

Utility Rate and Financial Consultants





Water Rate Study

Final Report

August 2003



Utility Rate and Financial Consultants



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August 29, 2003

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

Dear Mr. Lewis:

On behalf of Rick Giardina & Associates, Inc. I am pleased to submit this final report on the *Water Rate Study* completed for the Department of Public Utilities.

Thank you for the opportunity to again be of service to the Department on this important project. Questions regarding our report should be directed to me at (303) 369-3535.

Sincerely,

Richard D. Giardina

President

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Salt Lake City Corporation Department of Public Utilities

Water Rate Study

Final Report

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EXECUTIVE SUMMARY

Salt Lake City Corporation Department of Public Utilities authorized this *Water Rate Study* to evaluate the need for a water rate increase and to consider changing the water rate structure to a more conservation-oriented approach. Another aspect of the study was to evaluate the ability of impact fees to fund capital improvements needed to serve new water users. This is a report on the results of these analyses. The Department is also responsible for the provision of wastewater and stormwater service. However, this report contains results for only the City/Department's Water Enterprise Fund.

The financial plan for the Water Enterprise Fund is summarized in Table 1. The projected rate increases for the Operations and Impact Fee subfunds are shown at the top of Table 1. The cash reserve requirement is driving the increases for the Operations Subfund. Another outcome of the plan is an increase in the amount of debt expected to be issued to fund the projected capital improvement plan (CIP). The 10-year CIP will require approximately \$214 million in funding. This is expected to increase the debt to total assets ratio to approximately 23 percent by the end of the 10-year planning period. Although higher than historic levels, this is still low for large water utilities¹.

As part of the water rate study, the Department formed a Water Rate Subcommittee (WRS) for the purpose of investigating the current water rates and making a recommendation to the Public Utilities Advisory Committee (PUAC). Rick Giardina & Associates, Inc. (RGA), a water rate and financial planning consulting firm, was retained to assist the Department in the technical aspects of this rate study and work with the WRS, PUAC and the City. Six WRS meetings were held during the course of the study to discuss and evaluate different rate alternatives for possible recommendation to the PUAC and consideration by the City Administration (the Mayor) and Council.

Highest Ranked Water Rate Objectives

- 1. Conservation
- 2. Compliance with legal authorities
- 3. Peak usage reduction

One result of the WRS meetings was the Subcommittee's ranking of rate objectives. Conservation and peak water use reduction were two of the three highest ranked objectives that the WRS decided should be addressed through the pricing structure. The second highest of the three top objectives was to ensure that rates comply with all legal requirements.

Based on the above described process and recommended rate objectives, the rate structure recommended to the PUAC by the WRS for implementation is shown in Table 2. This structure reflects several adjustments as made by the City Administration. In staying consistent with the current rate approach, the Administration felt that all users should pay the same rates for water use in

Based on a survey of investor owned water utilities, the long-term debt to assets averaged 50 percent to 55 percent. Source: California Public Utilities Commission.



each of the respective rate blocks. However, customers with irrigation meters would pay the Block 2 rate for all use within their irrigation target. Use exceeding the irrigation target would be priced at the higher block 3 rate. The irrigation target would be based on an evaluation of the water needs at each site and be reflective of the evapotranspiration and vegetation at the customer location. Recommended water rates are shown in Table 2.

Table 1

| Enterprise Fund | | | | | | |
|--|------------------|------------------|--------------|--------------|-----------------|--|
| Summary Financial Plan Fiscal Year Ending June 30 | | | | | | |
| | | dget | .c 30 | Projected | | |
| Description | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-0 7 | |
| Projected Revenue Increases | | | | | | |
| Operations Subfund (1) | 4% | 3% | 10% | 5% | 5% | |
| Impact Fee Subfund | 0% | 2% | 2% | 2% | 2% | |
| Operating Revenues and Expe | ıses | | | | | |
| Revenues | \$41,156,020 | \$44,339,923 | \$48,127,196 | \$50,829,631 | \$53,844,721 | |
| Expenses | 29,396,620 | 32,087,237 | 34,196,289 | 38,336,020 | 40,169,100 | |
| Net Operating Income | 11,759,400 | 12,252,686 | 13,930,907 | 12,493,611 | 13,675,621 | |
| Other Cash Inflows/Outflows | | | | | | |
| Inflows | | | | | | |
| Impact Fees | 250,000 | 500,000 | 1,366,819 | 1,756,339 | 1,839,077 | |
| Other Contributions | 905,000 | 905,000 | 905,000 | 905,000 | 905,000 | |
| Bond Proceeds | 0 | 0 | 0 | 0 | 0 | |
| Subtotal | <u>1,155,000</u> | _1,405,000 | 2,271,819 | 2,661,339 | 2,744,077 | |
| Outflows | | | | | | |
| Capital Outlays | 1,393,750 | 1,447,500 | 1,482,200 | 1,373,600 | 2,093,000 | |
| Capital Improvements | 12,806,225 | 21,757,831 | 9,160,461 | 5,056,000 | 5,520,000 | |
| Watershed Purchases | 0 | 250,000 | 250,000 | 500,000 | 500,000 | |
| Debt Service | 4,681,775 | <u>4,742,704</u> | 4,737,748 | 2,620,352 | 2,620,352 | |
| Subtotal | 18,881,750 | 28,198,035 | 15,630,409 | 9,549,952 | 10,733,352 | |
| | | | | | | |

(14,540,349)

17,531,759

<u>\$ 2,991,410</u>

\$2,991,410

9%

2.6

572,317

\$0

10%

2.9

2,991,410

\$ 3,563,727

\$3,563,727

5,604,998

3,563,727

\$ 9,168,725

\$3,168,725

\$6,000,000

16%

4.8

20%

2.5

(5,967,350)

23,499,109

<u>\$17,531,759</u>

\$11,531,759

\$6,000,000

⁽³⁾ Net operating income divided by total debt service. Target 2.0x.



Increase/Decrease in Cash

End of Year Cash Balance

Cash Reserved for CIP

Cash Reserve Ratio (2)

Beginning of Year Cash Bal.

Cash Reserved for Operations

Debt Service Coverage Ratio (3)

5,686,346

9,168,725

\$14,855,071

\$8,855,071

\$6,000,000

15%

5.2

⁽¹⁾ Actual revenue increases will differ from these revenue increases due to the final rate structure as implemented by the City and the amount of the conservation adjustment needed to achieve revenue targets.

⁽²⁾ Cash reserved for operations divided by subtotal for operating expenditures. Target 10% - 20%.

| Table 2 | | | | |
|-------------------|---------|--|--|--|
| Recommended Water | r Rates | | | |

Residential Rate Structure

Non-Residential Rate Structure (1)

Uniform Winter Rates and Inclining Block (IB) Summer Rates

Average Winter Consumption (AWC) Rates

<u>Description:</u> One uniform rate, the Block 1 rate applies to all water use from November 1 through March 31.

<u>Description:</u> Inclining block rates consisting of 3 blocks. Block 2 usage is based on average winter consumption from November 1 through March 31.

Inclining block rates apply to all water use from April 1 through October 31.

Rates apply all year.

| Block | Range | Rate (2) | <u>Block</u> | Percent of AWC | Rate (2) |
|-------|-----------|------------|--------------|----------------|------------|
| 1 | 0-9 ccf | \$0.72/ccf | 1 | 0-100% | \$0.72/ccf |
| 2 | 10-29 ccf | \$1.10/ccf | 2 | 101%-300% | \$1.10/ccf |
| 3 | > 29 ccf | \$1.52/ccf | 3 | > 300% | \$1.52/ccf |

(1) Non-residential rates include irrigation customers. However, designated irrigation customers would have their water use evaluated and a water use target established. The Block 2 rate would apply to the water target amount, and use in excess of the target would be priced at the Block 3 rate.

(2) Inside City rates are shown. Outside City rates are 1.35 times the rates shown in this table.

New impact fees were calculated based on the currently approved capital improvement plan and the forecast of new water users connecting to the system from July 2003 through June 2012. The recommended impact fees are shown in Table 3.

| | . , , | Table | e 3 | | | |
|---------------------------|---------------|-----------------|-------------|---------------|----------|-----------|
| | | Impact | | | | |
| | Pr | oposed Char | ge Schedule | | | |
| | | Proposed | | | Current | |
| Per Unit or | Water | Water | | Water | Water | |
| <u>by Meter Size</u> | <u>System</u> | Resource | Total Fee | <u>Svstem</u> | Resource | Total Fee |
| | (1) | (2) | (5) | (1) | (2) | (5) |
| Single-Family Residential | | | | | | |
| 5/8" x 3/4" | \$ 1,506 | \$ 210 | \$ 1,716 | \$ 784 | \$ 97 | \$ 881 |
| 3/4" | 1,506 | 210 | 1,716 | 784 | 97 | 881 |
| 1" | 2,510 | 515 | 3,025 | 1,307 | 200 | 1,507 |
| 1 1/2" | 5,020 | 1,241 | 6,261 | 2,613 | 495 | 3,108 |
| Non-SFR (3) | | | | | | |
| Duplex | \$ 924 | \$ 142 | \$ 1,066 | \$ 930 | \$ 130 | \$ 1,060 |
| Triplex | 619 | 106 | 725 | 996 | 156 | 1,152 |
| Fourplex | 663 | 117 | 780 | 1,228 | 204 | 1,432 |
| Commercial/Industrial | | | | | | |
| 5/8" x 3/4" | \$ 1,506 | \$ 328 | \$ 1,834 | \$ 784 | \$ 140 | \$ 924 |
| 3/4" | 1,506 | 328 | 1,834 | 784 | 140 | 924 |
| 1" | 2,510 | 1,004 | 3,514 | 1,307 | 438 | 1,745 |
| 1 1/2" | 5,020 | 1,938 | 6,958 | 2,613 | 728 | 3,341 |
| 2" | 8,032 | 2,772 | 10,804 | 4,181 | 875 | 5,056 |
| 3" | 16,064 | 5,659 | 21,723 | 8,363 | 2,130 | 10,493 |
| 4" | 25,100 | (4) | 25,100 | 13,067 | | |
| 6" | 50,200 | (4) | 50,200 | 26,133 | | |
| 8" | 80,320 | (4) | 80,320 | 41,813 | | |

(1) Charge based on ratio of meter size flow capacity to 3/4" meter flow capacity. Department is no longer issuing 5/8" x 3/4" services.

(4)

115,460

60,107

(2) Charge based on ratio to Equivalent Residential Unit (ERU) summer gpd.

115,460

- (3) Defined as 1 connection serving 5 or more living units.
- (4) For meters 4" and larger, the Water Resource Fee would be determined through the City's special assessment process detailed in the City Code.
- (5) Water System Fee would be the same for Inside City and Outside City connections. The water resource fee for service outside the City would be 1.35 times the Inside City fee; Outside City fees are currently 1.5 times greater.

10"

I. INTRODUCTION AND BACKGROUND

A. Introduction

Rick Giardina & Associates, Inc. (RGA) was retained by Salt Lake City Department of Public Utilities (the Department) to prepare a cost of service analysis and design water rates. In addition, RGA was retained to evaluate and develop impact fees that will be charged to customers requiring a new connection to the water system. The current rate structure has been in effect for over seven years; therefore, a new cost of service analysis was needed to ensure that rates are adequate for recovering projected operating expenses and capital expenditures, including funding sufficient to support the capital improvement plan and other financial operating criteria used to measure the financial viability for the Department. In performing this study, alternative rate structures were investigated for comparison with the current approach and an evaluation was completed of the potential impacts the alternatives would have on the City's customers.

This report consists of the following sections.

Executive Summary

I. Introduction and Background

This section presents a brief overview of the purpose of the study and the current operations of the Department. It also presents the public involvement process that was used to evaluate, develop, and make recommendations for implementing new water rates.

II. Financial Plan

The Department's 10-year financial plan includes revenue based on the recommended water rates and impact fees, the approved capital improvement plan, and the Department's operating objectives and financial parameters to ensure financial soundness.

III. Cost of Service Analysis

This section provides a description of the methodology used in the cost of service analysis, and summarizes the customer class parameters developed in the cost allocation process.

IV. Rate Design

This section presents the rate alternatives considered and the process used to evaluate the alternatives. It also includes the recommended water rates and a summary of the rational behind the recommendation.



V. <u>Impact Fees</u>

This section presents the methodology used for developing new impact fees and the resulting impact fees compared to current impact fees.

B. Background

The Department is an enterprise organization of Salt Lake City. This enterprise designation requires the Department to be self-supporting through revenues obtained from rates and fees charged for the water treatment and supply services provided by the Department.

In August 2002, the Department engaged in a project with RGA to develop a multi-year financial plan, evaluate the current water rate structure and consider alternative rate approaches. The purpose of this process was to complete a cost of service analysis and work with the Department and a citizen subcommittee to advise the Public Utilities Advisory Committee (PUAC) on alternative rate methodologies, a preferred approach, and recommend specific rates for consideration by the City. The name of the citizen committee formed for this process was the Public Utilities Advisory Committee Water Rate Subcommittee (WRS).

WRS members met on six different occasions during which customer usage characteristics, system design and cost information, and related information was presented and discussed. In addition, the Department organized a facilities tour for WRS members. The meetings were held on the following dates:

August 29, 2002 September 13, 2002 – Facilities Tour September 19, 2002 October 9, 2002 October 22, 2002 November 19, 2002 December 19, 2002

A brief summary of the meetings is provided in this section for the purpose of outlining the major milestones of the process. Appendix E contains meeting agendas and summaries.

Members of the City Council and Mayor's staff also attended WRS meetings. On two separate occasions both the PUAC and the Mayor were briefed (by RGA and the Department) regarding WRS progress and recommendations.



Review of WRS Meetings

<u>Meeting 1:</u> The first meeting provided an overview of the WRS process as well as history and background information on the water utility system.

Meeting 2: Concepts of water rate design were presented, and distinctions were made between different rate design approaches and objectives. A list of 11 rate design pricing objectives was developed and presented to the WRS for discussion and use in a "ranking" exercise. Subcommittee members scored each objective on a scale of 1 to 7 with a "7" indicating that the objective was of the highest importance. The ranking of the objectives based on the average score from the

scoring process is provided in Table 4.

| | Table 4 | | | | |
|-------------|-------------------------------|----------------|--|--|--|
| | Pricing Objectives | | | | |
| | | Average | | | |
| <u>Rank</u> | <u>Objective</u> | <u>Ranking</u> | | | |
| 1 | Water Conservation | 6.25 | | | |
| 2 | Compliance w/Legal Authority | 5.70 | | | |
| 3 | Peak Usage Reduction | 5.60 | | | |
| 4 | Growth Pays for Itself | 5.40 | | | |
| 5 | Cost-of-Service Equity | 5.00 | | | |
| 6 | Social Equity | 4.90 | | | |
| 7 | Revenue Stability | 4.80 | | | |
| 8 | Customer Impact | 4.35 | | | |
| 9 | Customer Acceptance | 4.30 | | | |
| 10 | Administrative Ease (tied) | 3.50 | | | |
| 10 | Large Volume Customers (tied) | 3.50 | | | |

Water conservation was ranked highest with an average score of 6.25; items ranked 2 through 4 scored from 5.4 to 5.7 indicating roughly equal ranking. Items ranked 5, 6 and 7 were also ranked nearly equal at 5.0, 4.9 and 4.8, respectively. Based on these results, and given the WRS agreement that the rates should unquestionably include "Compliance w/Legal Authority," the top 3 objectives for the alternative water rate structures to address are:

- □ Water Conservation□ Peak Usage Reduction□ Growth Pays for Itself
- The relatively high ranking of "Growth Pays for Itself" suggests that new customers should pay their share for the water system through impact fees. This is consistent with the City's past practice of adopting impact fees reflective of the

full cost of serving new customers.

Table 5 contains descriptions of the top-ranked objectives.

Meeting 3: This meeting consisted of discussions on rate design concepts, introducing alternative rate approaches to the WRS and discussing the differences between them. As a result of this meeting, the WRS chose to evaluate three alternative rate approaches and compare them with the City's current rate approach.



| Table 5 Top-Ranked Pricing Objectives | | | |
|---|--|--|--|
| Water Conservation – Effective in promoting the efficient use of resources on a year-round basis. | Compliance with Legal Authorities – Meets all known legal standards and requirements and has minimum potential for legal challenge. | | |
| Peak Usage Reduction – Assigns the cost of providing peaking facilities to those customers having significant peak to average water use patterns, i.e., discourages the use of water during periods of peak demand. | Growth Pays for Itself – Supports new housing, commercial, and industrial development; allows the City to be rate competitive with adjacent and similar communities. | | |

One rate structure considered was the Irvine Ranch Water District (located in southern California) rate approach in which the utility developed water targets for all users based on the number of people occupying the facility being metered, and

| Table 6 Irvine Ranch Water District Rates | | | | |
|--|-----------|-------------------|--|--|
| Inverted Block Rate Appr | | | | |
| C | harge | | | |
| <u>Tier</u> | Rate | <u>Use</u> (1) | | |
| | (per ccf) | (% of allocation) | | |
| Low Volume Discount (2) | \$0.53 | 0 – 40% | | |
| Conservation Base Rate | \$0.69 | 41 - 100% | | |
| Inefficient | \$1.38 | 101 - 150% | | |
| Excessive | \$2.76 | 151 - 200% | | |
| Wasteful | \$5.52 | > 200% | | |

- (1) For residential accounts the allocation is based on the number of persons per household (pphh) and landscaped area. Default or base values are:
 - 4 pphh
 - 1,300 square feet for landscape area
- (2) Based on 3 ccf per person per month and 4 persons household. This standard allocation equates to 12 ccf or approximately 9,000 gallons per month.

| | Table 7 | | | | |
|----------------------|-----------------------------|----------------|--|--|--|
| | El Paso Water Utility Rates | | | | |
| Peak Management Rate | | | | | |
| Block | | Price - \$/ccf | | | |
| 1 | 4 ccf – 150% AWC | \$0.90 / ccf | | | |
| 2 | 151 - 300% AWC | \$1.52 / ccf | | | |
| 3 | > 300% AWC | \$1.90 / ccf | | | |

 AWC – average water consumption during the winter period (represents indoor water use).
 Because sewer bills are also based on AWC, customers do not have an incentive to over use during the AWC period. the amount of irrigation required to sustain the vegetation on the property according to an evapotranspiration calculation. This structure is illustrated in Table 6. As noted in Table 6, usage in each block above the conservation base rate, is priced at a rate 2 times higher than the rate for the preceding block. The Block 5 price is set 8 times higher than Block 1 to effectively penalize the wasteful use of water.

Another rate structure considered by the WRS was based on an approach used in El Paso, Texas. This approach consists of using average winter consumption (AWC) as the basis for defining

inside and outside usage targets. Three rate blocks are defined by the utility for this rate approach as illustrated in Table 7.

The third rate approach considered by the WRS was an inclining block rate structure used in Park City, Utah. This approach consists of defining rate blocks similar to those in the other two alternatives, but with specific usage levels set for each block, or fixed blocks, instead of establishing usage blocks based on individual user characteristics.



| Table 8 | | | | | |
|---------|--------------------------|--------------|--------------------------|--|--|
| | Park Ci | ty Rates | | | |
| Seas | onal/Inverted Block Stru | cture - Re | esidential/Irrigation | | |
| | Acco | ounts | | | |
| Block | Usage Range (gals.) | Price | Use Type | | |
| | (1) (5) | (2) | | | |
| 1 | 0 - 5,000 | \$1.25 | Indoor Use (3) | | |
| 2 | 5,001 - 30,000 | \$2.00 | Irrigation (4) | | |
| 3 | 30,001 - 80,000 | \$3.25 | Excess Irrigation | | |
| 4 | > 80,000 | \$5.00 | Wasteful Use | | |

- (1) Applies to all single-family residential accounts. Ranges increase by meter size for multi-family and irrigation accounts.
- (2) Rates shown apply from June September. October May usage rate is \$1.75 per 1,000 gallons for all water use. Commercial accounts pay \$1.75 per 1,000 gallons for all use year-round.
- (3) Average winter use SFR.
- (4) Irrigation allowance based on a 14,520 square foot lot (.33 acre) with 50% irrigated area.
- (5) SFR 3/4" fixed rate \$10.00 per month.

Table 8 illustrates the Park City approach for residential customers. Each block would be priced at the levels indicative of the costs of water service, with higher prices applied to the blocks for outdoor usage and inefficient usage.

Meeting 4: This meeting included presentations and discussions regarding the Department's capital improvement plan and the corresponding financial plan. The Department's financial operating objectives were discussed in detail, and the parameters and guidelines for measuring financial viability were identified.

One key aspect of the cost of service study was the determination that the ratio of costs for customers outside the City to customers inside the City has changed from 1.50 to 1.35. In general terms, this means that costs of service have changed such that outside customer rates should now be 1.35 times the applicable inside City customer rates instead of the current 1.50 times differential. There are a variety of reasons for this shift including a reduction in the cost of debt and equity capital that the City should be allowed to recover from users that are not within the City limits.

Meeting 5: This meeting consisted of a more detailed evaluation of the most favored rate alternatives, a review of the WRS rate objectives as determined in Meeting 2, and a presentation of the rate impacts each alternative would have on existing customers in terms of changes in monthly bills. As a result of discussions held and the materials presented, the WRS decided that it would choose between two final rate alternatives that would be compared at Meeting 6. The rate alternatives chosen for a final evaluation during Meeting 6 are:

Alternative 1: The current uniform seasonal rates adjusted for exclusion of the 5 ccf of usage that is included in the monthly customer charge. These rates are based on a 3 percent increase in rates approved by the City Council for FY 2003-04.

Alternative 2: The AWC approach for all customers. As usage increases for AWC up to 300 percent of AWC and then greater than 300 percent of AWC, the unit price also increases. The second block generally represents efficient outdoor water use levels. The third block is priced higher to discourage inefficient use and is set at all water use in excess of 300 percent of AWC.



Individual usage targets would be established for each Irrigation account based on area, evapotranspiration rates, etc. Billing for irrigation users would start at the Block 2 rate, and the Block 3 rate would apply to all use in excess of the target amount.

Alternative 3: Residential customers would pay rates based on an inclining block rate design in the summer and a uniform winter rate. All non-residential customers would pay a rate based on the AWC approach with the exception of the previously referenced Irrigation accounts.

The Irrigation customers would pay the second block rate determined under the AWC approach unless they exceed a targeted usage amount. The third block rate would be charged for any usage exceeding the targeted usage amount.

<u>Meeting 6:</u> During the sixth meeting, the WRS held discussions on the merits of implementing each of the alternatives identified in Meeting 5. Detailed customer bill impact comparisons were presented to the WRS in order to compare the effectiveness each rate would have in achieving the top two goals of conservation and peak usage reduction.

At the end of the meeting, a vote was held to select the rate approach that would be recommended to the PUAC. The WRS chose Alternative 3, consisting of an inverted block rate structure for residential water users, and an AWC block rate structure for non-residential customers. These rate approaches were chosen on a vote of 9 to 6.

The PUAC endorsed the WRS rate recommendation at its January 8, 2003 meeting. This recommendation was then presented to the Administration; several concerns were subsequently addressed through the refinement of rates as reflected in section IV of this report.

C. Reliance on Department Provided Data

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



As is often the case, there will be differences between actual and projected data, and 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 such, we take no responsibility for the accuracy of data or projections provided by or prepared on behalf of the Salt Lake City Utilities Water Department, nor do we have any responsibility for updating this report for events occurring after the date of this report.

D. Acknowledgement

The successful completion of this study depended on the efforts of several staff members of the Water Department. In particular, the RGA study team would like to thank Mr. LeRoy Hooton, Jr., Mr. Jeff Niermeyer, Mr. James Lewis, and Ms. Stephanie Duer for their support and guidance throughout this study process.

The Department of Public Utilities and RGA would also like to thank the WRS and PUAC members for participating in this study. Members of these two groups are listed below.

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Kenneth Neal, WRS Patricia Nielson, WRS Kevin Pace, WRS Michael Polacek, PUAC Lisa Romney, WRS, Mayor's Staff and non-voting member Ouim Roundy, WRS Gregg Smith, WRS Jan Striefel, WRS (PUAC, Outside City as of Jan. 2003) James D. Tangaro, WRS Ron Vance, WRS Pieter van der Have, WRS Peter Von Sivers, WRS Ted Wilson, WRS Nancy Young, PUAC



II. FINANCIAL PLAN

This section presents the financial plan for the Water Enterprise Fund. The financial plan consists of projections for two subfunds within the Enterprise Fund: the Operations Subfund, and the Impact Fee Subfund. The two subfunds were formed to provide an analysis framework for two functions.

The Operations Subfund was formed to account for expenses and revenues associated with the daily operations of the Water Utility. This includes O&M expenses and capital expenditures needed to sustain adequate water services and meet regulatory requirements. Revenues are primarily obtained from payments for monthly water service through water rates and monthly service fees. Other sources of revenue include interest income on cash balances, and revenue from miscellaneous fees and charges.

The Impact Fee Subfund is used to account for impact fee revenues and growth-related capital expenditures, i.e., debt service and capital projects. Revenues in this Subfund are targeted for new water supply and treatment facilities needed to meet increased demand for water services. Revenues in this fund are not meant to be used for any other purpose than designated growth-related projects and associated debt.

When combined the cash flows for these two subfunds represent the Water Enterprise Fund Cash Flow statement; a statement of all Water Utility activities.

A. Enterprise Fund

The Operations Subfund and the Impact Fee Subfund are combined into one five-year financial plan for the Water Enterprise in Table 9. A 10-year plan is shown on page A-5 in Appendix A.



| Table 9 | | | | | | | |
|----------------------------------|---------------------|---------------------|--------------------|--------------------|---------------------|--|--|
| Enterprise Cash Flow Statement | | | | | | | |
| Fiscal Year Ending June 30 | | | | | | | |
| <u>Description</u> | <u>2002-03</u> | <u>2003-04</u> | <u>2004-05</u> | <u>2005-06</u> | <u>2006-07</u> | | |
| Operating Revenues | | | | | S-1-11-00. | | |
| Water Sales | \$38,257,000 | \$41,413,498 | \$45,881,114 | \$48,520,204 | \$51,311,094 | | |
| Other Income | 2,049,020 | 2,126,425 | 2,126,425 | 2,166,878 | 2,166,878 | | |
| Interest Income (1) | <u>850,000</u> | 800,000 | <u>119,656</u> | 142,549 | 366,749 | | |
| Subtotal | 41,156,020 | 44,339,923 | 48,127,196 | 50,829,631 | 53,844,721 | | |
| Operating Expenditures | | | | | | | |
| Metropolitan Water Assessment | 0 | 0 | 3,510,946 | 7,021,892 | 7,021,892 | | |
| Metropolitan Water Purchases | 8,325,000 | 9,050,000 | 6,975,000 | 7,050,000 | 8,312,500 | | |
| Operating Expenditures | 21,071,620 | 23,037,237 | 23,710,343 | 24,264,128 | 24,834,708 | | |
| Subtotal | 29,396,620 | 32,087,237 | 34,196,289 | 38,336,020 | 40,169,100 | | |
| Net Operating Income | 11,759,400 | 12,252,686 | 13,930,907 | 12,493,611 | 13,675,621 | | |
| C 1 Indiana | | | | | | | |
| Cash Inflows | 250,000 | 500.000 | 1 366 910 | 1.756.220 | 1 930 977 | | |
| Impact Fees | 250,000 | 500,000 | 1,366,819 | 1,756,339 | 1,839,077 | | |
| Other Contributions | 905,000 | 905,000 | 905,000 | 905,000 | 905,000 | | |
| Subtotal | <u>1,155,000</u> | 1,405,000 | 2,271,819 | 2,661,339 | <u>2,744,077</u> | | |
| Cash Outflows | | | | | | | |
| Capital Outlays | 1,393,750 | 1,447,500 | 1,482,200 | 1,373,600 | 2,093,000 | | |
| Capital Improvements | 12,806,225 | 21,757,831 | 9,160,461 | 5,056,000 | 5,520,000 | | |
| Watershed Purchases | 0 | 250,000 | 250,000 | 500,000 | 500,000 | | |
| Debt Service | 4,681,775 | 4,742,704 | 4,737,748 | 2,620,352 | 2,620,352 | | |
| Subtotal | 18,881,750 | 28,198,035 | 15,630,409 | 9,549,952 | 10,733,352 | | |
| Torono (Donnos) in Cook Bol | (5.067.250) | (14.540.240) | 570 217 | 5 (04 000 | 5 (96 246 | | |
| Increase (Decrease) in Cash Bal. | (5,967,350) | (14,540,349) | 572,317 | 5,604,998 | 5,686,346 | | |
| Beginning of Year Cash Bal. | 23,499,109 | 17,531,759 | 2,991,410 | 3,563,727 | 9,168,725 | | |
| End of Year Cash Balance | <u>\$17,531,759</u> | <u>\$ 2,991,410</u> | <u>\$3,563,727</u> | <u>\$9,168,725</u> | <u>\$14,855,071</u> | | |
| Cash Reserved for CIP | \$11,531,759 | \$0 | \$0 | \$3,168,724 | \$8,855,071 | | |
| Cash Reserved for Operations | \$6,000,000 | \$2,991,410 | \$3,563,727 | \$6,000,000 | \$6,000,000 | | |
| Cash Reserve Ratio (2) | 20% | 9% | 10% | 16% | 15% | | |
| Debt Service Coverage Ratio (3) | 2.5 | 2.6 | 2.9 | 4.8 | 5.2 | | |
| Door Bervice Coverage Ratio (3) | 2.3 | 2.0 | 2.9 | 7,0 | 3.2 | | |

⁽¹⁾ Interest income is calculated beginning in FY 2004-05; prior year values are from the Department's budget.



⁽²⁾ Target: 10% - 20%. Calculated by dividing Cash Reserved for Operations by the Subtotal for Operating Expenditures.

⁽³⁾ Target: 2.0 time annual debt service payment. Calculated by dividing Net Operating Income by Total Debt Service.

The Water Enterprise is expected to have cash reserves that border the lower bound of the Cash Reserve Ratio target of 10 percent to 20 percent. This indicates that there is a strong dependence on the accuracy of the revenue projections in order to meet daily cash operating needs. Thus, revenues and water use trends will need to be monitored closely to determine if a greater revenue increase is required than what is projected. The projected revenue increases

| Table 10 | | | | | |
|---------------------------------------|---------|---------|----------------|----------------|--|
| Projected Rate/Fee Increases | | | | | |
| Fiscal Year | | | | | |
| | 2003-04 | 2004-05 | <u>2005-06</u> | <u>2006-07</u> | |
| Operations Subfund 3.0% 10% 5.0% 5.0% | | | | | |
| Impact Fee Subfund | 2.0% | 2.0% | 2.0% | 2.0% | |

included in this plan are shown in Table 10.

B. Operations Subfund

The Operations Subfund cash flow is summarized in Table 11. This Subfund is intended to operate on a self-funding basis; as such revenues should be sufficient to cover all operations, maintenance, and capital costs required to provide water service to existing customers. Revenues are derived primarily from monthly water rates, with minor amounts obtained from interest income and other user fees such as fire protection service fees.

At the bottom of Table 11 are the three primary financial criteria for assessing the financial performance and condition of this Subfund. The End of Year Cash Balance fluctuates primarily due to the schedule for capital projects, and somewhat parallels the cash reserve ratio. While the End of Year Cash Balance provides a basis for judging the ability to fund the next year's capital projects with cash, a cash reserve ratio target of between 10 percent to 20 percent has been established as a measure of the liquidity of the Operations Subfund.

The debt service coverage ratio is targeted at 2 times the annual debt service payment, and is calculated as follows:

Debt Service Coverage Ratio = Net Operating Income
Debt Service

As shown, the ratio indicates that the Operations Subfund is expected to achieve sufficient revenues to cover the debt service through FY 2006-07.



| Table 11 | | | | | | | |
|--|---------------------|---------------------|-------------------|---------------------|---------------------|--|--|
| Operations Subfund Cash Flow Statement | | | | | | | |
| Fiscal Year Ending June 30 | | | | | | | |
| <u>Description</u> | <u>2002-03</u> | <u>2003-04</u> | <u>2004-05</u> | <u>2005-06</u> | <u>2006-07</u> | | |
| Operating Revenues | | | | | | | |
| Water Sales | \$38,257,000 | \$41,413,498 | \$45,881,114 | \$48,520,204 | \$51,311,094 | | |
| Other Income | 2,049,020 | 2,126,425 | 2,126,425 | 2,166,878 | 2,166,878 | | |
| Interest Income (1) | <u>850,000</u> | <u>750,000</u> | <u>174,115</u> | <u>144,873</u> | <u>298,912</u> | | |
| Subtotal | 41,156,020 | 44,289,923 | 48,181,654 | 50,831,955 | 53,776,884 | | |
| Operating Expenditures | | | | | | | |
| Metropolitan Water Assessment | 0 | 0 | 3,510,946 | 7,021,892 | 7,021,892 | | |
| Metropolitan Water Purchases | 8,325,000 | 9,050,000 | 6,975,000 | 7,050,000 | 8,312,500 | | |
| Operating Expenditures | 21,071,620 | 23,037,237 | 23,710,343 | 24,264,128 | 24,834,708 | | |
| Subtotal | 29,396,620 | 32,087,237 | 34,196,289 | 38,336,020 | 40,169,100 | | |
| Net Operating Income | 11,759,400 | 12,202,686 | 13,985,365 | 12,495,935 | 13,607,784 | | |
| Cash Inflows | | | | | | | |
| Other Contributions | 905,000 | 905,000 | 905,000 | 905,000 | 905,000 | | |
| Bond Proceeds | 0 | 0 | 0 | 0 | 0 | | |
| Subtotal | 905,000 | 905,000 | 905,000 | 905,000 | 905,000 | | |
| Cash Outflows | | | | | | | |
| Capital Outlays | 1,393,750 | 1,447,500 | 1,482,200 | 1,373,600 | 2,093,000 | | |
| Capital Improvements | 12,590,730 | 18,893,131 | 9,151,461 | 5,056,000 | 5,020,000 | | |
| Watershed Purchases | 0 | 250,000 | 250,000 | 500,000 | 500,000 | | |
| Debt Service | 4.681,775 | 4,742,704 | 4,737,748 | 2,620,352 | 2,620,352 | | |
| Subtotal | 18,666,255 | 25,333,335 | <u>15,621,409</u> | 9,549,952 | 10,233,352 | | |
| Increase (Decrease) in Cash Bal. | (6,001,855) | (12,225,649) | (731,044) | 3,850,983 | 4,279,432 | | |
| Beginning of Year Cash Bal. | 22,580,377 | 16,578,522 | 4,352,873 | 3,621,829 | 7,472,812 | | |
| End of Year Cash Balance | <u>\$16,578,522</u> | <u>\$ 4,352,873</u> | \$ 3,621,829 | <u>\$.7,472,812</u> | <u>\$11,752,244</u> | | |
| Cash Reserve Ratio (2) | 56.4% | 13.6% | 10.6% | 19.5% | 29.3% | | |
| Debt Service Coverage Ratio (3) | 2.51 | 2.57 | 2.95 | 4.77 | 5.19 | | |

⁽¹⁾ Interest income is calculated beginning in FY 2004-05; prior year values are from the Department's budget.



⁽²⁾ Target: 10% - 20%. Calculated by dividing Cash Reserved for Operations by the Subtotal for Operating Expenditures.

⁽³⁾ Target: 2.0 time annual debt service payment. Calculated by dividing Net Operating Income by Total Debt Service.

C. Impact Fee Subfund

The Impact Fee Subfund was created to manage the funds used to develop new water supply and increase system capacity to serve new water users. An impact fee is assessed for each new connection to the water system. The resulting fee revenue is dedicated to the development of new capacity and facilities to serve new water users, and therefore the subfund should be self-funding. The cashflow statement is based on implementation of the current impact fees due to the need for further consideration by the City Administration.

| Table 12 | | | | | |
|--|--|----------------|----------------|--------------------|--------------------|
| lmp | | fund Cash Flov | | | |
| | Fiscal Y | ear Ending Jun | | | |
| | <u>Budget</u> | | Proje | cted | |
| <u>Description</u> | <u>2002-03</u> | <u>2003-04</u> | <u>2004-05</u> | <u>2005-06</u> | <u>2006-07</u> |
| Revenues/Cash Inflows | | | | | |
| Impact Fees | \$250,000 | \$ 500,000 | \$1,366,819 | \$1,756,339 | \$1,839,077 |
| Bond Proceeds | 0 | 0 | 0 | 0 | 0 |
| Interest Income (1) | 0 | 50,000 | (54,459) | (2,324) | 67,837 |
| Subtotal | 250,000 | 550,000 | 1,312,361 | 1,754,015 | 1,906,914 |
| Expenditures/Cash Outflows | | | | | |
| Capital Improvements - Growth | 215,495 | 2,864,700 | 9,000 | 0 | 500,000 |
| Increase (Decrease) in Cash Bal. | 34,505 | (2,314,700) | 1,303,361 | 1,754,015 | 1,406,914 |
| Beginning of Year Cash Balance | 918,732 | 953,237 | (1,361,463) | (58,102) | 1,695,913 |
| End of Year Cash Balance | <u>\$953,237</u> | (\$1,361,463) | (\$ 58,102) | <u>\$1,695,913</u> | <u>\$3,102,827</u> |
| (1) Interest income is calculated beginn | (1) Interest income is calculated beginning in FY 2004-05; prior year values are from the Department's budget. | | | | |

The negative cash balance in FY 2003-04 implies a short-term loan or transfer may be required from the Water Operations Subfund. The negative interest income is the implied cost of financing, or interest paid. Page A-7 in Appendix A shows this Subfund's cash flow for FY 2002-03 through FY 2011-12.



III. COST OF SERVICE ANALYSIS

The cost of service analysis involves the identification of all expenditures and financial obligations, and allocating the revenue required for them to the customers paying fees to obtain water service. Therefore, there were two primary steps:

Determining revenue requirements, and

☐ Cost allocation

The cost of service (COS) analysis involved obtaining and evaluating customer billing data, characteristics of the water system, and a list of capital expenditures. RGA used a methodology described by the American Water Works Association (AWWA) as the base-extra capacity method to allocate system costs to the water customer rate classes². The customer classes for which the cost-of-service was completed for ratemaking purposes are residential, non-residential, and irrigation. This section of the report presents the methodology and results of the cost of service analysis.

A. Demand Forecast

The water demand forecast is based on the combination of anticipated growth in the number of water accounts and the reduced average usage per account that could potentially occur over the study period due to conservation.

| Table 13 | | | | | | |
|-------------|-----------------------------|------------|----------|--|--|--|
| I | Historical Water Demand (1) | | | | | |
| | Water Gallons Percent | | | | | |
| Calendar | Demand | Per Day | Change | | | |
| <u>Year</u> | (mgd) (2) | Per Capita | in GPDPC | | | |
| 1992 | 82.3 | 286 | | | | |
| 1993 | 75.9 | 256 | -10% | | | |
| 1994 | 77.6 | 254 | -1% | | | |
| 1995 | 79.8 | 264 | 4% | | | |
| 1996 | 84.0 | 275 | 4% | | | |
| 1997 | 79.4 | 256 | -7% | | | |
| 1998 | 76.0 | 242 | -5% | | | |
| 1999 | 76.9 | 245 | 1% | | | |
| 2000 | 79.6 | 252 | 3% | | | |
| 2001 | 87.1 | 264 | 5% | | | |
| 2002 | 83.7 | 235 | -11% | | | |

⁽¹⁾ Water demand equals metered water use.

Over the last eleven years, water demands have fluctuated from 87.1 million gallons per day (mgd) in 2001 to a low in 1993 of 75.9 mgd.

The variability in water use per capita can be attributed in part to differences in precipitation from year-to-year, and the mix of customers (e.g., residential vs. non-residential) as the City's service area has grown. Other factors include the amount of multi-unit housing, changes in efficiency in indoor water fixtures, such as low-flow devices, and more efficient irrigation practices and systems. Because the use per capita includes all water service, changes in commercial and industrial customer characteristics

² Principles of Water Rates, Fees and Charges, AWWA Manual M1, Fifth Edition.



⁽²⁾ Million gallons per day.

also influences this statistic. In particular, the number of people working in Salt Lake City but commuting from outside the City has increased. This may be why there was an increase in the use per capita in some years, which is based on total water demand divided by the permanent population of the City.

Table 14 shows the forecasted water demand for the next ten years. This forecast was developed with consideration of the changing growth patterns within the Department's service territory, and to reflect a sustained level of conservation.

| Table 14 | | | | |
|-------------|-------------|---------------|-----------|--|
| F | orecasted W | ater Demand (| 1) | |
| | Water | Gallons | | |
| Calendar | Demand | Per Capita | | |
| <u>Year</u> | (mgd) (2) | Per Day | Acre-Feet | |
| 2003 | 84.7 | 250 | 94,800 | |
| 2004 | 86.2 | 250 | 96,500 | |
| 2005 | 87.7 | 250 | 98,200 | |
| 2006 | 88.7 | 249 | 99,300 | |
| 2007 | 89.7 | 249 | 100,400 | |
| 2008 | 90.7 | 248 | 101,500 | |
| 2009 | 91.7 | 248 | 103,700 | |
| 2010 | 92.7 | 247 | 103,800 | |
| 2011 | 93.7 | 247 | 104,900 | |

- (1) Water demand equals metered water use.
- (2) Million gallons per day.

Forecasted water demand is based on the expected water demand for FY 2002-03 under the present drought conditions, and is largely influenced by the programs implemented by the Department to induce water conservation. Table 14 shows the water demand as projected by the Department based on new customer growth and the continuation of active conservation programs including the results of this pricing study.

B. Revenue Requirements

The Department serves customers located both within and outside the City limits. Customers within the City pay property taxes to the Metropolitan Water District of Salt Lake City and Sandy City (MWDSL&S) and the Central Utah Water Conservancy District (CUWCD). The funds received by the MWDSL&S are used to acquire and develop water resources and treated water for all the City's customers. Outside City customers do not pay property taxes to the MWDSL&S. Additionally, ownership and utility system development risks reside within the City Administration and City constituents. For these reasons, the method used to determine revenue requirements is different for the inside and outside City customer groups.

Revenue requirements for inside City customers are determined using the Cash Needs methodology. This method involves determining the amount of annual revenues required to meet the cash needs of the water utility, including O&M expenses, capital expenditures, and funds needed to establish and maintain cash operating reserves, and other borrowing requirements such as loan or bond covenants.



Alternatively, revenue requirements for customers located outside the City include the same O&M expenses as in the Cash Needs method, but involve a different approach for recovering invested capital. This approach is referred to as the Utility method. Specifically, depreciation is included as a means of recovering capital expenditures, and a rate of return is applied to the total system capital assets and working capital (known as "rate base") to account for the cost of borrowing and business risks, i.e., a return "on" the City's investment as well as a return "of" this same investment. Cash operating reserves are accounted for in the working capital component of rate base. It is the difference in how invested capital is recovered under the two methods that causes a difference in the revenue requirements under each method and thus the support for higher rates for outside City customers.

The rate of return applied in this study is based on the Water Enterprise's embedded cost of debt and a derived or estimated return on equity capital. The return on equity used (10.17 percent) is an average based on a survey of allowed

| | Table 15 Weighted Cost of Capital | | | | | | |
|---|--------------------------------------|--------|--------|---------------|--|--|--|
| Weighted Rate Base Weight Return (1) ROR (2) | | | | | | | |
| Debt | \$ 32,995,000 | 15.9% | 4.94% | 0.79% | | | |
| Equity | 174,747,668 | 84.1% | 10.17% | <u>8.55</u> % | | | |
| Total | \$207,742,668 | 100.0% | | 9.34% | | | |

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

rates of return on equity for large water utilities in the western U.S. (Appendix B, page B-19). Table 15 illustrates the weighted components for the total rate of return applied to the total water utility rate base.

A summary of the FY 2003-04 revenue requirements for each

method is shown in Table 16. Note that O&M requirements shown in Table 16 are the same for both methods, and the difference in the total amounts is based on the approach to recovering invested capital. The return on rate base shown in Table 16 is based on a weighted average of the embedded cost of debt and an estimated allowable rate of return on equity shown in Table 15.

The revenue requirements shown in Table 16 are prior to allocating costs to inside and outside city customers. In order to allocate costs for ratemaking purposes, a cost-of-service analysis is performed for Inside City and Outside City customer classes. In the cost allocation process, the revenue developed under the Utility method is reduced to the level of the Cash Needs revenue requirement by adjusting the rate of return for the Inside City customers. This adjustment effectively provides for the allocation of costs (or revenue requirements) to the Inside City customers on a Cash Needs basis, and the Outside City customers on the Utility basis.



| Table 16 | | | | | |
|---|------------------|-------------------|--|--|--|
| Summary of Cash Needs and Utility Based Methods | | | | | |
| for Revenue Requirements | FY 2003-04 (1) | ı | | | |
| Functional Category | Cash Needs | <u>Utility</u> | | | |
| Water Supply | \$ 648,722 | \$ 648,722 | | | |
| Water Power & Pumping | 1,859,018 | 1,859,018 | | | |
| Water Purification | 11,586,958 | 11,586,958 | | | |
| Transmission & Distribution | 6,663,037 | 6,663,037 | | | |
| Shops & Maintenance | 2,443,910 | 2,443,910 | | | |
| Water Customer Service | 3,466,502 | 3,466,502 | | | |
| Water Administration | 2,417,158 | 2,417,158 | | | |
| Other Operating Expenses | <u>1,086,496</u> | 1,086,496 | | | |
| Total O&M | 30,171,800 | 30,171,800 | | | |
| Capital Expenditures and Debt Service | 18,789,690 | | | | |
| Depreciation | | 5,657,383 | | | |
| Return On Rate Base | | <u>19,400,468</u> | | | |
| Subtotal | 18,789,690 | 25,057,852 | | | |
| Gross Revenue | 48,961,490 | 55,229,652 | | | |
| Adjustments (2) | (5,227,928) | (5,227,928) | | | |
| Net Revenue Requirement from Rates | \$43,733,562 | \$50,001,724 | | | |
| (1) Some amounts may not add due to roundin | ua. | | | | |

The applicable rates of return for determining revenue requirements for Inside City and Outside City customers are shown in Table 17. Appendix B of this report contains the detailed calculations for these rates of return on page B-20. These rates are used to develop unit costs for the rate base component of revenue requirements.

The cost-of-service is described in the next section.

- (1) Some amounts may not add due to rounding.
- (2) Adjustments include excess cash, grants, other sources of income, and interest income.

C. Cost Allocation

As previously noted the base-extra capacity method was used to allocate system costs to the customer classes. The method involves identifying the costs associated with the major water system components and allocating these costs to the customer classes based on how each customer class uses the system, i.e., the water demand characteristics of each class. The base or average day demand component in the cost allocation methodology is defined as the amount of capacity that would be needed to serve a uniform or "flat" water demand profile. As such, average demand provides the base capacity amount for each customer class. Customer demand above the average is the extra capacity component.

| Table 17 | |
|--|---------------|
| Adjusted Rate of Return | |
| Utility Basis Revenue Requirement (1) | \$ 50,001,724 |
| Cash Needs Revenue Requirement (1) | 43,733,562 |
| Difference, Cash Needs Adjustment Amount | 6,268,162 |
| Utility Return on Rate Base (1) | 19,400,468 |
| City Adjustment for Cash Needs Revenue | (6,268,162) |
| Net Adjusted Return on Rate Base | 13,132,306 |
| Inside City Return on Rate Base (2) | 6,811,254 |
| Outside City Return on Rate Base (2) | 6,321,052 |
| | \$ 13,132,306 |
| Inside City Adjusted Rate of Return | |
| Inside City Rate Base (2) | \$140,056,044 |
| Inside City Return on Rate Base | 6,811,254 |
| Adjusted Rate of Return | 4.86% |
| Outside City Rate of Return | |
| Outside City Rate Base (2) | \$ 67,686,624 |
| Outside City Return on Rate Base | 6,321,052 |
| Adjusted Rate of Return | 9.34% |
| _ | |
| (1) See Table 16. | |
| (2) See Appendix B, page B-20. | |

Customer class use of the system is characterized by three statistical ratios: average day demand (ADD), maximum day demand (MDD), and maximum hour demand (MHD). These three ratios were calculated for the two customer categories, Inside City and Outside City, using fiscal year (FY) 2001-02 billing data.

The corresponding ratios for the total system were obtained from the 1997 Master Plan³ and are presented in Table 18. All three ratios are calculated by dividing the respective maximum day and hour demand values by the ADD. By default, the average day demand ratio is thereby set equal to 1.00.

| Table 18 | | | | |
|----------------------------|--------------|--|--|--|
| Water System Demand Ratios | | | | |
| Description | <u>Ratio</u> | | | |
| Average Day Demand | 1.00 | | | |
| Maximum Day Demand | 2.73 | | | |
| Maximum Hour Demand | 3.42 | | | |

For instance, the MHD ratio implies that the system is designed to serve 3.42 times the ADD in order to meet the MHD. Similarly, the MDD ratio implies that the system is designed to serve 2.73 times the average daily demand so it can meet maximum day demand requirements.

By developing these ratios for each customer class and the entire water system, a correlation is made between customer use of the system and how the system is designed to serve all customers. These ratios are used in the cost allocation process to represent the relationship between system components that were designed to meet each type of customer demand. The cost allocation method therefore involves matching customer water usage characteristics with system operational characteristics through the use of these ratios.

In the first step in the cost-of-service process, all system capital assets are assigned to the three demand categories. For example, water pumping components are acquired and used primarily for meeting MDD and MHD, so those components are not assigned to ADD. Similarly, water purification

Salt Lake City Water System Master Plan, Prepared by CH2M Hill, page 3-6, May 1997.



facilities are typically sized to meet MDD and therefore are not assigned to MHD. Some components are assigned to all three categories, which implies that the component costs will be allocated according to the proportion of demand represented by these three ratios. The assets and how they were assigned to each demand category are illustrated on page B-6 and B-7 in Appendix B of this report.

| Table 19 | | | | | |
|---------------------|-------------|----------------|-------------|--------------|--|
| Asset Allocation | on Percenta | ges for System | Demand Fac | tors | |
| | Base | <u>Extra C</u> | Capacity | | |
| Asset Allocation | Average | Maximum | Maximum | | |
| <u>Combinations</u> | Day | <u>Day</u> | <u>Hour</u> | <u>Total</u> | |
| ADD/MDD/MHD | 22.6% | 39.1% | 38.2% | 100.0% | |
| MDD/MHD | 0.0% | 50.6% | 49.4% | 100.0% | |
| ADD | 100.0% | 0.0% | 0.0% | 100.0% | |
| ADD/MDD | 36.6% | 63.4% | 0.0% | 100.0% | |
| MDD | 0.0% | 100.0% | 0.0% | 100.0% | |
| MHD | 0.0% | 0.0% | 100.0% | 100.0% | |
| ADD/MHD | 37.2% | 0.0% | 62.8% | 100.0% | |

Table 19 shows the asset allocation percentages used to allocate costs to the base and extra-capacity components (Average Day Demand, Max Day Demand, and Max Hour Demand values as shown in Table 18) in the cost allocation process. Thus, any component assigned to all three categories would have

its costs allocated to the categories as shown in the ADD/MDD/MHD combination in Table 19. Other combinations of potential asset allocations are also shown in the table with the respective proportion of costs that correspond to the assigned combinations. In summary, assigning the water utility system costs to these three demand measures provides the basis for correlating customer use characteristics to the system costs. Both capital costs and O&M costs are allocated to these three demand measures for that purpose.

Based on the recommended rate structure in which customers pay the same rate for the same type of water service (i.e., Inside and Outside City) the most appropriate cost allocation approach involves allocating costs to Inside City and Outside City customers. This is accomplished in the cost-of-service process by aggregating the Inside City and the Outside City customer characteristics using FY 2001-02 billing data to develop the ADD, MDD, and MHD ratios for each customer category, and then correlating the customer ratios to the system ratios.

| Table 20 Customer Class Demand Factors | | | | | |
|---|------|------|------|--|--|
| ADD MDD MHD Description Ratio Ratio Ratio | | | | | |
| System | 1.00 | 2.73 | 3.42 | | |
| Inside City | 1.00 | 2.63 | 3.29 | | |
| Outside City | 1.00 | 3.02 | 3.79 | | |

The resulting demand ratios for Inside City and Outside City customer categories are presented in Table 20. The System demand ratios are shown at the top for reference purposes.

As reflected by the higher ratios in Table 20, Outside City customers have higher peaking demands than Inside City customers. By using

these factors in the cost allocation process, system component and O&M costs allocated to these demand categories are allocated to the customers according to how they impose demands on the water system.



Therefore, through development of system and customer demand ratios, each customer class is allocated a portion of the system costs based on the ratios in Table 20. The detailed development of these factors is provided on pages B-14 and B-15 in Appendix B of this report.

The next step in the cost-of-service process is to develop service unit costs that can be applied to the customer class usage allocations. Service unit costs consist

| Table 21 | | | |
|---|-----------------|--|--|
| System Cost Allocation Parameters | | | |
| Service Categories Allocation Units | | | |
| Base Capacity | ADD | | |
| Excess Capacity | MDD, MHD | | |
| Meters and Services Equivalent Meters | | | |
| Billing and Collecting | Number of Bills | | |
| Fire Protection Equivalent Connections (1) | | | |
| (1) One aguivalent connection is based on the flow (gallons | | | |

(1) One equivalent connection is based on the flow (gallons per minute - gpm) of a 6 inch connection.

of applying unit costs (i.e., \$/ccf) to the categories shown in Table 21.

The customer class usage allocations to the base and excess capacity categories are shown on page B-16 in Appendix B to this report. They are derived by using the ratios shown in Table 20.

The detailed cost allocation for the Cash Needs and Utility approaches are shown

on page B-21 to page B-25 in Appendix B to this report.

The unit costs are developed on page B-17 in Appendix B to this report. The allocation of the system operational costs and capital expenditures, summarized on Table 16 is shown on page B-26 of Appendix B. A summary of the resulting cost allocation to each service category is shown in Table 22.

| Table 22 | | | | | | |
|--------------|---------------------|--------------|-----------------|----------------|-------------|-------------------|
| | | Cost . | Allocation Re | esul <u>ts</u> | | |
| | Meters Public Total | | | | | |
| Customer | Base | Extra | and | Billing & | Fire | Revenue |
| <u>Class</u> | Capacity | Capacity | Services | Collecting | Protection | Requirement |
| Inside City | \$10,919,669 | \$12,136,139 | \$ 758,077 | \$2,893,543 | \$ 809,677 | \$27,517,106 |
| Outside City | 5,648,998 | 8,229,631 | 405,505 | 1,338,735 | 450,388 | <u>16,073,257</u> |
| Total | \$16,568,667 | \$20,365,770 | \$1,163,582 | \$4,232,278 | \$1,260,065 | \$43,590,363 |

| Table 23 | | | | |
|---------------------------------|--------------------|--------------|--------------|--|
| Cost | of Service Sumn | ıary | | |
| Reve | enue Requireme | nts | | |
| | Inside City | Outside City | <u>Total</u> | |
| Fixed Charges | \$ 3,968,186 | \$ 2,428,228 | \$ 6,396,414 | |
| Volume Charges | 23,548,919 | 13,645,029 | 37,193,949 | |
| Total | 27,517,105 | 16,073,257 | 43,590,363 | |
| Private Fire Protection 143,195 | | | | |
| Total Revenue Requirements | | | \$43,733,558 | |

The cost of service analysis resulted in the allocation of costs to the customer classes as shown in Table 23.

Table 23

indicates a revenue requirements amount for Private Fire Protection, which is a customer category with a monthly service charge. The development of fire



protection rates is shown on page B-33 of Appendix B. The rates are based on the connection size and are indicated on page B-32.

Using the results of the cost allocation in Table 22 and the projected usage for Inside City and Outside City customers for FY 2002-03, the relative cost to serve Inside City and Outside City customers can be calculated on a per unit basis. This calculation is shown in Table 24. Thus, the detailed cost allocation in which system costs and characteristics are correlated to the customer usage characteristics resulted in the determination that the cost to serve Outside City

| Table 24 | | | |
|---|---------------|--|--|
| Calculation of Outside City Rate Differential | | | |
| ' | Amount | | |
| <u>Outside City</u> | | | |
| Revenue Requirement | \$16,073,257 | | |
| Use (ccf) | 11,648,148 | | |
| Rate (\$/ccf) | <u>\$1.38</u> | | |
| Inside City | | | |
| Revenue Requirement | \$27,517,106 | | |
| Use (ccf) | 26,865,399 | | |
| Rate (\$/ccf) | <u>\$1.02</u> | | |
| Outside/Inside Rate Ratio (\$1.38/\$1.02) | 1.35 | | |

customers is 1.35 times more than the cost to serve Inside City customers.

The resulting ratio of 1.35 was used in the rate design for Outside City customers. Therefore, the rate structure for Inside City customers was developed first, and then the Outside/Inside ratio of 1.35 was applied to the Inside City customer rates to obtain the Outside City customer rates.

The rate design is presented in Section IV.

IV. RATE DESIGN

This section of the report illustrates and discusses the approach used to design water rates. As discussed in Section III, customer usage characteristics were used to allocate costs to Inside City and Outside City customers; they are also the primary basis on which the proposed rates are based. The first part of this section presents the overview of the types of rates that were considered by the Water Resources Subcommittee (WRS), followed by a section presenting the recommended water rates. The third part of this section presents the customer usage characteristics used for the rate design, and the actual rate design process for the proposed rates.

A. Overview of Rate Alternatives

As part of the public involvement process, the WRS reviewed and suggested that the following rate approaches be considered for implementation by the City.

<u>Seasonal/Inclining Block</u>: This rate has one volume rate in the winter and an inclining block design for the summer. Blocks are typically set based on indoor and outdoor usage criteria, and are fixed for each customer group rather than being variable as would be the case for the Inclining Block/Target and Peak Management methods discussed below.

Inclining Block/Target: An inclining block design that uses evapotranspiration and typical water consumption needs per person to set a target for each customer. If a customer exceeds the targeted amount for their household and landscape needs, they incur higher charges as a result of the inclining block pricing. Significantly higher rates ("penalty" rates) would apply to inefficient and wasteful use. Thus, this rate design is aimed primarily at sending price signals for conservation purposes with consideration for typical indoor needs and landscape irrigation requirements. Blocks are variable for each customer account depending upon the number of people in the household and the area to be irrigated.

<u>Peak Management</u>: An inclining block design that uses average winter consumption (AWC) as the basis for setting an "indoor" usage block. This amount – the AWC – is the basis for setting upper blocks. This rate design aims at sending a price signal for conservation purposes, but also is intended to be flexible with respect to household size. Rather than the water utility setting the target for indoor and outdoor usage blocks, average winter water consumption is the block setting criteria. The second block (priced higher than the first) typically is set to allow for efficient outdoor water use levels, and is set as a percentage of the customer's AWC. The third block is priced even higher than the second to discourage inefficient use and is also set based on a percentage of AWC.



<u>Seasonal Uniform</u>: The Department's current water rate approach is intended to emphasize the difference in winter and summer water supply and delivery costs. This rate design has a higher price in the summer to encourage more conservation regardless of whether the water is used for indoor or outdoor purposes.

B. Recommended Water Rates

As described in the Background section of this report, (see Section I) the WRS considered several alternative usage or volume charge rate designs. Several meetings were held to discuss and select the rate structure that would meet the rate objective as described in Section I.

As a result of the series of WRS, and Public Utility Advisory Committee (PUAC) meetings, and final review by the City Administration of proposed rates, the rates recommended for implementation reflect two rate structures — one for residential users and another for non-residential users. Table 25 provides a description of the rate structures and the recommended rates.



Table 25 Recommended Water Rates

Residential Rate Structure Uniform Winter Rates and Inclining Block (IB) Summer Rates

<u>Uniform Winter Rate</u>: One rate (\$0.72 per ccf) applies to all water use from November 1 through March 31. This is the same rate as the rate for the first block of the inclining block rates.

<u>Inclining Block Rates:</u> Applies to all water use from April 1 through October 31.

<u>First Block:</u> For non-peaking or indoor use. This water use block is based on a statistical analysis of residential customer usage during the winter. Average winter use for an Inside City SFR account was 9 ccf. One price (\$0.72 per ccf) applies to all use in this block, and the rate also applies to winter consumption as described for the Uniform Winter Rate above.

Second Block: For peaking use or outdoor irrigation. The water use in this block is based on a statistical analysis of residential customer usage in the summer months compared to winter months. This block is bounded by 10 ccf and 29 ccf, the upper and lower bounds for Blocks 1 and 3, respectively. A price higher than the first block rate is applied to all use within this block to encourage conservation – \$1.10 per ccf.

Third Block: For excessive use. Excessive use is based on what the average residential user requires for summer outside water uses. The lower bound of this block is 29 ccf. All use above 29 ccf per month is priced in this block at the highest rate to encourage conservation – \$1.52 per ccf.

Applicable Rates Block Range Rate 1 0 - 9 ccf \$0.72 per ccf 2 10 - 29 ccf \$1.10 per ccf 3 > 29 ccf \$1.52 per ccf

Non-Residential Rate Structure Average Winter Consumption (AWC) Based Rates

For the non-residential class the same rates apply all year.

<u>Inclining Block Rates:</u> Applies to all water used throughout the year.

<u>First Block:</u> For non-peaking or indoor use based on average winter water consumption levels. One price applies to all use in this block – \$0.72 per ccf.

Second Block: For peaking use or outdoor irrigation. The block threshold is variable for each user based on the user's AWC from November 1 through March 31. This block is bounded by 100 percent of AWC and 300 percent of AWC, the upper and lower bounds for Blocks 1 and 3, respectively. A price higher than the rate for use in the first block is applied to all use within this range to encourage conservation – \$1.10 per ccf.

Third Block: For high or excessive use, i.e., all use exceeding 300 percent of a customer's average winter use. All use above 300 percent of AWC is considered excessive and is priced at the highest rate to encourage conservation – \$1.52 per ccf.

| Applicable Rates | | | | |
|------------------|------------------|----------------|--|--|
| Block | Range | Rate | | |
| Block 1 | 0-100% of AWC | \$0.72 per ccf | | |
| Block 2 | 101%-300% of AWC | \$1.10 per ccf | | |
| Block 3 | > 300% of AWC | \$1.52 per ccf | | |

C. Rate Design

Monthly Customer Charge

The monthly customer charge, which varies by meter size, is calculated by identifying customer service-related costs in addition to other fixed costs, and dividing these costs by the number of equivalent meters. Two types of costs are included in the fixed monthly charge:

- ☐ Billing and Collections
- ☐ Meter Reading and Services

The billing, collections, meter reading, and services items are somewhat self-explanatory since the costs pertain specifically to performing those functions. The costs for these functions have been tabulated from accounts specifically to these customer service areas. The table on page B-5 of Appendix B indicates these costs.

The revenue and rate calculation for the monthly Customer Charge is provided on pages B-27 and B-28 in Appendix B to this report. Monthly charges were developed on an equivalent unit basis, using equivalent cost units for the billing

| Table 26 | | |
|-----------------|----------------|--|
| Proposed Custon | mer Charges by | |
| Meter | · Size | |
| Meter Size | Inside City | |
| (inches) | (1) | |
| 1" and smaller | \$5.90 | |
| 1.5" | \$7.15 | |
| 2" | \$7.84 | |
| 3" | \$13.73 | |
| 4" | \$14.77 | |
| 6" | \$21.70 | |
| 8" | \$39.71 | |
| 10" | \$74.36 | |
| 12" | \$143.65 | |

(1) Outside City charges are 1.35 times higher than charges shown

and collection component, and equivalent flow units for the meter reading and services component. The monthly charges for the Inside City customers are shown in Table 26. Charges for Outside City customers would be 1.35 times higher based on the differential calculated and discussed in Section III. One significant change in the proposed Customer Charge is the discontinuance of the 5 ccf usage allowance. Removing the 5 ccf minimum use component from the customer charge allows water users to pay for only what they use.

Volume Rates

100%

The design of recommended volume rates involved completion of a billing analysis of the Department's water customers to gain an understanding of their usage characteristics. For the purpose of rate design, two key

analyses were prepared, using FY 2001-02 data, to identify the amount of water

Table 27 used in each of the recommended rate

Inside City, Single-Family Residential Usage Usage Percent of Percent of Block Block Use in Block Bills in Block 1-9 ccf 1 36% 41% 2 10-29 ccf 35% 37% 29% 22% 3 > 29 ccf

100%

used in each of the recommended rate blocks for the residential and nonresidential classes (see Tables 27 and 28, respectively).



| Table 28 | | | | |
|-----------------------------------|-----------------|----------------|--|--|
| Inside City | , Non-Residenti | al Usage | | |
| Usage Block Percent of Percent of | | | | |
| Percent of AWC | Use in Block | Bills in Block | | |
| 0 - 100% | 55% | 55% | | |
| 101% - 300% | 26% | 30% | | |
| >300% | <u>_19</u> % | <u>15</u> % | | |
| | 100% | 100% | | |

These tables indicate the amount of usage that can be expected in each of the three rate blocks. The "Percent Use in Block" column indicates the percentage of the total water used in FY 2001-02 for each block. The "Percent of Bills in Block" column shows the percentage of bills that fell in each block for FY 2001-02.

As shown in Table 27, approximately 78 percent (41 percent + 37 percent = 78 percent) of the residential bills will have usage billed at block 1 and 2 rates. Note, however, that these bills represent only about 71 percent (36 percent + 35 percent = 71 percent) of the use that will be charged in these same two blocks. This indicates that the highest use residential customers use a disproportionate amount of water and some of their usage will be charged at the highest rate block.

Table 28 indicates non-residential user characteristics for the AWC rate structure. For instance, about 85 percent of the bills are expected to occur in the first two rate blocks, which corresponds to about 81 percent of the total water use. In addition, the users billed in the third block use a disproportionately higher amount of water than those in the first two blocks. This is reflected by the lower percentage of bills relative to the usage percentage (15 percent of bills versus 19 percent of usage) in the third rate block (indicated by > 300 percent of AWC).

However, there is a lower percentage of non-residential users than residential customers in the third block because of the block variability characteristic of the AWC method. The AWC approach has block variability because it allows some flexibility in defining the level at which higher block rates are applied. As discussed previously, the three blocks of the AWC approach are specific for each customer, based on customer specific average and peak usage characteristics.

The AWC approach was chosen for non-residential customers because of the greater diversity in water use for non-residential customers when compared to residential customers. This created some concern with regard to implementing a fixed block rate structure for non-residential customers. The concern was that a fixed block rate could penalize high volume water users that have a relatively constant water use throughout the year, and might be unable to achieve very much more efficiency in water use, i.e., achieve reductions in water use.

| Table 29 | | | | |
|----------------------------|------------|------------|--|--|
| Seasonal Residential Usage | | | | |
| Average Average | | | | |
| Summer Winter | | | | |
| Inside City | <u>Use</u> | <u>Use</u> | | |
| Single-Family Residential | 32 ccf | 9 ccf | | |

The second step and a key analysis in the design of rates involved applying customer usage characteristics to achieve the needed revenues. For this step, RGA calculated the average summer and winter use for residential customers as shown in Table 29.



The average winter use of 9 ccf was used as the basis for setting the first rate block, and the average summer use (32 ccf) was used as the basis for setting the second rate block. However, because the goal of this structure was to achieve a reduction in summer/outdoor use, the 32 ccf usage threshold was reduced to a 29 ccf "target usage level"; an approximate 10 percent reduction.

| Table 30 Inside City Customer Usage by Rate Block | | | | |
|--|------------|------------------|-----------|------------|
| | | Annual | ccf Use | |
| Inside City | Block 1 | Block 2 | Block 3 | Total |
| Residential | 3,749,316 | 3,678,173 | 1,896,473 | 9,323,963 |
| Non-Residential | 8,376,067 | 3,916,544 | 1,053,511 | 13,346,123 |
| Irrigation | 0 | <u>1,418,347</u> | 0 | 1,418,347 |
| Total | 12,125,383 | 9,013,065 | 2,949,985 | 24,088,433 |

The estimated volume for each rate block is illustrated in Table 30 for the Inside City customer classes. Using the consumption percentages shown in Tables 28 and 27, the projected usage for FY 2002-03 was

distributed into the three rate blocks established under the recommended rate approach for each of the primary customer classes – Residential, Non-Residential, and Irrigation. This was done for both the Inside City and Outside City customer classes. Table 31 shows the same distribution of usage for the Outside City

Table 31 customer classes.

| Table 31 Outside City Customer Usage by Rate Block | | | | |
|--|-----------|-----------|-----------|--------------|
| Annual ccf Use | | | | |
| Inside City | Block 1 | Block 2 | Block 3 | <u>Total</u> |
| Residential | 2,182,428 | 2,699,831 | 2,406,644 | 7,288,903 |
| Non-Residential | 1,539,752 | 806,232 | 443,674 | 2,789,658 |
| Irrigation | 0 | 365,567 | 0 | 365,567 |
| Total | 3,722,180 | 3,871,630 | 2,850,318 | 10,444,128 |

In order to allow for conservation and still achieve needed revenue to meet financial obligations, approximately 8 percent to 10 percent less water use

was assumed for all customers as a result of the City's water conservation programs and this new tiered rate structure.

With this 10 percent water demand reduction, the annual revenue from rates is limited to a 3 percent increase based on customer billings using the current rate structure. Thus, if conservation does not reduce the total system water use by 10 percent or more, the proposed rates could result in more than a 3 percent increase in revenue from the current rate level. As such, this new rate structure and its ability to achieve the desired revenue should be reviewed after the rates have been

in effect for approximately two summer seasons.

| Table 32 Inside City Customer Volume Rates | | | |
|--|----------------|------------------|--------------|
| <u>Blocks</u> | Usage (ccf) | Rate (\$/ccf) | Revenue |
| 1 2 | 12,125,383 | \$0.72 | \$ 8,730,276 |
| | 9,013,065 | \$1.10 | 9,914,371 |
| 3 | 2,949,985 | \$1.53 | 4,513,476 |
| Total | 24,088,433 | | \$23,158,123 |

The total estimated usage in each block is multiplied times the rate (\$/ccf) to obtain the amount of expected revenue. The development of the rates for Inside City customers is illustrated in Table 32.

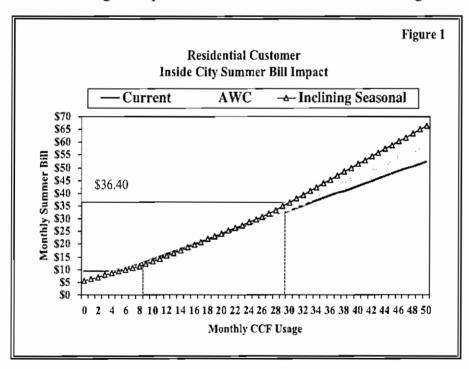


The rate calculations for the Outside City customers are shown in Table 33. As

| Table 33 Calculation of Outside City Volume Rates | | | | |
|---|---|--------|--------------|----------|
| - | Inside City Outside/Inside Outside City | | | • |
| Rate | Rate | Multip | <u>olier</u> | Rate |
| (\$/ccf) | | | | (\$/ccf) |
| \$0.72 | х | 1.35 | = | \$0.97 |
| \$1.10 | х | 1.35 | = | \$1.49 |
| \$1.53 | х_ | 1.35 | = | \$2.07_ |

discussed in Section III, the cost-of-service process resulted in the determination that it costs 1.35 times the amount to serve Outside City customers than Inside City customers. The basis for this, as discussed, is the higher peaking characteristics of Outside City customers, and the costs associated with serving a population that is not governed and managed by the City.

The rationale for setting the rate level, or price, for each rate block is illustrated in Figure 1. As shown, there are three different rate structures compared in Figure 1: the current uniform seasonal rates, AWC rates, and the proposed inclining block rates. The objective of the rate making process was to set rates so there was a greater price incentive to conserve water at a usage amount that exceeds the



typical use by singlefamily residential customers. This price incentive is illustrated by the rise in the line for the inclining block rate at approximately 29 ccf use per monthly billing period. Note that of the three rate structures shown, the inclining block structure has characteristics that provide for a more rapid increase in the monthly bill after the second block usage is exceeded at 29 ccf.

For instance, locating

30 ccf usage on the line for the inclining block rate indicates a monthly bill of about \$36 per month. The current uniform rate structure is represented by a straight line, whereas the AWC structure characteristics provide for a slightly increasing monthly bill after the second rate block usage is exceeded. The ability to create a stronger price incentive to conserve water is demonstrated by the inclining block rate structure, and is one of the reasons the WRS selected this approach for residential customers.



Another consideration in developing the rates was the customer bill impacts that could occur when new rates are implemented. Figure 1 illustrates monthly bills at varying levels of water use. This information was used for rate design purposes. Additional customer bill impacts are discussed in the next section.

D. Customer Bill Impacts

The purpose of performing an analysis of customer bill impacts is to compare one rate structure to another. To complete this illustration the rates shown in Table 33 were applied to actual historic customer billing data for FY 2001-02 to compare with bills using the current rates, including the approved 3 percent increase for FY 2003-04. This comparison involved obtaining historic monthly usage from billing records for customers and "re-billing" their usage with calculated or proposed rates and comparing the resulting monthly bills to bills derived using the current rates adjusted for a 3 percent increase.

Based on the calculations completed for the three primary rate classes — Residential, Non-Residential, and Irrigation — the percentage of bills that would increase, decrease, and stay the same when compared to the current rate structure (plus 3 percent) were compiled and are summarized in Table 33. Inside City and Outside City impacts are shown in the first column for the Residential class using the proposed Inclining Block/Uniform rate structure. When compared to the current rates, this table indicates that 55 percent of the residential customer bills for Inside City customers would be higher than if billed under the current rates with a 3 percent rate increase applied. For Outside City customers, approximately 58 percent of the Residential bills would reflect an increase when compared to bills under the current rates.

| Alternati | Table Customer B ve Rate Structures (| | nt Rates |
|-------------------|---|-----------------|-------------------|
| | Residential | AWC Non-Re | <u>sidential</u> |
| <u>Customer</u> | IB/Uniform (1) | Non-Residential | <u>lrrigation</u> |
| Inside City | | | |
| Increase | 55% | 34% | 17% |
| No Change | 20% | 3% | 1% |
| Decrease | 25% | 63% | 82% |
| Outside City | | | |
| Increase | 58% | 42% | 55% |
| No Change | 16% | 6% | 1% |
| Decrease | 26% | 52% | 44% |
| (1) IB = Inclinit | ng Block | | |

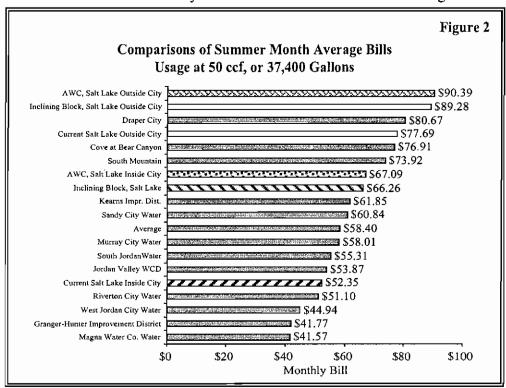
Similarly, 34 percent of Non-Residential bills for Inside City customers would reflect an increase under the AWC rates when compared to bills under the current rates. For Outside City customers, 42 percent of the bills would reflect an increase when compared to the bills under the current rates.

In comparing the Salt Lake City proposed rates with other cities, Figure 2 shows



that the City's summer monthly bill for the recommended inclining block rates (for residential customers) would be among the highest for a high use customer, i.e., a customer using 50 ccf. Implementing the inclining block structure would increase the bill for Inside City customers, at this relatively high usage level of 50 ccf, to where it would be higher than the average of the water utilities shown.

Notice that the AWC rates and inclining block rates are nearly the same for inside and outside city customers. This is because the average use assumptions are the



same and are set to coincide with the indoor use and outdoor use levels the inclining block rates are targeted to address.



V. IMPACT FEES

Impact fees are assessed as new service connections are made to the water system or for existing connections that expand their demand for service. The resulting revenues are used to fund additional water supply and delivery facilities. This section of the report provides the assumptions and methodology used to calculate water impact fees.

A. Methodology and Fee Development

The costs associated with projects and portions of projects that are intended to serve new customers form the basis for the impact fee calculations. The steps in developing impact fees are as follows:

- 1) Forecast new growth for each customer class served by the water department.
- 2) Identify the projects and portions of projects in the capital improvement plan that will serve new customers, and allocate the costs of projects to existing and new customers according to their water use characteristics (water demand).
- 3) Calculate the costs associated with the existing system surplus capacity that will service new customers and allocate these costs to the new customers.
- 4) Calculate the impact fees for each customer class on an equivalent water demand basis; this common denominator is referred to as an equivalent residential unit (ERU) and involves using the average daily demand (ADD) for a residential customer with a 3/4-inch meter and service line.

Impact fee revenues are dedicated to the funding of facilities for new customers, and therefore require separate accounting to track cash inflows and outflows. To accomplish this a cash flow statement is developed as a final step to the impact fee development process to evaluate the ability of impact fees to fund the capital improvement projects targeted for use by new customers.

The development of the impact fees through the four step process described above is provided in the following subsections.

New Water Connections Forecast

Salt Lake City and County is continuing to grow, although at different rates in different geographical locations. The Department has considered different growth rates in different areas of Salt Lake City into its projection of new customer water connections.



The 2000 census data was used as a basis from which to forecast new water users, and the Department made adjustments to the forecast according to a more detailed evaluation of growth in Salt Lake City. Therefore, a combination of forecasts involving the 2000 census data, state projections⁴ for employment growth, and the Department's guidance on growth within its service area were used to develop the forecast for new water users. Using population forecasts and projections of employment growth in conjunction with the actual number and sizes of meters currently connected to the system, RGA developed a forecast of future connections by meter size. Connections by meter size is important for projecting

| | Table 35 | |
|----------------------|--------------------|--------------|
| Forecast of N | ew Water Conn | ections |
| | FY 2003 thr | ough FY 2011 |
| Customer Class | Inside City | Outside City |
| Residential | 3,488 | 1,847 |
| Commercial | 1,713 | 172 |
| Industrial | 42 | 0 |
| Municipal/Irrigation | 89 | 0 |
| All Other | <u>168</u> | <u>63</u> |
| Total | 5,500 | 2,082 |

the equivalent number of new metered connections to the system for the calculation of the impact fee revenues for the cash flow statement in Section II. The annual new accounts are shown in Appendix C, page C-14. The estimated number of new connections by current customer classes is shown in Table 35.

Capital Improvement Expenditures

The capital improvement plan consists of capital outlays for new water supply facilities, including water and water rights. Table 36 shows the total amounts planned for the major categories. The amounts shown for growth-related projects are distributed over the ten-year planning period on page C-5 in Appendix C. The Department made an assessment of the proportion of each project that will serve existing connections and new water connections. The amounts for each are shown in the table on page C-5. For the total CIP outlay of about \$213 million, about \$23.5 million of it is expected to be necessary to support new water users. The balance, \$189.5 million will be funded through the previously described user rates, debt, or a combination of the two.

The amounts shown in Table 36 are in year 2003 dollars, therefore, inflation will increase the expenditures for projects as they are completed in later years. These values represent a summary of the Department's capital improvement program as provided to RGA.

⁴ 2002 Baseline Projections, Governor's Office of Planning and Budget, UPED Model System.



System Capacity for New Water Users

The CIP expenditures are expected to add another 15 mgd of capacity to the existing system, which is expected to be partially used by the new users connected to the water system during the 2003 to 2012 planning period. The new capacity additions include the Mill Creek Treatment plant, City Creek Treatment Plant upgrade, and several new deep water wells. Other additions involve increasing the capacity of pipes and general delivery system components to deliver water to new water users. The costs of these projects are included in the table on page C-5 in Appendix C.

Calculation of Impact Fees

The calculation of the impact fees involves using the costs associated with all

| Table 3 | 36 | |
|-----------------------------------|----------------|---------------|
| Capital Improvement P | lan Cost Summa | ry |
| | Total | Allocated to |
| <u>Category</u> | <u>Amount</u> | Growth |
| Treatment Plants | \$45,942,498 | 19.4% |
| Water Service Connections | 25,575,103 | 0.0% |
| Water Rights & Supply | 10,300,000 | 0.0% |
| Water Main Replacements | 68,284,637 | 7.6% |
| Water Main Miscellaneous Projects | 11,500,000 | 0.0% |
| Storage Reservoirs | 171,526 | 0.0% |
| Pumping Plants And Pump Houses | 4,134,000 | 21.6% |
| Maintenance & Repair Shops | 3,680,625 | 4.1% |
| Landscaping | 530,000 | 0.0% |
| Land | 4,000,000 | 0.0% |
| Distribution Reservoirs | 20,365,557 | 5.0% |
| Distribution Mains & Hydrants | 4,229,916 | 0.0% |
| Deep Pump Wells | 13,693,000 | 54.0% |
| Culverts Flumes & Bridges | 571,000 | 0.0% |
| Total Capital Improvements | \$212,977,862 | 11.0% |
| Growth Amount | | \$23,560,000 |

system components developed for the purpose of serving new water users, including the costs of new capacity. These costs include the CIP costs shown in Table 36, and in addition, financing costs associated with issuing debt to fund the projects until additional impact fee revenues are received. The schedules used to support the calculation are shown in Appendix C, pages C-4 through C-14.

B. Summary of Proposed Impact Fees

The proposed impact fees are shown in Table 37. All fees are calculated based on the equivalent meter flow capacity as indicated on page C-11 of Appendix C.



| Table 37 |
|--------------------------|
| Impact Fees |
| Proposed Charge Schedule |

| | | Proposed | | | Current | |
|---------------------------|---------------|----------|-----------|---------------|----------|-----------|
| Per Unit or | Water | Water | | Water | Water | |
| <u>bv Meter Size</u> | System | Resource | Total Fee | <u>System</u> | Resource | Total Fee |
| | (1) | (2) | (5) | (1) | (2) | (5) |
| Single-Family Residential | | | | | | |
| 5/8" x 3/4" | \$ 1,506 | \$ 210 | \$ 1,716 | \$ 784 | \$ 97 | \$ 881 |
| 3/4" | 1,506 | 210 | 1,716 | 784 | 97 | 881 |
| 1" | 2,510 | 515 | 3,025 | 1,307 | 200 | 1,507 |
| 1 1/2" | 5,020 | 1,241 | 6,261 | 2,613 | 495 | 3,108 |
| Non-SFR (3) | | | | | | |
| Duplex | \$ 924 | \$ 142 | \$ 1,066 | \$ 930 | \$ 130 | \$1,060 |
| Triplex | 619 | 106 | 725 | 996 | 156 | 1,152 |
| Fourplex | 663 | 117 | 780 | 1,228 | 204 | 1,432 |
| Commercial/Industrial | | | | | | |
| 5/8" x 3/4" | \$ 1,506 | \$ 328 | \$ 1,834 | \$ 784 | \$ 140 | \$ 924 |
| 3/4" | 1,506 | 328 | 1,834 | 784 | 140 | 924 |
| 1" | 2,510 | 1,004 | 3,514 | 1,307 | 438 | 1,745 |
| 1 1/2" | 5,020 | 1,938 | 6,958 | 2,613 | 728 | 3,341 |
| 2" | 8,032 | 2,772 | 10,804 | 4,181 | 875 | 5,056 |
| 3" | 16,064 | 5,659 | 21,723 | 8,363 | 2,130 | 10,493 |
| 4" | 25,100 | (4) | 25,100 | 13,067 | | |
| 6" | 50,200 | (4) | 50,200 | 26,133 | | |
| 8" | 80,320 | (4) | 80,320 | 41,813 | | |
| 10" | 115,460 | (4) | 115,460 | 60,107 | | |

- (1) Charge based on ratio of meter size flow capacity to 3/4" meter flow capacity. Department is no longer issuing 5/8" x 3/4" services.
- (2) Charge based on ratio to Equivalent Residential Unit (ERU) summer gpd.
- (3) Defined as 1 connection serving 5 or more living units.
- (4) For meters 4" and larger, the Water Resource Fee would be determined through the City's special assessment process detailed in the City Code.
- (5) Water System Fee would be the same for Inside City and Outside City eonnections. The water resource fee for service outside the City would be 1.35 times the Inside City fee; Outside City fees are currently 1.5 times greater.

The cashflow projection for the Impact Fee Subfund is summarized in Table 12 of Section II, and in detail in Appendix A, page A-7. In order to be self-sustaining, the current impact fees are estimated to need to be increased 2 percent each year in the current planning period. The proposed impact fees are not represented in the cash flow projection because there has been no action taken to proceed with implementing new impact fees.



Appendix A

Financial Analysis

CLIENT: SALT LAKE CITY WATER UTILITIES PROJECT: WATER RATE STUDY FILE: SLC_WaterCF.xls

FILE: SLC_WaterCF.xls SCHEDULE: INPUT DATE: 09/02/03 RANGE: INPUT1

FY 2003-04 2004 1. Base Year - Fiscal Year (July 1)

| 2. Escalation / Inflation Factors | BUDGET | ESTIMATE | ESTIMATE PROJECTED | | | | | | | |
|---|------------|-------------|----------------------|-------------|-------------|---------------|-------------|----------------------|-------------|-------------|
| _ | FY 2002-03 | FY 2003-04 | FY 2004-05 | FY 2005-06 | FY 2006-07 | FY 2007-08 | FY 2008-09 | FY 2009-10 | FY 2010-11 | FY 2011-12 |
| a. General Growth/Inflation Factors | | | 1 | | | | | | | |
| General Factor (CPI) | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% |
| Construction Project Cost Inflator | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | | 2.50% |
| Operating Expenditure Inflation | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | | 2.50% |
| Water Conservation Program | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% | 2.50% |
| Metropolitan Water Assessment | 0.00% | 0.00% | 0.00% | 100.00% | 0.00% | %00° 0 | 0.00% | 0.00% | %00.0 | %00.0 |
| 3. Special Cost Inputs | | | | | | | | | | |
| Metropolitan Water Rate (\$/af) | \$150 | \$150 | \$150 | \$150 | \$175 | \$300 | \$300 | \$300 | \$300 | \$300 |
| Metropolitan Water purchases in acre feet | 45,550 | 46,000 | 46,500 | 47,000 | 47,500 | 48,000 | 49,000 | 50,000 | 51,000 | 52,000 |
| Property Tax Elimination from MWD [1] | | \$3,700,000 | \$3,792,500 | \$3,887,313 | \$3,984,495 | \$4,084,108 | \$4,186,210 | \$4,290,866 | \$4,398,137 | \$4,508,091 |
| Property Tax Elimination from CUWCD [1] | | \$7,670,000 | \$7,861,750 | \$8,058,294 | \$8,259,751 | \$8,466,245 | \$8,677,901 | \$8,894,849 | \$9,117,220 | \$9,345,150 |
| Discounted Water Elimination from CUWCD [1] | Ξ | | | \$1,500,000 | \$1,537,500 | \$1,575,938 | \$1,615,336 | \$1,655,719 | \$1,697,112 | \$1,739,540 |
| 4. Impact Fee Increase Factors | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% |
| 5. Interest Earnings on Cash Balance | 2.00% | 3.50% | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% | 4.00% |
| 6. Bond Issuance Parameters Issuance Cost Factor, @1% Term, Years Interest Rate, Annual | - | 20 5.50% | 20 5.50% | 20 5.50% | 20 5.50% | 20 5.50% | 20 5.50% | 20 5. 50 % | 20 5.50% | 20 5.50% |
| | | | | | | | | | | |
| 7. Growth Rate w/Conservation | 0.0% | 0.7% | 0.7% | 0.7% | 0.7% | 0.7% | %2'0 | 0.7% | 0.7% | 0.7% |
| | | | | | | | | | | |

[1] Additional Revenue needed due to elimination of property taxes for water systems.

CLIENT: SALT LAKE CITY WATER UTILITIES

PROJECT: WATER RATE STUDY FILE: SLC_WaterCF.xls

FILE: SLC_WaterCF.xls SCHEDULE: INPUT

DATE: 09/02/03

RANGE: INPUT2

| 7. Current Impact Fees | | | | | | | |
|---------------------------|------------|----------|----------|------------|-----------|-----------|----------|
| | | Water | Water | Water | | | |
| | | System | Resource | Resource | Total Fee | Total Fee | Weighted |
| Single-Family Residential | Meter Size | Fee | Fee City | Fee County | | County | Average |
| | 3/4" | \$784 | 26\$ | \$145 | | \$929 | \$894.18 |
| | 1, | \$1,307 | \$200 | \$298 | | \$1,605 | |
| | 11/2" | \$2,613 | \$495 | \$738 | \$3,108 | \$3,351 | |
| Multi-Family Residential | | | | | | | |
| Duplex | | \$930 | \$130 | \$130 | \$1,060 | \$1,060 | |
| Triplex | | \$996 | \$156 | \$156 | \$1,152 | \$1,152 | |
| Fourplex | | \$1,228 | \$204 | \$204 | \$1,432 | \$1,432 | |
| Average [2] | | | | | \$1,215 | \$1,215 | |
| Commercial | 3/4" | \$784 | \$140 | \$140 | \$924 | \$924 | |
| | -1- | \$1,307 | \$438 | \$438 | \$1,745 | \$1,745 | |
| | 1112" | \$2,613 | \$728 | \$728 | \$3,341 | \$3,341 | |
| | 2" | \$4,181 | \$875 | \$875 | \$5,056 | \$5,056 | |
| | 3, | \$8,363 | \$2,130 | \$2,130 | \$10,493 | \$10,493 | |
| | *4 | \$13,067 | [2] | <u>6</u> | | | |
| | 9 | \$26,133 | [3] | <u>6</u> | | | |
| | <u>*</u> 0 | \$41,813 | [3] | [6] | | | |
| | 10" | \$60,107 | ල | [3] | | | |

^[2] Average used for revenue forecast.[3] See special assessment process in City Code.

CLIENT: SALT LAKE CITY WATER UTILITIES PROJECT: WATER RATE STUDY

FILE: SLC_WaterCF.xls SCHEDULE: INPUT

DATE: 09/02/03 RANGE: INPUT3

FILE: SLC_WaterCF.xls

8. Current User Fees

| City 3/4" 11.5" 1.5" 2.7 3.8 6.7 1.6 1.7 1.5 2.7 3.4 1.5 2.7 3.8 4.7 1.5 6.8 8.8 1.0 1.0 1.0 1.0 1.0 1.0 | | | Customer | Uniform Rate \$/ccf [5] | te \$/ccf [5] |
|---|--------------|------------------|----------|-------------------------|---------------|
| 3/4" \$8.40 \$0.61 1" \$8.40 1.5" \$23.94 2" \$35.67 3" \$71.12 4" \$109.49 6" \$233.49 8" \$496.08 10" \$496.08 11.5" \$35.76 2" \$63.36 3" \$106.53 4" \$12.47 1.5" \$35.08 6" \$552.60 10" \$743.95 | Class | Meter Size | Fee [4] | Winter | Summer |
| 1.5" \$8.40 1.5" \$23.94 2" \$35.67 3" \$71.12 4" \$109.49 6" \$233.49 8" \$233.49 6" \$233.49 10" \$496.08 11" \$496.08 11.5" \$12.47 1.5" \$12.47 1.5" \$106.53 4" \$116.07 6" \$350.08 8" \$522.60 10" \$743.95 | Inside City | 3/4" | \$8.40 | \$0.61 | \$0.93 |
| 1.5" \$23.94 2" \$35.67 3" \$71.12 4" \$109.49 6" \$233.49 8" \$348.49 10" \$496.08 11" \$12.47 1.5" \$12.47 2" \$63.36 2" \$63.36 3" \$16.53 4" \$16.53 6" \$350.08 8" \$522.60 10" \$743.95 | | - | \$8.40 | | - |
| 2" \$35.67 3" \$71.12 4" \$109.49 6" \$233.49 8" \$348.49 10" \$496.08 11" \$12.47 1.5" \$12.47 1.5" \$63.36 2" \$63.36 3" \$164.07 6" \$350.08 8" \$522.60 10" \$743.95 | | 1.5" | \$23.94 | | |
| 3," \$71.12 4" \$109.49 6" \$233.49 8" \$348.49 10" \$496.08 3/4" \$12.47 1.5" \$12.47 \$12.47 \$12.47 \$12.47 \$12.47 \$12.47 \$12.47 \$1.5" \$63.36 2" \$63.36 3" \$166.53 4" \$164.07 6" \$350.08 8" \$522.60 10" \$743.95 | | 2," | \$35.67 | | |
| 4" \$109.49 6" \$233.49 8" \$348.49 10" \$496.08 11" \$12.47 1.5" \$12.47 2" \$63.36 3" \$106.53 4" \$164.07 6" \$522.60 10" \$743.95 | | ઌૼ | \$71.12 | | |
| 6" \$233.49 8" \$348.49 10" \$496.08 3/4" \$12.47 1.5" \$12.47 2" \$63.36 3" \$106.53 4" \$164.07 6" \$350.08 8" \$522.60 10" \$743.95 | | 4" | \$109.49 | | |
| 8" \$348.49 10" \$496.08 3/4" \$12.47 1" \$12.47 1.5" \$35.76 2" \$63.36 3" \$106.53 4" \$164.07 6" \$350.08 8" \$522.60 10" \$743.95 | | 9 | \$233.49 | | |
| 10" \$496.08 3/4" \$12.47 \$0.90 1" \$12.47 \$0.90 2" \$35.76 \$63.36 2" \$63.36 \$106.53 4" \$164.07 \$164.07 6" \$350.08 8" \$522.60 10" \$743.95 | | 8 | \$348.49 | | |
| 3/4" \$12.47 \$0.90 1" \$12.47 1.5" \$35.76 2" \$63.36 3" \$106.53 4" \$164.07 6" \$350.08 8" \$522.60 10" \$743.95 | | 10" | \$496.08 | | |
| | Outside City | 3/4" | \$12.47 | \$0.90 | \$1.39 |
| | | - | \$12.47 | | |
| | | 1.5" | \$35.76 | | |
| | | 2" | \$63.36 | | |
| | | ų. | \$106.53 | | |
| | | . ₁ 4 | \$164.07 | | |
| | | .'9 | \$350.08 | | |
| | | <u>.</u> 89 | \$522.60 | | |
| | | 10" | \$743.95 | | |

[4] Includes first 5 ccf. [5] Applies to use over 5 ccf.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY DECISION CRITERIA Base Case

FILE: SLC_WaterCF.xls SCHEDULE: DECSN DATE: 09/02/03 RANGE: DECISIONS

| | * 100 | | and learn | | | | | | | |
|--|---------------|--------------|--------------|--------------|---------------|------------------|---------------|---------------|------------------|-------------------|
| DESCRIPTION | FY 2002-03 | | FY 2004-05 | FY 2005-06 | FY 2006-07 | FY 2007-08 | FY 2008-09 | FY 2009-10 | FY 2010-11 | FY 2011-12 |
| 1919 | | | | | | | | | | |
| Water Revenue Adjustments [1] | 4.0% | 3.0% | 10.0% | 5.0% | \$.0% | 7.0% | 10.0% | 5.0% | 3.0% | 3,0% |
| Impact Fee Adjustments [1] | %0.0 | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2,0% | 2.0% | 2.0% | 3,0% |
| Effective month of increase [1 = July 1] | - | - | - | - | - | • | - | - | • | • |
| Bond Proceeds [2] | | i | ; | ; | : | | | | 1 | |
| Operations Subfund Impact Fee Subfund | g ° | g ° | ၀္ ဝ | တ္က ထ | g = | 5,250,000 | ₽° | 3,250,000 | g, ° | \$18,000,000 0 |
| Total Fund | · | ⇔ | 69 | · · | \$ | \$ 29,250,000 \$ | · | \$ 35,250,000 | \$ | 18,000,000 |
| Year End Cash Balance | | | | | | | | | | |
| Operations | 16,578,522 | 4,352,873 | 3,621,829 | 7,472,612 | 11,752,244 | 25,802,091 | 6,138,644 | 26,159,579 | 12,506,967 | 8,902,052 |
| Impact Fee | 953,237 | (1,361,463) | (58.102) | 1,695,913 | 3,102,627 | 7,382,587 | 150,503 | 2,768,817 | 2,065,224 | 26,090 |
| Total Fund | \$ 17,531,759 | \$ 2,991,410 | \$ 3,563,727 | \$ 9,188,725 | \$ 14,855,071 | \$ 33,164,678 \$ | 6,289,147 | \$ 28,928,397 | \$ 14,572,190 \$ | 8,928,142 |
| Cash Reserve Ratio (Tamet: 10%-20%) [3] | 20.4% | 13.6% | 10.6% | 95.00 | 20.3% | 55 1% | 10 9% | 53.7% | 25.1% | 17.5% |
| Debt Service Coverage Ratio (Target: 2.0x) [4] | 2,51 | 2.58 | 2.94 | 4.77 | 5.22 | 4.28 | 3.35 | | 2.55 | 2.66 |
| | | • | • | • | • | | | • | ! | į |
| Average Residential Bill | 4694 | 9500 | 2654 | 24 | 35 | 4460 | 2003 | £53 | 409 | 450% |
| Average cci per account, all Residential | 264 | 264 | 264 | 264 | 284 | 26 4 | 264 | 264 | 7 8 | 564 |
| Cumulative Debt Issued | 20 | \$0 | 0\$ | 8 | 20 | \$29,250,000 | \$29,250,000 | \$64,500,000 | \$64,500,000 | \$82,500,000 |
| Cumulative % of CIP Funded by Debt | 0.0% | 0.0% | 0.0% | 0.0% | 90.0% | 38.1% | 24.9% | 44.4% | 37.1% | 38,7% |
| CIP Annual Amount | \$12,806,225 | \$22,007,831 | \$9,410,461 | \$5,556,000 | \$6,020,000 | \$20,903,750 | \$40,732,875 | \$27,635,000 | \$28,790,000 | \$38,915,720 |
| Cumulative CIP Amount | \$12,806,225 | 534,814,056 | \$44,224,517 | \$49,780,517 | \$55,600,517 | \$78,704,287 | \$117,437,142 | \$145,272,142 | \$174,062,142 | \$212,977,862 |

[1] Input the desired percentage increase in revenues.
[2] Input the bond or loan amount needed,
[3] Cash Reserved for Operations divided by subtotal for Operating Expenditures
[4] Net Operating Income divided by total Debt Service.

SALT LAKE CITY WATER UTILITIES
WATER RATE STUDY
CASH FLOW PROJECTION
Total Fund, Base Case

FILE: SLC_WaterCF.xls

SCHEDULE: TOTAL_CF DATE: 09/02/03 RANGE: TOT_CF

2.66 28,**2**70,676 50,892,568 5,505,803 582,888 72,468,303 18,000,000 (5,644,048)\$8,928,142 905,000 500,000 14,572,190 \$6,000,000 FY 2011-12 21,009,948 2,620,352 \$69,718,538 2,166,878 7,021,892 15,600,000 21,575,735 2,104,948 38,415,720 1,157,136 7,021,892 27,447,258 49,769,150 2,036,224 (14,356,206)\$14,572,190 \$8,572,190 FY 2010-11 \$67,206,563 2,166,878 500,000 2,620,352 \$6,000,000 2,941,224 1,142,703 28,290,000 5,505,803 38,058,858 28,928,397 20,761,427 12.3% 3.62 FY 2007-08 FY 2008-09 FY 2009-10 251,566 67,203,540 7,021,892 26,647,823 48,669,715 2,060,441 \$6,289,147 \$28,928,397 35,250,000 38,215,441 \$6,000,000 1,157,846 27,335,000 500,000 2,496,818 34,110,016 22,639,250 \$64,785,096 2,166,878 2,620,352 6,289,147 \$22,928,397 18,533,824 12.6% 3.35 (26,875,531) 1,326,587 7,021,892 25,871,673 47,593,565 2,021,560 905,000 \$61,261,334 2,926,560 33,164,678 \$289,147 \$6,000,000 1,113,280 40,232,875 500,000 2,620,352 2,496,818 2,166,878 17,161,234 46,963,325 PROJECTED 25,423,414 46,845,306 7,021,892 1,900,847 29,250,000 32,055,847 \$55,296,088 594,203 18,309,607 \$33,164,678 \$27,164,678 2,166,878 58,057,169 11,211,863 1,434,000 20,403,750 500,000 2,620,352 24,958,102 14,855,071 \$6,000,000 14.9% 5.22 366,749 7,021,892 8,312,500 1,839,077 905,000 \$8,855,071 \$6,000,000 \$51,311,094 40,169,100 500,000 5,686,346 9,168,725 \$14,855,071 2,166,878 13,675,621 2,093,000 5,520,000 2,620,352 10,733,352 24,834,708 2,744,077 FY 2006-07 15.7% 5,604,998 3,563,727 4.77 142,549 50,829,631 7,021,892 7,050,000 24,264,128 38,336,020 1,756,339 905,000 \$9,168,725 \$6,000,000 FY 2004-05 FY 2005-06 500,000 \$3,168,725 2,166,878 5,056,000 2,620,352 9,549,952 \$48,520,204 2,661,339 1,373,600 12,493,611 10.4% 2,94 3,510,946 6,975,000 23,710,343 34,196,289 1,366,819 905,000 င္တ \$45,881,114 2,126,425 48,127,196 2,271,819 1,482,200 250,000 4,737,748 15,630,409 572,317 2,991,410 \$3,563,727 \$3,563,727 119,656 13,930,907 9,160,461 2.58 9.3% FY 2003-04 800,000 23,037,237 32,087,237 12,252,686 500,000 905,000 (14,540,349)\$2,991,410 2,126,425 0 250,000 င္အ \$2,991,410 \$41,413,498 9,050,000 1,447,500 4,742,704 28,198,035 17,531,759 1,405,000 21,757,831 BUDGET 20.4% 2.51 FY 2002-03 850,000 41,156,020 (5,967,350)\$38,257,000 250,000 905,000 \$6,000,000 0 11,759,400 18,881,750 \$17,531,759 2,049,020 8,325,000 21,071,620 29,396,620 1,155,000 1,393,750 4,681,775 23,499,109 \$11,531,759 12,806,225 Debt Service Coverage Ratio (Target: 2.0x) [4] Cash Reserve Ratio (Target: 10%-20%) [3] Increase (Decrease) in Cash Balance Beginning of Year Cash Balance Metropolitan Water Assessment Cash Reserved for Operations **OPERATING EXPENDITURES** Metropolitan Water Purchases End of Year Cash Balance **NET OPERATING INCOME** Debt Service - Existing [2] OPERATING REVENUES OTHER EXPENDITURES OTHER CASH INFLOWS Operating Expenditures Cash Reserved for CIP Watershed Purchases Capital Improvements Other Contributions Debt Service - New Interest Income [1] Bond Proceeds Capital Outlays DESCRIPTION Other Income Water Sales Impact Fees Subtotal Subtotal Subtotat Subtotal

[1] Interest Income is calculated beginning in FY 2004-05.

[2] Scheduled debt based on Report of Independent Accountants on Financial

Statements and Supplemental Information for the year ended June 30, 2001.

[3] Cash Reserved for Operations divided by subtotal for Operating Expenditures.
[4] Net Operating Income divided by total Debt Service.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY CASH FLOW PROJECTION
Operations Subfund, Base Case

FILE: SLC_WaterCF.xls SCHEDULE: WATER_CF DATE: 09/02/03 RANGE: OPS_CF

| | RIDGET | ESTIMATE | | | | PROJECTED | CTED | | | |
|---|---------------|--------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| DESCRIPTION | FY 2002-03 | FY 2003-04 | FY 2004-05 | FY 2005-06 | FY 2006-07 | FY 2007-08 | FY 2008-09 | FY 2009-10 | FY 2010-11 | FY 2011-12 |
| OPERATING REVENUES | | | | | | | | | | |
| Water Sales | \$38,257,000 | \$41,413,498 | \$45,881,114 | \$48,520,204 | \$51,311,094 | \$55,296,088 | \$61,261,334 | \$64,785,096 | \$67,206,563 | \$69,718,538 |
| Other Income | 2,049,020 | 2,126,425 | 2,126,425 | 2,166,878 | 2,166,878 | 2,166,878 | 2,166,878 | 2,166,878 | 2,166,878 | 2,166,878 |
| Interest Income [1] | 850,000 | 750,000 | 174,115 | 144,873 | 298,912 | 470,090 | 1,032,084 | 245,546 | 1,046,383 | 500,279 |
| Subtotal | 41,156,020 | 44,289,923 | 48,181,654 | 50,831,955 | 53,776,884 | 57,933,055 | 64,460,295 | 67,197,519 | 70,419,824 | 72,385,694 |
| OPERATING EXPENDITURES | | | 6 | 6 | 50 | 900 | 200 | 000 | 900 | 700 |
| Metropolitan Water Assessment | | | 3,510,946 | 7,021,892 | 260,120,1 | 7,021,092 | 760,120,1 | 7,021,692 | 260,120,7 | 760,120,7 |
| Metropolitan Water Purchases | 8,325,000 | | 6,975,000 | 7,050,000 | 8,312,500 | 14,400,000 | 14,700,000 | 15,000,000 | 15,300,000 | 15,600,000 |
| Operating Expenditures | 21,071,620 | - 1 | 23,710,343 | 24,264,128 | 24,834,708 | 25,423,414 | 25,8/1,6/3 | 26,647,823 | 27,447,258 | 28,270,676 |
| Subtotal | 29,396,620 | 32,087,237 | 34,196,289 | 38,336,020 | 40,169,100 | 46,845,306 | 47,593,565 | 48,669,715 | 49,769,150 | 50,892,568 |
| NET OPERATING INCOME | 11,759,400 | 12,202,686 | 13,985,365 | 12,495,935 | 13,607,784 | 11,087,749 | 16,866,730 | 18,527,804 | 20,650,674 | 21,493,127 |
| OTHER CASH INFLOWS Other Contributions | 905.000 | 905.000 | 905.000 | 905,000 | 905.000 | 905.000 | 905,000 | 902,000 | 905,000 | 905,000 |
| Bond Proceeds | 0 | 0 | 0 | 0 | 0 | 24,000,000 | 0 | 32,000,000 | 0 | 18,000,000 |
| Subtotal | 905,000 | 905,000 | 905,000 | 905,000 | 905,000 | 24,905,000 | 905,000 | 32,905,000 | 905,000 | 18,905,000 |
| OTHER EXPENDITURES | 000 | | 000 | 000 | | 200 | 2,4 | 040 174 4 | 4 4 4 5 | 140 101 1 |
| Capital Outlays | 1,393,750 | 1,447,500 | 1,482,200 | 1,3/3,500 | 2,093,000 | 1,434,000 | 1,113,280 | 1,15/,845 | 1,142,703 | /69,/81,1 |
| Capital Improvements | 12,590,730 | 18,893,131 | 9,151,461 | 5,056,000 | 5,020,000 | 17,388,550 | 31,152,875 | 25,085,000 | 26,165,000 | 34,914,600 |
| Watershed Purchases | 0 | 250,000 | 250,000 | 200,000 | 200,000 | 000'009 | 200,000 | 000,000 | 200,000 | 000,000 |
| Debt Service - Existing [2] | 4,681,775 | 4,742,704 | 4,737,748 | 2,620,352 | 2,620,352 | 2,620,352 | 2,620,352 | 2,620,352 | 2,620,352 | 2,620,352 |
| Debt Service - New | 0 | 0 | 0 | 0 | 0 | 0 | 2,048,671 | 2,048,671 | 4,780,232 | 4,780,232 |
| Subtotal | 18,666,255 | 25,333,335 | 15,621,409 | 9,549,952 | 10,233,352 | 21,942,902 | 37,435,178 | 31,411,869 | 35,208,287 | 44,003,041 |
| Increase (Decrease) in Cash Balance | (6,001,855) | (6,001,855) (12,225,649) | (731,044) | 3,850,983 | 4,279,432 | 14,049,847 | (19,663,447) | 20,020,935 | (13,652,613) | (3,604,914) |
| Beginning of Year Cash Balance | 22,580,377 | 16,578,522 | 4,352,873 | 3,621,829 | 7,472,812 | 11,752,244 | 25,802,091 | 6,138,644 | 26,159,579 | 12,506,967 |
| End of Year Cash Balance | \$16.578.522 | \$4,352,873 | \$3,621,829 | \$7,472,812 | \$11,752,244 | \$25,802,091 | \$6,138,644 | \$26,159,579 | \$12,506,967 | \$8,902,052 |
| | | | | | | | | | | |
| Cash Reserve Ratio (Target: 10%-20%) Debt Service Ratio (Target: 2.0x) | 56.4% 2.51 | 13.6% | 10.6% 2.95 | 19.5% 4.77 | 29.3% 5.19 | 55.1% 4.23 | 12.9% 3.61 | 53.7% 3.97 | 25.1% 2.79 | 17.5% 2.90 |
| | | | | | | | | | | |

 ^[1] Interest Income is calculated beginning in FY 2004-05.
 [2] Scheduled debt based on Report of Independent Accountants on Financial Statements and Supplemental Information for the year ended June 30, 2001.

SALT LAKE CITY WATER UTILITIES
WATER RATE STUDY
CASH FLOW PROJECTION
Impact Fee Subfund, Base Case

FILE: SLC_WaterCF.xls SCHEDULE: IMPACT_CF DATE: 09/02/03 RANGE: IMPFEE_CF

| | BUDGET | ESTIMATE | | | | PRO. | PROJECTED | | | - |
|-------------------------------------|------------|-------------------------|-------------|------------------------------------|-----------------------|-------------|-----------------------|-------------|-------------|-------------|
| DESCRIPTION | FY 2002-03 | FY 2002-03 FY 2003-04 | FY 2004-05 | | FY 2005-06 FY 2006-07 | FY 2007-08 | FY 2007-08 FY 2008-09 | FY 2009-10 | FY 2010-11 | FY 2011-12 |
| REVENUES | | | | | | | | | | |
| Impact Fees | \$250,000 | \$500,000 | \$1,366,819 | \$1,756,339 | \$1,839,077 | \$1,900,847 | \$2,021,560 | \$2,060,441 | \$2,036,224 | \$2,104,948 |
| Interest Income [1] | 0 | 50,000 | (54,459) | (2,324) | 67,837 | 124,113 | 294,503 | 6,020 | 110,753 | 82,609 |
| Subtotal | 250,000 | 550,000 | 1,312,361 | 1,754,015 | 1,906,914 | 2,024,960 | 2,316,063 | 2,066,461 | 2,146,977 | 2,187,557 |
| OTHER CASH INFLOWS | | | | | | | | | | |
| Other Contributions | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Bond Proceeds | 0 | 0 | 0 | 0 | 0 | 5,250,000 | 0 | 3,250,000 | 0 | 0 |
| Subtotal | 0 | 0 | 0 | 0 | 0 | 5,250,000 | 0 | 3,250,000 | 0 | 0 |
| EXPENDITURES | | | | | | | | | | |
| Capital Improvements, Growth | 215,495 | 2,864,700 | 9,000 | 0 | 500,000 | 3,015,200 | 9,080,000 | 2,250,000 | 2,125,000 | 3,501,120 |
| Debt Service - Existing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Debt Service - New | 0 | 0 | 0 | 0 | 0 | 0 | 448,147 | 448,147 | 725,571 | 725,571 |
| Subtotal | 215,495 | 2,864,700 | 9,000 | 0 | 200,000 | 3,015,200 | 9,528,147 | 2,698,147 | 2,850,571 | 4,226,691 |
| Increase (Decrease) in Cash Balance | 34,505 | 34,505 (2,314,700) | 1,303,361 | 1,754,015 | 1,406,914 | 4,259,760 | (7,212,084) | 2,618,315 | (703,594) | (2,039,134) |
| Beginning of Year Cash Balance | 918,732 | 953,237 | (1,361,463) | (58,102) | 1,695,913 | 3,102,827 | 7,362,587 | 150,503 | 2,768,817 | 2,065,224 |
| End of Year Cash Balance | \$953.237 | \$953,237 (\$1,361,463) | (\$58,102) | (\$58,102) \$1,695,913 \$3,102,827 | \$3,102,827 | \$7,362,587 | \$150,503 | \$2,768,817 | \$2,065,224 | \$26,090 |

[1] Interest Income is calculated beginning in FY 2004-05.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY NEW DEBT, Base Case

FILE: SLC_WaterCF.xls SCHEDULE: NEWDEBT DATE: 09/02/03 RANGE: NDEBT

| | ESTIMATE | | | | PROJECTED | CTED | | | |
|--|------------|----------------|------------|------------|--------------|-------------|--------------|-------------|--------------|
| DESCRIPTION | FY 2003-04 | FY 2004-05 | FY 2005-06 | FY 2006-07 | FY 2007-08 | FY 2008-09 | FY 2009-10 | FY 2010-11 | FY 2011-12 |
| BOND SIZING | | | | | | | | | |
| Amount to be Funded | \$0 | \$0 | \$0 | \$0 | \$29,250,000 | \$0 | \$35,250,000 | \$0 | \$18,000,000 |
| Issuance Cost, 1% | 0 | 0 | 0 | 0 | 292,500 | 0 | 352,500 | 0 | 180,000 |
| Total Bond Size | 0\$ | \$0 | \$0 | \$0 | \$29,542,500 | \$0 | \$35,602,500 | \$0 | \$18,180,000 |
| DEBT SERVICE PAYMENT [1] | | | | | | | | | |
| Impact Fee Subfund | | | | | | | | | |
| FY 2003-04 Series | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| FY 2004-05 Series | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2005-06 Series | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2006-07 Series | | | | | 0 | 0 | 0 | 0 | 0 |
| FY 2007-08 Series | | | | | | 448,147 | 448,147 | 448,147 | 448,147 |
| FY 2008-09 Series | | | | | | | 0 | 0 | 0 |
| FY 2009-10 Series | | | | | | | | 277,424 | 277,424 |
| FY 2010-11 Series FY 2011-12 Series | | | | | | | | | 0 |
| Subtotal | 08 | 0\$ | 90 | 0\$ | 0\$ | \$448 147 | \$448 147 | \$725 571 | \$725 571 |
| | 3 | 3 | 2 | 2 | 3 | 10 | 0 | - 10,03 | 10,01 |
| Operations Subfund | | | | | | | | | |
| FY 2003-04 Series | | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| FY 2004-05 Series | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2005-06 Series | | | | 0 | 0 | 0 | 0 | 0 | 0 |
| FY 2006-07 Series | | | | | 0 | 0 | 0 | 0 | 0 |
| FY 2007-08 Series | | | | | | 2,048,671 | 2,048,671 | 2,048,671 | 2,048,671 |
| FY 2008-09 Series | | | | | | | 0 | 0 | 0 |
| FY 2009-10 Series | | | | | | | | 2,731,561 | 2,731,561 |
| FY 2010-11 Series | | | | | | | | | 0 |
| FY 2011-12 Series | | | | | | | | | |
| Subtotal | \$0 | \$0 | \$0 | \$0 | \$0 | \$2,048,671 | \$2,048,671 | \$4,780,232 | \$4,780,232 |
| Total Dobt Society | Ş | Ş | Ş | Ş | ç | 62 406 940 | 42 406 040 | 9F EOF 902 | 200 200 |
| I DIGIL DEDI SELVICE | 2 | Q Q | O¢. | Q. | O.C. | \$2,430,010 | \$2,430,018 | \$00,50c,c¢ | \$0,500,803 |

[1] Note that repayment begins 1-year after issuance.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY EXISTING DEBT

FILE: SLC_WaterCF.xls SCHEDULE: E_DEBT DATE: 09/02/03 RANGE: EDEBT

| DESCRIPTION | FY 2002-03 | FY 2003-04 | FY 2004-05 | FY 2002-03 FY 2003-04 FY 2004-05 FY 2005-06 FY 2006-07 FY 2007-08 FY 2008-09 FY 2009-10 FY 2010-11 FY 2011-12 | FY 2006-07 | FY 2007-08 | FY 2008-09 | FY 2009-10 | FY 2010-11 | FY 2011-12 |
|--------------------|-------------|-------------------------|-------------|---|-------------|-------------|-------------|------------|-------------------------|-------------|
| 1993 Series | | | | | | | | | | |
| Principal | \$2,087,450 | \$2,195,350 | \$2,307,400 | \$107,900 | \$107,900 | \$107,900 | \$107,900 | \$107,900 | \$107,900 | \$107,900 |
| Interest | 408,009 | 300,506 | 185,250 | 61,804 | 61,804 | 61,804 | 61,804 | 61,804 | 61,804 | 61,804 |
| Subtotal | 2,495,459 | 2,495,856 | 2,492,650 | 169,704 | 169,704 | 169,704 | 169,704 | 169,704 | 169,704 | 169,704 |
| 1994 Series | | | | | | | | | | |
| Principal | 595,000 | 625,000 | | | | | | | | |
| Interest | 6,498 | 33,750 | | | | | | | | |
| Subtotal | 601,498 | 658,750 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4007 Corios | | | | | | | | | | |
| Principal | 380,000 | 400.000 | 1.075.000 | 1.330.000 | 1.330.000 | 1,330,000 | 1,330,000 | 1.330 000 | 1 330 000 | 1 330 000 |
| Interest | 1,188,818 | 1,172,098 | 1,154,098 | 1,104,648 | 1,104,648 | 1,104,648 | 1,104,648 | 1,104,648 | 1,104,648 | 1,104,648 |
| Subtotal | 1,568,818 | 1,572,098 | 2,229,098 | 2,434,648 | 2,434,648 | 2,434,648 | 2,434,648 | 2,434,648 | 2,434,648 | 2,434,648 |
| Bond Note Expense | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 |
| Total Debt Service | \$4,681,775 | \$4,681,775 \$4,742,704 | \$4,737,748 | \$2,620,352 | \$2,620,352 | \$2,620,352 | \$2,620,352 | H | \$2,620,352 \$2,620,352 | \$2,620,352 |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY OPERATIONS AND MAINTENANCE EXPENSE

FILE: SLC_WPLAN.XLS
SCHEDULE: OM_EXP
DATE: 09/02/03
RANGE: OMEXP

| APPROPRIATION COST CENTER | ACTUAL FY 2001-2002 | REQUESTED FY 2002-2003 | PROJECTED FY 2003-2004 |
|----------------------------------|------------------------|---------------------------|---------------------------|
| 5101 Water Supply | | | |
| 00100 Canal Maint | \$522,997 | \$433,170 | \$4 46,165 |
| 00200 Source Of Water | 214,136 | 196,657 | 202,557 |
| Subtotal | 737,133 | 629,827 | 648,722 |
| 5103 Water Power & Pumping | | | |
| 00300 Deep Wells | 511,175 | 562,244 | 579,111 |
| 00400 Booster Pumping | 1,012,509 | 1,038,730 | 1,069,892 |
| 00500 Irrigation Pumping | 126,988 | 203,898 | 210,015 |
| Subtotal | 1,650,672 | 1,804,872 | 1,859,018 |
| 5105 Water Purification | | | |
| 00600 Watershed Patrol | 953,096 | 1,145,787 | 1,180,161 |
| 00700 City Creek | 707,464 | 633,120 | 652,114 |
| 00800 Parleys | 895,441 | 958,881 | 987,647 |
| 00900 Big Cottonwood | 927,599 | 877,245 | 903,562 |
| 01000 Cross Connection-Sample | 195,104 | 201,424 | 207,467 |
| 01100 Metropolitian Water | 7,648,517 | 7,825,000 | 6,900,000 |
| 01200 Little Dell Dam | 32,139 | 40,516 | 41,731 |
| 01800 Water Quality | 499,781 | 589,138 | 606,812 |
| 03500 Little Dell Recreation | 80,263 | 104,334 | 107,464 |
| Subtotal | 11,939,404 | 12,375,445 | 11,586,958 |
| 5107 Transmission & Distribution | | | |
| 01300 Engineering | 641,870 | 718,190 | 739,736 |
| 01400 Distribution | 1,950,989 | 2,183,984 | 2,249,504 |
| 01500 Computer | 255,530 | 287,544 | 296,170 |
| 01600 Emergency/ GIS In 2001 | 452,296 | 527,386 | 543,208 |
| 01700 Maintenance | 2,728,584 | 2,751,864 | 2,834,420 |
| Subtotal | 6,029,269 | 6,468,968 | 6,663,037 |
| 5109 Shops & Maint | | | |
| 02000 Work Order Office | 154,723 | 189,247 | 194,924 |
| 02100 Storehouse | 185,507 | 177,628 | 182,957 |
| 02200 General Maint | 407,197 | 642,665 | 661,945 |
| 02300 Fleet Maint | 105,268 | 530,459 | 480,773 |
| 02400 Meter Repair | 330,440 | 335,341 | 345,401 |
| 02500 Elect. & Telmetry | 353,163 | 375,824 | 387,099 |
| 03000 Safety Program | 327,679 | 185,253 | 190,811 |
| Subtotal | 1,863,977 | 2,436,417 | 2,509,510 |
| Custotal | | <u></u> | |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY OPERATIONS AND MAINTENANCE EXPENSE

FILE: SLC_WPLAN.XLS

SCHEDULE: OM_EXP DATE: 09/02/03 RANGE: OMEXP

| APPROPRIATION COST CENTER | ACTUAL FY 2001-2002 | REQUESTED FY 2002-2003 | PROJECTED FY 2003-2004 |
|----------------------------------|------------------------|---------------------------|---------------------------|
| 5111 Water Customer Service | | | |
| 02600 Meter Reading | 701,637 | 769,886 | 858,583 |
| 02700 Billing | 1,156,229 | 1,196,912 | 1,232,819 |
| 02800 Customer Service | 875,524 | 898,552 | 925,509 |
| 02900 Accounting | 531,317 | 329,821 | 449,592 |
| Subtotal | 3,264,707 | 3,195,171 | 3,291,026 |
| 5113 Water Admin | | | |
| 03100 Adminstration | 99,310 | 305,123 | 314,277 |
| 03200 Gnral Oprtions | 1,425,720 | 1,590,847 | 1,528,696 |
| 03300 Cntrcts & Const | 322,076 | 305,768 | 314,941 |
| 03400 Development & Review | 247,075 | 251,693 | 259,244 |
| Subtotal | 2,094,181 | 2,453,431 | 2,527,034 |
| Other Operating Expenses | | | |
| 2921.01 Contrib. To General Fund | 497,408 | 626,850 | 645,656 |
| 2995 Payment In Lieu Of Taxes | 398,111 | 428,000 | 440,840 |
| 2542 Uncollectable Accts | 0 | 0 | 0 |
| Subtotal | 895,519 | 1,054,850 | 1,086,496 |
| Total Expense | 28,474,862 | 30,418,981 | 30,171,800 |
| | | | |
| 2700 Capital Expenditures | 15,135,920 | 25,273,870 | 14,046,986 |
| 2545 Depreciation Expense | 4,887,227 | 5,510,019 | 5,735,837 |
| 2811 & 2821 Debt Service | 4,730,239 | 4,800,000 | 4,742,704 |
| 2825 Bond Note Expense [2] | 13,907 | 16,000 | |
| Grand Total | \$53,242,155 | \$66,018,870 | 54,697,327 |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY CAPITAL IMPROVEMENT PLAN

FILE: SLC_WaterCF.xls SCHEDULE: SUMMARY DATE: 09/02/03 RANGE: CIP_SUM

| | Total | FISCAL | FISCAL | FISCAL | FISCAL | FISCAL | FISCAL | FISCAL | FISCAL | FISCAL | FISCAL |
|--------------------------------------|---------------|--------------|--------------|--------------|-------------|-------------|--------------|--|-------------|--------------|--------------|
| Capital Improvements | Amount | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 |
| Treatment Plants | \$45,942,498 | \$838,498 | \$13,345,000 | \$14,000 | \$500,000 | \$0 | \$11,000,000 | \$6,040,000 | \$9,525,000 | \$1,380,000 | \$3,300,000 |
| Water Service Connections | 25,575,103 | 4,025,103 | 3,100,000 | 3,100,000 | 1,850,000 | 1,850,000 | 1,850,000 | 2,450,000 | 2,450,000 | 2,450,000 | 2,450,000 |
| Water Rights & Supply | 10,300,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 5,030,000 | 5,030,000 |
| Water Main Replacements | 68,284,637 | 4,791,425 | 3,466,031 | 4,321,461 | 1,250,000 | 1,250,000 | 3,000,000 | 7,900,000 | 9,000,000 | 15,300,000 | 18,005,720 |
| Water Main Miscellaneous Projects | 11,500,000 | 1,050,000 | 1,050,000 | 1,050,000 | 1,050,000 | 1,050,000 | 1,290,000 | 1,240,000 | 1,240,000 | 1,240,000 | 1,240,000 |
| Storage Reservoirs | 171,526 | 46,526 | 0 | 75,000 | 50,000 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pumping Plants And Pump Houses | 4,134,000 | 170,000 | 61,000 | 145,000 | 100,000 | 1,100,000 | 158,000 | 600,000 | 600,000 | 1,100,000 | 100,000 |
| Maintenance & Repair Shops | 3,680,625 | 37,000 | 55,000 | 40,000 | 40,000 | 40,000 | 225,750 | 122,875 | 540,000 | 1,040,000 | 1,540,000 |
| Landscaping | 530,000 | 70,000 | 60,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 | 20,000 |
| Land [1] | 4,000,000 | 0 | 250,000 | 250,000 | 200,000 | 500,000 | 200,000 | 500,000 | 500,000 | 500,000 | 200,000 |
| Distribution Reservoirs | 20,365,557 | 201,557 | 0 | 14,000 | 0 | 0 | 20,000 | 13,750,000 | 1,250,000 | 50,000 | \$,050,000 |
| Distribution Mains & Hydrants | 4,229,916 | 1,489,116 | 590,800 | 250,000 | 100,000 | 100,000 | 100,000 | 400,000 | 400,000 | 400,000 | 400,000 |
| Deep Pump Wells | 13,693,000 | 32,000 | 0 | 35,000 | 26,000 | 0 | 2,600,000 | 7,400,000 | 2,200,000 | 200,000 | 1,200,000 |
| Culverts Flumes & Bridges | 57 1,000 | 25,000 | 0 | 36,000 | 10,000 | 50,000 | 50,000 | 250,000 | 50,000 | 50,000 | 50,000 |
| TOTAL CAPITAL IMPROVEMENTS | 212,977,862 | 12,806,225 | 22,007,831 | 9,410,461 | 5,556,000 | 6,020,000 | 20,903,750 | 40,732,875 | 27,835,000 | 28,790,000 | 38,915,720 |
| Capital Outlays | ı | | | | | | | | | | |
| Automobiles & Trucks | 8,014,786 | 592,500 | 748,000 | 783,000 | 847,600 | 1,328,000 | 714,000 | 728,280 | 742,846 | 757,703 | 772,857 |
| Field Maintenance Equipment - Motive | 1,209,000 | 175,000 | 206,000 | 228,000 | 35,000 | 185,000 | 240,000 | 35,000 | 35,000 | 35,000 | 35,000 |
| Pump Plant Equipment | 1,274,000 | 42,000 | 145,000 | 100,000 | 182,000 | 305,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| Treatment Plant Equipment | 1,405,750 | 380,250 | 184,500 | 128,000 | 113,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| Telemetry Equipment | 425,000 | 50,000 | 25,000 | 50,000 | 25,000 | 20,000 | 25,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| Office Furniture & Equipment | 762,000 | 72,000 | 52,000 | 160,000 | 88,000 | 50,000 | 80,000 | 50,000 | 80,000 | 50,000 | 80,000 |
| Other Non-Motive Equipment | 735,200 | 82,000 | 87,000 | 33,200 | 83,000 | 75,000 | 175,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| TOTAL CAPITAL OUTLAY | 13,825,736 | 1,393,750 | 1,447,500 | 1,482,200 | 1,373,600 | 2,093,000 | 1,434,000 | 1,113,280 | 1,157,846 | 1,142,703 | 1,187,857 |
| TOTAL CAPITAL | \$226,803,598 | \$14,199,975 | \$23,455,331 | \$10,892,661 | \$6,929,600 | \$8,113,000 | \$22,337,750 | \$22,337,750 \$41,846,155 \$28,992,846 | | \$29,932,703 | \$40,103,577 |

[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 UTILITIES WATER RATE STUDY REVENUE AND BILLED USE

FILE: SLC_WaterCF.xls SCHEDULE: FORECAST DATE: 09/02/03 RANGE: CUSTFORC

| | | | | | PR | PROJECTED | | | | |
|-----------------------------|--------------|------------|--------------|--------------|--------------|--------------|--------------|---|--------------|--------------|
| DESCRIPTION | FY 2002-03 | FY 2003-04 | FY 2004-05 | FY 2005-06 | FY 2006-07 | FY 2007-08 | FY 2008-09 | FY 2003-04 FY 2004-05 FY 2005-06 FY 2006-07 FY 2007-08 FY 2008-09 FY 2009-10 FY 2010-11 FY 2011-12 | FY 2010-11 | FY 2011-12 |
| Revenue Forecast | | | | | | | | | | |
| Average Revenue per ccf [1] | \$0,965 | \$1,037 | \$1.14 | \$1.20 | \$1.26 | \$1.35 | \$1.48 | \$1.55 | \$1,60 | \$1.65 |
| Total Customer Use - ccf | 39,639,600 | 39,923,501 | 40,209,436 | 40,497,418 | 40,787,463 | 41,079,565 | 41,373,800 | 40,209,436 40,497,418 40,787,463 41,079,565 41,373,800 41,670,121 41,968,565 | 41,968,565 | 42,269,147 |
| Water Sales Revenue | \$38,257,000 | | \$45,881,114 | \$48,520,204 | \$51,311,094 | \$55,296,088 | \$61,261,334 | \$41,413,498 \$45,881,114 \$48,520,204 \$51,311,094 \$55,296,088 \$61,261,334 \$64,785,096 \$67,206,563 | \$67,206,563 | \$69,718,538 |
| | | | | | | | | | | |
| Total Exchange Use - ccf | 3,122,604 | 3,144,968 | 3,144,968 | | 3,144,968 | 3,144,968 | 3,144,968 | 3,144,968 3,144,968 3,144,968 3,144,968 | 3,144,968 | 3,144,968 |
| Total System Use - ccf | 42,762,204 | 43,068,469 | 43,354,404 | 43,642,386 | 43,932,431 | 44,224,554 | 44,518,768 | 43,068,469 43,354,404 43,642,386 43,932,431 44,224,554 44,518,768 44,815,090 45,113,533 | 45,113,533 | 45,414,115 |
| Annual Change | | 0.7% | %2'0 | %2.0 | 0.7% | %2.0 | 0.7% | 0.7% | 0.7% | %2.0 |

[1] FY 2001-02 determined from sales and revenues. [2] Exchange Use is FY 2001-02 estimate.

Water Department Accounts

| Water Department Accounts | | | | | ă | חשב ושל השם | | | | |
|---------------------------|------------|------------|------------|------------|------------|-------------|------------|------------|------------|------------|
| Customer Group | FY 2002-03 | FY 2003-04 | FY 2004-05 | FY 2005-06 | FY 2006-07 | FY 2007-08 | FY 2008-09 | FY 2009-10 | FY 2010-11 | FY 2011-12 |
| Inside City | | | | | | | | | | |
| Residential | 43,665 | 43,900 | | | | | 45,834 | 46,269 | 46,708 | 47,151 |
| Commercial | 7,334 | 7,547 | | | | | 8,473 | 8,672 | 8,859 | 9,046 |
| Industrial | 177 | 182 | 186 | 191 | 195 | 200 | 205 | 209 | 214 | 218 |
| Municipal | 379 | 390 | | | | | 437 | 448 | 457 | 467 |
| Miscellaneous | 722 | 742 | 759 | | | | 834 | 853 | 872 | 890 |
| Total City | 52,276 | 52,761 | 53,198 | 53,827 | 54,468 | 55,115 | 55,782 | 56,452 | 57,110 | 57,772 |
| Outside City | | | | | | | | | | |
| Residential | 23,137 | 23,261 | | 23,608 | 23,832 | 24,058 | 24,286 | 24,517 | 24,749 | 24,984 |
| Commercial | 731 | 752 | 169 | | | | 844 | 864 | 883 | 901 |
| Industrial | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | က |
| Municipal | 9 | 9 | 9 | _ | 7 | 7 | 7 | 7 | 7 | œ |
| Miscellaneous | 266 | 274 | 280 | 287 | 293 | 300 | 307 | 315 | 321 | 328 |
| Total | 24,142 | 24,295 | 24,444 | 24,690 | 24,940 | 25,191 | 25,447 | 25,705 | 25,963 | 26,223 |
| Exchange Residential | 090'6 | 090'6 | 090'6 | 090'6 | 090'6 | 090'6 | 9.060 | 9,060 | 090'6 | 090'6 |
| Exchange Commercial | 408 | 408 | 408 | | | | 408 | 408 | 408 | 408 |
| Exchange Industrial | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Exchange Municipal | 58 | 58 | 58 | 58 | 58 | | 58 | 58 | 58 | 58 |
| Exchange Miscellaneous | 95 | 95 | 96 | | | 95 | 95 | 95 | 95 | 96 |
| Total Exchange [2] | 9,625 | 9,625 | 9,625 | 9,625 | 9,625 | 9,625 | 9,625 | 9,625 | 9,625 | 9,625 |
| TOTAL WATER ACCOUNTS | 86,043 | 86,681 | 87,267 | 88,143 | 89,033 | 89,931 | 90,855 | 91,782 | 92,698 | 93,620 |
| City and County Only | | | | | | | | | | |
| | | | | | | | | | | |

[2] Exchange customers based on 3-year average, 1999-2001.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY IMPACT FEE Revenue Forecast

FILE: SLC_WaterCF.xls SCHEDULE: IMPACT_REV DATE: 09/04/03 RANGE: IMPACTREV

| | BUDGET | ESTIMATE | | | | PROJ | PROJECTED | | | |
|---|------------|------------|-------------|-------------|--|-------------|-------------|---|-------------|---|
| CUSTOMER | FY 2002-03 | FY 2003-04 | FY 2004-05 | FY 2005-06 | FY 2003-04 FY 2004-05 FY 2005-06 FY 2006-07 FY 2007-08 | FY 2007-08 | FY 2008-09 | FY 2008-09 FY 2009-10 FY 2010-11 FY 2011-12 | FY 2010-11 | FY 2011-12 |
| Inside City | | | | | | | | | | |
| Residential | | | \$244,052 | \$433,295 | \$437,432 | \$441,568 | \$445,705 | \$449,841 | \$453,977 | \$458,114 |
| Commercial | | | 656,420 | 687,130 | 714,001 | 721,678 | 775,420 | 767,743 | 717,840 | 717,840 |
| Industrial | | | 34,505 | 34,505 | 34,505 | 43,131 | 43,131 | 43,131 | 43,131 | 43,131 |
| Municipal | | | 48,293 | 48,293 | 53,658 | 53,658 | 53,658 | 53,658 | 53,658 | 53,658 |
| Miscellaneous | | | 67,498 | 71,468 | 71,468 | 71,468 | 79,409 | 79,409 | 71,468 | 71,468 |
| Subtotal | | • | 1,050,767 | 1,274,691 | 1,311,064 | 1,331,504 | 1,397,324 | 1,393,783 | 1,340,075 | 1,344,211 |
| Outside City | | | | | | | | | | |
| Residential | | | 136,998 | 243,309 | 245,501 | 247,693 | 249,885 | 252,077 | 255,365 | 257,557 |
| Commercial | | | 92,145 | 97,566 | 102,986 | 102,986 | 108,406 | 108,406 | 102,986 | 102,986 |
| Industrial | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Municipal | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Miscellaneous | | | 33,833 | 39,472 | 39,472 | 39,472 | 39,472 | 39,472 | 39,472 | 39,472 |
| Subtotal | | • | 262,977 | 380,347 | 387,959 | 390,151 | 397,763 | 399,955 | 397,823 | 400,015 |
| Total | | | 1 212 744 | 1 655 038 | 1 600 003 | 1 721 655 | 1 795 087 | 1 703 738 | 1 737 808 | 1 744 226 |
| Decision Criteria Based Escalation Factor | | | 1.040 | 1.061 | | 1.104 | | 1.149 | 1.172 | |
| TOTAL IMPACT FEE REVENUE (1) | \$250,000 | | \$1,366,819 | \$1,756,339 | \$500,000 \$1,366,819 \$1,756,339 \$1,839,077 | \$1,900,847 | \$2,021,560 | \$2,060,441 | \$2,036,224 | \$1,900,847 \$2,021,560 \$2,060,441 \$2,036,224 \$2,104,948 |

(1) Department budget amounts were used in FY 2002-03 and FY 2003-04. Source: Budget for the Year Ending June 30, 2003

Current weighted average Impact Fees for each Customer category are used as basis for estimating revenue prior to applying escalation factor.

Appendix B

Cost of Service Analysis

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY RATE REVENUE SUMMARY OUTSIDE/INSIDE RATIO = 1.35

FILE: SLC_COSTALLOC.XLS

SCHEDULE: REVSUM DATE: 09/02/03 RANGE: TOTREV

| _ | Inside City | Outside City | Total |
|----------------|--------------|---------------------|--------------|
| Revenue | | | |
| Fixed Charges | 3,968,186 | 2,428,228 | 6,396,414 |
| Volume Charges | 23,548,919 | 13,645,029 | 37,193,949 |
| Total | \$27,517,106 | \$16,073,257 | \$43,590,363 |
| • | Priva | ate Fire Protection | \$143,220 |
| | Reven | ue Requirements | \$43,733,583 |
| | | | |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY

REVENUE REQUIREMENTS

FILE: SLC_COSTALLOC.xls

SCHEDULE: ALLOC_SUM

DATE: 09/02/03 RANGE: CA_SUM

| EXPENDITURES | Cash Basis | Utility Basis |
|--------------------------------------|---------------|------------------|
| Gross Operations & Maintenance Costs | \$30,171,800 | \$30,171,800 |
| Adjustments | | |
| Grants & Other Related | 855,000 | 855,000 |
| Other Sources | 50,000 | 50,000 |
| Interest Income | 197,800 | 197,800 |
| Other Income | 2,087,150 | 2,087,150 |
| Excess Cash Balance | 2,037,978 | 2,037,978 |
| Adjusted O&M | 24,943,872 | 24,943,872 |
| Capital Costs | | |
| Depreciation Expense | | 5,657,383 |
| Capital Expenditures | 14,046,986 | . , |
| Debt Service | 4,742,704 | |
| Return On Rate Base | | 19,400,468 |
| Net Rate Revenue Requirement | \$43,733,562 | \$50,001,724 |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY CLASS REVENUE SUMMARY W/1.35 RATIO

FILE: SLC_COSTALLOC.xls

SCHEDULE: CLASS_SUM

DATE: 09/02/03 RANGE: CLASSUM

| Class | Revenue for Current Rates [1] | Revenue for Proposed Rates |
|-------------------------|-------------------------------------|----------------------------------|
| Inside City | | |
| Residential | \$11,119,300 | \$12,777,315 |
| Non-Residential | 13,852,428 | 12,622,796 |
| Municipals | 1,474,589 | 1,599,699 |
| Subtotal | 26,446,317 | 26,999,811 |
| Outside City | | |
| Residential | 12,260,614 | 13,384,852 |
| Non-Residential | 4,215,497 | 3,740,236 |
| Municipals | 522,077 | 546,415 |
| Subtotal | 16,998,187 | 17,671,503 |
| Class Revenue Total | 43,444,504 | 44,671,314 |
| Private Fire Protection | \$64,728 | \$143,220 |
| Total Rate Revenue | \$43,509,232 | \$44,814,533 |

3% Increase

\$44,814,509 Limitation based on

City Council's approval of 3% increase for 2003-04.

[1] FY 2002-03 Rates using 2001-02 water usage.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY COST CENTERS

FILE: SLC_COSTALLOC.xls

SCHEDULE: COST_CENTERS

DATE: 09/02/03
RANGE: OM_COST

| APPROPRIATION COST CENTER | PROJECTED FISCAL YEAR 2003-2004 |
|--|---------------------------------------|
| 5101 Water Supply 00100 Canal Maint | 446,165 |
| 00200 Source Of Water | 202,557 |
| Subtotal | 648,722 |
| 5103 Water Power & Pumping 00300 Deep Wells | 579,111 |
| 00400 Booster Pumping | 1,069,892 |
| 00500 Irrigation Pumping | 210,015 |
| Subtotal | 1,859,018 |
| 5105 Water Purification | |
| 00600 Watershed Patrol | 1,180,161 |
| 00700 City Creek | 652,114 987,647 |
| 00800 Parleys 00900 Big Cottonwood | 903,562 |
| 01000 Cross Connection-Sample | 207,467 |
| 01100 Metropolitian Water | 6,900,000 |
| 01200 Little Dell Dam | 4 1,731 |
| 01800 Water Quality | 606,812 |
| 03500 Little Dell Recreation | 107,464 |
| Subtotal | 11,586,958 |
| 5107 Transmission & Distribution | 700 700 |
| 01300 Engineering | 739,736 2,249,504 |
| 01400 Distribution 01500 Computer | 2,249,504 296,170 |
| 01600 Emergency/ GIS In 2001 | 543,208 |
| 01700 Maintenance | 2,834,420 |
| Subtotal | 6,663,037 |
| 5109 Shops & Maint | |
| 02000 Work Order Office | 194,924 |
| 02100 Storehouse | 182,957 |
| 02200 General Maint | 661,945 |
| 02300 Fleet Maint | 480,773 |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY COST CENTERS

FILE: SLC_COSTALLOC.xls

SCHEDULE: COST_CENTERS

DATE: 09/02/03
RANGE: OM_COST

| 02400 Meter Repair | 345,401 |
|--|---------------------|
| 02500 Elect. & Telmetry | 387,099 |
| 03000 Safety Program | 190,811 |
| Subtotal | 2,509,510 |
| 5111 Water Customer Service | |
| 02600 Meter Reading | 858,583 |
| 02700 Billing | 1,232,819 |
| 02800 Customer Service | 925,509 |
| 02900 Accounting | 449,592 |
| Subtotal | 3,291,026 |
| 5113 Water Admin | 0440== |
| 03100 Adminstration | 314,277 |
| 03200 Gnral Oprtions | 1,528,696 |
| 03300 Cntrcts & Const | 314,941 |
| 03400 Development & Review | 259,244 |
| Subtotal | 2,527,034 |
| Other Operating Expenses | |
| 2921.01 Contrib. To General Fund | 645,656 |
| 2995 Payment In Lieu Of Taxes | 440,840 |
| 2542 Uncollectable Accts | 0 |
| Subtotal | 1,086,496 |
| Grand Total | 30 <u>,</u> 171,800 |
| | |
| 2700 CAPITAL EXPENDITURES 2545 DEPRECIATION EXPENSE | 14,046,986 |
| 2811 & 2821 DEBT SERVICE 2825 BOND NOTE EXPENSE [2] | 4,742,704 |
| TOTAL EXPENSE | 54,697,327 |
| | |

^[1] Conservation program costs of \$200,000 removed and added to Admininstration.

^[2] Included in Debt Service in FY 2003-04

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY ASSET ALLOCATION

FILE: SLC_COSTALLOC.XIS SCHEDULE: ASSETS DATE: 09/02/03 RANGE: ASSETALLOC

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| | Balance 6/30/2002 | 2002 | | | | | | | | | |
|--------------------------------------|-------------------|--------------|--------------|--------------------|---------|-------------|-----------------|-------------|----------------|------------|------------|
| 1 | | l O | Per | Period Allocations | SI. | A | Allocated Costs | | | | |
| | | I | Average | Maximum | Maximum | Average | Maximum | Maximum | Customer Costs | r Costs | Fire |
| | | Annual | Day | Day | Hour | Day | Day | Hour | Meters & | Billing & | Protection |
| | Assets | Depreciation | Demand | Demand | Demand | Demand | Demand | Demand | Services | Collecting | Service |
| LAND | | | | | | | | | | | |
| Land | 5,464,341 | | - | 0 | 0 | \$5,251,232 | 0\$ | \$0 | | | \$213,109 |
| Rights of Way | 17,690 | | ۲- | 0 | 0 | 17,000 | 0 | 0 | | | 069 |
| Water Rights | 9,587,275 | | - | 0 | 0 | 9,213,371 | 0 | 0 | | | 373,904 |
| Canals | 814,255 | | 0 | - | - | 0 | 559,390 | 223,109 | | | 31,756 |
| Total Land | 15,883,561 | 0 | | | ı | 14,481,603 | 559,390 | 223,109 | 0 | 0 | 619,459 |
| BUILDINGS | | | | | | | | | | | |
| Treatment Plants | 21,585,442 | 369,500 | ۲ | - | 0 | \$7,598,392 | \$13,145,218 | \$ 0 | | | 841,832 |
| Pump Plants [1] | 2,512,006 | 49 | 0 | - | - | 0 | 1,725,738 | 688,300 | | | 97,968 |
| Residences | 63,183 | | - | - | 0 | 22,241 | 38,478 | 0 | | | 2,464 |
| Maintenance & Repair Shops | 3,045,046 | 78,724 | - | 0 | 0 | 2,926,289 | 0 | 0 | | | 118,757 |
| Total Buildings | 27,205,678 | 498,444 | | | ' | 10,546,923 | 14,909,433 | 688,300 | 0 | 0 | 1,061,021 |
| IMPROVEMENTS OTHER THAN BLDGS | gs GS | | | | | | | | | | |
| Culver, Plumes, & Bridges | 1,317,695 | 26,226 | 0 | - | | 0\$ | \$905,251 | \$361,054 | | | 51,390 |
| Artesian Wells | 96,222 | | 0 | - | - | 0 | 66,104 | 26,385 | | | 3,753 |
| Deep Pump Wells | 3,686,462 | | 0 | - | - | 0 | 2,532,584 | 1,010,106 | | | 143,772 |
| Water Conduits & Supply Lines | 34,549,064 | | - | - | - | 9,708,085 | 16,794,987 | 6,698,579 | | | 1,347,413 |
| Water Storage Reservoirs | 3,985,711 | | - | 0 | 0 | 3,800,133 | 0 | 0 | | | 185,578 |
| Water Distribution Reservoirs | 21,080,724 | | 0 | - | - | 0 | 14,482,370 | 5,776,205 | | | 822,148 |
| Distribution Mains & Hydrants | 69,431,738 | 8 | - | - | - | 17,400,925 | 30,103,600 | 12,006,638 | 7,212,738 | | 2,707,838 |
| Water Service Connections | 27,741,299 | | - | - - | - | 7,795,143 | 13,485,597 | 5,378,649 | | | 1,081,911 |
| Landscaping | 296,435 | | - | 0 | 0 | 296,435 | 0 | 0 | | | 0 |
| Drinking Fountains | 25,794 | | - | 0 | 0 | 25,794 | 0 | 0 | | | 0 |
| Capitalized Interest | 7,544,214 | 149,163 | - | 0 | 0 | 7,249,990 | 0 | 0 | | | 294,224 |
| Total Improvements | 169,755,357 | 2,863,544 | | | 1 | 46,276,504 | 78,370,493 | 31,257,595 | 7,212,738 | 0 | 6,638,028 |
| EQUIPMENT | | | | | | | | | | | |
| Automobiles & Trucks | 4,800,950 | | - | - | _ | \$1,403,787 | \$2,428,551 | \$968,613 | | | 0 |
| Field Maintenance Equipment - Motive | 1,359,507 | | - | - | - | 397,517 | 687,704 | 274,287 | | | 0 |
| Pump Plant Equipment | 2,160,517 | | 0 | - | - | 0 | 1,484,266 | 591,991 | | | 84,260 |
| Treatment Plant Equipment | 5,248,005 | | 0 | - | _ | 0 | 3,605,358 | 1,437,975 | | | 204,672 |
| Telemetering Equipment | 1,681,172 | | ۳ | 0 | 0 | 1,615,606 | 0 | 0 | | | 65,566 |
| Office Equipment & Furniture | 1,194,287 | 87,599 | ۲ | - | - | 349,207 | 604,128 | 240,953 | | | 0 |
| Other Equipment | 1,504,944 | 131,617 | - | - | - | 440,042 | 761,273 | 303,629 | | | 0 |
| Total Equipment | 17.949.382 | 1.525.239 | | | | 4.206.158 | 9.571.279 | 3.817.447 | 0 | 0 | 354,498 |
| | 100/21/21 | | | | • | 221 | 011 | 1 (1) | | , | 3 |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY ASSET ALLOCATION

CAPITAL ASSETS
Balance 6/30/2002

FILE: SLC_COSTALLOC.xis SCHEDULE: ASSETS DATE: 09/02/03 RANGE: ASSETALLOC

| | | 2002 | | | | | | | | | |
|-------------------------------|---------------|--------------|---------|--|---|--------------|--|--------------|----------------|------------|-------------|
| | | | Per | Period Allocations | S | ¥ | Allocated Costs | | | | |
| | | ı | Average | Maximum | Maximum | Average | Maximum | Maximum | Customer Costs | r Costs | Fire |
| | | Annual | Day | Day | Hour | Day | Day | Hour | Meters & | Billing & | Protection |
| | Assets | Depreciation | Demand | Demand | Demand | Demand | Demand | Demand | Services | Collecting | Service |
| CONSTRUCTION WORK IN PROGRESS | GRESS | | | | | | | | | | |
| Work in Process Buildings | 881,905 | | - | | - | \$247,810 | \$428,711 | \$170,989 | | | 34,394 |
| Work in Process Improvements | 7,230,380 | | - | - | - | 2,031,695 | 3,514,832 | 1,401,869 | | | 281,985 |
| WIP Pump Plant Equipment | 140,558 | | 0 | | - | 0 | 96,563 | 38,514 | | | 5,482 |
| WIP Treament Plant | 52,708 | | 0 | - | - | 0 | 36,210 | 14,442 | | | 2,056 |
| WIP Telemetry | 0 | | 0 | - | - | 0 | 0 | 0 | | | 0 |
| WIP Furniture & Equipment | 110,233 | | - | | - | 30,975 | 53,586 | 21,373 | | | 4,299 |
| WIP Other Non-Motive | 0 | | - | ₩. | - | 0 | 0 | 0 | | | 0 |
| Capitalized Interest | 570,459 | | - | - | - | 160,296 | 277,312 | 110,604 | | | 22,248 |
| Total Work in Process | 8,986,244 | 0 | | | ı | 2,470,775 | 4,407,214 | 1,757,791 | 0 | 0 | 350,464 |
| TOTAL | 239,780,221 | 4,887,227 | | | | \$77,981,963 | \$107,817,809 \$37,744,242 \$7,212,738 | \$37,744,242 | \$7,212,738 | \$0 | \$9,023,470 |
| | | | | | 100.0% | 32.5% | 45.0% | 15.7% | 3.0% | %0:0 | 3.8% |
| Accumulated Depreciation | \$59,907,856 | | | | | 15,538,121 | 27,401,121 | 9,657,529 | 5,196,461 | 0 | 2,114,824 |
| Net Assets | \$179,872,365 | | | | | \$62,443,841 | \$80,416,688 | \$28,086,712 | \$2,016,277 | \$0 | \$6,908,845 |
| Annual Depreciation % | 2.65% | vo. | | | | Ratik | Ratios for Allocations | SITS | | | |
| Average Life | 38 | 38 years | | Ś | System Ratios: | - | 2.73 | | | | |
| Asset Additions less WIP | 230.793,977 | | Systen | Incremental Katio: System Cost Percent Allocations: | Incremental Katio: ercent Allocations: | 1 29.2% | 1./3 50.6% | 20.2% | 100.0% | | |

\$5,530,271 \$200,468,838 Test Year Depreciation Average Rate Base

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY

DEPRECIATION ALLOCATION

SLC_COSTALLOC.xls DEPREC FILE:

SCHEDULE:

09/02/03 DEPALLOC DATE:

RANGE:

| | | Alloc | Allocated Depreciation | tion | | | |
|-----------------------------------|-----------------------------|---------------|------------------------|-----------|----------------------|----------------------|-----------------------|
| | ı | Average | Maximum | Maximum | Customer Costs | er Costs | Fire |
| | Accumulated Depreciation | Day Demand | Day Demand | Hour | Meters & Services | Billing & Collecting | Protection Service |
| LAND | | | | | | | |
| Land | 20 | 8 | \$0 | Çş | 2 0 | \$0 | 20 |
| Rights of Way | | 0 | 0 | 0 | | | 0 |
| Water Rights | | 0 | 0 | 0 | | | 0 |
| Canals | | 0 | 0 | 0 | | | 0 |
| Total Land | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BUILDINGS | | | | | | | |
| Treatment Plants | 5,192,277 | 1,827,757 | 3,162,020 | 0 | | | 202,499 |
| Pump Plants [1] | 735,046 | 0 | 504,974 | 201,406 | | | 28,667 |
| Residences | 41,536 | 14,621 | 25,295 | 0 | | | 1,620 |
| Maintenance & Repair Shops | 1,027,349 | 987,282 | 0 | 0 | | | 40,067 |
| Total Buildings | 6,996,208 | 2,829,661 | 3,692,289 | 201,406 | 0 | 0 | 272,852 |
| IMPROVEMENTS OTHER THAN BLDGS | S | | | | | | |
| Culver, Plumes, & Bridges | 251,283 | 0 | 172,631 | 68,853 | | | 9,800 |
| Artesian Wells | 84,785 | 0 | 58,247 | 23,231 | | | 3,307 |
| Deep Pump Wells | 1,459,251 | 0 | 1,002,500 | 399,841 | | | 56,911 |
| Water Conduits & Supply Lines | 8,653,697 | 2,431,638 | 4,206,734 | 1,677,830 | | | 337,494 |
| Water Storage Reservoirs | 710,511 | 677,429 | 0 | 0 | | | 33,082 |
| Water Distribution Reservoirs | 5,659,405 | 0 | 3,887,988 | 1,550,700 | | | 220,717 |
| Distribution Mains & Hydrants [1] | 14,789,926 | 2,636,450 | 4,561,058 | 1,819,150 | 5,196,461 | | 576,807 |
| Water Service Connections | 9,174,580 | 2,578,003 | 4,459,946 | 1,778,822 | | | 357,809 |
| Landscaping | 61,883 | 61,883 | 0 | 0 | | | 0 |
| Drinking Fountains | 21,438 | 21,438 | 0 | 0 | | | 0 |
| Capitalized Interest | 1,490,132 | 1,432,017 | 0 | 0 | | | 58,115 |
| Total Improvements | 42,356,891 | 9,838,858 | 18,349,103 | 7,318,428 | 5,196,461 | 0 | 1,654,041 |
| | | | | | | | |

SALT LAKE CITY WATER UTILITIES

WATER RATE STUDY

DEPRECIATION ALLOCATION

SLC_COSTALLOC.xls DEPREC FILE:

SCHEDULE:

09/02/03 DATE:

DEPALLOC RANGE:

| | , | Alloc | Allocated Depreciation | ion | | | |
|--------------------------------------|--------------|--------------|------------------------|-------------|-------------|----------------|-------------|
| | Accumulated | Average | Maximum | Maximum | Custom | Customer Costs | Fire |
| | Depreciation | Demand | Demand | Demand | Services | Collecting | Service |
| | | | | | | | |
| EQUIPMENT | | | | | | | |
| Automobiles & Trucks | 3,159,035 | 923,694 | 1,597,991 | 637,349 | | | 0 |
| Field Maintenance Equipment - Motive | 844,359 | 246,889 | 427,117 | 170,353 | | | 0 |
| Pump Plant Equipment | 1,339,751 | 0 | 920,403 | 367,097 | | | 52,250 |
| Treatment Plant Equipment | 2,234,627 | 0 | 1,535,180 | 612,297 | | | 87,150 |
| Telemetering Equipment | 1,239,235 | 1,190,905 | 0 | 0 | | | 48,330 |
| Office Equipment & Furniture | 946,322 | 276,702 | 478,695 | 190,925 | | | 0 |
| Other Equipment | 791,429 | 231,412 | 400,343 | 159,674 | | | 0 |
| Total Equipment | 10,554,758 | 2,869,602 | 5,359,729 | 2,137,695 | 0 | 0 | 187,731 |
| CONSTRUCTION WORK IN PROGRESS | S | | | | | | |
| Work in Process Buildings | | 0 | 0 | 0 | | | 0 |
| Work in Process Improvements | | 0 | 0 | 0 | | | 0 |
| WIP Pump Plant Equipment | | 0 | 0 | 0 | | | 0 |
| WIP Treament Plant | | 0 | 0 | 0 | | | 0 |
| WIP Telemetry | | 0 | 0 | 0 | | | 0 |
| WIP Furniture & Equipment | | 0 | 0 | 0 | | | 0 |
| WIP Other Non-Motive | | 0 | 0 | 0 | | | 0 |
| Capitalized Interest | | 0 | 0 | 0 | | | 0 |
| Total Work in Process | 0 | 0 | 0 | 0 | | | |
| TOTAL | 59,907,856 | \$15,538,121 | \$27,401,121 | \$9,657,529 | \$5,196,461 | \$0 | \$2,114,624 |
| Percent of Total | 100.0% | 25.9% | 45.7% | 16.1% | 8.7% | %0.0 | 3.5% |
| | | | | | | | |

Note: Balances as of June 30, 2002

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY ALLOCATION FACTORS

FILE: SLC_COSTALLOC.xls
SCHEDULE: ALLOCFACTOR
DATE: 09/02/03
RANGE: FACTORS

System Allocations

| | Syst | aystelli Allocations | 0 |
|----------------------------------|----------------|----------------------|----------------|
| | Average | Maximum | Maximum |
| | Day | Day | Hour |
| EXPENDITURES | Demand | Demand | Demand |
| System Ratios [1]: | 1.00 | 2.73 | 3.42 |
| Incremental Ratio: | 1.00 | 1.73 | 69.0 |
| I | 29.24% | 50.58% | 20.18% |
| 5101 Water Supply | | | |
| 00100 Canal Maint | 0 | - | 0 |
| 00200 Source Of Wir | - | - | 0 |
| 5103 Water Power & Pumping | | | |
| | (| • | • |
| 00300 Deep Wells | 5 | _ | _ |
| 00400 Booster Pmpng | 0 | - | - |
| 00500 Irrgtion Pmpng | 0 | - | 0 |
| EACE Motor Durition | | | |
| מוסס גומופי ו תוווכמווסו | | • | • |
| 00600 Watershed Patrol | - | 0 | 0 |
| 00700 City Creek | - | - | 0 |
| 00800 Parleys | - | _ | 0 |
| 00900 Big Cottonwood | - | - | 0 |
| 01000 Cross Connection-Sample | - | - | 0 |
| 01100 Metropolitian Water | - | 0 | 0 |
| 01200 Little Dell Dam | 0 | - | 0 |
| 01800 Water Quality | - | | 0 |
| 03500 Little Dell Recreation | - | - | 0 |
| 5107 Transmission & Distribution | | | |
| 01300 Engineering | - | 0 | 0 |
| 01400 Distribution | 0 | - | - - |
| 01500 Computer | · - | 0 | 0 |
| 01600 Emropey/ Gis In 2001 | - | C | _ |
| 01700 Maintagen | - c | · - | · - |
| O I / OO Malliterialice | > | - | - |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY ALLOCATION FACTORS

FILE: SLC_COSTALLOC.xls SCHEDULE: ALLOCFACTOR DATE: 09/02/03 RANGE: FACTORS

| Average Maximum Day Day Demand Demand 1 0 0 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 | | Syst | System Allocations | 2 |
|--|-------------------------------|---------|--------------------|---------|
| Day Day intenance 1 0 be 0 0 be 0 0 comercial 0 0 construction 1 1 bions 1 1 const 1 1 cxpenses 1 1 cxpenses 1 1 cypenses 1 1 cypenses <t< th=""><th></th><th>Average</th><th>Maximum</th><th>Maximum</th></t<> | | Average | Maximum | Maximum |
| Demand D | | Day | Day | Hour |
| int | EXPENDITURES | Demand | Demand | Demand |
| int int | 5109 Shops & Maintenance | | | |
| int | 0000 total 0-1-065 | • | • | • |
| int int 1 0 0 1 1 0 0 1 1 1 0 0 1 1 1 0 0 1 | UZUUU WYK Ordr Office | _ | ɔ | 5 |
| 0000 | 02100 Storehouse | - | 0 | 0 |
| -0 0000 | 02200 General Maint | - | 0 | 0 |
| 0 0000 | 02300 Fleet Maint | - | 0 | 0 |
| 0000 | 02400 Meter Repair | 0 | O | 0 |
| - 0000 | 02500 Elect & Telmtry | - | 0 | 0 |
| 0000 | 03000 Safety Program | - | 0 | 0 |
| on 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 5111 Water Customer Service | | | |
| on 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 02600 Meter Reading | 0 | 0 | 0 |
| on 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | 02700 Billing | 0 | 0 | 0 |
| on 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 02800 Customer Serv | 0 | 0 | 0 |
| 5113 Water Administration 03100 Administration [1] 1 1 1 03200 Gnral Oprtions 1 1 1 1 03300 Cntrcts & Const 1 1 1 1 03400 Development & Review 1 1 1 1 Other Operating Expenses 2921.01 Contr To General Fund 1 1 1 2995 Pmnt In Lieu Of Taxes 1 1 1 1 2542 Uncollectable Accts 1 1 1 1 | 02900 Accounting [1] | 0 | 0 | 0 |
| 03100 Administration [1] 1 1 1 03200 Gnral Oprtions 1 1 1 03300 Cntrcts & Const 1 1 1 03400 Development & Review 1 1 1 Other Operating Expenses 2921.01 Contr To General Fund 1 1 1 2995 Fmnt In Lieu Of Taxes 1 1 1 2542 Uncollectable Accts 1 1 1 | 5113 Water Administration | | | |
| 03200 Gnral Oprtions 1 1 1 03300 Cntrcts & Const 1 1 1 03400 Development & Review 1 1 1 01her Operating Expenses 2921.01 Contr To General Fund 1 1 1 2995 Pmnt In Lieu Of Taxes 1 1 1 1 2542 Uncollectable Accts 1 1 1 1 | 03100 Administration [1] | - | - | - |
| 03300 Cntrcts & Const 1 1 1 03400 Development & Review 1 1 1 01her Operating Expenses 2921.01 Contr To General Fund 1 1 1 2995 Pmnt In Lieu Of Taxes 1 1 1 2542 Uncollectable Accts 1 1 1 | 03200 Gnral Oprtions | - | - | - |
| 03400 Development & Review 1 1 1 Other Operating Expenses 1 1 1 2921.01 Contr To General Fund 1 1 1 1 2995 Pmnt In Lieu Of Taxes 1 1 1 1 2542 Uncollectable Accts 1 1 1 1 | 03300 Cntrcts & Const | - | - | _ |
| Other Operating Expenses 2921.01 Contr To General Fund 1 1 1 2995 Pmnt In Lieu Of Taxes 1 1 1 1 2542 Uncollectable Accts 1 1 1 | 03400 Development & Review | - | - | - |
| 2921.01 Confr To General Fund 1 1 1 2995 Pmnt In Lieu Of Taxes 1 1 1 2542 Uncollectable Accts 1 1 1 | Other Operating Expenses | | | |
| 2995 Pmnt In Lieu Of Taxes 1 1 1 2542 Uncollectable Accts 1 1 1 | 2921.01 Contr To General Fund | - | - | - |
| 2542 Uncollectable Accts 1 1 1 | 2995 Pmnt In Lieu Of Taxes | - | - | - |
| | 2542 Uncollectable Accts | - | - | - |

[1] Factors from 1997 Master Plan

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY ALLOCATION FACTORS

FILE: SLC_COSTALLOC.xls SCHEDULE: ALLOCFACTOR DATE: 09/02/03 RANGE: FACTORS

Service Category Allocation Percentages

| | | Base | Extra C | Extra Capacity |
|--------------------------------|--------|---------|---------|----------------|
| | | Average | Maximum | Maximum |
| Demand Allocation Combinations | Total | Day | Day | Hour |
| ADD/MDD/MHD | 100.0% | 29.2% | 20.6% | 20.2% |
| MDD/MHD | 100.0% | %0:0 | 71.5% | |
| ADD | 100.0% | 100.0% | | |
| ADD/MDD | 100.0% | 36.6% | 63.4% | 0.0% |
| MDD | 100.0% | %0.0 | 100.0% | |
| MHD | 100.0% | %0:0 | 0.0% | 100.0% |
| ADD/MHD | 100.0% | 59.2% | | 40.8% |

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| | | Capital | Sapital Allocation Fact | -actors | | | |
|----------------------|-------|---------|-------------------------|---------|----------|-----------|---------|
| | | Base | Extra C | apacity | Customer | er Costs | Fire |
| | | Average | Maximum | Maximum | Meters & | Billing & | |
| | Total | Day | Day | Hour | Services | _ | Service |
| O&M Cost Factors | 100% | 43.7% | 28.0% | 7.3% | 1.1% | 17.0% | 2.9% |
| Capital Expenditures | 100% | 32.5% | 45.0% | | 3.0% | %0:0 | 3.8% |
| Debt Service | 100% | 32.5% | 45.0% | 15.7% | 3.0% | %0:0 | 3.8% |

UTILITY BASIS ALLOCATION

| | | Capita | Capital Allocation Factors | Factors | | | |
|---|-------|---------|----------------------------|-------------------------|----------|-------------------------------|------------|
| ı | | Base | Extra C | Extra Capacity | Custom | Customer Costs | Fire |
| | • | Average | Maximum | Average Maximum Maximum | Meters & | Meters & Billing & Protection | Protection |
| | Total | Day | Day | Hour | Services | Hour Services Collecting | Service |
| O&M Cost Factors | 100% | 43.7% | 28.0% | 7.3% | 1.1% | 17.0% | 2.9% |
| Rate Base | 100% | 32.5% | 45.0% | 15.7% | 3.0% | %0.0 | 3.8% |
| Depreciation Expense | 100% | 25.9% | 45.7% | 16.1% | 8.7% | 0.0% | 3.5% |
| Total Weighted Allocation Factors | | 37.9% | 35.6% | 11.0% | 2.7% | %2'6 | 3.2% |
| Base/Extra Capacity Proportions Fire Protection Cost Factors | | 43.2% | 26.8% | | | | |
| All Categories excluding Storage | 3.9% | | | | | | |
| Storage | 4.7% | | | | | | |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY

AVERAGE ANNUAL ACCOUNTS

SLC_COSTALLOC.xls ACCTS FILE: SCHEDULE: DATE: RANGE:

09/02/03 CUSTACCT

| | Equivalent Cost Meters | Bills | Accounts | Meter Size | City Average Bills | County Average Bills | Total Average Bills | Equivalent Average Flow Annual Meters Accounts | Average Annual Accounts |
|---------------|------------------------------|---------|----------|------------|--------------------------|----------------------------|---------------------------|--|-------------------------------|
| Inside City | | | | 1 | | | | | |
| Residential | 43,369 | 518,388 | 43,199 | 2/8" | 199,289 | 34,366 | 233,655 | 16,226 | 19,471 |
| Commercial | 24,435 | 85,982 | 7,165 | 3/4" | 285,821 | 175,808 | 461,629 | 38,469 | 38,469 |
| Industrial | 1,440 | 2,081 | 173 | 1. | 93,383 | 67,072 | 160,455 | 22,330 | 13,371 |
| Municipals | 1,616 | 4,441 | 370 | 1.25" | 9 | 0 | 9 | _ | _ |
| Miscellaneous | 3,442 | 8,250 | 688 | 1.5" | 9,103 | 1,502 | 10,605 | 2,943 | 884 |
| Subtotal | 74,302 | 619,142 | 51,595 | 2" | 18,523 | 3,942 | 22,465 | | 1,872 |
| | | | | * 2.5" | 0 | 0 | 0 | 0 | 0 |
| Outside City | | | | 3, | 3,908 | 754 | 4,662 | | 389 |
| Residential | 25,518 | 274,685 | 22,890 | .4 | 4,862 | 713 | 5,575 | | 465 |
| Commercial | 4,587 | 8,572 | 714 | .9 | 2,723 | 1,486 | 4,209 | • | 351 |
| Industrial | 83 | 24 | 2 | | 1,210 | 691 | 1,901 | 8,448 | 158 |
| Municipals | 06 | 71 | 9 | 10" | 315 | 120 | 435 | | 36 |
| Miscellaneous | 1,293 | 3,102 | 259 | 12" | 0 | 0 | 0 | 0 | 0 |
| Subtotal | 31,571 | 286,454 | 23,871 | | | | | | |
| Total | 105,873 | 905,596 | 75,466 | Total | 619,143 | 286,454 | 905,597 | 124,495 | 75,466 |

* 2.5 inch meters were eliminated because they are fire system meters.

BASE EXTRA-CAPACITY FACTOR DEVELOPMENT SALT LAKE CITY WATER UTILITIES WATER RATE STUDY

SLC_COSTALLOC.xls USAGE FILE SCHEDULE:

09/04/03 DATE:

BASE_EC RANGE:

> Max Hour Demand

Max Day Demand

Average Day Demand

| System Ratios | 1.00 | 2.73 | 3.42 | | | | | | |
|---|-------------------------|--------------------------------|-------------------|-------------------|-----------|---|-------------------|-----------------|------------------|
| | (1) Max Month | (2) Avg. Month | (3) System Max | (4) System Max | | (6) (7) System Max Class Max- | (7) Class Max- | (8) Max. Day | (9) Max. Hour |
| Customer Class | Consumption Consumption | Consumption | Day | Hour | Month | Month Cap. Fctr. Month Ratio Cap. Fctr. | Month Ratio | Cap. Fctr. | Cap. Factor |
| Inside City | 4,554,197 | 379,516 | 312,319 | 391,257 | 7,032,185 | 1.38 | 1.91 | 2.63 | 3.29 |
| Outside City | 2,038,918 | 169,910 | 312,319 | 391,257 | 7,032,185 | 1.38 | 2.20 | 3.02 | 3.79 |
| Average System Day Demand Total Annual System Usage, cof | ınd i, ccf | 114,403 41, 7 56,917 | | | | | | | |

Ratios are from 1997 Master Plan, derived from historic system data.

This is the consumption during the month when maximum consumption occurs for the system. July is the highest consumption month.

Average monthly consumption for the customer class.

System Max Day Demand ratio times the average system day demand shown.

System Max Hour Demand ratio times the average system day demand shown.

Total ccf use in July, the month in which maximum consumption occurs.

The ratio of Max Day Demand to the average day demand during the month of July, the Max consumption month. This results in a capacity factor (CF) for the Max Month. £36£66£66

The ratio of the average demand for the class in July to the annual average daily demand.

Column (6) times Column (7). The system Max Day relationship to system average demand is applied to each class. System Max Hour divided by System Max Day ratio is applied to the class Max Day ratio, Column (8).

BASE EXTRA-CAPACITY FACTOR DEVELOPMENT SALT LAKE CITY WATER UTILITIES WATER RATE STUDY

FILE: SLC_COSTALLOC.xls
SCHEDULE: USAGE
DATE: 09/04/03
RANGE: BASE_EC

| USAGE CALCULATIONS FROM BILL FREQUE | FROM BILL FRE | EQUENCY ANALYSIS | LYSIS | | | | | | |
|-------------------------------------|---------------|-------------------------|------------|------------|------------|----------------|------------|----------------|------------|
| | | | | FY 2002-03 | 7-Month | 7-Month Summer | 7-Mont | 7-Month Summer | |
| | FY 2001-02 | | | Less 2% | FY 2003-04 | FY 2003-04 | AWC. | AWC Approach | |
| Class | Annual Use | June-Sept | Oct-May | Annual Use | Apr-Oct | Nov-Mar | Base Use | Extra Capacity | Total |
| Inside City | | | | | | | | | |
| Residential | 10,497,872 | 6,146,993 | 4,350,879 | 10,398,849 | 8,545,860 | 1,932,413 | 4,637,790 | 5,761,059 | 10,398,849 |
| Commercial | 9,622,250 | 4,896,143 | 4,726,107 | 9,650,835 | 7,197,218 | 2,407,068 | 5,776,963 | 3,873,873 | 9,650,835 |
| Industry | 2,029,368 | 826,966 | 1,202,402 | 2,035,397 | 1,350,062 | 675,517 | 1,621,242 | 414,155 | 2,035,397 |
| Municipal | 1,577,172 | 1,070,431 | 506,742 | 1,581,857 | 1,518,545 | 55,682 | 133,638 | 1,448,220 | 1,581,857 |
| Miscellaneous | 3,188,987 | 1,733,242 | 1,455,745 | 3,198,461 | 2,461,172 | 721,862 | 1,732,468 | 1,465,992 | 3,198,461 |
| Subtotal | 26,915,649 | 14,673,775 | 12,241,875 | 26,865,399 | 21,072,857 | 5,792,542 | 13,902,101 | 12,963,298 | 26,865,399 |
| Outside City | | | | | | | | | |
| Residential | 8,206,593 | 4,959,881 | 3,246,712 | 8,129,183 | 6,736,703 | 1,422,965 | 3,415,115 | 4,714,068 | 8,129,183 |
| Commercial | 2,293,844 | 1,127,478 | 1,166,366 | 2,300,658 | 1,655,053 | 625,675 | 1,501,620 | 799,039 | 2,300,658 |
| Industry | 190,222 | 149,752 | 40,470 | 190,787 | 172,185 | 16,950 | 40,679 | 150,108 | 190,787 |
| Municípal | 406,503 | 304,300 | 102,203 | 407,711 | 381,076 | 23,102 | 55,445 | 352,265 | 407,711 |
| Miscellaneous | 617,973 | 378,540 | 239,433 | 619,809 | 506,019 | 108,420 | 260,209 | 359,600 | 619,809 |
| Subtotal | 11,715,135 | 6,919,951 | 4,795,184 | 11,648,148 | 9,451,036 | 2,197,112 | 5,273,068 | 6,375,080 | 11,648,148 |
| City and County | 38,630,784 | 21,593,726 | 17,037,059 | 38,513,547 | 30,523,893 | 7,989,654 | 19,175,169 | 19,338,378 | 38,513,547 |
| Exchange Total | 3,126,133 | | | | | | | | |
| | | | | | | | | | |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY

SERVICE UNITS

SLC_COSTALLOC.xls SERVUNIT FILE: SCHEDULE:

RANGE: SRVUNIT **DATE:** 09/02/03

| | Đ | (5) | (C) | 4) | (2) | (9) | <u>(-)</u> | 8) | (6) | (10) |
|-------------------------|---------------|---------|------------------------|-------------|---------|----------------|--------------|-------------------|-------------|---------|
| | Base Capacity | city | Mŝ | Maximum Day | ay | Ma | Maximum Hour | our | | |
| | FY 2003-04 | Average | Average Capacity Total | Total | Extra | Capacity Total | Total | Extra | Fourivalent | Annual |
| Class | _ | Use | Factor | Capacity | Ϋ́ | , | Capacity | Capacity Capacity | Meters | Bills |
| Inside City | | | | | | | | | | |
| Residential | 10,398,849 | 28,490 | 2.78 | 79,279 | 50,789 | 3.49 | 99,316 | 48,528 | 43,369 | 518,388 |
| Commercial | 9,650,835 | 26,441 | 2.40 | 63,573 | 37,133 | 3.01 | 79,641 | 42,509 | 24,435 | 85,982 |
| Industrial | 2,035,397 | 5,576 | 1.59 | 8,886 | 3,310 | 2.00 | 11,132 | 7,822 | 1,440 | 2,081 |
| Municipals | 1,581,857 | 4,334 | 3.29 | 14,239 | 9,905 | 4.12 | 17,838 | 7,933 | 1,616 | 4,441 |
| Miscellaneous | 3,198,461 | 8,763 | 2.66 | 23,342 | 14,579 | 3.34 | 29,242 | 14,663 | 3,442 | 8,250 |
| Subtotal | 26,865,399 | 73,604 | 2.63 | 193,401 | 119,798 | 3.29 | 242,283 | 122,486 | 74,302 | 619,142 |
| Outside City | | | | | | | | | | |
| Residential | 8,129,183 | 22,272 | 3.05 | 67,956 | 45,684 | 3.82 | 85,131 | 39,447 | 25,518 | 274,685 |
| Commercial | 2,300,658 | 6,303 | 2.35 | 14,817 | 8,513 | 2.94 | 18,561 | 10,048 | 4,587 | 8,572 |
| Industrial | 190,787 | 523 | 1.4 | 740 | 217 | 1.77 | 927 | 710 | 83 | 24 |
| Municipals | 407,711 | 1,117 | 3.29 | 3,670 | 2,553 | 4.12 | 4,597 | 2,045 | 06 | 71 |
| Miscellaneous | 619,809 | 1,698 | 3.95 | 6,704 | 5,006 | 4.95 | 8,399 | 3,393 | 1,293 | 3,102 |
| Subtotal | 11,648,148 | 31,913 | 3.02 | 96,470 | 64,557 | 3.79 | 120,852 | 56,295 | 31,571 | 286,454 |
| Total System | 38,513,547 | 105,517 | | | 184,354 | | 363,135 | 178,781 | 105,873 | 905,596 |
| | | | | | | | | | | |
| Inside City Allocations | | 69.8% | | | 65.0% | | | 68.5% | | |

NOTES:

(1) Annual use is based on FY 2001-02 use, growth to 2003-04 levels with conservation included.
(2) Column (1) divided by 365.
(3) Taken from Column (8) in the Base Extra-Capacity worksheet.
(4) Column (3) times Column (2).
(5) Column (4) minus Column (2).
(6) Taken from Column (9) in the Base Extra-Capacity worksheet.
(7) Column (6) times Column (5).
(8) Column (7) minus Column (5).
(9) Equivalent meters calculated on a cost equivalency basis.
(10) Annual bills tabulated from billing records, projected to FY 2003-04.

31.5%

35.0%

30.2%

Outside City Allocations

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY UNIT COSTS

SLC_COSTALLOC.xls UNITCOST

FILE: SCHEDULE: DATE: 0

09/02/03 UCOST

| | | | L | Extra Capacity | pacity | Customer Costs | r Costs | Public Fire | Total |
|-------------------|--|---|--|--|--|--|---------------------------------|---|---------------------------------|
| | Item | Total Cost | Base | Maximum Day | Maximum Hour | Meters & Services | Billing & Collecting | Protection Service | Cost of Service |
| 7 7 | Total System Number of Units Amount Units | of Units | 38,513,547 ccf | 184,354 ccf | 178,781 ccf | 105,873 Equiv. Meter | 905,596 Bills | 9,721 Equiv. Connect. | ti |
| ω 4 | O&M Expense Total Unit Cost | \$24,943,872 | \$10,901,090 0.2830 | \$6,981,326 37.8690 | \$1,826,835 10.2183 | \$285,553 2.6971 | \$4,232,278 4.6735 | \$716,791 73.7364 | \$24,943,872 |
| 9 | Depreciation Expense Total Unit Cost | \$5,530,271 | \$1,467,339 0.0381 | \$2,587,618 14.0361 | \$912,006 5.1013 | \$490,726 4.6350 | \$0 0.0000 | \$199,694 20.5425 | \$5,657,383 |
| 7 8 9 01 | Rate Base \$207,742, 7 Total Rate Base \$207,742, 8 Unit rate base cost 9 Inside City Return on Rate Base 0 Outside City Return on Rate Base | \$207,742,668 tate Base Rate Base | \$67,562,624 1.7543 4.86% 9.34% | \$93,412,039 506.6981 4.86% 9.34% | \$32,701,152 182.9121 4.86% 9.34% | \$6,249,028 59,0238 4.86% 9.34% | \$0 0.0000 4.86% 9.34% | \$7,817,824 804,2202 4.86% 9.34% | \$207,742,668 4.86% 9.34% |
| 12 2 5 | Unit Return on Rate Base Inside City \$/Unit Outside City \$/Unit | ase | \$0.0853 \$0.1638 | \$24.6419 \$47.3190 | \$8.8954 \$17.0816 | \$2.8705 \$5.5121 | \$0.0000 | \$39,1111 \$75.1037 | |
| 4 5 5 | Total Unit Cost of Service Inside City \$/Unit Outside City \$/Unit | ice | \$0.4065 \$0.4850 | \$76.5471 \$99.2242 | \$24.2150 \$32.4012 | \$10.2026 | \$4.6735 \$4.6735 | \$133.3900 \$169.3826 | \$0.0000 |

SALT LAKE CITY WATER UTILITIES

WATER RATE STUDY COST OF CAPITAL

FILE: SLC_COSTALLOC.xls

SCHEDULE: ROR

DATE: 09/02/03 RANGE: COCAP

Weighted Cost of Capital

| | • | | | Weighted |
|----------|---------------|--------|--------|----------|
| | Amount | Weight | Return | ROR (1) |
| Debt | \$32,995,000 | 15.9% | 4.94% | 0.78% |
| * Equity | \$174,747,668 | 84.1% | 10.17% | 8.55% |
| Total | \$207,742,668 | 100.0% | | 9.34% |

^{*} Based on allowed return on equity for large water utilities.

| | | | | | Weighted |
|--------|------|--------------|--------|-------|----------|
| | | | | | Cost of |
| Series | ; | Debt | Weight | Rate | Debt |
| | 1993 | \$9,235,000 | 28.0% | 5.35% | 1.5% |
| | 1997 | \$23,760,000 | 72.0% | 4.78% | 3.4% |
| Total | | \$32,995,000 | 100.0% | | 4.9% |

| | Series 1993 | Total | | | Series 1997 | Total | |
|-----------|-------------|-------------|--------|----------|-------------|--------------|--------|
| Date | Principal | Outstanding | Coupon | Date | Principal | Outstanding | Coupon |
| 2/1/2002 | | | | | | | |
| 2/1/2003 | \$2,515,000 | \$9,235,000 | 5.15% | 2/1/2003 | \$380,000 | \$23,760,000 | 4.40% |
| 2/1/2004 | 2,645,000 | 6,720,000 | 5.25% | 2/1/2004 | 400,000 | 23,380,000 | 4.50% |
| 2/1/2005 | 2,780,000 | 4,075,000 | 5.35% | 2/1/2005 | 1,075,000 | 22,980,000 | 4.60% |
| 2/1/2006 | 130,000 | 1,295,000 | 5.75% | 2/1/2006 | 1,330,000 | 21,905,000 | 4.60% |
| 2/1/2007 | 140,000 | 1,165,000 | 5.75% | 2/1/2007 | 1,390,000 | 20,575,000 | 4.63% |
| 2/1/2008 | 150,000 | 1,025,000 | 5.75% | 2/1/2008 | 1,455,000 | 19,185,000 | 4.70% |
| 2/1/2009 | 155,000 | 875,000 | 5.75% | 2/1/2009 | 1,525,000 | 17,730,000 | 4.90% |
| 2/1/2010 | 165,000 | 720,000 | 5.75% | 2/1/2010 | 1,600,000 | 16,205,000 | 5.00% |
| 2/1/2011 | 175,000 | 555,000 | 5.75% | 2/1/2011 | 1,680,000 | 14,605,000 | 5.00% |
| 2/1/2012 | 185,000 | 380,000 | 5.75% | 2/1/2012 | 1,760,000 | 12,925,000 | 5.10% |
| 2/1/2013 | 195,000 _ | 195,000 | 5.75% | 2/1/2013 | 1,850,000 | 11,165,000 | 5.10% |
| Average C | ost | \$9,235,000 | 5.35% | 2/1/2014 | 2,155,000 | 9,315,000 | 5.20% |
| | _ | | | 2/1/2015 | 2,265,000 | 7,160,000 | 5.25% |
| | | | | 2/1/2016 | 2,385,000 | 4,895,000 | 5.25% |
| | | | | 2/1/2017 | 2,510,000 | 2,510,000 | 5.25% |
| | | | | Average | Cost | \$23,760,000 | 4.78% |

⁽¹⁾ Does not add due to rounding.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY AUTHORIZED RETURNS

FILE: SLC_COSTALLOC.xls

SCHEDULE: ROR
DATE: 09/02/03

RANGE: ROE

Decision/Resolution

| Company Name | Number | ROR | ROE |
|----------------------|-----------|--------|--------|
| | | | |
| Apple Valley Ranchos | 99-03-032 | 9.61% | 10.15% |
| California American | 00-03-053 | 8.73% | 9.95% |
| California Water | 01-08-039 | 8.95% | 9.80% |
| Citizens Utilities | 98-10-056 | 8.18% | 9.60% |
| Dominguez | 00-10-027 | 9.23% | 9.95% |
| Great Oaks | 94-03-077 | 10.56% | 11.50% |
| San Gabriel Valley | 96-07-057 | 10.03% | 10.30% |
| San Jose | 01-04-034 | 9.11% | 9.95% |
| Santa Clarita | 97-09-001 | 10.09% | 10.20% |
| Suburban | 96-04-076 | 9.15% | 10.00% |
| Valencia | 94-12-020 | 9.40% | 10.50% |
| | | 9.37% | 10.17% |

Source: California Public Utilities Commission

SALT LAKE CITY WATER UTILITIES ADJUSTED RATE OF RETURN WATER RATE STUDY

Revenue Requirement

\$43,733,562 \$50,001,724 Utility Basis Cash Basis

Difference

\$730,083 \$19,400,468 9.34% \$7,817,824 Protection Fire Meters \$6,249,028 9.34% \$583,578 Base Capacity Maximum Day Maximum Hour \$67,562,624 \$93,412,039 \$32,701,152 9.34% \$3,053,863 Utility Return on Rate Base 9.34% \$8,723,472 9.34% \$6,309,472 Rate of Return Total Return Rate Base

\$207,742,668

Total

Fire

69.5% 30.5% Protection 68.5% 31.5% 100.0% Rate Base Allocation 35.0% 65.0% 100.0% 30.2% 69.8% Inside City Outside City Total

\$2,381,441 \$67,686,624 \$7,817,824 \$207,742,668 \$5,436,384 \$140,056,044 Total Protection \$1,863,441 \$4,385,587 Meters Base Capacity Maximum Day Maximum Hour \$22,404,085 \$10,297,068 \$32,701,152 \$32,710,840 \$60,701,199 \$20,433,835 \$47,128,790 Outside City Inside City

Total

Return on Rate Base

\$13,079,416 \$6,321,052 \$19,400,468 Total Fire Protection \$730,083 \$507,688 \$222,396 \$409,557 \$583,578 \$174,021 Meters Base Capacity Maximum Day Maximum Hour \$2,092,251 \$961,612 \$3,053,863 \$5,668,704 \$3,054,768 \$8,723,472 \$1,908,255 \$6,309,472 \$4,401,217 Outside City Inside City Area Total \$6,268,162 Net Adjusted Return on Rate Base \$13,132,306 City Adjustment

e City \$6,321,052 Total \$13,132,306 \$6,811,254 Inside City Outside City

4.86% 9.34% Inside City Adjusted ROR Outside City Adjusted ROR

Calculations for Adjusted Rate of Return

SLC_COSTALLOC.xls

FILE SCHEDULE:

REVRECON

RANGE: ADJROR **DATE:** 09/04/03

| Item | Description | Amount |
|------|--|---------------|
| - | Utility Basis Revenue Requirement | \$50,001,724 |
| 7 | Cash Basis Revenue Requirement | 43,733,562 |
| က | Difference, Cash Needs Adjustment Amount | \$6,268,162 |
| 4 | | |
| S. | Rate Base | \$207,742,668 |
| 9 | Rate of Return | 9.34% |
| 7 | Utility Return on Rate Base (Items 6 x Item 5) | \$19,400,468 |
| €0 | | |
| 6 | Rate Base Allocation (a) | (p) |
| 10 | Inside City 67.4% | \$140,056,044 |
| 1 | Outside City 32.6% | 67,686,624 |
| 12 | Total (Item 10 + Item 1 | \$207,742,668 |
| 13 | | |
| 4 | Return on Rate Base | |
| 15 | Inside City (Item 10a x Item 7) | \$13,079,416 |
| 16 | Outside City | 6,321,052 |
| 17 | Total Utility Return on Rate Base (Item 7) | 19,400,468 |
| 18 | City Adjustment for Cash Needs Revenue | (6,268,162) |
| 19 | Net Adjusted Return on Rate Base | \$13,132,306 |
| 20 | | |
| 21 | Inside City Adjusted Rate of Return | |
| 22 | Inside City Return on Rate Base | \$6,811,254 |
| 23 | Inside City Rate Base | \$140,056,044 |
| 24 | Adjusted ROR (Item 22 / Item 23) | 4.86% |
| 25 | | |
| 56 | Outside City | \$6,321,052 |
| 27 | Outside City Rate Base | \$67,686,624 |
| 28 | Adjusted ROR (Item 26 / Item 27) | 9.34% |
| 29 | | |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY CASH NEEDS BASIS REVENUE REQUIREMENTS

FILE: SLC_COSTALLOC.xIS SCHEDULE: CASHALLOC DATE: 09/02/03 RANGE: CASHBAS

| | PROJECTED | Average Day | Maximum Day | Maximum Hour | Customer Costs Meters & Billin | er Costs Billing & | Fire Protection | Public Fire Protection | Total Cost of |
|----------------------------------|------------|----------------|----------------|-----------------|-----------------------------------|-----------------------|--------------------|---------------------------|------------------|
| EXPENDITURES | FY 2003-04 | Demand | Demand | Demand | Services | Collecting | Service | Service | Service |
| 5101 Water Supply | | | | | | | | | |
| 00100 Canal Maint | \$446,165 | \$0 | \$428,765 | \$0 | 0\$ | \$0 | \$17,400 | \$ | |
| 00200 Source Of Wir | 202,557 | 71,303 | 123,354 | 0 | 0 | 0 | 7,900 | 0 | |
| Subtotal | 648,722 | 71,303 | 552,119 | 0 | 0 | 0 | 25,300 | 0 | 648,722 |
| 5103 Water Power & Pumping | | | | | | | | | |
| 00300 Deep Wells | 579,111 | 0 | 397,847 | 158,679 | 0 | 0 | 22,585 | 0 | |
| 00400 Booster Pmpng | 1,069,892 | 0 | 735,011 | 293,155 | 0 | 0 | 41,726 | 0 | |
| 00500 Ingtion Pmpng | 210,015 | 0 | 201,824 | 0 | 0 | 0 | 8,191 | | |
| Subtotal | 1,659,018 | 0 | 1,334,683 | 451,834 | 0 | 0 | 72,502 | 0 | 1,859,018 |
| 5105 Water Purification | | | | | | | | | |
| 00600 Watershed Patrol | 1,180,161 | 1,134,134 | 0 | 0 | 0 | 0 | 46,026 | 0 | |
| 00700 City Creek | 652,114 | 229,554 | 397,128 | 0 | 0 | 0 | 25,432 | 0 | |
| 00800 Parleys | 967,647 | 347,666 | 601,463 | 0 | 0 | 0 | 38,518 | 0 | |
| 00900 Big Cottonwood | 903,562 | 318,067 | 550,256 | 0 | 0 | 0 | 35,239 | 0 | |
| 01000 Cross Connection-Sample | 207,467 | 73,031 | 126,344 | 0 | 0 | 0 | 8,091 | 0 | |
| 01100 Metropolitian Water | 000'006'9 | 6,630,900 | 0 | 0 | 0 | 0 | 269,100 | 0 | |
| 01200 Little Dell Dam | 41,731 | 0 | 40,104 | 0 | 0 | 0 | 1,628 | 0 | |
| 01800 Water Quality | 606,812 | 213,607 | 369,540 | 0 | 0 | 0 | 23,666 | 0 | |
| 03500 Little Dell Recreation | | 37,829 | 65,444 | 0 | 0 | 0 | 4,191 | 0 | |
| Subtotal | 11,586,958 | 8,984,788 | 2,150,279 | 0 | 0 | 0 | 451,891 | 0 | 11,586,958 |
| 5107 Transmission & Distribution | | | | | | | | | |
| 01300 Engineering | 739,736 | 710,886 | 0 | 0 | 0 | 0 | 28,850 | | |
| 01400 Distribution | 2,249,504 | 0 | 1,545,400 | 616,373 | 0 | 0 | 87,731 | | |
| 01500 Computer | 296,170 | 284,620 | 0 | 0 | 0 | 0 | 11,551 | 0 | |
| 01600 Emrgncy/ Gis In 2001 | 543,208 | 522,022 | 0 | 0 | 0 | 0 | 21,185 | 0 | |
| 01700 Maintenance | 2,834,420 | 0 | 1,947,235 | 776,643 | 0 | 0 | 110,542 | 0 | |
| Subtotal | 6,663,037 | 1,517,528 | 3,492,634 | 1,393,016 | 0 | 0 | 259,858 | 0 | 6,663,037 |
| 5109 Shops & Maintenance | | | | | | | | | |
| 02000 Wrk Ordr Office | 194,924 | 194,924 | 0 | 0 | 0 | 0 | 0 | | |
| 02100 Storehouse | 182,957 | 182,957 | 0 | 0 | 0 | 0 | 0 | | |
| 02200 General Maint | 661,945 | 661,945 | 0 | 0 | 0 | 0 | 0 | | |
| 02300 Fleet Maint | 480,773 | 480,773 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 02400 Meter Repair | 345,401 | 0 | 0 | 0 | 345,401 | 0 | 0 | 0 | |
| 02500 Elect & Telmtry | 387,099 | 372,002 | 0 | 0 | 0 | 0 | 15,097 | | |
| 03000 Safety Program | 190,811 | 190,811 | 0 | 0 | 0 | 0 | ٥ | 0 | |
| Subtotal | 2,443,910 | 2,083,411 | 0 | 0 | 345,401 | ٥ | 15,097 | 0 | 2,443,910 |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY CASH NEEDS BASIS REVENUE REQUIREMENTS

FILE: SLC_COSTALLOC.xls SCHEDULE: CASHALLOC DATE: 09/02/03 RANGE: CASHBAS

| | , | 4 | Allocated Costs | | | | | Reallocation | |
|---|--------------|--------------|-----------------|---------------|----------------|-------------|-------------|--------------|--------------|
| | | Average | Maximum | Maximum | Customer Costs | r Costs | Fire | Public Fire | Total |
| | PROJECTED | Day | Day | Hour | Meters & | Billing & | Protection | Protection | Cost of |
| EXPENDITURES | FY 2003-04 | Demand | Demand | Demand | Services | Collecting | Service | Service | Service |
| 5111 Water Customer Service | | | | | | | | | |
| 02500 Meter Reading | 858,583 | 0 | 0 | 0 | 0 | 858,583 | 0 | 0 | |
| 02700 Billing | 1,232,819 | 0 | 0 | 0 | 0 | 1,232,819 | 0 | 0 | |
| 02800 Customer Serv | 925,509 | 0 | 0 | 0 | 0 | 925,509 | 0 | 0 | |
| 02900 Accounting [1] | 449,592 | 0 | 0 | 0 | 0 | 449,592 | 0 | 0 | |
| Subtotal | 3,466,502 | 0 | 0 | 0 | 0 | 3,466,502 | 0 | 0 | 3,466,502 |
| 5113 Water Administration | | | | | | | | | |
| 03100 Adminístration [1] | 314,277 | 0 | 0 | 0 | 0 | 314,277 | 0 | 0 | |
| 03200 Gnral Oprtions | 1,528,696 | 223,494 | 386,644 | 154,211 | 0 | 764,348 | 0 | 0 | |
| 03300 Cntrcts & Const | 314,941 | 0 | 0 | 0 | 0 | 314,941 | 0 | 0 | |
| 03400 Development & Review | 259,244 | 0 | 0 | 0 | 0 | 259,244 | 0 | 0 | |
| Subtotal | 2,417,158 | 223,494 | 386,644 | 154,211 | О | 1,652,810 | 0 | 0 | 2,417,158 |
| Other Operating Expenses | 675 656 | 181 425 | 212 866 | 125 184 | c | c | 25.181 | c | |
| 2995 Payment In Lieu Of Tayes | 440 840 | 123 873 | 214 301 | 85.473 | · c | o C | 17 193 | | |
| 2542 Uncollectable Acets | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Subtotal | 1.086.496 | 305,299 | 528.167 | 210.656 | 0 | 0 | 42.373 | 0 | 1.086.496 |
| Total | \$30,171,800 | \$13,185,823 | \$8,444,525 | \$2,209,717 | \$345,401 | \$5,119,312 | \$867,022 | \$0 | 30,171,800 |
| Percent Allocated: | | 43.7% | 28.0% | 7.3% | 1.1% | 17.0% | 2.9% | | |
| Adjustments | | | | | | | | | |
| Grants & Other Related | 855,000 | 373,656 | 239,299 | 62,618 | 9,788 | 145,070 | 24,569 | 0 | |
| Other Sources | 20,000 | 21,851 | 13,994 | 3,662 | 572 | 8,484 | 1,437 | 0 | |
| Interest Income | 197,800 | 86,443 | 55,361 | 14,486 | 2,264 | 33,561 | 5,684 | 0 | |
| Other Income | 2,087,150 | 912,136 | 584,154 | 152,858 | 23,893 | 354,131 | 59,977 | 0 | |
| Excess Cash Balance | 2,037,978 | 890,647 | 570,392 | 149,257 | 23,330 | 345,788 | 58,564 | 0 | |
| Subtotal | 5,227,928 | \$2,284,734 | \$1,463,200 | \$382,882 | \$59,848 | \$887,033 | \$150,231 | \$0 | 5,227,928 |
| Adjusted O&M Revenue Requirements | \$24,943,872 | \$10,901,090 | \$6,981,326 | \$1,826,835 | \$285,553 | \$4,232,278 | \$716,791 | \$0 | 24,943,872 |
| Capital Costs | 4000 | 0000 | 240.004 | 2 2 4 4 6 2 2 | 000 | Ċ | 000 | Ċ | |
| 2700 Capital Experiorules 2545 Democration Expense | 008,040,41 | 060,000,4 | 0,510,204 | 2,411,102 | 422,342 | 0 0 | 020,020 | o c | |
| 2811, 2821, 2825 Debt Service | 4.742.704 | 1.542.435 | 2,132,569 | 746.558 | 142.663 | 0 | 178.479 | 0 | |
| Total Capital Costs | 18,789,690 | 6,110,833 | 8,448,833 | 2,957,719 | 565,206 | 0 | 707,098 | 0 | 18,789,690 |
| Net Revenue Requirement | \$43,733,562 | \$17,011,922 | \$15,430,159 | \$4,784,554 | \$850,758 | \$4,232,278 | \$1,423,890 | 9 | \$43,733,562 |
| | | | | - | | | | | |

[1] Conservation program costs of \$200,000 removed and added to Admininstration.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY UTILITY BASIS REVENUE REQUIREMENTS

FILE: SLC_COSTALLOC.xls
SCHEDULE: UTILALLOC
DATE: 09/02/03
RANGE: UT_ALLOC

| | • | | Allocated Costs | | | | | Reallocation | |
|--|-------------------------|----------------|-----------------|-----------------|----------|---------------------------------------|--------------------|---------------------------|------------------|
| Y DENOTED TO THE TOTAL THE TOTAL TO THE TOTAL THE TOTAL TO THE TOTAL THE TOTAL TO T | PROJECTED EV 2003-04 | Average Day | Maximum Day | Maximum Hour | Meters & | Customer Costs | Fire Protection | Public Fire Protection | Total Cost of |
| | | | | | 2014100 | S S S S S S S S S S S S S S S S S S S | 200 | Setalce | aniaiac |
| 5101 Water Supply | 207 2778 | ę | 247.00 765 | é | 6 | ç | 1 | | |
| COLOG Callal Mallit | 9440, 103 | 4 202 | 4420,753 | 9 | 9 | 0,4 | 417,400 | 77 | |
| School Source Of Wall | 648 722 | 71 303 | 552 119 | | | | 006,7 | | 240 700 |
| | 1000 | 200 | 21.100 | | | > | 20,000 | | 040,122 |
| 5103 Water Power & Pumping | | | | | | | | | |
| 00300 Deep Wells | 579,111 | 0 | 397,847 | 158,679 | 0 | 0 | 22,585 | 0 | |
| 00400 Booster Pmpng | 1,069,892 | 0 | 735,011 | 293,155 | 0 | 0 | 41,726 | | |
| 00500 Irrglion Pmpng | 210,015 | 0 | 201,824 | 0 | 0 | 0 | 8,191 | 0 | |
| Subtotal | 1,859,018 | 0 | 1,334,683 | 451,834 | 0 | 0 | 72,502 | 0 | 1,859,018 |
| 5105 Water Purification | | | | | | | | | |
| 00600 Watershed Patrol | 1,180,161 | 1,134,134 | 0 | 0 | 0 | 0 | 46.026 | 0 | |
| 00700 City Creek | 652,114 | 229,554 | 397,128 | 0 | 0 | 0 | 25,432 | | |
| 00800 Parleys | 987,647 | 347,668 | 601,483 | 0 | 0 | | 38,518 | 0 | |
| 00900 Big Cottonwood | 903,562 | 318,067 | 550,256 | 0 | 0 | 0 | 35,239 | 0 | |
| 01000 Cross Connection-Sample | 207,467 | 73,031 | 126,344 | 0 | 0 | | 8,091 | 0 | |
| 01100 Metropolitian Water | 6,900,000 | 6,630,900 | 0 | 0 | 0 | | 269,100 | 0 | |
| 01200 Little Dell Dam | 41,731 | 0 | 40,104 | 0 | 0 | 0 | 1,628 | 0 | |
| 01800 Water Quality | 606,812 | 213,607 | 369,540 | 0 | 0 | 0 | 23,666 | | |
| 03500 Little Dell Recreation | 107,464 | 37,829 | 65,444 | 0 | 0 | 0 | 4,191 | 0 | |
| Subtotal | 11,586,958 | 8,984,788 | 2,150,279 | 0 | 0 | 0 | 451,891 | 0 | 11,586,958 |
| 5107 Transmission & Distribution | | | | | | | | | |
| 01300 Engineering | 739,736 | 710,886 | 0 | 0 | 0 | 0 | 28,850 | 0 | |
| 01400 Distribution | 2,249,504 | 0 | 1,545,400 | 616,373 | 0 | | 87,731 | 0 | |
| 01500 Computer | 296,170 | 284,620 | 0 | 0 | 0 | | 11,551 | | |
| 01600 Emrgncy/ Gis In 2001 | 543,208 | 522,022 | 0 | 0 | 0 | | 21,185 | | |
| 01700 Maintenance | 2,834,420 | 0 | 1,947,235 | 776,643 | Q | 0 | 110,542 | 2 0 | |
| Subtotal | 6,663,037 | 1,517,528 | 3,492,634 | 1,393,016 | 0 | 0 | 259,858 | 3 0 | 6,663,037 |
| 5109 Shops & Maintenance | | | | | | | | | |
| 02000 Wrk Ordr Office | 194,924 | 194,924 | 0 | 0 | 0 | | 0 | 0 | |
| 02100 Storehouse | 182,957 | 182,957 | 0 | 0 | 0 | | 0 | 0 | |
| 02200 General Maint | 661,945 | 661,945 | 0 | 0 | 0 | | 0 | 0 | |
| 02300 Fleet Maint | 480,773 | 480,773 | O | 0 | 0 | 0 | Ç | | |
| 02400 Meter Repair | 345,401 | 0 | 0 | 0 | 345,401 | 0 | 0 | | |
| 02500 Elect & Telmtry | 387,099 | 372,002 | 0 | 0 | 0 | | 15,097 | | |
| 03000 Safety Program | 190,811 | 190,811 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Subtotal | 2,443,910 | 2,083,411 | 0 | 0 | 345,401 | 0 | 15,097 | 0 | 2,443,910 |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY UTILITY BASIS REVENUE REQUIREMENTS

FILE: SLC_COSTALLOC.xls
SCHEDULE: UTILALLOC
DATE: 09/02/03
RANGE: UT_ALLOC

| | ' | ٩ | Allocated Costs | | | | | Reallocation | |
|--------------------------------------|--------------|----------------|-----------------|-----------------|--------------------|----------------|--------------------|---------------------------|------------------|
| | PRDJECTED | Average Day | Maximum Day | Maximum Hour | Custom Meters & | Customer Costs | Fire Protection | Public Fire Protection | Total Cost of |
| EXPENDITURES | FY 2003-04 | Demand | Demand | Demand | Services | Collecting | Service | Service | Service |
| 5111 Water Customer Service | 0 | Ċ | c | · | • | 6 L | • | • | |
| UZ600 Meter Keading | 858,583 | 0 | > | 5 | 0 | 858,583 | 0 | 0 | |
| 02700 Billing | 1,232,819 | 0 | 0 | 0 | 0 | 1,232,819 | 0 | 0 | |
| 02800 Customer Serv | 925,509 | 0 | 0 | 0 | 0 | 925,509 | 0 | 0 | |
| 02900 Accounting [1] | 449,592 | 0 | 0 | 0 | 0 | 449,592 | 0 | 0 | |
| Subtotal | 3,466,502 | 0 | 0 | 0 | 0 | 3,466,502 | 0 | 0 | 3,466,502 |
| 5113 Water Administration | | | | | | | | | |
| 03100 Administration [1] | 314,277 | 0 | 0 | 0 | 0 | 314,277 | 0 | 0 | |
| 03200 Gnral Oprtions | 1,528,696 | 223,494 | 386,644 | 154,211 | 0 | 764,348 | 0 | 0 | |
| 03300 Cntrcts & Const | 314,941 | 0 | 0 | 0 | 0 | 314,941 | 0 | 0 | |
| 03400 Development & Review | 259,244 | 0 | 0 | 0 | 0 | 259,244 | 0 | 0 | |
| Subtotal | 2,417,158 | 223,494 | 386,644 | 154,211 | 0 | 1,652,810 | 0 | 0 | 2,417,158 |
| Other Operating Expenses | | | | | | | | | |
| 2921.01 Contribution To General Fund | 645,656 | 181,425 | 313,866 | 125,184 | 0 | 0 | 25,181 | 0 | |
| 2995 Payment In Lieu Of Taxes | 440,840 | 123,873 | 214,301 | 85,473 | 0 | 0 | 17,193 | 0 | |
| 2542 Uncollectable Accts | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Subtotal | 1,086,496 | 305,299 | 528,167 | 210,656 | 0 | 0 | 42,373 | 0 | 1,086,496 |
| Total | \$30,171,800 | \$13,185,823 | \$8,444,525 | \$2,209,717 | \$345,401 | \$5,119,312 | \$867,022 | 0\$ | 30,171,800 |
| Adjustments | | | | | | | | | |
| Grants & Other Related Sources | 855,000 | 373,656 | 239,299 | 62,618 | 9,788 | 145,070 | 24,569 | | |
| Other Sources | 50,000 | 21,851 | 13,994 | 3,662 | 572 | 8,484 | 1,437 | | |
| Interest Income | 197,800 | 86,443 | 55,361 | 14,486 | 2,264 | 33,561 | 5,684 | | |
| Other Income | 2,087,150 | 912,136 | 584,154 | 152,858 | 23,893 | 354,131 | 59,977 | | |
| Cash Balance | 2,037,978 | 890,647 | 570,392 | 149,257 | 23,330 | 345,788 | 58,564 | | |
| Total | 5,227,928 | \$2,284,734 | \$1,463,200 | \$382,882 | \$59,848 | \$887,033 | \$150,231 | \$0 | 5,227,928 |
| Adjusted D&M Revenue Requirements | \$24,943,872 | \$10,901,090 | \$6,981,326 | \$1,826,835 | \$285,553 | \$4,232,278 | \$716,791 | 0\$ | 24,943,872 |
| | | | | | | | | | |

SALT LAKE CITY WATER UTILITIES
WATER RATE STUDY
UTILITY BASIS REVENUE REQUIREMENTS

FILE: SLC_COSTALLOC xis SCHEDULE: UTILALLOC DATE: 09/02/03 RANGE: UT_ALLOC

| | | 4 | Alfocated Costs | | | | | Reallocation | |
|---|--------------|--|-----------------|----------------------|-------------------------------------|-------------|-------------|--------------|------------------|
| | • | Average | Maximum | Maximum | Customer Costs | er Costs | Fire | Public Fire | Total |
| | PROJECTED | Day | Day | Hour | Meters & | Billing & | Protection | Protection | Cost of |
| EXPENDITURES | FY 2003-04 | Demand | Demand | Demand | Services | Collecting | Service | Service | Service |
| Capital Costs | FY 2003-04 | | | | | | | | |
| 2545 Depreciation Expense | 5,657,383 | \$1,467,339 | \$2,587,618 | \$912,006 | \$490,726 | \$0 | \$199,694 | | |
| Rate Base | 204,022,857 | | | | | | | | |
| Working Capital (45 days) | \$3,719,811 | | | | | | | | |
| Total Rate Base | 207,742,668 | 67,562,624 | 93,412,039 | 32,701,152 6,249,028 | 6,249,028 | 0 | 7,817,824 | | 207,742,668 |
| Rate Of Return [2] | 9.34% | 9.34% | 9.34% | 9.34% | 9.34% | 9.34% | 9.34% | 9.34% | |
| Return On Rate Base | \$19,400,468 | \$6,309,472 | \$8,723,472 | \$3,053,863 | \$583,578 | \$0 | \$730,083 | \$0 | 19,400,468 |
| Net Rate Revenue Requirement | \$50,001,724 | \$50,001,724 \$18,677,900 \$18,292,415 | \$18,292,415 | \$5,792,704 | \$5,792,704 \$1,359,857 \$4,232,278 | \$4,232,278 | \$1,646,569 | \$0 | 50,001,724 |
| Adjusted Revenue Requirement for Cash Basis | \$43,734,000 | \$43,734,000 \$16,568,667 | \$15,575,753 | \$4,790,017 | \$4,790,017 \$1,163,582 \$4,232,278 | \$4,232,278 | \$1,403,265 | \$0 | \$0 \$43,733,562 |
| Adjusted Revenue Requirement 3% Increase | \$41,464,710 | | | | | | | | |

^[1] Conservation program costs of \$200,000 removed and added to Admininstration. [2] See Weighted Cost of Capital in ROR sheet.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY

UTILITY METHOD COST ALLOCATION

SCHEDULE: COSTALLOC

FILE: SLC_COSTALLOC.XLS

DATE: 09/02/03 RANGE: CLASSCOST

Inside City

| | | | | | | | Keallocation | |
|----------------------------|--------------|----------------|-------------|----------------|-------------|--------------|--------------------|------------------------|
| | <u> </u> | Extra Capacity | apacity | Customer Costs | r Costs | Public Fire | Public Fire | Total |
| | • | Maximum | Maximum | Meters & | Billing & | Protection | Protection | Cost of |
| Item | Base | Day | Hour | Services | Collecting | Service | Service | Service |
| System Costs | \$16,568,667 | \$15,575,753 | \$4,790,017 | \$1,163,582 | \$4,232,278 | \$1,260,031 | | \$43,590,328 |
| Units | çç | cď | င် | Equiv. Meters | Bills | Equiv. Conn. | Equiv. Conn. | |
| City Unit Costs of Service | \$0.4065 | \$76.5471 | \$24.2150 | \$10.2026 | \$4.6735 | \$133.3900 | \$133.3900 | |
| Fire Protection Service | | | | | | | | |
| Units of Service | 0 | 0 | 0 | 0 | 0 | 6,070 | 0 | |
| Allocated Cost of Service | \$0 | \$0 | \$0 | 80 | \$0 | \$809,677 | \$0 | \$809,677 |
| Units of Service | 26,865,399 | 119,798 | 122,486 | 74,302 | 619,142 | | | |
| Total City Allocations | \$10,919,669 | \$9,170,152 | \$2,965,987 | \$758,077 | \$2,893,543 | | \$809,677 | \$809,677 \$27,517,106 |
| | | | | | | | | |

Outside City

| | | | | | | | Reallocation | |
|--------------------------------|--------------|--------------|----------------|----------------|-------------|--------------|---------------|--------------|
| | | Extra C | Extra Capacity | Customer Costs | r Costs | Public Fire | Public Fire | Total |
| | • | Maximum | Maximum | Meters & | Billing & | Protection | Protection | Cost of |
| Item | Base | Day | Hour | Services | Collecting | Service | Service | Service |
| System Costs | \$16,568,667 | \$15,575,753 | \$4,790,017 | \$1,163,582 | \$4,232,278 | \$1,260,031 | \$1,260,031 | \$43,590,328 |
| Units | СĆ | oct | Ş | Equiv. Meters | Bills | Equiv. Conn. | Equiv. Meters | |
| County Unit Costs of Service | \$0.4850 | \$99,2242 | \$32.4012 | \$12.8442 | \$4.6735 | \$169.3826 | 169.3826 | |
| Fire Protection Service | | | | | | | | |
| Units of Service | 0 | 0 | 0 | 0 | 0 | 2,659 | | |
| Allocated Cost of Service | \$0 | \$0 | \$0 | \$0 | \$0 | \$450,388 | | \$450,388 |
| Total Units of Service | 11,648,148 | 64,557 | 56,295 | 31,571 | 286,454 | | | |
| Total Outside City Allocations | \$5,648,998 | \$6,405,601 | \$1,824,029 | \$405,505 | \$1,338,735 | | \$450,388 | \$16,073,257 |
| Subtotal, Cost Allocations | \$16,568,667 | \$15,575,753 | \$4.790.017 | \$1,163.582 | \$4.232.278 | \$1,260,066 | | \$43,590,363 |
| Total System Allocated | \$43,590,363 | | | | | | | |

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY

SLC_COSTALLOC.XLS

RATES_FIX 09/02/03

SCHEDULE:

DATE: RANGE:

CUSTCOST

CUSTOMER CHARGE CALCULATIONS

Revenue Required from Customer Charge

Water Shed & Water Rights Purchases (WWRP) Adjusted Revenue Required from Fixed Charge Total Revenue Required from Fixed Charge Billing & Collecting Meters & Services Demand

1,163,582 4,232,278 5,858,196 \$5,858,196 462,336

| | 3/4" Meter | | Inside City | | Outside City | Equivalent | |
|------------|-------------|-------------|-------------|---------------------|---------------------|------------|------------|
| | Equivalent | | Equivalent | | Equivalent | Flow | Equivalent |
| | Replacement | Inside City | Replacement | Outside City | Replacement | Meter | Flow |
| Meter Size | Cost Ratio | Accounts | Cost Meters | Accounts | Cost Meters | Ratio | Meters |
| (inches) | | | | | | | |
| .8/9 | 1.0 | 16,983 | 16,983 | 2,915 | 2,915 | 0.8 | 16,582 |
| 3/4" | 1.0 | 24,357 | 24,357 | 14,911 | 14,911 | 1.0 | 39,268 |
| - | 1.0 | 7,958 | 7,958 | 5,689 | 5,689 | 1.7 | 22,790 |
| 1.5" | 2.5 | 776 | 1,940 | 127 | 318 | 3.3 | 3,007 |
| 2" | 3.3 | 1,578 | 5,260 | 334 | 1,113 | 5.3 | 10,191 |
| 3". | 10.4 | 333 | 3,469 | 64 | 299 | 10.0 | 3,970 |
| .4 | 11.7 | 414 | 4,830 | 09 | 700 | 16.7 | 7,902 |
| 9 | 20.0 | 232 | 4,640 | 126 | 2,520 | 33.3 | 11,932 |
| | 41.7 | 103 | 4,292 | 59 | 2,458 | 53.3 | 8,639 |
| 10" | 83.3 | 27 | 2,250 | 10 | 833 | 76.7 | 2,837 |
| 12" | 166.7 | 1 | 1 | | | 143.3 | 0 |
| Total | | 52,761 | 75,978 | 24,295 | 32,124 | | 127,118 |

CUSTOMER CHARGE CALCULATIONS SALT LAKE CITY WATER UTILITIES WATER RATE STUDY

SLC_COSTALLOC.XLS

RATES_FIX

FILE: SCHEDULE:

DATE: RANGE:

CUSTCOST 09/02/03

Revenue Required from Customer Charge

Customer Charge Cost Categories

\$758,077 Meters & Services

\$2,893,543 Billing & Collecting

316,566 Water Purchases (WWRP)

\$3,968,186 Inside City Fixed Charge Revenue

| Weter Size | WWRP, Billing & Collecting | Meters & Services | Inside City Customer Charge | Inside City Revenues by Meter | Outside City Customer Charge | Outside City Outside City Customer Revenues by Charge Meter | Total Revenues by Meter |
|------------|-------------------------------|----------------------|-----------------------------------|-------------------------------------|------------------------------------|---|-------------------------------|
| (inches) | | | | | | | |
| 5/8" | \$5.07 | \$0.83 | \$5.90 | \$1,202,736 | \$7.97 | \$278,694 | \$1,481,430 |
| 3/4" | \$5.07 | \$0.83 | \$5.90 | \$1,724,963 | \$7.97 | \$1,425,596 | \$3,150,558 |
| 1 | \$5.07 | \$0.83 | \$5.90 | \$563,586 | \$7.97 | \$543,908 | \$1,107,494 |
| 1.5" | \$5.07 | \$2.08 | \$7.15 | \$66,570 | \$9.65 | \$14,708 | \$81,278 |
| 2," | \$5.07 | \$2.77 | \$7.84 | \$148,491 | \$10.59 | \$42,430 | \$190,921 |
| 3". | \$5.07 | \$8.66 | \$13.73 | \$54,870 | \$18.54 | \$14,237 | \$69,107 |
| 4 | \$5.07 | \$9.70 | \$14.77 | \$73,380 | \$19.94 | | \$87,737 |
| 9 | \$5.07 | \$16.63 | \$21.70 | \$60,411 | \$29.29 | \$44,293 | \$104,704 |
| | \$5.07 | \$34.64 | \$39.71 | \$49,087 | \$53.61 | \$37,959 | \$87,046 |
| 10" | \$5.07 | \$69.29 | \$74.36 | \$24,092 | \$100.38 | \$12,046 | \$36,138 |
| 12" | \$5.07 | \$138.58 | \$143.65 | \$0 | \$193.92 | \$0 | \$0 |
| | | | | \$3,968,186 | | \$2,428,228 | \$6,396,414 |

SALT LAKE CITY WATER UTILITIES

WATER RATE STUDY

Inside City Volume Rates WATER RATE DESIGN

Inside City Allocated Costs, Adjusted for 3% Increase

Less Fixed Charge Revenue

RATE_CITY 09/02/03 DATE:

SLC_COSTALLOC.xls

FILE SCHEDULE:

IS_CITY

RANGE:

\$23,548,919 3,968,186 \$27,517,106

\$0.88 Balance to be Recovered Via Volume Charge Structure Average Rate

MODIFIED PEAKING METHOD

| (6) (7) Extra | Capacity Customer | Weight Rate \$/ccf | | | | 0.0% \$0.78 | 61.5% | |
|------------------|-------------------|--------------------|--------------|----------------|--------------|-------------|--------------|-------------|
| (2) | Base | Weight | | | | 100.0% | 38.5% | |
| (4) Extra | Capacity | Rate \$/ccf | | \$0.9854 | | \$0.9854 | \$0.9854 | |
| (3) | Base Rate | \$/ccf | \$0.7751 | | | \$0.7751 | \$0.7751 | |
| (2) | Revenue | Requirements | \$10,774,824 | \$12,774,096 | \$23,548,919 | \$4,489,510 | \$19,059,409 | 900 640 040 |
| (1) | | Usage - ccf | 13,902,101 | 12,963,298 | 26,865,399 | 5,792,542 | 21,072,857 | 000 000 |
| | | Period | Base | Extra Capacity | Total | Winter | Summer | - 1- F |

(1) Base usage is based on average winter use, Oct-May, for 12 months. Summer use is June-Sept. Extra Capacity is Total usage minus Base usage. All usage was obtained from a bill frequency analysis, and actual bills,

projected to FY 2003-04.

- (2) Base and Extra Capacity revenue are from the cost allocation tables for the class allocations. winter and summer revenue are obtained by multiplying column 6 times column 1.

- (3) Base rate is base revenue divided by base usage.(4) Extra capacity rate is Extra Capacity revenue divided by Extra Capacity usage.(5) Base Weight is the percentage of the Base Rate applied to the winter and summer seasons. The summer weight is based upon summer base water usage.
- (6) Extra Capacity Weight is the percentage of the corresponding rate applied to winter and summer seasons. It is based upon summer extra-capacity water usage.
- (7) The Customer Rate is the result of multiplying columns 4 and 5 times the respective rates in columns 2 and 3.
- * A 50-cent charge is applied to each monthly bill to obtain these funds.

SALT LAKE CITY WATER UTILITIES

WATER RATE STUDY WATER RATE DESIGN

Inside City, Proposed Rate Alternative w/ 1.35 Ratio

FILE: SLC_COSTALLOC.xls

SCHEDULE: INVSEAS_ALT

DATE: 09/02/03

RANGE: INV_ALT

Inside City Allocated Costs \$27,517,106
Less Fixed Charge Revenue 3,968,186
Balance to be Recovered Via Volume Charge Structure Average Rate \$/ccf \$0.88

ALLOCATED USAGE AND REVENUE REQUIREMENTS

| _ | Block 1 | Block 2 | Block 3 | Total Allocated Usage (ccf) | Adjusted Usage (ccf) | Total Revenue |
|---------------------|------------|-----------|-----------|--------------------------------------|----------------------------|------------------|
| Inside City | | | | | | |
| Residential [1] | 3,749,316 | 3,678,173 | 2,971,360 | 10,398,849 | 9,323,963 | \$9,647,102 |
| Non-Residential [2] | 8,376,067 | 3,916,544 | 2,592,081 | 14,884,692 | 13,346,123 | 11,950,839 |
| Irrigation [3] | | 1,418,347 | 0 | 1,581,857 | 1,418,347 | 1,560,182 |
| Total | 12,125,383 | 9,013,065 | 5,563,441 | 26,865,399 | 24,088,433 | \$23,158,124 |

[1] Block 1 is 0-9 ccf per month

Block 2 is 10-29 ccf per month

Block 3 is > 29 ccf per month

[2] Block 1 is 100% of AWC

Block 2 is 101-300% of AWC

Block 2 is > 300% of AWC

[3] All use is assumed to be in Block 2.

Residential and Non-Residential Rate Calculation, Includes Irrigation Use

INVERTED AND AWC BLOCK RATE APPROACH

| | | | | | Conservation |
|-------------|----------|------------|--------------|--------|--------------|
| Block Range | Billed U | se (1) | Revenue | Rate | Reduction |
| | % | ccf | | \$/ccf | |
| Block 1 | 45.1% | 12,125,383 | \$8,730,276 | \$0.72 | 0.0% |
| Block 2 | 33.5% | 9,013,065 | \$9,914,371 | \$1.10 | 0.0% |
| Block 3 | 11.0% | 2,949,985 | \$4,513,476 | \$1.53 | -10.3% |
| | 89.7% | 24,088,433 | \$23,158,124 | | 89.7% |

⁽¹⁾ Adjusted for conservation.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY

WATER RATE DESIGN

Outside City, Proposed Rate Alternative

FILE: SLC_COSTALLOC.xls

SCHEDULE: INVSEAS_ALT

DATE: 09/02/03 RANGE: INV_ALT

Outside City Allocated Costs
*Less Fixed Charge Revenue

\$16,073,000

__

2,428,000 \$13,645,000

Balance to be Recovered Via Volume Charge Structure

13,645,000

Average Rate \$/ccf

\$1.17

ALLOCATED USAGE AND REVENUE REQUIREMENTS

| | | Net |
|-----------------|--------------------|--------------|
| | | Revenue |
| Period | Usage - ccf | Requirements |
| Base | 5,273,068 | \$5,379,335 |
| Extra Capacity_ | 6,375,080 | \$8,265,665 |
| Total | 11,648, <u>148</u> | \$13,645,000 |
| | | |

| | Block 1 | Block 2 | Block 3 | Total Allocated Usage (ccf) | Adjusted Usage (ccf) | Revenue |
|---------------------|-----------|-----------|-----------|--------------------------------------|----------------------------|--------------|
| Outside City | | | | | | |
| Residential [1] | 2,182,428 | 2,699,831 | 3,246,924 | 8,129,183 | 7,288,903 | \$11,121,456 |
| Non-Residential [2] | 1,539,752 | 806,232 | 765,271 | 3,111,254 | 2,789,657 | 3,613,248 |
| Irrigation [3] | | 365,567 | 0 | 487,423 | 365,567 | 544,695 |
| Total | 3,722,180 | 3,871,630 | 4,012,195 | 11,727,860 | 10,444,127 | \$15,279,399 |

[1] Block 1 is 0-9 ccf per month

Block 2 is 10-29 ccf per month

Block 3 is > 29 ccf per month

[2] Block 1 is 100% of AWC

Block 2 is 101-300% of AWC

Block 2 is > 300% of AWC

[3] All use is assumed to be in Block 2.

Outside/Inside Ratio

1.35

| | | | | | Conservation |
|-------------|----------|------------|--------------|--------|--------------|
| Block Range | Billed U | se (1) | Revenue | Rate | Reduction |
| | % | ccf | | \$/ccf | |
| Block 1 | 31.7% | 3,722,180 | \$3,610,514 | \$0.97 | 0.0% |
| Block 2 | 33.0% | 3,871,630 | \$5,768,728 | \$1.49 | 0.0% |
| Block 3 | 24.3% | 2,850,317 | \$5,900,157 | \$2.07 | -10.3% |
| | 89.1% | 10,444,127 | \$15,279,399 | | 89.1% |

⁽¹⁾ Adjusted for conservation.

^{*} A 50-cent charge is applied to each monthly bill in addition to customer service charges.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY FIRE PROTECTION SERVICE

SLC_COSTALLOC.xls FIREPROT FILE: SCHEDULE: DATE: 0 RANGE:

09/02/03 FIRERATES

| | | Rate | | | Revenue | |
|--------------------|-----------------|--------------------|------------------|-----------------|---------------------------------------|------------------|
| Connection Size | Current Rate | Calculated Rate | Proposed Rate | Current Rate | Calculated Rate | Proposed Rate |
| 3/4" | \$0.75 | \$0.38 | \$0.38 | 0\$ | \$0 | \$0 |
| - | \$1.00 | \$0.48 | \$0.48 | 00.00 | 0.00 | 00.00 |
| 1.5" | \$1.50 | \$0.96 | \$0.96 | 0.00 | 0.00 | 00.0 |
| 2" | \$2.00 | \$1.54 | \$1.54 | 24.00 | 18.48 | 18.48 |
| 2.5" | \$2.50 | \$2.48 | \$2.48 | 0.00 | 0.00 | 00.0 |
| 3, | \$3.00 | \$3.41 | \$3.41 | 00.00 | 0.00 | 00.0 |
| 4" | \$4.00 | \$5.77 | \$5.77 | 144.00 | 207.86 | 207.86 |
| 9 | \$6.00 | \$12.03 | \$12.03 | 18,360.00 | 36,809.25 | 36,809.25 |
| 8 | \$8.00 | \$17.28 | \$17.28 | 37,248.00 | 80,443.80 | 80,443.80 |
| 10" | \$10.00 | \$27.91 | \$27.91 | 7,800.00 | 21,767.98 | 21,767.98 |
| 12" | \$12.00 | \$41.38 | \$41.38 | 1,152.00 | 3,972.51 | 3,972.51 |
| Fotal | | | | \$64,728.00 | \$64,728.00 \$143,219.88 \$143,219.88 | \$143,219.88 |

\$144.35

| SALT LAKE CITY WATER UTILITIES | WATER RATE STUDY | FIRE PROTECTION SERVICE |
|--------------------------------|------------------|-------------------------|
|--------------------------------|------------------|-------------------------|

: SLC_COSTALLOC.xls : FIREPROT : 09/02/03 : FIREPRO FILE: SCHEDULE: 1
DATE: 0
RANGE: 1

| Costs to be Allocated Misc. Revenue Offset - Public Fire Protection | ire Protection | | | <u>Total</u> \$1,403,265 | Public \$1,260,031 | Private \$143,220 |
|--|----------------|-----------------|-----------------------|-----------------------------|-----------------------|----------------------|
| Total | | | | \$1,403,265 | \$1,260,031 | \$143,220 |
| Description | | Number | Equivalency Factor | Equivalent Connections | Allocated % | Allocated Amount |
| Inside City Hydrants Outside City Hydrants | | 6,070 | | | | |
| Total Hydrants | | 8,729 | - | 8,729 | 89.7953% | \$1,260,031 |
| Private Fire Services | | Ву | | | | |
| Meter Size | Meters | Connection Size | | | | |
| 2/8" | 2 | 0 | 0.02400 | • | 0.0000% | |
| 3/4" | 654 | 0 | 0.03200 | • | 0.0000% | |
| 1. | 35 | 0 | 0.04000 | • | 0.0000% | |
| 1.5" | 19 | 0 | 0.08000 | | 0.0000% | |
| 2" | 10 | - | 0.12800 | 0 | 0.0013% | 18 |
| 2.5" | 0 | 0 | 0.20585 | , | 0.0000% | , |
| 3" | 0 | 0 | 0.28370 | • | 0.0000% | |
| "4 | 0 | က | 0.48000 | - | 0.0148% | 208 |
| 9 | 0 | 255 | 1.00000 | 255 | 2.6232% | 36,809 |
| #8 | 0 | 388 | 1.43630 | 257 | 5.7328% | 80,444 |
| 10" | 0 | 65 | 2.32000 | 151 | 1.5513% | 21,768 |
| 12" | 0 | 80 | 3.44000 | 28 | 0.2831% | 3,973 |
| Subtotal Private Fire Lines | 720 | 720 | | 392 | 10.2065% | \$143,220 |
| Total | | 9,449 | | 9,721 | 100.0000% | \$1,403,251 |
| | | | | | | |

Cost per Equivalent 6" Connection

Appendix C

Impact Fee Analysis

SALT LAKE CITY DEPARTMENT OF WATER
WATER SYSTEM IMPACT FEES
SUMMARY TABLE – EQUIVALENT RESIDENTIAL UNITS

FILE: SLC_ImpactFee.xls
SCHEDULE: Chg Summary
DATE: 09/02/03
RANGE: ChgSummary

| SYSTEM COMPONENT | CURRENT | PROPOSED | PERCENT CHANGE | UNIT REPLACEMENT COST [1] |
|---|---------|----------|-------------------|---------------------------------|
| Water System | | | | |
| With water resources | \$881 | \$1,716 | 94.8% | \$ 4,542 |
| Without water resources | \$784 | \$1,506 | 92.1% | |
| Water Resources Only | \$97 | \$210 | 116.5% | |

^[1] Based on the estimated replacement cost of the system using engineering cost indices.

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM IMPACT FEES PROPOSED CHARGE SCHEDULE

FILE: SLC_impactFee.xls
SCHEDULE: Water Proposed

DATE: 09/02/03 RANGE: Proposed

| | Average Usa | age, gpd (1) | Water | Water | |
|---|-------------|-------------------|-----------------------|---------------------|-----------------------|
| Per Unit | Summer | Annual | System (2) | Resource (3)(8) | Total |
| Equivalent Residential Unit - City 3/4" SFR Multifamily (4) City/Outside City | | 358 259 | \$1,506 818 | \$210 152 | \$1,716 970 |

Single Family Residential - City Only (8)

| Meter | | Meter | Average Us | age, gpd (1) | Water | Water | |
|------------|------------|--------------|------------|--------------|------------|-----------------|---------|
| Size, in. | Туре | Capacity (5) | Summer | Annual | System (6) | Resource (3)(8) | Total |
| 5/8 x 3/4" | Disc | 20 | | 358 | \$1,506 | \$210 | \$1,716 |
| 3/4" | \$1 | 30 | | 358 | 1,506 | 210 | 1,716 |
| 1-0" | 11 | 50 | | 878 | 2,510 | 515 | 3,025 |
| 1-1/2" | 0 | 100 | | 2,116 | 5,020 | 1,241 | 6,261 |

Mult-Family Residential

| | Average Usa | ige, gpd (1) | Water | Water | |
|----------|-------------|--------------|------------|-----------------|---------|
| Per Unit | Summer | Annual | System (2) | Resource (3)(8) | Total |
| | | | | | |
| Duplex | 399 | 242 | \$924 | \$142 | \$1,066 |
| Triplex | 267 | 180 | 619 | 106 | 725 |
| Fourplex | 286 | 199 | 663 | 117 | 780 |

| Commercial | / Industrial | City/ Outside City | | | | | |
|------------|--------------|-----------------------|--------------|-------------|-----------------|-----------------|--------------|
| Meter | | Meter | Average Usaç | ie, gpd (1) | Water | Water | |
| Size, in. | Type | Capacity (5) | Summer | Annual | System (6) | Resource (3)(8) | <u>Total</u> |
| 510 01411 | Diese | 20 | | 550 | £1 E0¢ | # 2.20 | E4 004 |
| 5/8 x 3/4" | Disc | 20 | | 559 | \$1,506 | \$328 | \$1,834 |
| 3/4" | " | 30 | | 559 | 1,506 | 328 | 1,834 |
| 1-0" | II. | 50 | | 1,712 | 2,510 | 1,004 | 3,514 |
| 1-1/2" | п | 100 | | 3,304 | 5,020 | 1,938 | 6,958 |
| 2-0" | II | 160 | | 4,726 | 8,032 | 2,772 | 10,804 |
| 3-0" | Compound | 320 | | 9,648 | 16,064 | 5,659 | 21,723 |
| 4-0" | ïII | 500 | | 17,682 | 25,100 | (7) | 25,100 |
| 6-0" | н | 1,000 | | 24,283 | 50,200 | (7) | 50,200 |
| 8-0" | п | 1,600 | | 34,908 | 80,320 | (7) | 80,320 |
| 10-0" | II | 2,300 | | 120,975 | 115,460 | (7) | 115,460 |
| 2-0" | Turbine | 160 | | 4,726 | 8,032 | 2,772 | 10,804 |
| 3-0" | II | 350 | | 9,648 | 1 7 ,570 | 5,659 | 23,229 |
| 4-0" | II | 600 | | 17,682 | 30,120 | (7) | 30,120 |
| 6-0" | lī | 1,250 | | 24,283 | 62,750 | (7) | 62,750 |
| 8-0" | П | 1,800 | | 34,908 | 90,360 | (7) | 90,360 |
| 10-0" | П | 2,900 | | 120,975 | 145,580 | (7) | 145,580 |

- (1) Based on Utility records for 1999 through 2001; MFR based on sample of accounts for this same period. Summer: June August; Winter: December February.
- (2) Charge based on ratio to ERU summer gpd.
- (3) Charge based on ratio to the ERU annual gpd.
- (4) Defined as 1 connection serving 5 or more living units.
- (5) gpm gallon per minute from AWWA M6 Water Meters—Selection, Installation, Testing, and Maintenance, pg. 28-29, 1986.
- (6) Charge based on ratio of meter size to 3/4" meter capacity. Dept. is no longer issuing 5/8" x 3/4" services.
- (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 357 gpd.
- (8) Outside City water resource fees would be 1.35 times greater than inside City.

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM IMPACT FEES CURRENT AND PROPOSED CHARGES

FILE: SLC_ImpactFee.xls
SCHEDULE: Water Curr v Prop

DATE: 09/02/03

RANGE: WaterComparison

| | | | Proposed | | | Current | | Differ | rence |
|-----------------|---------------|---------------|--------------|---------|---------|--------------|---------|---------|---------|
| Customer | r Class | System | Resource (3) | Total | System | Resource (3) | Total | Amount | Percent |
| Multifamily Res | sidential (1) | | | | | | | | |
| Per Unit | siacinal (1) | \$818 | \$152 | \$970 | \$324 | \$56 | \$380 | \$590 | 155% |
| , | | **** | • • • • | • | • | | | | |
| Single Family F | Residential | | | | | | | | |
| Meter Size, in. | Туре | | | | | | | | |
| 5/8 x 3/4" | Disc | \$1,506 | \$210 | \$1,716 | \$784 | \$97 | \$881 | \$835 | 95% |
| 3/4" | 11 | 1,506 | 210 | 1,716 | 784 | 97 | 881 | 835 | 95% |
| 1-0" | H | 2,510 | 515 | 3,025 | 1,307 | 200 | 1,507 | 1,518 | 101% |
| 1-1/2" | " | 5,020 | 1,241 | 6,261 | 2,613 | 495 | 3,108 | 3,153 | 101% |
| Non-SFR Resid | lential | City / County | f | | | | | | |
| Per Unit (2) | | | ' | | | | | | |
| Duplex | | \$1,848 | \$284 | \$2,132 | \$930 | \$130 | \$1,060 | \$1,072 | 101% |
| Triplex | | \$1,857 | 318 | 2,175 | 996 | 156 | \$1,152 | \$1,023 | 89% |
| Fourplex | | \$2,652 | 468 | 3,120 | 1,228 | 204 | \$1,432 | \$1,688 | 118% |
| • | | * =, | | -, | ,, | | | | |
| Commercial / Ir | | | | | | | | | |
| Meter Size, in. | Type | | **** | 04.004 | 2704 | 0440 | 2004 | 0040 | 000/ |
| 5/8 x 3/4" | Disc " | \$1,506 | \$328 | \$1,834 | \$784 | \$140 | \$924 | \$910 | 98% |
| 3/4" | ,, | 1,506 | 328 | 1,834 | 784 | 140 | 924 | 910 | 98% |
| 1-0" | | 2,510 | 1,004 | 3,514 | 1,307 | 438 | 1,745 | 1,769 | 101% |
| 1-1/2" | 10 | 5,020 | 1,938 | 6,958 | 2,613 | 728 | 3,341 | 3,617 | 108% |
| 2-0" | 11 | 8,032 | 2,772 | 10,804 | 4,181 | 875 | 5,056 | 5,748 | 114% |
| 3-0" | Compound | 16,064 | 5,659 | 21,723 | 8,363 | 2,130 | 10,493 | 11,230 | 107% |
| 4-0" | 11 | 25,100 | (2) | 25,100 | 13,067 | (2) | 13,067 | 12,033 | 92% |
| 6-0" | " | 50,200 | (2) | 50,200 | 26,133 | (2) | 26,133 | 24,067 | 92% |
| 8-0" | *1 | 80,320 | (2) | 80,320 | 41,813 | (2) | 41,813 | 38,507 | 92% |
| 10-0" | 14 | 115,460 | (2) | 115,460 | 60,107 | (2) | 60,107 | 55,353 | 92% |
| 2-0" | Turbine | 8,032 | 2,772 | 10,804 | 4,181 | 875 | 5,056 | 5,748 | 114% |
| 3-0" | 41 | 17,570 | 5,659 | 23,229 | 9,859 | 2,130 | 11,989 | 11,240 | 94% |
| 4-0" | ** | 30,120 | (2) | 30,120 | 18,359 | (2) | 18,359 | 11,761 | 64% |
| 6-0" | (+ | 62,750 | (2) | 62,750 | 24,715 | (2) | 24,715 | 38,035 | 154% |
| 8-0" | tt. | 90,360 | (2) | 90,360 | 32,350 | (2) | 32,350 | 58,010 | 179% |
| 10-0" | u u | 145,580 | (2) | 145,580 | 120,975 | (2) | 120,975 | 24,605 | 20% |

⁽¹⁾ Defined as 1 connection serving 5 or more living units.

⁽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 357 gpd.

⁽³⁾ County water resource fees would be 1.35 times greater than inside City.

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM IMPACT FEES SYSTEM DEMAND

FILE: SLC_ImpactFee.xls
SCHEDULE: Capacity Info
DATE: 09/02/03
RANGE: SYSDEMAND

| Normal Year Conditions Source: Water Master Plan Tables 3-6 and 3-7 | 1995 | 2025 |
|---|-----------------------|-------------------------|
| Tables 3-0 and 5-7 | 1000 | |
| Max Day Demand | 216.1 | 318.1 |
| Non-City Capacity Sources Metro Jordan Aquaduct | 85.0 50.0 | 85.0 50.0 |
| Amount to be met via City Facilities | 81.1 | 183.1 |
| Available City Capacity | | |
| WTP | 81.0 | 81.0 |
| Springs | 5.0 | 5.0 |
| Surplus / (Deficiency) Before Wells | 4.9 | (97.1) |
| Wells Well Restrictions Surplus / (Deficiency) | 55.0 (5.5) 54.4 | 55.0 (5.5) (47.6) |
| Total Demand | 216.1 | 318.1 |
| Total Capacity - Max Month or Day? | 270.5 | 270.5 |
| Surplus / (Deficiency) | 54.4 | (47.6) |
| Max Month Factor Capacity - Average Day Demand | 2.0 135.3 | |
| May Day Factor | 2.7 | |
| Max Day Factor | | |
| Capacity - Average Day Demand | 99.1 | |

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM IMPACT FEES MARGINAL COST ALLOCATION METHODOLOGY

FILE: SLC_ImpactFee.xls SCHEDULE: Water Sys MC DATE: 09/02/03 RANGE: WaterMC

> PLANNING PERIOD (2002 \$)

| | | | | | | | | | | | Growth | Growth | _ |
|---|---------------------------|--------------------|-----------------|-----------------------|---|----------------|----------------|---------------------------------------|-----------|--------------|---------|---------------|-------|
| PROJECT | FY 2002-03 | FY 2003-04 F | FY 2004-05 FY 2 | FY 2005-06 FY 2005-07 | FY 2006-07 FY 2007-2008 FY 2008-2009 FY 2009-2010 FY 2010-2011 FY 2011-2012 | Y 2008-2009 FY | 2009-2010 F | 2010-2011 FY | 2011-2012 | TOTAL | Percent | Amount | ۔ |
| 50% Shara Of Laboratory At Rec Plant | | | | | | | 500,000 | 1,000,000 | • | \$ 1,500,000 | 10% | 150,000 | 8 |
| City Creek - Treatment Plant Upgrade | 300,000 | 300,000 11,300,000 | | | | | | | | 11,600,000 | 25% | 2,900,000 | 8 |
| Millcreek Treatment Plant | | | | | 600,000 | 5,400,000 | | | | 6,000,000 | 100% | 6,000,000 | 80 |
| Little Willow Pump Station - New Booster Pump | 130,000 | | | | | | | | | 130,000 | 100% | 130,000 | 000 |
| Pumps & Motor 4500 So Pump Station | | 14,000 | | | | | | | | 14,000 | 100% | 14,000 | 80 |
| Soft Start Motor Starter Bonneville Pump Station | | 17,000 | | | | | | | | 17,000 | 20% | 8,500 | 8 |
| Pump Bonnevilla Pump Station | | 14,000 | | | | | | | | 14,000 | 100% | 14,000 | 8 |
| Victory Road | | | | | | | | 1,000,000 | | 1,000,000 | 20% | 200,000 | 8 |
| North Bench Pump Station | | | | 1,000,000 | | | | | | 1,000,000 | 20% | 200,000 | 8 |
| Motor & Pump 7800 So Pump Station | | 16,000 | | | | | | | | 16,000 | 20% | 3,200 | 88 |
| Motor & Pump 3900 So Pump Station | | | 17,000 | | | | | | | 17,000 | 20% | 3,400 | 8 |
| V.F.D. For 7800 So Pump Station | | | 28,000 | | | | | | | 28,000 | 20% | 5,600 | 800 |
| Pumps & Motor Birch Dr Pump Station | | | | | 16,000 | | | | | 16,000 | 20% | 3,200 | 200 |
| Motor Research Park Pump Station | | | | | 12,000 | | | | | 12,000 | 100% | 12,000 | 900 |
| Red Butte | | | | | 400,000 | 800,000 | | | | 1,200,000 | 100% | 1,200,000 | 000 |
| 600 East | | | | | | 1,000,000 | | | | 1,000,000 | 100% | 1,000,000 | 80 |
| City Creek | | | | | | 1,200,000 | | | | 1,200,000 | 100% | 1,200,000 | 8 |
| (3) New Wells To Cover 10 Cfs Water Rights | | | | | 1,000,000 | | 1,000,000 | | 1,000,000 | 3,000,000 | 100% | 3,000,000 | 8 |
| 3900 South Highland Drive | | | | | 1,000,000 | | | | | 1,000,000 | 100% | 1,000,000 | 8 |
| 7000 South Pump Station | | | | | | | | | | 0 | 10% | | |
| 4500 South Pump Station | | | | | | | | | | 0 | 10% | · • | |
| 4500 South 2700 East Reservoir | 52,474 | | | | | | | | 5,000,000 | 5,052,474 | 20% | \$ 1,010,495 | 495 |
| Lower Parley'S Conduit - Parley'S Way To Approx. 1300 South | | | | | | 3,400,000 | | | | 3,400,000 | 50% | \$ 660,000 | 8 |
| Victory Road Lines - Pump Station To Ensign Downs (18") | | | | | | | 2,250,000 | | | 2,250,000 | 20% | \$ 450,000 | 000 |
| Millcreek Traetment Plant Lina - Tank To Wasatch Blvd (24") | | | | | | | 750,000 | | | 750,000 | 100% | \$ 750,000 | 000 |
| 2700 South - 13Th East To Park Reservoir (16") | | | | | | | | 4,250,000 | | 4,250,000 | 10% | \$ 425,000 | 8 |
| 900 East - 5260 South To 5600 South | | | | | | | | | 198,000 | 198,000 | 20% | 39,600 | 600 |
| 5600 South - 850 East To 900 East | | | | | | | | | 28,600 | 28,600 | 20% | 5,7 | 5,720 |
| 1300 East - Vine Street (6085 S) To 6400 South | | | | | | | | | 279,000 | 279,000 | 20% | \$ 55,800 | 900 |
| Upgrade Fire Protection In The County Exchange Area | | | | | | | | 7,000,000 | 7,000,000 | 14,000,000 | 20% | \$ 2,800,000 | 000 |
| Victory Road Projects (4) | 26,291,643 | | | | | | | | | 26,291,643 | 46% | 12,152,409 | 409 |
| Total | \$26,774,117 \$11,361,000 | \$11,361,000 | \$45,000 | \$0 \$1,000,000 | \$3,028,000 \$11,800,000 | Ιİ | \$4,500,000 \$ | \$4,500,000 \$13,250,000 \$13,505,600 | | \$85,263,717 | 42% | \$ 35,712,924 | 924 |

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM IMPACT FEES MARGINAL COST ALLOCATION METHODOLOGY

Total Capacity Added @ 2012 Additional ADD Increment

26.00 mgd (Water Master Plan, Table 3-5, Dry Year, August Supply Capability) 9.52 mgd capacity added to meet projected ERU connections

FILE: SLC_ImpactFee.xls SCHEDULE: Water Sys MC

DATE: 09/02/03 RANGE: WaterMC

Victory Road Projects - Growth Amount 10-Year Capital Improvement Plan - Growth Amount New Debt Financing Costs

\$12,152,409
23,560,515 from current financial plan - CIP
4,346,224 from Impact Fund Cash Flow Decision Criteria and New Debt Calculations
\$40,059,148

System Development Fee Per ERU

ERU Capacity Total Cost

358 Residential GPD, 3/4" Meters 26,592

\$1,506

Unless noted, cost estimates from CH2M Hill, Water System Master Plan, April 1997, Table 55-1.
 Cost estimate from CH2M Hill, Water System Master Plan, April 1997, Table 4-4.
 Amount allocated to growth based on analysis prepared for Department by CH2M Hill (correspondence dated June 27, 1997).
 Includes capital project expenditures made by the Department between 1981 and 1993, in the general vicinity of the Northwest Quadrant.

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM IMPACT FEES MARGINAL COST ALLOCATION METHODOLOGY

FILE: SLC_ImpactFee.xls
SCHEDULE: Water Sys MC
DATE: 09/02/03
RANGE: Res_Table

| | Total Original | Land | Original Cost Excld. | | Replacement | Land | Total Replacement |
|--------------|-------------------|-------------------|-------------------------|--------------|----------------|----------------|----------------------|
| Year | Cost | Cost | Land | Index (1) | Cost Value (2) | Cost | Cost Value |
| 1900 | \$4,671,901 | \$550,211 | \$4,121,690 | \$76 | \$267,475,966 | \$550,211 | \$268,026,177 |
| 1902 | 15,082 | - | 15,082 | 76 | 978,770 | | 978,770 |
| 1907 | 6,736 | 6,736 | - | 76 | - | 6,736 | 6,736 |
| 1912 | 16,887 | 16,887 | - | 72 | - | 16,887 | 16,887 |
| 1913 | 5,504 | 5,504 | • | 79 70 | - | 5,504 | 5,504 |
| 1914 | - | | - | 70 | - | 4 400 | 1 400 |
| 1920 | 1,400 | 1,400 | - | 197 | • | 1,400 | 1,400 3,975 |
| 1921 | 3,975 | 3,975 | - | 159 | - | 3,975 1,075 | 1,075 |
| 1922 | 1,075 | 1,075 | | 137 163 | - | 1,000 | 1,000 |
| 1925 | 1,000 | 1,000 | - | 164 | - | 3,784 | 3,784 |
| 1926 | 3,784 | 3,784 4,220 | - | 163 | _ | 4,220 | 4,220 |
| 1928 1930 | 4,220 230 | 230 | - | 160 | | 230 | 230 |
| 1931 | 1,159 | 1,159 | _ | 142 | _ | 1,159 | 1,159 |
| 1932 | 1,800 | 1,800 | _ | 123 | _ | 1,800 | 1,800 |
| 1934 | 59,905 | 59,905 | | 156 | _ | 59,905 | 59,905 |
| 1942 | 09,300 | 00,000 | | 217 | | - | - |
| 1943 | 2,862 | 2,862 | - | 228 | _ | 2,862 | 2,862 |
| 1944 | 4,000 | 4,000 | | 235 | | 4,000 | 4,000 |
| 1951 | 1,300 | 1,300 | - | 427 | | 1,300 | 1,300 |
| 1952 | 1,720 | 1,720 | _ | 447 | - | 1,720 | 1,720 |
| 1954 | 13,611 | 13,611 | - | 494 | - | 13,6 11 | 13,611 |
| 1957 | 23,570 | 23,570 | - | 569 | | 23,570 | 23,570 |
| 1958 | 10,370 | 10,370 | - | 597 | - | 10,370 | 10,370 |
| 1961 | 79,539 | 79,539 | - | 666 | - | 79,539 | 79,539 |
| 1962 | 52,890 | 52,890 | - | 686 | • | 52,890 | 52,890 |
| 1963 | 7,750 | 7,750 | - | 708 | • | 7,750 | 7,750 |
| 1964 | 64,033 | 64,033 | - | 736 | - | 64,033 | 64,033 |
| 1966 | 18,000 | 18,000 | - | 801 | - | 18,000 | 18,000 |
| 1967 | 257,250 | 257,250 | - | 844 | • | 257,250 | 257,250 |
| 1968 | 12,552 | 12,552 | - | 908 | - | 12,552 | 12,552 |
| 1970 | 25,981 | | 25,981 | 1086 | 117,991 | - | 117,991 |
| 1972 | 99,380 | 60,880 | 38,500 | 1475 | 128,741 | 60,880 | 189,621 |
| 1973 | 8,000 | 8,000 | - | 1556 | - | 8,000 | 8,000 |
| 1974 | 154,400 | | 154,400 | 1670 | 455,958 | - | 455,958 |
| 1975 | 170 | 170 | - | 1887 | - | 170 | 170 |
| 1976 | 82,560 | 82,560 | - | 2124 | - | 82,560 | 82,560 |
| 1977 | 277,100 | 277,100 | - | 2353 | • | 277,100 | 277,100 |
| 1978 | 2,260 | 2,260 | | 2565 | | 2,260 | 2,260 |
| 1979 | 76,786 | 75,666 | 1,120 | 2739 | 2,017 | 75,666 | 77,683 |
| 1980 | 20,191 | 17,791 | 2,400 | 2947 | 4,016 | 17,791 | 21,807 |
| 1981 | 2,100 | 2,100 | - | 3201 | - | 2,100 | 2,100 |
| 1982 | 5,410 | 5,410 | - | 3446 | - | 5,410 | 5,410 |
| 1983 | 17,069 | 17,069 | - | 3690 | - | 17,069 | 17,069 |
| 1984 | 29,710 | 4,650 | 25,060 | 3106 | 39,787 | 4,650 | 44,437 |
| 1985 | 8,888 | 454 400 | 8,888 | 3316 | 13,218 | 454 400 | 13,218 |
| 1986 | 151,483 | 151,483 | • | 3503 | - | 151,483 | 151,483 |
| 1987 | - | 40.005 | 47.750 | 3507 | 24.745 | 13,095 | 37,840 |
| 1988 | 30,847 | 13,095 | 17,752 | 3538 | 24,745 | 1,384 | 24,651 |
| 1989 | 18,564 | 1,384 | 17,180 | 3642 3668 | 23,267 | 367,783 | 367,783 |
| 1990 | 367,783 | 367,783 | - | 3715 | • | - | 307,703 |
| 1991 | - 850 | 850 | - | 3834 | _ | 850 | 850 |
| 1992 | | 51,417 | - | 4012 | _ | 51,417 | 51, 4 17 |
| 1993 1994 | 51,417 514,054 | 51,417 514,054 | - | 4009 | _ | 514,054 | 514,054 |
| 1994 | 170,809 | 170,809 | - | 4088 | | 170,809 | 170,809 |
| 1996 | 170,009 | 600,011 | - | 4334 | - | - | |
| 1997 | 67,909 | 67,909 | _ | 4329 | _ | 67,909 | 67,909 |
| 1998 | 858,547 | 54,995 | 803,552 | 4470 | 886,534 | 54,995 | 941,529 |
| 1999 | 4,345,196 | 17,536 | 4,327,660 | 4498 | 4,744,750 | 17,536 | 4,762,286 |
| .000 | .,5,70,700 | | .,, | | .,,. = 3 | 1 | |

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM IMPACT FEES MARGINAL COST ALLOCATION METHODOLOGY

FILE: SLC_ImpactFee.xls
SCHEDULE: Water Sys MC
DATE: 09/02/03
RANGE: Res_Table

| Year | Total Original Cost | Land Cost | Original Cost Excld. Land | Index (1) | Replacement Cost Value (2) | Land Cost | Total Replacement Cost Value |
|-------------|---------------------------|--------------|---------------------------------|-----------|-------------------------------|--------------|------------------------------------|
| 2000 | 855 | 855 | - | 4767 | | 855 | 855 |
| 2001 | 120,333 | 120,333 | - | 4663 | - | 120,333 | 120,333 |
| 2002 | 2,198,861 | 2,170,851 | 28,010 | 4932 | 28,008 | 2,170,851 | 2,198,859 |
| 2003 | | | | | | - | - |
| 2004 | | | | | | - | - |
| 2005 | | | | | | - | • |
| Subtotal | 15,051,616 | 5,464,341 | 9,587,275 | | 274,923,768 | 5,464,341 | 280,388,109 |
| Water Stock | 1,329,448 | 0 | 1,329,448 | | 7,34 <u>9,9</u> 15 | 0 | 7,349,915 |
| Total | \$16,381,064 | \$5,464,341 | \$10,916,723 | | \$282,273,683 | \$5,464,341 | \$287,738,024 |

(1) ENR (2002)

4932

⁽²⁾ Land Cost not included in replacement cost calculation.

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM IMPACT FEES WATER STOCK LEDGER 30-Jun-02

FILE: SLC_ImpactFee.xls
SCHEDULE: Water Stock

DATE: 09/02/03 RANGE: WaterStock

| Water Stock Company | Total Number of O/S Shares | - | 2002 ties Owned Cost | Market Value Per Share | Total Market Value |
|--|-------------------------------------|----------|----------------------------|------------------------------|--------------------------|
| Big Cottonwood Lower Canal | 2,000 | 29.0 | \$1,988 | \$50 | \$1,450 |
| Big Cottonwood Tanner Ditch | 2,000 | 337.0 | 244,677 | 900 | 303,300 |
| Big Ditch Irrigation Company | 2,000 | 143.5 | 10,564 | 100 | 14,350 |
| Boundry Springs Water Users | 150 | 57.7 | 59,120 | 1,200 | 69,246 |
| Brighton and North Point Irrigation Company | 15,000 | 31.0 | - | - | - |
| Brown and Sanford | 0 | 11.0 | 6,000 | 1,000 | 11,000 |
| Burrows Spring Water | 10,000 | 5,220.0 | - | - | - |
| Butler Ditch | 168 | 168.0 | - | 125 | 21,000 |
| East Jordan Irrigation Company | 10,000 | 2,479.8 | 420,504 | 1,700 | 4,215,575 |
| East Millcreek Water Company - Primary | 5,000 | 13.9 | 1,058 | 50 | 696 |
| East Millcreek Water Company - Secondary | 1,000 | 34.5 | 2,454 | 50 | - |
| Forest Dale Water Company | · _ | 39,241.0 | , <u>-</u> | 1 | 39,241 |
| G. W. R. H. Irrigation Company | _ | 12.0 | 240 | 20 | 240 |
| Green Ditch Water Company | 575 | 157.5 | 84,645 | 750 | 118,125 |
| Hill Ditch Company | 5,000 | 746.0 | 35,020 | 100 | 74,600 |
| Holiday Water Company - Culinary | 6,000 | 80.0 | 19,930 | 230 | 18,400 |
| Holiday Water Company - Irrigation | · - | 20.0 | - | 230 | 4,600 |
| Kennedy Ditch Irrigation Company | - | 1,072.5 | - | 50 | 53,623 |
| Little Cottonwood Brown Ditch | _ | 4.0 | 8 | 2 | 8 |
| Little Cottonwood Tanner Ditch | 1,265 | 92.5 | 8,888 | 100 | 9,253 |
| Lower Millcreek Irrigation Company - A | 1,500 | 13.4 | 9,491 | 1,500 | 20,025 |
| Lower Millcreek Irrigation Company - B | 1,500 | 270.0 | 302,299 | 6,656 | 1,797,074 |
| McGhie Irrigation Company | _ | 76.0 | - | 10 | 760 |
| Richards Ditch | _ | 3.5 | - | 560 | 1,960 |
| Silver Lake Company | _ | 1.0 | 100 | 100 | 100 |
| Spring Creek Irrigation Company - Culinary | 3,500 | _ | - | - | - |
| Spring Creek Irrigation Company - Irrigation | 3,500 | _ | - | - | - |
| Union and Jordan Irrigation Company | 6,000 | 2.0 | - | 10 | 20 |
| Upper Canal Irrigation Company | 6,000 | 3,768.0 | 33,305 | 90 | 339,987 |
| Walker Ditch | _ | 18.0 | 900 | 50 | 900 |
| Wasatch Resort Water Company | _ | 150.0 | - | 50 | 7,500 |
| Welby Jacobs Water Users (Formerly Provo | _ | 197.0 | 49,250 | 250 | 49,250 |
| White Ditch Irrigation Company | 780 | 45.0 | 39,008 | 3,947 | 177,632 |
| Total | 82,938 | 54,495 | \$ 1,329,448 | | \$ 7,349,915 |

SALT LAKE CITY DEPARTMENT OF WATER VICTORY ROAD

PROJECTS

FILE: SLC_ImpactFee.xls
SCHEDULE: NW Water
DATE: 09/02/03
RANGE: VictoryRd

| DESCRIPTION | In Service Date | Original Cost | ENR Index | 2002 Replacement Cost |
|---|-----------------------|------------------|--------------|-----------------------------|
| 5600 West 700 South to North Temple | 1981 | \$2,069,675 | 3201 | \$3,188,890 |
| Victory Road Res. Supply Line - 200 West - Clinton Ave. to 600 North | 1981 | 33,036 | 3201 | 50,901 |
| Chicago Street - 1800 North | 1982 | 5,076 | 3446 | 7,265 |
| Victory Road Res. Supply Line - 500 North - 900 West to 1200 West | 1983 | 454,562 | 3690 | 607,561 |
| Victory Road Res. Supply Line - Victory Road Res to 900 West | 1983 | 483,589 | 3690 | 646,358 |
| Victory Road Res. Supply Line - 700 North & 2200 West, Redwood Road to No | 1983 | 1,863,741 | 3690 | 2,491,049 |
| CUP Pressure Reducing Station - 2100 South 3700 West | 1984 | 17,522 | 3106 | 27,819 |
| Victory Road Lines Phases I & II | 1985 | 3,078,372 | 3316 | 4,578,568 |
| 700 North Redwood Rd to 2200 North Phase III | 1985 | 890,672 | 3316 | 1,324,727 |
| North Temple 2200 West to Gladiola | 1986 | 1,125,000 | 3503 | 1,583,928 |
| Victory Road Reservoir (12 million gallons) | 1986 | 2,212,942 | 3503 | 3,115,681 |
| Redwood Road - 900 North to 1700 North | 1987 | 267,023 | 3507 | 375,528 |
| California Avenue - Pioneer Road to the West Valley Highway | 1987 | 620,000 | 3507 | 871,937 |
| Gladiola Street - California Avenue to 2100 South | 1987 | 438,026 | 3507 | 616,018 |
| California Avenue - Redwood Road to Pioneer Road | 1988 | 573,600 | 3538 | 799,544 |
| Gladiola St 500 So, to Calif. Ave | 1990 | 451,465 | 3668 | 607,041 |
| 5600 West 700 South Brasher Auto | 1990 | 1,000,000 | 3668 | 1,344,602 |
| Calif Ave Gladiola to Pioneer Rd | 1991 | 316,302 | 3715 | 419,920 |
| Calif Ave Redwood Rd to 800 West | 1992 | 853,620 | 3834 | 1,098,084 |
| 2100 South - 4560 to 5600 West | 1993 | 250,833 | 4012 | 308,352 |
| 1300 So - 5600 West to Land | 1993 | 136,878 | 4012 | 168,266 |
| 2100 South - North Frontage Road | 1993 | 94,860 | 4012 | 116,613 |
| 2100 So - 3700 West Reg Station on CUP 40" Conduit | 1995 | 100,430 | 4088 | 121,165 |
| California Avenue - City Project | 1997 | 1,054,219 | 4329 | 1,201,064 |
| | 1998 | ., | 4470 | • |
| | 1999 | | 4498 | _ |
| | 2000 | | 4767 | - |
| 700 West - 900 South to 1700 South | 2001 | 246,847 | 4663 | 261,087 |
| Redwood Road - 500 South to 1175 South | 2002 | 359,675 | 4932 | 359,675 |
| Total | | \$18,997,965 | | \$26,291,643 |
| Growth Allocation | | | | 46.22% |
| Growth Amount | | | | \$12,152,409 |
| Non-Growth Amount | | | | \$14,139,234 |
| | | | | |
| | | Peak | Average | |

| Course Department MCD Chapte for CUD Deal, Marth Marth | Year | Month (million ccf) | Flow (million ccf) | |
|--|----------------------|----------------------------|---------------------------------------|--|
| Source Department MGD Sheets for CUP Peak Month Water Use | 1997 1998 1999 | 559.69 640.92 685.08 | 198.40 224.30 224.40 | |
| | 2000 2001 | 748.63 817.97 | 274.00 309.50 | |
| 2001 Max Month Capac Maximum Capacity of the Northwest Area Facilitie | • | 26.89 50.00 | | |
| No | n-Growth Growth | | currently utilized balance for growth | |

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM IMPACT FEES PROPOSED EQUIVALENCY RATIOS

FILE: SLC_ImpactFee.xls
SCHEDULE: Prop Eq_Ratios
DATE: 09/03/03

RANGE: EquivRatio

| PE | ER UNIT | FEE AMOUNT Water Water Total | | | EQUIVALENCY RATIO Water Water | | | |
|----------------------|----------------------|---------------------------------|----------------|------------------|-------------------------------|--------------|---------------|--|
| METER / | CONNECTION | System | Resource | | System (2) Res | ource (3 | To <u>tal</u> | |
| | | | | | | | | |
| Equivalent ! | Residential Unit (1) | \$1,506 | \$210 | \$1 ,716 | 1.0 | 1.0 | 1.0 | |
| Multifamily | | 818 | 152 | 970 | 0.5 | 0.7 | 0.6 | |
| Single Fami Meter | ily Residential | | | | | | | |
| Size, in. | Туре | | | | | | | |
| 5/8 x 3/4" | Disc | \$1,506 | \$210 | \$1,716 | 1.0 | 1.0 | 1.0 | |
| 3/4" | " | 1,506 | 210 | 1,716 | 1.0 | 1.0 | 1.0 | |
| 1-0" | II | 2,510 | 515 | 3,025 | 1.7 | 2.5 | 1.8 | |
| 1-1/2" | п | 5,020 | 1,241 | 6,261 | 3.3 | 5.9 | 3.7 | |
| Single Fami | ly Residential | | | | | | | |
| Per Unit | | | | | | | | |
| Duplex | | \$1,848 | \$284 | \$2,132 | 1.2 | 1.4 | 1.2 | |
| Triplex | | 1,857 | 318 468 | 2,175 | 1,2 1,8 | 1.5 2.2 | 1.3 1.8 | |
| Fourplex | | 2,652 | 400 | 3,120 | 1.0 | 2.2 | 1.0 | |
| Commercial Meter | l / Industrial | | | | | | | |
| Size, in. | Туре | | | | | | | |
| 5/8 x 3/4" | Disc | \$1,506 | \$328 | \$1,834 | 1.0 | 1.6 | 1.1 | |
| 3/4" | II H | 1,506 | 328 | 1,834 | 1.0 | 1.6 | 1.1 | |
| 1-0" | " " | 2,510 | 1,004 | 3,514 | 1.7 | 4.8 | 2.1 | |
| 1-1/2" | | 5,020 | 1,938 | 6,958 | 3.3 | 9.2 | 4.1 | |
| 2-0" 3-0" | | 8,032 | 2,772 5,659 | 10,804 21,723 | 5.3 10.7 | 13.2 27.0 | 6.3 12.7 | |
| 3-0 4-0" | Compound " | 16,064 25,100 | (4) | 25,096 | 16.7 | 27.0 | 14.6 | |
| 6-0" | | 50,200 | (4) | 50,196 | 33.3 | | 29.3 | |
| 8-0" | lt. | 80,320 | (4) | 80,316 | 53.3 | | 46.8 | |
| 10-0" | II. | 115,460 | (4) | 115,456 | 76.7 | | 67.3 | |
| 2-0" | Turbine | 8,032 | 2,772 | 10,804 | 5.3 | 13.2 | 6.3 | |
| 3-0" | 11 | 17,570 | 5,659 | 23,229 | 11.7 | 27.0 | 13.5 | |
| 4-0" | 11 | 30,120 | (4) | 30,116 | 20.0 | | 17.6 | |
| 6-0" | 11 | 62,750 | (4) | 62,746 | 41.7 | | 36.6 | |
| 8-0" | yı . | 90,360 | (4) | 90,356 | 60.0 | | 52.7 | |
| 10-0" | 11 | 145,580 | (4) | 145,576 | 96.7 | | 84.8 | |

⁽¹⁾ ERU equal to a single family residential 5/8" x 3/4" meter connection.

⁽²⁾ Based on gallon per minute from AWWA M6 Water Meters—Selection, Installation, Testing, and Maintenance, except for MF which is based on ratio to the ERU summer time usage.

⁽³⁾ Charge based on ratio to the ERU annual gpd.

⁽⁴⁾ For meters 4-0" and larger, the water resource fee would be determined based on the ratio of projected annua usage (gpd) to the ERU usage amount of 357 gpd.

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM RESOURCES UNIT REPLACEMENT COST METHODOLOGY

FILE: SLC_ImpactFee.xls
SCHEDULE: Prop Eq_Ratios

DATE: 09/02/03 RANGE: RCNMeth

| ltem | Amount |
|--|----------------------|
| Replacement Cost New - System | \$ 755,645,374 |
| Resources - at Original Cost | 9,587,275 |
| Water Stock | 7,349,915 |
| Less Outstanding Debt Principal (1) | (31,697,587) |
| Less Contributed Assets (@ RCN) | (80,309,432) |
| Adjusted RCN | \$ 660,575,545 |
| Average Day Capacity - mgd (2) Annual average usage per SFR account (gpd) (3) - ERU Capacity | 50 358 138,631 |
| Gross System Development Fee Per ERU Credit for Existing Debt Service | \$ 4,765 |
| Paid Through Rates | (223) |
| Net Impact Fee Per ERU | \$ 4,542 |

- (1) From Salt Lake City Water, Sewer and Storm Water Utilities Report of Independent Accountants on Financial Statements and Supplemental Information for the year ended June 30, 2001.
- (2) Current average day capacity is 211.5 mgd as shown on page 3-7, CH2M Hill Water Master Plan.
- (3) Based on actual usage 1999 2001, City SFR 3/4" class.

SALT LAKE CITY DEPARTMENT OF WATER WATER SYSTEM RESOURCES COMPARISON OF METERED WATER USAGE

FILE: SLC_ImpactFee.xls
SCHEDULE: Prop Eq_Ratios

DATE: 09/02/03 RANGE: UseComp

| AVERAGE AVERAGE | DATIO TO |
|---|-----------------|
| MONTHLY MONTHLY METERED METERED AVERAGE GALLONS | RATIO TO SFR |
| CUSTOMER USE IRRIGATION MONTHLY PER UNIT | SEASONAL |
| CLASS (1,000 gals) (1,000 gals) UNITS PER DAY | AVERAGE |
| Single Family Residential (1) | |
| Annual 193,392 n/a 14,171 358 | n/a |
| Summer (2) 368,121 n/a 14,171 650 | n/a |
| Winter 77,289 n/a 14,171 175 | n/a |
| Multi-Family Residential (3) | |
| Annual 132,364 16,789 259 | 72.40% |
| Summer (2) 180,389 16,789 353 | 54.35% |
| Winter 93,696 16,789 183 | 104.84% |
| Duplex (3) | |
| Annual 71,101 7,762 242 | 67.60% |
| Summer (2) 119,638 7,762 399 | 61.38% |
| Winter 35,940 7,762 146 | 83.43% |
| Triplex (3) | |
| Annual 10,643 1,452 180 | 50.28% |
| Summer (2) 15,969 1,452 267 | 41.08% |
| Winter 6,161 1,452 127 | 72.57% |
| Four-Plex (3) | |
| Annual 33,931 4,680 199 | 55.59% |
| Summer (2) 47,531 4,680 286 | 44.00% |
| Winter 22,203 4,680 146 | 83.43% |

⁽¹⁾ Weighted average for 3/4" and 5/8" SFR City accounts; Utility records for 2001-02

Winter: December through February.

⁽²⁾ Summer: June through August.

⁽³⁾ Based on Utility records of City and Outside City accounts for 2000 through 2001.

SALT LAKE CITY WATER UTILITIES WATER RATE STUDY NEW CONNECTIONS

FILE: SLC_WaterCF.xls SCHEDULE: FORECAST DATE: 09/02/03 RANGE: INCREMENTAL_ACCTS

| Incremental Connections | FY 2002-03 FY | FY 2003-04 | FY 2004-05 | FY 2005-06 | FY 2006-07 | FY 2007-08 | FY 2008-09 | FY 2009-10 | FY 2010-11 | FY 2011-12 | |
|----------------------------|---------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|
| City Residential | 466.0 | 235.0 | 236.0 | 419.0 | 423.0 | | 431.0 | 435.0 | 439.0 | | 0 |
| City Commercial | 168.0 | 213.0 | 171.0 | 179.0 | 186.0 | 188.0 | 202.0 | 200.0 | 187.0 | 187.0 | 0. |
| City Industrial | 4.0 | 5.0 | 4.0 | 4.0 | 4.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 0 |
| City Municipal | 0.6 | . 11.0 | 0.6 | 9.0 | 10.0 | | 10.0 | 10.0 | 10.0 | = | 0. |
| City Miscellaneous | 17.0 | 21.0 | 17.0 | 18.0 | 18.0 | 18.0 | 20.0 | 20.0 | 18.0 | # | 0. |
| SubTotal (rounded) | 664.0 | 485.0 | 437.0 | 629.0 | 641.0 | 648.0 | 668.0 | 670.0 | 659.0 | 663.0 | 9 |
| County Residential | - 247.0 | 124.0 | 125.0 | 222.0 | 224.0 | | 228.0 | 230.0 | 233.0 | | 0. |
| County Commercial | 17.0 | 21.0 | 17.0 | 18.0 | 19.0 | 19.0 | 20.0 | 20.0 | 19.0 | 19.0 | 0. |
| County Industrial | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0. |
| County Municipal | 0.0 | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | 0.0 | | 0 |
| County Miscellaneous | 6.0 | 8.0 | 0.9 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | 7.0 | _ | 0. |
| SubTotal (rounded) | 270.0 | 153.0 | 148.0 | 247.0 | 250.0 | 252.0 | 255.0 | 257.0 | 259.0 | 261.0 | 0. |
| | | , | | , | | | | | | | |
| Exchange Residential | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| Exchange Commercial | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0. |
| Exchange Industrial | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| Exchange Municipal | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0. |
| Exchange Miscellaneous | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0. |
| SubTotal (rounded) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| Total | 934.0 | 638.0 | 585.0 | | | 0.006 | 923.0 | 927.0 | 918.0 | 924.0 | 0. |
| Cumulative Total Remaining | 8,516.0 | 7,582.0 | 6,944.0 | 6,359.0 | 5,483.0 | 4,592.0 | 3,692.0 | 2,769.0 | 1,842.0 | 924.0 | 0. |
| ERU Connections | | 17,348.8 | | | | | | | | | |
| Conversion factor | | 2.288 | | | | | | | | | |
| Annual ERU Connections | | 1,460 | 1,339 | 2,004 | 2,039 | 2,059 | 2,112 | 2,121 | 2,101 | 2,114 | 14 |
| | | | | | | | | | | | |

Appendix D

Bill Frequency Analysis

SALT LAKE CITY WATER RATE STUDY BILLING FREQUENCY - ANNUAL Single-Family Residential, City

FILE: BillFreq_CitySFR.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) CUMULATIVE | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|----------|----------|--------------------|----------------------|--------------------|--------------------------|--------------------|------------------------|-----------|--------------------|----------------|
| | USAGE | NO. OF BILLS IN | OF BILLS STOPPING | BILLS THROUGH | USE OF BILLS STOPPING | FOR BILLS | CUMULA BILLE | | CUMUL | |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | USAGE | NO. OF | % OF |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| 1 | | 79,938 | | 439,890 | • | - | - | 0.0% | 79,938 | 15.4% |
| 2 | 1 | 10,655 | 10,655 | 429,235 | 10,655 | 439,890 | 439,890 | 5.0% | 90,593 | 17.4% |
| 3 | 2 | 16,390 | 32,780 | 412,845 | 43,435 | 429,235 | 869,125 | 9.9% | 106,983 | 20.6% |
| 4 | 3 | 20,880 | 62,640 | 391,965 | 106,075 | 412,845 | 1,281,970 | | 127,863 | 24.6% |
| 5 | 4 | 23,232 | 92,928 | 368,733 | 199,003 | 391,965 | 1,673,935 | | 151,095 | 29.1% |
| 6 | 5 | 33,167 | 165,835 | 335,566 | 364,838 | 368,733 | 2,042,688 | | 184,262 | 35.4% |
| 7 | 6 | 25,701 | 154,206 | 309,885 | 519,044 | 335,568 | 2,378,234 | | 209,963 | 40.4% |
| 8 | 7 | 23,887 | 167,209 | 265,978 | 686,253 | 309,865 | 2,688,099 | | 233,850 | 45.0% |
| 9 | 8 | 21,138 | 169,104 | 264,840 | 855,357 | 285,978 | 2,974,077 | | 254,988 273,716 | 49.1% 52.7% |
| 10 | 9 | 18,728 | 168,552 | 246,112 | 1,023,909 | 264,840 246,112 | 3,238,917 3,485,029 | | 290,102 | 55.8% |
| 11 | 10 | 16,386 | 163,860 158,488 | 229,726 215,318 | 1,187,769 1,346,257 | 229,726 | 3,714,755 | | 304,510 | 58.6% |
| 12 13 | 11 12 | 14,408 12,824 | 153,886 | 202,494 | 1,500,145 | 215,318 | 3,930,073 | | 317,334 | 61.0% |
| 14 | 13 | 11,588 | 150,644 | 190,906 | 1,650,789 | 202,494 | 4,132,567 | | 328,922 | 63.3% |
| 15 | 14 | 10,237 | 143,318 | 180,669 | 1,794,107 | 190,906 | 4,323,473 | | 339,159 | 65,2% |
| 16 | 15 | 9,438 | 141,570 | 171,231 | 1,935,677 | 180,669 | 4,504,142 | | 348,597 | 87.1% |
| 17 | 16 | 8,546 | 136,736 | 162,885 | 2,072,413 | 171,231 | 4,675,373 | | 357,143 | 88.7% |
| 18 | 17 | 7,691 | 130,747 | 154,994 | 2,203,180 | 162,685 | 4,838,058 | 55.0% | 364,834 | 70.2% |
| 19 | 18 | 7,296 | 131,328 | 147,898 | 2,334,488 | 154,994 | 4,993,052 | | 372,130 | 71.8% |
| 20 | 19 | 6,827 | 129,713 | 140,871 | 2,464,201 | 147,698 | 5,140,750 | 58.4% | 378,957 | 72.9% |
| 21 | 20 | 6,367 | 127,340 | 134,504 | 2,591,541 | 140,871 | 5,281,621 | | 385,324 | 74.1% |
| 22 | 21 | 5,939 | 124,719 | 128,565 | 2,716,260 | 134,504 | 5,416,125 | | 391,263 | 75.3% |
| 23 | 22 | 5,775 | 127,050 | 122,790 | 2,843,310 | 128,565 | 5,544,690 | | 397,038 | 76.4% |
| 24 | 23 | 5,460 | 125,580 | 117,330 | 2,968,890 | 122,790 | 5,867,480 | | 402,498 | 77.4% |
| 25 | 24 | 5,108 | 122,592 | 112,222 | 3,091,482 | 117,330 | 5,784,810 5,897,032 | | 407,606 412,531 | 78.4% 79.4% |
| 26 27 | 25 26 | 4,925 4,595 | 123,125 119,470 | 107,297 102,702 | 3,214,607 3,334,077 | 112,222 107,297 | 6,004,329 | | 417,126 | 80.2% |
| 28 | 27 | 4,448 | 120,042 | 98,256 | 3,454,119 | 102,702 | 6,107,031 | | 421,572 | 81.1% |
| 29 | 28 | 4,336 | 121,408 | 93,920 | 3,575,527 | 98,256 | 6,205,287 | | 425,908 | 81.9% |
| 30 | 29 | 4,064 | 117,656 | 89,856 | 3,693,383 | 93,920 | 6,299,207 | | 429,972 | 82.7% |
| 31 | 30 | 3,895 | 116,850 | 85,961 | 3,810,233 | 89,856 | 6,389,063 | 72.6% | 433,867 | 83.5% |
| 32 | 31 | 3,659 | 113,429 | 82,302 | 3,923,662 | 85,961 | 6,475,024 | 73.6% | 437,526 | 84.2% |
| 33 | 32 | 3,528 | 112,896 | 78,774 | 4,036,558 | 82,302 | 6,557,326 | | 441,054 | 84.8% |
| 34 | 33 | 3,375 | 111,375 | 75,399 | 4,147,933 | 78,774 | 6,636,100 | | 444,429 | 85.5% |
| 35 | 34 | 3,174 | 107,916 | 72,225 | 4,255,849 | 75,399 | 6,711,499 | | 447,603 | 86.1% |
| 36 | 35 | 3,108 | 108,780 | 69,117 | 4,364,629 | 72,225 | 6,783,724 | | 450,711 | 88.7% |
| 37 | 36 | 2,979 | 107,244 | 66,138 | 4,471,873 | 69,117 | 6,852,841 | | 453,690 456,510 | 87.3% 87.8% |
| 38 39 | 37 38 | 2,820 2,872 | 104,340 109,136 | 63,318 60,446 | 4,576,213 4,685,349 | 66,138 63,318 | 8,918,979 6,982,297 | | 459,382 | 88.4% |
| 40 | 39 | 2,624 | 109,136 | 57,822 | 4,787,685 | 60,446 | 7,042,743 | | 462,006 | 88.9% |
| 41 | 40 | 2,436 | 97,440 | 55,386 | 4,885,125 | 57,822 | 7,100,565 | | 464,442 | 89.3% |
| 42 | 41 | 2,248 | 92,168 | 53,138 | 4,977,293 | 55,386 | 7,155,951 | | 466,690 | 89.8% |
| 43 | 42 | 2,134 | 89,628 | 51,004 | 5,066,921 | 53,138 | 7,209,089 | 81.9% | 488,824 | 90.2% |
| 44 | 43 | 2,109 | 90,687 | 48,895 | 5,157,608 | 51,004 | 7,280,093 | 82.5% | 470,933 | 90.6% |
| 45 | 44 | 2,026 | 89,144 | 46,869 | 5,246,752 | 48,895 | 7,308,988 | | 472,959 | 91.0% |
| 46 | 45 | 1,929 | 86,805 | 44,940 | 5,333,557 | 46,869 | 7,355,857 | | 474,888 | 91.4% |
| 47 | 46 | 1,828 | 84,088 | 43,112 | 5,417,645 | 44,940 | 7,400,797 | | 476,716 | 91.7% |
| 48 | 47 | 1,767 | 83,049 | 41,345 | 5,500,694 | 43,112 | 7,443,909 | | 478,483 | 92.0% |
| 49 | 48 | 1,695 | 81,360 | 39,650 | 5,582,054 | 41,345 | 7,485,254 | | 480,178 481,822 | 92.4% 92.7% |
| 50 51 | 49 50 | 1,644 1,501 | 80,556 75,050 | 38,008 36,505 | 5,862,610 5,737,660 | 39,650 38,006 | 7,524,904 7,562,910 | | 483,323 | 93.0% |
| 52 | 51 | 1,463 | 74,613 | 35,042 | 5,812,273 | 36,505 | 7,599,415 | | 464,786 | 93.3% |
| 53 | 52 | 1,427 | 74,204 | 33,615 | 5,886,477 | 35,042 | 7,634,457 | | 486,213 | 93.5% |
| 54 | 53 | 1,350 | 71,550 | 32,265 | 5,958,027 | 33,615 | 7,668,072 | | 487,563 | 93.8% |
| 55 | 54 | 1,340 | 72,360 | 30,925 | 6,030,387 | 32,265 | 7,700,337 | | 488,903 | 94.1% |
| 56 | 55 | 1,205 | 68,275 | 29,720 | 6,096,662 | 30,925 | 7,731,262 | | 490,108 | 94.3% |
| 57 | 56 | 1,094 | 61,264 | 28,626 | 6,157,926 | 29,720 | 7,760,982 | | 491,202 | 94.5% |
| 58 | 57 | 1,144 | 65,208 | 27,462 | 8,223,134 | 28,626 | 7,789,608 | | 492,346 | 94.7% |
| 59 | 58 | 1,041 | 60,378 | 26,441 | 6,283,512 | 27,482 | 7,817,090 | | 493,387 | 94.9% |
| 60 | 59 | 1,059 | 62,481 | 25,382 | 6,345,993 | 26,441 | 7,843,531 | | 494,446 | 95.1% |
| 61 | 60 | 905 | 54,300 | 24,477 | 6,400,293 | 25,382 | 7,868,913 | | 495,351 | 95.3% |
| 62 | 61 | 931 | 56,791 | 23,546 | 6,457,084 | 24,477 | 7,893,390 | | 496,282 | 95.5% |
| 63 | 62 | 906 | 56,172 | 22,640 | 6,513,256 8,588,255 | 23,546 | 7,918,936 7,939,576 | | 497,188 498,081 | 95.6% 95.8% |
| 64 65 | 63 64 | 873 738 | 54,999 47,232 | 21,767 21,029 | 8,815,487 | 22,640 21,767 | 7,961,343 | | 498,799 | 95.6% 96.0% |
| 66 | 65 | 784 | 50,960 | 20,245 | 6,866,447 | 21,029 | 7,982,372 | | 499,583 | 96.1% |
| 00 | 03 | ,04 | 00,000 | 20,240 | 0,000,177 | 21,020 | .,502,012 | 55.1 70 | ,000 | |

FILE: BillFreq_CitySFR.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) CUMULATIVE | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|--------------|----------------|----------------|--------------------|-------------------|------------------------|-----------------------|------------------------|-----------|--------------------|------------------|
| | | NO. OF | OF BILLS | BILL\$ | USE OF BILLS | FOR | CUMULA | | CUMUL | |
| Disale | USAGE | BILLS IN | STOPPING | THROUGH BLOCK | STOPPING IN BLOCK | BILLS PASSING THRU | USAGE | USAGE | NO. OF | % OF |
| Block No. | BLOCK (ccf) | (#) | IN BLOCK (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| 67 | 66 | 751 | 49,566 | 19,494 | 6,716,013 | 20,245 | 8,002,617 | 91.0% | 500,334 | 96.2% |
| 68 | 67 | 673 | 45,091 | 18,821 | 6,781,104 | 19,494 | 8,022,111 | 91.2% | | 96.4% |
| 69 | 68 | 653 | 44,404 | 18,188 | 6,805,508 | 18,821 | 8,040,932 | | 501,660 | 96.5% |
| 70 | 69 | 637 | 43,953 | 17,531 | 6,849,461 | 18,168 | 8,059,100 | 91.6% | 502,297 502,884 | 96.6% 96.7% |
| 71 72 | 70 71 | 587 558 | 41,090 39,618 | 16,944 16,386 | 6,890,551 6,930,169 | 17,531 16,944 | 8,076,631 8,093,575 | 92.0% | 503,442 | 96.8% |
| 73 | 72 | 560 | 40,320 | 15,826 | 6,970,489 | 16,386 | 8,109,961 | 92.2% | 504,002 | 97.0% |
| 74 | 73 | 501 | 36,573 | 15,325 | 7,007,082 | 15,826 | 8,125,787 | 92.4% | 504,503 | 97.1% |
| 75 | 74 | 549 | 40,626 | 14,776 | 7,047,688 | 15,325 | 8,141,112 | 92.5% | | 97,2% |
| 78 | 75 | 499 | 37,425 | 14,277 | 7,085,113 | 14,776 | 8,155,888 | 92.7% | 505,551 | 97.3% |
| 77 | 76 | 472 | 35,872 | 13,805 | 7,120,985 | 14,277 | 8,170,165 | 92.9% | 506,023 | 97.3% |
| 78 79 | 77 78 | 446 426 | 34,342 33,228 | 13,359 12,933 | 7,155,327 7,188,555 | 13,805 13,359 | 8,183,970 8,197,329 | 93.0% | 506,469 506,895 | 97.4% 97.5% |
| 60 | 76 79 | 397 | 31,363 | 12,536 | 7,100,333 | 12,933 | 8,210,262 | | 507,292 | 97.6% |
| 81 | 80 | 405 | 32,400 | 12,131 | 7,252,318 | 12,536 | 8,222,798 | | 507,697 | 97.7% |
| 82 | 81 | 371 | 30,051 | 11,780 | 7,282,369 | 12,131 | 8,234,929 | 93.6% | 508,068 | 97.7% |
| 83 | 82 | 371 | 30,422 | 11,389 | 7,312,791 | 11,760 | 8,246,889 | | 508,439 | 97.8% |
| 84 | 83 | 358 | 29,714 | 11,031 | 7,342,505 | 11,389 | 8,258,078 | | 506,797 | 97.9% |
| 85 | 84 | 330 | 27,720 | 10,701 | 7,370,225 | 11,031 | 8,269,109 | | 509,127 | 97.9% 98.0% |
| 86 87 | 85 86 | 336 328 | 28,560 28,208 | 10,365 10,037 | 7,398,785 7,428,993 | 10,701 10,365 | 8,279,810 8,290,175 | | 509,463 509,791 | 98.0% |
| 88 | 87 | 327 | 28,449 | 9,710 | 7,455,442 | 10,037 | 8,300,212 | | 510,118 | 98.1% |
| 89 | 88 | 275 | 24,200 | 9,435 | 7,479,642 | 9,710 | 8,309,922 | | 510,393 | 98.2% |
| 90 | 89 | 285 | 25,365 | 9,150 | 7,505,007 | 9,435 | 8,319,357 | 94.6% | 510,678 | 98.2% |
| 91 | 90 | 258 | 23,220 | 8,892 | 7,528,227 | 9,150 | 8,328,507 | | 510,936 | 98.3% |
| 92 | 91 | 289 | 26,299 | 8,603 | 7,554,528 | 8,892 | 8,337,399 | | 511,225 | 98.3% |
| 93 | 92 | 227 | 20,884 | 8,376 | 7,575,410 | 8,803 | 8,346,002 | | 511,452 | 98.4% |
| 94 95 | 93 94 | 245 221 | 22,785 20,774 | 8,131 7,910 | 7,598,195 7,618,969 | 6,376 6,131 | 8,354,378 8,362,509 | | 511,897 511,918 | 98.4% 98.5% |
| 96 | 95 | 234 | 22,230 | 7,676 | 7,641,199 | 7,910 | 6,370,419 | | 512,152 | 98.5% |
| 97 | 96 | 204 | 19,584 | 7,472 | 7,660,783 | 7,876 | 6,376,095 | | 512,356 | 98.6% |
| 98 | 97 | 193 | 18,721 | 7,279 | 7,679,504 | 7,472 | 8,385,567 | | 512,549 | 98.6% |
| 99 | 98 | 208 | 20,364 | 7,071 | 7,699,888 | 7,279 | 6,392,846 | | 512,757 | 98.6% |
| 100 | 99 | 192 | 19,008 | 6,879 | 7,718,898 | 7,071 | 6,399,917 | | 512,949 | 98.7% |
| 101 | 100 | 203 | 20,300 | 6,676 | 7,739,198 | 8,879 | 8,406,796 | | 513,152 | 98.7% |
| 102 103 | 110 120 | 1,802 1,142 | 168,636 131,729 | 5,074 3,932 | 7,907,832 8,039,561 | 59,176 45,429 | 8,465,972 8,511,401 | | 514,754 515,896 | 99.0% 99.2% |
| 103 | 130 | 794 | 99,368 | 3,138 | 8,138,929 | 35,468 | 8,546,869 | | 516,690 | 99.4% |
| 105 | 140 | 598 | 80,992 | 2,540 | 8,219,921 | 28,652 | 8,575,521 | | 517,288 | 99.5% |
| 108 | 150 | 451 | 65,525 | 2,089 | 8,285,448 | 23,275 | 8,598,798 | 97.7% | 517,739 | 99.6% |
| 107 | 160 | 343 | 53,291 | 1,746 | 8,336,737 | 19,301 | 8,618,097 | | 518,082 | 99.7% |
| 108 | 170 | 253 | 41,818 | 1,493 | 8,380,555 | 16,268 | 8,634,365 | | 518,335 | 99.7% |
| 109 | 180 | 204 | 35,797 | 1,289 | 8,416,352 | 14,007 | 8,648,372 | | 518,539 518,716 | 99.8% |
| 110 | 190 200 | 177 158 | 32,810 30,467 | 1,112 956 | 8,449,162 8,479,629 | 12,070 10,387 | 8,860,442 8,670,829 | | 518,716 | 99.6% 99.6% |
| 111 112 | 210 | 110 | 22,581 | 846 | 8,502,210 | 9,041 | 8,679,870 | | 518,982 | 99.8% |
| 113 | 220 | 104 | 22,394 | 742 | 8,524,604 | 7,974 | 8,687,844 | | 519,086 | 99.9% |
| 114 | 230 | 88 | 19,836 | 654 | 8,544,440 | 7,016 | 8,694,860 | 98.8% | 519,174 | 99.9% |
| 115 | 240 | 70 | 18,477 | 584 | 8,560,917 | 6,217 | 8,701,077 | | 519,244 | 99.9% |
| 116 | 250 | 60 | 14,708 | 524 | 8,575,625 | 5,548 | 8,706,625 | | 519,304 | 99.9% |
| 117 | 260 | 50 | 12,795 | 474 | 8,588,420 | 5,035 | 8,711,860 | | 519,354 | 99.9% |
| 118 119 | 270 280 | 32 | 8,494 10,775 | 442 403 | 8,596,914 8,607,689 | 4,594 4,275 | 8,718,254 8,720,529 | | 519,386 519,425 | 99.9% 99.9% |
| 120 | 290 | 39 29 | 8,282 | 374 | 8,615,971 | 3,902 | 8,724,431 | | 519,454 | 99.9% |
| 121 | 300 | 27 | 7,966 | 347 | 8,823,937 | 3,608 | 8,728,037 | | 519,481 | 99.9% |
| 122 | 310 | 25 | 7,618 | 322 | 8,631,555 | 3,338 | 6,731,375 | | 519,506 | 99.9% |
| 123 | 320 | 21 | 6,820 | 301 | 8,838,175 | 3,120 | 8,734,495 | | 519,527 | 99.9% |
| 124 | 330 | 19 | 6,189 | 282 | 8,844,344 | 2,909 | 8,737,404 | | 519,546 | 99.9% |
| 125 | 340 | 24 | 8,055 | 258 | 8,852,399 | 2,715 | 8,740,119 | | 519,570 519,593 | 100.0% |
| 126 | 350 | 23 | 7,927 | 235 222 | 8,660,326 8,664,942 | 2,457 2,286 | 8,742,576 8,744,862 | | 519,593 | 100.0% 100.0% |
| 127 128 | 360 370 | 13 13 | 4,616 4,761 | 209 | 8,869,703 | 2,200 | 8,747,033 | | 519,819 | 100.0% |
| 129 | 380 | 17 | 8,387 | 192 | 8,876,090 | 2,017 | 8,749,050 | | 519,636 | 100.0% |
| 130 | 390 | 14 | 5,389 | 178 | 8,881,479 | 1,849 | 8,750,699 | | 519,650 | 100.0% |
| 131 | 400 | 16 | 6,321 | 162 | 8,687,800 | 1,701 | 8,752,600 | | 519,888 | 100.0% |
| 132 | 410 | 10 | 4,056 | 152 | 8,691,858 | 1,576 | 8,754,176 | 99.5% | 519,678 | 100.0% |
| | | | | | | | | | | |

FILE: BillFreq_CitySFR.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) | (4) | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|--------------|----------------|-------------------|-------------------|------------------|------------------------|-----------------------|------------------------|------------|--------------------|------------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | | CUMUL | |
| Dlack | USAGE | BILLS IN BLOCK | STOPPING | THROUGH BLOCK | STOPPING IN BLOCK | BILLS PASSING THRU | USAGE | D USAGE | NO, OF | WNTS % OF |
| Block No. | BLOCK (ccf) | (#) | IN BLOCK (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| 133 | 420 | 12 | 4,982 | 140 | 8,696,838 | 1,462 | 8,755,638 | 99.5% | 519,688 | 100.0% |
| 134 | 430 | 6 | 2,552 | 134 | 8,699,390 | 1,372 | 8,757,010 | | 519,694 | 100.0% |
| 135 | 440 | 7 | 3,050 | 127 | 8,702,440 | 1,310 | 8,758,320 | | 519,701 | 100.0% |
| 136 | 450 | 6 | 2,679 | 121 | 8,705,119 | 1,249 | 8,759,569 8,760,772 | | 519,707 519,708 | 100.0% 100.0% |
| 137 | 460 470 | 1 5 | 453 2,332 | 120 115 | 8,705,572 8,707,904 | 1,203 1,182 | 8,761,954 | | 519,713 | 100.0% |
| 138 139 | 480 | 4 | 1,906 | 111 | 8,709,810 | 1,136 | 8,763,090 | | 519,717 | 100.0% |
| 140 | 490 | 3 | 1,453 | 108 | 8,711,263 | 1,093 | 8,764,183 | | 519,720 | 100.0% |
| 141 | 500 | 3 | 1,492 | 105 | 8,712,755 | 1,072 | 8,765,255 | 99.6% | 519,723 | 100.0% |
| 142 | 510 | 3 | 1,516 | 102 | 8,714,271 | 1,036 | 8,766,291 | | 519,726 | 100.0% |
| 143 | 520 | 1 | 514 | 101 | 8,714,785 | 1,014 | 8,767,305 | | 519,727 | 100.0% |
| 144 | 530 | 2 | 1,055 | 99 | 8,715,840 | 1,005 | 8,768,310 | | 519,729 | 100.0% |
| 145 | 540 | 6 | 3,217 | 93 | 8,719,057 | 967 | 8,769,277 | | 519,735 | 100.0% |
| 146 | 550 | 2 | 1,090 | 91 | 8,720,147 | 920 | 8,770,197 | | 519,737 | 100.0% 100.0% |
| 147 | 560 | 5 3 | 2,780 | 86 83 | 8,722,927 | 890 847 | 8,771,087 8,771,934 | | 519,742 519,745 | 100.0% |
| 148 149 | 570 580 | 5 | 1,697 2,874 | 78 | 8,724,624 8,727,498 | 804 | 8,772,738 | | 519,750 | 100.0% |
| 150 | 590 | 4 | 2,347 | 74 | 8,729,845 | 767 | 8,773,505 | | 519,754 | 100.0% |
| 151 | 600 | 2 | 1,200 | 72 | 8,731,045 | 740 | 8,774,245 | | 519,756 | 100.0% |
| 152 | 610 | 3 | 1,815 | 69 | 8,732,880 | 705 | 8,774,950 | | 519,759 | 100.0% |
| 153 | 620 | 4 | 2,454 | 65 | 8,735,314 | 664 | 8,775,614 | 99.7% | 519,763 | 100.0% |
| 154 | 630 | 1 | 624 | 64 | 8,735,938 | 644 | 8,776,258 | 99.8% | 519,764 | 100.0% |
| 155 | 640 | 5 | 3,178 | 59 | 8,739,116 | 618 | 8,776,878 | | 519,769 | 100.0% |
| 156 | 650 | 1 | 647 | 58 | 8,739,783 | 587 | 8,777,463 | | 519,770 | 100.0% |
| 157 | 670 | 3 | 1,993 | 55 | 8,741,756 | 1,143 | 8,778,606 | | 519,773 | 100.0% |
| 158 | 680 | 1 | 673 | 54 | 8,742,429 | 543 | 8,779,149 | | 519,774 | 100.0% |
| 159 | 690 | 3 | 2,058 | 51 | 8,744,487 | 528 | 8,779,677 | | 519,777 519,779 | 100.0% 100.0% |
| 160 | 720 | 2 | 1,434 | 49 47 | 8,745,921 8,747,371 | 1,524 480 | 8,781,201 8,781,681 | | 519,779 | 100.0% |
| 161 162 | 730 740 | 2 | 1,450 1,467 | 45 | 8,748,838 | 457 | 8,782,138 | | 519,783 | 100.0% |
| 163 | 750 | 3 | 2,244 | 42 | 8,751,082 | 444 | 8,782,582 | | 519,786 | 100.0% |
| 164 | 780 | 1 | 779 | 41 | 8,751,861 | 1,259 | 8,783,841 | | 519,787 | 100.0% |
| 165 | 790 | 1 | 790 | 40 | 8,752,651 | 410 | 8,784,251 | 99.8% | 519,788 | 100.0% |
| 166 | 810 | 2 | 1,616 | 38 | 8,754,267 | 796 | 8,785,047 | 99.9% | 519,790 | 100.0% |
| 167 | 840 | 1 | 836 | 37 | 8,755,103 | 1,136 | 8,786,183 | | 519,791 | 100.0% |
| 168 | 870 | 1 | 869 | 36 | 8,755,972 | 1,109 | 8,787,292 | | 519,792 | 100.0% |
| 169 | 880 | 4 | 3,495 | 32 | 8,759,467 | 335 | 8,787,627 | | 519,796 | 100.0% |
| 170 | 890 | 2 | 1,780 | 30 | 8,761,247 | 320 | 8,787,947 | | 519,798 | 100.0% |
| 171 | 900 | 2 | 1,792 910 | 28 27 | 8,763,039 8,763,949 | 292 280 | 8,788,239 8,788,519 | | 519,800 519,801 | 100.0% 100.0% |
| 172 173 | 910 930 | 1 | 2,782 | 24 | 8,766,731 | 532 | 8,789,051 | | 519,804 | 100.0% |
| 174 | 940 | 1 | 939 | 23 | 8,767,870 | 239 | 8,789,290 | | 519,805 | 100.0% |
| 175 | 960 | 2 | 1,908 | 21 | 8.789,578 | 448 | 8,789,738 | | 519,807 | 100,0% |
| 176 | 1,000 | 1 | 997 | 20 | 8,770,575 | 837 | 8,790,575 | | 519,808 | 100.0% |
| 177 | 1,010 | 4 | 4,018 | 16 | 8,774,593 | 178 | 8,790,753 | 99.9% | 519,812 | 100.0% |
| 178 | 1,030 | 1 | 1,022 | 15 | 8,775,615 | 312 | 8,791,065 | | 519,813 | 100.0% |
| 179 | 1,060 | 1 | 1,060 | 14 | 8,776,675 | 450 | 8,791,515 | | 519,814 | 100.0% |
| 180 | 1,070 | 1 | 1,064 | 13 | 8,777,739 | 134 | 8,791,649 | | 519,815 | 100.0% |
| 181 | 1,090 | 1 | 1,085 | 12 | 8,778,824 | 255 | 8,791,904 | | 519,816 | 100.0% |
| 182 | 1,160 | 2 | 2,312 | 10 | 8,781,138 | 832 295 | 8,792,736 8,793,031 | | 519,818 519,819 | 100.0% 100.0% |
| 183 | 1,190 | 1 | 1,185 1,195 | 9 | 8,782,321 8,783,516 | 295 85 | 8,793,031 8,793,116 | | 519,819 | 100.0% |
| 184 185 | 1,200 1,370 | 1 | 1,195 1,366 | 7 | 8,784,882 | 1,356 | 8,794,472 | | 519,821 | 100.0% |
| 186 | 1,370 | 1 | 1,432 | 6 | 8,786,314 | 482 | 8,794,954 | | 519,822 | 100.0% |
| 187 | 1,690 | 2 | 3,369 | 4 | 8,789,683 | 1,489 | 8,796,443 | | 519,824 | 100.0% |
| 188 | 1,750 | 1 | 1,748 | 3 | 8,791,431 | 238 | 8,796,681 | | 519,825 | 100.0% |
| 189 | 2,010 | 1 | 2,009 | 2 | 8,793,440 | 779 | 8,797,460 | | 519,826 | 100.0% |
| 190 | 2,100 | 1 | 2,091 | 1 | 8,795,531 | 171 | 8,797,631 | | 519,827 | 100.0% |
| 191 | 2,320 | 1 | 2,318 | - | 8,797,849 | 218 | 8,797,849 | 100.0% | 519,828 | 100.0% |
| Total | | 519,828 | 8.797,849 | | | | | | | |

FILE: BillFreq_CitySFRSum.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) CUMULATIVE | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|----------|----------|----------------|--------------------|--------------------|------------------------|--------------------|------------------------|----------------|--------------------|----------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | TIVE | CUMU | LATIVE |
| | USAGE | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS _ | BILLE | D | ACC | DUNTS |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | | NO. OF | % OF |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | | BILLS |
| 1 | 0 | 44,117 | 0 | 259,116 | 0 | 0 | 0 | 0.0% | 44,117 | 14.5% |
| 2 | 1 | 3,619 | 3,619 | 255,497 | 3,619 | 259,116 | 259,116 | 3.6% | | 15.7% |
| 3 | 2 | 5,446 | 10,896 | 250,049 | 14,515 | 255,497 | 514,613 | 7.2% | | 17.5% |
| 4 | 3 | 7,163 | 21,489 | 242,886 | 36,0 0 4 | 250,049 | 764,662 | 10.7% | 60,347 | 19.9% |
| 5 | 4 | 7,960 | 31,920 | 234,906 | 67,924 | 242,886 | 1,007,548 | 14.1% | | 22.5% |
| 6 | 5 | 8,902 | 44,510 | 226,004 | 112,434 | 234,906 | 1,242,454 | 17.4% 20.6% | | 25.5% 28.5% |
| 7 8 | 6 7 | 9,112 8,876 | 54,672 62,132 | 216,692 | 167,106 229,238 | 226,004 216,892 | 1,468,458 1,685,350 | 23.6% | 95,217 | 31.4% |
| 9 | 8 | 8,561 | 66,488 | 208,016 199,455 | 297,726 | 208,016 | 1,893,366 | | 103,778 | 34.2% |
| 10 | 9 | 8,077 | 72,693 | 191,378 | 370,419 | 199,455 | 2,092,821 | | 111,655 | 36.9% |
| 11 | 10 | 7,682 | 76,820 | 183,696 | 447,239 | 191,378 | 2,284,199 | | 119,537 | 39.4% |
| 12 | 11 | 7,148 | 78,626 | 176,548 | 525,867 | 183,696 | 2,467.895 | | 126,685 | 41.8% |
| 13 | 12 | 7,072 | 84,864 | 169,476 | 610,731 | 176,546 | 2,644,443 | | 133,757 | 44.1% |
| 14 | 13 | 6,831 | 68,803 | 162,645 | 699,534 | 169,476 | 2,813,919 | | 140,586 | 46.4% |
| 15 | 14 | 6,314 | 88,396 | 156,331 | 787,930 | 162,645 | 2,976,564 | | 146,902 | 48.4% |
| 16 | 15 | 6,068 | 91,020 | 150,263 | 876,95 0 | 156,331 | 3,132,695 | 43.9% | 152,970 | 50.4% |
| 17 | 16 | 5,886 | 94,176 | 144,377 | 973,126 | 150,263 | 3,283,158 | 46.0% | 156,656 | 52.4% |
| 18 | 17 | 5,533 | 94,061 | 138,844 | 1,067,187 | 144,377 | 3,427,535 | 48.1% | 164,389 | 54.2% |
| 19 | 18 | 5,378 | 96,804 | 133,466 | 1,163,991 | 136,644 | 3,566,379 | 50.0% | 169,767 | 56.0% |
| 20 | 19 | 5,277 | 100,263 | 128,189 | 1,264,254 | 133,466 | 3,699,845 | | 175,044 | 57.7% |
| 21 | 20 | 5,047 | 100,940 | 123,142 | 1,365,194 | 128,189 | 3,628,034 | | 180,091 | 59.4% |
| 22 | 21 | 4,852 | 101,892 | 118,290 | 1,467,086 | 123,142 | 3,951,176 | | 164,943 | 61.0% |
| 23 | 22 | 4,793 | 105,446 | 113,497 | 1,572,532 | 118,290 | 4,069,466 | | 189,736 | 62.6% |
| 24 | 23 | 4,673 | 107,479 | 108,824 | 1,680,011 | 113,497 | 4,182,963 | | 194,409 | 64.1% |
| 25 | 24 | 4,371 | 104,904 | 104,453 | 1,784,915 | 108,824 | 4,291,787 | | 198,780 | 65.6% |
| 26 | 25 | 4,320 | 108,000 | 100,133 | 1,892,915 | 104,453 | 4,396,240 | | 203,100 | 67.0% |
| 27 | 26 | 4,060 | 105,560 | 96,073 | 1,998,475 | 100,133 | 4,496,373 | | 207,160 | 68.3% |
| 28 | 27 | 3,923 | 105,921 | 92,150 | 2,104,396 | 96,073 | 4,592,446 | | 211,063 214,965 | 69.6% 70.9% |
| 29 | 28 | 3,682 | 108,696 | 88,268 84,584 | 2,213,092 2,319,928 | 92,150 88,268 | 4,684,596 4,772,864 | | 216,649 | 70.9% |
| 30 31 | 29 30 | 3,684 3,565 | 106,836 106,950 | 61,019 | 2,426,878 | 84,584 | 4,857,448 | | 222,214 | 73.3% |
| 32 | 31 | 3,370 | 104,470 | 77,649 | 2,531,346 | 81,019 | 4,938,467 | | 225,584 | 74.4% |
| 33 | 32 | 3,228 | 103,296 | 74,421 | 2,634,644 | 77,649 | 5,016,116 | | 226,812 | 75,5% |
| 34 | 33 | 3,121 | 102,993 | 71,300 | 2,737,637 | 74,421 | 5,090,537 | | 231,933 | 76.5% |
| 35 | 34 | 2,911 | 98,974 | 68,389 | 2,836,611 | 71,300 | 5,161,837 | | 234,644 | 77.4% |
| 36 | 35 | 2.874 | 100,590 | 65,515 | 2,937,201 | 68,389 | 5,230,226 | | 237,718 | 78.4% |
| 37 | 36 | 2,747 | 98,892 | 62,768 | 3,036,093 | 65,515 | 5,295,741 | | 240,465 | 79.3% |
| 38 | 37 | 2,644 | 97,828 | 60,124 | 3,133,921 | 62,768 | 5,358,509 | 75.2% | 243,109 | 80.2% |
| 39 | 38 | 2,678 | 101,764 | 57,446 | 3,235,685 | 60,124 | 5,418,633 | 76.0% | 245,767 | 81.1% |
| 40 | 39 | 2,467 | 96,213 | 54,979 | 3,331,898 | 57,446 | 5,476,079 | 76.8% | 248,254 | 81.9% |
| 41 | 40 | 2,296 | 91,840 | 52,683 | 3,423,738 | 54,979 | 5,531,058 | | 250,550 | 82.6% |
| 42 | 41 | 2,127 | 87,207 | 50,556 | 3,510,945 | 52,683 | 5,583,741 | | 252,677 | 83.3% |
| 43 | 42 | 2,022 | 84,924 | 48,534 | 3,595,869 | 50,556 | 5,634,297 | | 254,699 | 84.0% |
| 44 | 43 | 1,987 | 85,441 | 46,547 | 3,681,310 | 48,534 | 5,682,831 | | 256,686 | 84.6% |
| 45 | 44 | 1,923 | 84,612 | 44,624 | 3,765,922 | 46,547 | 5,729,378 | | 258,609 | 85.3% |
| 46 | 45 | 1,838 | 82,710 | 42,786 | 3,848,632 | 44,624 | 5,774,002 | | 260,447 | 85.9% |
| 47 | 46 | 1,744 | 80,224 | 41,042 | 3,928,856 | 42,786 | 5,616,788 | | 262,191 | 86.5% |
| 48 | 47 | 1,680 | 78,960 | 39,362 | 4,007,816 | 41,042 | 5,857,830 | | 263,871 | 87.0% |
| 49 | 48 | 1,620 | 77,760 | 37,742 | 4,085,576 | 39,362 | 5,897,192 | | 265,491 267,057 | 87.6% |
| 50 | 49 | 1,566 | 76,734 | 36,176 | 4,162,310 | 37,742 | 5,934,934 5,971,110 | | 266,482 | 88.1% 88.5% |
| 51 | 50 | 1,425 | 71,250 | 34,751 | 4,233,560 4,304,501 | 36,176 34,751 | 6,005,861 | | 269,873 | 69.0% |
| 52 53 | 51 52 | 1,391 1,352 | 70,941 70,304 | 33,360 32,008 | 4,304,805 | 33,360 | 6,039,221 | | 271,225 | 89.4% |
| 54 | 53 | 1,352 | 68,635 | 30,713 | 4,443,440 | 32,008 | 6,071,229 | | 272,520 | 89.9% |
| 55 | 53 54 | 1,295 | 69,012 | 29,435 | 4,512,452 | 30,713 | 6,101,942 | | 273,798 | 90.3% |
| 56 | 55 | 1,143 | 62,865 | 26,292 | 4,575,317 | 29,435 | 6,131,377 | | 274,941 | 90.7% |
| 57 | 56 | 1,032 | 57,792 | 27,260 | 4,633,109 | 28,292 | 6,159,669 | | 275,973 | 91.0% |
| 58 | 57 | 1,098 | 62,586 | 26,162 | 4,695,695 | 27,280 | 6,186,929 | | 277,071 | 91.4% |
| 59 | 58 | 1,013 | 58,754 | 25,149 | 4,754,449 | 26,162 | 6,213,091 | | 278,084 | 91.7% |
| 60 | 59 | 1,018 | 60,062 | 24,131 | 4,614,511 | 25,149 | 6,238,240 | | 279,102 | 92.0% |
| 61 | 60 | 659 | 51,540 | 23,272 | 4,866,051 | 24,131 | 6,262,371 | | 279,961 | 92.3% |
| 62 | 61 | 892 | 54,412 | 22,380 | 4,920,463 | 23,272 | 6,285,643 | | 280,853 | 92.6% |
| 63 | 62 | 868 | 53,816 | 21,512 | 4,974,279 | 22,380 | 6,308,023 | | 281,721 | 92.9% |
| 64 | 63 | 624 | 51,912 | 20,688 | 5,026,191 | 21,512 | 6,329,535 | 66.8% | 262,545 | 93.2% |
| | | | | | | | | | | |

FILE: BillFreq_CitySFRSum.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) CUMULATIVE | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|------------|------------|--------------|-------------------|-------------------|------------------------|--------------------|------------------------|-----------|--------------------|----------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | | | LATIVE |
| Disak | | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS | USAGE | D | NO. OF | % OF |
| No. | (ccf) | BLOCK (#) | IN BLOCK (ccf) | BLOCK (#) | IN BLOCK (ccf) | PASSING THRU (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| 65 | 64 | 703 | 44,992 | 19,985 | 5,071,183 | 20,688 | 6,350,223 | | 283,248 | 93.4% |
| 66 | 65 | 751 | 48,815 | 19,234 | 5,119,998 | 19,985 | 6,370,208 | | 283,999 | 93.7% |
| 67 | 66 | 719 | 47,454 | 18,515 | 5,187,452 | 19,234 | 6,389,442 | 89.6% | 284,718 | 93.9% |
| 68 | 67 | 648 | 43,416 | 17,867 | 5,210,868 | 18,515 | 6,407,957 | 89.9% | 285,366 | 94.1% |
| 69 | 68 | 615 | 41,820 | 17,252 | 5,252,688 | 17,867 | 6,425,824 | | 285,981 | 94.3% |
| 70 | 69 | 609 | 42,021 | 16,643 | 5,294,709 | 17,252 | 6,443,076 | | 286,590 | 94.5% |
| 71 | 70 | 565 | 39,550 | 18,078 | 5,334,259 | 16,643 | 6,459,719 | | 287,155 | 94.7% |
| 72 | 71 | 528 | 37,488 | 15,550 | 5,371,747 | 16,078 | 8,475,797 | | 287,683 | 94.9% 95.0% |
| 73 74 | 72 72 | 539 | 38,808 | 15,011 14,532 | 5,410,555 5,445,522 | 15,550 15.011 | 6,491,347 8,506,358 | | 288,222 288,701 | 95.2% |
| 74 75 | 73 74 | 479 532 | 34,967 39,368 | 14,000 | 5,484,890 | 14,532 | 6,520,890 | | 289.233 | 95.4% |
| 75 76 | 75 | 470 | 35,250 | 13,530 | 5,520,140 | 14,000 | 6,534,890 | | 289,703 | 95.5% |
| 77 | 76 | 446 | 33,896 | 13,084 | 5,554,036 | 13,530 | 8,548,420 | | 290,149 | 95.7% |
| 78 | 77 | 421 | 32,417 | 12,663 | 5,586,453 | 13,084 | 6,561,504 | | 290,570 | 95.8% |
| 79 | 78 | 402 | 31,356 | 12,281 | 5,617,809 | 12,663 | 8,574,167 | 92.2% | 290,972 | 96.0% |
| 80 | 79 | 381 | 30,099 | 11,880 | 5,647,908 | 12,261 | 6,586,428 | 92.4% | 291,353 | 96.1% |
| 81 | 80 | 390 | 31,200 | 11,490 | 5,879,108 | 11,880 | 6,598,308 | | 291,743 | 96.2% |
| 82 | 81 | 354 | 28,674 | 11,138 | 5,707,782 | 11,490 | 6,809,798 | | 292,097 | 98.3% |
| 83 | 82 | 354 | 29,028 | 10,782 | 5,736,810 | 11,138 | 6,620,934 | | 292,451 | 96.4% |
| 84 | 83 | 340 | 28,220 | 10,442 | 5,765,030 | 10,782 | 6,631,716 | | 292,791 | 96.6% |
| 85 | 84 | 316 | 26,544 | 10,126 | 5,791,574 | 10,442 | 6,642,158 | | 293,107 293,422 | 96.7% 96.8% |
| 86 87 | 85 86 | 315 314 | 26,775 27,004 | 9,811 9,497 | 5,818,349 5,845,353 | 10,128 9,811 | 6,652,284 6,662,095 | | 293,736 | 96.9% |
| 88 | 87 | 313 | 27,004 | 9,184 | 5,872,584 | 9,497 | 6,671,592 | | 294,049 | 97.0% |
| 89 | 88 | 265 | 23,320 | 8,919 | 5,895,904 | 9,184 | 6,680,776 | | 294,314 | 97.1% |
| 90 | 89 | 273 | 24,297 | 8,646 | 5,920,201 | 8,919 | 8,689,695 | | 294,587 | 97.1% |
| 91 | 90 | 245 | 22,050 | 8,401 | 5,942,251 | 8,646 | 6,698,341 | | 294,832 | 97.2% |
| 92 | 91 | 276 | 25,116 | 8,125 | 5,967,367 | 8,401 | 6,706,742 | 94.1% | 295,108 | 97.3% |
| 93 | 92 | 217 | 19,964 | 7,908 | 5,987,331 | 8,125 | 6,714,867 | | 295,325 | 97.4% |
| 94 | 93 | 233 | 21,669 | 7,675 | 6,009,000 | 7,908 | 6,722,775 | | 295,558 | 97.5% |
| 95 | 94 | 216 | 20,304 | 7,459 | 6,029,304 | 7,675 | 6,730,450 | | 295,774 | 97.5% |
| 96 | 95 | 222 | 21,090 | 7,237 | 6,050,394 | 7,459 | 6,737,909 | | 295,996 | 97.8% |
| 97 | 96 07 | 199 | 19,104 | 7,038 6,855 | 6,069,498 | 7,237 7,038 | 6,745,146 6,752,184 | | 296,195 296,378 | 97.7% 97.7% |
| 98 99 | 97 98 | 183 195 | 17,751 19,110 | 6,680 | 6,087,249 8,106,359 | 6,855 | 6,759,039 | | 296,573 | 97.8% |
| 100 | 99 | 180 | 17,820 | 8,480 | 6,124,179 | 6,660 | 6,785,699 | | 296,753 | 97.9% |
| 101 | 100 | 193 | 19,300 | 6,287 | 6,143,479 | 8,480 | 6,772,179 | | 296,946 | 97.9% |
| 102 | 110 | 1,534 | 161,453 | 4,753 | 6,304,932 | 55,583 | 6,827,762 | 95.8% | 298,480 | 98.4% |
| 103 | 120 | 1,088 | 125,483 | 3,665 | 6,430,415 | 42,453 | 6,870,215 | 96.4% | 299,568 | 98.8% |
| 104 | 130 | 751 | 93,969 | 2,914 | 6,524,384 | 32,989 | 6,903,204 | | 300,319 | 99.0% |
| 105 | 140 | 568 | 76,909 | 2,346 | 6,601,293 | 26,529 | 6,929,733 | | 300,887 | 99.2% |
| 106 | 150 | 425 | 61,724 | 1,921 | 6,683,017 | 21,434 | 6,951,167 | | 301,312 | 99.4% |
| 107 | 160 | 317 | 49,266 | 1,604 | 6,712,283 | 17,756 | 6,968,923 | | 301,629 | 99.5% 99.5% |
| 108 109 | 170 180 | 238 186 | 39,008 32,650 | 1,368 1,182 | 6,751,291 6,783,941 | 14,928 12,850 | 6,983,851 6,996,701 | | 301,865 302,051 | 99.6% |
| 110 | 190 | 170 | 31,504 | 1,012 | 6,815,445 | 11,024 | 7,007,725 | | 302,221 | 99.7% |
| 111 | 200 | 144 | 28,115 | 868 | 6,843,560 | 9,435 | 7,017,160 | | 302,365 | 99.7% |
| 112 | 210 | 102 | 20,927 | 786 | 6,864,487 | 8,187 | 7,025,347 | | 302,467 | 99.7% |
| 113 | 220 | 94 | 20,229 | 672 | 6,884,716 | 7,209 | 7,032,556 | 98.6% | 302,561 | 99.8% |
| 114 | 230 | 81 | 18,265 | 591 | 6,902,981 | 6,355 | 7,038,911 | | 302,642 | 99.8% |
| 115 | 240 | 67 | 15,771 | 524 | 6,918,752 | 5,601 | 7,044,512 | | 302,709 | 99.8% |
| 116 | 250 | 55 | 13,482 | 469 | 6,932,234 | 4,972 | 7,049,484 | | 302,764 | 99.8% |
| 117 | 260 | 46 | 11,788 | 423 | 6,944,002 | 4,498 | 7,053,982 | | 302,810 | 99.9% |
| 118 | 270 | 31 36 | 9,227 9,943 | 392 356 | 6,952,229 6,962,172 | 4,087 3,783 | 7,058,069 7,061,852 | | 302,641 302,677 | 99.9% 99.9% |
| 119 120 | 280 290 | 36 27 | 9,943 7,716 | 329 | 6,969,888 | 3,745 3,446 | 7,065,298 | | 302,904 | 99.9% |
| 120 | 300 | 26 | 7,675 | 303 | 6,977,563 | 3,165 | 7,068,463 | | 302,930 | 99.9% |
| 122 | 310 | 20 | 6,099 | 283 | 6,983,662 | 2,929 | 7,071,392 | | 302,950 | 99.9% |
| 123 | 320 | 18 | 5,679 | 265 | 6,989,341 | 2,749 | 7,074,141 | | 302,966 | 99.9% |
| 124 | 330 | 16 | 5,190 | 249 | 6,994,531 | 2,560 | 7,076,701 | | 302,984 | 99.9% |
| 125 | 340 | 24 | 8,055 | 225 | 7,002,586 | 2,385 | 7,079,066 | | 303,008 | 99.9% |
| 126 | 350 | 21 | 7,236 | 204 | 7,009,822 | 2,136 | 7,081,222 | | 303,029 | 99.9% |
| 127 | 360 | 11 | 3,903 | 193 | 7,013,725 | 1,983 | 7,083,205 | | 303,040 | 99.9% |
| 126 | 370 | 13 | 4,761 | 180 | 7,018,486 | 1,881 | 7,085,086 | 99.4% | 303,053 | 99.9% |

FILE: BillFreq_CitySFRSum.xls SCHEDULE: Summary DATE: 09/02/03

RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|------------|-------|----------|------------------|----------|------------------------|--------------------|------------------------|-----------|--------------------|------------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | TIVE | CUMU | LATIVE |
| | USAGE | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS | BILLE | | ACC | OUNTS |
| Block | | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | | NO. OF | % OF |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| 129 | 380 | 14 | 5,252 | 166 | 7,023,738 | 1,732 | 7,086,818 | 99.4% | 303,067 | 99.9% |
| 130 | | 13 | 5,005 | 153 | 7,028,743 | 1,595 | 7,088,413 | 99.4% | 303,080 | 99.9% |
| 131 | 400 | 11 | 4,338 | 142 | 7,033,081 | 1,468 | 7,089,881 | 99.4% | 303,091 | 100.0% |
| 132 | 410 | 9 | 3,648 | 133 | 7,036,729 | 1,378 | 7,091,259 | | 303,100 | 100.0% |
| 133 | 420 | 11 | 4,571 | 122 | 7,041,300 | 1,281 | 7,092,540 | | 303,111 | 100.0% |
| 134 | 430 | 5 | 2,129 | 117 | 7,043,429 | 1,199 | 7,093,739 | | 303,116 | 100.0% |
| 135 | 440 | 5 | 2,179 | 112 | 7,045,608 | 1,149 | 7,094,888 | | 303,121 | 100.0% |
| 136 | 450 | 6 | 2,679 | 106 | 7,048,287 | 1,099 | 7,095,987 | | 303,127 | 100.0% |
| 137 | 470 | 4 | 1,867 | 102 | 7,050,154 | 2,107 | 7,098,094 | | 303,131 | 100.0% |
| 138 | | 4 | 1,906 | 98 | 7,052,060 | 1,006 | 7,099,100 | | 303,135 | 100.0% 100.0% |
| 139 | | 3 | 1,453 | 95 | 7,053,513 | 963 | 7,100,063 | | 303,138 | 100.0% |
| 140 | | 3 | 1,492 | 92 | 7,055,005 | 942 | 7,101,005 | | 303,141 303,143 | 100.0% |
| 141 | 510 | 2 | 1,011 | 90 | 7,056,016 | 91 1 694 | 7,101,916 7,102,810 | | 303,144 | 100.0% |
| 142 | | 1 | 514 | 89 | 7,056,530 | 885 | 7,102,616 | | 303,146 | 100.0% |
| 143 | 530 | 2 | 1,055 | 87 | 7,057,585 7,059,723 | 848 | 7,104,543 | | 303,150 | 100.0% |
| 144 | 540 | 4 | 2,138 | 83 61 | 7,060,813 | 820 | 7,105,363 | | 303,152 | 100.0% |
| 145 | | 2 5 | 1,090 2,780 | 76 | 7,063,593 | 790 | 7,106,153 | | 303,157 | 100.0% |
| 146 147 | 570 | 3 | 1,697 | 73 | 7,065,290 | 747 | 7,106,900 | | 303,160 | 100.0% |
| 148 | 580 | 5 | 2,874 | 68 | 7,068,164 | 704 | 7,107,604 | | 303,165 | 100.0% |
| 149 | | 4 | 2,347 | 64 | 7,070,511 | 667 | 7,108,271 | | 303,169 | 100.0% |
| 150 | | 2 | 1,200 | 62 | 7,071,711 | 640 | 7,108,911 | | 303,171 | 100.0% |
| 151 | 610 | 3 | 1,815 | 59 | 7,073,526 | 605 | 7,109,516 | | 303,174 | 100.0% |
| 152 | | 4 | 2,454 | 55 | 7,075,980 | 564 | 7,110,080 | 99.7% | 303,178 | 100.0% |
| 153 | 830 | 1 | 624 | 54 | 7,076,604 | 544 | 7,110,624 | 99.7% | 303,179 | 100.0% |
| 154 | | 5 | 3,178 | 49 | 7,079,782 | 518 | 7,111,142 | 99.7% | 303,184 | 100.0% |
| 155 | | 1 | 647 | 48 | 7,080,429 | 487 | 7,111,629 | 99.7% | 303,185 | 100.0% |
| 156 | | 1 | 662 | 47 | 7,081,091 | 952 | 7,112,581 | 99.8% | 303,186 | 100.0% |
| 157 | | 1 | 673 | 46 | 7,081,764 | 463 | 7,113,044 | 99.8% | 303,187 | 100.0% |
| 158 | 690 | 3 | 2,058 | 43 | 7,083,822 | 448 | 7,113,492 | 99.8% | 303,190 | 100.0% |
| 159 | 720 | 1 | 716 | 42 | 7,084,538 | 1,286 | 7,114,778 | | 303,191 | 100.0% |
| 160 | 730 | 2 | 1,450 | 40 | 7,085,988 | 410 | 7,115,188 | | 303,193 | 100.0% |
| 161 | 740 | 2 | 1,467 | 38 | 7,087,455 | 387 | 7,115,575 | | 303,195 | 100.0% |
| 162 | 750 | 3 | 2,244 | 35 | 7,089,699 | 374 | 7,115,949 | | 303,198 | 100.0% |
| 163 | | 1 | 779 | 34 | 7,090,478 | 1,049 | 7,116,998 | | 303,199 | 100.0% |
| 164 | 790 | 1 | 790 | 33 | 7,091,268 | 340 | 7,117,338 | | 303,200 | 100.0% |
| 165 | | 1 | 807 | 32 | 7,092,075 | 657 | 7,117,995 | | 303,201 | 100.0% |
| 166 | 840 | 1 | 836 | 31 | 7,092,911 | 956 | 7,118,951 | | 303,202 | 100.0% 100.0% |
| 167 | | 4 | 3,495 | 27 | 7,096,406 | 1,215 | 7,120,166 | | 303,206 303,208 | 100.0% |
| 168 | | 2 | 1,780 | 25 | 7,098,186 | 270 242 | 7,120,438 7,120,678 | | 303,210 | 100.0% |
| 169 | | 2 | 1,792 | 23 22 | 7,099,978 7,100,888 | 230 | 7,120,908 | | 303,211 | 100.0% |
| 170 | | 1 | 910 1,855 | 20 | 7,102,743 | 435 | 7,121,343 | | 303,213 | 100.0% |
| 171 | 930 | 2 1 | 939 | 19 | 7,102,743 | 199 | 7,121,542 | | 303,214 | 100.0% |
| 172 173 | | 1 | 951 | 18 | 7,104,633 | 371 | 7,121,913 | | 303,215 | 100.0% |
| 173 | | 4 | 4,018 | 14 | 7,108,651 | 878 | 7,122,791 | | 303,219 | 100.0% |
| 175 | | 1 | 1,022 | 13 | 7,109,673 | 272 | 7,123,063 | | 303,220 | 100.0% |
| 178 | | 1 | 1,060 | 12 | 7,110,733 | 390 | 7,123,453 | | 303,221 | 100.0% |
| 177 | | 1 | 1,064 | 11 | 7,111,797 | 114 | 7,123,567 | | 303,222 | 100.0% |
| 178 | | 1 | 1,085 | 10 | 7,112,882 | 215 | 7,123,782 | | 303,223 | 100.0% |
| 179 | | 1 | 1,185 | 9 | 7,114,067 | 995 | 7,124,777 | | 303,224 | 100.0% |
| 180 | | 1 | 1,195 | 8 | 7,115,262 | 85 | 7,124,862 | | 303,225 | 100.0% |
| 181 | | 1 | 1,366 | 7 | 7,116,628 | 1,356 | 7,126,218 | | 303,226 | 100.0% |
| 182 | | 1 | 1,432 | 6 | 7,118,060 | 482 | 7,126,700 | | 303,227 | 100.0% |
| 183 | | 2 | 3,369 | 4 | 7,121,429 | 1,489 | 7,128,189 | 100.0% | 303,229 | 100.0% |
| 184 | | 1 | 1,748 | 3 | 7,123,177 | 238 | 7,128,427 | | 303,230 | 100.0% |
| 185 | | 1 | 2,009 | 2 | 7,125,186 | 7 7 9 | 7,129,206 | 100.0% | 303,231 | 100.0% |
| 186 | | 1 | 2,091 | 1 | 7,127,277 | 171 | 7,129,377 | | 303,232 | 100.0% |
| 187 | | 1 | 2,318 | 0 | 7,129,595 | 218 | 7,129,595 | 100.0% | 303,233 | 100.0% |
| Total | | 303,233 | 7,129,595 | | | | | | | _ |

FILE: BillFreq_CityMFR.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | 44) | (2) | (2) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|----------|----------------|-------------------|----------------------|-------------------|------------------------|-------------------------|------------------------|----------------|------------------|----------------|
| | (1) | (2) | (3) TOTAL USE | (4) CUMULATIVE | CUMULATIVE | BLOCK USE | | | | |
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA BILLEI | | ACCO | |
| Block | USAGE BLOCK | BILLS IN BLOCK | STOPPING IN BLOCK | THROUGH BLOCK | STOPPING IN BLOCK | BILLS _ PASSING THRU | USAGE | USAGE | NO. OF | % OF |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| 1 | - 0 | 8,178 | 1,904 | 52,266 51,068 | - 1,904 | - 104,040 | 104,040 | 0.0% 8.6% | 8,178 9,376 | 13.5% 15.5% |
| 2 | 2 4 | 1,198 2,256 | 8,069 | 48,812 | 9,973 | 101,181 | 205,221 | 17.0% | 11,632 | 19.2% |
| 4 | 8 | 4,067 | 22,363 | 44,745 | 32,336 | 95,585 | 300,806 | 24.8% | 15,699 | 26.0% |
| 5 | 8 | 4,561 | 34,274 | 40,184 | 66,610 | 87,276 | 388,082 | 32.1% | 20,260 | 33.5% |
| 6 | 10 | 4,387 | 41,580 47,959 | 35,797 31,621 | 108,190 156,149 | 78,078 69,441 | 466,160 535,601 | 38.5% 44.2% | 24,647 28,823 | 40.8% 47.7% |
| 7 8 | 12 14 | 4,176 3,619 | 48,788 | 28,002 | 204,937 | 61,364 | 596,965 | 49.3% | 32,442 | 53.7% |
| 9 | 16 | 3,114 | 48,233 | 24,888 | 253,170 | 54,413 | 651,378 | 53.8% | 35,558 | 58.8% |
| 10 | 18 | 2,542 | 44,467 | 22,346 | 297,637 | 48,487 | 699,865 | 57.8% | 38,098 | 63.0% |
| 11 | 20 | 2,221 | 43,268 | 20,125 18,254 | 340,905 381,081 | 43,540 39,264 | 743,405 782,669 | 61.4% 64.8% | 40,319 42,190 | 66.7% 69.6% |
| 12 13 | 22 24 | 1,671 1,726 | 40,176 40,534 | 16,528 | 421,615 | 35,618 | 818,267 | 67.6% | 43,916 | 72.7% |
| 14 | 26 | 1,548 | 39,441 | 14,980 | 461,056 | 32,249 | 850,536 | 70.3% | 45,464 | 75.2% |
| 15 | 28 | 1,315 | 36,151 | 13,665 | 497,207 | 29,291 | 879,827 | 72.7% | 46,779 | 77.4% |
| 16 | 30 | 1,274 | 37,594 | 12,391 | 534,801 | 26,704 | 906,531 | 74.9% | 48,053 49,155 | 79.5% 81.3% |
| 17 | 32 34 | 1,102 1,006 | 34,704 33,713 | 11,289 10,283 | 569,505 603,218 | 24,222 22,087 | 930,753 952,840 | 78.9% 78.7% | 50,161 | 83.0% |
| 18 19 | 36 | 854 | 30,330 | 9,429 | 633,548 | 20,152 | 972,992 | 80.4% | 51,015 | 84.4% |
| 20 | 38 | 844 | 31,633 | 8,585 | 665,181 | 18,419 | 991,411 | 81.9% | 51,859 | 85.8% |
| 21 | 40 | 712 | 28,093 | 7,873 | 693,274 | 16,783 | 1,008,194 | 83.3% | 52,571 | 87.0% |
| 22 | 42 | 701 | 29,082 | 7,172 | 722,356 | 15,386 | 1,023,580 | 84.5% | 53,272 | 88.1% 89.2% |
| 23 | 44 | 614 | 26,711 | 6,558 6,016 | 749,067 773,730 | 14,039 12,847 | 1,037,619 1,050,466 | 85.7% 86.8% | 53,886 54,428 | 90.0% |
| 24 25 | 46 48 | 542 509 | 24,663 24,176 | 5,507 | 797,906 | 11,776 | 1,062,242 | 87.7% | 54,937 | 90.9% |
| 26 | 50 | 494 | 24,427 | 5,013 | 622,333 | 10,741 | 1,072,983 | 88.6% | 55,431 | 91.7% |
| 27 | 52 | 447 | 23,022 | 4,566 | 845,355 | 9,804 | 1,082,787 | 89.4% | 55,678 | 92.4% |
| 28 | 54 | 361 | 19,316 | 4,205 | 684,671 | 8,954 | 1,091,741 | 90.2% | 56,239 | 93.0% 93.6% |
| 29 | 56 58 | 336 321 | 18,645 18,467 | 3,869 3,548 | 883,318 901,783 | 8,239 7,587 | 1,099,980 1,107,567 | 90.9% 91.5% | 56,575 56,896 | 94.1% |
| 30 31 | 60 | 295 | 17,535 | 3,253 | 919,318 | 6,931 | 1,114,498 | 92.1% | 57,191 | 94.6% |
| 32 | 62 | 253 | 15,561 | 3,000 | 934,879 | 6,381 | 1,120,879 | 92.6% | 57,444 | 95.0% |
| 33 | 64 | 217 | 13,784 | 2,783 | 948,663 | 5,896 | 1,126,775 | 93.1% | 57,661 | 95.4% |
| 34 | 66 | 205 | 13,422 | 2,578 | 962,085 | 5,458 | 1,132,233 | 93.5% | 57,866 58,060 | 95.7% 96.1% |
| 35 | 68 70 | 194 | 13,098 13,135 | 2,384 2,195 | 975,183 988,318 | 5,062 4,873 | 1,137,295 1,141,968 | 93.9% 94.3% | 58,249 | 96.4% |
| 36 37 | 70 | 189 156 | 11,161 | 2,039 | 999,479 | 4,319 | 1,146,287 | 94.7% | 58,405 | 96.6% |
| 38 | 74 | 137 | 10,062 | 1,902 | 1,009,541 | 4,002 | 1,150,289 | 95.0% | 58,542 | 96.9% |
| 39 | 76 | 144 | 10,867 | 1,758 | 1,020,408 | 3,727 | 1,154,016 | 95.3% | 58,686 | 97.1% |
| 40 | 78 | 137 | 10,615 | 1,621 | 1,031,023 | 3,445 | 1,157,461 | 95.6% 95.9% | 58,823 58,942 | 97.3% 97.5% |
| 41 42 | 80 82 | 119 130 | 9,452 10,588 | 1,502 1,372 | 1,040,475 1,051,063 | 3,174 2,932 | 1,160,635 1,163,567 | 96.1% | 59,072 | 97.7% |
| 43 | 84 | 88 | 7,348 | 1,284 | 1,058,411 | 2,700 | 1,166,267 | 96.3% | 59,160 | 97.9% |
| 44 | 86 | 86 | 7,351 | 1,198 | 1,065,762 | 2,523 | 1,168,790 | 96.5% | 59,246 | 98.0% |
| 45 | 88 | 68 | 5,945 | 1,130 | 1,071,707 | 2,357 | 1,171,147 | 96.7% | 59,314 | 98.1% |
| 46 | 90 | 77 | 6,888 | 1,053 | 1,078,595 | 2,218 2,063 | 1,173,365 1,175,428 | 96.9% 97.1% | 59,391 59,466 | 98.3% 98.4% |
| 47 48 | 92 94 | 75 75 | 6,857 7,018 | 978 903 | 1,085,452 1,092,470 | 1,924 | 1,177,352 | 97.1% | 59,541 | 98.5% |
| 49 | 96 | 72 | 6,878 | 831 | 1,099,348 | 1,772 | 1,179,124 | 97.4% | 59,613 | 98.6% |
| 50 | | 57 | 5,554 | 774 | 1,104,902 | 1,630 | 1,180,754 | 97.5% | 59,670 | 98.7% |
| 51 | 100 | 63 | 6,265 | 711 | 1,111,167 | 1,513 | 1,182,267 | 97.7% | 59,733 | 98.8% |
| 52 | | 42 | 4,261 | 669 | 1,115,428 | 1,399 1,320 | 1,183,666 1,184,986 | 97.8% 97.9% | 59,775 59,815 | 98.9% 99.0% |
| 53 54 | 104 106 | 40 47 | 4,142 4,957 | 629 582 | 1,119,570 1,124,527 | 1,320 | 1,186,219 | 98.0% | 59,862 | 99.0% |
| 55 | | 40 | 4,299 | 542 | 1,128,626 | 1,143 | 1,187,362 | 98.1% | 59,902 | 99.1% |
| 58 | 110 | 28 | 3,064 | 514 | 1,131,890 | 1,068 | 1,188,430 | 98.2% | 59,930 | 99.1% |
| 57 | 112 | 30 | 3,345 | 484 | 1,135,235 | 1,013 | 1,189,443 | 98.2% | 59,960 | 99.2% |
| 58 | | 28 | 3,183 | 456 430 | 1,138,418 1,141,422 | 959 900 | 1,190,402 1,191,302 | 98.3% 98.4% | 59,988 60,014 | 99.2% 99.3% |
| 59 60 | | 26 24 | 3,004 2,817 | 430 406 | 1,144,239 | 845 | 1,192,147 | 98.5% | 60,038 | 99.3% |
| 61 | | 29 | 3,463 | 377 | 1,147,702 | 795 | 1,192,942 | 98.5% | 60,067 | 99.4% |
| 62 | 122 | 13 | 1,580 | 364 | 1,149,282 | 748 | 1,193,690 | 98.6% | 60,080 | 99.4% |
| 63 | 124 | 30 | 3,708 | 334 | 1,152,990 | 716 | 1,194,406 | 98.7% | 60,110 | 99.4% |

SALT LAKE CITY WATER RATE STUDY BILLING FREQUENCY - ANNUAL Multi-Family Residential, City

FILE: BillFreq_CityMFR.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) | (4) | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|------------|------------|----------|---------------|------------|------------------------|------------------|------------------------|-----------------|---------------------------|------------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | TIVE | CUMUL | ATIVE |
| | USAGE | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS | BILLE | | ACCO | UNTS |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | USAGE | NO. OF | % OF |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| 64 | 126 | 18 | 2,259 | 316 | 1,155,249 | 659 | 1,195,065 | 98.7% | 60,128 | 99.5% |
| 65 | 128 | 21 | 2,677 | 295 | 1,157,926 | 621 | 1,19 5 ,686 | 98.8% | 60,149 | 99.5% |
| 66 | 130 | 15 | 1,944 | 280 | 1,1 5 9,870 | 584 | 1,196,270 | 98.8% | 60,164 | 99.5% |
| 67 | 132 | 14 | 1,84 0 | 266 | 1,161,710 | 552 | 1,196,822 | 98.9% | 60,178 | 99.6% |
| 68 | 134 | 12 | 1,601 | 254 | 1,163,311 | 525 | 1,197,347 | 98.9% | 60,19 0 | 99.6% |
| 69 | 136 | 17 | 2,301 | 237 | 1,165,612 | 497 | 1,197,844 | 98.9% | 60,207 | 99.6% |
| 70 | 136 | 8 | 1,096 | 229 | 1,166,710 | 466 | 1,196,312 | 99.0% | 60,215 | 99.6% |
| 71 | 140 | 15 | 2,093 | 214 | 1,168,803 | 451 | 1,198,763 | 99.0% | 60,230 | 99.6% |
| 72 | 142 | 12 | 1,698 | 202 | 1,170,501 | 422 | 1,199,185 | 99.1% | 60,242 | 99.7% |
| 73 | 144 | 10 | 1,435 | 192 | 1,171,936 | 399 | 1,199,584 | 99.1% | 60,252 | 99.7% |
| 74 | 146 | 5 | 727 | 187 | 1,172,663 | 381 | 1,199,965 | 99,1% | 60,257 | 99.7% 99.7% |
| 75 | 148 | 5 | 739 | 182 | 1,173,402 | 373 | 1,200,338 | 99.1% 99.2% | 60,262 6 0 ,271 | 99.7% |
| 76 | 150 | 9 | 1,347 | 173 | 1,174,749 | 361 | 1,200,699 | 99.2% | 60,276 | 99.7% |
| 77 | 152 | 5 | 757 | 166 | 1,175,506 | 343 332 | 1,201,042 | 99.2% | 60,283 | 99.7% |
| 78 | 154 | 7 6 | 1,074 934 | 161 155 | 1,176,580 1,177,514 | 320 | 1,201,374 1,201,694 | 99.3% | 60,289 | 99.7% |
| 79 80 | 156 158 | 4 | 630 | 151 | 1,178,144 | 308 | 1,202,002 | 99.3% | 60,293 | 99.8% |
| 81 | 160 | 4 | 636 | 147 | 1,178,782 | 300 | 1,202,302 | 99.3% | 60,297 | 99.8% |
| 82 | 162 | 8 | 1,290 | 139 | 1,180,072 | 288 | 1,202,590 | 99.3% | 60,305 | 99.6% |
| 83 | 164 | 4 | 653 | 135 | 1,180,725 | 275 | 1,202,865 | 99.4% | 60,309 | 99.6% |
| 84 | 166 | 9 | 1,491 | 126 | 1,182,216 | 267 | 1,203,132 | 99.4% | 60,318 | 99.6% |
| 85 | 168 | 7 | 1,172 | 119 | 1,183,388 | 248 | 1,203,380 | 99.4% | 80.325 | 99.8% |
| 86 | 170 | 6 | 1,017 | 113 | 1,184,405 | 235 | 1,203,615 | 99.4% | 60,331 | 99.8% |
| 87 | 172 | 3 | 516 | 110 | 1,184,921 | 226 | 1,203,841 | 99.4% | 60,334 | 99.6% |
| 88 | 174 | 6 | 1,039 | 104 | 1,185,960 | 215 | 1,204,058 | 99.5% | 60,340 | 99.8% |
| 89 | 176 | 4 | 701 | 100 | 1,186,661 | 205 | 1,204,261 | 99.5% | 60,344 | 99.8% |
| 90 | 178 | 5 | . 887 | 95 | 1,187,548 | 197 | 1,204,458 | 99.5% | 60,349 | 99.8% |
| 91 | 180 | 1 | 179 | 94 | 1,187,727 | 189 | 1,204,647 | 99.5% | 60,350 | 99.8% |
| 92 | 182 | 6 | 1,089 | 88 | 1,188,816 | 185 | 1,204,832 | 99.5% | 60,356 | 99.9% |
| 93 | 186 | 3 | 556 | 85 | 1,189,372 | 350 | 1,205,182 | 99.5% | 60,359 | 99.9% |
| 94 | 188 | 5 | 938 | 80 | 1,190,310 | 168 | 1,205,350 | 99.6% | 60,364 | 99.9% |
| 95 | 190 | 3 | 569 | 77 | 1,190,879 | 159 | 1,205,509 | 99.6% | 60,367 | 99.9% |
| 96 | 192 | 3 | 576 | 74 | 1,191,455 | 154 | 1,205,663 | 99.6% | 60,370 | 99.9% |
| 97 | 194 | 4 | 773 | 70 | 1,192,228 | 145 | 1,205,808 | 99.6% | 60,374 | 99.9% |
| 98 | 196 | 3 | 587 | 67 | 1,192,815 | 139 | 1,205,947 | 99.6% | 60,377 | 99.9% |
| 99 | 198 | 4 | 790 | 63 | 1,193,605 | 132 | 1,206,079 | 99.6% | 60,361 | 99.9% |
| 100 | 208 | 7 | 1,432 | 56 | 1,195,037 | 606 | 1,206,685 | 99.7% | 60,368 | 99.9% |
| 101 | 218 | 7 | 1,489 | 49 | 1,196,526 | 523 | 1,207,208 | 99.7% | 60,395 | 99.9% |
| 102 | 228 | 4 | 889 | 45 | 1,197,415 | 467 | 1,207,675 | 99.8% | 60,399 | 99.9% |
| 103 | 238 | 12 | 2,790 | 33 | 1,200,205 | 384 | 1,208,059 | 99.8% | 60,411 | 99.9% |
| 104 | 248 | 4 | 976 | 29 | 1,201,181 | 314 | 1,208,373 | 99.8% | 60,415 | 100.0% |
| 105 | 258 | 3 | 761 | 26 | 1,201,942 | 277 | 1,208,650 | 99.8% | 60,416 | 100.0% |
| 106 | 268 | 5 | 1,330 | 21 | 1,203,272 | 250 | 1,208,900 | 99.9% | 60,423 | 100.0% |
| 107 | 278 | 4 | 1,091 | 17 | 1,204,363 | 189 | 1,209,089 | 99.9% | 60,427 | 100.0% |
| 108 | 288 | 2 | 566 | 15 | 1,204,929 | 160 | 1,209,249 | 99.9% | 60,429 | 100.0% |
| 109 | 298 | 1 | 297 | 14 | 1,205,226 | 149 | 1,209,398 | 99.9% | 60,430 | 100.0% |
| 110 | 308 | 3 | 907 | 11 | 1,206,133 | 123 | 1,209,521 | 99.9% | 60,433 | 100.0% |
| 111 | 318 | 1 | 313 | 10 | 1,206,446 | 105 | 1,209,626 | 99.9% | 60,434 | 100.0% 100.0% |
| 112 | 328 | 1 | 322 | 9 | 1,206,768 | 94 | 1,209,720 | 99.9% 100.0% | 60,435 | 100.0% |
| 113 | 368 | 1 | 368 1 115 | 8 | 1,207,136 1,208,251 | 360 61 | 1,210,080 | 100.0% | 60,436 60,439 | 100.0% |
| 114 | 378 | 3 3 | 1,115 | 5 | 1,208,251 | 133 | 1,210,141 | 100.0% | 60,439 | 100.0% |
| 115 | 408 438 | 1 | 1,207 431 | 2 1 | 1,209,456 | 53 | 1,210,274 1,210,327 | 100.0% | 60,443 | 100.0% |
| 116 117 | 798 | 1 | 796 | _ ' | 1,210,685 | 358 | 1,210,685 | 100.0% | 60,444 | 100.0% |
| Total | / 50 | 60,444 | 1,210,685 | | 1,210,000 | 300 | 1,210,000 | 100.074 | 00,777 | 100.076 |
| IULAI | | 00,444 | 1,210,000 | | | | | | | |

SALT LAKE CITY WATER RATE STUDY BILLING FREQUENCY - SUMMER Multi-Family Residential, City

FILE: BillFreq_CityMFR_Sum.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) CUMULATIVE | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|------------|------------|--------------------|------------------|-------------------|--------------------|---------------------------|--------------------|----------------|------------------|----------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | | | LATIVE |
| • | | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS | BILLE | :D | | OUNTS % OF |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU (ccf) | USAGE (ccf) | (PERCENT) | NO. OF BILLS | BILLS |
| <u>No.</u> | (ccf) 0 | (#) 4,643 | (ccf) | (#) 30,616 | (ccf) 0 | (001) | (001) | 0.0% | 4,643 | 13.2% |
| 2 | 2 | 442 | 714 | 30,174 | 714 | 61,082 | 61,062 | 6.8% | 5,085 | 14.4% |
| 3 | | 864 | 3,109 | 29,310 | 3,823 | 60,001 | 121,063 | 13.5% | 5,949 | 16.9% |
| 4 | 6 | 1,362 | 7,552 | 27,948 | 11,375 | 58,000 | 179,063 | 19.9% | 7,311 | 20.7% |
| 5 | 8 | 1,708 | 12,855 | 26,240 | 24,230 | 55,087 | 234,150 | 26.0% | 9,019 | 25.6% |
| 6 | 10 | 1,770 | 16,781 | 24,470 | 41,011 | 51,561 | 285,711 | 31.8% | 10,789 | 30.6% |
| 7 | 12 | 1,861 | 21,395 | 22,609 | 62,406 | 48,003 | 333,714 378,069 | 37.1% 42.1% | 12,650 14,350 | 35.9% 40.7% |
| 8 | 14 | 1,700 | 22,937 | 20,909 19,280 | 85,343 110,593 | 44,355 41,004 | 419,073 | 46.6% | 15,979 | 45.3% |
| 9 10 | 16 18 | 1,629 1,465 | 25,250 25,638 | 17,815 | 136,231 | 37,828 | 456,901 | 50.8% | 17,444 | 49.5% |
| 11 | 20 | 1,383 | 26,973 | 16,432 | 163,204 | 34,943 | 491,844 | 54.7% | 18,827 | 53.4% |
| 12 | 22 | 1,280 | 27,496 | 15,152 | 190,700 | 32,200 | 524,044 | 58.3% | 20,107 | 57.0% |
| 13 | 24 | 1,192 | 27,993 | 13,960 | 218,693 | 29,689 | 553,733 | 61.6% | 21,299 | 60.4% |
| 14 | 26 | 1,137 | 28,976 | 12,823 | 247,669 | 27,334 | 581,067 | 64.6% | 22,438 | 63.6% |
| 15 | 28 | 1,016 | 27,940 | 11,807 | 275,609 | 25,138 | 606,205 | 87.4% | 23,452 | 66.5% |
| 16 | 30 | 995 | 29,373 | 10,812 | 304,982 | 23,137 | 629,342 | 70.0% | 24,447 | 69.3% 71.9% |
| 17 | 32 | 888 | 27,953 | 9,924 | 332,935 | 21,161 | 650,503 669,941 | 72.4% 74.5% | 25,335 26,163 | 71.9% 74.2% |
| 18 | 34 36 | 828 722 | 27,742 25,642 | 9,096 8,374 | 360,677 386,319 | 19,438 17, 84 2 | 687,783 | 76.5% | 26,885 | 76.3% |
| 19 20 | 38 | 731 | 27,396 | 7,643 | 413,715 | 16,366 | 704,149 | 78.3% | 27,616 | 78.3% |
| 21 | 40 | 605 | 23,865 | 7,038 | 437,580 | 14,951 | 719,100 | 80.0% | 28,221 | 80.0% |
| 22 | 42 | 617 | 25,595 | 6,421 | 463,175 | 13,757 | 732,857 | 81.5% | 28,838 | 81.8% |
| 23 | 44 | 538 | 23,409 | 5,883 | 486,584 | 12,579 | 745,436 | 82.9% | 29,376 | 83.3% |
| 24 | 46 | · 487 | 22,166 | 5,396 | 508,750 | 11,530 | 756,966 | 84.2% | 29,863 | 84.7% |
| 25 | 48 | 449 | 21,332 | 4,947 | 530,082 | 10,572 | 767,538 | 85.4% | 30,312 | 86.0% |
| 26 | 50 | 442 | 21,852 | 4,505 | 551,934 | 9,646 | 777,184 | 86.5% 87.4% | 30,754 31,153 | 67.2% 88.4% |
| 27 | 52 | 399 | 20,551 17,174 | 4,106 | 572,485 589,659 | 8,813 8,052 | 785,997 794,049 | 88.3% | 31,474 | 89.3% |
| 28 29 | 54 56 | 321 301 | 16,700 | 3,785 3,484 | 606,359 | 7,414 | 801,463 | 89.2% | 31,775 | 90.1% |
| 30 | 58 | 299 | 17,202 | 3,185 | 623,561 | 6,828 | 808,291 | 89.9% | 32,074 | 91.0% |
| 31 | 80 | 262 | 15,574 | 2,923 | 639,135 | 6,224 | 814,515 | 90.6% | 32,336 | 91.7% |
| 32 | | 229 | 14,085 | 2,694 | 653,220 | 5,733 | 820,248 | 91.2% | 32,565 | 92.4% |
| 33 | 64 | 192 | 12,197 | 2,502 | 665,417 | 5,297 | 825,545 | 91.8% | 32,757 | 92.9% |
| 34 | 66 | 184 | 12,049 | 2,318 | 677,466 | 4,909 | 830,454 | 92.4% | 32,941 | 93.4% |
| 35 | 68 | 164 | 11,072 | 2,154 | 688,538 | 4,556 | 835,010 | 92.9% | 33,105 | 93.9% 94.4% |
| 36 | 70 | 170 | 11,814 | 1,984 | 700,352 | 4,222 3,903 | 839,232 843,135 | 93.4% 93.8% | 33,275 33,418 | 94.4% |
| 37 | 72 | 1 43 128 | 10,231 9,400 | 1,841 1,713 | 710,583 719,983 | 3,610 | 846,745 | 94.2% | 33,546 | 95.1% |
| 38 39 | 74 76 | 134 | 10,112 | 1,579 | 730,095 | 3,354 | 850,099 | 94.6% | 33,680 | 95.5% |
| 40 | | 119 | 9,221 | 1,460 | 739,316 | 3,097 | 853,196 | 94.9% | 33,799 | 95.9% |
| 41 | 80 | 105 | 8,337 | 1,355 | 747,653 | 2,857 | 856,053 | 95.2% | 33,904 | 96.2% |
| 42 | 82 | 122 | 9,937 | 1,233 | 757,590 | 2,643 | 858,696 | 95.5% | 34,026 | 96.5% |
| 43 | 64 | 84 | 7,014 | 1,149 | 764,604 | 2,424 | 861,120 | 95.8% | 34,110 | 96.7% |
| 44 | 86 | 79 | 6,754 | 1,070 | 771,358 | 2,258 | 863,378 | 96.0% | 34,189 | 97.0% |
| 45 | | 64 | 5,595 | 1,006 | 778,953 | 2,103 | 865,481 | 96.3% | 34,253 34,324 | 97.1% 97.3% |
| 46 | | 71 | 6,354 | 935 | 783,307 789,707 | 1,976 1,830 | 887,457 889,287 | 96.5% 96.7% | 34,324 34,394 | 97.5% |
| 47 | | 70 | 6,400 6,456 | 865 796 | 796,163 | 1,700 | 870,987 | 96.9% | 34,463 | 97.7% |
| 48 49 | | 69 65 | 6,210 | 731 | 802,373 | 1,562 | 872,549 | 97.1% | 34,528 | 97.9% |
| 50 | | 51 | 4,970 | 880 | 807,343 | 1,434 | 873,983 | 97.2% | 34,579 | 98.1% |
| 51 | | 58 | 5,768 | 622 | 813,111 | 1,328 | 875,311 | 97.4% | 34,637 | 98.2% |
| 52 | | 38 | 3,854 | 584 | 818,965 | 1,222 | 876,533 | 97.5% | 34,675 | 98.3% |
| 53 | | 36 | 3,727 | 548 | 820,692 | 1,151 | 877,684 | 97.6% | 34,711 | 98.4% |
| 54 | | 41 | 4,324 | 507 | 825,016 | 1,074 | 878,758 | 97.8% | 34,752 | 98.6% |
| 55 | | 34 | 3,853 | 473 | 828,669 | 995 | 879,753 | 97.9% 98.0% | 34,786 34,812 | 98.7% 98.7% |
| 56 57 | | 26 | 2,848 | 447 421 | 831,515 834,415 | 932 882 | 880,685 881,567 | 98.0% | | 98.8% |
| 57 58 | | 26 24 | 2,900 2,728 | 397 | 837,143 | 834 | 882,401 | 98.2% | 34,862 | 98.9% |
| 59 | | 23 | 2,857 | 374 | 839,800 | 783 | 883,184 | 98.2% | 34,885 | 98.9% |
| 60 | | 21 | 2,465 | 353 | 842,285 | 735 | 883,919 | 98.3% | | 99.0% |
| 61 | | 24 | 2,867 | 329 | 845,132 | 693 | 884,612 | 96.4% | | 99.1% |
| 62 | | 11 | 1,336 | 318 | 846,468 | 652 | 885,264 | 98.5% | | 99.1% |
| 83 | 124 | 26 | 3,213 | 292 | 849,681 | 62 5 | 885,889 | 98.5% | 34,967 | 99.2% |
| | | | | | | | | | | |

SALT LAKE CITY WATER RATE STUDY BILLING FREQUENCY - SUMMER Multi-Family Residential, City

FILE: BillFreq_CityMFR_Sum.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) | (4) | (5) | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|-----------|-------|----------|-----------------------|---------|----------------------------|------------------|---------|-----------|--------|-----------------|
| | | NO. OF | TOTAL USE OF BILLS | BILLS | CUMULATIVE USE OF BILLS | FOR | CUMULA | TIVE | CUMU | LATIVE |
| | HEACE | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS | BILLE | | | DUNTS |
| Dioak | BLOCK | | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | | NO. OF | % OF |
| Block | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| No. 64 | 126 | 17 | 2.134 | 275 | 851.815 | 576 | 886,485 | 98.6% | 34,984 | 99.2% |
| 65 | 128 | 16 | 2,038 | 259 | 853,853 | 540 | 887,005 | 98.7% | 35,000 | 99.3% |
| 66 | 130 | 14 | 1,815 | 245 | 855,668 | 513 | 887,518 | 98.7% | 35,014 | 99.3% |
| 67 | 132 | 12 | 1,577 | 233 | 857,245 | 483 | 888,001 | 98.8% | 35,026 | 99.3% |
| 68 | 134 | 11 | 1,468 | 222 | 858,713 | 460 | 888,461 | 98.8% | 35,037 | 99.4% |
| 69 | 136 | 16 | 2,166 | 206 | 860,879 | 434 | 888,895 | 98.9% | 35,053 | 99.4% |
| 70 | 138 | 6 | 824 | 200 | 861,703 | 408 | 889,303 | 98.9% | 35,059 | 99.4% |
| 71 | 140 | 11 | 1,535 | 189 | 863,238 | 395 | 889,698 | 99.0% | 35,070 | 99.5% |
| 72 | 142 | 10 | 1,415 | 179 | 884,653 | 373 | 890,071 | 99.0% | 35,080 | 99.5% |
| 73 | 144 | 10 | 1,435 | 189 | 886,088 | 353 | 690,424 | 99.1% | 35,090 | 99.5% |
| 74 | 148 | 5 | 727 | 184 | 886,815 | 335 | 890,759 | 99.1% | 35,095 | 99.5% |
| 75 | 148 | 5 | 739 | 159 | 867,554 | 327 | 891,088 | 99.1% | 35,100 | 99.5% |
| 78 | 150 | 8 | 1,197 | 151 | 888,751 | 315 | 891,401 | 99.2% | 35,108 | 99.6% |
| 77 | 152 | 3 | 455 | 148 | 889,206 | 301 | 891,702 | 99.2% | 35,111 | 99.6% |
| 78 | 154 | 7 | 1,074 | 141 | 870,280 | 292 | 891,994 | 99.2% | 35,118 | 99.6% |
| 79 | 156 | 5 | 778 | 138 | 871,058 | 280 | 892,274 | 99.3% | 35,123 | 99.6% |
| 80 | 158 | 4 | 630 | 132 | 871,888 | 270 | 892,544 | 99.3% | 35,127 | 99.6% |
| 81 | 160 | 3 | 479 | 129 | 872,187 | 283 | 892,807 | 99.3% | 35,130 | 99.6% |
| 82 | 162 | 8 | 1,290 | 121 | 873,457 | 252 | 893,059 | 99.3% | 35,138 | 99.7% |
| 83 | 164 | 2 | 327 | 119 | 873,784 | 241 | 893,300 | 99.4% | 35,140 | 99.7% |
| 84 | 166 | 9 | 1,491 | 110 | 875,275 | 235 | 893,535 | 99.4% | 35,149 | 99.7% |
| 85 | 168 | 7 | 1,172 | 103 | 876,447 | 218 | 893,751 | 99.4% | 35,156 | 99.7% |
| 86 | 170 | 5 | 847 | 98 | 877,294 | 203 | 893,954 | 99.4% | 35,161 | 99.7% |
| 87 | 172 | 3 | 516 | 95 | 877,810 | 196 | 894,150 | 99.5% | 35,164 | 99.7% |
| 88 | 174 | 6 | 1,039 | 89 | 878,849 | 185 | 894,335 | 99.5% | 35,170 | 99.7% |
| 89 | 176 | 3 | 526 | 86 | 879,375 | 176 | 894,511 | 99.5% | 35,173 | 99.8% |
| 90 | 178 | 5 | 887 | 81 | 880,282 | 169 | 894,680 | 99.5% | 35,178 | 99.8% |
| 91 | 180 | 1 | 179 | 80 | 880,441 | 161 | 894,841 | 99.5% | 35,179 | 99.8% |
| 92 | 182 | 6 | 1,089 | 74 | 881,530 | 157 | 894,998 | 99.6% | 35,185 | 99.8% |
| 93 | 188 | 3 | 556 | 71 | 882,086 | 294 | 895,292 | 99.6% | 35,188 | 99.8% |
| 94 | 188 | 5 | 938 | 86 | 883,024 | 140 | 895,432 | 99.6% | 35,193 | 99.8% |
| 95 | 190 | 3 | 589 | 63 | 883,593 | 131 | 895,563 | 99.6% | 35,196 | 99.8% |
| 96 | 192 | 3 | 576 | 60 | 884,169 | 126 | 895,689 | 99.6% | 35,199 | 99.8% |
| 97 | 194 | 4 | 773 | 56 | 884,942 | 117 | 895,806 | 99.6% | 35,203 | 99.8% |
| 98 | 198 | 3 | 587 | 53 | 885,529 | 111 | 895,917 | 99.7% | 35,206 | 99.8% |
| 99 | 198 | 3 | 592 | 50 | 886,121 | 104 | 896,021 | 99.7% | 35,209 | 99.9% |
| 100 | 208 | 5 | 1,021 | 45 | 887,142 | 481 | 896,502 | 99.7% | 35,214 | 99.9% |
| 101 | 218 | 6 | 1,274 | 39 | 888,416 | 416 | 896,918 | 99.8% | 35,220 | 99.9% |
| 102 | 228 | 4 | 889 | 35 | 889,305 | 367 | 897,285 | 99.8% | 35,224 | 99.9% |
| 103 | 238 | 10 | 2,326 | 25 | 891,631 | 296 | 897,581 | 99.8% | 35,234 | 99.9% |
| 104 | 248 | 4 | 976 | 21 | 892,607 | 234 | 897,815 | 99.9% | 35,238 | 99.9% |
| 105 | 258 | 2 | 504 | 19 | 893,111 | 198 | 898,013 | 99.9% | 35,240 | 99.9% |
| 106 | 268 | 4 | 1,062 | 15 | 894,173 | 180 | 898,193 | 99.9% | 35,244 | 100.0% |
| 107 | 278 | 4 | 1,091 | 11 | 895,264 | 129 | 898,322 | 99.9% | 35,248 | 100.0% |
| 108 | 288 | 2 | 566 | 9 | 895,830 | 100 | 898,422 | 99.9% | 35,250 | 100.0% |
| 109 | 298 | 1 | 297 | 8 | 896,127 | 89 | 898,511 | 100.0% | 35,251 | 100.0% |
| 110 | 308 | 1 | 305 | 7 | 896,432 | 77 | 898,588 | 100.0% | 35,252 | 100.0% |
| 111 | 318 | 1 | 313 | 6 | 896,745 | 65 | 898,653 | 100.0% | 35,253 | 1 0 0.0% |
| 112 | 328 | 1 | 322 | 5 | 897,067 | 54 | 898,707 | 100.0% | 35,254 | 1 0 0.0% |
| 113 | 368 | 1 | 368 | 4 | 897,435 | 200 | 898,907 | 100.0% | 35,255 | 100.0% |
| 114 | 378 | 3 | 1,115 | 1 | 898,550 | 21 | 895,928 | 100.0% | 35,258 | 100.0% |
| 115 | 408 | 1 | 403 | 0 | 898,953 | 25 | 898,953 | 100.0% | 35,259 | 100.0% |
| Total | | 35,259 | 898,953 | | | | | | | |

SALT LAKE CITY WATER RATE STUDY
BILLING FREQUENCY - ANNUAL
Single-Family Residential, Outside City

FILE: BillFreq_SFRCnty.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) CUMULATIVE | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|----------|----------|----------------|------------------|--------------------|------------------------|--------------------|------------------------|-------------------|--------------------|----------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | TIVE | CUMUL | |
| | USAGE | BILL\$ IN | STOPPING | THROUGH | STOPPING | BILLS _ | BILLE | D | ACCO | |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | (DEDCENT) | NO. OF BILLS | % OF |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) 0 | (ccf) | (ccf) 0 | (PERCENT) 0.0% | 121,710 | 31.9% |
| 1 | 0 | 121,710 | 0 2,640 | 259,842 257,202 | 2,640 | 259,842 | 259,842 | | 124,350 | 32.6% |
| 2 | 1 2 | 2,640 4,003 | 8,006 | 253,199 | 10,646 | 257,202 | 517,044 | | 128,353 | 33.6% |
| 4 | 3 | 5,219 | 15,657 | 247,980 | 26,303 | 253,199 | 770,243 | | 133,572 | 35.0% |
| 5 | 4 | 6,555 | 26,220 | 241,425 | 52,523 | 247,980 | 1,018,223 | 13.6% | 140,127 | 36.7% |
| 6 | 5 | 42,306 | 211,530 | 199,119 | 264,053 | 241,425 | 1,259,648 | 16.8% | 182,433 | 47.8% |
| 7 | 6 | 8,180 | 49,080 | 190,939 | 313,133 | 199,119 | 1,458,767 | | 190,613 | 50.0% |
| 8 | 7 | 7,810 | 54,670 | 183,129 | 367,803 | 190,939 | 1,649,706 | | 198,423 | 52.0% |
| 9 | 8 | 7.661 | 61,288 | 175,468 | 429,091 | 183,129 | 1,832,835 | 24.5% | | 54.0% |
| 10 | 9 | 7,136 | 64,224 | 168,332 | 493,315 | 175,468 | 2,008,303 | 26.8% | | 55.9% |
| 11 | 10 | 6,759 | 67,590 | 161,573 | 560,905 | 168,332 | 2,176,635 | | 219,979 226,229 | 57.7% 59.3% |
| 12 | 11 | 6,250 | 68,750 | 155,323 | 629,655 | 161,573 | 2,338,208 | 31.3% 33.3% | | 60.8% |
| 13 | 12 | 5,637 | 67,644 | 149,686 | 697,299 | 155,323 149,686 | 2,493,531 2,643,217 | 35.3% | | 62.1% |
| 14 | 13 | 5,250 | 68,250 | 144,436 | 765,549 834,877 | 144,436 | 2,787,653 | | 242,068 | 63.4% |
| 15 | 14 15 | 4,952 4,693 | 69,328 70,395 | 139,484 134,791 | 905,272 | 139,484 | 2,927,137 | | 246,761 | 64.7% |
| 16 17 | 16 | 4,093 | 67,712 | 130,559 | 972,984 | 134,791 | 3,061,928 | | 250,993 | 65.8% |
| 18 | 17 | 3,841 | 65,297 | 126,718 | 1,038,281 | 130,559 | 3,192,487 | | 254,834 | 66.8% |
| 19 | 18 | 3,854 | 69,372 | 122,864 | 1,107,653 | 126,718 | 3,319,205 | 44.4% | | 67.8% |
| 20 | 19 | 3,682 | 69,958 | 119,182 | 1,177,611 | 122,864 | 3,442,069 | 46.0% | 262,370 | 68.8% |
| 21 | 20 | 3,465 | 69,300 | 115,717 | 1,246,911 | 119,182 | 3,561,251 | 47.6% | 265,835 | 89.7% |
| 22 | 21 | 3,253 | 68,313 | 112,464 | 1,315,224 | 115,717 | 3,676,968 | 49.2% | 269,088 | 70.5% |
| 23 | 22 | 3,135 | 68,970 | 109,329 | 1,384,194 | 112,464 | 3,789,432 | 50.7% | | 71.3% |
| 24 | 23 | 3,099 | 71,277 | 106,230 | 1,455,471 | 109,329 | 3,898,761 | 52.1% | 275,322 | 72.29 |
| 25 | 24 | 3,036 | 72,864 | 103,194 | 1,528,335 | 106,230 | 4,004,991 | 53.5% | | 73.0% |
| 28 | 25 | 2,912 | 72,800 | 100,282 | 1,601,135 | 103,194 | 4,108,185 | 54.9% | , | 73.7% |
| 27 | 26 | 2,793 | 72,618 | 97,489 | 1,673,753 | 100,282 | 4,208,467 | 56.3% | | 74.49 |
| 28 | 27 | 2,743 | 74,061 | 94,746 | 1,747,814 | 97,489 | 4,305,956 | | 286,806 289,448 | 75.2% 75.9% |
| 29 | 28 | 2,642 | 73,976 | 92,104 | 1,821,790 | 94,746 92,104 | 4,400,702 4,492,806 | | 291,985 | 76.5% |
| 30 | 29 | 2,537 | 73,573 | 89,567 86,998 | 1,895,363 1,972,433 | 89,567 | 4,582,373 | | 294,554 | 77.2% |
| 31 | 30 31 | 2,569 2,479 | 77,070 76,849 | 84,519 | 2,049,282 | 86,998 | 4,669,371 | 62.4% | | 77.89 |
| 32 33 | 32 | 2,479 | 76,896 | 82,116 | 2,126,178 | 84,519 | 4,753,890 | 63.6% | | 78.5% |
| 34 | 33 | 2,405 | 75,735 | 79,821 | 2,201,913 | 82,116 | 4,836,006 | | 301,731 | 79.19 |
| 35 | 34 | 2,234 | 75,956 | 77,587 | 2,277,869 | 79,821 | 4,915,827 | 65.7% | | 79.7% |
| 36 | 35 | 2,296 | 80,360 | 75,291 | 2,358,229 | 77,587 | 4,993,414 | 66.8% | 306,261 | 80.3% |
| 37 | 36 | 2,119 | 76,284 | 73,172 | 2,434,513 | 75,291 | 5,088,705 | 67.8% | 308,380 | 80.89 |
| 38 | 37 | 2,201 | 81,437 | 70,971 | 2,515,950 | 73,172 | 5,141,877 | 88.7% | | 81.4% |
| 39 | 38 | 2,114 | 80,332 | 68,857 | 2,596,282 | 70,971 | 5,212,848 | 69.7% | - | 82.0% |
| 40 | 39 | 2,081 | 81,159 | 66,776 | 2,677,441 | 68,857 | 5,281,705 | 70.6% | 314,776 | 82.5% |
| 41 | 40 | 1,971 | 78,840 | 64,805 | 2,756,281 | 66,776 | 5,348,481 | | 316,747 | 83.0% |
| 42 | 41 | 1,977 | 81,057 | 62,828 | 2,837,338 | 64,805 | 5,413,286 | | 318,724 | 83.5% |
| 43 | 42 | 1,945 | 81,690 | 60,883 | 2,919,028 | 62,828 | 5,476,114 | | 320,669 322,589 | 84.0% 84.5% |
| 44 | 43 | 1,920 | 82,560 | 58,963 | 3,001,588 | 60,883 58.963 | 5,536,997 5,595,960 | | 324,514 | 85,19 |
| 45 | 44 | 1,925 | 84,700 | 57,038 55,228 | 3,086,288 | 58,963 57,038 | 5,652,980 | | 326,324 | 85.59 |
| 46 | 45 | 1,810 | 81,450 83,490 | 55,228 53,413 | 3,167,738 3,251,226 | 57,038 55,228 | 5,708,226 | | 326,139 | 86.09 |
| 47 | 46 47 | 1,815 1,672 | 78,584 | 51,741 | 3,329,812 | 53,413 | 5,761,639 | 77.0% | | 66.4% |
| 48 49 | 47 | 1,672 | 81,600 | 50,041 | 3,411,412 | 51,741 | 5,813,380 | | 331,511 | 66.9° |
| 50 | 49 | 1,582 | 77,518 | 48,459 | 3,488,930 | 50,041 | 5,863,421 | | 333,093 | 67.39 |
| 51 | 50 | 1,626 | 81,300 | 46,833 | 3,570,230 | 48,459 | 5,911,880 | 79.0% | | 87.79 |
| 52 | 51 | 1,568 | 79,968 | 45,265 | 3,650,198 | 46,833 | 5,958,713 | 79.7% | | 88.19 |
| 53 | 52 | 1,551 | 80,652 | 43,714 | 3,730,850 | 45,265 | 6,003,978 | 60.3% | | 86.59 |
| 54 | 53 | 1,445 | 76,585 | 42,269 | 3,807,435 | 43,714 | 6,047,692 | 60.9% | | 88.99 |
| 55 | 54 | 1,403 | 75,762 | 40,866 | 3,883,197 | 42,269 | 6,089,961 | 61.4% | | 89.39 |
| 56 | 55 | 1,473 | 81,015 | 39,393 | 3,964,212 | 40,866 | 6,130,827 | 82.0% | | 89.79 |
| 57 | 56 | 1,399 | 78,344 | 37,994 | 4,042,556 | 39,393 | 6,170,220 | | 343,558 | 90.09 |
| 58 | 57 | 1,309 | 74,613 | 36,685 | 4,117,169 | 37,994 | 6,208,214 | 83.0% | | 90.4 |
| 59 | 58 | 1,250 | 72,500 | 35,435 | 4,189,669 | 36,685 | 6,244,899 | 83.5% | | 90.79 |
| 60 | 59 | 1,224 | 72,216 | 34,211 | 4,261,885 | 35,435 | 6,280,334 | 84.0% | | 91.09 |
| 61 | 60 | 1,166 | 71,160 | 33,025 | 4,333,045 | 34,211 | 6,314,545 | 84.4% | | 91.39 |
| 62 | 61 | 1,114 | 67,954 | 31,911 | 4,400,999 | 33,025 | 6,347,570 | 84.9% | | 91.6% |
| 63 | 62 | 1,105 | 68,510 | 30,806 | 4,469,509 | 31,911 | 6,379,481 | 85.3% | 350,746 | 91.9% |

FILE: BillFreq_SFRCnty.xls

SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|------------|------------|------------|------------------|------------------|------------------------|------------------|------------------------|----------------|--------------------|----------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | TIVE | CUMUL | ATIVE |
| | USAGE | | STOPPING | THROUGH | STOPPING | BILLS | BILLE | D | ACCO | |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | | NO, OF | % OF |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| 64 | 63 | 1,080 | 68,040 | 29,726 | 4,537,549 | 30,806 | 6,410,287 | 85.7% | 351,826 | 92.2% |
| 65 | 64 | 1,088 | 69,632 | 28,638 | 4,607,181 | 29,726 | 6,440,013 | | 352, 9 14 | 92.5% |
| 66 | 65 | 985 | 64,025 | 27,653 | 4,671,206 | 28,638 | 6,468,651 | | 353,899 | 92.8% |
| 67 | 66 | 973 | 64,218 | 26,680 | 4,735,424 | 27,653 | 6,496,304 | 86.9% | 354,872 355,781 | 93.0% 93.2% |
| 68 | 67 | 909 | 60,903 | 25,771 | 4,796,327 | 26,680 25,771 | 6,522,984 6,548,755 | | 356,660 | 93.5% |
| 69 70 | 68 69 | 879 906 | 59,772 62,514 | 24,892 23,986 | 4,856,099 4,918,613 | 24,892 | 6,573,647 | | 357,566 | 93.7% |
| 70 | 70 | 856 | 59,920 | 23,130 | 4,978,533 | 23,986 | 6,597,633 | 88.2% | | 93.9% |
| 72 | 71 | 859 | 60,989 | 22,271 | 5,039,522 | 23,130 | 6,620,763 | 88.5% | | 94.2% |
| 73 | 72 | 761 | 54,792 | 21,510 | 5,094,314 | 22,271 | 6,643,034 | 88.8% | 380,042 | 94.4% |
| 74 | 73 | 754 | 55,042 | 20,758 | 5,149,356 | 21,510 | 6,664,544 | 89.1% | 360,796 | 94.6% |
| 75 | 74 | 702 | 51,948 | 20,054 | 5,201,304 | 20,756 | 6,685,300 | 89.4% | | 94.7% |
| 76 | 75 | 722 | 54,150 | 19,332 | 5,255,454 | 20,054 | 6,705,354 | | 362,220 | 94.9% |
| 77 | 76 | 650 | 49,400 | 18,682 | 5,304,854 | 19,332 | 6,724,686 | 69.9% | 362,870 | 95.1% |
| 78 | 77 | 655 | 50,435 | 18,027 | 5,355,269 | 18,682 | 6,743,368 | 90.2% | 363,525 | 95.3% |
| 79 | 78 | 607 | 47,346 | 17,420 | 5,402,635 | 18,027 | 6,761,395 6,778,815 | 90.4% 90.6% | 364,132 364,682 | 95.4% 95.6% |
| 80 | 79 | 550 | 43,450 | 16,870 | 5,446,085 | 17,420 16,870 | 6,795,685 | 90.6% | 365,234 | 95.7% |
| 81 | 80 | 552 547 | 44,160 44,307 | 16,318 15,771 | 5,490,245 5,534,552 | 16,318 | 6,812,003 | 91.1% | • | 95.9% |
| 82 83 | 81 82 | 526 | 43,132 | 15,245 | 5,577,684 | 15,771 | 6,827,774 | 91.3% | 366,307 | 96.0% |
| 84 | 83 | 526 | 43,658 | 14,719 | 5,621,342 | 15,245 | 6,843,019 | 91.5% | | 96.1% |
| 85 | 84 | 503 | 42,252 | 14,216 | 5,663,594 | 14,719 | 6,857,738 | 91.7% | | 96.3% |
| 86 | 85 | 454 | 38,590 | 13,762 | 5,702,184 | 14,216 | 6,871,954 | | 367,790 | 96.4% |
| 87 | 88 | 469 | 40,334 | 13,293 | 5,742,518 | 13,782 | 6,885,716 | 92.1% | 368,259 | 96.5% |
| 88 | 87 | 406 | 35,322 | 12,887 | 5,777,840 | 13,293 | 6,899,009 | 92.2% | 368,665 | 96.6% |
| 89 | 88 | 401 | 35,288 | 12,486 | 5,813,128 | 12,887 | 6,911,898 | 92.4% | | 96.7% |
| 90 | 69 | 366 | 32,574 | 12,120 | 5,845,702 | 12,486 | 6,924,382 | 92.6% | | 96.8% |
| 91 | 90 | 369 | 35,010 | 11,731 | 5,880,712 | 12,120 | 6,938,502 | 92.7% | , | 96.9% |
| 92 | 91 | 349 | 31,759 | 11,382 | 5,912,471 | 11,731 | 6,946,233 | | 370,170 | 97.0% |
| 93 | 92 | 347 | 31,924 | 11,035 | 5,944,395 | 11,382 | 6,959,815 | | 370,517 370,830 | 97.1% 97.2% |
| 94 | 93 | 313 309 | 29,109 | 10,722 10,413 | 5,973,504 6,002,550 | 11,035 10,722 | 6,970,650 6,981,372 | | 371,139 | 97.3% |
| 95 98 | 94 95 | 309 | 29,048 28,500 | 10,413 | 6,002,550 6,031,050 | 10,722 | 8,991,785 | | 371,139 | 97.3% |
| 97 | 96 | 336 | 32,448 | 9,775 | 6,063,498 | 10,113 | 7,001,698 | | 371,777 | 97.4% |
| 98 | 97 | 304 | 29,486 | 9,471 | 6,092,986 | 9,775 | 7,011,673 | | 372,081 | 97.5% |
| 99 | 98 | 327 | 32,046 | 9,144 | 6,125,032 | 9,471 | 7,021,144 | 93.9% | 372,408 | 97.6% |
| 100 | 99 | 273 | 27,027 | 8,871 | 6,152,059 | 9,144 | 7,030,288 | 94.0% | 372,681 | 97.7% |
| 101 | 100 | 258 | 25,800 | 8,613 | 6,177,859 | 8,871 | 7,039,159 | | 372,939 | 97.7% |
| 102 | 110 | 2,153 | 228,462 | 6,460 | 6,404,321 | 75,762 | 7,114,921 | | 375,092 | 98.3% |
| 103 | 120 | 1,489 | 171,560 | 4,971 | 6.575,881 | 57,480 | 7,172,401 | | 376,581 | 98.7% |
| 104 | 130 | 1,082 | 135,471 | 3,889 | 6,711,352 | 44,521 | 7,216,922 | | 377,663 | 99.0% |
| 105 | 140 | 794 | 107,304 | 3,095 | 6,818,656 6,900,485 | 35,034 28,329 | 7,251,956 7,280,285 | | 378,457 379,020 | 99.2% 99.3% |
| 106 | 150 160 | 563 502 | 81,829 77,976 | 2,532 2,030 | 6,978,461 | 22,976 | 7,303,281 | | 379,522 | 99.5% |
| 107 108 | 170 | 334 | 55,159 | 1,896 | 7,033,620 | 18,679 | 7,321,940 | | 379,858 | 99.8% |
| 109 | 180 | 247 | 43,331 | 1,449 | 7,078,951 | 15,831 | 7,337,771 | | 380,103 | 99.6% |
| 110 | 190 | 221 | 40,905 | 1,228 | 7,117,856 | 13,405 | 7,351,176 | | 380,324 | 99.7% |
| 111 | 200 | 174 | 33,969 | 1,054 | 7,151,825 | 11,449 | 7,362,625 | 98.4% | 380,498 | 99.7% |
| 112 | 210 | 138 | 27,958 | 918 | 7,179,783 | 9,938 | 7,372,563 | 98.6% | 380,634 | 99.8% |
| 113 | 220 | 125 | 26,923 | 793 | 7,206,706 | 8,603 | 7,381,168 | | 360,759 | 99.8% |
| 114 | 230 | 89 | 20,003 | 704 | 7,226,709 | 7,463 | 7,388,829 | | 360,848 | 99.8% |
| 115 | 240 | 89 | 20,964 | 615 | 7,247,873 | 6,644 | 7,395,273 | - | 380,937 | 99.8% |
| 118 | 250 | 89 | 16,905 | 548 | 7,264,578 | 5,805 | 7,401,078 | | 381,008 | 99.9% |
| 117 | 260 | 53 | 13,537 | 493 | 7,278,115 | 5,217 | 7,406,295 | | 381,059 381,107 | 99.9% 99.9% |
| 118 | 270 | 48 45 | 12,717 | 445 400 | 7,290,832 7,303,244 | 4,687 4,262 | 7,410.982 7,415,244 | | 381,152 | 99.9% |
| 119 120 | 260 290 | 45 25 | 12,412 7,120 | 375 | 7,303,244 | 3,870 | 7,419,114 | | 381,177 | 99.9% |
| 120 | 300 | 31 | 9,166 | 344 | 7,319,530 | 3,818 | 7,422,730 | | 361,208 | 99.9% |
| 122 | 310 | 31 | 9,477 | 313 | 7,329,007 | 3,307 | 7,428,037 | | 381,239 | 99.9% |
| 123 | 320 | 26 | 8,194 | 287 | 7,337,201 | 3,004 | 7,429,041 | | 381,265 | 99.9% |
| 124 | 330 | 28 | 9,090 | 259 | 7,346,291 | 2,720 | 7,431,761 | 99.4% | 381,293 | 99.9% |
| 125 | 340 | 25 | 8,401 | 234 | 7,354,692 | 2,491 | 7,434,252 | | 381,316 | 99.9% |
| 128 | 350 | 22 | 7,579 | 212 | 7,362,271 | 2,219 | 7,436,471 | 99.4% | 381,340 | 99.9% |
| | | | | | | | | | | |

FILE: BillFreq_SFRCnty.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|-------|-------|----------|------------------|------------|------------------------|------------------|------------------------|--------------------|----------------|--------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | | CUMUL | |
| | USAGE | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS | BILLE | D | ACCO NO. OF | % OF |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | (DEDCENT) | BILLS | BILLS |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) 7,438,544 | (PERCENT) 99.4% | 381,353 | 99.9% |
| 127 | 360 | 13 | 4,633 | 199 | 7,366,904 | 2,073 | 7,438,544 | 99.5% | 381,367 | 100.0% |
| 128 | 370 | 14 | 5,131 | 185 | 7,372,035 | 1,941 1,804 | 7,440,485 | 99.5% | 381,376 | 100.0% |
| 129 | 380 | 9 | 3,374 | 176 | 7,375,409 | | 7,443,997 | 99.5% | 381,391 | 100.0% |
| 130 | 390 | 15 | 5,798 | 161 | 7,381,207 | 1,708 1,547 | 7,445,544 | 99.5% | 381,405 | 100.0% |
| 131 | 400 | 14 | 5,537 | 147 | 7,386,744 | 1,347 | 7,446,939 | 99.6% | 381,419 | 100.0% |
| 132 | 410 | 14 | 5,665 | 133 | 7,392,409 | 1,295 | 7,448,234 | 99.6% | 381,430 | 100.0% |
| 133 | 420 | 11 | 4,585 | 122 | 7,396,994 | 1,176 | 7,449,410 | 99.6% | 381,439 | 100.0% |
| 134 | 430 | 9 | 3,826 | 113 104 | 7,400,820 | 1,104 | 7,450,514 | 99.6% | 381,448 | 100.0% |
| 135 | 440 | 9 | 3,934 | 104 97 | 7,404,754 7,407,874 | 1,010 | 7,451,524 | 99.6% | 381,455 | 100.0% |
| 136 | 450 | 7 | 3,120 | 97 88 | 7,411,974 | 930 | 7,452,454 | 99.6% | 381,464 | 100.0% |
| 137 | 460 | 9 | 4,100 | | | 869 | 7,453,323 | 99.6% | 381,469 | 100.0% |
| 138 | 470 | 5 | 2,339 | 83 | 7,414,313 | 735 | 7,454,058 | 99.7% | 381,487 | 100.0% |
| 139 | 480 | 18 | 8,545 | 65 50 | 7,422,858 7,426,249 | 611 | 7,454,669 | 99.7% | 381,494 | 100.0% |
| 140 | 490 | 7 | 3,391 | 58 | | 558 | 7,455,227 | 99.7% | 381,498 | 100.0% |
| 141 | 500 | 4 | 1,978 | 54 | 7,428,227 | 528 | 7,455,755 | 99.7% | 381,503 | 100.0% |
| 142 | 510 | 5 | 2,538 | 49 | 7,430,765 | 470 | 7,456,225 | 99.7% | 381,507 | 100.0% |
| 143 | 520 | 4 | 2,060 | 45 | 7,432,825 | 427 | 7,456,652 | 99.7% | 381,511 | 100.0% |
| 144 | 530 | 4 | 2,097 | 41 | 7,434,922 | 408 | 7,457,060 | 99.7% | 381,513 | 100.0% |
| 145 | 540 | 2 | 1,078 | 39 | 7,436,000 | | | 99.7% | 381,513 | 100.0% |
| 146 | 560 | 1 | 557 | 38 | 7,436,557 | 777 735 | 7,457,837 | 99.7% | 381,519 | 100.0% |
| 147 | 580 | 5 | 2,875 | 33 | 7,439,432 | 735 656 | 7,458,572 | 99.7% | 381,520 | 100.0% |
| 148 | 600 | 1 | 596 | 32 | 7,440,028 | 632 | 7,459,228 | 99.7% | 381,521 | 100.0% |
| 149 | 620 | 1 | 612 | 31 | 7,440,840 | 295 | 7,459,860 7,460,155 | 99.7% | 381,524 | 100.0% |
| 150 | 630 | 3 | 1,875 | 28 | 7,442,515 | 295 273 | 7,460,133 | 99.7% | 381,525 | 100.0% |
| 151 | 640 | 1 | 633 | 27 | 7,443,148 | 267 | 7,460,426 | 99.7% | 381,526 | 100.0% |
| 152 | 650 | 1 | 647 | 26 | 7,443,795 | 253 | 7,460,948 | 99.7% | 381,527 | 100.0% |
| 153 | 660 | 1 | 653 | 25 | 7,444,448 | 241 | 7,461,189 | 99.8% | 381,528 | 100.0% |
| 154 | 670 | 1 | 661 | 24 | 7,445,109 | 226 | 7,461,109 | 99.8% | 381,530 | 100.0% |
| 155 | 680 | 2 | 1,346 | 22 20 | 7,446,455 | 211 | 7,461,626 | 99.8% | 381,532 | 100.0% |
| 156 | 690 | 2 | 1,371 | | 7,447,826 | 794 | 7,462,420 | 99.8% | 381,534 | 100.0% |
| 157 | 730 | 2 | 1,454 | 18 | 7,449,280 | 354 | 7,462,774 | 99.8% | 361,536 | 100.0% |
| 158 | 750 | 2 | 1,494 | 16 15 | 7,450,774 | 155 | 7,462,774 | 99.8% | 361,537 | 100.0% |
| 159 | 760 | 1 | 755 | | 7,451,529 | 149 | 7,463,078 | 99.8% | 381,538 | 100.0% |
| 160 | 770 | 1 | 769 | 14 | 7,452,298 | 1,398 | 7,464,476 | 99.8% | 381,539 | 100.0% |
| 161 | 870 | 1 | 868 877 | 13 12 | 7,453,168 7.454,043 | 1,396 | 7,464,603 | 99.8% | 381,540 | 100.0% |
| 162 | 880 | 1 | | | , , | 1,312 | 7,465,915 | 99.8% | 381,541 | 100.0% |
| 163 | 990 | 1 | 982 | 11 | 7,455,025 | 211 | 7,466,126 | 99.8% | 381,542 | 100.0% |
| 164 | 1,010 | 1 | 1,001 | 10 9 | 7,456,026 | 895 | 7,487,021 | 99.8% | 381,543 | 100.0% |
| 165 | 1,100 | 1 | 1,095 | 8 | 7,457,121 | 443 | 7,467,464 | 99.8% | 381,544 | 100.0% |
| 166 | 1,150 | 1 | 1,143 | - | 7,458,264 | 472 | 7,467,404 | 99.8% | 381,545 | 100.0% |
| 167 | 1,210 | 1 | 1,202 | 7 | 7,459,466 | | | 99.9% | 381,546 | 100.0% |
| 168 | 1,420 | 1 | 1,419 | 6 | 7,460,885 | 1,469 416 | 7,469,405 7,469,821 | 99.9% | 381,547 | 100.0% |
| 169 | 1,490 | 1 | 1,486 | 5 | 7,482,371 | 2,500 | 7,469,621 | 99.9% | 381,548 | 100.0% |
| 170 | 1,990 | 1 | 1,990 | 4 | 7,484,361 | | | 99.9% | 381,549 | 100.0% |
| 171 | 2,070 | 1 | 2,070 | 3 | 7,486,431 | 320 | 7,472,641 | 99.9% | 381,550 | 100.0% |
| 172 | 2,540 | 1 | 2,540 | 2 | 7,468,971 | 1,410 | 7,474,051 | 100.0% | 381,551 | 100.0% |
| 173 | 5,390 | 1 | 5,388 | 1 | 7,474,359 | 5,698 69 | 7,479,749 | 100.0% | 381,552 | 100.0% |
| 174 | 5,460 | 1 | 5,459 | 0 | 7,479,818 | 69 | 7,479,818 | 100.0% | J01,30Z | 100.0% |
| Total | | 381,552 | 7,479,818 | | | | | | | |

FILE: BillFreq_CntySFR_Sum.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|----------|------------|----------------|------------------|-----------------------------|------------------------|-----------------------|------------------------|----------------|--------------------|-----------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | | | LATIVE DUNTS |
| | - | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS PASSING THRU | USAGE | | NO. OF | % OF |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK (#) | IN BLOCK (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| No. 1 | (ccf) 0 | (#) 66,081 | (ccf) | 156,491 | 0 | 0 | 0 | 0.0% | 66,081 | 29.7% |
| 2 | 1 | 1,249 | 1,249 | 155,242 | 1,249 | 156,491 | 156,491 | 2.5% | 67,330 | 30.3% |
| 3 | 2 | 1,830 | 3,660 | 153,412 | 4,909 | 155,242 | 311,733 | 5.0% | 69,160 | 31.1% |
| 4 | 3 | 2,454 | 7,362 | 150,958 | 12,271 | 153,412 | 465,145 | 7.5% | 71,614 | 32.2% |
| 5 | 4 | 3,161 | 12,644 | 147,797 | 24,915 | 150,958 | 616,103 | 9.9% | 74,775 | 33.6% |
| 6 | 5 | 3,523 | 17,615 | 144,274 | 42,530 | 147,797 | 763,900 | 12.3% | 78,298 | 35.2% |
| 7 | 8 | 3,689 | 22,134 | 140,585 | 64,664 | 144,274 | 908,174 | 14.6% | 81,987 | 36.8% |
| 8 | 7 | 3,848 | 25,538 | 136,937 | 90,200 | 140,585 | 1,048,759 | 16.9% | 85,635 | 38.5% |
| 9 | 8 | 3,602 | 28,816 | 133,335 | 119,016 | 136,937 | 1,185,696 | 19.1% | 89,237 | 40.1% |
| 10 | 9 | 3,460 | 31,140 | 129,875 | 150,156 | 133,335 | 1,319,031 | 21.3% 23.3% | 92,697 95,989 | 41.6% 43.1% |
| 11 | 10 | 3,292 | 32,920 | 126,583 | 183,076 | 129,875 126,583 | 1,448,906 1,575,489 | 25.4% | 99,112 | 44.5% |
| 12 | 11 | 3,123 | 34,353 | 123,460 | 217,429 252,229 | 123,460 | 1,898,949 | 27.4% | 102,012 | 45.8% |
| 13 | 12 | 2,900 2,754 | 34,800 35,802 | 120,560 117, 8 06 | 288,031 | 120,560 | 1,819,509 | 29.3% | 104,766 | 47.1% |
| 14 15 | 13 14 | 2,734 | 37,086 | 115,157 | 325,117 | 117,806 | 1,937,315 | 31.2% | 107,415 | 48.3% |
| 16 | 15 | 2,663 | 39,945 | 112,494 | 365,062 | 115,157 | 2,052,472 | 33.1% | 110,078 | 49.5% |
| 17 | 18 | 2,375 | 38,000 | 110,119 | 403,062 | 112,494 | 2,164,966 | 34.9% | 112,453 | 50.5% |
| 18 | 17 | 2,316 | 39,372 | 107,803 | 442,434 | 110,119 | 2,275,085 | 36.7% | 114,769 | 51.6% |
| 19 | 18 | 2,406 | 43,308 | 105,397 | 485,742 | 107,803 | 2,382,888 | 38.4% | 117,175 | 52.6% |
| 20 | 19 | 2,315 | 43,985 | 103,082 | 529,727 | 105,397 | 2,488,285 | 40.1% | 119,490 | 53.7% |
| 21 | 20 | 2,269 | 45,380 | 100,813 | 575,107 | 103,082 | 2,591,367 | 41.8% | 121,759 | 54.7% |
| 22 | 21 | 2,158 | 45,318 | 98,655 | 620,425 | 100,813 | 2,692,180 | | 123,917 | 55.7% |
| 23 | 22 | 2,156 | 47,432 | 96,499 | 667,857 | 98,655 | 2,790,835 | | 126,073 | 56.8% |
| 24 | 23 | 2,172 | 49,956 | 94,327 | 717,813 | 96,499 | 2,887,334 | | 128,245 | 57.6% |
| 25 | 24 | 2,179 | 52,296 | 92,148 | 770,109 | 94,327 | 2,981,661 | 48.0% 49.5% | 130,424 132,577 | 58.6% 59.6% |
| 26 | 25 | 2,153 | 53,825 | 89,995 | 823,934 | 92,148 89,995 | 3,073,809 3,163,804 | 51.0% | 134,643 | 60.5% |
| 27 | 26 | 2,068 | 53,718 56,079 | 87,929 85,852 | 877,650 933,729 | 87,929 | 3,251,733 | 52.4% | 136,720 | 61.4% |
| 28 29 | 27 28 | 2,077 2,046 | 57,288 | 83,806 | 991,017 | 85,852 | 3,337,585 | 53.8% | 138,766 | 62.3% |
| 30 | 29 | 2,047 | 59,363 | 81,759 | 1,050,380 | 83,806 | 3,421,391 | 55.1% | 140,813 | 63.3% |
| 31 | 30 | 2,045 | 61,350 | 79,714 | 1,111,730 | 81,759 | 3,503,150 | 56.4% | 142,858 | 64.2% |
| 32 | 31 | 2,034 | 63,054 | 77,680 | 1,174,784 | 79,714 | 3,582,864 | 57.7% | 144,892 | 65.1% |
| 33 | 32 | 2,005 | 64,160 | 75,675 | 1,238,944 | 77,680 | 3,660,544 | 59.0% | 146,897 | 66.0% |
| 34 | 33 | 1,910 | 63,030 | 73,765 | 1,301,974 | 75,675 | 3,736,219 | 60.2% | 148,807 | 66.9% |
| 35 | 34 | 1,864 | 63,376 | 71,901 | 1,365,350 | 73,765 | 3,809,984 | 61.4% | 150,671 | 67.7% |
| 36 | 35 | 1,987 | 69,545 | 69,914 | 1,434,895 | 71,901 | 3,881,885 | 62.5% | 152,658 | 68.6% |
| 37 | 36 | 1,846 | 66,456 | 68,068 | 1,501,351 | 69,914 | 3,951,799 | 63.7% | 154,504 | 69.4% |
| 38 | 37 | 1,933 | 71,521 | 66,135 | 1,572,872 | 68,068 | 4,019,867 | 64.8% 65.8% | 156,437 | 70.3% 71.1% |
| 39 | 38 | 1,818 | 69,084 | 64,317 | 1,641,956 | 66,135 64,317 | 4,086,002 4,150,319 | 66.9% | 158,255 160,108 | 71.1% |
| 40 | 39 40 | 1,851 1,752 | 72,189 70,080 | 62,466 60,714 | 1,714,145 1,784,225 | 82,466 | 4,212,785 | 67.9% | 181,858 | 72.7% |
| 41 42 | 41 | 1,768 | 72,488 | 58,946 | 1,856,713 | 60,714 | 4,273,499 | 68.9% | 163,628 | 73.5% |
| 43 | 42 | 1,754 | 73,668 | 57,192 | 1,930,381 | 58,946 | 4,332,445 | 69.8% | 165,380 | 74.3% |
| 44 | 43 | 1,733 | 74,519 | 55,459 | 2,004,900 | 57,192 | 4,389,637 | 70.7% | 167,113 | 75.1% |
| 45 | 44 | 1,753 | 77,132 | 53,706 | 2,082,032 | 55,459 | 4,445,096 | 71.6% | 168,866 | 75.9% |
| 46 | 45 | 1,661 | 74,745 | 52,045 | 2,156,777 | 53,706 | 4,498,802 | 72.5% | 170,527 | 76.6% |
| 47 | 48 | 1,678 | 77,188 | 50,367 | 2,233,965 | 52,045 | 4,550,847 | | 172,205 | 77.4% |
| 48 | 47 | 1,535 | 72,145 | 48,832 | 2,306,110 | 50,367 | 4,601,214 | | 173,740 | 78.1% |
| 49 | 48 | 1,564 | 75,072 | 47,268 | 2,381,182 | 48,832 | 4,850,046 | | 17 5 ,304 | 78.8% |
| 50 | 49 | 1,450 | 71,050 | 45,818 | 2,452,232 | 47,268 | 4,697,314 | 75.7% | 178,754 | 79.4% |
| 51 | 50 | 1,501 | 75,050 | 44,317 | 2,527,282 | 45,818 | 4,743,132 | 76.4% | | 80.1% |
| 52 | | 1,446 | 73,746 | 42,871 | 2,601,028 2,677,364 | 44,317 42,871 | 4,787,449 4,830,320 | 77.1% 77.8% | 179,701 181,169 | 80.7% 81.4% |
| 53 | 52 | 1,488 | 78,336 | 41,403 | 2,748,225 | 41,403 | 4,871,723 | | 182,506 | 82.0% |
| 54 55 | | 1,337 1,307 | 70,861 70,578 | 40,066 38,759 | 2,818,803 | 40,066 | 4,911,789 | | 183,813 | 82.6% |
| 55 56 | | 1,307 | 76,670 | 37,365 | 2,895,473 | 38,759 | 4,950,548 | | 185,207 | 83.2% |
| 57 | | 1,394 | 73,192 | 36,058 | 2,968,665 | 37,365 | 4,987,913 | 80.4% | 188,514 | 83.8% |
| 58 | | 1,242 | 70,794 | 34,816 | 3,039,459 | 38,058 | 5,023,971 | 80.9% | 187,756 | 84.4% |
| 59 | | 1,184 | 68,672 | 33,632 | 3,108,131 | 34,816 | 5,058,787 | 81.5% | 188,940 | 84.9% |
| 80 | | 1,164 | 68,676 | 32,468 | 3,176,807 | 33,832 | 5,092,419 | | 190,104 | 85.4% |
| 61 | 60 | 1,125 | 67,500 | 31,343 | 3,244,307 | 32,488 | 5,124,887 | | 191,229 | 85.9% |
| 82 | | 1,059 | 64,599 | 30,284 | 3,308,906 | 31,343 | 5,156,230 | | 192,288 | 86.4% |
| 63 | 62 | 1,052 | 65,224 | 29,232 | 3,374,130 | 30,284 | 5,186,514 | 83.6% | 193,340 | 86.9% |
| | | | | | | | | | | |

FILE: BillFreq_CntySFR_Sum.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) CUMULATIVE | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|------------|------------|--------------|--------------------|-------------------|------------------------|------------------|------------------------|--------------------|--------------------|----------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | | | LATIVE |
| | | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS _ | BILLE | D | | DUNTS |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | (DEDCENT) | NO. OF | % OF |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) 5,215,746 | (PERCENT) 84.0% | 194,368 | 87.3% |
| 64 | 63 64 | 1,026 | 64,638 66,240 | 28,206 27,171 | 3,438,768 3,505,008 | 29,232 28,206 | 5,243,952 | 84.5% | 195,401 | 87.8% |
| 65 66 | 65 | 1,035 938 | 60,970 | 26,233 | 3,565,978 | 27,171 | 5,271,123 | 84.9% | 196,339 | 88.2% |
| 67 | 66 | 925 | 61,050 | 25,308 | 3,627,028 | 26,233 | 5,297,356 | 85.3% | 197,264 | 88.6% |
| 68 | 67 | 869 | 58,223 | 24,439 | 3,685,251 | 25,308 | 5,322,664 | 85.8% | 198,133 | 89.0% |
| 69 | 68 | 828 | 56,304 | 23,611 | 3,741,555 | 24,439 | 5,347,103 | 86.2% | 198,961 | 89.4% |
| 70 | 69 | 868 | 59,892 | 22,743 | 3,801,447 | 23,611 | 5,370,714 | 86.5% | 199,829 | 89.8% |
| 71 | 70 | 806 | 56,420 | 21,937 | 3,857,867 | 22,743 | 5,393,457 | 86.9% | 200,835 | 90.1% |
| 72 | 71 | 819 | 58,149 | 21,118 | 3,916,016 | 21,937 | 5,415,394 | 87.3% | 201,454 | 90.5% |
| 73 | 72 | 737 | 53,064 | 20,381 | 3,969,080 | 21,118 | 5,436,512 | 87.6% | 202,191 | 90.8% |
| 74 | 73 | 713 | 52,049 | 19,668 | 4,021,129 | 20,381 | 5,456,893 | 87.9% | 202,904 | 91.2% |
| 75 | 74 | 872 | 49,728 | 18,996 | 4,070,857 | 19,668 | 5,476,581 | 88.2% | 203,576 | 91.5% 91.8% |
| 76 | 75 | 684 | 51,300 | 18,312 | 4,122,157 | 18,996 | 5,495,557 5,513,869 | 88.5% 68.8% | 204,260 204,886 | 92.1% |
| 77 | 76 | 626 | 47,576 48,741 | 17,886 | 4,169,733 4,218,474 | 18,312 17,686 | 5,531,555 | 69.1% | 205,519 | 92.3% |
| 78 79 | 77 78 | 633 578 | 45,084 | 17,053 16,475 | 4,263,558 | 17,053 | 5,548,608 | 89.4% | 206,097 | 92.6% |
| 80 | 76 79 | 525 | 41,475 | 15,950 | 4,305,033 | 16,475 | 5,565,083 | 89.7% | 206,622 | 92.8% |
| 81 | 80 | 522 | 41,760 | 15,428 | 4,346,793 | 15,950 | 5,581,033 | 89.9% | 207,144 | 93.1% |
| 82 | 81 | 530 | 42,930 | 14,898 | 4,389,723 | 15,428 | 5,596,461 | 90.2% | 207,674 | 93.3% |
| 83 | 82 | 509 | 41,738 | 14,389 | 4,431,461 | 14,898 | 5,611,359 | 90.4% | 208,163 | 93.5% |
| 84 | 83 | 502 | 41,666 | 13,887 | 4,473,127 | 14,389 | 5,625,748 | 90.6% | 208,685 | 93.8% |
| 85 | 84 | 476 | 39,984 | 13,411 | 4,513,111 | 13,887 | 5,639,635 | 90.9% | 209,161 | 94.0% |
| 86 | 85 | 436 | 37,060 | 12,975 | 4,550,171 | 13,411 | 5,653,048 | 91.1% | 209,597 | 94.2% |
| 67 | 86 | 443 | 38,098 | 12,532 | 4,588,269 | 12,975 | 5,666,021 | | 210,040 | 94.4% |
| 88 | 87 | 394 | 34,278 | 12,138 | 4,622,547 | 12,532 | 5,678,553 | | 210,434 | 94.5% |
| 89 | 88 | 374 | 32,912 | 11,764 | 4,655,459 | 12,138 | 5,690,691 | 91.7% | 210,808 | 94.7% |
| 90 | 89 | 350 | 31,150 | 11,414 | 4,686,609 | 11,764 | 5,702,455 | 91.9% | 211,158 211,528 | 94.9% 95.0% |
| 91 | 90 | 370 | 33,300 30,758 | 11,044 10,706 | 4,719,909 4,750,667 | 11,414 11,044 | 5,713,869 5,724,913 | | 211,866 | 95.2% |
| 92 93 | 91 92 | 338 321 | 29,532 | 10,700 | 4,780,199 | 10,706 | 5,735,619 | | 212,187 | 95.3% |
| 94 | 93 | 297 | 27,621 | 10,088 | 4,807,820 | 10,385 | 5,746,004 | 92.6% | 212,484 | 95.5% |
| 95 | 94 | 296 | 27,824 | 9,792 | 4,835,644 | 10,088 | 5,756,092 | | 212,780 | 95.6% |
| 96 | 95 | 291 | 27,645 | 9,501 | 4,863,289 | 9,792 | 5,765,884 | 92.9% | 213,071 | 95.7% |
| 97 | 96 | 326 | 31,296 | 9,175 | 4,894,585 | 9,501 | 5,775,385 | 93.1% | 213,397 | 95.9% |
| 98 | 97 | 296 | 28,712 | 8,879 | 4,923,297 | 9,175 | 5,784,560 | 93.2% | 213,693 | 96.0% |
| 99 | 98 | 315 | 30,870 | 8,564 | 4,954,167 | 8,679 | 5,793,439 | 93.3% | 214,008 | 96.2% |
| 100 | 99 | 259 | 25,641 | 8,305 | 4,979,808 | 8,564 | 5,802,003 | 93.5% | 214,267 | 96.3% |
| 101 | 100 | 246 | 24,600 | 8,059 | 5,004,408 | 8,305 | 5,810,308 | 93.6% | 214,513 | 96.4% |
| 102 | 110 | 2,053 | 215,943 | 6,006 | 5,220,351 | 70,703 | 5,881,011 | | 216,566 | 97.3% |
| 103 | 120 | 1,399 | 161,179 | 4,607 | 5,381,530 | 53,359 | 5,934,370 | | 217,965 218,998 | 97.9% 98.4% |
| 104 | 130 | 1,033 | 129,323 100,538 | 3,574 2,830 | 5,510,853 5,611,391 | 41,103 32,118 | 5,975,473 6,007,591 | | 219,742 | 98.7% |
| 105 106 | 140 150 | 744 524 | 76,160 | 2,306 | 5,687,551 | 25,860 | 6,033,451 | 97.2% | | 99.0% |
| 107 | 160 | 471 | 73,147 | 1,835 | 5,760,698 | 20,847 | 6,054,298 | | 220,737 | 99.2% |
| 108 | 170 | 312 | 51,536 | 1,523 | 5,812,234 | 16,846 | 6,071,144 | | 221,049 | 99.3% |
| 109 | 180 | 228 | 40,014 | 1,295 | 5,852,248 | 14,204 | 8,085,348 | 98.0% | 221,277 | 99.4% |
| 110 | 190 | 207 | 38,313 | 1,088 | 5,890,561 | 11,933 | 6,097,281 | | 221,484 | 99.5% |
| 111 | 200 | 159 | 31,053 | 929 | 5,921,614 | 10,133 | 8,107,414 | 98.4% | 221,643 | 99.6% |
| 112 | 210 | 123 | 25,279 | 806 | 5,946,893 | 8,739 | 6,116,153 | | 221,766 | 99.6% |
| 113 | 220 | 110 | 23,691 | 696 | 5,970,584 | 7,551 | 6,123,704 | | 221,876 | 99.7% |
| 114 | 230 | 81 | 18,209 | 815 | 5,988,793 | 6,539 | 6,130,243 | | 221,957 | 99.7% |
| 115 | 240 | 84 | 19,784 | 531 | 6,008,577 | 5,774 | 6,136,017 | | 222,041 | 99.8% |
| 116 | 250 | 63 | 15,441 | 468 | 6,024,018 | 5,001 | 6.141,018 8.145,490 | | 222,104 222,150 | 99.8% 99.8% |
| 117 | 260 | 46 40 | 11,752 10,803 | 422 382 | 6,035,770 6,046,373 | 4,472 4,023 | 8,145,490 6,149,513 | | 222,150 | 99.6% |
| 118 | 270 280 | 40 41 | 11,315 | 341 | 6,057,686 | 4,023 3,655 | 6,153,168 | | 222,190 | 99.8% |
| 119 120 | 290 | 18 | 5,117 | 323 | 6,082,805 | 3,307 | 6,156,475 | | 222,249 | 99.9% |
| 121 | 300 | 29 | 6,581 | 294 | 6,071,386 | 3,111 | 6,159,566 | | 222,278 | 99.9% |
| 122 | | 30 | 9,172 | 284 | 6,080,558 | 2,812 | 6,182,398 | | 222,308 | 99.9% |
| 123 | 320 | 21 | 6,614 | 243 | 6,067,172 | 2,534 | 6,184,932 | | 222,329 | 99.9% |
| 124 | 330 | 26 | 8,443 | 217 | 6,095,615 | 2,293 | 6,187,225 | | 222,355 | 99.9% |
| 125 | 340 | 24 | 8,062 | 193 | 6,103,677 | 2,072 | 6,169,297 | | 222,379 | 99.9% |
| 126 | 350 | 18 | 6,207 | 175 | 6,109,884 | 1,837 | 6,171,134 | 99.4% | 222,397 | 99.9% |

FILE: BillFreq_CntySFR_Sum.xls

SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|-------|-------|--------------------|----------------------|-------|--------------------------|------------------|-----------------|-----------|---------|-----------------|
| | USAGE | NO. OF BILLS IN | OF BILLS STOPPING | BILLS | USE OF BILLS STOPPING | FOR BILLS | CUMULA BILLE | | | LATIVE DUNTS |
| Block | BLOCK | | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | | NO. OF | % OF |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| 127 | 360 | 7 | 2,497 | 168 | 6,112,381 | 1,727 | 6,172,861 | 99.5% | 222,404 | 99.9% |
| 128 | 370 | 13 | 4.768 | 155 | 6,117,149 | 1,638 | 6,174,499 | 99.5% | 222,417 | 99.9% |
| 129 | 360 | 7 | 2,626 | 146 | 6,119,775 | 1,516 | 6,176,015 | 99.5% | 222,424 | 99.9% |
| 130 | 390 | 14 | 5,410 | 134 | 6,125,165 | 1,430 | 6,177,445 | 99.5% | 222,438 | 99.9% |
| 131 | 400 | 12 | 4,749 | 122 | 6,129,934 | 1,289 | 6,178,734 | 99.5% | 222,450 | 99.9% |
| 132 | 410 | 12 | 4,656 | 110 | 6,134,790 | 1,156 | 6,179,890 | 99.6% | 222,462 | 100.0% |
| 133 | 420 | 8 | 3,338 | 102 | 6,138,128 | 1,078 | 6,180,968 | 99.6% | 222,470 | 100.0% |
| 134 | 430 | 7 | 2,979 | 95 | 6,141,107 | 989 | 6,181,957 | 99.6% | 222,477 | 100.0% |
| 135 | 440 | 6 | 3,497 | 87 | 6,144,604 | 927 | 6,182,684 | 99.6% | 222,465 | 100.0% |
| 136 | 450 | 6 | 2,675 | 81 | 6,147,279 | 845 | 6,183,729 | 99.6% | 222,491 | 100.0% |
| 137 | 460 | 8 | 3,649 | 73 | 6,150,926 | 779 | 6,184,506 | 99.6% | 222,499 | 100.0% |
| 136 | 470 | 5 | 2,339 | 68 | 6,153,267 | 719 | 6,185,227 | 99.7% | 222,504 | 100.0% |
| 139 | 480 | 15 | 7,120 | 53 | 6,160,367 | 600 | 6,185,827 | 99.7% | 222,519 | 100.0% |
| 140 | 490 | 7 | 3,391 | 46 | 6,163,778 | 491 | 6,186,318 | 99.7% | 222,526 | 100.0% |
| 141 | 500 | 3 | 1,466 | 43 | 6,165,264 | 446 | 6,166,764 | 99.7% | 222,529 | 100.0% |
| 142 | 510 | 4 | 2,031 | 39 | 6,167,295 | 421 | 6,187,185 | 99.7% | 222,533 | 100.0% |
| 143 | 520 | 4 | 2,060 | 35 | 6,169,355 | 370 | 6,187,555 | 99.7% | 222,537 | 100.0% |
| 144 | 530 | 3 | 1,575 | 32 | 6,170,930 | 335 | 6,167,890 | 99.7% | 222,540 | 100.0% |
| 145 | 540 | 2 | 1,078 | 30 | 6,172,008 | 318 | 6,168,206 | 99.7% | 222,542 | 100.0% |
| 146 | 560 | 1 | 557 | 29 | 6,172,565 | 597 | 6,186,805 | 99.7% | 222,543 | 100.0% |
| 147 | 580 | 4 | 2,301 | 25 | 6,174,866 | 561 | 6,189,366 | 99.7% | 222,547 | 100.0% |
| 148 | 620 | 1 | 612 | 24 | 6,175,478 | 992 | 6,190,358 | 99.7% | 222,546 | 100.0% |
| 149 | 630 | 3 | 1,875 | 21 | 6,177,353 | 225 | 6,190,583 | 99.7% | 222,551 | 100.0% |
| 150 | 650 | 1 | 647 | 20 | 6,178,000 | 417 | 6,191,000 | 99.7% | 222,552 | 100.0% |
| 151 | 660 | 1 | 653 | 19 | 6,176,653 | 193 | 8,191,193 | 99.8% | 222,553 | 100.0% |
| 152 | 670 | 1 | 661 | 18 | 6,179,314 | 181 | 6,191,374 | 99.6% | 222,554 | 100.0% |
| 153 | 690 | 2 | 1,371 | 16 | 6,180,665 | 351 | 6,191,725 | 99.6% | 222,558 | 100.0% |
| 154 | 730 | 2 | 1,454 | 14 | 6,182,139 | 634 | 6,192,359 | 99.8% | 222,556 | 100.0% |
| 155 | 750 | 2 | 1,494 | 12 | 6,183,633 | 274 | 6,192,633 | 99.8% | 222,560 | 100.0% |
| 156 | 760 | 1 | 755 | 11 | 6,184,368 | 115 | 6,192,748 | 99.8% | 222,561 | 100.0% |
| 157 | 770 | 1 | 769 | 10 | 6,185,157 | 109 | 6,192,857 | 99.8% | 222,562 | 100.0% |
| 158 | 870 | 1 | 868 | 9 | 6,186,025 | 998 | 6,193,855 | 99.8% | 222,563 | 100.0% |
| 159 | 880 | 1 | 877 | 8 | 6,186,902 | 67 | 6,193,942 | 99.8% | 222,564 | 100.0% |
| 160 | 1,100 | 1 | 1,095 | 7 | 6,187,997 | 1,755 | 6,195,697 | 99.8% | 222,565 | 100.0% |
| 161 | 1,150 | 1 | 1,143 | 6 | 6,189,140 | 343 | 6,196,040 | 99.8% | 222,566 | 100.0% |
| 162 | 1,210 | 1 | 1,202 | 5 | 6,190,342 | 352 | 6,196,392 | 99.6% | 222,567 | 100.0% |
| 163 | 1,420 | 1 | 1,419 | 4 | 6,191,761 | 1,049 | 6,197,441 | 99.9% | 222,566 | 100.0% |
| 164 | 1,990 | 1 | 1,990 | 3 | 6,193,751 | 2,280 | 6,199,721 | 99.9% | 222,569 | 100.0% |
| 165 | 2,070 | 1 | 2,070 | 2 | 6,195,821 | 240 | 6,199,961 | 99.9% | 222,570 | 100.0% |
| 166 | 5,390 | 1 | 5,388 | 1 | 6,201,209 | 6,636 | 6,206,599 | 100.0% | | 100.0% |
| 167 | 5,460 | 1 | 5,459 | 0 | 6,206,668 | 69 | 6,206,668 | 100.0% | 222,572 | 100.0% |
| Total | | 222,572 | 6,206,668 | | | | | | | |

FILE: BillFreq_CntyMFR.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) | (4) | (5) | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|----------|----------|------------|-----------------------|----------------|-------------------------|------------------|------------------|-------------------|-----------------|----------------|
| | | NO. OF | TOTAL USE OF BILLS | BILLS | CUMULATIVE USE OF BILLS | FOR | CUMULA | | CUMUL | |
| | USAGE | | STOPPING | THROUGH | STOPPING | BILLS _ | BILLE | .D | ACCO | |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | (DEDOCKT) | NO. OF BILLS | % OF B!LLS |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) 0.0% | 1,057 | 27.6% |
| 1 | 0 | 1,057 | 0 | 2,771 | 0 | 5 ,514 | 5,514 | 7.0% | 1,125 | 29.4% |
| 2 | 2 | 68 | 108 | 2,703 2,588 | 108 524 | 5,362 | 10,876 | 13.7% | 1,120 | 32.4% |
| 3 | 4 6 | 115 492 | 416 2,566 | 2,096 | 3,090 | 4,790 | 15,666 | 19.8% | 1,732 | 45.2% |
| 4 5 | 8 | 187 | 1,405 | 1,909 | 4,495 | 4,101 | 19,767 | 24.9% | 1,919 | 50.1% |
| 6 | 10 | 152 | 1,440 | 1,757 | 5,935 | 3,738 | 23,505 | 29.6% | 2,071 | 54.1% |
| 7 | 12 | 131 | 1,501 | 1,626 | 7,436 | 3,443 | 26,948 | 34.0% | 2,202 | 57.5% |
| 8 | 14 | 112 | 1,510 | 1,514 | 8,946 | 3,194 | 30,142 | 38.0% | 2,314 | 60.4% |
| 9 | 16 | 97 | 1,496 | 1,417 | 10,442 | 2,972 | 33,114 | 41.8% | 2,411 | 63.0% |
| 10 | 18 | 99 | 1,740 | 1,318 | 12,182 | 2,792 | 35,906 | 45.3% | 2,510 | 65.6% |
| 11 | 20 | 91 | 1,776 | 1,227 | 13,958 | 2,592 | 38,498 | 48.5% | 2,601 | 67.9% |
| 12 | 22 | 83 | 1,779 | 1,144 | 15,737 | 2,407 | 40,905 | 51.6% | 2,684 | 70.1% |
| 13 | 24 | 73 | 1,714 | 1,071 | 17,451 | 2,250 | 43,155 | 54.4% | 2,757 | 72.0% |
| 14 | 26 | 68 | 1,737 | 1,003 | 19,188 | 2,111 | 45,266 | 57.1% | 2,825 | 73.8% |
| 15 | 28 | 60 | 1,652 | 943 | 20,840 | 1,978 | 47,244 | 59.6% | 2,885 | 75.4% |
| 16 | 30 | 63 | 1,858 | 880 | 22,696 | 1,852 | 49,096 | 61.9% | 2,948 | 77.0% |
| 17 | 32 | 67 | 2,114 | 813 | 24,810 | 1,730 | 50,826 | 64.1% | 3,015 | 78.8% |
| 18 | 34 | 47 | 1,575 | 766 | 26,385 | 1,603 | 52,429 | 68.1% | 3,062 | 80.0% |
| 19 | 36 | 31 | 1,100 | 735 | 27,48 5 | 1,516 | 53,945 | 68.0% | 3,093 | 80.8% |
| 20 | 38 | 29 | 1,088 | 706 | 28,573 | 1,456 | 55,401 | 69.9% | 3,122 | 81.6% 82.6% |
| 21 | 40 | 41 | 1,623 | 665 | 30,196 | 1,395 | 56,796 | 71.6% 73.3% | 3,163 3,192 | 83.4% |
| 22 | 42 | 29 | 1,210 | 636 | 31,406 | 1,322 | 58,118 59,372 | 74.9% | 3,192 | 84.4% |
| 23 | 44 | 39 | 1,696 | 597 | 33,104 34,876 | 1,254 1,172 | 60,544 | 76.4% | 3,270 | 85.4% |
| 24 | 46 | 39 | 1,772 | 558 525 | 36,447 | 1,172 | 61,647 | 77.7% | 3,303 | 86.3% |
| 25 26 | 48 50 | 33 30 | 1,571 1,486 | 495 | 37,933 | 1,036 | 62,683 | 79.0% | 3,333 | 87.1% |
| 27 | 52 | 27 | 1,392 | 468 | 39,325 | 978 | 63,661 | 80.3% | 3,360 | 87.8% |
| 28 | 54 | 27 | 1,439 | 441 | 40,764 | 917 | 64,578 | 81.4% | 3,387 | 88.5% |
| 29 | 56 | 28 | 1,549 | 413 | 42,313 | 863 | 65,441 | 82.5% | 3,415 | 89.2% |
| 30 | 58 | 24 | 1,384 | 389 | 43,697 | 818 | 66,259 | 83.6% | 3,439 | 89.8% |
| 31 | 60 | 20 | 1,191 | 369 | 44,888 | 769 | 67,028 | 84.5% | 3,459 | 90.4% |
| 32 | 62 | 24 | 1,476 | 345 | 46,364 | 726 | 67,754 | 85.4% | 3,483 | 91.0% |
| 33 | 64 | 26 | 1,650 | 319 | 48,014 | 676 | 68,430 | 86.3% | 3,509 | 91.7% |
| 34 | 66 | 15 | 984 | 304 | 48,998 | 632 | 69,062 | 87.1% | 3,524 | 92.1% |
| 35 | 68 | 13 | 879 | 291 | 49,877 | 603 | 69,665 | 87.9% | 3,537 | 92.4% |
| 36 | 70 | 26 | 1,B07 | 265 | 51,684 | 569 | 70,234 | 88.6% | 3,563 | 93.1% |
| 37 | 72 | 20 | 1,426 | 245 | 53,110 | 516 | 70,750 | 89.2% | 3,583 | 93.6% |
| 38 | 74 | 15 | 1,104 | 230 | 54,214 | 484 | 71,234 | 89.8% | 3,598 | 94.0% |
| 39 | 76 | 17 | 1,285 | 213 | 55,499 | 453 | 71,687 | 90.4% | 3,615 | 94.4% |
| 40 | 78 | 11 | 854 | 202 | 56,353 | 422 | 72,109 | 90.9% | 3,626 | 94.7% |
| 41 | 80 | 12 | 956 | 190 | 57,309 | 400 372 | 72,509 72,881 | 91.4% 91.9% | 3,638 3,651 | 95.0% 95.4% |
| 42 | 82 | 13 | 1,058 | 177 | 58,367 | 351 | 73,232 | 92.4% | 3,656 | 95.5% |
| 43 | 84 | 5 | 417 | 172 160 | 58,784 59,809 | 337 | 73,569 | 92.8% | 3,668 | 95.6% |
| 44 | 86 88 | 12 9 | 1,025 790 | 151 | 60,599 | 318 | 73,887 | 93.2% | 3,677 | 98.1% |
| 45 | 90 | 13 | 1,166 | 138 | 61,765 | 298 | 74,185 | 93.6% | 3,690 | 96.4% |
| 46 47 | 92 | 6 | 548 | 132 | 62,313 | 272 | 74,457 | 93.9% | 3,698 | 96.6% |
| 48 | 94 | 8 | 748 | 124 | 63,061 | 260 | 74,717 | 94.2% | 3,704 | 96.8% |
| 49 | 96 | 7 | 667 | 117 | 63,728 | 243 | 74,960 | 94.5% | 3,711 | 96.9% |
| 50 | 98 | 9 | 877 | 108 | 64,605 | 229 | 75,189 | 94.8% | 3,720 | 97.2% |
| 51 | 100 | 7 | 697 | 101 | 65,302 | 213 | 75,402 | 95.1% | 3,727 | 97.4% |
| 52 | 102 | 9 | 915 | 92 | 66,217 | 199 | 75,601 | 95.3% | 3,736 | 97.6% |
| 53 | 104 | 8 | 827 | 84 | 67,044 | 179 | 75,780 | 95.6% | 3,744 | 97.8% |
| 54 | 108 | 6 | 634 | 78 | 67,678 | 166 | 75,946 | 95.8% | 3,750 | 98.0% |
| 55 | 108 | 6 | 643 | 72 | 68,321 | 151 | 78,097 | 96.0% | 3,758 | 98.1% |
| 5B | 110 | 2 | 219 | 70 | 68,540 | 143 | 76,240 | 96.1% | 3,758 | 98.2% |
| 57 | 112 | 7 | 780 | 63 | 69,320 | 136 | 76,376 | 96.3% | 3,765 | 98.4% |
| 58 | 114 | 4 | 455 | 59 | 69,775 | 125 | 78,501 | 96.5% | 3,769 | 98.5% |
| 59 | 118 | 4 | 470 | 55 | 70,245 | 234 | 76,735 | 96.8% | 3,773 | 98.6% |
| 60 | 120 | 1 | 119 | 54 | 70,364 | 109 | 76,844 | 96.9% | 3,774 | 98.6% |
| 61 | 122 | 2 | 243 | 52 | 70,607 | 107 | 76,951 77,054 | 97.0% 97.2% | 3,778 3,777 | 98.6% 98.7% |
| 62 | | 1 | 123 | 51 47 | 70,730 71,241 | 103 203 | 77,054 77,257 | 97.4% | 3,777 | 98.8% |
| 63 | 128 | 4 | 511 | 47 | 11,241 | 203 | 11,231 | 37.470 | 0,101 | 20.074 |

FILE: BillFreq_CntyMFR.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|-------|-------|----------|-----------|------------|--------------|------------------|--------|-----------|--------|--------|
| | | | TOTAL USE | CUMULATIVE | | BLOCK USE FOR | CUMULA | TIVE | CUMUL | ATIVE |
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | BILLS | BILLE | | ACCO | |
| | USAGE | BILLS IN | STOPPING | THROUGH | STOPPING | PASSING THRU | USAGE | | NO. OF | % OF |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | | (ccf) | (PERCENT) | BILLS | BILLS |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | | 97.5% | 3,782 | 98.8% |
| 64 | 130 | 1 | 129 | 46 | 71,370 | 93 | 77,350 | | | 98.9% |
| 65 | 132 | 3 | 395 | 43 | 71,765 | 91 | 77,441 | 97.7% | 3,785 | |
| 66 | 134 | 5 | 669 | 38 | 72,434 | 85 | 77,526 | 97.8% | 3,790 | 99.0% |
| 67 | 136 | 3 | 406 | 35 | 72,840 | 74 | 77,600 | 97.9% | 3,793 | 99.1% |
| 68 | 138 | 2 | 276 | 33 | 73,116 | 70 | 77,670 | 97.9% | 3,795 | 99.1% |
| 69 | 144 | 1 | 143 | 32 | 73,259 | 197 | 77,867 | 98.2% | 3,796 | 99.2% |
| 70 | 146 | 1 | 145 | 31 | 73,404 | 63 | 77,930 | 98.3% | 3,797 | 99.2% |
| 71 | 150 | 2 | 298 | 29 | 73,702 | 122 | 78,052 | 98.4% | 3,799 | 99.2% |
| 72 | 152 | 1 | 152 | 28 | 73,854 | 58 | 78,110 | 98.5% | 3,800 | 99.3% |
| 73 | 156 | 2 | 310 | 26 | 74,184 | 110 | 78,220 | 98.6% | 3,802 | 99.3% |
| 74 | 158 | 3 | 472 | 23 | 74,638 | 50 | 78,270 | 98.7% | 3,805 | 99.4% |
| 75 | 160 | 2 | 320 | 21 | 74,956 | 46 | 78,316 | 98.8% | 3,807 | 99.5% |
| 76 | 170 | 5 | 848 | 16 | 75,804 | 208 | 78,524 | 99.0% | 3,612 | 99.6% |
| 77 | 176 | 1 | 175 | 15 | 75,979 | 95 | 78,819 | 99.1% | 3,613 | 99.6% |
| 78 | 180 | 3 | 538 | 12 | 76,517 | 58 | 78,877 | 99.2% | 3,616 | 99.7% |
| 79 | 192 | 1 | 191 | 11 | 76,708 | 143 | 78,820 | 99.4% | 3,617 | 99.7% |
| 80 | 208 | 2 | 403 | 9 | 77,111 | 163 | 78,983 | 99.6% | 3,819 | 99.8% |
| 81 | 218 | 4 | . 855 | 5 | 77,966 | 73 | 79,056 | 99.7% | 3,823 | 99.9% |
| | | 4 | | 4 | 78,193 | 49 | 79,105 | 99.8% | 3,824 | 99.9% |
| 82 | 228 | 1 | 227 | | | 71 | 79,176 | 99.8% | 3,825 | 99.9% |
| 83 | 248 | 1 | 239 | 3 | 78,432 | | | 99.9% | 3,826 | 99.9% |
| 84 | 258 | 1 | 256 | 2 | 78,688 | 28 | 79,204 | | | |
| 85 | 308 | 2 | 808 | 0 | 79,296 | 92 | 79,296 | 100.0% | 3,828 | 100.0% |
| Total | | 3,828 | 79,296 | | | | | | | |

SALT LAKE CITY WATER RATE STUDY BILLING FREQUENCY - SUMMER Multi-Family Residential, Outside City FILE: BillFreq_CntyMFR_Sum.xls

SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) TOTAL USE | (4) | (5) CUMULATIVE | (6) BLOCK USE | (7) | (8) | (9) | (10) |
|----------|-------------|--------------|-------------------|--------------|-------------------|-----------------------|---------------------------|----------------|------------------------|-----------------|
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA BILLE | | | LATIVE DUNTS |
| Black | | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS PASSING THRU | USAGE | <u> </u> | NO. OF | % OF |
| Block | (ccf) | BLOCK (#) | IN BLOCK (ccf) | BLOCK (#) | IN BLOCK (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| No. 1 | 0 | 559 | 0 | 1,674 | 0 | 0 | 0 | 0.0% | 559 | 25.0% |
| 2 | 2 | 33 | 50 | 1,641 | 50 | 3,332 | 3,332 | 5.3% | 592 | 26.5% |
| 3 | 4 | 61 | 223 | 1,580 | 273 | 3,261 | 6,593 | 10.5% | 653 | 29.2% |
| 4 | 6 | 72 | 401 | 1,506 | 674 | 3,129 | 9,722 | 15.4% | 725 | 32.5% |
| 5 | 8 | 98 | 733 | 1,410 | 1,407 | 2,965 | 12,667 | 20.2% | 823 | 36.9% |
| 6 | 10 | 66 | 627 | 1,344 | 2,034 | 2,787 | 15,474 | 24.6% | 889 | 39.6% |
| 7 | 12 | 72 | 826 | 1,272 | 2,860 | 2,650 | 16,124 | 28.8% | 961 | 43.0% |
| 8 | 14 | 67 | 907 | 1,205 | 3,767 | 2,513 | 20,637 | 32.8% | 1,028 | 46.0% |
| 9 | 16 | 52 | 803 | 1,153 | 4,570 | 2,381 | 23,018 | 36.6% | 1,080 | 48.4% |
| 10 | 18 | 61 | 1,068 | 1,092 | 5,638 | 2,276 | 25,294 27,455 | 40.2% 43.6% | 1,141 1 ,194 | 51.1% 53.5% |
| 11 | 20 | 53 68 | 1,037 1,460 | 1,039 971 | 6,675 8,135 | 2,161 2,042 | 29,497 | 46.9% | 1,262 | 56.5% |
| 12 13 | 22 24 | 48 | 1,125 | 923 | 9,260 | 1,915 | 31,412 | 49.9% | 1,310 | 58.7% |
| 14 | 26 | 44 | 1,122 | 879 | 10,382 | 1,624 | 33,236 | 52.8% | 1,354 | 60.6% |
| 15 | 28 | 48 | 1,321 | 831 | 11,703 | 1,735 | 34,971 | 55.6% | 1,402 | 62.8% |
| 16 | 30 | 49 | 1,444 | 782 | 13,147 | 1,636 | 36,607 | 58.2% | 1,451 | 65.0% |
| 17 | 32 | 53 | 1,672 | 729 | 14,819 | 1,540 | 38,147 | 60.6% | 1,504 | 67.4% |
| 18 | 34 | 42 | 1,407 | 687 | 16,226 | 1,437 | 39,584 | 62.9% | 1,546 | 69.2% |
| 19 | 36 | 22 | 779 | 665 | 17,005 | 1,361 | 40,945 | 65.1% | 1,568 | 70.2% |
| 20 | 36 | 22 | 825 | 643 | 17,830 | 1,319 | 42,264 | 67.2% | 1,590 | 71.2% |
| 21 | 40 | 38 | 1,506 | 605 | 19,336 | 1,272 | 43,536 | 69.2% | 1,628 | 72.9% |
| 22 | 42 | 26 | 1,084 | 579 | 20,420 | 1,202 | 44,738 | 71.1% | 1,654 | 74.1% |
| 23 | 44 | 37 | 1,611 | 542 | 22,031 | 1,141 | 45,879 | 72.9% | 1,691 | 75.7% |
| 24 | 46 | 34 | 1,545 | 508 | 23,576 | 1,065 | 46,944 | 74.6% | 1,725 | 77.3% |
| 25 | 48 | 30 | 1,429 | 478 | 25,005 | 1,005 | 47,949 | 76.2% | 1,755 1,781 | 78.6% 79.8% |
| 26 | 50 52 | 26 | 1,287 | 452 426 | 26,292 27,632 | 943 892 | 48,892 49,784 | 77.7% 79.1% | 1,781 | 80.9% |
| 27 26 | 52 54 | 26 22 | 1,340 1,172 | 404 | 28,804 | 836 | 50,620 | 80.4% | 1,829 | 81.9% |
| 29 | 56 | 27 | 1,494 | 377 | 30,298 | 790 | 51,410 | 61.7% | 1,856 | 83.1% |
| 30 | 58 | 22 | 1,288 | 355 | 31,566 | 746 | 52,156 | 62.9% | 1,878 | 64.1% |
| 31 | 60 | 20 | 1,191 | 335 | 32,757 | 701 | 52,857 | 84.0% | 1,898 | 65.0% |
| 32 | 62 | 23 | 1,415 | 312 | 34,172 | 659 | 53,516 | 65.0% | 1,921 | 68.0% |
| 33 | 64 | 25 | 1,587 | 287 | 35,759 | 611 | 54,127 | 86.0% | 1,946 | 87.1% |
| 34 | 66 | 13 | 854 | 274 | 36,613 | 570 | 54,697 | 86.9% | 1,959 | 87.7% |
| 35 | 68 | 13 | 879 | 261 | 37,492 | 543 | 55,240 | 87.8% | 1,972 | 88.3% |
| 36 | 70 | 23 | 1,599 | 238 | 39,091 | 511 | 55,751 | 88.6% | 1,995 | 89.3% |
| 37 | 72 | 19 | 1,355 | 219 | 40,446 | 463 | 56,214 | 89.3% | 2,014 | 90.2% |
| 36 | 74 | 14 | 1,030 | 205 | 41,476 | 432 | 56,646 | 90.0% | 2,028 | 90.6% |
| 39 | 76 | 17 | 1,285 | 186 | 42,761 43,381 | 403 | 57,049 5 7 ,431 | 90.7% 91.2% | 2,045 2,053 | 91.6% 91.9% |
| 40 41 | 78 80 | 8 10 | 620 797 | 180 170 | 44,178 | 372 357 | 57,421 57,778 | 91.8% | 2,063 | 92.4% |
| 42 | 82 | 12 | 977 | 158 | 45,155 | 333 | 56,111 | 92.3% | 2,075 | 92.9% |
| 43 | 84 | 5 | 417 | 153 | 45,572 | 313 | 58,424 | 92.8% | 2,080 | 93.1% |
| 44 | 86 | 10 | 855 | 143 | 46,427 | 301 | 58,725 | 93.3% | 2,090 | 93.6% |
| 45 | 86 | 9 | 790 | 134 | 47,217 | 284 | 59,009 | 93.6% | 2,099 | 94.0% |
| 46 | 90 | 13 | 1,166 | 121 | 48,383 | 264 | 59,273 | 94.2% | 2,112 | 94.6% |
| 47 | 92 | 6 | 548 | 115 | 46,931 | 238 | 59,511 | 94.6% | 2,118 | 94.6% |
| 48 | 94 | 6 | 748 | 107 | 49,679 | 226 | 59,737 | 94.9% | 2,126 | 95.2% |
| 49 | 96 | 7 | 687 | 100 | 50,346 | 209 | 59,946 | 95.3% | 2,133 | 95.5% |
| 50 | 98 | 7 | 682 | 93 | 51,028 | 196 | 60,142 | 95.6% | 2,140 | 95.8% |
| 51 | 100 | 7 | 697 | 86 | 51,725 | 183 | 60,325 | 95.9% | 2,147 | 96.1% |
| 52 | 102 | 9 | 915 | 77 | 52,840 53,467 | 169 | 60,494 80,643 | 96.1% | 2,156 2,164 | 96.6% 96.9% |
| 53 54 | 104 106 | 8 6 | 827 634 | 69 63 | 53,467 54,101 | 149 136 | 80,643 60,779 | 96.4% 96.6% | 2,170 | 97.2% |
| 54 55 | 108 | 6 | 643 | 57 | 54,744 | 121 | 60,900 | 96.8% | 2,176 | 97.4% |
| 56 | 110 | 2 | 219 | 55 | 54,963 | 113 | 61,013 | 96.9% | 2,178 | 97.5% |
| 57 | 112 | 7 | 780 | 48 | 55,743 | 106 | 61,119 | 97.1% | 2,185 | 97.9% |
| 58 | 114 | 4 | 455 | 44 | 56,198 | 95 | 61,214 | 97.3% | 2,189 | 98.0% |
| 59 | 118 | 2 | 234 | 42 | 56,432 | 174 | 61,388 | 97.5% | 2,191 | 98.1% |
| 60 | 120 | 1 | 119 | 41 | 56,551 | 83 | 61,471 | 97.7% | 2,192 | 98.2% |
| 61 | 12 2 | 1 | 121 | 40 | 58,872 | 81 | 61,552 | 97.8% | 2,193 | 98.2% |
| 62 | 124 | 1 | 123 | 39 | 58,795 | 79 | 61,631 | 97.9% | 2,194 | 96.3% |
| 63 | 128 | 4 | 511 | 35 | 57,306 | 155 | 61,786 | 98.2% | 2,198 | 98.4% |
| | | | | | | | | | | |

SALT LAKE CITY WATER RATE STUDY BILLING FREQUENCY - SUMMER Multi-Family Residential, Outside City FILE: BillFreq_CntyMFR_Sum.xls

SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|-------|-------|----------|-----------|------------|---------------------|--------------|--------|-----------|--------|--------|
| | ` ' | , , | TOTAL USE | CUMULATIVE | CUMULATIVE | BLOCK USE | | | | |
| | | NO. OF | OF BILLS | BILLS | USE OF BILLS | FOR | CUMULA | | | LATIVE |
| | USAGE | BILLS IN | STOPPING | THROUGH | STOPPING | BILLS _ | BILLE | ס | | UNTS |
| Block | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | PASSING THRU | USAGE | | NO. OF | % OF |
| No. | (ccf) | (#) | (ccf) | (#) | (ccf) | (ccf) | (ccf) | (PERCENT) | BILLS | BILLS |
| 64 | 132 | 3 | 395 | 32 | 57,701 | 139 | 61,925 | 98.4% | 2,201 | 98.6% |
| 65 | 134 | 5 | 669 | 27 | 58,370 | 63 | 61,986 | 98.5% | 2,206 | 98.8% |
| 66 | 136 | 2 | 271 | 25 | 58,641 | 53 | 62,041 | 98.6% | 2,208 | 98.9% |
| 67 | 138 | 2 | 276 | 23 | 58,917 | 50 | 82,091 | 98.7% | 2,210 | 99.0% |
| 68 | 146 | 1 | 145 | 22 | 59,062 | 163 | 62,274 | 99.0% | 2,211 | 99.0% |
| 69 | 150 | 2 | 298 | 20 | 59,360 | 86 | 62,360 | 99.1% | 2,213 | 99.1% |
| 70 | 152 | 1 | 152 | 19 | 59,512 | 40 | 62,400 | 99.2% | 2,214 | 99.1% |
| 71 | 156 | 1 | 155 | 18 | 59,667 | 75 | 62,475 | 99.3% | 2,215 | 99.2% |
| 72 | 156 | 3 | 472 | 15 | 60,139 | 34 | 62,509 | 99.3% | 2,218 | 99.3% |
| 73 | 160 | 1 | 160 | 14 | 60,299 | 30 | 62,539 | 99.4% | 2,219 | 99.4% |
| 74 | 170 | 4 | 679 | 10 | 60,978 | 139 | 62,878 | 99.8% | 2,223 | 99.6% |
| 75 | 176 | 1 | 175 | 9 | 61,153 | 59 | 62,737 | 99.7% | 2,224 | 99.6% |
| 76 | 180 | 3 | 538 | 6 | 61,691 | 34 | 62,771 | 99.7% | 2,227 | 99.7% |
| 77 | 192 | 1 | 191 | 5 | 61,882 | 71 | 62,842 | 99.9% | 2,228 | 99.8% |
| 78 | 208 | 2 | 403 | 3 | 62,285 | 67 | 62,909 | 100.0% | 2,230 | 99.9% |
| 79 | 218 | 2 | 421 | 1 | 62,706 | 15 | 62,924 | 100.0% | 2,232 | 100.0% |
| 80 | 228 | 1 | 227 | 0 | 62,933 | 9 | 62,933 | 100.0% | 2,233 | 100.0% |
| Total | | 2,233 | 62,933 | | | | | | | |

| | ∖ C | DUENCY | Counts City |
|----------------|------------------|-----------------------|-------------------------------|
| SALT LAKE CITY | WATER RATE STUDY | AWC BILLING FREQUENCY | Mon Desidential Accounts City |

| SALT LAKE CITY WATER RATE STUDY AWC BILLING FREQUENCY Non-Residential Accounts, City | ry STUDY FREQUENCY Il Accounts, C | ify | | | FILE: BillFreqA' SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREG | FILE: BillFreqAWC_CityNRes.xls IEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ | ityNRes.xls | _ |
|---|--|----------|------------------------|----------------------|--|--|---------------------|------------|
| | 5 | (2) | (3) | (4) CIIMIII ATIVE | (5) | (9) | (2) | (8) |
| | ! | NO. OF | TOTAL USE | BILLS | CUMULATIVE | CUMULATIVE | CUMULATIVE | ATIVE |
| Customer | USAGE | BILLS IN | FOR BILLS IN BI OCK | I HKOUGH BI OCK | USE OF BILLS | % of USE IN BLOCK | ACCOUNTS NO OF % | NIS %OF |
| Name | (% of AWC) | # # | (ccf) | (#) | (ccf) | (%) | BILLS | BILLS |
| All Meters City | 0-100% | 57,523 | 8,351,307 | 46,421 | 8,351,307 | 26% | 103,944 | 100.0% |
| • | 101%-200% | 23,590 | 2,785,616 | 22,831 | 11,136,923 | 75% | 46,421 | 44.7% |
| | 201%-250% | 4,128 | 651,079 | 18,703 | 11,788,001 | %62 | 22,831 | 22.0% |
| | 251%-300% | 3,124 | 468,272 | 15,579 | 12,256,273 | 83% | 18,703 | 18.0% |
| | 301%-350% | 2,404 | 334,080 | 13,175 | 12,590,353 | 85% | 15,579 | 15.0% |
| | 350%-400% | 2,040 | 247,484 | 11,135 | 12,837,837 | %18 | 13,175 | 12.7% |
| | 401%-450% | 1,333 | 185,229 | 9,802 | 13,023,066 | 88% | 11,135 | 10.7% |
| | 451%-500% | 1,476 | 151,199 | 8,326 | 13,174,264 | %68 | 9,802 | 9.4% |
| | >200% | 8,326 | 1,666,427 | ı | 14,840,692 | 100% | 8,326 | 8.0% |
| | >320% | 13,175 | 2,250,342 | • | 14,840,695 | 100% | 13,175 | 12.7% |
| Totals | • | 103,944 | 14,840,692 | | | | 103,944 | |

SALT LAKE CITY
WATER RATE STUDY
AWC BILLING FREQUENCY
Irrigation Accounts, City

FILE: BillFreqAWC_CityMuni.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) | (4) CHMIII ATIVE | (2) | (9) | (2) | (8) |
|-----------------------|------------|----------|------------------|---------------------|--------------|------------|------------|--------|
| | | NO. OF | TOTAL USE | BILLS | CUMULATIVE | CUMULATIVE | CUMULATIVE | ATIVE |
| | USAGE | BILLS IN | FOR BILLS | THROUGH | USE OF BILLS | % of USE | ACCOUNTS | UNTS |
| Customer | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | IN BLOCK | NO. OF | % OF |
| Name | (% of AWC) | #) | (cct) | # | (cct) | (%) | BILLS | BILLS |
| All Meters Irrigation | 0-100% | 2,081 | 211,441 | 1,915 | 211,441 | 17% | 3,996 | 100.0% |
| | 101%-200% | 239 | 159,531 | 1,676 | 370,972 | 30% | 1,915 | 47.9% |
| | 201%-250% | 78 | 74,382 | 1,598 | 445,354 | 36% | 1,676 | 41.9% |
| | 251%-300% | 09 | 72,768 | 1,538 | 518,122 | 45% | 1,598 | 40.0% |
| | 301%-350% | 20 | 71,742 | • | 589,863 | 48% | 1,538 | 38.5% |
| | 350%-400% | 55 | 65,004 | 1,413 | 654,868 | 23% | 1,468 | 36.7% |
| | 401%-450% | 48 | 62,448 | 1,365 | 717,316 | 28% | 1,413 | 35.4% |
| | 451%-500% | 468 | 59,514 | 897 | 776,829 | 93% | 1,365 | 34.2% |
| | >200% | 897 | 454,183 | • | 1,231,013 | 100% | 897 | 22.4% |
| | >320% | 1,468 | 641,150 | • | 1,231,013 | 100% | 1,468 | 36.7% |
| Totals | | 3,996 | 1,231,013 | | | | 3,996 | |

Non-Residential Accounts, Outside City SALT LAKE CITY
WATER RATE STUDY
AWC BILLING FREQUENCY

FILE: BillFreqAWC_CntyNonRes.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | Đ | (5) | (3) | (4) | (2) | (9) | 6 | (8) |
|----------------------------|------------|----------|-----------|------------|--------------|------------|-----------|--------|
| | | | | CUMULATIVE | | | | |
| | | NO. OF | TOTAL USE | BILLS | CUMULATIVE | CUMULATIVE | JMULATIVE | nı. |
| | USAGE | BILLS IN | FOR BILLS | THROUGH | USE OF BILLS | % of USE | CCOUNTS | |
| Customer | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | IN BLOCK | NO. OF | % OF |
| Name | (% of AWC) | # | (ccf) | #) | (ccf) | (%) | BILLS | BILLS |
| Non-Residential All Meters | 0-100% | 8,294 | 1,567,513 | 7,570 | 1,567,513 | 21% | 15,864 | 100.0% |
| | 101%-200% | 2,923 | 596,813 | 4,647 | 2,164,325 | %02 | 7,570 | 47.7% |
| | 201%-250% | 758 | 152,532 | 3,889 | 2,316,858 | 75% | 4,647 | 29.3% |
| | 251%-300% | | 106,581 | 3,383 | 2,423,439 | %82 | | 24.5% |
| | 301%-350% | 384 | 74,220 | 2,999 | 2,497,658 | 81% | 3,383 | 21.3% |
| | 350%-400% | | 59,206 | 2,647 | 2,556,864 | 82% | | 18.9% |
| | 401%-450% | 289 | 49,682 | 2,358 | 2,606,546 | 84% | | 16.7% |
| | 451%-500% | 301 | 40,248 | 2,057 | 2,646,794 | 85% | | 14.9% |
| | >200% | 2,057 | 455,250 | • | 3,102,044 | 100% | | 13.0% |
| | >320% | 2,999 | 604,386 | 1 | 3,102,044 | 100% | 2,999 | 18.9% |
| Totals | | 15,864 | 3,102,044 | | | | 15,864 | 1 |

| AWC BILLING FREQUENCY Irrigation, Outside City |
|---|
| |

FILE: BillFreqAWC_CntyMuni.xls SCHEDULE: Summary DATE: 09/02/03 RANGE: BILLFREQ

| | (1) | (2) | (3) | (4) CHMH ATIVE | (2) | (9) | (2) | (8) |
|------------------------|------------|----------|-----------|-------------------|----------|------------|------------|--------|
| | | NO. OF | TOTAL USE | BILLS | Ę | CUMULATIVE | CUMULATIVE | ATIVE |
| | USAGE | BILLS IN | FOR BILLS | THROUGH | | % of USE | ACCOUNTS | JNTS |
| Customer | BLOCK | BLOCK | IN BLOCK | BLOCK | IN BLOCK | IN BLOCK | NO.OF | % OF |
| Name | (% of AWC) | (#) | (cct) | (#) | (cct) | (%) | BILLS | BILLS |
| Irrigation, All Meters | 0-100% | 318 | 77,353 | 258 | 77,353 | 19% | 9/9 | 100.0% |
| | 101%-200% | 42 | 36,414 | 179 | 113,767 | 28% | 258 | 44.8% |
| | 201%-250% | 21 | 13,022 | | 126,789 | 31% | 179 | 31.1% |
| | 251%-300% | 17 | 12,275 | 141 | 139,064 | 34% | 158 | 27.4% |
| | 301%-350% | 16 | 11,532 | 125 | 150,596 | 37% | 141 | 24.5% |
| | 350%-400% | 10 | 11,352 | 115 | 161,947 | 40% | 125 | 21.7% |
| | 401%-450% | 10 | 11,280 | | 173,227 | 43% | 115 | 20.0% |
| | 451%-500% | 18 | 11,152 | 87 | 184,379 | 45% | 105 | 18.2% |
| | >200% | 87 | 222,124 | • | 406,503 | 100% | 87 | 15.1% |
| | >320% | 125 | 255,907 | • | 406,503 | 100% | 125 | 21.7% |
| Totals | | 929 | 406,503 | | | | 276 | |

Appendix E

Water Rate Subcommittee Meeting Agenda and Summaries

Public Utilities

Advisory Board Water Rate Subcommittee August 29, 2002 7:00-9:00 A.M.

Agenda - Meeting No. 1

| 1. | Greeting (5 minutes) | Jim Lewis Finance Administrator |
|----|--|--|
| 2. | Introductions and Opening Comments(10 minutes) | Rick Giardina, RGA Project Manager and Facilitator |
| 3. | Review and Discussion of Mission Statement and Rules of Participation (10 minutes) | All |
| 4. | Overview of Scope of Services and Project Schedule (20 minutes) | Rick Giardina |
| 5. | Discuss / Determine Meeting Schedule (5 minutes) | All |
| 6. | BREAK | |
| 7. | Overview of Water System (30 minutes) Historical Overview System Operations Water Sources Historic Supply/Demand | LeRoy Hooton Director |
| 8. | Overview of Rate Setting Process – Rate-Making 101 (35 minutes) | Rick Giardina Joel Theis, RGA Finance Team Leader |
| 9. | Closing Comments – Review of Next Meeting (5 minutes) | Rick Giardina |

Public Utilities

Public Utilities Advisory CommitteeWater Rate Subcommittee (the WRS)

Meeting No. 1 August 29, 2002

Meeting Summary

Committee Members in Attendance:

Kenneth Neal Cullen Battle Pat Nielson Kenneth Bullock Quim Roundy Cindy Cromer Scott Endicott Gregg Smith Zach Frankel Jan Striefel James Tangaro Bruce Jones Ronald Vance Darrell Mensel Pieter van der Have Gary Mumford Peter von Sivers Leland Myers

Committee Members Absent:

Bob BerringtonKevin PaceGordon CarmenLisa RomneyKim HibbertTed Wilson

Department Staff / Consultants in Attendance:

Stephanie Duer, Water Conservation
Coordinator
LeRoy Hooton, Director
Jim Lewis, Finance Administrator
Jeff Niermeyer, Deputy Director
Kurt Spjute, Financial Manager

The meeting began at 7:00 am. All items on the agenda were addressed and the following issues and concerns were raised during the meeting.

Public Utilities

Public Utility Advisory Committee Water Rate Subcommittee September 19, 2002 7:00-9:00 A.M.

Agenda - Meeting No. 2

| 1. | Opening Comments Meeting No. 1 Summary Other Business | Rick Giardina, RGA Project Manager and Facilitator |
|----|--|--|
| 2. | Customer/System Data | Department Staff and RGA |
| 3. | Conceptual Design Workshop | Rick Giardina and Joel Theis |
| 4. | Pricing Objectives and Rate Alternatives | Rick Giardina and Joel Theis |
| 5. | Closing Comments – Review of Next Meeting | Rick Giardina |

Public Utilities

Public Utilities Advisory CommitteeWater Rate Subcommittee (the WRS)

Meeting No. 2 September 19, 2002

Meeting Summary

Committee Members in Attendance:

Cullen Battle Kenneth Neal Kenneth Bullock Patricia Nielson Gordon Carmen Kevin Pace Cindy Cromer Lisa Romney Scott Endicott Quim Roundy Zach Frankel Gregg Smith Kim Hibbert Jan Striefel James Tangaro Bruce Jones Orfeo Kostrencich Ronald Vance Gary Mumford Peter von Sivers Leland Myers Ted Wilson

Committee Members Absent:

Bob Berrington Darrell Mensel

Department Staff / Consultants in Attendance:

Jim Lewis, Finance Administrator

Jeff Niermeyer, Deputy Director

Stephanie Duer, Water Conservation

Coordinator

Rick Giardina, RGA Project Manager

Joel Theis, RGA Project Staff

Jim Olson, Stantec Project Staff

The meeting began about 7:15 am. All items on the agenda were completed except the Alternative Rate Approaches discussion, which will be completed at the next meeting to be held October 9th.

Orfeo Kostrencich replaced Pieter van der Have on the Committee.

Various system supply and demand data was presented at the meeting along with information on the customer's served by the Utility. However, the primary purpose was to discuss pricing objectives and determine the importance of each objective by having the Committee complete a ranking process. Each objective was ranked on a scale of 1 to 7 with a "7" indicating that the objective was of the highest importance.

The ranking of the 11 objectives is provided below.

| <u>Rank</u> | Objective | Average Ranking |
|-------------|-------------------------------|-----------------|
| 1 | Water Conservation | 6.25 |
| 2 | Compliance w/Legal Authority | 5.70 |
| 3 | Peak Usage Reduction | 5.60 |
| 4 | Growth Pays for Itself | 5.40 |
| 5 | Cost-of-Service Equity | 5.00 |
| 6 | Social Equity | 4.90 |
| 7 | Revenue Stability | 4.80 |
| 8 | Customer Impact | 4.35 |
| 9 | Customer Acceptance | 4.30 |
| 10 | Administrative Ease (tied) | 3.50 |
| 10 | Large Volume Customers (tied) | 3.50 |

Water conservation was ranked highest with an average score of 6.25; items ranked 2 through 4 scored from 5.4 to 5.7 indicating roughly equal ranking. Items ranked 5 and 6 were also ranked nearly equal at 5.0 and 4.9, respectively. Based on these results, and given the committee's agreement that the rates should unquestionably include "Compliance w/Legal Authority," the top 3 objectives for the new water rates to address are: Water Conservation, Peak Usage Reduction, and Growth Pays for Itself. The ranking of Cost-of-Service Equity and Social Equity as the next two objectives after these first three indicates that, overall, the committee would be willing to forgo strict compliance to cost-based rates in order to induce water conservation and peak usage reduction.

The relatively high ranking of Growth Pays for Itself suggests that new customers should pay their full share for the water system through impact fees. This is consistent with the City's past practice of adopting impact fees reflective of the full cost of serving new customers.

Table 1 is a description of the top-ranked objectives.

| Table 1 Top-Ranked Pricing Objectives | | | | |
|---|---|--|--|--|
| Water Conservation – Effective in promoting | Compliance with Legal Authorities – Meets all | | | |
| the efficient use of resources on a year-round | known legal standards and requirements and | | | |
| basis. | has minimum potential for legal challenge. | | | |
| | | | | |
| Peak Usage Reduction – Assigns the cost of | Growth Pays for Itself - Supports new | | | |
| providing peaking facilities to those customers | housing, commercial, and industrial | | | |
| having significant peak to average water use | development; allows the Town to be rate | | | |
| patterns, i.e., discourages the use of water | competitive with adjacent and similar | | | |
| during periods of peak demand. | communities. | | | |

The rankings will be summarized at the meeting on October 9th, and time will be allowed for discussion to ascertain whether the above assessments of these rankings are accurate.

The following items represent the most significant points of discussion:

- Concerns were raised about the WRS not having enough time to review all relevant material and rate alternatives within the four meeting schedule originally planned. Therefore, an additional meeting will be held October 9th to present several rate design approaches and discuss the pros and cons of each in order to provide the WRS more information to factor into the current rate study. Specific rate approaches for Park City and the Irvine Ranch Water District (southern California) will also be discussed.
- ☐ In response to inquiries about whether residential lot size could be used as a basis for setting rates, the Irvine Ranch Water District rate design will be discussed as one of the alternative rate designs for consideration in the current rate study.
- A question was raised about whether the level (quality) of service can be a criterion in rate design. The committee discussed the County exchange service area where there are small diameter lines which need to be replaced to meet the new fire protection requirement. The City stated that this issue is currently being discussed with the County and Exchange Companies. The City's position is that the lines need to be upgraded by the irrigation company.

As indicated in the above notes, the next meeting will be held October 9th at the Salt Lake Community College (same location as Meeting 2):

Salt Lake Community College 1575 S. State Street Room W-111D Time: 7 AM to 9:30 AM.

Additional materials will be mailed prior to the meeting for review prior to the meeting.

Subsequent meetings will be held on October 22nd and November 13th.

The meeting concluded at approximately 9:15 am.

Public Utilities

Public Utility Advisory Committee Water Rate Subcommittee October 9, 2002 7:00-9:30 A.M.

Agenda - Meeting No. 3

| 1. | Opening Comments Meeting No. 2 Summary Other Business | Joel Theis, RGA Finance Team Leader |
|----|---|--|
| 2. | Conceptual Design Workshop | Rick Giardina and Joel Theis |
| 3. | Rate Design Alternatives Park City Irvine Ranch Water District | |
| 4. | Closing Comments – Review of | |

Public Utilities

Public Utilities Advisory CommitteeWater Rate Subcommittee (the WRS)

Meeting No. 3 October 9, 2002

Meeting Summary

Committee Members in Attendance:

Ted Wilson Kenneth Neal Patricia Nielson Leland Myers Kevin Pace Cullen Battle Cindy Cromer Lisa Romney Scott Endicott Ouim Roundy Zach Frankel Gregg Smith Kim Hibbert Jan Striefel Bruce Jones James Tangaro Orfeo Kostrencich Ronald Vance Gary Mumford

Committee Members Absent:

Ken Bullock Darrell Mensel
Bob Berrington Peter von Sivers
Gordon Carmen

Department Staff / Consultants in Attendance:

LeRoy Hooton, Director Jim Lewis, Finance Administrator Kurt Spjute, Financial Manager Stephanie Duer, Water Conservation Coordinator Rick Giardina, RGA Project Manager Joel Theis, RGA Project Staff

The meeting began about 7:05 am.

Rick Giardina started the meeting by providing an overview of Meeting No. 2, which included reviewing the ranking of pricing objectives. He also indicated that the primary purpose of Meeting No. 3 was to identify up to 2 rate alternatives that would be modeled for comparison to

the current seasonal rate approach. Several rate design alternatives were presented in the context of how they addressed the three highest ranked objectives – conservation, peak management, and cost of service equity. The rate design alternatives included:

Seasonal/Inverted Block: This rate has one volume rate in the winter and an inverted block

design for the summer. Blocks are typically set based on indoor and outdoor usage criteria, and are fixed for each customer group rather than being variable as in the Inverted Block/Budget and Peak

Management methods discussed below.

Inverted Block/Budget: An inverted block design that uses evapotranspiration and typical

water consumption needs per person to set a budget for customers. If customers exceed the budgeted amount for their household and

landscape needs, the inverted block pricing penalizes them.

Significantly higher rates apply to inefficient and wasteful use. Thus,

this rate design is aimed primarily at sending price signals for conservation purposes with consideration for typical human

consumption needs and landscape irrigation requirements. Blocks are variable for each customer account depending upon the number of people in the household and the amount of land owned that must be

irrigated.

Peak Management: An inverted block design that uses average winter consumption as the

basis for setting an "indoor" usage block, which is the basis for setting upper blocks. This rate design aims at sending a price signal for conservation purposes, but also is intended to be flexible with respect to household size. Rather than the water utility setting the budget for indoor and outdoor usage blocks, average winter water consumption is the block setting criteria. The second block is defined based on a percentage of indoor usage and is intended to address outdoor usage or usage above average winter use levels. Additional

blocks can be defined for pricing other usage.

Seasonal: The Department's current water rate, which is intended to emphasize

the difference in winter and summer water delivery costs. This rate design has a price signal that encourages more conservation in the

summer regardless of indoor or outdoor use.

The Committee had significant discussion about the type of rate structure that should be implemented. There was general consensus that an inverted block structure should be considered for the new rate design. However, there was disagreement on how the blocks should be set. One approach is to set blocks according to a standard amount of water use for typical households and non-residential customers, thereby encouraging customers to adjust their water consumption to these standards or pay a higher price per hundred cubic foot (ccf) of water. The primary standards discussed are the number of people per household and the amount of landscape requiring irrigation. The Park City, Utah rate structure incorporates these concepts.

The alternative approach discussed involves setting rate blocks according to the requirements per person and per square foot of landscape. This approach is consistent with the Irvine Ranch Water District approach, which utilizes an evapotranspiration rate and use per person to set water budgets around which an inverted block rate structure is designed.

Based on Committee discussions and the similarities between rate structures, it was decided that the current rates would be compared to various forms of Peak Management and Inverted Block/Budget rate designs at the meeting on November 19th. These comparisons will enable the Committee to see examples of how each rate structure would impact customers with different use characteristics. They will also enable the Committee to see how the primary concepts, namely standardized customer blocks versus requirements based customer blocks, behind these rate designs influence monthly bills for different customers.

The meeting concluded at approximately 9:15 am.

Meeting No. 4 will be held October 22nd at the Salt Lake Community College (same location as Meeting No. 3):

Salt Lake Community College 1575 S. State Street Room W-111D Time: 7 AM to 9:30 AM.

Topics for review and discussion at the next meeting include the Department's projected capital improvement program, the preliminary financial plan, and a brief overview of the assumptions for the rate alternative comparisons that will be presented at Meeting No. 5, scheduled for November 19th.

Additional materials will be mailed prior to the meeting for review prior to the meeting.

Public Utilities

Public Utility Advisory Committee Water Rate Subcommittee October 22, 2002 7:00-9:30 A.M.

Agenda - Meeting No. 4

| 1. | Opening Comments Meeting No. 3 Summary Other Business | Rick Giardina, RGA Project Manager and Facilitator |
|----|--|--|
| 2. | Overview of Capital Improvement Plan | Jeff Niermeyer, Deputy Director & Jim Lewis, Finance Administrator |
| 3. | Review of Draft Financial Plan | Rick Giardina |
| 4. | Discussion Regarding Rate Alternatives Assumptions | Rick Giardina Stephanie Duer, Water Conservation Coordinator |
| 5. | Closing Comments – Review of Next Meeting | Rick Giardina |

Public Utilities

Public Utilities Advisory CommitteeWater Rate Subcommittee (the WRS)

Meeting No. 4 October 22, 2002

Meeting Summary

Committee Members in Attendance:

Leland Myers
Cullen Battle
Ken Bullock
Gordon Carmen
Cindy Cromer
Scott Endicott
Zach Frankel
Kim Hibbert
Bruce Jones

Orfeo Kostrencich Gary Mumford Kenneth Neal Patricia Nielson Kevin Pace Lisa Romney James Tangaro Ronald Vance Peter von Sivers

Committee Members Absent:

Ted Wilson Bob Berrington Darrell Mensel Quim Roundy Gregg Smith Jan Striefel

<u>Department Staff / Consultants in Attendance</u>:

Chuck Call, Chief Engineer Stephanie Duer, Water Conservation Coordinator LeRoy Hooton, Director Jim Lewis, Finance Administrator Jeff Niermeyer, Deputy Director

Rick Giardina, RGA Project Manager

Guests in Attendance:

Elise Lazar, Mayor's Green Team Erica Thoen, URC

The meeting began about 7 am.

The agenda for this meeting included a review of current financial information regarding past rate increases, outstanding debt service, financial planning criteria, historic and projected capital expenditures and employee levels. Jim Lewis led the discussion on these topics.

Several key points are summarized below:

- Key financial measures for financial planning purposes:
 DSC Legal debt service coverage requirement of 1.25 times (x) annual debt service and a target of 2.0x. The Department's current bond rating is "AA".
 Cash Reserves Maintain a cash balance in the water enterprise fund equal to 10% to 15% of annual cash O&M expenses.
- 2. Water Rate History

| Water Rate Increase History | | | | | | | |
|-----------------------------|---|--|--|--|--|--|--|
| <u>Years</u> | Cumulative Percentage <u>Increase</u> | Reason for Increase | | | | | |
| July 1995 | 0% | Seasonal Rates | | | | | |
| July 1996 – 2001 | 45% | Five Year CIP – \$60 million | | | | | |
| July 2001 – 2006 | 13% | Metropolitan Water CIP Assessment of \$7 million per | | | | | |
| | | year | | | | | |

 The preliminary financial plan includes \$229 million in capital improvement costs over the next 10 years PLUS
 \$7 million per year for SLC's share of Metro WTP (debt service) beginning in fiscal year (FY) 2005-06.

Rick Giardina presented an overview of the preliminary financial plan as summarized in the Table below; this table illustrates the annual revenue increases under 4 rate options.

| Revenue Adjustments | | | | | | |
|---------------------|-----------|-------------------|-----------|-----------------|--|--|
| Fiscal | Fiscal | | | onservation | | |
| Year | Base Case | with Conservation | w/o Metro | w/o Metro & CUP | | |
| 03-04 | 4% | 6% | 16% | 38% | | |
| 04-05 | 7% | 7% | 7% | 3% | | |
| 05-06 | 1% | 3% | 3% | 5% | | |
| 06-07 | 13% | 12% | 10% | 12% | | |
| 07-08 | 15% | 15% | 10% | 10% | | |
| 08-09 | 17% | 21% | 27% | 18% | | |
| 09-10 | 0% | 0% | 0% | 0% | | |
| 10-11 | 6% | 5% | 0% | 6% | | |
| 11-12 | 5% | 6% | 10% | 5% | | |
| Total | 68% | 75% | 83% | 97% | | |

Each of the financial plan options are discussed below:

<u>Base Case</u> – Includes nominal growth (less than 1% per year) and static or constant water use per account.

<u>With Conservation</u> – same growth rate as the "Base Case" scenario except water use per account decreases in the range of 5% to 10% over the 10-year study period.

<u>With Conservation and W/O Metro</u> – same as the "With Conservation" scenario but assumes all property tax revenue sources for Metro are immediately eliminated.

<u>With Conservation and W/O Metro or CUP</u> – same as the "With Conservation" scenario but assumes all property tax revenue sources for Metro and Central Utah Water Conservation District (CUP) are immediately eliminated.

With respect to the relatively significant revenue increases indicated in the last two scenarios, the following points are important and relate to the current discussion occurring in the State regarding the elimination of property taxes as a funding source for water projects and related costs. These points were <u>not</u> presented during the meeting but are the result of discussions that occurred after the meeting was concluded.

- While the scenarios above reflect the immediate elimination of 100% of the property tax authority now utilized by Metro and CUP, this is not likely to happen for a number of reasons not the least of which has to do with the dedication of these revenues to the repayment of outstanding bonds.
- Any decision to eliminate property tax authority is likely to be phased-in or done over a period of years not "overnight" as indicated in the previous table.
- As noted, Metro and CUP will likely retain some property tax authority as it relates to the repayment of currently outstanding bonds.
- The ultimate impact of this change is difficult, at best, to estimate. The amount of revenue to be "replaced" if property taxes are lost can be affected by any number of factors including possible changes in the operations of Metro and CUP due to current perceptions regarding "over collections" and other savings from potential "belt tightening" initiatives.

The bottom line is that there is no way to definitively determine the impact of this change on the Utility's ratepayers. However, it is safe to say that this change will very likely result in an increase in the cost of water to the Utility. The percentage increases shown in the pervious table represent a theoretical "worst case" scenario that in all likelihood will not come to pass.

The last agenda item for the meeting was an overview of rate assumptions for "modeling" the El Paso and Irvine Ranch approaches.

The meeting concluded at approximately 9:30 am.

Meeting No. 5 will be held **Tuesday**, **November 19th** (not the 13th as originally scheduled) at the Salt Lake Community College (same location as Meeting No. 3):

Salt Lake Community College 1575 S. State Street Room W-111D Time: 7 AM to 9:30 AM.

Topics for review and discussion at the next meeting include:

- Final Financial Plan
- Rate Alternatives and Customer Impact
- Recommended (by the Committee) Rate Alternative

Salt Lake City Department of **Public Utilities**

Public Utility Advisory Committee Water Rate Subcommittee November 19, 2002 7:00-9:30 A.M.

Meeting No. 5

There was no formal agenda presented for this meeting.

Primary Topic:

Discussion and Selection of Rate Alternatives

Public Utilities

Public Utilities Advisory Committee Water Rate Subcommittee (the WRS)

Meeting No. 5 November 19, 2002

Meeting Summary

Committee Members in Attendance:

Kenneth Neal Ted Wilson Leland Myers Patricia Nielson Cullen Battle Lisa Romney Gordon Carmen Gregg Smith Scott Endicott Jan Striefel Zach Frankel James Tangaro Kim Hibbert Ronald Vance Peter von Sivers Bruce Jones

Gary Mumford

Committee Members Absent:

Darrell Mensel **Bob Berrington** Ken Bullock Kevin Pace Cindy Cromer Ouim Roundy Orfeo Kostrencich

Department Staff / Consultants in Attendance:

Jim Lewis, Finance Administrator Rick Giardina, RGA Project Manager Jeff Niermeyer, Deputy Director Joel Theis, RGA Kurt Spjute, Financial Manager

The meeting began with a presentation by Zach Frankel of the potential phase-out of property taxes. He emphasized the concept of property tax elimination leading to a more equitable method of water resource funding in which pay for use is the primary method for funding. This is strictly from Zach Frankel's perspective and does not imply that the Department supports it. Zach also distributed a copy of a report prepared by Utah River Council, entitled "Mirage in the Desert: Property Tax Subsidies for Water."

Discussion of the rate alternatives included concerns about the AWC not providing incentives for indoor conservation, and allowing more outdoor usage for residential customers with large families. However, in recognition of the difficulty in designing inverted block rates that are equitable for commercial and industrial customers, the AWC rate was viewed by many Subcommittee members as a preferred method.

The Inverted Block-Seasonal rate approach was viewed as an acceptable rate method for residential customers by many subcommittee members. However, some members opposed the setting of outdoor use blocks so that customers with larger than average lots (and irrigated areas) paid more for each ccf (unit of water) than customers with average size lots. The issue in setting the blocks is whether every acre, or square foot, of land should be allowed a certain efficient level of water at a constant rate, or whether blocks should be based upon an average size lot irrigation requirements. The majority of the Subcommittee favored setting outdoor use according to average lot size, although no vote was taken on the issue.

The Irvine Ranch Water District (IRWD) approach and the Modified Peaking (updated current seasonal approach) were not favored approaches, and there will be no further consideration of these methods. The IRWD method was considered to be administratively burdensome. The Modified Peaking method was not considered to be capable of inducing conservation or reducing peak usage, the two top pricing objectives, as effectively as the AWC and Inverted Block-Seasonal rate methods.

Based on discussions during the meeting and a review of comments made, the AWC method and the Inverted Block-Seasonal method will be evaluated further. Projected customer impacts will be presented at an additional meeting to be held December 19th. Impacts of implementing the AWC method will be evaluated for Commercial, Industrial, and the All Other customer classes.

Impacts of implementing the Inverted Block-Seasonal method will be evaluated for the residential class. The Municipal Irrigation customer class will have a rate design based on individual customer usage. Information from an audit performed on municipal customers to assess irrigation needs will be used to develop the block definitions for this class.

As indicated, another subcommittee meeting will be held Thursday, December 19 at the same location as the previous meeting, to finalize the rate development recommendations. This meeting will start promptly at 7:00 a.m.

Salt Lake City Department of **Public Utilities**

Public Utility Advisory Committee Water Rate Subcommittee December 19, 2002 7:00-9:30 A.M.

Meeting No. 6

There was no formal agenda presented for this meeting.

Primary Topic:

Presentation and Discussion of Selected Rate Alternatives

Committee Recommendations

Public Utilities

Public Utilities Advisory CommitteeWater Rate Subcommittee (the WRS)

Meeting No. 6 December 19, 2002

Meeting Summary

Committee Members in Attendance:

Patricia Nielson Leland Myers Cullen Battle **Kevin Pace** Gordon Carmen Lisa Romney Cindy Cromer Quim Roundy Scott Endicott Gregg Smith Zach Frankel Jan Striefel Bruce Jones James Tangaro Gary Mumford Ronald Vance Kenneth Neal Peter von Sivers

Committee Members Absent:

Bob Berrington Orfeo Kostrencich Ken Bullock Darrell Mensel Kim Hibbert Ted Wilson

Department Staff / Consultants in Attendance:

Stephanie Duer, Water Conservation Coordinator Jim Lewis, Finance Administrator Jeff Niermeyer, Deputy Director Kurt Spjute, Financial Manager

The meeting began about 7:15 am.

Rick Giardina, RGA Project Manager Joel Theis, RGA Project Staff Jim Olson, Brown & Caldwell Rick Giardina started the meeting by providing an overview of the agenda and the meeting objective, which was to choose a rate design approach to recommend to the PUAC. Based on results of Meeting No. 5, three alternative rate design approaches were presented for comparison:

Alternative 1: Current Seasonal Uniform Rate Structure

The Department's current water structure, which is intended to emphasize the difference in winter and summer water delivery costs. These rates were increased 3% to reflect the rate increase approved by the City Council for FY 2003-04. Alternatives 2 and 3 incorporate the same revenue requirement as would be achieved with a 3% increase in current rates.

Alternative 2: Average Winter Consumption (AWC) for All Customers

This is an inverted block design that uses average winter consumption as the basis for setting the first pricing block (indoor water use). Usage higher than the average winter consumption for each customer is priced higher in blocks 2 and 3. The second block typically is set to allow for efficient outdoor water use levels, and is set based on percentages of the AWC for each customer. The third block is priced higher to discourage inefficient use and is set based on a percentage of AWC.

All customers would pay the same rates under this 3-block approach with the exception of the irrigation-only customers. The irrigation-only accounts would pay the second block rate unless they exceed a targeted usage amount; the third block rate would apply to all usage exceeding the targeted usage amount.

Alternative 3: Seasonal Uniform and Inverted Block for Residential Accounts Average Winter Consumption (AWC) for All Other Accounts

The residential rate approach consists of a uniform volume rate in the winter and an inverted block design for the summer. Blocks are set based on average winter and average summer usage criteria.

The commercial rate approach consists of three rate blocks that are defined as a percentage of average winter consumption for each customer. This rate follows the same conventions as described in Alternative 2. All non-residential customers would pay the same rates under this 3-block approach with the exception of irrigation customers who would be charged as previously described.

Customer bill impacts and revenue impacts were presented to indicate the changes from the current rates that could be expected if either of the two new alternatives were implemented.

The Committee had significant discussion about the type of rate structure that should be implemented. Viewpoints voiced about each method include:

Alternative 2 – some Subcommittee members believe it lacks a conservation incentive for indoor use, and the incentive for high volume users to conserve was not as strong as the Alternative 3 Inverted Block approach. In addition, inefficient water use in the winter would increase a customer's AWC, and therefore would lead to a higher indoor-use-block consumption amount and a higher outdoor-use-block consumption amount. Thus, inefficient water use in the winter is rewarded with higher usage levels in the summer at the lower block rates.

Alternative 2 was favored by some members because it does not incorporate specific or fixed usage amounts for each block for all customers. This Alternative provides block usage and pricing adjusted to the average consumption characteristics of each customer. Conceptually, the AWC method provides for equal pricing (across all customer classes) of all indoor water consumption, all efficient outdoor water consumption, and for any excessive water consumption.

Alternative 3 – some Subcommittee members believe this Alternative sends "mixed" or confusing pricing because a customer could be charged more in the summer than in the winter for using the same amount of water. This would occur when a customer used enough water to exceed the first block usage level in all months. In this instance a uniform rate would be applied in the winter (all use at one price), and inverted block rates would be applied in the summer. In the summer, the customer would pay the same rate as in the winter for any use within the first block (the indoor usage block), and would pay the second block rate for any use exceeding the first block — and the third block rate for any use exceeding the second block (efficient outdoor use block).

This Alternative was favored by some Subcommittee members because it sets indoor and outdoor usage blocks at levels consistent with the average residential customer usage characteristics. The price signal was therefore considered by some Subcommittee members to be stronger and more influential in reducing peak demand.

With regard to Alternative 3, Options A and B were considered. Option A consists of separate inverted block structures for inside versus outside City customers; Option B did not.

Recommendations

Based on discussions at prior meetings and "votes" taken at this meeting, the Subcommittee arrived at the following recommendations:

- The current minimum charge per account per month that includes a 5 ccf allowance for all accounts should be replaced with a fixed charge that does not include any usage allowance. Both charges vary by meter size. The fixed charge includes only customer service, billing and meter-related costs; as such it is considered a customer service charge.
- 2. The current outside city rate differential of 1.50x (times greater than inside City rates) should lower to 1.35x based on the RGA cost of service analysis.

- 3. The Alternative 3/Option B rate structure (uniform winter/inverted block summer) should be used for all residential service. The block or usage thresholds would be the same for all customers (i.e., Option B, no distinction between inside and outside accounts). The selection of Alternative 3 passed by a vote of 9 to 6; Option B over Option A passed by a vote of 11 to 4.
- 4. The AWC structure, Alternative 3, should be used for all non-residential accounts.
- 5. The Subcommittee voted unanimously for a motion recommending that the Department and Council commit to complete a comprehensive review of the impact that the above recommendations have on water use, revenues, etc.

There are no more meetings scheduled for the Water Rate Subcommittee. Participation and attendance by members of the WRS has been greatly appreciated, and the Department and RGA would like to thank everyone for their contributions to this water rate development process.

These results and recommendations will be presented to the PUAC on January 8th and to the City Council later in January or February of 2003. The Subcommittee will be notified regarding the date of future City Council meetings to consider water rates.

RGA's report will contain a separate section discussing the Subcommittee process and recommendations.

The meeting concluded at approximately 9:15 am.