

## **Water Rate Study for City of Parlier**

**October 12, 2015**

### **Purpose**

The purpose of this cost of service water study is to review and modify the existing water rate structure to set rates such that each customer class provides revenue to the water enterprise consistent with the cost to serve them. Additionally, overall operating costs, debt, assets, and revenue are analyzed to evaluate reasonableness of costs, and the need to increase overall revenue. These steps are conducted to be consistent with the requirements of California's Proposition 218.

### **Summary**

Parlier's existing rate structure does not associate with customer classes and does not collect revenue from customer classes in a manner consistent with the cost to serve them. In particular, the cost to single-family homes is disproportionately low, and the cost to multi-family is disproportionately high. However, existing combined revenue from rates and fees from all customers is found to be adequate to cover operating expenses and needed improvements at least in the near future. The Water Enterprise Fund balance is also found to be adequate to cover variations in revenue and expense. Long term debt incurred by the Water Enterprise is minimal.

The impact of the cost of service proposed rates is that the average monthly cost for single-family homes will increase, and other rate classes will decrease. The reason is that single-family home have not been paying a volumetric rate. The average single-family bill will double under the proposed rate structure. Accordingly, public awareness and education will be critical for a smooth transition for single-family customers as the new rates are implemented.

### **Existing Rates**

Parlier's existing rate structure does not collect revenue such that each customer class provides revenue consistent with the cost to serve them.

The primary reason that existing rates are not balanced is that single-family dwellings are not charged a volumetric rate at all, but only a fixed fee each month, either \$18.50 per customer, or \$16.95 for a senior citizen account. The cost of service results show revenue from this customer class is insufficient, and they have no incentive to conserve water without a metered rate.

The secondary reason is that the volumetric rate charged to all other customers is relatively high compared to the resultant cost-of service rates. The existing volumetric rate is \$3.40 per hundred cubic feet, which is the same as \$4.55 per thousand gallons. In contrast, the resultant cost of service volumetric rate averages \$1.69 per thousand gallon, much lower.



Finally, the existing fixed monthly charge is based on the number of dwelling units as opposed to meter size. The cost to the water system to serve a multi-family unit with one meter is a function of the meter size and volume, not the number of units. This would be different if each unit received a bill, but for these situations, the apartments have a master meter and one bill. For example, presently, an apartment complex with 20 units is charged  $20 \times \$18.50 = \$370.00$  each month, plus the volumetric rate.

A detail of the rate structure is that the first 40 cubic feet of water is presently included in the fixed monthly charge. The value of this water at the existing volumetric rate is \$1.36, which is relatively low.

The existing rate structure is shown on Attachment A, also compared to the proposed rate structure on the same table.

### **Existing Expense and Revenue Evaluation**

Existing revenue of \$1,450,000 from the Water Enterprise is found to be adequate to cover current and anticipated costs over the next few years. This is a positive finding because the need for increased revenue would dictate that rates must be increased overall, as opposed to merely balanced to achieve fairness across customer classes. See Attachment B for detail.

Operating costs are held constant from FY15 through FY16 consistent with the City budget. Revenue is presently sufficient to cover ongoing expenses, and also to fund major repair at a rate of \$200,000 per year. Based on planned projects at present, this amount should be adequate. Identified projects over the next few years include fire hydrant repair including added valves, purchase of a vacuum truck (shared with sewer), added stand-by generators, and other miscellaneous well site repairs. When a water system master plan is completed, additional amounts may be needed for projects, such as re-drilling one of the four water wells, drilling a new well, or adding equipment to further purify water.

The water enterprise has very little debt. There is one loan from the California Department of Water Resources with a remaining balance of \$147,904 as of June 2014. Debt service is only \$32,000 per year and there is no debt service coverage ratio requirement.

Finally, the Water Enterprise fund balance appears adequate at \$2.3 million dollars; however, it is noted that \$1.4 million is “due from other funds,” thus it may not be immediately available.

### **Water Conservation, Volume Projections and Unaccounted-For Water**

As a result of the ongoing drought, Parlier’s water consumption has been decreasing over the past few years. Water production in calendar year 2014 was ten percent lower than calendar year 2013. Production for January through September 2015 is nine percent lower than the same period in 2014.

Attachment C shows volumes metered through customer meters (lower than production volumes) for the period June 2014 through May 2015. The total is 547 million gallons for this baseline 12-month

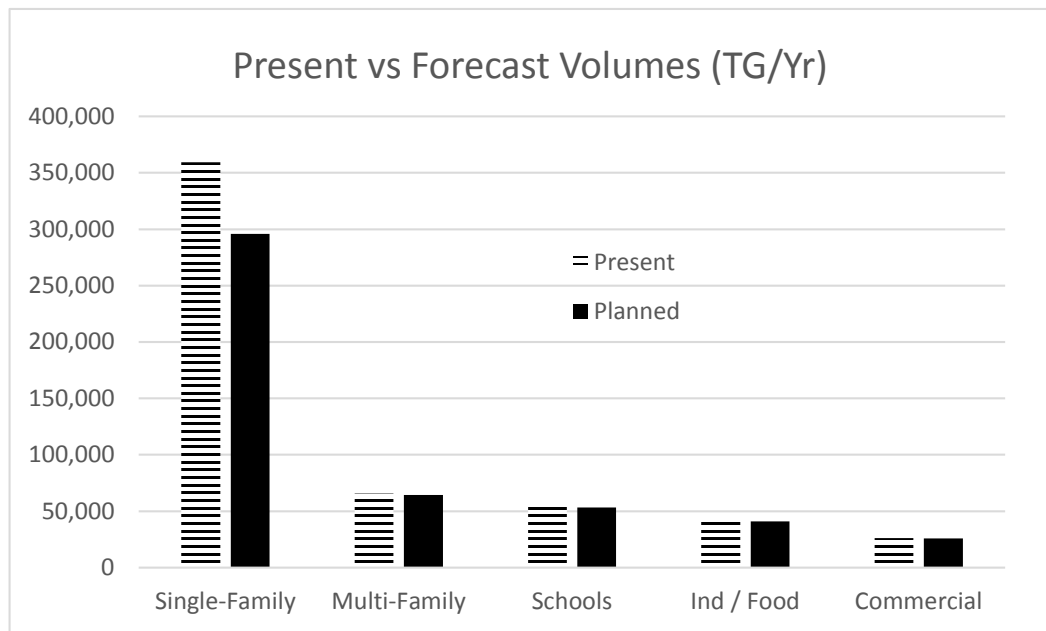


period. Planned rates are based on 480 million gallons of sales as described below. This is a 12 percent reduction, primarily driven by reduced single-family volumes, as described below.

As the new rate structure will include volumetric billing to single-family customers, certainly consumption will decrease because customers will want to minimize their monthly bills. Two assumptions are made to forecast the effect of volumetric billing. The first is that baseline usage will decrease ten percent. The second is that summer irrigation will decrease 30 percent. The result for a typical single-family customer is an annual reduction of 16 percent. This means that an average single-family customer using 156 thousand gallons per year now will be reduced to 131 thousand gallons. See Attachment D.

An additional, third assumption is made that overall system consumption will reduce a slight two percent because of ongoing water conservation efforts.

The chart below illustrates present vs forecast volumes by customer class, also showing the single-family group to be the largest by far, and with the largest drop in consumption.



Unaccounted-for water over a one year period was 11.6 percent for the period June 2014 through May 2015. This was done by comparing water production from the city's four wells against water volumes billed through by the City to its customers. Though a lower value would benefit the water system, 11.6 percent is tolerable by industry standards. (In general, 5 percent would be excellent, and 20 percent would be poor.) Further, for Parlier, the variable cost of water is mostly electricity for pumping, whereas other cities also purchase and treat surface water at an additional cost. Parlier does not incur a purchase cost for water. Detailed information is shown in Attachment E.



## Rate Design

The newly proposed rates are developed using the American Water Works Association Cost of Service rate setting methodology. This methodology first groups customers into classes with similar usage profiles and geographically similar on the water system. Customers were divided as follows.

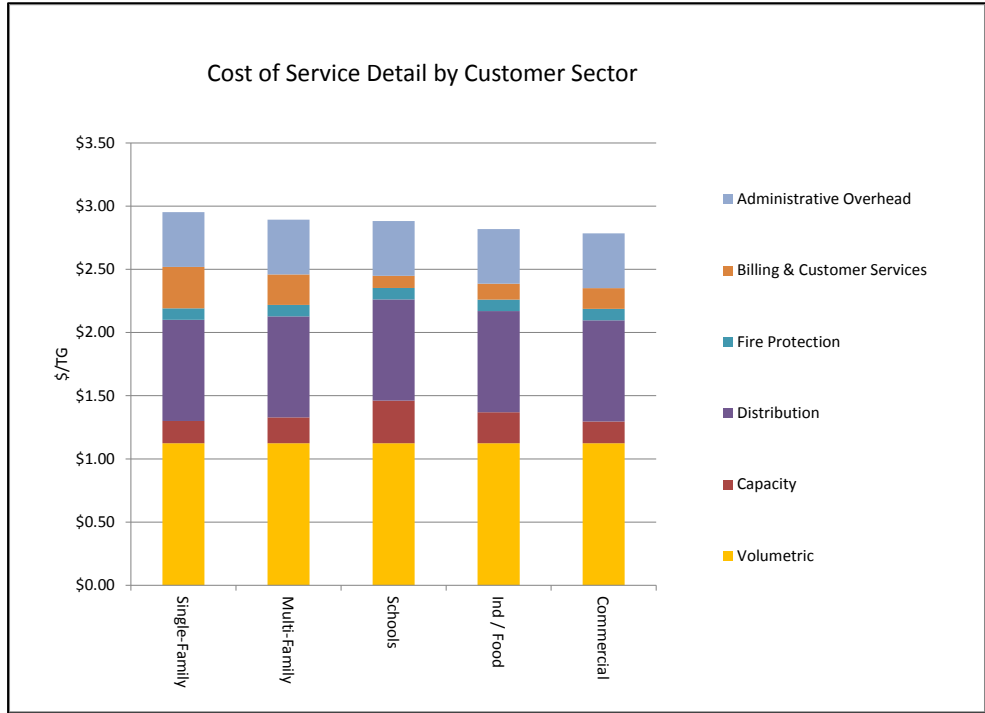
<b>Customer Class</b>	<b>Number of Accounts</b>
Single-Family	2,285
Multi-Family	36
Schools	12
Industrial / Food	12
Commercial	84
Total	2,429

Rates and fees are then set to charge each group consistent with the cost incurred on the system to serve them. The various components of the cost of service analysis are contained in Attachments F-1 through F-6, and are summarized here in the order.

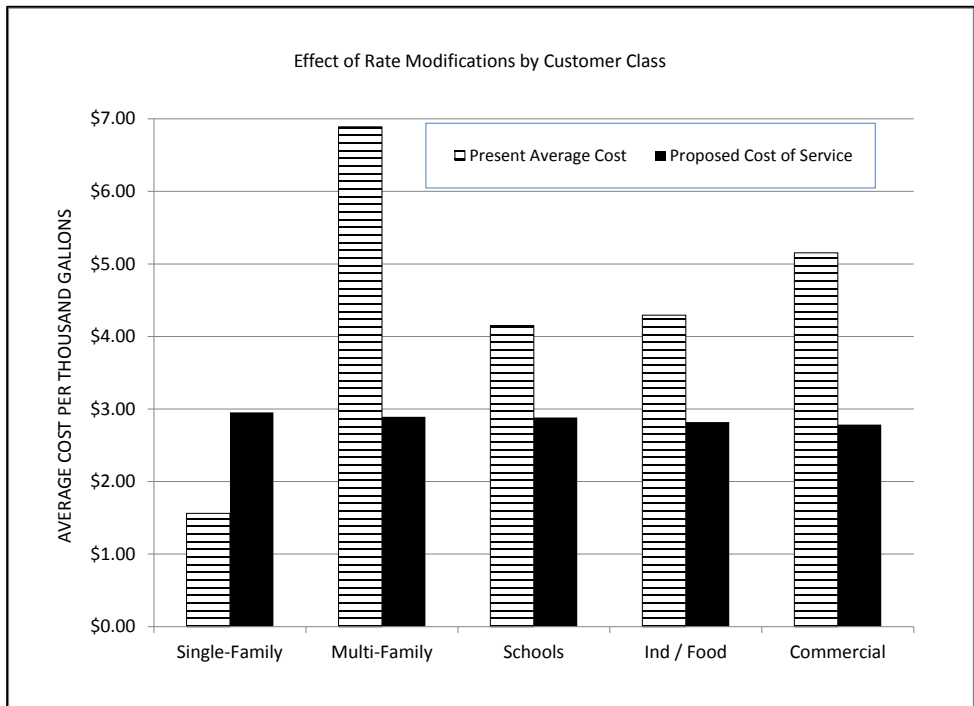
<u><b>Attachment</b></u>	<u><b>Contents</b></u>
F-1	Cost of Service Table Summary
F-2	Functionalization and Classification Detail
F-3	Volumetric and Capacity Allocation Factors
F-4	Weighting: Distribution, Fire, and Billing
F-5	Peaking Factors
F-6	Fixed and Volumetric Rate Setting

The City of Parlier water system is generally one geographic area with water production and distribution interspersed. Therefore, the cost to distribute water from production to customer is essentially the same for all customers, as a function of volume. (This would not be true if water was sent by transmission line to a distant location not central to town.) Parlier is supplied by four producing water wells with the support of one water tank built with grant money for the purpose of fire protection. Accordingly, there are no storage or reservoir costs.

The cost of service results, illustrated below, shows the average cost per customer class to be similar. The highest average cost of \$2.95 per thousand gallons is for single family primarily because the billing component is relatively higher than the other classes, as a result of lower monthly water volumes per bill issued for single family. The lowest average cost is \$2.82 for the Industrial/Food class for the opposite reason, large volumes per monthly bill issued. The other factor varying the most between classes is the capacity factor, which is the measure of how even water usage is over the months of a year. The School class has the worst capacity factor because of summer irrigation to the large lawns. The range of average cost per service class is then only 16 cents, with an average cost of service rate of \$2.92 per thousand gallons.



The cost of service results compared to the existing revenue contribution per customer class reveals large discrepancies. On average, single family is subsidized by all other classes. Multi-family is paying the highest average rate because they pay a volumetric rate plus the fixed rate multiplied by the number of living units in each account. Single-family is the lowest because the only cost is the fixed monthly fee. The chart below illustrates the discrepancies, and again shows the average cost of service rates to be very close to each other.





The proposed billing structure consists of a fixed monthly fee and a volumetric fee for each customer class. The objective of the rate design is to create a fixed-volumetric combination for each customer class that approximates the cost of service to each class. All single-family homes are proposed to pay the same service fee, even though some have 1.5 inch meters required for fire protection system. The rate design should not penalize residential customers required to have fire protection systems. The existing senior discount of \$16.95 is discontinued because cost of service methodology does not support the discount. Fortunately, the proposed monthly service fee is less, at \$16.00.

Beyond single-family, since instantaneous demand on the system is a function of meter size, it is appropriate to increase the fixed monthly service fee as a function of meter size. This is because larger demand on the system indicates the system capacity has to be adequate to handle that demand on a peak demand day. The proposed fixed monthly fees have been skewed slightly from the standard industry scale that is based on meter size. The monthly fees are held lower for the smaller meter sizes up to 2.5 inches, then ramped up based on meter size to the largest meter size of eight inches. This was done to keep the average cost down in the commercial customer class, consistent with the cost of service results. If this had not been done, the volumetric rate for the commercial customer class would have been disproportionately low to achieve the overall revenue contribution needed for the commercial class.

<b>Calculation of Fixed Monthly Service Fee and Revenue</b>					
<b>Meter Size</b>	<b>Number of Accounts</b>	<b>Multiplier</b>	<b>Rate</b>	<b>Revenue (\$/Mo)</b>	<b>Revenue (\$/Yr)</b>
All Single Family	2,285	1.00	<b>\$16.00</b>	\$36,560	\$438,700
3/4"	33	1.00	\$20.00	660	\$7,900
5/8"	3	1.00	\$20.00	60	\$700
1"	28	1.00	\$20.00	560	\$6,700
1 1/2"	13	1.00	\$20.00	260	\$3,100
2"	37	1.00	\$20.00	740	\$8,900
2 1/2"	1	1.00	\$20.00	20	\$200
3"	10	10.00	\$200.00	2,000	\$24,000
4"	14	16.67	\$333.40	4,668	\$56,000
6"	4	33.33	\$666.60	2,666	\$32,000
8"	1	53.33	\$1,066.60	1,067	\$12,800
	2,429			49,261	591,000

The volumetric rates were set in conjunction with the fixed monthly fees to achieve the appropriate cost of service results. The following table shows the calculation of the volumetric rates for each customer class. The monthly service fee for single family was lowered to \$16.00 from the existing \$18.50 such that the monthly fee would not exceed 50 percent of the cost for an average customer. This also provides very slight rate relief for single-family customers compared to the previous rate.



Calculated Volumetric Rate to Meet Overall Revenue Requirement						
Customer Class	Revenue Requirement	Less Fixed Revenue	Balance at Volumetric	Volume TG	Calculated Rate	Fixed Percent of Total
Single-Family	\$874,028	\$438,700	\$435,328	296,000	\$1.47	50%
Multi-Family	185,168	64,500	120,668	64,000	\$1.89	35%
Schools	152,794	39,600	113,194	53,000	\$2.14	26%
Large Ind / Food	115,592	23,800	91,792	41,000	\$2.24	21%
Commercial	72,419	24,500	47,919	26,000	\$1.84	34%
Totals / Averages	\$1,400,000	\$591,100	\$808,900	480,000	\$1.69	42%

### Implementation of New Rate Structure

The average monthly cost to a single-family home will double under the proposed rate structure, as follows.

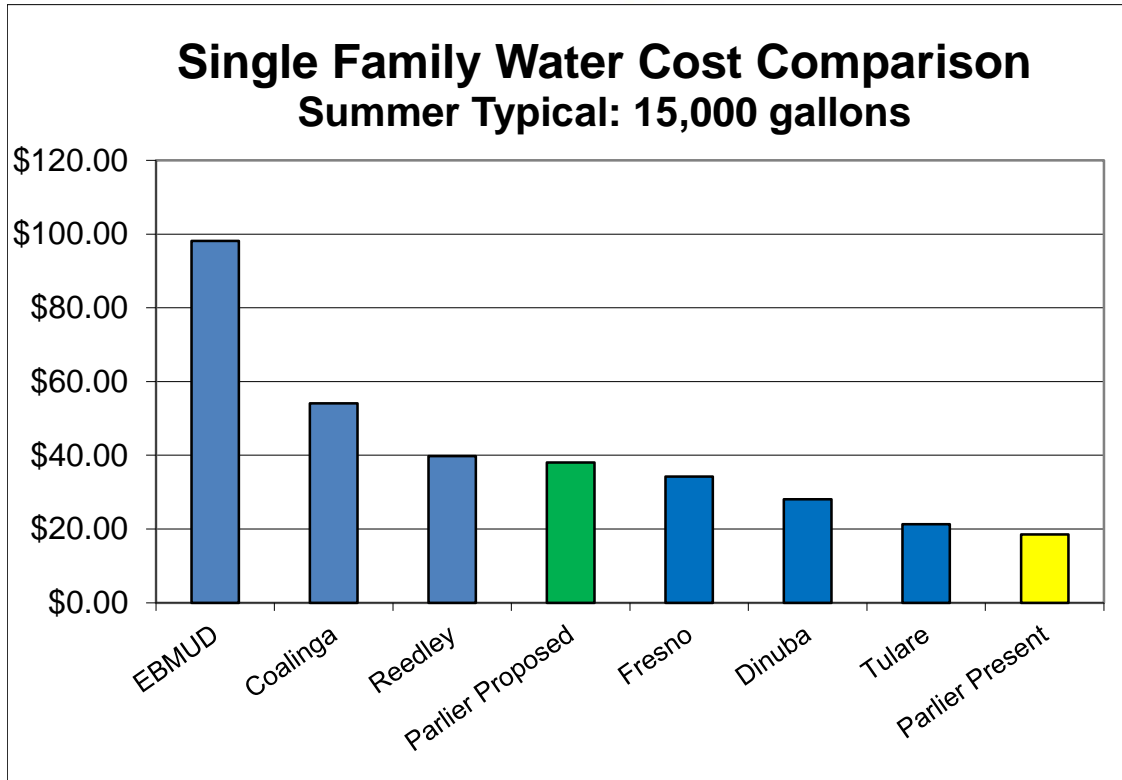
<u>Impact to Single-Family Homes</u>	
<b>Present Cost:</b>	\$18.50 per month
<b>Proposed Average Cost:</b>	
Monthly Service Fee:	\$16.00
11 TG/mo x \$1.47/TG:	<u>\$16.17</u>
Total	\$32.17 per month

Additionally, the number of customers in the single-family rate class is the largest by far, at 2,285 accounts. Considering the cost-increase impact on the single-family sector, it is important to proactively inform and education customers such that they are prepared. Suggested steps are:

1. Articles in the Parlier Post explaining the necessity and fairness of volumetric rates
2. Message on billing statements announcing change
3. Message board at City Hall
4. Immediately following city council approval of new rates, send customized letter to single-family customers showing existing cost compared to the new cost they will incur using the customer's actual usage information
5. Customer education about water conservation included with rate information sent

The average cost to all other customer classes will decrease, thus the sole focus for good customer communication prior to their cost increase is the single-family customer group.

In conclusion, the increased average monthly single-family cost will be consistent with other nearby communities. The chart below shows Parlier currently to be the lowest, but after the increase to be consistent with Reedley and Fresno, comparing a typical summer month at 15,000 gallons.



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**Current and Proposed Rates**

**ATTACHMENT A**

<b>City of Parlier Current and Proposed Water Rates</b>			
		<b>Current Rates</b>	<b>Proposed January 1, 2016</b>
<b>Volumetric Rates</b>		<b>(\$ / Thousand Gallons)</b>	
	All Single Family	NONE	\$1.47
	Multi-Family	\$4.55	\$1.89
	Schools	\$4.55	\$2.14
	Ind/Food Processing	\$4.55	\$2.24
	Commercial	\$4.55	\$1.84
<b>Fixed Monthly Service Fees</b>		<b>(\$ / Month)</b>	
	Single-Family up to 1.5" meter	\$18.50	\$16.00
	Single-Family Senior up to 1.5"	\$16.95	\$16.00
	Multi-Family & Commercial up to 2.5" meter*	\$18.50	\$20.00
	3" Meter	\$18.50	\$200.00
	4" Meter	\$18.50	\$333.00
	6" Meter	\$18.50	\$666.00
	8" Meter	\$18.50	\$1,067.00
* Current Multi-Family is Fee times numbers of units. Proposed is per meter based on meter size.			

**ATTACHMENT B****PARLIER WATER ENTERPRISE FUND****Audited Historical Statement of Revenues and Expenses  
For the Fiscal Years Ending June 30,**

	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
	<b><u>Actual</u></b>	<b><u>Actual</u></b>	<b><u>Preliminary</u></b>	<b><u>Budget</u></b>
<b>Revenues:</b>				
Charges for Services	\$1,556,736	\$2,147,923	\$1,433,000	\$1,433,000
Connection Fees	4,164	44,428	4,000	5,000
Other Revenue	0	36,440	12,000	12,000
Total Operating Revenue	<u>1,560,900</u>	<u>2,228,791</u>	<u>1,449,000</u>	<u>1,450,000</u>
<b>Operation &amp; Maintenance Expenses:</b>				
Contractual Services and Utilities	449,185	625,555	398,000	400,000
Personnel	534,144	475,256	437,000	436,000
Supplies and Material	102,937	155,099	392,000	390,000
Bad Debt Expense	0	45,816	45,000	45,000
Depreciaton	122,228	127,660	129,000	129,000
Total Operating Expenses	<u>1,208,494</u>	<u>1,429,386</u>	<u>1,401,000</u>	<u>1,400,000</u>
<b>Operating Income/(loss)</b>	352,406	799,405	48,000	50,000
<b>Non-Operating Revenue:</b>				
Impact Fee Revenue	22,444	57,899	2,100	2,100
Interest Expense	(32,274)	(89,838)	(4,000)	(4,000)
Total Non-Operating	<u>(9,830)</u>	<u>(31,939)</u>	<u>(1,900)</u>	<u>(1,900)</u>
<b>Net Income before Transfers</b>	342,576	767,466	46,100	48,100



# Projection of Overall Water Sales Volumes

# ATTACHMENT C

City of Parlier Water Volume and Revenue by Customer Class									
Service to	Month	Residential Cubic Feet	Multi-Family Cubic Feet	Schools Cubic Feet	Ind / Food Cubic Feet	Commercial Cubic Feet	Total Cubic Feet		
06/30/14	6	5,338,773	949,483	571,878	897,224	376,755	8,134,113		
07/31/14	7	5,144,763	1,228,399	827,813	574,810	380,824	8,156,609		
08/31/14	8	6,722,088	1,136,157	1,357,934	827,195	473,718	10,517,092		
09/30/14	9	5,627,214	1,006,480	1,304,903	546,981	392,318	8,877,896		
10/31/14	10	3,676,617	648,730	609,457	232,540	277,298	5,444,642		
11/30/14	11	2,325,416	522,575	414,756	250,333	240,882	3,753,962		
12/31/14	12	2,590,465	454,099	111,829	412,537	243,219	3,812,149		
01/31/15	1	3,291,101	533,284	40,899	287,464	185,097	4,337,825		
02/28/15	2	2,905,614	452,390	137,989	259,703	220,597	3,976,293		
03/31/15	3	2,778,900	468,665	382,773	418,648	223,251	4,272,237		
04/30/15	4	4,085,147	648,522	673,692	314,441	268,165	5,989,967		
05/31/15	5	3,546,010	719,927	835,625	561,949	224,573	5,888,084		
Totals Cubic Feet		48,032,108	8,768,691	7,269,548	5,583,825	3,506,697	73,160,869		
		66%	12%	10%	8%	5%			
Totals Thousand Gallons		359,280	65,590	54,376	41,767	26,230	547,243		
Reductions Overall TG		2%	2%	2%	2%	2%			
		352,095	64,278	53,289	40,932	25,705	536,000		
Reductions A additional TG		16%	0%	0%	0%	0%			
<b>Planning Volumes TG</b>		<b>295,759</b>	<b>64,278</b>	<b>53,289</b>	<b>40,932</b>	<b>25,705</b>	<b>480,000</b>		



**Projected 16 Percent Residential Reduction from Metering**

**ATTACHMENT D**

Month	Existing		Projected		New Total	MG
	Totals	Baseline	Summer	Summer Reduced by		
<b>UNITS ARE IN million CF</b>						
				<b>Baseline Reduced by</b>	<b>Summer Reduced by</b>	
				-10%	-30%	
11	2.3	2.8		2.5		18.85
12	2.6	2.8		2.5		18.85
1	3.3	2.8		2.5		18.85
2	2.9	2.8		2.5		18.85
3	2.8	2.8		2.5		18.85
4	4.1	2.8	1.2	2.5	0.8	25.13
5	3.5	2.8	0.7	2.5	0.5	22.51
6	5.4	2.8	2.6	2.5	1.8	32.46
7	5.1	2.8	2.3	2.5	1.6	30.89
8	6.7	2.8	3.9	2.5	2.7	39.27 Peak
9	5.6	2.8	2.8	2.5	2.0	33.51
10	3.7	2.8	0.9	2.5	0.6	23.56
	48.0	33.6	14.4	30.1	10.1	40.3
		48.0		40.2		
				-16%		
	48,000,000	cf				40,320,000
	7.48					7.48
	1000					1000
	359,040	TG				301,594 TG
	<u>2300</u>	Residential Customers				<u>2300</u> Residential Customers
	<b>156</b>	<b>TG / Cust / Year</b>				<b>131</b> <b>TG / Cust / Year</b>
In July, 2087 accounts with 1 or more usage units.						
	5,100,000	cf				4,100,000 cf
	7.48					7.48
	1000					1000
	38,148	TG				30,668 TG
	<u>2087</u>	Residential Customers				<u>2087</u> Residential Customers
	<b>18</b>	<b>TG / Cust / July</b>				<b>15</b> <b>TG / Cust / July</b>





# Cost of Service Summary Table

# ATTACHMENT F-1

## Water Enterprise Revenue Requirement Allocation Table

Cost Component (\$/yr)	Total	Single-Family	Multi-Family	Schools	Ind / Food	Commercial
Volumetric	\$539,750	\$332,846	\$71,967	\$59,597	\$46,104	\$29,236
Capacity	97,500	52,099	13,025	17,863	10,048	4,466
Distribution	384,000	236,800	51,200	42,400	32,800	20,800
Fire Protection	43,750	26,979	5,833	4,831	3,737	2,370
Finance & Customer Services	127,000	97,037	15,410	5,137	5,137	4,280
Administrative Overhead	208,000	128,267	27,733	22,967	17,767	11,267
<b>Total Revenue Requirement</b>	<b>1,400,000</b>	<b>874,028</b>	<b>185,168</b>	<b>152,794</b>	<b>115,592</b>	<b>72,419</b>
<b>Revenues at Present Rates</b>	<b>1,433,000</b>	<b>462,000</b>	<b>441,000</b>	<b>220,000</b>	<b>176,000</b>	<b>134,000</b>
<b>Balance/(Deficiency) of Funds</b>	<b>33,000</b>	<b>-412,028</b>	<b>255,832</b>	<b>67,206</b>	<b>60,408</b>	<b>61,581</b>
<b>Summary Statistics</b>						
Treated Water Sales (TG)	480,000	296,000	64,000	53,000	41,000	26,000
Cost of Service (\$/TG)	2.92	2.95	2.89	2.88	2.82	2.79
Present Revenue (\$/TG)	2.99	1.56	6.89	4.15	4.29	5.15
Change (%)	-2%	89%	-58%	-31%	-34%	-46%
<b>Cost of Service Detail by Customer Sector in \$/TG</b>						
Total	\$1.12	\$1.12	\$1.12	\$1.12	\$1.12	\$1.12
Volumetric	0.20	0.18	0.20	0.34	0.25	0.17
Capacity	0.80	0.80	0.80	0.80	0.80	0.80
Distribution	0.09	0.09	0.09	0.09	0.09	0.09
Fire Protection	0.26	0.33	0.24	0.10	0.13	0.16
Billing & Customer Services	<u>0.43</u>	<u>0.43</u>	<u>0.43</u>	<u>0.43</u>	<u>0.43</u>	<u>0.43</u>
Administrative Overhead	\$2.92	\$2.95	\$2.89	\$2.88	\$2.82	\$2.79
Total						



## Cost of Service Classification Detail

## ATTACHMENT F-2

Functionalization and Classification of Revenue Requirement										
Account Description	Total	Total (Calculated)	Volumetric	Capacity	Distribution	Fire Protection	Finance & Billing	Admin Overhead	Comments	
Electricity - Pumping	160,000	160,000	160,000	0	0	0	0	0	100% Variable	
Personnel - PW	200,000	200,000	80,000	20,000	90,000	10,000	0	0	40/10/45/5/0 split	
Contract Services	80,000	80,000	32,000	8,000	36,000	4,000	0	0	40/10/45/5/0 split	
Parts and Supplies	200,000	200,000	80,000	20,000	90,000	10,000	0	0	40/10/45/5/0 split	
Repair and Maint	160,000	160,000	72,000	16,000	64,000	8,000	0	0	45/10/40/5 split	
Capital Outlay & Depreciation	235,000	235,000	105,750	23,500	94,000	11,750	0	0	Approximates Planning	
Finance Billing	127,000	127,000	0	0	0	0	127,000	0	1:1	
Administrative Overhead	208,000	208,000	0	0	0	0	0	208,000	1:1	
Debt Service	30,000	30,000	10,000	10,000	10,000	0	0	0	30/30/30	
Totals	1,400,000	1,400,000	539,750	97,500	384,000	43,750	127,000	208,000		
		100%	39%	7%	27%	3%	9%	15%		







## Cost of Service Category Weighting

## ATTACHMENT F-4

Distribution System Weighting				
	Volumetric Allocation %	Weighting Factor		Distribution Allocation
Single-Family	62%	1	0.62	61.7%
Multi-Family	13%	1	0.13	13.3%
Schools	11%	1	0.11	11.0%
Ind / Food	9%	1	0.09	8.5%
Commercial	5%	1	0.05	5.4%
Totals	100%		1.00	100.0%

Fire Protection Weighting				
	Volumetric Allocation %	Weighting Factor		Fire Protection Allocation
Single-Family	62%	1	0.62	61.7%
Multi-Family	13%	1	0.13	13.3%
Schools	11%	1	0.11	11.0%
Ind / Food	9%	1	0.09	8.5%
Commercial	5%	1	0.05	5.4%
Totals	100%		1.00	100.0%

Billing & Customer Services Weighting							
		Billing & Cust Svcs			Administrative Overhead		
	Number of Customers	Weighting Factor		Allocation	Volumetric Allocation	Weighting Factor	Allocation
Single-Family	2,267	1	2,267	76.4%	62%	1	62%
Multi-Family	36	10	360	12.1%	13%	1	13%
Schools	12	10	120	4.0%	11%	1	11%
Ind / Food	12	10	120	4.0%	9%	1	9%
Commercial	100	1	100	3.4%	5%	1	5%
Totals	2,427		2,967	100%	100%		100%



Cost of Service Peaking Factors

ATTACHMENT F-5

Determination of Peaking Factors by Customer Class											
Month	Residential		Multi-Family		Schools		Ind / Food		Commercial		
	Cubic Feet	Peak	Cubic Feet	Peak	Cubic Feet	Peak	Cubic Feet	Peak	Cubic Feet	Peak	
6	5,338,773		949,483		571,878		897,224		376,755		
7	5,144,763		1,228,399	1,228,399	827,813		574,810		380,824		
8	6,722,088	6,722,088	1,136,157		1,357,934	1,357,934	827,195		473,718	473,718	
9	5,627,214		1,006,480		1,304,903		546,981		392,318		
10	3,676,617		648,730		609,457		232,540		277,298		
11	2,325,416		522,575		414,756		250,333		240,882		
12	2,590,465		454,099		111,829		412,537		243,219		
1	3,291,101		533,264		40,899		287,464		185,097		
2	2,905,614		452,390		137,989		259,703		220,597		
3	2,778,900		468,665		382,773		418,648		223,251		
4	4,085,147		648,522		673,692		314,441		268,165		
5	3,546,010		719,927		835,625		561,949		224,573		
Totals	48,032,108		8,768,691		7,269,548		5,583,825		3,506,697		
Averages	4,002,676	1.7	730,724	1.7	605,796	2.2	465,319	1.9	292,225	1.6	



## Calculation of Fixed and Volumetric Rates

## ATTACHMENT F-6

<b>Calculation of Fixed Cost Revenue</b>					
	<b>Number of Customers</b>				
<b>Single-Family</b>	2,267				
<b>Multi-Family</b>	36				
<b>Schools</b>	12				
<b>Ind / Food</b>	12				
<b>Commercial</b>	<u>102</u>				
<b>Totals</b>	2,429				
	<b>Count</b>	<b>Multiplier</b>	<b>Rate</b>	<b>Revenue (\$/Mo)</b>	<b>Revenue (\$/Yr)</b>
<b>All Single Family</b>	2,285	1.00	<b>\$16.00</b>	\$36,560	\$438,700
<b>3/4"</b>	33	1.00	\$20.00	660	\$7,900
<b>5/8"</b>	3	1.00	\$20.00	60	\$700
<b>1"</b>	28	1.00	\$20.00	560	\$6,700
<b>1 1/2"</b>	13	1.00	\$20.00	260	\$3,100
<b>2"</b>	37	1.00	\$20.00	740	\$8,900
<b>2 1/2"</b>	1	1.00	\$20.00	20	\$200
<b>3"</b>	10	10.00	\$200.00	2,000	\$24,000
<b>4"</b>	14	16.67	\$333.40	4,668	\$56,000
<b>6"</b>	4	33.33	\$666.60	2,666	\$32,000
<b>8"</b>	1	53.33	\$1,066.60	1,067	\$12,800
	2,429			49,261	591,000

<b>Calculated Volumetric Rate to Meet Overall Revenue Requirement</b>						
<b>Customer Class</b>	<b>Revenue Requirement</b>	<b>Less Fixed Revenue</b>	<b>Balance at Volumetric</b>	<b>Volume TG</b>	<b>Calculated Rate</b>	<b>Fixed Percent of Total</b>
Single-Family	\$874,028	\$438,700	\$435,328	296,000	\$1.47	50%
Multi-Family	185,168	64,500	120,668	64,000	\$1.89	35%
Schools	152,794	39,600	113,194	53,000	\$2.14	26%
Large Ind / Food	115,592	23,800	91,792	41,000	\$2.24	21%
Commercial	72,419	24,500	47,919	26,000	\$1.84	34%
<b>Totals / Averages</b>	<b>\$1,400,000</b>	<b>\$591,100</b>	<b>\$808,900</b>	<b>480,000</b>	<b>\$1.69</b>	<b>42%</b>