumbing Code.
(2) 3 trailer spaces shall equal 1 residential .
(3) 6 trailer spaces shall equal 1 residential dwelling unit.

Salt Lake City
Stormwater Impact Fees
Stormwater Asset Summary by Category

Table E-13

Line No.	Asset Item	Original Cost	Accumulated Depreciation	Book Value Value	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
1	Utility	4,070	4,070	0	6,767	0
2	Trailer	46,170	29,372	16,798	70,681	25,744
3	Mixer	3,167	3,167	0	5,265	0
4	Vehicle	1,462,032	609,405	852,628	1,829,200	1,045,002
5	Welder	4,803	4,803	0	7,986	0
6	Power	3,331	3,331	0	5,539	0
7	Excavator	196,059	109,656	86,403	246,220	92,387
8	Long Arm	24,162	24,162	0	40,171	0
9	Computer	21,484	21,484	0	35,217	0
10	Station	2,346,902	1,234,617	1,112,285	4,372,696	2,044,341
11	Lines	54,515,712	23,677,230	30,838,482	150,519,661	71,061,584
12	Canals	1,079,120	0	1,079,120	14,359,659	14,359,659
13	Landscape	0	0	0	0	0
14	Storage	16,800	16,800	0	26,725	0
15	IFAS	7,100	7,100	0	11,295	0
16	Flowmeter	3,063	3,063	0	4,873	0
17	Compactor	11,000	11,000	0	16,858	0
18	Software	5,540	5,540	0	8,490	0
19	Analyzer	79,015	79,015	0	121,094	0
20	Drain Lines	48,066,351	3,697,204	44,369,147	56,329,440	51,550,922
21	Drainage	1,586,431	0	1,586,431	2,403,292	2,403,292
22	Loader	62,943	62,943	0	89,558	0
23	Station Lift	208,576	58,079	150,497	295,047	212,863
24	Compressor	11,987	8,990	2,997	15,665	3,916
25	Backhoe	51,312	33,353	17,959	67,057	23,470
26	Vactor Truck	249,800	231,957	17,843	316,665	22,619
27	Equipment	97,973	52,784	45,190	116,704	53,448
28	Truck	408,166	333,070	75,096	505,287	92,964
29	Landscaping	573,879	273,583	300,296	1,210,914	597,654
30	Mower	31,605	11,288	20,318	35,179	22,615
31	Camera	15,950	15,950	0	25,373	0
32	Land	85,218	0	85,218	85,218	85,218
33	Lift Station	4,044,895	458,765	3,586,130	4,733,842	4,141,441
34	Building	86,754	21,688	65,065	127,939	95,955
35	Telemetering	14,696	11,022	3,674	19,206	4,801
36	GPS Unit	59,613	51,111	8,502	81,577	11,541
37	GPS	55,677	10,771	44,907	58,995	45,404
38	Right Of Way	51,261	0	51,261	51,261	51,261
39	System	11,725	11,725	0	16,415	0
40	Interest	407,329	15,478	391,852	431,258	414,539
41	Monitoring	20,536	20,536	0	34,143	0
42	Meter	7,254	7,254	0	12,061	0
43	Sampler	23,028	23,028	0	35,292	0
44	**Total**	**116,062,489**	**31,254,392**	**84,808,097**	**238,785,785**	**148,462,640**

Salt Lake City
Stormwater Impact Fees
Stormwater Impact Fee Calculation

Table E-14

Line No.	Description	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
1	Total Asset Valuation	$238,785,785	$148,462,640
2	Less: Outstanding Principal on Series 2004 Bonds[1]	(19,562,400)	(19,562,400)
3	**Net Asset Valuation**	**$219,223,385**	**$128,900,240**
4	Total Impervious Square Feet	514,729,899	514,729,899
5	**Unit Cost, $ per Impervious Square Foot**	**$0.43**	**$0.25**
6	Total Acreage	42,699	42,699
7	**Unit Cost, $ per Acre**	**$5,134**	**$3,019**
8	**Unit Cost, $ per 1/4 Acre**	**$1,284**	**$755**
9	**Existing Fee, $ per 1/4 Acre**		**$374**

(1) Series 2004 Bonds remaining principal totals $27,740,000 at the end of FY09.
The Department allocated 24% of this bond to wastewater and 76% to stormwater.

Salt Lake City
Wastewater Impact Fees
Detailed Wastewater Asset Listing, FY07

Table E- 15

Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Life years	Acquistion Date	Year	ENR 20-Cities Cost Index	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
1	Actuator	3,540	2,213	1,328	20	06/30/1996	1998	1.47	$5,221	$1,958
2	Actuator	3,540	2,213	1,328	20	06/30/1996	1998	1.47	5,221	1,958
3	Actuator	3,540	2,213	1,328	20	06/30/1996	1998	1.47	5,221	1,958
4	Actuator	3,540	2,213	1,328	20	06/30/1996	1996	1.47	5,221	1,958
5	Actuator	5,571	3,482	2,089	20	06/30/1996	1996	1.47	8,216	3,081
6	Actuator	12,998	12,998	0	10	06/30/1998	1998	1.40	18,197	0
7	Actuator	12,998	12,998	0	10	06/30/1998	1998	1.40	18,197	0
8	Actuator	12,998	12,998	0	10	06/30/1998	1998	1.40	18,197	0
9	Actuator	12,998	12,998	0	10	06/30/1998	1998	1.40	18,197	0
10	Alarm	8,760	5,971	789	30	02/01/1982	1982	2.17	14,848	1,709
11	Alarm	11,740	10,370	1,370	30	12/01/1981	1981	2.34	27,525	3,211
12	Analyzer	3,927	3,927	0	10	07/01/1991	1991	1.71	6,731	0
13	Analyzer	5,000	5,000	0	10	04/01/1992	1992	1.66	8,313	0
14	Analyzer	9,725	9,238	486	10	10/31/1998	1998	1.40	13,815	681
15	Analyzer	10,845	10,845	0	10	08/01/1991	1991	1.71	18,591	0
16	Analyzer	14,140	14,140	0	10	07/01/1993	1993	1.59	22,494	0
17	Analyzer	28,544	0	28,544	10	12/31/1995	1995	1.51	43,242	43,242
18	Analyzer	141,300	0	141,300	10	10/31/1995	1995	1.51	214,058	214,056
19	ATV	11,356	11,356	0	7	10/11/2000	2000	1.33	15,129	0
20	Backhoe	51,312	47,647	3,865	7	09/11/2001	2001	1.31	67,057	4,790
21	Backhoe	77,500	5,536	71,964	7	06/16/2008	2008	1.00	77,500	71,964
22	Band Saw	6,805	6,805	0	10	08/01/1987	1987	1.88	12,800	0
23	Bender	3,054	3,054	0	10	07/01/1988	1988	1.83	5,600	0
24	Blower	12,650	12,650	0	30	01/01/1966	1966	8.13	102,889	0
25	Blower Gas	4,242	4,242	0	10	03/01/1994	1994	1.53	6,501	0
26	Boiler	18,525	9,726	8,799	20	05/31/1998	1998	1.40	25,935	12,319
27	Boiler	18,525	9,726	8,799	20	05/31/1998	1998	1.40	25,935	12,319
28	Boiler	56,054	36,435	19,619	30	06/01/1989	1969	1.80	100,666	35,233
29	Boiler	56,054	36,435	19,619	30	06/01/1989	1989	1.80	100,666	35,233
30	Boiler	56,054	36,435	19,619	30	06/01/1989	1969	1.80	100,666	35,233
31	Building	1,083	1,083	0	50	01/01/1953	1953	13.61	14,963	0
32	Building	3,776	3,360	415	50	01/01/1964	1964	8.85	33,418	3,677
33	Building	4,980	3,237	1,743	50	01/01/1976	1976	3.45	17,191	6,017
34	Building	5,993	5,993	0	50	01/01/1953	1953	13.61	82,767	0
35	Building	6,700	1,256	5,444	40	06/30/2001	2001	1.31	8,756	7,114
36	Building	8,694	2,085	6,629	40	06/30/1999	1999	1.37	11,692	9,068
37	Building	9,000	2,138	6,863	40	06/30/1999	1999	1.37	12,311	9,387
38	Building	10,400	5,850	4,550	40	06/01/1986	1986	1.93	20,089	8,780
39	Building	10,850	2,306	8,544	40	06/30/2000	2000	1.33	14,455	11,383
40	Building	12,875	6,759	6,116	20	10/31/1997	1997	1.42	18,319	6,702
41	Building	13,136	1,149	11,986	40	06/30/2005	2005	1.11	14,621	13,342
42	Building	14,030	3,683	10,347	40	06/30/1998	1998	1.40	19,642	14,468
43	Building	14,542	14,542	0	50	01/01/1953	1953	13.81	200,879	0
44	Building	15,807	15,607	0	50	01/01/1953	1953	13.61	216,356	0
45	Building	17,345	2,385	14,960	40	06/30/2003	2003	1.24	21,472	16,520
46	Building	19,416	6,349	11,067	50	06/01/1987	1967	1.88	36,524	20,816
47	Building	20,208	7,326	12,883	40	06/01/1994	1994	1.53	30,970	19,744
48	Building	20,440	20,440	0	40	01/01/1964	1964	8.85	160,917	0
49	Building	20,850	3,909	16,941	40	01/24/2001	2001	1.31	27,248	22,139
50	Building	22,809	5,987	16,822	40	06/30/1998	1998	1.40	31,933	23,551
51	Building	23,291	2,620	20,671	40	06/30/2004	2004	1.20	28,054	24,898
52	Building	36,773	19,765	17,007	40	06/01/1987	1987	1.68	69,172	31,992
53	Building	49,298	49,298	0	50	01/01/1953	1953	13.81	680,984	0
54	Building	55,880	10,476	45,403	40	06/30/2001	2001	1.31	73,027	59,334
55	Building	60,956	18,001	44,955	40	06/30/1998	1998	1.40	85,339	62,937
56	Building	63,112	54,907	8,205	50	01/01/1965	1965	8.54	538,697	70,031
57	Building	71,689	38,640	33,249	40	06/01/1987	1987	1.86	135,229	82,543
58	Building	150,882	20,746	130,136	40	06/30/2003	2003	1.24	186,764	161,101
59	Building	183,989	80,355	83,635	50	06/01/1964	1964	2.00	327,822	167,190
60	Building	200,798	110,439	90,359	50	06/01/1981	1981	2.34	470,768	211,854
61	Building	271,531	176,495	95,036	50	01/01/1976	1976	3.45	937,303	328,056
62	Building	295,090	295,090	0	50	01/01/1953	1953	13.81	4,076,264	0
63	Building	320,374	208,243	112,131	50	01/01/1976	1976	3.45	1,105,905	387,067
64	Building	572,570	78,728	493,841	40	06/30/2003	2003	1.24	708,610	611,349
65	Building	725,762	254,017	471,745	50	06/01/1991	1991	1.71	1,244,084	808,655
66	Building	753,777	489,955	263,622	50	01/01/1976	1976	3.45	2,601,974	910,690
67	Building	910,793	193,543	717,249	40	06/30/2000	2000	1.33	1,213,421	955,569
68	Cabinetry	3,500	3,500	0	10	05/01/1989	1989	1.80	6,286	0
69	Cabinets	7,879	7,879	0	10	06/01/1991	1991	1.71	13,506	0
70	Camera	3,603	3,803	0	10	01/01/1994	1994	1.53	5,629	0
71	Camera	9,236	2,771	6,485	5	11/15/2006	2006	1.07	9,676	6,913
72	Camera	10,936	3,281	7,655	5	11/15/2006	2006	1.07	11,693	8,185
73	Camera	29,015	8,705	20,311	5	11/15/2006	2006	1.07	31,024	21,717
74	Cart	3,603	3,603	0	10	05/01/1990	1990	1.75	6,660	0
75	Cart	4,752	4,752	0	10	07/01/1993	1993	1.59	7,559	0
76	Centerwell	31,465	10,383	21,061	50	06/01/1992	1992	1.66	52,313	35,050
77	Chambers	31,423	8,116	23,305	60	06/01/1993	1993	1.59	49,988	37,074
78	Clarifier	20,004	20,004	0	30	01/01/1966	1966	8.13	162,700	0
79	Clarifier	61,000	47,783	13,217	30	01/01/1985	1985	1.98	120,518	26,112
80	Clarifier	61,000	47,783	13,217	30	01/01/1985	1985	1.98	120,518	26,112
81	Clarifier	201,865	85,793	116,072	20	12/30/1999	1999	1.37	276,129	156,774
82	Clarifier	310,372	0	310,372	10	06/30/1995	1995	1.51	470,164	470,164
83	Clarifier	324,140	324,140	0	30	01/01/1966	1966	8.13	2,636,396	0
84	Clarifiers	145,197	42,349	102,848	60	06/01/1991	1991	1.71	246,894	176,300
85	Claanar	5,752	5,752	0	5	05/01/1989	1989	1.80	10,329	0
86	Collection	246,024	150,689	95,334	40	06/01/1964	1984	2.00	491,813	190,577
87	Collection	286,951	146,087	140,864	40	06/01/1968	1986	1.83	529,949	258,350
88	Collection	893,115	480,049	413,066	40	06/01/1987	1987	1.66	1,660,023	777,011
89	Collection	1,312,463	738,260	574,203	40	06/01/1986	1986	1.93	2,532,656	1,108,037

Salt Lake City
Wastewater Impact Fees
Detailed Wastewater Asset Listing, FY07

Table E- 15

Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Life years	Acquistion Date	Year	ENR 20-Cities Cost Index	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
90	Compressor	3,350	3,350	0	10	07/01/1991	1991	1.71	5,742	0
91	Compressor	3,626	3,444	181	10	02/28/1989	1989	1.37	4,959	248
92	Compressor	4,323	4,323	0	10	09/01/1981	1981	2.34	10,136	0
93	Compressor	4,686	4,335	351	20	06/01/1990	1990	1.75	8,207	616
94	Compressor	8,395	8,395	0	10	06/03/1996	1996	1.47	12,360	0
95	Compressor	10,799	10,799	0	5	03/01/1994	1994	1.53	16,550	0
96	Compressor	10,899	10,899	0	10	02/01/1992	1992	1.66	18,121	0
97	Compressor	13,098	5,567	7,531	20	02/28/2000	2000	1.33	17,450	10,034
98	Compressor	13,098	5,567	7,531	20	02/28/2000	2000	1.33	17,450	10,034
99	Compressor	13,106	6,881	6,225	20	01/31/1998	1998	1.40	18,349	8,716
100	Compressor	46,920	30,498	16,422	30	06/01/1989	1989	1.80	84,263	29,492
101	Compressor	171,921	111,749	60,172	30	06/01/1989	1989	1.80	308,752	108,063
102	Compressor	171,921	111,749	60,172	30	06/01/1989	1989	1.80	308,752	108,063
103	Computer	3,018	3,018	0	10	05/01/1989	1989	1.80	5,421	0
104	Computer	3,078	3,078	0	3	11/01/1991	1991	1.71	5,276	0
105	Computer	3,502	3,502	0	3	11/30/1995	1995	1.51	5,305	0
106	Computer	3,502	3,502	0	3	11/30/1995	1995	1.51	5,305	0
107	Computer	3,502	3,502	0	3	11/30/1995	1995	1.51	5,305	0
108	Computer	3,674	3,674	0	3	11/30/1996	1996	1.47	5,418	0
109	Computer	4,087	4,087	0	3	12/01/1994	1994	1.53	6,263	0
110	Computer	4,535	4,535	0	3	03/31/1999	1999	1.37	6,203	0
111	Computer	4,753	4,753	0	3	06/20/2000	2000	1.33	6,332	0
112	Computer	5,275	5,275	0	3	11/01/1991	1991	1.71	9,042	0
113	Computer	7,992	7,992	0	3	12/01/1993	1993	1.59	12,714	0
114	Computer	8,796	8,796	0	3	11/01/1991	1991	1.71	15,078	0
115	Computer	13,495	13,495	0	3	09/27/2001	2001	1.31	17,636	0
116	Computer	22,025	22,025	0	3	06/30/1996	1996	1.47	32,481	0
117	Controls	20,000	28,000	0	10	01/01/1965	1985	1.98	55,320	0
118	Controls	56,000	56,000	0	10	01/01/1985	1965	1.98	110,639	0
119	Controls	170,157	170,157	0	10	07/01/1963	1983	2.04	346,844	0
120	Controls	306,666	199,333	107,333	30	06/01/1969	1989	1.60	550,739	192,759
121	Conversion	8,650	2,595	6,055	5	11/15/2006	2006	1.07	9,249	6,474
122	Conveyor	9,312	9,312	0	30	01/01/1976	1976	3.45	32,146	0
123	Copier	3,984	3,984	0	5	06/04/2000	2000	1.33	5,306	0
124	Copier	4,362	3,053	1,309	5	08/30/2005	2005	1.11	4,855	1,457
125	Copier	20,720	20,720	0	5	09/19/2000	2000	1.33	27,605	0
126	Crane	13,574	13,574	0	10	06/01/1985	1985	1.98	26,816	0
127	Crane	13,851	8,873	4,778	30	08/01/1969	1989	1.80	24,516	8,581
128	Crane	72,595	72,595	0	5	06/01/1994	1994	1.53	111,255	0
129	Cutter	3,769	3,769	0	10	05/01/1994	1994	1.53	5,776	0
130	Deaerator	70,909	46,091	24,818	30	06/01/1969	1989	1.60	127,345	44,571
131	Deionized	5,654	5,654	0	10	03/01/1989	1989	1.80	10,154	0
132	Density	3,034	3,034	0	10	11/01/1981	1961	2.34	7,115	0
133	Density	3,034	3,034	0	10	11/01/1981	1981	2.34	7,115	0
134	Density	3,034	3,034	0	10	11/01/1981	1981	2.34	7,115	0
135	Density	3,034	3,034	0	10	11/01/1981	1981	2.34	7,115	0
136	Detector	3,222	3,222	0	10	01/01/1984	1984	2.00	6,441	0
137	Detector	3,222	3,222	0	10	01/01/1984	1984	2.00	6,441	0
138	Detector	3,222	3,222	0	10	01/01/1984	1984	2.00	6,441	0
139	Detector	3,500	3,500	0	5	04/30/1997	1997	1.42	4,980	0
140	Digester	12,346	11,420	926	20	06/01/1990	1990	1.75	21,624	1,622
141	Drive	9,490	7,355	2,135	20	06/01/1993	1993	1.59	15,097	3,397
142	Dryblaster	3,379	3,379	0	10	02/01/1991	1991	1.71	5,792	0
143	Drying Bed	123,356	29,811	93,545	60	08/01/1994	1994	1.53	169,049	143,363
144	Earthquake	82,996	20,789	42,207	50	06/01/1992	1992	1.66	104,737	70,174
145	Enclosure	4,035	4,835	0	10	12/31/1997	1997	1.42	6,679	0
146	Engine	3,409	2,983	428	20	08/01/1991	1991	1.71	5,644	731
147	Equipment	3,055	1,375	1,680	10	06/30/2004	2004	1.20	3,680	2,024
148	Equipment	3,091	1,082	2,009	10	06/30/2005	2005	1.11	3,441	2,237
149	Equipment	3,254	732	2,522	20	06/30/2004	2004	1.20	3,919	3,038
150	Equipment	3,264	2,121	1,142	30	06/01/1989	1989	1.80	5,861	2,051
151	Equipment	3,406	2,327	1,079	30	06/01/1986	1988	1.83	6,246	1,978
152	Equipment	3,612	2,347	1,264	10	08/28/2002	2002	1.27	4,578	1,602
153	Equipment	3,820	3,820	0	5	03/26/2001	2001	1.31	4,992	0
154	Equipment	3,620	3,820	0	5	03/26/2001	2001	1.31	4,992	0
155	Equipment	3,632	1,341	2,491	10	06/16/2005	2005	1.11	4,265	2,772
156	Equipment	4,085	3,063	1,021	10	11/27/2000	2000	1.33	5,442	1,360
157	Equipment	4,190	3,876	314	20	06/01/1990	1990	1.75	7,339	551
158	Equipment	4,470	2,012	2,459	10	06/30/2004	2004	1.20	5,384	2,961
159	Equipment	4,470	2,012	2,459	10	06/30/2004	2004	1.20	5,384	2,961
160	Equipment	4,530	4,530	0	5	03/26/2001	2001	1.31	5,920	0
161	Equipment	5,082	5,082	0	5	03/26/2001	2001	1.31	6,641	0
162	Equipment	5,082	5,082	0	5	03/26/2001	2001	1.31	6,641	0
163	Equipment	5,425	4,069	1,356	10	09/05/2000	2000	1.33	7,228	1,807
164	Equipment	5,578	5,578	0	10	06/30/1996	1998	1.47	8,227	0
165	Equipment	5,667	3,117	2,550	10	06/30/2003	2003	1.24	7,015	3,157
166	Equipment	5,695	3,132	2,563	10	12/10/2002	2002	1.27	7,219	3,249
167	Equipment	5,695	3,132	2,563	10	12/10/2002	2002	1.27	7,219	3,249
168	Equipment	6,184	6,184	0	10	06/03/1996	1996	1.47	9,119	0
169	Equipment	6,970	3,136	3,833	10	10/15/2003	2003	1.24	8,628	4,745
170	Equipment	7,073	2,652	4,421	20	06/30/2001	2001	1.31	9,243	5,777
171	Equipment	7,570	2,839	4,731	20	06/30/2001	2001	1.31	9,893	6,163
172	Equipment	7,599	5,699	1,900	10	09/12/2000	2000	1.33	10,124	2,531
173	Equipment	7,621	3,429	4,192	10	06/30/2004	2004	1.20	9,179	5,049
174	Equipment	7,737	5,803	1,934	10	09/12/2000	2000	1.33	10,308	2,577
175	Equipment	7,608	2,147	5,661	20	06/30/2003	2003	1.24	9,686	7,008
176	Equipment	8,028	2,810	5,218	10	04/20/2005	2005	1.11	6,936	5,808
177	Equipment	8,956	2,015	6,941	20	08/30/2004	2004	1.20	10,787	8,360
178	Equipment	9,059	5,868	3,171	10	06/28/2002	2002	1.27	11,484	4,019

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179	Equipment	9,059	5,888	3,171	10	06/28/2002	2002	1.27	11,484	4,019
180	Equipment	9,209	3,453	5,756	20	06/30/2001	2001	1.31	12,035	7,522
181	Equipment	9,796	2,449	7,347	10	06/30/2006	2006	1.07	10,474	7,856
182	Equipment	10,041	502	9,539	10	06/30/2008	2008	1.00	10,041	9,539
183	Equipment	10,599	6,889	3,710	10	01/08/2002	2002	1.27	13,436	4,703
184	Equipment	10,700	5,885	4,815	10	08/21/2002	2002	1.27	13,564	6,104
185	Equipment	13,400	1,005	12,395	20	06/30/2007	2007	1.04	13,940	12,895
186	Equipment	13,810	1,036	12,774	20	06/30/2007	2007	1.04	14,367	13,289
187	Equipment	13,884	9,487	4,397	30	06/01/1988	1988	1.83	25,464	8,063
188	Equipment	14,956	6,730	8,226	10	04/27/2004	2004	1.20	18,014	9,808
189	Equipment	20,235	11,129	9,108	10	12/05/2002	2002	1.27	25,651	11,543
190	Equipment	20,463	17,905	2,558	20	06/01/1991	1991	1.71	35,078	4,385
191	Equipment	20,950	11,523	9,428	10	10/22/2002	2002	1.27	26,558	11,951
192	Equipment	20,984	13,640	7,344	30	06/01/1989	1989	1.80	37,685	13,190
193	Equipment	21,223	11,673	9,550	10	08/05/2002	2002	1.27	26,904	12,107
194	Equipment	21,471	11,809	9,662	10	11/06/2002	2002	1.27	27,218	12,248
195	Equipment	21,880	14,229	7,882	10	04/23/2002	2002	1.27	27,749	9,712
196	Equipment	22,471	14,606	7,865	10	06/06/2002	2002	1.27	28,486	9,970
197	Equipment	23,106	15,019	8,087	30	06/01/1989	1989	1.80	41,497	14,524
198	Equipment	24,100	3,013	21,088	20	06/30/2006	2006	1.07	25,789	22,548
199	Equipment	28,220	7,055	21,165	10	09/15/2005	2005	1.11	31,410	23,558
200	Equipment	28,241	24,711	3,530	20	08/01/1991	1991	1.71	48,410	6,051
201	Equipment	28,583	19,532	9,051	30	06/01/1988	1988	1.83	52,423	16,601
202	Equipment	29,820	10,437	19,383	10	10/21/2004	2004	1.20	35,918	23,346
203	Equipment	30,640	10,724	19,916	10	08/11/2004	2004	1.20	36,905	23,988
204	Equipment	31,445	14,150	17,295	10	07/08/2003	2003	1.24	38,927	21,410
205	Equipment	33,335	22,779	10,556	30	06/01/1988	1988	1.83	61,138	19,360
206	Equipment	39,481	34,546	4,935	20	06/01/1991	1991	1.71	67,677	8,460
207	Equipment	40,000	26,000	14,000	30	08/01/1989	1989	1.80	71,838	25,143
208	Equipment	40,341	1,009	39,332	20	06/30/2008	2008	1.00	40,341	39,332
209	Equipment	46,839	36,300	10,539	20	08/01/1993	1993	1.59	74,511	16,785
210	Equipment	55,000	48,125	6,875	20	06/01/1991	1991	1.71	94,280	11,785
211	Equipment	66,083	66,083	0	10	06/01/1993	1993	1.59	105,125	0
212	Equipment	70,750	48,346	22,404	30	06/01/1988	1988	1.83	129,759	41,091
213	Equipment	73,918	57,286	16,632	20	08/01/1993	1993	1.59	117,588	26,457
214	Equipment	81,586	63,214	18,352	20	08/01/1993	1993	1.59	129,755	29,195
215	Equipment	82,275	53,479	28,796	10	12/01/2001	2001	1.31	107,521	37,632
216	Equipment	89,072	60,868	28,208	30	08/01/1986	1986	1.83	163,362	51,731
217	Equipment	153,980	19,248	134,733	20	06/30/2006	2006	1.07	164,644	144,084
218	Equipment	197,679	135,080	62,598	30	06/01/1988	1988	1.83	362,552	114,808
219	Equipment	274,964	187,892	87,072	30	08/01/1988	1988	1.83	504,296	159,694
220	Equipment	663,624	590,143	273,481	30	08/01/1988	1988	1.83	1,583,926	501,576
221	Equipment	1,436,040	981,294	454,746	30	06/01/1988	1988	1.83	2,633,762	834,025
222	Equipment	3,173,618	2,166,774	1,005,042	30	08/01/1988	1988	1.83	5,820,921	1,843,292
223	Equipment	3,783,775	3,310,803	472,972	20	06/01/1991	1991	1.71	6,486,060	810,757
224	Evaporator	4,514	4,514	0	30	01/01/1976	1976	3.45	15,561	0
225	Evaporator	5,395	4,945	450	30	01/01/1981	1981	2.34	12,649	1,054
226	Evaporator	11,985	11,985	0	30	01/01/1966	1966	6.13	97,480	0
227	Exchanger	4,104	2,666	1,437	30	06/01/1989	1989	1.80	7,371	2,560
228	Exchenger	4,104	2,666	1,437	30	06/01/1989	1989	1.80	7,371	2,560
229	Exchanger	4,104	2,666	1,437	30	06/01/1969	1969	1.80	7,371	2,560
230	Exchanger	4,104	2,666	1,437	30	06/01/1969	1969	1.80	7,371	2,560
231	Exchanger	4,104	2,666	1,437	30	06/01/1969	1969	1.80	7,371	2,560
232	Exchanger	8,052	5,234	2,816	30	06/01/1969	1969	1.80	14,461	5,061
233	Exchanger	36,000	36,000	0	30	01/01/1966	1966	8.13	309,073	0
234	Exchanger	103,000	103,000	0	20	01/01/1985	1985	1.98	203,497	0
235	Ferm	10,464	2,529	7,935	60	06/01/1994	1994	1.53	16,037	12,161
236	Farm	48,467	19,671	28,595	50	06/01/1988	1988	1.83	86,891	52,445
237	Fence	33,391	11,019	22,372	50	06/01/1992	1992	1.66	55,516	37,196
238	Field	13,680	13,680	0	3	12/01/1992	1992	1.66	22,744	0
239	Fileserver	11,586	11,586	0	3	11/01/1994	1994	1.53	17,757	0
240	Fileserver	17,405	17,405	0	3	01/01/1995	1995	1.51	26,366	0
241	Filter	311,266	311,266	0	30	01/01/1966	1966	8.13	2,531,664	0
242	Filter	644,462	547,793	96,869	30	08/01/1983	1983	2.04	1,313,657	197,049
243	Filterarms	51,761	45,722	6,039	30	07/01/1981	1981	2.34	121,357	14,158
244	Filtration	19,098	19,098	0	10	06/30/1997	1997	1.42	27,173	0
245	Flare	4,475	4,475	0	10	04/01/1993	1993	1.59	7,119	0
246	Flare	12,240	12,240	0	10	04/01/1993	1993	1.59	19,471	0
247	Floor Tile	27,357	9,028	18,329	50	06/01/1992	1992	1.66	45,464	30,474
248	Flow Meter	7,138	7,138	0	10	06/01/1989	1989	1.60	12,816	0
249	Flow Meter	7,138	7,138	0	10	06/01/1989	1989	1.60	12,818	0
250	Flow Meter	3,200	800	2,400	10	08/07/2008	2008	1.07	3,422	2,566
251	Flow Meter	3,886	3,886	0	10	07/01/1961	1961	2.34	9,111	0
252	Forklift	16,650	16,650	0	7	06/30/1997	1997	1.42	26,621	0
253	Forklift	42,600	42,600	0	7	06/31/1998	1998	1.40	59,920	0
254	Fridge	3,179	3,179	0	10	02/01/1990	1990	1.75	5,569	0
255	Furniture	13,037	3,259	9,778	10	06/30/2008	2006	1.07	13,940	10,455
258	Garage	5,980	4,063	1,917	39	06/01/1982	1982	2.17	12,958	4,153
257	Garage	32,849	22,584	10,265	40	08/01/1981	1981	2.34	77,017	24,088
258	Garage	64,557	42,769	21,788	40	06/01/1982	1982	2.17	139,882	47,210
259	Gate	4,561	4,561	0	30	01/01/1976	1976	3.45	15,745	0
260	Gate	16,098	14,085	2,012	20	06/01/1991	1991	1.71	27,594	3,449
261	Gate	16,684	16,684	0	10	06/01/1982	1982	2.17	36,585	0
262	Gate	30,900	0	30,900	10	06/30/1995	1995	1.51	46,811	46,811
263	Generator	10,679	10,679	0	10	04/01/1985	1985	1.98	21,096	0
264	Generator	10,719	10,719	0	10	03/01/1967	1987	1.88	20,163	0
265	Generator	10,966	10,966	0	10	04/01/1988	1988	1.83	20,112	0
266	Generator	14,965	14,965	0	10	08/01/1990	1990	1.75	26,211	0
267	Generator	15,275	15,275	0	10	05/01/1989	1989	1.80	27,432	0

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268	Generator	15,500	15,500	0	10	09/01/1992	1992	1.66	25,770	0
269	Generator	15,900	15,900	0	10	03/01/1991	1991	1.71	27,255	0
270	Generator	16,590	0	16,590	7	03/31/1995	1995	1.51	25,132	25,132
271	Generator	18,370	18,370	0	10	10/30/1996	1996	1.47	27,091	0
272	Generator	19,248	14,436	4,812	10	01/16/2001	2001	1.31	25,154	6,289
273	Generator	19,550	19,550	0	10	05/31/1997	1997	1.42	27,817	0
274	Generator	19,788	19,788	0	10	05/31/1998	1998	1.40	27,703	0
275	Generator	22,700	3,405	19,295	10	03/07/2007	2007	1.04	23,615	20,073
276	Generator	23,233	1,162	22,072	10	04/29/2008	2008	1.00	23,233	22,072
277	Generator	24,995	21,246	3,749	10	05/30/2000	2000	1.33	33,300	4,995
278	Generator	25,967	25,967	0	10	06/30/1996	1996	1.47	38,295	0
279	Generator	63,800	63,800	0	30	01/01/1986	1986	8.13	518,918	0
280	Generator	85,522	85,522	0	30	01/01/1976	1976	3.45	295,215	0
281	Generator	90,273	90,273	0	30	01/01/1976	1976	3.45	311,616	0
282	Generator	130,423	130,423	0	10	06/01/1986	1986	1.93	251,678	0
283	Generator	130,423	130,423	0	10	06/01/1986	1986	1.93	251,678	0
284	Generator	130,423	130,423	0	10	06/01/1986	1986	1.93	251,678	0
285	Generator	328,018	300,684	27,335	30	06/01/1981	1981	2.34	769,061	64,088
286	GIS	45,615	45,615	0	10	06/01/1989	1989	1.80	81,919	0
287	Golf Cart	4,400	4,400	0	5	05/01/1989	1989	1.80	7,902	0
288	Grease Pum	21,199	19,609	1,590	20	06/01/1990	1990	1.75	37,131	2,785
289	Greaseline	30,735	8,964	21,771	60	08/01/1991	1991	1.71	52,685	37,319
290	Grinder	4,505	4,505	0	10	12/01/1990	1990	1.75	7,891	0
291	Grinder	7,586	6,954	632	30	01/01/1981	1981	2.34	17,786	1,482
292	Grit Screw	26,900	23,538	3,363	20	06/01/1991	1991	1.71	48,111	5,764
293	Gritter	3,592	3,592	0	30	01/01/1976	1976	3.45	12,399	0
294	Gritter	3,592	3,592	0	30	01/01/1976	1976	3.45	12,399	0
295	Grooving	3,666	3,666	0	5	11/01/1986	1986	1.93	7,075	0
296	Hammer	15,739	15,739	0	10	09/01/1991	1991	1.71	26,979	0
297	Hand Brake	7,789	6,621	1,168	10	12/30/1999	1999	1.37	10,654	1,598
298	Homogenize	3,953	3,953	0	10	02/01/1994	1994	1.53	6,059	0
299	Hopper	5,780	5,780	0	30	01/01/1966	1966	8.13	47,012	0
300	Hopper	24,801	24,801	0	30	01/01/1976	1976	3.45	85,612	0
301	Ifas	118,102	118,102	0	3	05/01/1993	1993	1.59	167,876	0
329	Ironworker	8,010	8,010	0	10	06/01/1988	1988	1.83	14,690	0
330	Irrigation	27,487	27,487	0	10	06/01/1993	1993	1.59	43,726	0
331	Laboratory	451,855	149,112	302,743	50	06/01/1992	1992	1.66	751,253	503,340
332	Laboratory	5,627	0	5,627	10	01/31/1996	1996	1.47	8,298	8,298
333	Laboratory	8,699	0	8,699	10	08/30/1995	1995	1.51	13,178	13,178
334	Lagoon	308,071	157,116	150,955	50	06/01/1983	1983	2.04	627,964	307,703
335	Land	424	0	424	99	01/01/1926	1926	39.84	424	424
336	Land	500	0	500	99	01/01/1957	1957	11.45	500	500
337	Land	700	0	700	99	04/01/1975	1975	3.75	700	700
338	Land	1,116	0	1,116	99	01/01/1912	1912	91.38	1,116	1,116
339	Land	1,502	0	1,502	0	06/30/2003	2003	1.24	1,502	1,502
340	Land	2,000	0	2,000	99	01/01/1900	1900	86.26	2,000	2,000
341	Land	$20,070	$0	$20,070	99	10/01/1928	1926	39.84	20,070	20,070
342	Land	200,200	0	200,200	0	03/01/1982	1982	2.17	200,200	200,200
343	Land	251,233	0	251,233	99	03/01/1963	1963	9.20	251,233	251,233
344	Land	302,100	0	302,100	99	03/01/1979	1979	2.76	302,100	302,100
345	Land	750,975	0	750,975	0	09/01/1981	1981	2.34	750,975	750,975
346	Land	2,655,130	0	2,655,130	99	06/01/1986	1986	1.93	2,655,130	2,655,130
347	Landscaping	20,000	20,000	0	5	01/01/1985	1985	1.98	39,514	0
348	Landscaping	2,364	916	1,448	40	06/01/1993	1993	1.59	3,761	2,304
349	Landscaping	3,100	1,007	2,092	20	06/30/2002	2002	1.27	3,929	2,652
350	Landscaping	11,766	2,177	9,589	100	06/01/1990	1990	1.75	20,608	16,796
351	Landscaping	14,114	5,787	8,327	50	06/01/1968	1966	1.83	25,686	15,272
352	Landscaping	20,079	0	20,079	20	06/30/1995	1995	1.51	30,418	30,418
353	Landscaping	21,126	4,753	16,373	20	06/30/2004	2004	1.20	25,446	19,721
354	Landscaping	26,721	10,956	15,788	50	06/01/1968	1968	1.83	49,008	28,915
355	Landscaping	30,002	0	30,002	20	06/30/2001	2001	1.31	39,208	39,208
356	Landscaping	36,865	0	36,865	20	08/30/1999	1999	1.37	50,427	50,427
357	Landscaping	52,760	0	52,760	20	06/30/2001	2001	1.31	68,950	68,950
358	Landscaping	63,251	17,394	45,857	20	06/30/2003	2003	1.24	76,301	56,768
359	Landscaping	74,913	29,216	45,897	50	06/01/1989	1989	1.80	134,536	82,067
360	Landscaping	99,024	56,939	42,085	20	06/30/1997	1997	1.42	140,895	59,880
361	Landscaping	205,740	118,300	87,439	20	06/30/1997	1997	1.42	292,735	124,412
362	Landscaping	466,847	190,915	274,732	50	06/01/1988	1988	1.83	854,017	503,870
363	Landscaping	648,641	265,943	382,698	50	06/01/1988	1988	1.83	1,189,637	701,886
364	Landscaping	805,483	330,248	475,235	50	06/01/1988	1988	1.83	1,477,292	871,602
365	Lathe	20,460	19,437	1,023	10	04/30/1999	1999	1.37	27,987	1,399
366	Lawnmower	7,496	4,820	2,678	7	02/29/2004	2004	1.20	9,031	3,225
367	Left	4,995	4,995	0	10	12/01/1989	1989	1.80	8,970	0
368	Level	4,665	4,665	0	10	06/01/1994	1994	1.53	7,149	0
369	Level	4,665	4,665	0	10	06/01/1994	1994	1.53	7,149	0
370	Level	5,540	5,540	0	10	12/01/1982	1982	2.17	12,004	0
371	Lift Station	780	230	550	39	06/30/1997	1997	1.42	1,110	783
372	Lift Station	1,169	385	804	40	06/30/1996	1996	1.47	1,724	1,185
373	Lift Station	1,906	562	1,344	39	06/30/1997	1997	1.42	2,712	1,912
374	Lift Station	2,967	1,034	1,933	33	06/30/1997	1997	1.42	4,222	2,751
375	Lift Station	4,267	0	4,267	10	03/31/1995	1995	1.51	6,464	6,464
376	Lift Station	5,230	850	4,380	40	06/30/2002	2002	1.27	6,630	5,553
377	Lift Station	6,000	675	5,325	40	06/30/2004	2004	1.20	7,227	6,414
378	Lift Station	7,204	1,351	5,853	40	08/30/2001	2001	1.31	9,415	7,650
379	Lift Station	7,576	1,042	6,535	40	08/30/2003	2003	1.24	9,379	8,090
380	Lift Station	6,398	105	8,293	40	06/30/2008	2008	1.00	8,398	8,293
381	Lift Station	13,592	1,189	12,403	40	06/30/2005	2005	1.11	15,129	13,806
382	Lift Station	14,856	2,785	12,070	40	06/30/2001	2001	1.31	19,414	15,774
383	Lift Station	14,910	3,914	10,996	40	06/30/1998	1998	1.40	20,874	15,395

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384	Lift Station	20,317	5,333	14,983	40	06/30/1998	1998	1.40	28,443	20,977
385	Lift Station	23,997	2,700	21,297	40	06/30/2004	2004	1.20	28,904	25,652
386	Lift Station	31,780	9,137	22,643	40	06/30/1997	1997	1.42	45,218	32,218
387	Lift Station	44,142	13,794	30,348	40	08/30/1996	1996	1.47	65,098	44,755
388	Lift Station	52,718	9,885	42,834	40	06/30/2001	2001	1.31	68,895	55,977
389	Lift Station	54,878	14,406	40,473	40	06/30/1998	1998	1.40	76,830	56,662
390	Lift Station	65,975	9,072	56,903	40	06/30/2003	2003	1.24	81,673	70,443
391	Lift Station	76,014	27,555	48,459	40	06/01/1994	1994	1.53	116,498	74,286
392	Lift Station	80,910	7,080	73,830	40	06/30/2005	2005	1.11	90,059	82,179
393	Lift Station	127,998	71,999	55,999	40	06/01/1988	1988	1.93	248,997	108,061
394	Lift Station	132,224	41,320	90,904	40	06/30/1996	1996	1.47	194,997	134,060
395	Lift Station	140,980	33,483	107,497	40	06/30/1999	1999	1.37	192,845	147,044
396	Lift Station	152,000	47,500	104,500	40	08/30/1996	1996	1.47	224,181	154,111
397	Lift Station	161,802	46,518	115,284	40	06/30/1997	1997	1.42	230,219	164,031
398	Lift Station	225,780	70,556	155,224	40	06/30/1996	1996	1.47	332,968	228,915
399	Lift Station	250,000	3,125	246,875	40	06/30/2008	2008	1.00	250,000	248,875
400	Lift Station	268,740	50,389	218,351	40	06/30/2001	2001	1.31	351,203	285,352
401	Lift Station	287,038	68,172	218,867	40	06/30/1999	1999	1.37	392,637	299,388
402	Lift Station	333,877	54,255	279,622	40	08/30/2002	2002	1.27	423,247	354,470
403	Lift Station	426,000	26,750	401,250	40	06/30/2006	2006	1.07	457,642	429,039
404	Loader	39,155	39,155	0	10	01/01/1981	1981	2.34	91,802	0
405	Loader	148,115	148,115	0	7	03/01/1992	1992	1.66	248,256	0
406	Maint Shop	178,611	55,816	122,795	40	06/30/1996	1996	1.47	263,405	181,091
407	Meter	3,195	3,195	0	10	01/01/1981	1981	2.34	7,490	0
408	Meter	6,275	6,275	0	10	01/31/1998	1998	1.40	8,785	0
409	Meters	31,043	31,043	0	20	01/01/1985	1985	1.98	61,331	0
410	Microscope	4,204	4,204	0	10	08/30/1997	1997	1.42	5,982	0
411	Microwave	23,526	23,526	0	10	03/31/1996	1996	1.47	34,695	0
412	Mill	4,363	4,383	0	10	07/01/1990	1990	1.75	7,643	0
413	Milling	7,273	7,273	0	10	05/01/1992	1992	1.66	12,091	0
414	Mixor	3,395	3,395	0	10	07/01/1994	1994	1.53	5,203	0
415	Mixer	95,000	95,000	0	20	01/01/1985	1985	1.98	187,891	0
416	Mixer	95,000	95,000	0	20	01/01/1985	1985	1.98	187,691	0
417	Mixer	95,000	95,000	0	20	01/01/1985	1985	1.98	187,691	0
418	Monitor	7,515	7,515	0	10	11/30/1997	1997	1.42	10,692	0
419	Monitoring	255,340	61,707	193,633	60	06/01/1994	1994	1.53	391,321	296,752
420	Monitors	15,423	15,423	0	10	06/01/1994	1994	1.53	23,636	0
421	Motor	3,212	3,212	0	10	05/01/1990	1990	1.75	5,625	0
422	Motor	3,212	3,212	0	10	05/01/1990	1990	1.75	5,625	0
423	Motor	3,780	3,760	0	30	01/01/1966	1966	8.13	30,582	0
424	Motors	1,661	735	945	40	06/01/1991	1991	1.71	2,861	1,621
425	Mower	5,445	5,445	0	5	01/01/1977	1977	3.22	17,518	0
426	Mower	6,485	6,485	0	5	04/30/1997	1997	1.42	9,227	0
427	Mower	9,909	9,909	0	10	09/01/1981	1981	2.34	23,232	0
428	Mower	9,999	7,856	2,143	7	08/27/2002	2002	1.27	12,675	2,716
429	Mower	12,110	12,110	0	10	04/01/1986	1988	1.93	23,369	0
430	Odor Control	11,568	11,568	0	10	06/01/1993	1993	1.59	18,402	0
431	Odor Control	42,426	18,031	24,395	20	02/25/2000	2000	1.33	56,523	32,500
432	Paging	3,786	3,786	0	10	10/30/1997	1997	1.42	5,369	0
433	Phone Sys	33,316	31,652	1,666	10	04/30/1999	1999	1.37	45,575	2,279
434	Piping	149,541	97,202	52,340	30	06/01/1989	1989	1.80	268,560	93,996
435	Plant	19,583	5,059	14,524	60	08/01/1993	1993	1.59	31,152	23,104
436	Plant	103,819	42,566	61,253	50	06/01/1988	1988	1.83	190,409	112,341
437	Plant	374,023	90,389	283,634	60	06/01/1994	1994	1.53	573,210	434,684
438	Plant	948,408	388,847	559,581	50	06/01/1988	1988	1.83	1,739,423	1,026,259
439	Plant	1,346,670	436,383	910,487	80	06/01/1989	1989	1.80	2,422,426	1,635,137
440	Plant	1,418,691	413,843	1,005,048	60	06/01/1991	1991	1.71	2,432,230	1,722,830
441	Plant	1,558,477	454,556	1,103,921	60	06/01/1991	1991	1.71	2,671,505	1,892,316
442	Power Unit	13,500	13,500	0	10	04/30/1997	1997	1.42	19,208	0
443	Powerplant	4,810	4,810	0	10	06/01/1992	1992	1.66	7,997	0
444	Press	6,619	6,619	0	10	01/01/1989	1989	1.80	11,887	0
445	Primary	44,862	41,497	3,365	20	06/01/1990	1990	1.75	78,575	5,893
446	Projector	5,960	5,980	0	5	02/28/1999	1999	1.37	8,180	0
447	Projector	14,252	14,252	0	5	06/30/1999	1999	1.37	19,496	0
448	Pump	3,059	3,059	0	10	09/01/1991	1991	1.71	5,243	0
449	Pump	3,059	3,059	0	10	09/01/1991	1991	1.71	5,243	0
450	Pump	3,059	3,059	0	10	09/01/1991	1991	1.71	5,243	0
451	Pump	3,139	1,491	1,646	20	06/30/1999	1999	1.37	4,294	2,254
452	Pump	3,350	3,350	0	10	04/30/1997	1997	1.42	4,767	0
453	Pump	3,517	3,224	293	30	01/01/1961	1981	2.34	8,246	687
454	Pump	3,590	3,590	0	10	09/01/1991	1991	1.71	6,154	0
455	Pump	3,793	3,793	0	10	04/01/1984	1984	2.00	7,582	0
456	Pump	4,173	4,173	0	10	09/01/1991	1991	1.71	7,154	0
457	Pump	4,387	4,387	0	15	11/01/1982	1982	2.17	9,506	0
458	Pump	4,600	4,600	0	20	01/01/1985	1985	1.98	9,088	0
459	Pump	4,670	4,670	0	30	01/01/1966	1966	8.13	37,983	0
460	Pump	4,747	4,747	0	10	11/01/1981	1981	2.34	11,129	0
461	Pump	5,225	2,743	2,482	20	12/31/1997	1997	1.42	7,434	3,531
462	Pump	5,295	5,295	0	30	01/01/1966	1966	8.13	43,067	0
463	Pump	6,273	6,273	0	10	03/01/1983	1983	2.04	12,766	0
464	Pump	6,595	6,595	0	10	06/01/1993	1993	1.59	10,491	0
465	Pump	6,736	5,052	1,664	10	10/31/2000	2000	1.33	8,974	2,244
466	Pump	6,736	5,052	1,664	10	10/31/2000	2000	1.33	8,974	2,244
467	Pump	6,825	6,625	0	10	02/01/1993	1993	1.59	10,857	0
468	Pump	6,900	6,900	0	20	01/01/1965	1965	1.98	13,632	0
469	Pump	7,165	7,165	0	10	01/01/1994	1994	1.53	11,011	0
470	Pump	7,757	7,757	0	10	03/01/1984	1984	2.00	15,507	0
471	Pump	6,000	6,000	0	20	01/01/1985	1985	1.98	15,806	0
472	Pump	6,000	8,000	0	20	01/01/1965	1965	1.98	15,806	0

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473	Pump	8,081	6,599	1,482	30	11/01/1983	1983	2.04	16,472	3,020
474	Pump	8,855	8,855	0	10	01/01/1980	1980	2.56	22,672	0
475	Pump	9,970	9,970	0	10	03/01/1988	1988	1.83	18,285	0
476	Pump	10,760	10,760	0	10	07/09/1997	1997	1.42	15,310	0
477	Pump	10,760	10,760	0	10	07/09/1997	1997	1.42	15,310	0
478	Pump	11,695	11,695	0	10	08/01/1983	1983	2.04	23,839	0
479	Pump	11,755	6,171	5,584	20	04/30/1998	1998	1.40	16,457	7,817
480	Pump	11,932	0	11,932	10	06/30/1995	1995	1.51	18,076	18,076
481	Pump	12,675	12,675	0	30	01/01/1966	1966	8.13	103,092	0
482	Pump	13,935	13,935	0	10	06/01/1993	1993	1.59	22,168	0
483	Pump	14,731	14,731	0	10	06/01/1994	1994	1.53	22,576	0
484	Pump	14,925	3,731	11,194	10	06/07/2006	2006	1.07	15,959	11,969
485	Pump	17,232	17,232	0	7	06/01/1991	1991	1.71	29,538	0
486	Pump	18,662	18,662	0	10	08/31/1996	1996	1.47	27,522	0
487	Pump	18,662	18,662	0	10	08/31/1996	1996	1.47	27,522	0
488	Pump	20,267	20,287	0	10	06/30/1998	1998	1.40	28,402	0
489	Pump	20,676	13,440	7,237	30	06/01/1989	1989	1.80	37,133	12,996
490	Pump	24,667	23,453	1,234	10	08/31/1998	1998	1.40	34,562	1,728
491	Pump	24,900	1,245	23,655	10	04/29/2006	2008	1.00	24,900	23,655
492	Pump	26,095	26,095	0	10	09/01/1991	1991	1.71	44,732	0
493	Pump	26,095	26,095	0	10	09/01/1991	1991	1.71	44,732	0
494	Pump	26,095	26,095	0	10	09/01/1991	1991	1.71	44,732	0
495	Pump	26,095	26,095	0	10	09/01/1991	1991	1.71	44,732	0
496	Pump	26,095	26,095	0	10	09/01/1991	1991	1.71	44,732	0
497	Pump	26,095	26,095	0	10	09/01/1991	1991	1.71	44,732	0
498	Pump	26,095	26,095	0	10	09/01/1991	1991	1.71	44,732	0
499	Pump	26,095	26,095	0	10	09/01/1991	1991	1.71	44,732	0
500	Pump	26,095	26,095	0	10	09/01/1991	1991	1.71	44,732	0
501	Pump	28,264	24,024	4,240	10	02/26/2000	2000	1.33	37,655	5,648
502	Pump	29,620	7,405	22,215	10	06/07/2006	2006	1.07	31,671	23,754
503	Pump	30,780	30,780	0	30	01/01/1960	1960	10.06	309,764	0
504	Pump	34,000	34,000	0	20	01/01/1985	1985	1.98	67,174	0
505	Pump	121,700	57,808	63,893	20	06/30/1999	1999	1.37	166,472	87,398
506	Pump Sump	3,700	3,700	0	20	01/01/1985	1985	1.98	7,310	0
507	Pumps	6,910	6,910	0	10	06/01/1987	1987	1.88	12,999	0
508	Pumps	104,064	0	104,064	10	06/30/1995	1995	1.51	157,678	157,678
509	Purifier	7,302	6,755	546	20	06/01/1990	1990	1.75	12,790	959
510	Quadrunner	5,100	5,100	0	5	06/01/1988	1988	1.83	9,354	0
511	Radio Base	56,255	56,255	0	10	12/01/1984	1984	2.00	112,455	0
512	Rag Rake	62,580	19,296	43,284	60	06/01/1990	1990	1.75	109,608	75,812
513	Reducer	10,673	5,070	5,603	20	04/30/1999	1999	1.37	14,599	7,665
514	Reducer	10,673	5,070	5,603	20	04/30/1999	1999	1.37	14,599	7,665
515	Restroom	55,043	28,072	26,971	50	06/01/1983	1983	2.04	112,199	54,976
516	Retention	701,952	315,879	386,074	50	06/01/1986	1986	1.93	1,354,555	745,005
517	Right of Way	1,500	0	1,500	0	06/01/1989	1989	1.80	1,500	1,500
518	Rodder	17,704	17,704	0	5	06/01/1992	1992	1.68	29,435	0
519	Roof	12,183	3,750	8,413	60	06/01/1990	1990	1.75	21,303	14,735
520	Roof	14,883	6,139	8,744	40	06/01/1992	1992	1.68	24,745	14,538
521	Roto Bin	3,803	3,803	0	10	05/01/1990	1990	1.75	6,660	0
522	Sampler	3,265	3,265	0	10	03/01/1989	1989	1.80	5,863	0
523	Sampler	3,648	3,465	182	10	04/30/1999	1999	1.37	4,990	250
524	Sampler	3,648	3,465	182	10	04/30/1999	1999	1.37	4,990	250
525	Sampler	3,648	3,465	182	10	04/30/1999	1999	1.37	4,990	250
526	Sampler	4,835	4,835	0	10	12/31/1997	1997	1.42	6,879	0
527	Sampler	4,880	0	4,880	10	12/31/1995	1995	1.51	7,393	7,393
528	Sampler	4,880	0	4,880	10	12/31/1995	1995	1.51	7,393	7,393
529	Sampler	5,281	4,489	792	30	06/01/1983	1983	2.04	10,785	1,615
530	Sampler	5,281	4,489	792	30	06/01/1983	1983	2.04	10,785	1,615
531	Sampler	5,281	4,489	792	30	06/01/1983	1983	2.04	10,785	1,615
532	Sampler	6,716	336	6,380	10	10/10/2007	2007	1.04	6,987	6,638
533	Sampler	6,716	336	6,380	10	10/10/2007	2007	1.04	6,987	6,638
534	Sampler	6,716	336	6,380	10	10/10/2007	2007	1.04	6,987	6,638
535	Sampler	6,716	336	6,380	10	10/10/2007	2007	1.04	6,987	6,638
536	Sampler	8,826	6,826	0	10	06/30/1997	1997	1.42	9,712	0
537	Saw	10,720	9,112	1,608	10	01/30/2000	2000	1.33	14,282	2,142
538	Scales	3,058	3,058	0	10	12/01/1981	1981	2.34	7,170	0
539	Scales	3,058	3,058	0	10	12/01/1981	1981	2.34	7,170	0
540	Scales	3,058	3,058	0	10	12/01/1981	1981	2.34	7,170	0
541	Scanner	3,618	3,618	0	3	07/08/2003	2003	1.24	4,479	0
542	Scrubbers	322,289	233,660	88,630	20	06/01/1994	1994	1.53	493,926	135,629
543	Security	22,540	5,823	16,718	80	06/01/1993	1993	1.59	35,857	26,594
544	Security	75,248	75,248	0	10	11/01/1988	1988	1.83	138,008	0
545	Seismac	20,000	6,600	13,400	50	08/01/1992	1992	1.66	33,252	22,279
546	Separator	11,840	11,840	0	30	01/01/1976	1976	3.45	40,871	0
547	Server	4,178	3,482	696	3	06/30/2006	2006	1.07	4,467	745
548	Service	12,281	11,360	921	20	06/01/1990	1990	1.75	21,509	1,613
549	Sewer	476,422	0	476,422	60	06/30/1995	1995	1.51	721,734	721,734
550	Sewer	1,963,484	0	1,963,484	60	06/30/1995	1995	1.51	2,974,461	2,974,461
551	Sewer Lines	601	534	67	40	01/01/1973	1973	4.37	2,629	295
552	Sewer Lines	2,953	2,621	332	40	01/01/1973	1973	4.37	12,915	1,453
553	Sewer Lines	15,100	11,136	3,964	40	01/01/1979	1979	2.76	41,875	10,940
554	Sewer Lines	16,890	12,456	4,434	40	01/01/1979	1979	2.76	48,815	12,236
555	Sewer Lines	18,242	14,365	3,878	40	01/01/1977	1977	3.22	58,691	12,472
556	Sewer Lines	24,623	21,853	2,770	40	01/01/1973	1973	4.37	107,692	12,115
557	Sewer Lines	25,000	23,438	1,563	40	01/01/1971	1971	5.24	131,057	8,191
558	Sewer Lines	26,000	24,375	1,625	40	01/01/1971	1971	5.24	136,299	8,519
559	Sewer Lines	26,210	21,951	4,259	40	01/01/1975	1975	3.75	98,205	15,958
560	Sewer Lines	28,123	12,304	15,819	40	08/01/1991	1991	1.71	48,206	27,117
561	Sewer Lines	29,561	28,975	2,586	40	01/01/1972	1972	4.73	139,782	12,228

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Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Life years	Acquistion Date	Year	ENR 20-Cities Cost Index	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
562	Sewer Lines	30,200	26,803	3,398	40	01/01/1973	1973	4.37	132,084	14,859
563	Sewer Lines	31,280	22,287	8,993	40	01/01/1980	1980	2.56	80,088	23,025
564	Sewer Lines	33,735	33,314	422	40	01/01/1969	1969	6.53	220,332	2,753
565	Sewer Lines	37,000	30,083	6,938	40	01/01/1976	1976	3.45	127,721	23,948
566	Sewer Lines	37,000	30,083	6,938	40	01/01/1976	1976	3.45	127,721	23,948
567	Sewer Lines	37,000	30,063	6,938	40	01/01/1976	1976	3.45	127,721	23,948
568	Sewer Lines	37,000	29,138	7,863	40	01/01/1977	1977	3.22	119,044	25,297
569	Sewer Lines	37,240	34,913	2,328	40	01/01/1971	1971	5.24	195,223	12,201
570	Sewer Lines	38,727	38,243	484	40	01/01/1969	1969	6.53	252,930	3,161
571	Sewer Lines	40,000	30,500	9,500	40	01/01/1978	1978	2.99	119,424	28,363
572	Sewer Lines	42,708	40,038	2,669	40	01/01/1971	1971	5.24	223,886	13,994
573	Sewer Lines	46,000	33,925	12,075	40	01/01/1979	1979	2.78	126,956	33,326
574	Sewer Lines	49,780	41,691	8,089	40	01/01/1975	1975	3.75	186,519	30,309
575	Sewer Lines	63,997	63,997	0	10	06/01/1992	1992	1.66	106,401	0
576	Sewer Lines	88,823	55,918	12,904	40	01/01/1976	1976	3.45	237,570	44,545
577	Sewer Lines	69,300	61,504	7,796	40	01/01/1973	1973	4.37	303,093	34,098
578	Sewer Lines	73,520	52,383	21,137	40	01/01/1980	1980	2.56	188,241	54,119
579	Sewer Lines	84,594	66,818	17,976	40	01/01/1977	1977	3.22	272,175	57,837
580	Sewer Lines	90.577	64.536	26,041	40	01/01/1980	1980	2.56	231,915	66,875
581	Sewer Lines	98,065	72,323	25,742	40	01/01/1979	1979	2.76	270,652	71,046
582	Sewer Lines	100,050	88,794	11,256	40	01/01/1973	1973	4.37	437,582	49,228
583	Sewer Lines	100,946	79,495	21,451	40	01/01/1977	1977	3.22	324,785	69,017
584	Sewer Lines	101,775	75,059	26,716	40	01/01/1979	1979	2.76	280,891	73,734
585	Sewer Lines	105,657	85,846	19,811	40	01/01/1976	1976	3.45	364,719	86,385
586	Sewer Lines	136,255	103,895	32,361	40	01/01/1978	1978	2.99	406,605	96,616
587	Sewer Lines	152,200	142,688	9,513	40	01/01/1971	1971	5.24	797,875	49,867
588	Sewer Lines	166,790	143,657	22,934	40	01/01/1974	1974	4.10	684,339	94,096
589	Sewer Lines	166,806	81,318	85,468	40	06/01/1989	1989	1.80	299,566	153,527
590	Sewer Lines	177,035	130,564	46,472	40	01/01/1979	1979	2.76	488,604	128,258
591	Sewer Lines	180,237	155,454	24,782	40	01/01/1974	1974	4.10	739,510	101,682
592	Sewer Lines	246,497	95,518	150,979	40	06/01/1993	1993	1.58	392,126	240,178
593	Sewer Lines	253,027	230,867	22,140	40	01/01/1972	1972	4.73	1,196,292	104,676
594	Sewer Lines	264,892	56,290	208,602	40	06/30/2000	2000	1.33	352,907	277,915
595	Sewer Lines	269,766	266,394	3,372	40	01/01/1969	1969	6.53	1,761,885	22,023
596	Sewer Lines	277,265	211,430	65,855	40	01/01/1976	1976	2.99	827,865	196,618
597	Sewer Lines	277,660	232,540	45,120	40	01/01/1975	1975	3.75	1,040,351	169,057
598	Sewer Lines	286,320	218,319	68,001	40	01/01/1978	1978	2.99	854,841	203,025
599	Sewer Lines	286,462	232,750	53,712	40	01/01/1976	1976	3.45	986,843	185,408
600	Sewer Lines	293,269	150,300	142,969	40	06/01/1966	1966	1.83	537,869	262,211
601	Sewer Lines	319,624	291,839	27,985	40	01/01/1972	1972	4.73	1,512,101	132,309
602	Sewer Lines	398,257	14,935	383,323	40	06/30/2007	2007	1.04	414,310	398,774
603	Sewer Lines	411,503	190,320	221,183	40	06/01/1990	1990	1.75	720,742	387,399
604	Sewer Lines	419,526	393,306	26,220	40	01/01/1971	1971	5.24	2,199,274	137,455
605	Sewer Lines	428,127	176,602	251,525	40	06/01/1992	1992	1.66	711,603	416,184
606	Sewer Lines	459,501	67,301	392,200	99	06/01/1994	1994	1.53	704,210	601,066
607	Sewer Lines	491,442	239,578	251,864	40	06/01/1989	1989	1.80	882,577	452,321
608	Sewer Lines	534,062	206,957	327,125	40	06/01/1993	1993	1.59	849,615	520,389
609	Sewer Lines	534,411	66,842	447,569	40	06/30/2002	2002	1.27	677,458	587,371
610	Sewer Lines	536,600	235,638	302,963	40	06/01/1991	1991	1.71	923,256	519,332
611	Sewer Lines	585,109	374,385	190,724	40	06/01/1982	1982	2.17	1,224,484	413,263
612	Sewer Lines	590,286	450,093	140,193	40	01/01/1978	1976	2.99	1,762,362	418,581
613	Sewer Lines	590,357	113,152	477,205	80	06/30/1997	1997	1.42	839,984	678,987
514	Sewer Lines	641,927	94,020	547,907	99	06/01/1994	1994	1.53	983,787	839,697
615	Sewer Lines	655,257	417,726	237,531	40	06/01/1983	1983	2.04	1,335,662	484,178
818	Sewer Lines	694,094	95,438	598,656	40	06/30/2003	2003	1.24	859,251	741,104
617	Sewer Lines	705,368	114,622	590,745	40	06/30/2002	2002	1.27	894,175	748,872
618	Sewer Lines	756,558	330,994	425,564	40	08/01/1991	1991	1.71	1,296,875	729,492
619	Sewer Lines	807,575	191,799	615,776	40	06/30/1999	1999	1.37	1,104,673	842,313
620	Sewer Lines	616,126	71,411	744,715	40	06/30/2005	2005	1.11	906,409	628,924
621	Sewer Lines	902,000	800,525	101,475	40	01/01/1973	1973	4.37	3,945,023	443,815
622	Sewer Lines	1,003,991	389,047	614,945	40	06/01/1993	1993	1.59	1,597,146	978,252
623	Sewer Lines	1,004,991	113,062	891,929	40	06/30/2004	2004	1.20	1,210,495	1,074,314
624	Sewer Lines	1,057,747	885,863	171,884	40	01/01/1975	1975	3.75	3,963,226	644,024
625	Sewer Lines	1,080,877	256,708	824,169	40	06/30/1999	1999	1.37	1,478,521	1,127,372
626	Sewer Lines	1,138,237	782,538	355,699	40	06/01/1981	1961	2.34	2,666,673	633,961
627	Sewer Lines	1,188,771	74,298	1,114,473	40	06/30/2006	2006	1.07	1,271,100	1,191,657
628	Sewer Lines	1,199,641	209,972	989,669	60	06/30/1998	1998	1.40	1,679,787	1,385,824
629	Sewer Lines	1,214,272	561,601	652,671	40	06/01/1990	1990	1.75	2,126,783	1,143,146
630	Sewer Lines	1,262,372	988,858	273,514	30	01/01/1985	1985	1.98	2,494,065	540,380
631	Sewer Lines	1,376,620	808,764	567,856	40	01/01/1985	1985	1.98	2,719,784	1,121,911
632	Sewer Lines	1,405,100	269,311	1,135,789	60	06/30/1997	1997	1.42	1,999,234	1,616,047
633	Sewer Lines	1,622,503	425,907	1,196,596	40	06/30/1998	1996	1.40	2,271,517	1,675,244
634	Sewer Lines	1,664,106	315,770	1,368,336	40	06/30/2001	2001	1.31	2,200,876	1,788,212
635	Sewer Lines	1,756,690	373,722	1,384,966	40	06/30/2000	2000	1.33	2,343,046	1,845,150
636	Sewer Lines	1,878,166	70,431	1,807,737	40	06/30/2007	2007	1.04	1,953,673	1,880,603
637	Sewer Lines	1,958,229	367,168	1,591,061	40	06/30/2001	2001	1.31	2,559,114	2,079,280
638	Sewer Lines	2,145,035	26,813	2,116,222	40	06/30/2008	2008	1.00	2,145,035	2,118,222
639	Sewer Lines	2,403,102	30,039	2,373,063	40	06/30/2008	2008	1.00	2,403,102	2,373,063
640	Sewer Lines	2,455,862	1,432,586	1,023,276	30	06/01/1991	1991	1.71	4,209,763	1,754,076
641	Sewer Lines	2,540,828	222,322	2,318,506	40	06/30/2005	2005	1.11	2,828,133	2,560,671
642	Sewer Lines	2,544,253	286,229	2,256,025	40	06/30/2004	2004	1.20	3,064,510	2,719,753
643	Sewer Lines	2,627,155	164,197	2,462,958	40	06/30/2006	2006	1.07	2,809,101	2,633,532
644	Sewer Lines	2,983,570	410,241	2,573,329	40	06/30/2003	2003	1.24	3,693,498	3,165,642
645	Sewer Lines	3,020,376	943,867	2,076,506	40	06/30/1996	1996	1.47	4,454,275	3,062,314
646	Sewer Lines	4,124,872	1,701,510	2,423,362	40	08/01/1992	1992	1.66	6,857,999	4,029,075
647	Shelter	12,565	0	12,585	10	06/30/1995	1995	1.51	19,066	19,066
648	Shelving	3,803	3,603	0	10	05/01/1990	1990	1.75	6,660	0
649	Shelving	6,623	6,623	0	10	10/01/1991	1991	1.71	11,352	0
650	Shelving	6,654	6,654	0	10	08/01/1993	1993	1.59	10,904	0

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Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Life years	Acquistion Date	Year	ENR 20-Cities Cost Index	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
651	Shelving	14,727	14,727	0	10	01/01/1980	1980	2.56	37,707	0
652	Shop	2,217	1,175	1,042	50	06/01/1982	1982	2.17	4,804	2,258
653	Sludge	13,000	13,000	0	20	01/01/1985	1985	1.98	25,684	0
654	Sludge	31,533	29,168	2,365	20	06/01/1990	1990	1.75	55,229	4,142
655	Sludge	182,863	150,862	32,001	20	06/01/1992	1992	1.66	304,028	53,205
656	Sludge	190,437	85,697	104,741	50	08/01/1986	1986	1.93	367,467	202,118
657	Sludge	292,574	292,574	0	7	04/30/1999	1999	1.37	400,209	0
658	Sludge	1,182,290	344,835	837,455	60	06/01/1991	1991	1.71	2,026,654	1,435,547
659	Sludge	1,491,263	434,952	1,056,311	60	06/01/1991	1991	1.71	2,556,289	1,810,704
660	Snow Plow	3,820	3,820	0	10	01/31/1998	1998	1.40	5,348	0
661	Snowplow	3,434	3,434	0	10	02/01/1994	1994	1.53	5,263	0
662	Software	7,124	7,124	0	3	04/21/2002	2002	1.27	9,031	0
663	Software	12,675	12,675	0	3	06/30/2003	2003	1.24	15,691	0
664	Software	17,021	17,021	0	3	07/01/1992	1992	1.66	28,298	0
665	Spreader	3,101	3,101	0	10	11/01/1991	1991	1.71	5,318	0
666	Station	4,370	4,370	0	10	07/01/1994	1994	1.53	6,697	0
667	Station	14,289	12,145	2,143	10	09/28/1999	1999	1.37	19,545	2,932
668	Station	27,618	10,701	16,915	40	06/01/1993	1993	1.59	43,932	26,908
669	Station	34,245	34,245	0	10	06/01/1993	1993	1.59	54,477	0
670	Station	53,863	24,912	28,951	40	06/01/1990	1990	1.75	94,341	50,708
671	Station	57,899	23,883	34,016	40	06/01/1992	1992	1.66	96,283	56,554
672	Station	63,991	26,396	37,595	40	06/01/1992	1992	1.66	106,391	62,505
673	Station	81,800	35,787	46,012	40	06/01/1991	1991	1.71	140,219	78,873
674	Station	101,444	39,309	62,134	40	06/01/1993	1993	1.59	161,376	98,843
675	Station	108,327	44,685	63,642	40	06/01/1992	1992	1.66	180,104	105,811
676	Station	145,785	67,426	78,360	40	06/01/1990	1990	1.75	255,342	137,246
677	Station	185,358	76,460	108,898	40	06/01/1992	1992	1.66	308,176	181,053
678	Sterilizer	6,250	4,687	1,562	10	12/13/2000	2000	1.33	8,327	2,082
679	Storage	5,341	5,341	0	10	03/01/1992	1992	1.66	8,860	0
680	Storage	7,000	7,000	0	10	07/01/1993	1993	1.59	11,136	0
681	Storage	14,949	0	14,949	20	06/30/1995	1995	1.51	22,647	22,647
682	Storage	15,900	0	15,900	20	06/30/1995	1995	1.51	24,087	24,087
683	Storage	27,609	7,132	20,477	60	06/01/1993	1993	1.59	43,921	32,575
684	Storage	32,439	32,439	0	10	08/01/1989	1989	1.80	58,257	0
685	Storage	409,118	178,989	230,129	40	08/01/1991	1991	1.71	701,301	394,482
688	Streamer	3,625	3,625	0	10	08/01/1989	1989	1.80	6,510	0
687	Structure	13,050	5,351	7,700	50	06/01/1988	1988	1.83	23,935	14,122
688	Structure	140,670	57,675	82,995	50	06/01/1988	1988	1.83	257,996	152,217
689	Structure	599,758	245,901	353,857	50	06/01/1988	1988	1.83	1,099,983	648,990
690	Structure	671,252	275,214	396,039	50	08/01/1988	1988	1.83	1,231,107	726,353
691	Sweeper	16,986	16,986	0	7	12/31/1997	1997	1.42	27,014	0
692	Switch	4,060	3,045	1,015	10	03/31/2001	2001	1.31	5,306	1,326
693	System	10,843	10,843	0	10	04/30/1998	1998	1.40	15,180	0
694	System	76,244	49,558	26,685	30	06/01/1989	1989	1.60	136,926	47,924
695	System	230,000	230,000	0	30	01/01/1966	1966	8.13	1,870,706	0
696	System	721,560	721,560	0	30	01/01/1966	1966	8.13	5,868,818	0
697	Telemetar	37,686	37,686	0	10	01/01/1985	1985	1.98	74,456	0
698	Telemetering	28,573	28,573	0	3	06/30/1999	1999	1.37	39,084	0
699	Telemetry	5,335	3,466	1,867	10	06/30/2002	2002	1.27	6,763	2,367
700	Telemetry	217,295	217,295	0	10	06/01/1991	1991	1.71	372,482	0
701	Telephone	19,929	19,929	0	10	06/01/1992	1992	1.66	33,134	0
702	Tractor	26,575	26,575	0	5	04/01/1994	1994	1.53	40,728	0
703	Trailer	4,510	4,510	0	7	02/29/1996	1996	1.47	6,651	0
704	Trailer	4,510	4,510	0	7	02/29/1996	1996	1.47	6,651	0
705	Trailer	9,347	9,347	0	10	06/01/1989	1989	1.60	16,786	0
706	Transportation	7,900	7,900	0	3	11/01/1992	1992	1.66	13,135	0
707	Treatment Plant	3,080	2,680	400	50	01/01/1965	1965	6.54	26,290	3,418
708	Treatment Plant	4,621	4,020	601	50	01/01/1965	1965	8.54	39,443	5,126
709	Treatment Plant	8,408	630	7,775	60	06/30/2004	2004	1.20	10,125	9,365
710	Treatment Plant	11,197	653	10,544	60	06/30/2005	2005	1.11	12,463	11,736
711	Treatment Plant	12,775	10,403	2,373	35	01/01/1960	1960	2.56	32,709	6,075
712	Treatment Plant	13,396	13,398	0	10	06/30/1997	1997	1.42	19,063	0
713	Treatment Plant	16,450	3,153	13,297	60	06/30/1997	1997	1.42	23,406	16,920
714	Treatment Plant	16,914	14,715	2,199	50	01/01/1965	1965	8.54	144,371	16,766
715	Treatment Plant	16,208	759	17,450	60	06/30/2006	2006	1.07	19,469	16,658
716	Treatment Plant	18,608	16,189	2,419	50	01/01/1965	1965	6.54	156,830	20,648
717	Treatment Plant	18,933	3,629	15,304	60	06/30/1997	1997	1.42	26,939	21,776
718	Treatment Plant	22,002	19,142	2,860	50	01/01/1965	1965	8.54	187,800	24,414
719	Treatment Plant	23,343	20,308	3,035	50	01/01/1965	1965	8.54	199,246	25,902
720	Treatment Plant	27,859	5,604	22,055	60	06/30/1996	1996	1.47	41,065	32,525
721	Treatment Plant	30,240	1,260	28,980	60	06/30/2006	2006	1.07	32,334	30,967
722	Treatment Plant	39,450	8,219	31,231	60	06/30/1998	1998	1.47	58,179	46,058
723	Treatment Plant	42,931	6,797	36,134	60	06/30/1999	1999	1.37	56,725	49,427
724	Treatment Plant	54,374	47,305	7,069	50	01/01/1965	1965	8.54	464,114	60,335
725	Treatment Plant	56,276	48,960	7,316	50	01/01/1965	1965	8.54	480,348	62,445
726	Treatment Plant	57,458	49,988	7,470	50	01/01/1965	1965	8.54	490,437	63,757
727	Treatment Plant	66,000	59,160	8,840	50	01/01/1965	1965	8.54	580,419	75,455
728	Treatment Plant	70,000	60,900	9,100	50	01/01/1965	1965	8.54	597,491	77,674
729	Treatment Plant	65,570	4,992	80,578	60	06/30/2005	2005	1.11	95,245	69,690
730	Treatment Plant	100,714	87,621	13,093	50	01/01/1965	1965	8.54	859,652	111,755
731	Treatment Plant	110,277	95,941	14,336	50	01/01/1965	1965	8.54	941,278	122,366
732	Treatment Plant	115,000	100,050	14,950	50	01/01/1965	1965	8.54	981,592	127,607
733	Treatment Plant	124,000	107,880	16,120	50	01/01/1965	1965	8.54	1,058,412	137,594
734	Treatment Plant	126,197	109,792	16,406	50	01/01/1965	1965	8.54	1,077,167	140,031
735	Treatment Plant	136,290	118,572	17,718	50	01/01/1965	1965	8.54	1,163,314	151,231
736	Treatment Plant	194,572	169,278	25,294	50	01/01/1965	1965	8.54	1,660,765	215,902
737	Treatment Plant	210,240	26,280	183,960	60	06/30/2001	2001	1.31	274,752	240,408
738	Treatment Plant	240,533	46,102	194,431	60	06/30/1997	1997	1.42	342,240	276,844
739	Treatment Plant	271,000	235,770	35,230	50	01/01/1965	1965	8.54	2,313,142	300,708

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Wastewater Impact Fees
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Table E- 15

Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Life years	Acquistion Date	Year	ENR 20-Cities Cost Index	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
740	Treatment Plant	275,860	239,998	35,862	50	01/01/1965	1965	8.54	2,354,625	306,101
741	Treatment Plant	287,818	250,402	37,416	50	01/01/1965	1965	8.54	2,456,693	319,370
742	Treatment Plant	296,000	259,260	38,740	50	01/01/1965	1965	8.54	2,543,603	330,668
743	Treatment Plant	318,496	34,504	283,992	60	06/30/2002	2002	1.27	403,748	360,009
744	Treatment Plant	343,547	298,886	44,661	50	01/01/1965	1965	8.54	2,932,373	381,208
745	Treatment Plant	422,000	367,140	54,860	50	01/01/1965	1965	8.54	3,602,014	468,282
746	Treatment Plant	422,000	367,140	54,860	50	01/01/1965	1965	8.54	3,602,014	466,262
747	Treatment Plant	452,575	86,744	365,832	60	06/30/1997	1997	1.42	643,943	520,520
748	Treatment Plant	550,000	478,500	71,500	50	01/01/1965	1965	8.54	4,694,568	610,294
749	Treatment Plant	602,567	524,233	76,334	50	01/01/1965	1965	8.54	5,143,258	668,624
750	Treatment Plant	780,726	151,556	639,170	60	06/30/1997	1997	1.42	1,125,077	909,437
751	Treatment Plant	797,109	422,468	374,641	50	06/01/1982	1982	2.17	1,727,184	811,776
752	Treatment Plant	940,425	86,206	854,220	60	06/30/2003	2003	1.24	1,164,196	1,057,478
753	Treatment Plant	2,026,316	267,345	1,740,971	60	06/30/2000	2000	1.33	2,702,263	2,319,442
754	Treatment Plant	2,507,076	146,246	2,360,830	60	06/30/2005	2005	1.11	2,790,564	2,627,781
755	Treatment Plant	2,864,635	501,311	2,363,324	80	06/30/1998	1998	1.40	4,010,512	3,308,872
756	Treatment Plant	3,256,281	1,530,452	1,725,829	50	01/01/1985	1985	1.96	6,433,425	3,409,715
757	Treatment Plant	5,138,322	1,070,484	4,067,836	60	06/30/1996	1996	1.47	7,577,899	5,999,012
758	Truck	9,936	6,386	3,549	7	01/30/2004	2004	1.20	11,968	4,274
759	Truck	147,000	115,500	31,500	7	04/14/2003	2003	1.24	181,978	38,995
760	Tv System	16,575	16,575	0	10	06/01/1985	1985	1.98	32,747	0
761	Unit	4,466	4,466	0	30	01/01/1976	1976	3.45	15,417	0
762	Unit	21,361	21,361	0	30	01/01/1976	1976	3.45	73,804	0
763	Util/Body	4,327	4,327	0	5	04/01/1990	1990	1.75	7,579	0
764	Utility	4,719	4,719	0	5	07/01/1991	1991	1.71	8,089	0
765	Vactor	94,504	33,751	60,753	7	06/14/2006	2006	1.07	101,049	64,960
766	Vactor Truck	137,720	127,883	9,837	7	03/28/2002	2002	1.27	174,584	12,470
767	Vactor Truck	236,325	221,302	17,023	7	03/28/2002	2002	1.27	302,118	21,580
768	Valve	6,700	6,700	0	10	06/01/1993	1993	1.59	13,840	0
769	Variable	121,477	112,366	9,111	20	06/01/1990	1990	1.75	212,765	15,957
770	Vehicle	880	880	0	5	06/21/2000	2000	1.33	1,172	0
771	Vehicle	880	880	0	5	06/21/2000	2000	1.33	1,172	0
772	Vehicle	1,297	1,297	0	5	02/28/1999	1999	1.37	1,774	0
773	Vehicle	3,995	3,995	0	5	08/11/2000	2000	1.33	5,322	0
774	Vehicle	4,475	4,475	0	5	11/30/1996	1996	1.47	6,599	0
775	Vehicle	5,163	5,163	0	5	08/22/2002	2002	1.27	6,545	0
776	Vehicle	5,630	2,815	2,815	5	07/08/2005	2005	1.11	6,267	3,133
777	Vehicle	5,804	5,224	580	5	06/30/2004	2004	1.20	6,991	699
778	Vehicle	5,862	5,862	0	5	12/17/2002	2002	1.27	7,431	0
779	Vehicle	7,083	7,083	0	5	06/21/2001	2001	1.31	9,256	0
780	Vehicle	7,100	710	6,390	5	06/30/2008	2008	1.00	7,100	6,390
781	Vehicle	7,634	7,634	0	5	01/02/2001	2001	1.31	9,977	0
782	Vehicle	7,655	7,655	0	5	06/25/1999	1999	1.37	10,471	0
783	Vehicle	8,076	8,076	0	5	12/01/1982	1982	2.17	17,499	0
784	Vehicle	9,556	9,556	0	5	05/01/1984	1984	1.53	14,645	0
785	Vehicle	9,962	9,962	0	5	09/01/1983	1983	2.04	20,306	0
786	Vehicle	10,877	7,614	3,263	5	07/20/2004	2004	1.20	13,101	3,930
787	Vehicle	10,977	10,977	0	5	03/01/1966	1966	1.93	21,182	0
788	Vehicle	11,418	11,418	0	5	03/01/1990	1990	1.75	19,998	0
789	Vehicle	12,472	12,472	0	5	08/30/1997	1997	1.42	17,746	0
790	Vehicle	12,571	12,571	0	5	05/30/2000	2000	1.33	16,746	0
791	Vehicle	12,750	12,750	0	5	09/30/1996	1996	1.47	18,803	0
792	Vehicle	12,950	12,950	0	5	10/31/1997	1997	1.42	18,426	0
793	Vehicle	13,021	13,021	0	5	03/31/1997	1997	1.42	18,527	0
794	Vehicle	13,059	13,059	0	5	02/28/2001	2001	1.31	17,066	0
795	Vehicle	13,626	13,628	0	5	03/31/1999	1999	1.37	18,915	0
796	Vehicle	13,828	13,828	0	5	03/31/1999	1999	1.37	18,915	0
797	Vehicle	14,664	14,664	0	5	01/17/2001	2001	1.31	19,164	0
798	Vehicle	14,963	14,963	0	5	06/21/2000	2000	1.33	19,934	0
799	Vehicle	14,963	14,963	0	5	06/21/2000	2000	1.33	19,934	0
800	Vehicle	15,119	15,119	0	5	09/01/1994	1994	1.53	23,171	0
801	Vehicle	15,370	15,370	0	5	08/25/1999	1999	1.37	21,024	0
802	Vehicle	15,438	15,436	0	5	02/23/2001	2001	1.31	20,173	0
803	Vehicle	15,664	15,664	0	5	09/01/1994	1994	1.53	24,006	0
804	Vehicle	15,669	15,669	0	5	03/19/2001	2001	1.31	20,738	0
805	Vehicle	15,669	15,669	0	5	03/19/2001	2001	1.31	20,738	0
806	Vehicle	16,030	16,030	0	5	10/31/1997	1997	1.42	22,808	0
807	Vehicle	16,104	16,104	0	5	04/11/2000	2000	1.33	21,455	0
808	Vehicle	16,184	1,618	14,566	5	12/06/2007	2007	1.04	16,837	15,153
809	Vehicle	16,931	16,931	0	5	10/31/1996	1996	1.47	24,970	0
810	Vehicle	17,525	17,525	0	5	09/30/1996	1996	1.47	25,845	0
811	Vehicle	17,672	17,672	0	5	04/30/1999	1999	1.37	24,173	0
812	Vehicle	17,833	16,050	1,783	5	06/16/2004	2004	1.20	21,480	2,148
813	Vehicle	17,889	0	17,669	5	06/30/1995	1995	1.51	27,100	27,100
814	Vehicle	18,196	16,196	0	5	02/28/1998	1998	1.40	25,475	0
815	Vehicle	18,826	13,178	5,648	5	04/29/2005	2005	1.11	20,954	6,286
816	Vehicle	18,826	18,826	0	5	02/28/2001	2001	1.31	24,603	0
817	Vehicle	18,826	18,826	0	5	02/28/2001	2001	1.31	24,603	0
818	Vehicle	19,329	19,329	0	5	05/07/2001	2001	1.31	25,260	0
819	Vehicle	19,352	13,546	5,806	5	06/30/2005	2005	1.11	21,540	6,462
820	Vehicle	19,415	19,415	0	5	11/01/1993	1993	1.59	30,865	0
821	Vehicle	19,488	17,539	1,949	5	06/16/2004	2004	1.20	23,473	2,347
822	Vehicle	19,550	19,550	0	5	09/30/1996	1996	1.47	28,831	0
823	Vehicle	19,850	17,865	1,985	5	06/09/2004	2004	1.20	23,909	2,391
824	Vehicle	19,926	19,926	0	5	09/30/1996	1996	1.47	29,386	0
825	Vehicle	19,950	19,950	0	5	10/31/1997	1997	1.42	28,386	0
826	Vehicle	20,136	20,136	0	5	05/29/2002	2002	1.27	25,526	0
827	Vehicle	20,136	20,136	0	5	05/29/2002	2002	1.27	25,526	0
828	Vehicle	20,136	20,136	0	5	05/29/2002	2002	1.27	25,526	0

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Table E- 15

Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Life years	Acquistion Date	Year	ENR 20-Cities Cost Index	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
829	Vehicle	20,136	20,136	0	5	05/29/2002	2002	1.27	25,526	0
830	Vehicle	20,136	20,136	0	5	05/29/2002	2002	1.27	25,526	0
831	Vehicle	20,250	20,250	0	5	09/30/1996	1996	1.47	29,664	0
832	Vehicle	20,318	20,318	0	5	04/30/2000	2000	1.33	27,070	0
833	Vehicle	20,385	18,347	2,039	5	06/16/2004	2004	1.20	24,554	2,455
834	Vehicle	20,385	18,347	2,039	5	06/16/2004	2004	1.20	24,554	2,455
835	Vehicle	20,650	20,650	0	5	04/30/2000	2000	1.33	27,512	0
836	Vehicle	20,687	20,687	0	5	06/30/1996	1996	1.47	30,506	0
837	Vehicle	20,907	20,907	0	5	08/27/2002	2002	1.27	26,503	0
838	Vehicle	21,056	14,739	6,317	5	06/06/2005	2005	1.11	23,437	7,031
839	Vehicle	21,216	21,216	0	5	02/26/2001	2001	1.31	27,726	0
840	Vehicle	21,216	21,216	0	5	02/28/2001	2001	1.31	27,726	0
841	Vehicle	21,673	21,673	0	5	06/06/2002	2002	1.27	27,475	0
842	Vehicle	21,800	21,800	0	5	10/31/1997	1997	1.42	31,018	0
843	Vehicle	21,820	19,638	2,182	5	00/18/2004	2004	1.20	26,282	2,628
844	Vehicle	21,825	21,825	0	5	07/13/2000	2000	1.33	29,077	0
845	Vehicle	21,892	21,892	0	5	02/26/2001	2001	1.31	28,610	0
846	Vehicle	22,285	11,143	11,143	5	12/21/2005	2005	1.11	24,805	12,402
847	Vehicle	22,373	22,373	0	5	06/30/2000	2000	1.33	29,807	0
848	Vehicle	22,567	2,257	20,311	5	12/14/2007	2007	1.04	23,477	21,129
849	Vehicle	23,046	23,046	0	5	04/18/2000	2000	1.33	30,703	0
850	Vehicle	23,046	23,046	0	5	04/18/2000	2000	1.33	30,703	0
851	Vehicle	23,625	16,536	7,068	5	09/15/2004	2004	1.20	28,456	8,537
852	Vehicle	23,635	23,635	0	5	02/28/2001	2001	1.31	30,867	0
853	Vehicle	23,900	7,170	16,730	5	03/31/2007	2007	1.04	24,863	17,404
854	Vehicle	24,058	24,058	0	5	09/30/1996	1996	1.47	35,479	0
855	Vehicle	24,390	2,439	21,951	5	02/27/2008	2008	1.00	24,390	21,951
856	Vehicle	24,637	24,637	0	5	05/28/2002	2002	1.27	31,231	0
857	Vehicle	25,100	2,510	22,590	5	02/29/2008	2008	1.00	25,100	22,590
858	Vehicle	28,038	28,038	0	5	10/31/1996	1996	1.47	41,349	0
859	Vehicle	30,942	30,942	0	5	09/30/1995	1995	1.51	46,874	0
860	Vehicle	31,224	31,224	0	5	06/30/1997	1997	1.42	44,427	0
861	Vehicle	34,075	23,853	10,223	5	06/30/2005	2005	1.11	37,928	11,378
862	Vehicle	34,075	23,853	10,223	5	06/30/2005	2005	1.11	37,928	11,378
863	Vehicle	46,350	33,845	14,505	5	07/20/2004	2004	1.20	58,236	17,471
864	Vehicle	50,082	50,082	0	5	05/03/2001	2001	1.31	65,450	0
865	Vehicle	57,728	57,728	0	5	06/27/2002	2002	1.27	73,180	0
866	Vehicle	61,377	6,138	55,239	5	12/06/2007	2007	1.04	63,851	57,466
867	Vehicle	64,160	64,160	0	5	04/30/1997	1997	1.42	91,289	0
868	Vehicle	66,865	66,865	0	5	05/01/1991	1991	1.71	114,618	0
869	Vehicle	70,545	70,545	0	5	06/30/1999	1999	1.37	96,498	0
870	Vehicle	79,085	39,543	39,543	5	05/17/2006	2006	1.07	84,563	42,281
871	Vehicle	83,639	41,820	41,820	5	11/10/2005	2005	1.11	93,098	46,548
872	Vehicle	88,095	88,095	0	5	04/30/1996	1996	1.47	129,917	0
873	Vehicle	90,773	90,773	0	5	04/30/1999	1999	1.37	124,167	0
874	Vehicle	98,575	29,573	69,003	5	04/09/2007	2007	1.04	102,548	71,784
875	Vehicle	107,688	10,769	96,919	5	02/07/2008	2008	1.00	107,668	96,919
876	Vehicle	109,500	66,036	23,464	7	06/27/2003	2003	1.24	135,555	29,047
877	Vehicle	115,573	115,573	0	5	12/07/1999	1999	1.37	158,091	0
878	Vehicle	199,887	157,054	42,833	7	01/15/2003	2003	1.24	247,449	53,025
879	Vehicle	235,530	235,530	0	7	05/30/2001	2001	1.31	307,803	0
880	Warehouse	265,254	124,799	160,455	40	06/01/1991	1991	1.71	488,976	275,049
881	Washer	7,330	7,330	0	10	09/01/1993	1993	1.59	11,860	0
882	Washer	7,907	0	7,907	10	12/31/1995	1995	1.51	11,978	11,976
883	Welder	3,306	3,306	0	10	08/01/1989	1969	1.80	5,936	0
884	Welder	8,091	6,877	1,214	10	10/25/1999	1999	1.37	11,068	1,660
885	Wetlands	22,722	22,722	0	10	06/01/1992	1992	1.66	37,777	0
886	Wetlands	307,760	107,723	200,057	50	08/01/1991	1991	1.71	527,590	342,933
887	Total	$155,274,331	$82,105,150	$93,169,181					$298,073,988	$134,119,418

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Table E-16

Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Life	Acquisition Date	Year	ENR 20-Cities Cost Index	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
1	Analyzer	79,015	79,015	0	10	06/01/1994	1994	1.53	$121,094	$0
2	Backhoe	51,312	33,353	17,959	10	09/11/2001	2001	1.31	67,057	23,470
3	Building	86,754	21,688	65,065	50	06/30/1996	1996	1.47	127,939	95,955
4	Camera	15,950	15,950	0	10	07/01/1993	1993	1.59	25,373	0
5	Canals	27,251	0	27,251	0	06/01/1935	1935	42.19	27,251	27,251
6	Canals	31,448	0	31,448	0	06/01/1965	1965	8.54	31,448	31,448
7	Canals	39,970	0	39,970	0	06/01/1955	1955	12.56	39,970	39,970
8	Canals	59,937	0	59,937	0	06/01/1985	1985	1.98	59,937	59,937
9	Canals	71,150	0	71,150	0	06/01/1945	1945	26.93	71,150	71,150
10	Canals	75,765	0	75,765	0	06/01/1905	1905	91.53	75,765	75,765
11	Canals	95,785	0	95,785	0	06/01/1915	1915	89.52	95,785	95,785
12	Canals	138,955	0	138,955	0	06/01/1975	1975	3.75	138,955	138,955
13	Canals	152,187	0	152,187	60	06/01/1900	1900	88.26	13,432,727	13,432,727
14	Canals	191,669	0	191,669	0	06/01/1925	1925	40.10	191,669	191,669
15	Canals	195,003	0	195,003	0	06/30/2006	2006	1.07	195,003	195,003
16	Compactor	11,000	11,000	0	10	02/01/1994	1994	1.53	16,858	0
17	Compressor	11,987	8,990	2,997	10	01/11/2001	2001	1.31	15,665	3,916
18	Computer	3,192	3,192	0	3	12/01/1992	1992	1.66	5,307	0
19	Computer	6,990	6,990	0	3	12/01/1993	1993	1.59	11,120	0
20	Computer	11,302	11,302	0	3	08/01/1992	1992	1.66	18,790	0
21	Drain Lines	123,443	17,488	105,955	60	06/30/2000	2000	1.33	164,459	141,161
22	Drain Lines	343,427	31,481	311,946	60	06/30/2003	2003	1.24	425,144	386,173
23	Drain Lines	445,397	18,558	426,839	60	06/30/2006	2006	1.07	476,244	456,400
24	Drain Lines	529,050	101,401	427,649	60	06/30/1997	1997	1.42	752,754	608,476
25	Drain Lines	536,065	58,074	477,991	60	06/30/2002	2002	1.27	679,555	605,937
26	Drain Lines	701,123	29,213	671,910	60	06/30/2006	2006	1.07	749,680	718,444
27	Drain Lines	753,622	43,961	709,661	60	06/30/2005	2005	1.11	838,838	789,906
28	Drain Lines	784,536	45,765	738,771	60	06/30/2005	2005	1.11	873,247	822,308
29	Drain Lines	814,727	128,998	685,729	60	06/30/1999	1999	1.37	1,114,457	938,001
30	Drain Lines	945,318	165,431	779,887	60	06/30/1998	1998	1.40	1,323,453	1,091,849
31	Drain Lines	1,018,114	76,359	941,755	60	06/30/2004	2004	1.20	1,226,301	1,134,328
32	Drain Lines	1,036,531	8,638	1,027,893	60	06/30/2008	2008	1.00	1,036,531	1,027,893
33	Drain Lines	1,091,803	172,869	918,934	60	06/30/1999	1999	1.37	1,493,467	1,257,001
34	Drain Lines	1,209,871	151,234	1,058,637	60	06/30/2001	2001	1.31	1,581,121	1,383,481
35	Drain Lines	1,232,789	92,459	1,140,330	60	06/30/2004	2004	1.20	1,484,873	1,373,508
36	Drain Lines	1,459,105	182,388	1,276,717	60	06/30/2001	2001	1.31	1,906,833	1,668,479
37	Drain Lines	1,480,316	209,711	1,270,604	60	06/30/2000	2000	1.33	1,972,179	1,692,787
38	Drain Lines	1,839,431	45,986	1,793,445	60	06/30/2007	2007	1.04	1,913,575	1,865,735
39	Drain Lines	2,024,973	219,372	1,805,601	60	06/30/2002	2002	1.27	2,567,003	2,288,911
40	Drain Lines	2,376,324	19,803	2,356,521	60	06/30/2008	2008	1.00	2,376,324	2,356,521
41	Drain Lines	2,673,722	512,463	2,161,258	60	06/30/1997	1997	1.42	3,804,281	3,075,127
42	Drain Lines	3,443,023	602,529	2,840,494	60	06/30/1998	1998	1.40	4,820,259	3,976,714
43	Drain Lines	3,493,984	320,282	3,173,702	60	06/30/2003	2003	1.24	4,325,363	3,928,871
44	Drain Lines	17,709,658	442,741	17,266,917	60	06/30/2007	2007	1.04	18,423,499	17,962,912
45	Drainage	217,229	0	217,229	60	06/30/1995	1995	1.51	329,081	329,081
46	Drainage	1,369,202	0	1,369,202	60	06/30/1995	1995	1.51	2,074,211	2,074,211
47	Equipment	3,150	1,103	2,048	10	03/10/2005	2005	1.11	3,506	2,279
48	Equipment	4,131	2,685	1,446	10	04/09/2002	2002	1.27	5,237	1,833
49	Equipment	4,992	3,245	1,747	10	06/20/2002	2002	1.27	6,328	2,215
50	Equipment	5,001	3,250	1,750	10	06/26/2002	2002	1.27	6,339	2,219
51	Equipment	5,001	3,250	1,750	10	06/26/2002	2002	1.27	6,339	2,219
52	Equipment	5,667	3,117	2,550	10	06/30/2003	2003	1.24	7,015	3,157
53	Equipment	5,667	3,117	2,550	10	06/30/2003	2003	1.24	7,015	3,157
54	Equipment	11,732	8,213	3,520	5	06/30/2005	2005	1.11	13,059	3,918
55	Equipment	11,732	8,213	3,520	5	06/30/2005	2005	1.11	13,059	3,918
56	Equipment	19,679	4,920	14,759	10	09/15/2005	2005	1.11	21,904	16,428
57	Equipment	21,223	11,673	9,550	10	08/05/2002	2002	1.27	26,904	12,107
58	Excavator	61,654	61,654	0	5	06/01/1992	1992	1.66	102,506	0
59	Excavator	134,405	48,002	86,403	7	06/30/2006	2006	1.07	143,713	92,387
60	Flowmeter	3,063	3,063	0	10	11/01/1993	1993	1.59	4,873	0
61	GPS	9,983	8,486	1,498	10	04/05/2000	2000	1.33	13,301	1,995
62	GPS	22,847	1,142	21,705	10	03/20/2008	2008	1.00	22,847	21,705
63	GPS	22,847	1,142	21,705	10	03/20/2008	2008	1.00	22,847	21,705
64	GPS Unit	3,000	1,950	1,050	10	04/30/2002	2002	1.27	3,803	1,331
65	GPS Unit	10,400	9,880	520	10	11/30/1998	1998	1.40	14,560	728
66	GPS Unit	12,418	10,555	1,863	10	08/21/1999	1999	1.37	16,986	2,548
67	GPS Unit	14,555	12,372	2,183	10	08/21/1999	1999	1.37	19,910	2,986
68	GPS Unit	19,240	16,354	2,886	10	09/30/1999	1999	1.37	26,318	3,948
69	Ifas	7,100	7,100	0	3	05/01/1993	1993	1.59	11,295	0
70	Interest	16,652	833	15,820	50	06/30/2006	2006	1.07	17,805	16,915
71	Interest	26,571	1,860	24,711	50	06/30/2005	2005	1.11	29,576	27,506

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Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Life	Acquisition Date	Year	ENR 20-Cities Cost Index	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
72	Interest	31,033	2,793	28,240	50	06/30/2004	2004	1.20	37,378	34,014
73	Interest	333,073	9,992	323,081	50	06/30/2007	2007	1.04	346,499	336,104
74	Land	0	0	0	0	05/27/2003	2003	1.24	0	0
75	Land	250	0	250	0	09/22/2004	2004	1.20	250	250
76	Land	7,135	0	7,135	0	04/14/2003	2003	1.24	7,135	7,135
77	Land	19,088	0	19,088	0	04/14/2003	2003	1.24	19,088	19,088
78	Land	58,745	0	58,745	0	09/21/2005	2005	1.11	58,745	58,745
79	Landscaping	4,486	4,486	0	50	06/01/1950	1950	16.26	72,957	0
80	Landscaping	11,252	6,414	4,838	50	06/01/1980	1980	2.56	28,810	12,388
81	Landscaping	12,558	6,907	5,651	50	06/01/1981	1981	2.34	29,443	13,249
82	Landscaping	18,838	10,361	8,477	50	06/01/1981	1981	2.34	44,167	19,875
83	Landscaping	18,838	10,361	8,477	50	06/01/1981	1981	2.34	44,167	19,875
84	Landscaping	36,093	17,686	18,407	50	06/01/1984	1984	2.00	72,152	36,797
85	Landscaping	36,093	17,686	18,407	50	06/01/1984	1984	2.00	72,152	36,797
86	Landscaping	38,166	17,175	20,991	50	06/01/1986	1986	1.93	73,649	40,507
87	Landscaping	90,232	44,214	46,018	50	06/01/1984	1984	2.00	180,378	91,993
88	Landscaping	307,323	138,295	169,028	50	06/01/1986	1986	1.93	593,040	326,172
89	Lift Station	5,102	829	4,272	40	06/30/2002	2002	1.27	6,467	5,416
90	Lift Station	8,025	702	7,323	40	06/30/2005	2005	1.11	8,932	8,151
91	Lift Station	12,582	472	12,111	40	06/30/2007	2007	1.04	13,090	12,599
92	Lift Station	12,929	2,101	10,828	40	06/30/2002	2002	1.27	16,390	13,726
93	Lift Station	67,878	9,333	58,545	40	06/30/2003	2003	1.24	84,029	72,475
94	Lift Station	78,909	8,877	70,032	40	06/30/2004	2004	1.20	95,045	84,352
95	Lift Station	94,307	29,471	64,836	40	06/30/1996	1996	1.47	139,078	95,616
96	Lift Station	103,190	19,348	83,842	40	06/30/2001	2001	1.31	134,854	109,569
97	Lift Station	109,253	9,560	99,693	40	06/30/2005	2005	1.11	121,607	110,966
98	Lift Station	117,648	25,000	92,648	40	06/30/2000	2000	1.33	156,739	123,432
99	Lift Station	128,098	20,816	107,282	40	06/30/2002	2002	1.27	162,386	135,998
100	Lift Station	206,797	7,755	199,042	40	06/30/2007	2007	1.04	215,133	207,065
101	Lift Station	353,365	22,085	331,280	40	06/30/2006	2006	1.07	377,838	354,223
102	Lift Station	624,867	117,163	507,704	40	06/30/2001	2001	1.31	816,606	663,494
103	Lift Station	793,642	168,649	624,993	40	06/30/2000	2000	1.33	1,057,344	832,659
104	Lift Station	1,328,304	16,604	1,311,700	40	06/30/2008	2008	1.00	1,328,304	1,311,700
105	Lines	0	0	0	60	06/01/1935	1935	42.19	0	0
106	Lines	0	0	0	60	06/01/1945	1945	26.93	0	0
107	Lines	113,215	27,360	85,855	60	06/01/1994	1994	1.53	173,508	131,577
108	Lines	200,781	77,803	122,978	40	06/01/1993	1993	1.59	319,402	195,633
109	Lines	1,125,341	436,070	689,272	40	06/01/1993	1993	1.59	1,790,189	1,096,490
110	Lines	1,532,473	1,366,455	166,018	60	06/01/1955	1955	12.56	19,252,423	2,085,677
111	Lines	1,745,996	421,949	1,324,047	60	06/01/1994	1994	1.53	2,675,831	2,029,172
112	Lines	2,461,703	1,784,735	676,968	60	06/01/1965	1965	8.54	21,012,060	5,778,318
113	Lines	2,657,643	830,514	1,827,130	40	06/30/1996	1996	1.47	3,919,338	2,694,545
114	Lines	7,399,452	4,131,361	3,268,091	60	06/01/1975	1975	3.75	27,724,689	12,245,071
115	Lines	37,279,108	14,600,984	22,678,124	60	06/01/1985	1985	1.98	73,652,222	44,805,101
116	Loader	62,943	62,943	0	7	11/23/1997	1997	1.42	89,558	0
117	Long Arm	24,162	24,162	0	5	08/01/1992	1992	1.66	40,171	0
118	Meter	7,254	7,254	0	10	07/01/1992	1992	1.66	12,061	0
119	Mixer	3,167	3,167	0	10	06/01/1992	1992	1.66	5,265	0
120	Monitoring	6,845	6,845	0	10	07/01/1992	1992	1.66	11,381	0
121	Monitoring	6,845	6,645	0	10	07/01/1992	1992	1.66	11,381	0
122	Monitoring	6,845	6,845	0	10	07/01/1992	1992	1.66	11,381	0
123	Mower	31,605	11,288	20,318	7	08/18/2005	2005	1.11	35,179	22,615
124	Power	3,331	3,331	0	5	06/01/1992	1992	1.66	5,539	0
125	Right Of Way	51,261	0	51,261	0	06/30/2000	2000	1.33	51,261	51,261
126	Sampler	7,676	7,676	0	10	04/01/1994	1994	1.53	11,764	0
127	Sampler	7,676	7,676	0	10	04/01/1994	1994	1.53	11,764	0
128	Sampler	7,676	7,676	0	10	04/01/1994	1994	1.53	11,764	0
129	Software	5,540	5,540	0	3	06/01/1994	1994	1.53	8,490	0
130	Station	20,000	11,250	8,750	40	06/01/1986	1986	1.93	38,594	16,885
131	Station	40,000	20,500	19,500	40	06/01/1988	1988	1.83	73,362	35,764
132	Station	43,000	27,413	15,588	40	06/01/1983	1983	2.04	87,650	31,773
133	Station	55,000	35,063	19,938	40	06/01/1983	1983	2.04	112,111	40,840
134	Station	55,000	36,438	18,563	40	06/01/1982	1982	2.17	119,175	40,221
135	Station	60,000	36,750	23,250	40	06/01/1984	1984	2.00	119,943	46,478
136	Station	60,000	38,250	21,750	40	06/01/1983	1983	2.04	122,303	44,335
137	Station	60,000	30,750	29,250	40	06/01/1988	1988	1.83	110,043	53,646
138	Station	65,300	36,731	28,569	40	06/01/1986	1986	1.93	126,009	55,129
139	Station	74,000	39,775	34,225	40	06/01/1987	1987	1.88	139,200	64,380
140	Station	80,000	51,000	29,000	40	06/01/1983	1983	2.04	163,070	59,113
141	Station	110,000	56,375	53,625	40	06/01/1988	1988	1.83	201,745	98,351
142	Station	114,602	32,948	81,654	40	06/30/1997	1997	1.42	163,060	116,180

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Line No.	Asset Category	Original Cost	Accumulated Depreciation	Book Value	Life	Acquisition Date	Year	ENR 20-Cities Cost Index	Replacement Cost New	Replacement Cost Less Accumulated Depreciation
143	Station	150,000	76,875	73,125	40	06/01/1988	1988	1.83	275,107	134,115
144	Station	150,000	99,375	50,625	40	06/01/1982	1982	2.17	325,022	109,695
145	Station	170,000	87,125	82,875	40	06/01/1988	1988	1.83	311,788	151,996
146	Station	440,000	225,500	214,500	40	06/01/1988	1988	1.83	806,980	393,403
147	Station	600,000	292,500	307,500	40	06/01/1989	1989	1.80	1,077,536	552,237
148	Station Lift	75,476	19,812	55,664	40	06/30/1998	1998	1.40	105,667	77,929
149	Station Lift	133,100	38,266	94,834	40	06/30/1997	1997	1.42	189,380	134,933
150	Storage	16,800	16,800	0	10	07/01/1993	1993	1.59	26,725	0
151	System	11,725	11,725	0	10	04/30/1998	1998	1.40	16,415	0
152	Telemetering	14,696	11,022	3,674	10	06/30/2001	2001	1.31	19,206	4,801
153	Trailer	3,670	3,670	0	10	06/01/1993	1993	1.59	5,838	0
154	Trailer	3,707	3,707	0	5	03/26/1997	1997	1.42	5,274	0
155	Trailer	4,438	4,438	0	7	09/01/1992	1992	1.66	7,378	0
156	Trailer	4,777	4,777	0	7	03/01/1993	1993	1.59	7,599	0
157	Trailer	12,780	12,780	0	7	05/31/1996	1996	1.47	18,847	0
158	Trailer	16,798	0	16,798	7	08/03/1994	1994	1.53	25,744	25,744
159	Truck	6,698	6,698	0	5	06/23/2003	2003	1.24	8,292	0
160	Truck	6,698	6,698	0	5	06/23/2003	2003	1.24	8,292	0
161	Truck	16,572	13,021	3,551	7	06/04/2003	2003	1.24	20,515	4,396
162	Truck	21,614	21,614	0	5	04/14/2003	2003	1.24	26,757	0
163	Truck	22,710	22,710	0	5	04/14/2003	2003	1.24	28,114	0
164	Truck	77,952	61,248	16,704	7	06/04/2003	2003	1.24	96,500	20,679
165	Truck	255,922	201,082	54,840	7	03/11/2003	2003	1.24	316,818	67,889
166	Utility	$4,070	$4,070	$0	5	07/01/1992	1992	1.66	6,767	0
167	Vactor Truck	249,800	231,957	17,843	7	04/02/2002	2002	1.27	316,665	22,619
168	Vehicle	100	100	0	1	06/30/1998	1998	1.40	140	0
169	Vehicle	100	100	0	1	06/30/1998	1998	1.40	140	0
170	Vehicle	3,700	0	3,700	5	11/30/1995	1995	1.51	5,605	5,605
171	Vehicle	3,700	0	3,700	5	11/30/1995	1995	1.51	5,605	5,605
172	Vehicle	4,277	4,277	0	5	05/30/1999	1999	1.37	5,850	0
173	Vehicle	4,577	3,204	1,373	5	07/23/2004	2004	1.20	5,513	1,654
174	Vehicle	5,823	5,823	0	5	06/30/1999	1999	1.37	7,966	0
175	Vehicle	5,826	2,913	2,913	5	08/18/2005	2005	1.11	6,485	3,242
176	Vehicle	7,767	7,767	0	5	06/01/1992	1992	1.66	12,914	0
177	Vehicle	9,646	2,894	6,752	5	04/06/2007	2007	1.04	10,035	7,024
178	Vehicle	12,571	12,571	0	5	04/25/2000	2000	1.33	16,748	0
179	Vehicle	15,869	15,869	0	5	03/19/2001	2001	1.31	20,738	0
180	Vehicle	18,227	12,759	5,468	5	04/29/2005	2005	1.11	20,288	6,086
181	Vehicle	18,532	18,532	0	5	03/09/1998	1998	1.40	25,946	0
182	Vehicle	19,488	17,539	1,949	5	06/16/2004	2004	1.20	23,473	2,347
183	Vehicle	20,507	20,507	0	5	03/30/1999	1999	1.37	28,051	0
184	Vehicle	20,625	20,625	0	5	10/30/1997	1997	1.42	29,346	0
185	Vehicle	21,216	21,216	0	5	02/28/2001	2001	1.31	27,726	0
186	Vehicle	21,820	19,638	2,182	5	06/16/2004	2004	1.20	26,282	2,628
187	Vehicle	22,567	2,257	20,311	5	12/14/2007	2007	1.04	23,477	21,129
188	Vehicle	22,567	2,257	20,311	5	12/14/2007	2007	1.04	23,477	21,129
189	Vehicle	25,100	2,510	22,590	5	02/29/2008	2008	1.00	25,100	22,590
190	Vehicle	26,758	26,758	0	5	07/13/2000	2000	1.33	35,649	0
191	Vehicle	27,121	13,561	13,561	5	07/07/2005	2005	1.11	30,188	15,094
192	Vehicle	28,352	8,506	19,846	5	11/03/2006	2006	1.07	30,316	21,221
193	Vehicle	32,533	3,579	28,954	50	06/30/2003	2003	1.24	40,274	35,844
194	Vehicle	79,547	39,774	39,774	5	12/07/2005	2005	1.11	88,542	44,271
195	Vehicle	107,688	10,769	96,919	5	02/07/2008	2008	1.00	107,688	96,919
196	Vehicle	114,853	114,853	0	7	02/29/1996	1996	1.47	169,379	0
197	Vehicle	125,623	21,356	104,267	50	06/30/2000	2000	1.33	167,364	138,912
198	Vehicle	142,763	21,414	121,349	50	06/30/2001	2001	1.31	186,570	158,584
199	Vehicle	199,880	99,940	99,940	5	12/07/2005	2005	1.11	222,481	111,241
200	Vehicle	292,308	55,539	236,769	50	06/30/1999	1999	1.37	399,845	323,874
201	Welder	4,803	4,803	0	5	06/01/1992	1992	1.66	7,986	0
202	**Total**	**$116,062,489**	**$31,254,392**	**$84,808,097**					**$238,785,785**	**$148,462,640**