



**Council Meeting: October 7, 2008**

**SUBJECT: Proposed Mobile Home Park Water Rate Structure and Approval of Budget Modification No. 15**

**REPORT IN BRIEF**

On July 15, 2008, Council adopted changes to the City's residential metering policy. As part of that action, Council directed that staff return with recommended rates for mobile home parks that treat them as a separate customer group, with charges that reflect their demand on the system and are consistent with State requirements for sub-metering and related billing.

Staff has completed a study with help from a utility rate consultant. The study recommended that the City break out mobile homes as a separate group with the same volumetric rate structure as the current Apartment customer classification combined with meter charges consistent with the City's current meter charge schedule.

The attached Draft Schedule of Water Utility Service Rates reflects this change. In order to implement these rates, a Proposition 218 notice will be required to all affected customers, in this case, mobile home customers. This mid-year rate mailing is estimated to cost approximately \$3,300 in postage and processing costs. Staff is recommending that Council direct staff to schedule a mid year utility rate public hearing, tentatively scheduled for December 9, 2008, on Mobile Home Park Water Rates, proceed with Proposition 218 noticing of the affected customers, and approve Budget Modification No. 15. Rates will become effective upon adoption of the Rate Resolution at the conclusion of the public hearing.

**BACKGROUND**

The State of California is in a drought. Water supply, as a policy and infrastructure issue, has been the subject of many recent discussions at the state level, including policy proposals for major infrastructure projects to insure statewide water supply.

Water conservation has been a key point in all discussions about water supply, and will clearly be an integral part of any long term plan for water throughout the state and at the local level. Most comprehensive conservation plans employ

a combination of individual water metering and demand based pricing as one of the tools to encourage water conservation.

Several mobile home parks in the City have expressed interest in sub-metering their properties for the purpose of encouraging conservation, a goal that financially benefits the park and is in line with the City's policies. The Santa Clara Valley Water District, which has a policy and financial interest in encouraging conservation, has offered to pay approximately 63% of the initial capital cost of sub-metering the parks, with the park picking up the remaining costs.

Under California Public Utilities Code, mobile home parks must charge the same rates to their residents as would be charged to the park by the water utility if it were billing the units directly. Currently, all mobile home parks in Sunnyvale are billed through a master meter (or meters) at the public right of way. They then pass their costs on to their customers. The City does not currently directly bill any mobile home residents, nor does it have a rate to do so. This makes it less clear to mobile home park management as to what they may or may not pass on to their customers after they install sub-meters.

To address the issues brought forward by mobile home parks, staff was directed to return to Council with recommended rates for the parks that treat them as a separate customer group with charges that reflect their demand on the system and are consistent with State requirements for sub-metering and related billing. This direction came as part of the changes to the City's residential metering policy adopted by Council on July 15, 2008.

### **EXISTING POLICY**

Sunnyvale Municipal Code section 12.24.010 authorizes the City Council to establish by resolution fees and charges based on cost influencing factors.

Policy 7.11.1a.5 of the General Plan's Fiscal Sub-Element states "The users fees established for each utility will be reviewed annually and set at a level that will support the total costs of the utility, including direct and indirect costs and contributions to reserves set by Council policy."

Policy 3.1E.1 of the General Plan's Water Sub-Element states "Establish rate structures that encourage on-going potable water conservation and that can be modified to achieve even greater levels of water conservation during period of water shortages/droughts"

### **DISCUSSION**

In August the City entered into an agreement under the City Manager's contract award authority with Foresight Consulting, a firm that specializes in utility rate studies. Using data from the City's last water cost of service

analysis, Foresight and City staff analyzed and evaluated the customer characteristics, water consumption, and cost allocations for mobile home parks. This work resulted in a technical memorandum from Foresight, which is provided as Attachment B to this report.

In its existing schedule of water rates, the city makes distinctions in different customer classes. Customers are placed into groups based upon their use of and demand on the City's water system. Currently, the water rate schedule has five distinct customer classifications: Apartment, Residential, Commercial, Institutional, Landscape, and Fire. Mobile home parks are currently contained within the Apartment customer classification. This is because the water demand characteristics of mobile home parks are similar to apartments. This is true in three key ways; they are master metered, they have a fairly flat demand pattern over the year, and their average usage per unit is similar to apartments.

Overall, the city's water rates are designed to achieve revenue sufficiency but also send pricing signals to customers to encourage water conservation. There is a fixed and a variable component to the rate structure. The variable (or volume based) rates are used to encourage conservation. This is by means of an inclining block tier structure which increases the unit cost of water as customers reach higher "tiers" of consumption.

The general cost of service justification for an inclining block rate structure is based on the fact that customers using more than average amounts of water require the City to provide a larger than capacity system, acquire more supply, and use more energy in order to meet the higher peak demands of these customers. Therefore, those higher costs are loaded onto those users through higher per unit costs at higher usage rates.

The first tier for single family residential customers is set at a level that estimates basic indoor usage. For example, the single family home structure allows for zero to six units of water (one unit is equal to 100 cubic feet or 748 gallons) at the base tier. This is approximately half of the average usage for single family homes in Sunnyvale. Beyond the base tier, customers are charged at a higher rate.

The tier breakpoints are determined by usage characteristics of a particular customer group and are a key point of discussion when developing inclining block rates. In the case of apartments and mobile homes, the first tier breaks at 4 units per month, which reflects a smaller indoor use than single family units, who have a the first tier break of 6 units per month. This is reflective of the smaller lot sizes and lower average use characteristics of apartment and mobile homes compared to single family units.

The inclining block rates are coupled with a meter charge for each meter, with charges based on size. The intent of the meter charge is to capture the fixed monthly cost of service to each connection, plus the cost of sizing the water system capacity to meet the customer's potential demand on the water system, which is measured by meter size. In the case of master metered complexes, several large meters may service the property with corresponding meter charges. In the case of individually metered homes, each user receives an individual meter charge.

The study recommended that the city handle mobile homes in two separate ways, as master metered mobile homes, and individually metered mobile homes. For master metered mobile homes, the consultant recommends that the City continue to treat them the same as master metered apartments. This consists of a fixed monthly fee based on the size of the meter, and volume based charges that break at the same tiers as apartments. For individually metered mobile homes these customers would be charged using the same volume based rates and tiers currently used for apartments, and would pay a meter charge based on the size of each individual meter. The volumetric charges are recommended to be the same as the current apartment charges because review of the data confirmed that the usage per unit for mobile homes is most similar to that of apartment customers.

Along with the subsidies provided by Santa Clara Valley Water District, this change will encourage mobile home parks to sub meter their units as it will allow them a mechanism to recover the cost of doing so. Sub metering has been shown to reduce the amount of water each unit uses.

As the City works through the current water shortage, and plans for future water demand, even small incremental reductions will be of benefit. In forecasting water usage, the city has taken into consideration conservation measures, both current and future. This small change to pricing will help the city maintain reliable supply, and encourage water conservation for this customer group.

The attached Draft Schedule of Water Utility Rates reflects the proposed change. In order to implement these rates, a Proposition 218 notice will be required to all affected customers (in this case mobile home customers) 45 days in advance of a public hearing.

### **FISCAL IMPACT**

As the staff recommendation simply separates mobile homes as a new customer group, there is no fiscal impact to the Water Supply and Distribution Fund with adopting new rates. Revenue to the Water Supply and Distribution Fund from mobile home parks in FY 2007/2008 was approximately \$638,000. This accounted for 2.6% of total revenue to the fund.

It should be noted that if a park chooses to sub-meter, the cost of the meter service charge may result in an overall increase in cost to each individual water bill in the park. For example, a master metered mobile home park with a six inch meter and 188 units would pay a monthly meter service charge of approximately \$83. As individually metered customers, they would collectively pay approximately \$810 (i.e. 188 units times the monthly service fee of \$4.31 per meter).

In order to comply with Proposition 218 noticing requirements, staff would need to issue a 45 day notice of rate hearing to the affected customers. This mid-year rate mailing is estimated to cost approximately \$3,300 in postage and processing costs. Approval of Budget Modification No. 15 is required to fund the additional noticing. The Budget Modification will appropriate \$3,300 from the Water Supply and Distribution Fund Rate Stabilization Reserve to Program 720 – Utility Billing, Collection and Revenue Management to fund the work. Program 720 resides in the General Fund, but is fully funded through transfers from the utilities. The Budget Modification for FY 2008/2009 is presented in the following table:

**Budget Modification No. 15**  
**Fiscal year 2008/2009**

	<b>Current</b>	<b>Increase (Decrease)</b>	<b>Revised</b>
<b>General Fund</b>			
Transfers In:			
Water Supply and Distribution Fund	\$2,462,052	\$3,300	\$2,465,352
Expenditures:			
Program 720 – Utility Billing, Collection, and Revenue Management	\$2,001,382	\$3,300	\$2,004,682
<b>Water Supply and Distribution Fund</b>			
Transfers Out:			
General Fund	\$2,462,052	\$3,300	\$2,465,352
Reserves:			
Rate Stabilization Reserve	\$3,111,320	(\$3,300)	(\$3,300)

**PUBLIC CONTACT**

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, in the Council Chambers lobby, in the Office of the City Clerk, at the Library, Senior Center, Community Center and Department of Public Safety; posting the agenda and report on the City's Web

site; and making the report available at the Library and the Office of the City Clerk.

**ALTERNATIVES**

1. Direct staff to schedule a mid year utility rate public hearing (tentatively scheduled for December 9, 2008) on Mobile Home Park Water Rates, proceed with Proposition 218 noticing of the affected customers, and approve Budget Modification No. 15
2. Delay implementation until the regular FY 2009/2010 Utility Rate Hearing in June 2009.
3. Do not move forward with changes to the water rate structure.

**RECOMMENDATION**

Staff recommends Alternative 1, direct staff to schedule a mid year utility rate public hearing (tentatively scheduled for December 9, 2008) on Mobile Home Park Water Rates, proceed with Proposition 218 noticing of the affected customers, and approve Budget Modification No. 15

Taking this action is consistent with the City's policy on water rate setting and will help the City encourage conservation and maintain its long term water supply.

Reviewed by:

Mary J. Bradley, Director of Finance

Prepared by: Timothy J. Kirby, Revenue Systems Supervisor

Approved by:

Amy Chan

City Manager

**Attachments**

A. Draft Schedule of Water Rates

B. Foresight Consulting Technical Memorandum: Mobile Home Rates

**DRAFT SCHEDULE OF WATER UTILITY SERVICE RATES  
FISCAL YEAR 2008/2009**

**WATER RATES – Within City Limits**

All potable water users billed monthly and bi-monthly, except landscape, agricultural and institutional users, shall pay a water charge for each one hundred (100) cubic feet, or part thereof, of water as follows:

<b>Apartment Users<sup>1</sup> (Per Hundred Cubic Feet)</b>	<b>Billed Monthly</b>	<b>Billed Bi-Monthly</b>	<b>Rate</b>
	0 – 4 CCF	0 – 8 CCF	\$ 1.4200
	5 – 23 CCF	9 – 46 CCF	\$ 2.7502
	24 – 35 CCF	47 – 70 CCF	\$ 2.9293
	36+ CCF	71+ CCF	\$ 3.0175

<b>Mobile Home Users<sup>1</sup> (Per Hundred Cubic Feet)</b>	<b>Billed Monthly</b>	<b>Billed Bi-Monthly</b>	<b>Rate</b>
	0 – 4 CCF	0 – 8 CCF	\$ 1.4200
	5 – 23 CCF	9 – 46 CCF	\$ 2.7502
	24 – 35 CCF	47 – 70 CCF	\$ 2.9293
	36+ CCF	71+ CCF	\$ 3.0175

<b>Residential Users (other than Apartments)</b>	<b>Billed Monthly</b>	<b>Billed Bi-Monthly</b>	<b>Rate</b>
	0 – 6 CCF	0 – 12 CCF	\$ 1.4200
	7 – 33 CCF	13 – 66 CCF	\$ 2.7502
	34 – 50 CCF	67 – 100 CCF	\$ 2.9293
	51 + CCF	101 + CCF	\$ 3.0175

In residential developments where two (2) or more dwelling units are served by a common meter, the upper limit (in cubic feet) of each rate block shall be multiplied by the dwelling units served by the common meter in calculating the rates to be applied to water usage monitored by the common meter. In such case, the lower limit of each rate block shall be one (1) cubic foot over the upper limit of the next lower rate block.

<b>Commercial, Industrial, Fire Line, and New Construction Users (Per Hundred Cubic Feet)</b>	<b>Billed Monthly</b>	<b>Billed Bi-Monthly</b>	<b>Rate</b>
	0 – 6 CCF	0 – 12 CCF	\$ 1.4200
	7 – 20 CCF	13 – 40 CCF	\$ 2.7502
	21 – 50 CCF	41 – 100 CCF	\$ 2.9293
	51 – 500 CCF	101 – 1000 CCF	\$ 3.0175
	501 – 1250 CCF	1001 – 2500 CCF	\$ 3.0958
	1251 – 2500 CCF	2501 – 5000 CCF	\$ 3.1799
	2501+ CCF	5001+ CCF	\$ 3.2547

<b>Other Users Landscape, Agricultural, Institutional and Recycled Water Users (Per Hundred Cubic Feet)</b>	<b>Rate</b>
Landscape Users	\$ 2.9889
Agricultural and Institutional Users	\$ 1.4200
Reclaimed Water – Landscape Users	\$ 2.6919
Reclaimed Water – Agricultural and Institutional Users	\$ 1.2780

**WATER SERVICE FEES (by meter size)**

In addition to water use as noted above, all users who are billed monthly and bi-monthly shall pay service charges based on meter size as follows:

<b>Meter Size</b>	<b>Monthly Rate</b>	<b>Bi-Monthly Rate</b>
5/8" x 3/4"	\$ 4.74	\$ 9.48
3/4"	\$ 5.41	\$ 10.82
1"	\$ 9.00	\$ 18.00
1-1/2"	\$ 14.23	\$ 28.46
2"	\$ 23.57	\$ 47.14
3"	\$ 42.38	\$ 84.76
4"	\$ 54.23	\$ 108.46
6"	\$ 91.52	\$ 183.04
8"	\$ 179.64	\$ 359.28
10"	\$ 233.88	\$ 467.76
12"	\$ 303.37	\$ 606.74

## *Technical Memo: Mobile Home Water Rates*

TO: **Tim Kirby, Revenue Systems Supervisor, City of Sunnyvale**

FROM: **Greg Clumpner, Foresight Consulting**

DATE: *September 24, 2008*

### *INTRODUCTION*

The City of Sunnyvale completed a water rate study last year but has not implemented the recommendations developed in that study.<sup>1</sup> However, that study analyzed the city's customer characteristics, water consumption, and costs allocations, along with rate structure alternatives. The City has since decided to create a separate water rate for mobile homes, which to date have been included in the rate schedule used for apartments.

The City retained Foresight to evaluate mobile home water rates using the information in the City's recent rate study. This memo summarizes our analysis and recommendations.

### *SUMMARY AND RECOMMENDATIONS*

**Mobile Home Rates** – There are two separate cases that need to be considered for mobile home water rates: (1) master-metered and (2) individually-metered mobile homes:

- Master-Metered Mobile Homes – Based on the data and rate study analysis, it appears that master-metered mobile homes should be charged the same water rate as apartments. This conclusion is supported by the fact that the City uses fixed monthly service fees that increase with the size of the meter. That is, the number of units served, and hence the demand on the water supply system, is reflected in the meter sizes. Additionally, apartments use a volume-based charge reflecting total consumption; this is also an equitable means of charging master metered mobile homes for variable costs.
- Individually-Metered Mobile Homes – Individually-metered mobile homes should be charged the same volume-based and tiered rates currently used for apartments. This recommendation is based on consumption data indicating that average monthly water use per dwelling unit for mobile homes is 6.9 Ccf/month compared to 7.7 Ccf/month for apartments and approximately 12 to 14 Ccf/month for single-family residential homes.<sup>2</sup> With regard to monthly service fees, these mobile home units would each pay the lowest monthly service fee available to residential customers (i.e., for a 5/8 x 3/4" meter).

Individually metered mobile home customers are charged a separate monthly service fee for each mobile home unit. This is vastly different than master-metered mobile homes, which have just one monthly service fee for each master meter. For example, a master metered mobile home park with a 6-inch meter and 188 units would pay a monthly service fee of \$83.20, but as individually metered customers, they would collectively pay \$810.28 (i.e., 188 units times the monthly service fee of \$4.31/meter).<sup>3</sup>

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<sup>1</sup> *Water & Wastewater Utility Cost of Service Rate Study*, Final Report, FCS Group, April 2007.

<sup>2</sup> Data from City billing records.

<sup>3</sup> This example is an actual mobile home account. Also, this recommendation assumes the City will provide the same type of maintenance and customer billing for individually metered mobile homes as it does for single-family residential customers.

**Recommended Rate Adjustments** – The City’s recently completed rate study indicates there are some cost-of-service adjustments that shift how costs are allocated between various customer classes. Foresight recommends the City complete the cost-of-service evaluation and adjust water rates accordingly. However, there are some technical issues that we believe should be reviewed as a part of that process. Specifically, the “equivalent-meter factors” used in the FCS study are significantly higher than those reflected in the City’s current rates. These factors determine the amount of fixed capacity costs allocated to customers based on their meter size. (See Appendix Table 8 for details.)

The FCS study also recommended a different rate structure in terms of the tier breakpoints and rate differentials for the volume-based rates in each consumption block. These should be reviewed and modified as needed with water conservation and revenue sufficiency in mind.

Lastly, there may be some differences in how the customer and consumption data was interpreted in developing the City’s 2007 rate analysis.<sup>4</sup> The City should review that data but also attempt to use the most current data when evaluating cost-of-service changes to the water rates.

The next two sections further explain the analysis and data used to develop these recommendations, followed by an Appendix which presents various tables relevant to this analysis.

## *OVERVIEW OF THE ANALYSIS*

Evaluating current rates for mobile homes has some inherent difficulties. First, the data used in FCS’s 2007 rate study is for FY’03-04, which is now several years outdated. Second, the revenue requirements and customer data addressed in the report are different than those reflected in the City’s current water rates. And third, there are differences in the rate structures addressed in the rate study versus the City’s current rates.<sup>5</sup> Because of these differences, results of the 2007 rate study are not directly applicable to the City’s current rate structure. However, Foresight has considered these differences and made recommendations accordingly.

Developing a separate rate for mobile homes needs to consider two cases:

1. **Master-Metered Mobile Homes** – These are mobile home parks billed as master metered customers, which is how they are currently billed.
2. **Individually-Metered Mobile Homes** – These are mobile home customers that have chosen to be individually metered (or sub-metered) rather than master metered. In this case, the City would need to determine an equitable rate per mobile home unit.

In the first case, the primary question is whether there is a basis for using rates for mobile home parks that are different than used for apartments. In the second case, the primary question is whether there are reasons to charge individually metered mobile homes rates that are different than those used for single-family residential customers. In considering these questions, Foresight has relied on the detailed analyses and consumption data included in the City’s recent rate study.

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<sup>4</sup> Foresight’s review of accounts and consumption data for apartments (including mobile homes) came up with some significant differences that those used in the FCS study. See Appendix Table 4 for more details.

<sup>5</sup> For example, the FCS study developed two fixed monthly fees (one based on connections and a second based on equivalent meters), whereas it is not clear how the City’s current service fee was constructed. Also, the tier breakpoints that define consumption blocks, and the tier rate differentials are different in the FCS study compared to the City’s current rates

The City's 2007 rate study developed three components which, cumulatively, make up the City's water rates. These three components are the basis for the evaluation of mobile home rates:

1. **Volume-Based Rates** – These are unit costs for water based on the amount of water each customer uses on a monthly basis.
2. **Fixed Charges Per Connection** – These fixed charges are a monthly service charge for each connection, or account. These charges do not vary by size of the water meter.<sup>6</sup>
3. **Fixed Charge Per Equivalent Meter** – These charges allocate fixed system capacity costs to customers based on their potential demand on the water system. This potential demand is measured by meter sizes, which reflects the amount of water each customer can use when their valve is fully opened.

## ***RESULTS OF THE ANALYSIS***

**Master-Metered Mobile Home Rates** – Table 1 summarizes the analysis and information contained in the City's rate study report, plus other data from the City's billing system. This table suggests that, as long as mobile homes are charged as master-metered customers the same way that apartments are, there is no basis for using different rates. Based on this result, we recommend using the same rates for both master-metered mobile homes and apartments.

Table 1

### **Comparison of Mobile Home & Apartment Water Rates From - FCS Rate Study Data**

*City of Sunnyvale*

<u>Customer Class</u>	<u>Volume-Based Rates (\$/Ccf)</u>	<u>Fixed Monthly Charges</u>	
		<u>\$/Conn./Mo.</u>	<u>\$/Equiv. Meter/Mo.(b)</u>
Mobile Homes as % of Apartments	100%	100%	100%

a. From Appendix Tables 1 and 2.

b. 100% is used because any differences in equivalent meters is reflected in the service charges per meter sizes.

**Individually Metered Mobile Homes** – The analysis presented in the FCS rate study indicated that the apartment customer class should have volume-based rates slightly lower than residential customers but fixed charges that are higher than residential customers.<sup>7</sup> This conclusion is based on two factors:

1. **Volume-Based Charges** – FCS's study indicated that mobile home customers should have volume-based rates that are 6% less than residential customers. This is because the "base costs," which make up most of the volume-based rates, are more heavily allocated to residential customers.<sup>8</sup>
2. **Fixed Monthly Service Fees** – FCS's study also indicated that mobile homes, which are currently included apartments, should have fixed charges per equivalent meter that are 32% higher than residential customers.<sup>9</sup> According to FCS, this is because apartments/mobile homes have a larger allocation of fixed capacity costs, as measured by the number of equivalent meters. However, this difference in fixed charges is

<sup>6</sup> The FCS study determined that the fixed charge per connection was 40% of the total fixed monthly service fee for the smallest meter size, and that this charge did not increase by meter size.

<sup>7</sup> See the "Summary of Unit Costs" on page 11 of Appendix C in the FCS final rate study report.

<sup>8</sup> FCS estimated the average apartment volume-based rate to be \$2.02/Ccf compared to a residential volume rate of \$2.15/Ccf. See page 11 of Appendix C in FCS's final study report.

<sup>9</sup> FCS estimated the average apartment per equivalent meter charge to be \$2.76/Ccf compared to a residential volume charge of \$2.09/Ccf. See page 11 of Appendix C in FCS's final study report.

reflected in the size of the customer's meter.<sup>10</sup> Additionally, the City's current water rates do not differentiate between monthly fixed rates by customer class. Therefore, we do not recommend singling out mobile homes for higher service charges related to the costs per equivalent meter. However, if (or when) the City decides to consider full cost-of-service rate analysis, equivalent meter charges should be reviewed along with all other rates and fees.

**Other Results of the Analysis** – Foresight's analysis revealed several areas that we would suggest the City further evaluate when updating the water rates:

- **Cost Allocations** – The FCS study indicated there should be some re-allocation of costs between the customer classes. This should be verified with more recent data on consumption and revenue requirements.
- **Consumption Data** – The FCS study was based on 2003-04 water consumption data. The rate analysis would be updated using the most current data available; in this case 2007-08 data, unless the study was delayed until 2008-09 data was available.
- **Equivalent Meter Factors** – We noted that there are significant differences between the City's current equivalent meter factors and those used by FCS (see Appendix Table 8). This issue should be further evaluated when the rate study is updated.

The following Tables summarize the supporting data used in this analysis.

## Appendix Tables

Appendix Table 1

### Calculation of Volume-Based Rates

City of Sunnyvale

Customer Class	Base Costs	Extra Capacity	Total (a)	Volume	\$/Ccf	As % of Apts.
Apartments (Only)	\$4,811,258	\$231,433	\$5,042,691	2,493,824	\$2.02	100%
Mobile Homes	\$604,108	\$28,733	\$632,841	313,128	\$2.02	100%
Total (a)	\$5,415,366	\$260,166	\$5,675,532	2,806,952	--	--
<b>Allocation Percentages (b)</b>						
Apartments (Only)	88.8%	89.0%				
Mobile Homes	11.2%	11.0%				
Total	100.0%	100.0%				

a. Total costs from FCS Final Report, Appendix C, pages 9-11, April 2007.

b. Percentages from Appendix Table 3.

Appendix Table 2

### Calculation of Fixed Charges: Per Account (i.e., Connection)

City of Sunnyvale

Customer Class	Allocation %'s (a)	Customer Costs (b)	Accounts	\$/Account /Month	As % of Apts.
Apartments (Only)	98.8%	\$35,448	1,599	\$1.85	100%
Mobile Homes	1.2%	\$421	19	\$1.85	100%
Total (a)	100.0%	\$35,869	1,618	--	--

a. Percentages from Appendix Table 3.

b. Total costs from FCS Final Report, Appendix C, pages 9-11, April 2007.

<sup>10</sup> That is, the average number of equivalent meters per mobile home account is 54.5 compared to 8.0 for apartments. See Appendix Table 7. However, larger meters have larger service charges, thereby making this difference a moot point.

Appendix Table 3  
**Functional Allocations Between Apartments & Mobile Homes**  
*City of Sunnyvale*

Customer Class	Distribution of			Distribution of
	Annual Consumption	Distribution of Peak Consumption	Distribution of Customer Accounts	Equivalent Meter Connections
<i>Allocation Basis for:</i>	<i>Base Costs</i>	<i>Extra Capacity</i>	<i>Customer Costs</i>	<i>Fire Protection</i>
<b>Apartments &amp; Mobile Homes Only (a)</b>				
Apartments	88.8%	89.0%	98.8%	92.5%
Mobile Homes	11.2%	11.0%	1.2%	7.5%
Apartments & M.H.	100.0%	100.0%	100.0%	100.0%

Source of Percentages: Appendix Tables 4, 5, 6 and 7.

- a. This represents a breakout of "Apartments" data from the FCS study into separate groups of Apartments (only) and Mobile Homes, which FCS had included in the Apartments customer class.  
b. Reflects FCS data from Exhibit 3.3 of the FCS Final Report, FCS Group, page 30, April 2007.

Appendix Table 4  
**Apartment/Mobile Home Water Consumption and Revenue Data (FY'03-04)**  
*City of Sunnyvale*

Customer Class	Tier 1	Tier 2	Tier 3	Tier 4	Total	% of Apts. & MH's	% of All Customers (b)
	<b>Annual Consumption (ccf) (a)</b>						
Apartments	1,160,696	1,276,448	27,317	29,363	2,493,824	88.8%	24.7%
Mobile Homes	147,716	159,434	2,661	3,317	313,128	11.2%	3.1%
Apartments & MH	1,308,412	1,435,882	29,978	32,680	2,806,952	100.0%	27.8% (c)
FCS Study Results (b)	837,587	1,971,221	0	0	2,808,808		
<b>Annual Revenue (a)</b>							
Apartments	\$1,118,370	\$2,382,090	\$54,303	\$60,124	\$3,614,886	88.9%	
Mobile Homes	\$142,339	\$297,552	\$5,290	\$6,792	\$451,972	11.1%	
Apartments & MH	\$1,260,709	\$2,679,642	\$59,593	\$66,916	\$4,066,859	100.0%	
FCS Study Results (b)	\$1,172,622	\$4,503,001	\$0	\$0	\$5,675,623		

a. Annual consumption or revenue from FY'03-04 data provided by City Dept. of Finance, August 2008.

b. % of annual consumption of apartments & mobile homes, based on FCS total of 27.8% of all consumption.

c. From Exhibit 3.3 of the "Water and Wastewater Utility Cost of Service Rate Study," Final Report, FCS Group, page 30, April 2007.

Appendix Table 5  
**Summary of Peak Water Consumption (FY'03-04)**  
*City of Sunnyvale*

Customer Class	Peak Capacity			% of All Customers (c)
	FCS Results (a)	Ccf (b)	%	
Apartments	--	1,410,638	89.0%	13.9%
Mobile Homes	--	175,134	11.0%	1.7%
Apartments & MH	1,596,078	1,585,772	100.0%	15.6%

a. From page 23 of Appendix C of the FCS Final Report, FCS Group, April 2007.

b. Consumption from May 1 thru Oct. 31, FY'03-04. Data provided by City Dept. of Finance, August 2008.

c. % of peak consumption of all customers, based on FCS total of 15.6% and peak of Apts. & M.H.'s as shown in Exhibit 3.3 of FCS' Final Report, FCS Group, page 30, April 2007.

## Appendix Table 6

**Apartment/Mobile Home Accounts (FY'03-04)**

City of Sunnyvale

Customer Class	Number of Accounts			
	Just Apartments/M.H.'s		All Customers (b)	
	Accounts (a)	%	Accounts	%
Apartments	1,599	98.8%	1,599	5.9%
Mobile Homes	19	1.2%	19	0.1%
<i>All Other Customers</i>	--	--	<u>25,304</u>	<u>94.0%</u>
Total	1,618	100.0%	26,922	100.0%

a. Source of data: FY'03-04 Data provided by City Dept. of Finance, August 2008, adjusted to FY'03-04.

b. Percentages in relation to all customer classes, not just apartments/mobile homes. From page 8 of Appendix C, FCS Final Report, FCS Group, April 2007.

## Appendix Table 7

**Apartment/Mobile Home Equivalent Meters (FY'03-04)**

City of Sunnyvale

Customer Class	Number of Equivalent Meters (a)			
	Number	Avg./Acct. (b)	As % of Apts.	% of All Customers
Apartments	12,842	8.0	92.5%	20.8%
Mobile Homes	1,036	54.5	7.5%	1.7%
<i>All Other Customers</i>	<u>47,760</u>	--	--	<u>77.5%</u>
Total	61,638	--	100.0%	100.0%

a. Percentages in relation to all customer classes, not just apartments/mobile homes. From page 8 of Appendix C, FCS Final Report, FCS Group, April 2007.

b. Number of equivalent meters divided by accounts (from Appendix Table 6).

## Appendix Table 8

**Alternative Equivalent Meter Factors**

City of Sunnyvale

Meter Sizes	Current Equiv. Meter Factors (a)	Foresight Equiv. Meter Factors (b)	FCS Equiv. Meter Factors (c)
5/8-3/4"	1.0	1.0	1.0
3/4"	1.2	1.0	1.5
1"	2.5	1.7	2.5
1 1/2"	4.3	3.3	5.0
2"	7.6	5.3	8.0
3"	14.2	11.7	16.0
4"	18.4	20.0	25.0
6"	31.5	41.7	50.0
8"	62.5	60.0	80.0
10"	81.6	96.7	115.0
12"	106.0	143.3	225.0

a. Reflected in City's current Service Fees. Assumes current service charge is split between the per connection fee and equivalent meter fee as indicated in the FCS study.

b. Source: AWWA Manual M6 - Table 5-3: Test Requirements for New, Rebuilt, and Repaired Cold-Water Meters.

c. Derived from Exhibit 3.9 of the FCS Final Report, April 2007.