



# LA PUENTE VALLEY COUNTY WATER DISTRICT STUDY OF WATER RATES, FEES AND CHARGES

MARCH 2011



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## Summary

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The La Puente Valley County Water District (District) approved Resolution 178 in July of 2006, thereby adopting rates and charges for water service, which instituted a multiyear (5 year) rate increase plan. The adopted rate schedule was to increase rates in September of each year; starting in September 2006 ending in September 2010; by approximately 10% for both the commodity rate and service charge rate.

In September 2009, the District approved Resolution 193 which canceled the scheduled rate increases for 2009 and committed the District to complete a water rate study before any future rate increases would be instituted. This action was based on the Board of Director's belief that benefits from cost saving measures implemented by the District, should be passed along to the customers of the District. Other motivating factors included the Board's concern of increasing water rates in a time when District customers were feeling the effects of a significant economic downturn in the region. This action also provided the District time to study its rate structure to ensure that it complied with current laws governing the setting of water rates and charges.

The District's Board of Directors directed District Staff to conduct an in house water rate study to avoid the additional expenses for professional services to conduct such a study. Staff has researched other water agencies that have conducted similar studies and has found that the cost of this type of study ranged from \$30,000 to over \$80,000. As part of the study, the Board of Directors requested Staff to provide a recommendation for water rates, which will generate sufficient revenue to meet the cost of providing water service to its customers over the next five years.

The last water rate adjustment instituted by the District was in September 2008. At that time, rates were increased by an average of 10%. The District is concerned with rising costs that will have a significant impact on the cost of providing water service to its customers over the next five years. The District has tried to minimize the effect of rising costs through various cost savings efforts, such as the procurement of additional water rights in the Main San Gabriel Groundwater Basin at a reduced cost to offset future costs of replacement water assessments. However, increases in overall operational expenses have necessitated additional revenue requirements. The costs that are projected to have the largest effect on operational expenses include but are not limited to:

1. Cost of Water- The Main San Gabriel Basin Watermaster Replacement Water Assessment was increased from \$251.90/acre-foot in 2008 to \$450.00/acre-foot in 2009, then to \$587.00/acre-foot in 2010, and is projected to exceed \$800.00/acre-foot by 2015. (Approximately 25% of the District's annual groundwater production is over its annual rights and this assessment is imposed on the District to that extent).
2. Infrastructure Improvement- In 2009 the District completed an update of the Water System Master Plan which identified various capital improvements needed in the District system.
3. Inflation- Costs for materials, supplies and labor have increased since the last rate adjustment and are conservatively projected to increase at an annual rate of inflation of 2% to 3%.

The major goals for this rate study include:

1. Distribution of the costs to water system customers in a fair and equitable manner.
2. Ensure rates reflect the current and projected cost of replacement water assessments from the Main San Gabriel Basin Watermaster (Watermaster).
3. Increased revenue stability.
4. Promotion of efficient water use through price signaling.

In addition to these specific goals, water rates in general should:

1. Generate revenues which do not exceed the costs necessary to provide water service to the District's customers (these costs include operations and infrastructure improvements as well as funding for adequate reserves).
2. Be as simple as possible to explain and administer.
3. Conform to current industry standards and practices.

This report provides an explanation of the process followed in conducting the rate study and the development of the proposed water rate structure.

In summary, the two major changes are proposed for the water rates:

- 1) Adjust service charges (by meter size) to better reflect the cost of service.
- 2) Adjust the commodity rate, tiered rate structure, to better reflect the cost of water for the customer classes in each service zone, based on historical usage trends.

**Note:** *The District has a limited amount of annual production rights in the Main San Gabriel Groundwater Basin. In most years these rights are significantly less than total customer water demands. The water produced in excess of these rights is subject to a replacement water assessment. Thus, the amount of water used by District customers that exceeds these annual production rights is substantially more expensive to provide. The tiered rate structure encourages water use efficiency and will benefit all customers by decreasing the replacement water assessments the District will be required to pay.*

Table-1 shows the proposed and current bi-monthly service charge by meter size. Based on Cost of Service methodology, an increase to the service charges is recommended. In addition, costs associated with the maintenance and repair of pump stations serving the different pressure zones is recommended to be removed from the service charge and added to the commodity rate. This will divide the cost more equitably based on customer usage in each pressure zone. Service charge revenue is independent of water usage. These charges represent approximately 25% of the system's revenues.

**Table-1**  
**Current and Proposed Service Charges**

Meter Size	Current Bi-Monthly Rate				Proposed Bi-Monthly Rate				
	Zone 1	Zone 2	Zone 3 & 4	Zone 5	2011	2012	2013	2014	2015
5/8"	27.95	29.85	31.95	N/A	28.58	29.19	29.80	30.41	31.02
3/4"	27.95	29.85	31.95	N/A	29.81	31.65	33.49	35.33	37.19
1"	44.03	45.93	48.03	65.26	45.13	46.23	47.33	48.43	49.54
1.5"	96.83	98.73	100.83	N/A	97.56	98.29	99.02	99.75	100.50
2"	112.14	114.04	116.14	N/A	115.18	118.22	121.26	124.30	127.36
3"	234.59	236.49	238.59	N/A	236.86	239.13	241.40	243.67	245.94
4"	326.43	328.33	330.43	N/A	332.81	339.19	345.57	351.95	358.35
6"	617.25	619.15	621.25	N/A	630.32	643.39	656.46	669.53	682.60
8"	785.82	787.52	789.62	N/A	830.02	874.22	918.42	962.62	1006.84

Table-2 shows the current tiered commodity rate, the proposed Commercial and Multi-Family commodity rate and the proposed change to the tiered rate structure for Residential users. The tiers were designed to promote efficient water use by charging a higher rate for water used that is greater than the monthly allocation for Residential users. The higher rate represents water in excess of the LPVCWD annual production right in the Main San Gabriel Groundwater Basin. The two-tier rate design is further discussed in Section 5.

(Note: One unit of water shown as HCF (100 cubic feet) is equal to 748 gallons)

**Table-2**  
**Current and Proposed Commodity Rates**

**Zone 1**

User Class	Current		Proposed 2011		Proposed 2012		Proposed 2013		Proposed 2014		Proposed 2015	
	0-30 HCF	>30 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF
Residential	\$1.25	\$1.52	\$1.32	\$1.65	\$1.39	\$1.77	\$1.46	\$1.93	\$1.53	\$2.18	\$1.61	\$2.32
Commercial	\$1.25	\$1.52	\$1.52		\$1.63		\$1.74		\$1.85		\$1.95	
Multi-Family	\$1.25	\$1.52	\$1.52		\$1.63		\$1.74		\$1.85		\$1.95	

**Zone 2**

User Class	Current		Proposed 2011		Proposed 2012		Proposed 2013		Proposed 2014		Proposed 2015	
Residential	0-30 HCF	>30 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF
		\$1.38	\$1.64	\$1.52	\$1.85	\$1.59	\$1.97	\$1.66	\$2.13	\$1.73	\$2.38	\$1.81
Commercial	\$1.38	\$1.64	\$1.72		\$1.83		\$1.94		\$2.05		\$2.15	
Multi-Family	\$1.38	\$1.64	\$1.72		\$1.83		\$1.94		\$2.05		\$2.15	

**Zone 3**

User Class	Current		Proposed 2011		Proposed 2012		Proposed 2013		Proposed 2014		Proposed 2015	
Residential	0-30 HCF	>30 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF
		\$1.49	\$1.76	\$1.69	\$2.02	\$1.76	\$2.14	\$1.83	\$2.30	\$1.90	\$2.55	\$1.98

**Zone 4**

User Class	Current		Proposed 2011		Proposed 2012		Proposed 2013		Proposed 2014		Proposed 2015	
Residential	0-30 HCF	>30H CF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF
		\$1.41	\$1.69	\$1.57	\$1.90	\$1.64	\$2.02	\$1.71	\$2.18	\$1.78	\$2.43	\$1.86
Commercial	\$1.41	\$1.69	\$1.77		\$1.88		\$1.99		\$2.10		\$2.20	
Multi-Family	\$1.41	\$1.69	\$1.77		\$1.88		\$1.99		\$2.10		\$2.20	

**Zone 5**

User Class	Proposed 2010		Proposed 2011		Proposed 2012		Proposed 2013		Proposed 2014		Proposed 2015	
Residential	0-30 HCF	>30H CF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF	0-25 HCF	>25 HCF
		\$1.53	\$1.79	\$1.83	\$2.16	\$1.90	\$2.28	\$1.97	\$2.44	\$2.04	\$2.55	\$2.12

The proposed rate recommendations are similar to rate structures found throughout southern California and are based on industry practices as set forth in *Principles of Water Rates, Fees and Charges* (also known as the M1 Manual) published by the American Water Works Association (AWWA). The methodology used is a combination of the Base-Extra Capacity and Commodity-Demand methods.

Table-3 on page 4 shows the impact to Residential users in Zone 1 with a 5/8" meter based on varying water use. The water system's average Residential customer uses 30 HCF in each bi-monthly billing period.

Under the proposed rate structure, the average bill for Commercial and Multi-Family users will increase in 2011 by approximately 8% for those with a 1" meter and 2% for those with a 2" meter. We understand that both user classes have a wide range of consumption needs and the averages are only one measure of assessing bill impacts. Section 6 provides further information on bill impacts for these user classes.

**Table-3**

**Example 5/8" Meter Service Residential Bill Impacts for Customers in Zone 1**

Usage (HCF)	Current Bi-Monthly Bill	Proposed 2011 Bi-Monthly Bill	Bi-Monthly \$ Change	% Increase
5	34.22	35.18	0.96	2.8%
10	40.47	41.78	1.31	3.2%
15	46.72	48.38	1.66	3.6%
20	52.97	54.98	2.01	3.8%
25	59.22	61.58	2.36	4.0%
30	65.47	69.83	4.36	6.7%
35	73.00	78.08	5.08	7.0%
40	80.58	86.33	5.75	7.1%
45	88.16	94.58	6.42	7.3%
50	95.74	102.83	7.09	7.4%
55	103.32	111.08	7.76	7.5%
60	110.90	119.33	8.43	7.6%

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## Section 1 Methodology

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### 1.1 Methodology

The methodology used for this rate study is based on the industry practice as set forth in *Principles of Water Rates, Fees and Charges* by the AWWA (also known as the M1 Manual). The methodology used is a combination of the Base-Extra Capacity and Commodity-Demand methods. This approach recognizes that the cost to serve each user class not only depends on the amount of water demanded, but also on the manner in which it is demanded, also known as peaking or capacity needs. Customer classes with higher peaking characteristics are more costly to serve on a per unit basis than those with low peaking needs, because of the costs related to the facilities required to meet these demands (i.e. - reservoirs, waterlines, pumping facilities).

The Basic process or steps of the water rate study are provided below with brief descriptions of each step:

1. Quantifying the number of customers in each customer class.
  - a. Sort through all current customers and correct classification as needed.
  - b. Verify existing customer accounts and meter sizes.
  - c. Provide a summary of all customers by meter size and class.
2. Determine revenue needs.
  - a. Review the past three years of operation and maintenance expenses.
  - b. Review the water system master plan project schedule.
  - c. Project the operation and maintenance expenses for the next five years.
  - d. Project the infrastructure improvement expenses for the next ten years.
3. Determine cost of service.
  - a. Calculate a fair allocation of revenue requirements for each customer class.
4. Design rates.
  - a. Determine a design to collect target revenues from each class.
  - b. Identify the change in rate and the % impact to customer classes.
  - c. Determine the new rates to collect the target revenues and lessen exceptionally large impacts to customers.
5. Determine final customer impacts
  - a. Calculate bills to assess impacts.
  - b. Compare rates to neighboring water purveyors.

## **Section 2**

### **Customers and Consumption**

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#### **2.1 Water System**

The La Puente Valley County Water District was founded in 1924. The District's system includes approximately 2,500 service connections, 31.9 miles of distribution and transmission mains, 4 wells, 4 booster pump stations, 4 pressure regulating stations and 3 reservoirs. Most of the District's infrastructure was constructed in the 1950's and 60's.

The District's primary source of water supply is from its well field which draws groundwater from the Main San Gabriel Groundwater Basin. The aquifer in the area where the wells draw water is contaminated with various contaminants, such as volatile organic compounds (VOC's) and perchlorate. In 2001, the District entered into an agreement with the parties who were potentially responsible for the groundwater contamination. This agreement is known as the Baldwin Park Operable Unit Project Agreement. Under this Agreement, the water from the District's well field is treated at the District's groundwater treatment facility to meet all State and Federal drinking water regulations and then is pumped into the District's service area. The cost to construct, maintain and operate the treatment facility was and continues to be reimbursed by the potentially responsible parties. None of these treatment costs are recovered in the District's water rates.

The District's service area is comprised of 5 pressure zones. The vast majority of water delivered from the District's well field enters the District's system in Zone 1 where it is either used by Zone 1 customers or is stored in the District's Main Street Reservoir facility. The water stored at this site also supplies Zones 2, 3 and 4 through booster station facilities. 96% of the District's customers are located within Zone 1 and Zone 2. Zone 5 is served through an interconnection with the City of Industry Waterworks System. Water supplied through this interconnection is repaid in a like quantity of water. In 2011, the District plans to construct a connection to the City of Industry Waterworks System's Industry Hills Reservoir facility. This connection will enable the District to pump from its Zone 3 booster station into the Industry Hills Reservoir to supply not only Zone 3, but also Zone 5. This connection will also improve fire flow capacity in the Zone 3 area and will act as an emergency supply connection for Zone 2.

#### **2.2 User Classes**

The District has a total of 8 different customer classifications. The number of customers in each of these classifications varies widely, and in some classes there are just a few customers. For this study the District has chosen to divide these customers up into three main customer (user) classes that have similar usage characteristics.

Table-4 shows the three customer classes of the District.

**Table-4**  
**User Classes and Rate Classes**

<b>Customer Class</b>
Residential (Single Family Residence)
Commercial (Commercial/Industrial/Irrigation/Public Authority)
Multi-Family (Apartments/Townhomes/Mobile Home Parks)

**2.3 Customer Count**

The breakdown of meters by meter size and customer class, as of September 2010, is shown in Table-5. As shown in the table, Residential customers comprise approximately 79.5% of the systems customers.

**Table-5**  
**Customer Meters by Size and Rate Class**

<b>Customer Class</b>	<b>5/8"</b>	<b>3/4"</b>	<b>1"</b>	<b>1.5"</b>	<b>2"</b>	<b>3"</b>	<b>4"</b>	<b>6"</b>	<b>8"</b>	<b>Total</b>	<b>% of Total</b>
Residential	1398	539	60	1	0	0	0	0	0	1998	<b>79.5%</b>
Commercial	139	87	100	18	98	7	10	2	0	461	<b>18.3%</b>
Multi-Family	15	18	8	6	5	0	0	2	0	54	<b>2.2%</b>
<b>Total</b>	<b>1552</b>	<b>644</b>	<b>168</b>	<b>25</b>	<b>103</b>	<b>7</b>	<b>10</b>	<b>4</b>	<b>0</b>	<b>2513</b>	<b>100%</b>

**2.4 Consumption**

Table-6 shows annual water consumption by customer class over the last five years (average of 2005-2010). As shown, approximately 46% of the District’s water is consumed by the Residential user, 13% by Multi-Family and 41% by Commercial users. HCF stands for hundred cubic feet and one (1) HCF is equal to 748 gallons of water.

**Table-6**  
**Consumption by Rate Class**

<b>Customer Class</b>	<b>Average Annual Consumption (HCF)</b>	<b>% of Total Consumption</b>
Residential	359,606	45.7%
Commercial	324,567	41.3%
Multi-Family	101,937	13.0%
<b>Total</b>	<b>786,110</b>	<b>100%</b>

## Section 3

### Revenue Requirement

The District's revenue requirement is defined as the yearly expenses required to operate the water system, less recurring non-rate revenue such as income from fees paid to the District for the management of the City of Industry Waterworks System, miscellaneous income and interest earnings. Yearly expenses may include operating and maintenance expenses, debt service (if applicable), reserve funding and cash financed capital projects. As noted in Section 2.1, the costs to construct, maintain and operate the District's groundwater treatment facility is not recovered through the District's water rates, but by reimbursement from the parties potentially responsible for the groundwater contamination. The related expenses are not included in the revenue requirements shown below. The District's estimated revenue requirement for the next five years is shown in Table-7.

**Table-7**  
**Revenue Requirement**

<b>EXPENSES</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
GENERAL AND ADMINISTRATIVE	\$765,200	\$816,405	\$845,571	\$868,677	\$932,538
TRANSMISSION, DISTRIBUTION AND SUPPLY	\$1,025,976	\$963,215	\$1,015,281	\$1,088,149	\$1,359,627
CAPITAL IMPROVEMENT	\$607,000	\$332,000	\$416,500	\$223,420	\$232,646
<b>SUBTOTAL ALL EXPENSES</b>	<b>\$2,398,176</b>	<b>\$2,111,620</b>	<b>\$2,277,352</b>	<b>\$2,180,246</b>	<b>\$2,524,811</b>
<b>LESS NON-OPERATING REVENUE</b>	<b>-\$501,671</b>	<b>-\$502,526</b>	<b>-\$504,122</b>	<b>-\$505,758</b>	<b>-\$507,437</b>
<b>TOTAL REQUIRED FROM RATES</b>	<b>\$1,896,506</b>	<b>\$1,609,093</b>	<b>\$1,773,230</b>	<b>\$1,674,488</b>	<b>\$2,017,374</b>

#### 3.1 Yearly Revenue Requirement Discussion

The yearly revenue requirements shown in Table-7 include all the estimated expenses required to operate the District for the indicated year. The rates are designed so that over the next five years the average annual revenue requirement is recovered. This revenue requirement is allocated to users in proportion to the cost of providing service to each customer class, as shown in the next section. The cost of service is recovered from service charges and commodity rates (\$/HCF).

#### 3.2 Revenue Requirement and Long Term Plan Assumptions

The following assumptions were incorporated in this study:

1. 2011-2015 assumes the District will follow the infrastructure improvement project expenditure schedule as detailed in the 2009 District Water Master Plan, with slight modification in timing of projects.
2. 2015 assumes the Operations and Management Agreement between the City of Industry and the La Puente Valley County Water District extends past 2015.
3. General Inflationary rate of 2% to 3%.

Table-8 shows the assumptions used to estimate the replacement water assessment costs. The next to last column on the right shows the projected replacement water expenses, per year over the next several years. The last column shows the estimated annual cost of water produced over annual production rights. This expense is considered a commodity related cost and is fully recovered in the commodity (water usage) rate.

**Table-8  
Replacement Water Assessment Assumptions**

Production Year	Pumping Rights	Leased Rights	Lease \$/AF	Cost of Lease	Total Rights	Est. Production	Production Over Rights	Amount of Reserve Rights	Reserve Rights Used	Reserve Water Expense	Replacement Water Obligation	Rep. Water Assessment/AF	Rep. Water Expense	Total Cost for Water Produced Over Rights
2007-08	1201	1270	203	\$257,104	2471	2238	1037	0	0	\$ -	0	\$ 252	\$ -	\$257,104
2008-09	1263	402	340	\$136,837	1665	1986	723	2000	321	\$ 80,840	0	\$ 450	\$ -	\$217,677
2009-10	972	680	400	\$271,978	1653	1841	188	1679	0	\$ -	188	\$ 587	\$ 110,450	\$382,428
2010-11	972	380	576	\$218,938	1352	1920	568	1679	568	\$ 142,966	0	\$ 640	\$ -	\$361,904
2011-12	1201	470	630	\$295,817	1671	1939	269	1112	269	\$ 67,641	0	\$ 685	\$ -	\$363,458
2012-13	1087	425	674	\$286,379	1512	1959	447	843	447	\$ 112,606	0	\$ 733	\$ -	\$398,985
2013-14	1087	425	708	\$300,698	1512	1978	467	396	396	\$ 99,747	71	\$ 769	\$ 54,346	\$454,791
2014-15	1087	425	743	\$315,733	1512	1998	486	0	0	\$ -	486	\$ 808	\$ 392,931	\$708,664
2015-16	1087	425	780	\$331,520	1512	2018	506	0	0	\$ -	506	\$ 848	\$ 429,524	\$761,044

## Section 4

### Cost of Service

Cost of service (COS) is defined as a method to equitably allocate the revenue requirement, discussed in Section 3, to each customer class. A COS analysis is a component of a rate study and yields the proper revenue to be collected from each customer class from both the service charge and commodity charges (\$/HCF). The District's COS for 2011 is derived below. The COS analysis for future years is derived in a similar fashion.

The AWWA recognizes four main cost categories and, as part of a COS analysis, we classify the District's revenue requirement for these four cost categories.

- 1) **Commodity Costs:** costs that pertain to meeting average day water demands.
- 2) **Capacity Costs:** costs associated with meeting demands above average day demands also known as peaking costs.
- 3) **Customer Costs:** costs that are incurred by the District in serving customers regardless of the amount of water demanded by customers.
- 4) **Fire Protection Costs (Private):** costs associated with providing and maintaining fire protection connections (hydrants and meters) as well as having the capacity readily available to fight fires.

Table-9 shows the resulting classification of the District's revenue requirement to the various cost categories. Classifying the revenue requirements is done by taking each expense account of the District, as listed in the District's Annual Budget, and determining if the expense is a commodity, capacity, customer or fire protection cost. In some cases the expense account was determined to be a cost related to more than one cost category and was appropriately divided into these categories. The AWWA M-1 Manual was referred to in determining the appropriate classification.

**Table-9**  
**Revenue Requirement by Cost Category**

Revenue Component	2011	2012	2013	2014	2015	Target	% of Total
Commodity	\$627,926	\$594,935	\$640,207	\$693,203	\$947,219	\$962,219	45.8%
Capacity	\$1,045,637	\$770,365	\$846,882	\$701,223	\$757,524	\$824,326	39.3%
Customer	\$203,624	\$220,091	\$243,267	\$243,663	\$281,413	\$281,413	13.4%
Direct Fire Protection	\$19,319	\$23,703	\$42,873	\$36,399	\$31,217	\$30,702	1.5%
<b>Total Costs</b>	<b>\$1,896,506</b>	<b>\$1,609,093</b>	<b>\$1,773,230</b>	<b>\$1,674,488</b>	<b>\$2,017,374</b>	<b>\$2,098,661</b>	<b>100.0%</b>

A typical concern in conducting a rate study is the revenue stability that will be created by the rate design and cost allocation to the four cost categories. The more costs are allocated to the commodity and capacity categories (which are collected through the commodity rate), the more the potential for revenue fluctuations. To attain more revenue stability, a portion of capacity costs should be collected through the service charge. The rates are designed to collect approximately 40% of capacity costs through the service charge. This helps reduce revenue volatility from year to year due to weather and/or other reasons for fluctuations in customer consumption.

#### 4.1 Commodity Costs

To allocate the commodity costs to each customer class, which are costs recovered through the system's commodity rate, we calculate the commodity allocation factor as shown in Table-10. This factor is the proportion of total historical consumption for each customer class. Approximately 46% of the water delivered by the District is consumed by Residential customers. Therefore, 46% of the commodity cost, in Table-9, is allocated to the Residential rate class. We use a similar cost allocation methodology for each of the remaining rate classes as well as the remaining cost categories. Table-10 shows the commodity allocation factor calculation.

**Table-10**  
**Commodity Allocation Factor**

<b>Customer Class</b>	<b>Average Annual Consumption (HCF)</b>	<b>% of Total Consumption</b>
Residential	359,606	45.7%
Commercial	324,567	41.3%
Multi-Family	101,937	13.0%
<b>Total</b>	<b>786,110</b>	<b>100%</b>

#### 4.2 Capacity Costs

We allocate a portion of the capacity costs, collected through the service charge, to the customer classes by using the capacity allocation. The capacity allocation factor is the proportion of hydraulically equivalent meters in each user class. Hydraulically equivalent meters are calculated using the AWWA equivalent meter ratios, which are ratios of the safe flows or capacities that can be delivered through each meter size. This best reflects each class' peaking requirements as measured by their water demands during the highest month of water consumption. Thus, a customer class with higher peaking (capacity) needs is allocated a larger share of the capacity costs. Table-11 shows the capacity allocation factor used to allocate a portion of the capacity costs based on AWWA standards.

**Table-11  
Capacity Allocation Factor**

Meter Size	No. of Residential Meters	No. of Commercial Meters	No. of Multi-Family	Total	AWWA Equivalent Meter Ratios	Residential Hydraulically Equivalent Meters	Commercial Hydraulically Equivalent Meters	Multi-Family Hydraulically Equivalent Meters	Total
5/8"	1398	139	15	1552	1	1398	139	15	1552
3/4"	539	87	18	644	1.5	808.5	130.5	27	966
1"	60	100	8	168	2.5	150	250	20	420
1.5"	1	18	6	25	5	5	90	30	125
2"	0	98	5	103	8	0	784	40	824
3"	0	7	0	7	16	0	112	0	112
4"	0	10	0	10	25	0	250	0	250
6"	0	2	2	4	50	0	100	100	200
8"	0	0	0	0	80	0	0	0	0
<b>Total</b>	1998	461	54	2513	<b>Total</b>	2361.5	1855.5	232	4449
<b>% of Total</b>	<b>79.51%</b>	<b>18.34%</b>	<b>2.15%</b>		<b>Capacity Allocation Factor</b>	<b>53%</b>	<b>42%</b>	<b>5%</b>	

### 4.3 Customer Costs

The last allocation step involves allocating customer related costs to each customer class. Customer related costs include billing and collecting costs, answering customer calls and other customer related services. The customer cost allocation factor is derived as the proportion of meters found in each user class. The meter service allocation factor is similar to the customer allocation factor. Table-12 shows the calculation of each of these customer allocation factors. Since the vast majority of the District's customers are Residential, Table-12 shows that 80% of customer related costs are allocated to the Residential rate class.

**Table-12  
Customer Allocation Factor**

Customer Class	# of Customers	Customer Allocation Factor
Residential	1998	80%
Commercial	461	18%
Multi-Family	54	2%
<b>Total</b>	<b>2513</b>	<b>100%</b>

To finally determine the cost of service for each customer class, the estimated revenue requirements in Table-9 for each category (commodity, capacity and customer) is multiplied by each allocation factor. The results are shown in Table-13.

**Table-13**  
**Cost of Service by Customer Class**

Customer Class	Allocated Commodity Costs	Allocated Capacity Costs	Allocated Customer Costs	Total Cost of Service
Residential	\$440,167	\$437,547	\$223,742	\$1,101,456
Commercial	\$397,278	\$343,794	\$51,624	\$792,696
Multi-Family	\$124,774	\$42,986	\$6,047	\$173,806
<b>Total</b>	<b>\$962,219</b>	<b>\$824,326</b>	<b>\$281,413</b>	<b>\$2,067,958</b>

To complete the COS, private fire service costs are distributed to each service by customer related cost divided by the number of services and the capacity related costs by the hydraulic capacity units each service size represents. Table-14 depicts this methodology.

**Table-14**  
**Cost of Private Fire Service**

Customer Class	Allocated Customer Costs	Total # of Services	Annual Cost per Service
Private Fire Service	\$ 3,085	36	\$ 85.69
Customer Class	Allocated Capacity Costs	Hydraulic Capacity Units	Annual Cost per Hydraulic Capacity Unit
Private Fire Service	\$ 27,617	2345	\$ 11.78

## Section 5

### Water Rates

#### 5.1 Service Charge

The service charge is a fixed charge based on two cost categories: (i) customer related costs, and (ii) capacity related costs. The monthly customer related costs category is derived by dividing the estimated annual customer costs in Table-9 by the number of meters, then dividing this result by the number of billing periods in a year.

*Example: (customer costs/ total number of meters)/ 6 billings or: \$281,413 / 2513 / 6= \$18.66*

To allocate capacity related costs by meter size, AWWA hydraulic capacity factors were used. These factors relate to the potential flow that may be conveyed through each meter size. For example a 1.5-inch meter has five times the capacity of a 5/8-inch meter. The second component of the service charge is derived by taking a percentage of the estimated annual "target" capacity costs and dividing that figure by the number of hydraulically equivalent meters; this result is then multiplied by the hydraulic capacity factor and then divided by the number of billing periods in a year.

*Example: ((capacity costs x %)/number of hydraulically equivalent meters) x hydraulic capacity factor)/ 6 billings or: \$824,326 \* 40% / 4449 \* 1 / 6 = \$12.35 as shown in Table-15 below target capacity charge for a 5/8" meter.*

Hydraulic meter equivalencies are calculated using AWWA hydraulic capacity factors which relate the potential flow or potential capacity of larger meters relative to a 5/8-inch meter. Table-15 shows the calculation of the service charge.

**Table-15**  
**Service Charge Calculation**

Meter Size	# of Meters	Target Customer Charge	Hydraulic Capacity Factor	Hydraulically Equivalent Meters	Target Capacity Charge	Target Proposed Bi-Monthly Service Charge (Cust. Chg. + Cap. Chg.)
5/8"	1552	\$18.66	1	1552	\$12.35	\$31.02
3/4"	644	\$18.66	1.5	966	\$18.53	\$37.19
1"	168	\$18.66	2.5	420	\$30.88	\$49.54
1.5"	25	\$18.66	5	125	\$81.83	\$100.50
2"	103	\$18.66	8	824	\$108.70	\$127.36
3"	7	\$18.66	16	112	\$227.28	\$245.94
4"	10	\$18.66	25	250	\$339.69	\$358.35
6"	4	\$18.66	50	200	\$663.93	\$682.60
8"	0	\$18.66	80	0	\$988.18	\$1,006.84
<b>Total</b>	<b>2513</b>			<b>4449</b>		

The current service charge rates were found to be lower for some meter sizes when compared to the COS. These rates have been adjusted accordingly. The overall goal is to achieve full recovery of customer costs revenue requirements and approximately 40% of the capacity costs revenue requirements through the service charge rate. Table-16 depicts the proposed service charge rate increases for years 2011-2015.

**Table-16**  
**Proposed Service Charge Rates**

Meter Size	Current Bi-Monthly Rate	2011	% Increase	2012	% Increase	2013	% Increase	2014	% Increase	2015	% Increase
5/8"	27.97	28.58	2.2%	29.19	2.1%	29.80	2.1%	30.41	2.0%	31.02	2.0%
3/4"	27.97	29.81	6.6%	31.65	6.2%	33.49	5.8%	35.33	5.5%	37.19	5.3%
1"	44.03	45.13	2.5%	46.23	2.4%	47.33	2.4%	48.43	2.3%	49.54	2.3%
1.5"	96.83	97.56	0.8%	98.29	0.7%	99.02	0.7%	99.75	0.7%	100.50	0.7%
2"	112.14	115.18	2.7%	118.22	2.6%	121.26	2.6%	124.30	2.5%	127.36	2.5%
3"	234.59	236.86	1.0%	239.13	1.0%	241.40	0.9%	243.67	0.9%	245.94	0.9%
4"	326.43	332.81	2.0%	339.19	1.9%	345.57	1.9%	351.95	1.8%	358.35	1.8%
6"	617.25	630.32	2.1%	643.39	2.1%	656.46	2.0%	669.53	2.0%	682.60	2.0%
8"	785.82	830.02	5.6%	874.22	5.3%	918.42	5.1%	962.62	4.8%	1006.84	4.6%

## 5.2 Commodity Rates

### 5.2.1 Single Family Residential Customers – Tiered (Inclining Block) Rates

One of the main goals of this rate study was to recover the commodity costs from each customer class fairly and equitably; however, the rate study should also promote efficient water use through price signaling. Therefore, it is recommended to continue with a tiered rate structure (also known as an inclining block rate structure) for the Residential class to encourage water use efficiency and to decrease the amount of expensive replacement water assessments the District will be required to pay.

A tiered rate structure charges a higher volumetric rate in each block of consumption. Several water utilities with former uniform rates have recently implemented tiered water rates as a necessary adjustment to California's drought conditions.

Because the cost of water substantially increases when the District produces water in excess of its annual production right in the Main San Gabriel Groundwater Basin, it is recommended to maintain a

two tiered rate structure for the Residential user class. The rate structure takes into account usage and allocates the cost of replacement water to customers whose water use causes the system to produce water in excess of the District's production right. Table-17 shows how the system's annual groundwater production right is used to determine the appropriate quantity of water allocated at Tier 1 pricing to each Residential customer in a bi-monthly billing period.

**Table-17**  
**Residential Class Tier Calculation**

Customer Class	No. of Customers	Average Annual Usage (HCF)	% of Total Usage	Residential Class Allocation in HCF (Usage% X Rights)	Annual Allocation per Residential Customer (HCF)	Customer Bi-Monthly Allocation Tier 1 (HCF)	Annual Usage Exceeding Pumping Right (HCF)
Residential	1998	359,606	45.7%	301,011	150.66	25	58,595
Total System	2513	786,110	100%	658,019	N/A	N/A	128,091

**Note: The District's Annual Production Right with leases= 1510.50 acre-feet. 1510.50 acre-feet = 658,019 HCF**

Because Residential customers have similar use patterns, a fair and equitable allocation can be derived from historical usage data and can be set to reflect the actual costs of providing service to the parcels served. Table-18 shows the current and proposed 2011 commodity rates for all customer classes in Zone 1.

**Table-18**  
**Proposed and Current Commodity Rates – Zone 1**

Customer Class	Current		Proposed 2011	
	0-30 HCF	>30HCF	0-25 HCF	>25 HCF
Residential	\$1.25	\$1.52	\$1.32	\$1.65
Commercial	\$1.25	\$1.52	\$1.52	
Multi-Family	\$1.25	\$1.52	\$1.52	

### 5.2.2 Commercial & Multi-Family

After review of the greatly varying water needs and usage patterns of the Commercial and Multi-Family user classes, it is recommended to reinstitute a single tier for these user classes. The commodity rates paid by Multi-Family and Commercial users are recommended to be the same regardless of how much water is used. However, a higher rate than the cost of the initial block for Residential accounts should be used to ensure that these classes pay their proportional share of the costs for water. As shown in Table-18, the Commercial and Multi-Family classes should be charged a uniform rate. Continuing tiered rates for these customer classes can create an unfair rate structure. As an example, consider a high-demand industrial water user such as a juice maker, textile manufacturer or plant nursery. The majority

of these users' consumption would fall in the high-priced second tier regardless of their legitimate, high-value producing water needs, which do not constitute the inefficient water use that a water agency would want to curb through price signaling.

### 5.2.3 Zone Pumping Charges

Zone pumping surcharges are established to fairly and equitably allocate the costs of providing water to higher elevations of service. The electrical pumping costs and typical pump maintenance costs incurred to pump water to customers in higher pumping zones benefit mostly those customers. Therefore, those customers should be charged for these higher pumping costs.

The District has established five pump zones. Table 19 shows the pumping surcharge rates that are incorporated into the commodity rate for each pump zone. Table 19 also shows the derivation of the pumping surcharges. The pump zone surcharge is derived by dividing the power and pump maintenance costs by the amount of water that flows through each zone. The water used in Zone 2 is included in the flow through Zone 1 since water consumed in Zone 2 must pass through Zone 1. As such, customers in Zone 2 must pay both Zones 1 and 2 surcharges as shown in the cumulative surcharge column. Pumping surcharges should be applied to all customer classes and incorporated into the commodity rates for each Zone.

Table-19

#### Zone Pumping Charges

		ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5
Ground Water (GW)	GROUNDWATER PUMPING ANNUAL POWER COSTS	\$ 87,015	\$ 87,015	\$ 87,015	\$ 87,015	\$ 87,015
	ANNUAL AVG. PRODUCTION (HCF)	805,914.91	805,914.91	805,914.91	805,914.91	805,914.91
	GW POWER COST PER HCF	\$ 0.108	\$ 0.108	\$ 0.108	\$ 0.108	\$ 0.108
		+	+	+	+	+
Zone 1	ZONE 1 ANNUAL POWER COSTS	\$ 57,673	\$ 57,673	\$ 57,673	\$ 57,673	\$ 57,673
	ANNUAL AVG. WATER DELIVERED THROUGH ZONE 1 (HCF)	805,914.91	805,914.91	805,914.91	805,914.91	805,914.91
	ZONE 1 POWER COST PER HCF	\$ 0.072	\$ 0.072	\$ 0.072	\$ 0.072	\$ 0.072
			+	+		+
Zone 2	ANNUAL POWER & BOOSTER PUMP MAINTENANCE COSTS		\$ 47,575	\$ 47,575		\$ 47,575
	ANNUAL AVG. WATER DELIVERED (HCF)		239,740.06	239,740.06		239,740.06
	ZONE 2 POWER COST PER HCF		\$ 0.20	\$ 0.20		\$ 0.20
				+		
Zone 3	ANNUAL POWER & BOOSTER PUMP MAINTENANCE COSTS			\$ 2,832		
	ANNUAL AVG. WATER DELIVERED (HCF)			16,894.95		

	ZONE 3 POWER COST PER HCF			\$ 0.17		
					+	
Zone 4	ANNUAL POWER & BOOSTER PUMP MAINTENANCE COSTS				\$ 4,438	
	ANNUAL AVG. WATER DELIVERED (HCF)				17,496.15	
	ZONE 4 POWER COST PER HCF				\$ 0.25	
						+
Zone 5	ANNUAL POWER, BOOSTER PUMP MAINTENANCE & INTERCONNECTION FACILITY COSTS					\$ 1,050
	ANNUAL AVG. WATER DELIVERED (HCF)					3,320.00
	ZONE 5 POWER COST PER HCF					\$ 0.32
<b>CUMULATIVE COST PER ZONE (\$/HCF)</b>		<b>\$ 0.18</b>	<b>\$ 0.38</b>	<b>\$ 0.55</b>	<b>\$ 0.43</b>	<b>\$ 0.69</b>
		<b>ZONE 1</b>	<b>ZONE 2</b>	<b>ZONE 3</b>	<b>ZONE 4</b>	<b>ZONE 5</b>

### 5.3 Private Fire Service Charge

The private fire service charge also is recommended to be updated to reflect the costs associated with maintaining and billing each connection and the costs associated with the potential demand for firefighting purposes. It is estimated that private fire services account for approximately 1.5% of yearly expenses, totaling approximately \$31,000 on average from 2011-15. Distributing this sum across the various sized connections yields private fire service charges as shown in Table-20, below. Note: the District collects *public* fire protection charges through its service charges.

**Table -20**  
**Private Fire Service Charge**

Size of Connection (inch)	Number of Services	Current Bi-Monthly Charge	Proposed 2011 Bi-Monthly Charge	Proposed 2012 Bi-Monthly Charge	Proposed 2013 Bi-Monthly Charge	Proposed 2014 Bi-Monthly Charge	Proposed 2015 Bi-Monthly Charge
.75	0	N/A	\$13.26	\$14.25	\$15.24	\$16.23	\$17.23
1	0	N/A	\$14.78	\$15.87	\$16.97	\$18.07	\$19.19
1.5	0	N/A	\$19.42	\$20.59	\$21.76	\$22.93	\$24.10
2	0	N/A	\$24.17	\$25.63	\$27.08	\$28.53	\$29.99
3	0	N/A	\$36.83	\$39.04	\$41.26	\$43.47	\$45.69
4	7	\$48.00	\$51.07	\$54.14	\$57.21	\$60.28	\$63.35
6	5	\$90.00	\$94.48	\$98.97	\$103.45	\$107.94	\$112.42
8	18	\$167.00	\$167.86	\$168.72	\$169.59	\$170.45	\$171.31
10	4	\$208.00	\$214.40	\$220.80	\$227.21	\$233.61	\$240.01
12	2	\$263.00	\$278.03	\$293.06	\$308.09	\$323.12	\$338.15

## Section 6

### Customer Bill Impacts

#### 6.1 Residential Bill Impacts

Table-21 and Table-22 show bill impacts for different levels of consumption over the next five years for the Residential customer class with a (5/8-inch) meter in the District's Zone 1 and Zone 2. The District's average Residential customer uses approximately 30 HCF per bi-monthly billing period.

**Table-21**  
**5/8" Meter Residential Bill Impacts (Zone 1)**

Usage (HCF)	Current Bi-Monthly Bill	2011	% Increase	2012	% Increase	2013	% Increase	2014	% Increase	2015	% Increase
5	34.22	<b>35.18</b>	3%	<b>36.14</b>	3%	<b>37.10</b>	3%	<b>38.06</b>	3%	<b>39.07</b>	3%
10	40.47	<b>41.78</b>	3%	<b>43.09</b>	3%	<b>44.40</b>	3%	<b>45.71</b>	3%	<b>47.12</b>	3%
15	46.72	<b>48.38</b>	4%	<b>50.04</b>	3%	<b>51.70</b>	3%	<b>53.36</b>	3%	<b>55.17</b>	3%
20	52.97	<b>54.98</b>	4%	<b>56.99</b>	4%	<b>59.00</b>	4%	<b>61.01</b>	3%	<b>63.22</b>	4%
25	59.22	<b>61.58</b>	4%	<b>63.94</b>	4%	<b>66.30</b>	4%	<b>68.66</b>	4%	<b>71.27</b>	4%
30	65.47	<b>69.83</b>	7%	<b>72.79</b>	4%	<b>75.95</b>	4%	<b>79.56</b>	5%	<b>82.87</b>	4%
35	73.00	<b>78.08</b>	7%	<b>81.64</b>	5%	<b>85.60</b>	5%	<b>90.46</b>	6%	<b>94.47</b>	4%
40	80.58	<b>86.33</b>	7%	<b>90.49</b>	5%	<b>95.25</b>	5%	<b>101.36</b>	6%	<b>106.07</b>	5%
45	88.16	<b>94.58</b>	7%	<b>99.34</b>	5%	<b>104.90</b>	6%	<b>112.26</b>	7%	<b>117.67</b>	5%
50	95.74	<b>102.83</b>	7%	<b>108.19</b>	5%	<b>114.55</b>	6%	<b>123.16</b>	8%	<b>129.27</b>	5%
55	103.32	<b>111.08</b>	8%	<b>117.04</b>	5%	<b>124.20</b>	6%	<b>134.06</b>	8%	<b>140.87</b>	5%
60	110.90	<b>119.33</b>	8%	<b>125.89</b>	5%	<b>133.85</b>	6%	<b>144.96</b>	8%	<b>152.47</b>	5%
70	126.06	<b>135.83</b>	8%	<b>143.59</b>	6%	<b>153.15</b>	7%	<b>166.76</b>	9%	<b>175.67</b>	5%
80	141.22	<b>152.33</b>	8%	<b>161.29</b>	6%	<b>172.45</b>	7%	<b>188.56</b>	9%	<b>198.87</b>	5%

Table -22

**5/8" Meter Residential Bill Impacts (Zone 2)**

Usage (HCF)	Current Bi-Monthly Bill	2011	% Increase	2012	% Increase	2013	% Increase	2014	% Increase	2015	% Increase
5	36.74	<b>36.17</b>	-2%	<b>37.13</b>	3%	<b>38.09</b>	3%	<b>39.05</b>	3%	<b>40.06</b>	3%
10	43.62	<b>43.76</b>	0%	<b>45.07</b>	3%	<b>46.38</b>	3%	<b>47.69</b>	3%	<b>49.10</b>	3%
15	50.51	<b>51.36</b>	2%	<b>53.02</b>	3%	<b>54.68</b>	3%	<b>56.34</b>	3%	<b>58.14</b>	3%
20	57.39	<b>58.95</b>	3%	<b>60.96</b>	3%	<b>62.97</b>	3%	<b>64.98</b>	3%	<b>67.18</b>	3%
25	64.28	<b>66.54</b>	4%	<b>68.90</b>	4%	<b>71.26</b>	3%	<b>73.62</b>	3%	<b>76.23</b>	4%
30	71.16	<b>75.78</b>	6%	<b>78.74</b>	4%	<b>81.90</b>	4%	<b>85.51</b>	4%	<b>88.82</b>	4%
35	79.38	<b>85.03</b>	7%	<b>88.59</b>	4%	<b>92.55</b>	4%	<b>97.41</b>	5%	<b>101.41</b>	4%
40	87.59	<b>94.27</b>	8%	<b>98.43</b>	4%	<b>103.19</b>	5%	<b>109.30</b>	6%	<b>114.00</b>	4%
45	95.81	<b>103.51</b>	8%	<b>108.27</b>	5%	<b>113.83</b>	5%	<b>121.19</b>	6%	<b>126.60</b>	4%
50	104.02	<b>112.75</b>	8%	<b>118.11</b>	5%	<b>124.47</b>	5%	<b>133.08</b>	7%	<b>139.19</b>	5%
55	112.24	<b>121.99</b>	9%	<b>127.95</b>	5%	<b>135.11</b>	6%	<b>144.97</b>	7%	<b>151.78</b>	5%
60	120.45	<b>131.24</b>	9%	<b>137.80</b>	5%	<b>145.76</b>	6%	<b>156.87</b>	8%	<b>164.37</b>	5%
70	136.88	<b>149.72</b>	9%	<b>157.48</b>	5%	<b>167.04</b>	6%	<b>180.65</b>	8%	<b>189.56</b>	5%
80	153.31	<b>168.21</b>	10%	<b>177.17</b>	5%	<b>188.33</b>	6%	<b>204.44</b>	9%	<b>214.74</b>	5%

**6.2 Commercial & Multi-Family Bill Impacts**

Table-23 and Table-24 show the bill impacts over the next five years for the Commercial and Multi-Family customer classes for different levels of consumption based on a 1-inch and 2-inch meter size in the District's Zone 1. The average use for this rate class is approximately 54 HCF (1-inch) and 320 HCF (2-inch).

Table -23

## 1" Meter Commercial Bill Impacts (Zone 1)

Usage (HCF)	Current Bi-Monthly Bill	2011	% Increase	2012	% Increase	2013	% Increase	2014	% Increase	2015	% Increase
10	56.53	<b>60.33</b>	7%	<b>62.53</b>	4%	<b>64.73</b>	4%	<b>66.93</b>	3%	<b>69.04</b>	3%
20	69.03	<b>75.53</b>	9%	<b>78.83</b>	4%	<b>82.13</b>	4%	<b>85.43</b>	4%	<b>88.54</b>	4%
30	81.53	<b>90.73</b>	11%	<b>95.13</b>	5%	<b>99.53</b>	5%	<b>103.93</b>	4%	<b>108.04</b>	4%
40	96.73	<b>105.93</b>	10%	<b>111.43</b>	5%	<b>116.93</b>	5%	<b>122.43</b>	5%	<b>127.54</b>	4%
50	111.93	<b>121.13</b>	8%	<b>127.73</b>	5%	<b>134.33</b>	5%	<b>140.93</b>	5%	<b>147.04</b>	4%
60	127.13	<b>136.33</b>	7%	<b>144.03</b>	6%	<b>151.73</b>	5%	<b>159.43</b>	5%	<b>166.54</b>	4%
70	142.33	<b>151.53</b>	6%	<b>160.33</b>	6%	<b>169.13</b>	5%	<b>177.93</b>	5%	<b>186.04</b>	5%
80	157.53	<b>166.73</b>	6%	<b>176.63</b>	6%	<b>186.53</b>	6%	<b>196.43</b>	5%	<b>205.54</b>	5%
90	172.73	<b>181.93</b>	5%	<b>192.93</b>	6%	<b>203.93</b>	6%	<b>214.93</b>	5%	<b>225.04</b>	5%
100	187.93	<b>197.13</b>	5%	<b>209.23</b>	6%	<b>221.33</b>	6%	<b>233.43</b>	5%	<b>244.54</b>	5%
110	203.13	<b>212.33</b>	5%	<b>225.53</b>	6%	<b>238.73</b>	6%	<b>251.93</b>	6%	<b>264.04</b>	5%
120	218.33	<b>227.53</b>	4%	<b>241.83</b>	6%	<b>256.13</b>	6%	<b>270.43</b>	6%	<b>283.54</b>	5%
140	248.73	<b>257.93</b>	4%	<b>274.43</b>	6%	<b>290.93</b>	6%	<b>307.43</b>	6%	<b>322.54</b>	5%

(This section continues on the following page.)

Table -24

**2" Meter Commercial Bill Impacts (Zone 1)**

Usage (HCF)	Current Bi-Monthly Bill	2011	% Increase	2012	% Increase	2013	% Increase	2014	% Increase	2015	% Increase
25	143.39	<b>153.18</b>	7%	<b>158.97</b>	4%	<b>164.76</b>	4%	<b>170.55</b>	4%	<b>176.11</b>	3%
50	180.04	<b>191.18</b>	6%	<b>199.72</b>	4%	<b>208.26</b>	4%	<b>216.80</b>	4%	<b>224.86</b>	4%
75	218.04	<b>229.18</b>	5%	<b>240.47</b>	5%	<b>251.76</b>	5%	<b>263.05</b>	4%	<b>273.61</b>	4%
100	256.04	<b>267.18</b>	4%	<b>281.22</b>	5%	<b>295.26</b>	5%	<b>309.30</b>	5%	<b>322.36</b>	4%
125	294.04	<b>305.18</b>	4%	<b>321.97</b>	6%	<b>338.76</b>	5%	<b>355.55</b>	5%	<b>371.11</b>	4%
150	332.04	<b>343.18</b>	3%	<b>362.72</b>	6%	<b>382.26</b>	5%	<b>401.80</b>	5%	<b>419.86</b>	4%
175	370.04	<b>381.18</b>	3%	<b>403.47</b>	6%	<b>425.76</b>	6%	<b>448.05</b>	5%	<b>468.61</b>	5%
200	408.04	<b>419.18</b>	3%	<b>444.22</b>	6%	<b>469.26</b>	6%	<b>494.30</b>	5%	<b>517.36</b>	5%
225	446.04	<b>457.18</b>	2%	<b>484.97</b>	6%	<b>512.76</b>	6%	<b>540.55</b>	5%	<b>566.11</b>	5%
250	484.04	<b>495.18</b>	2%	<b>525.72</b>	6%	<b>556.26</b>	6%	<b>586.80</b>	5%	<b>614.86</b>	5%
275	522.04	<b>533.18</b>	2%	<b>566.47</b>	6%	<b>599.76</b>	6%	<b>633.05</b>	6%	<b>663.61</b>	5%
300	560.04	<b>571.18</b>	2%	<b>607.22</b>	6%	<b>643.26</b>	6%	<b>679.30</b>	6%	<b>712.36</b>	5%
325	598.04	<b>609.18</b>	2%	<b>647.97</b>	6%	<b>686.76</b>	6%	<b>725.55</b>	6%	<b>761.11</b>	5%
350	636.04	<b>647.18</b>	2%	<b>688.72</b>	6%	<b>730.26</b>	6%	<b>771.80</b>	6%	<b>809.86</b>	5%
375	674.04	<b>685.18</b>	2%	<b>729.47</b>	6%	<b>773.76</b>	6%	<b>818.05</b>	6%	<b>858.61</b>	5%
400	712.04	<b>723.18</b>	2%	<b>770.22</b>	7%	<b>817.26</b>	6%	<b>864.30</b>	6%	<b>907.36</b>	5%

**Section 7****Rate Comparison**

Table-25 shows the Residential rates from 12 local water purveyors in comparison to the proposed 2011 District Residential rates. Although the District bills bi-monthly, the table compares rates by calculating monthly bills for each purveyor based on a 5/8-inch meter with varying consumption (District average consumption is 15 HCF monthly). The District's 2011 calculated bills are approximately 20% below the current average of these purveyors. Note: several of these purveyors are either in the process of raising rates, have approved rate increases for next year or are planning to raise rates within the next twelve months.

Table-25

Comparison of Residential monthly water bills for 5/8" meter service (as of March 1, 2011)

Purveyor	10 HCF	20 HCF	30 HCF	40 HCF	50 HCF	60 HCF
Valley County Water	\$16.63	\$24.69	\$36.53	\$48.38	\$60.22	\$72.07
City of Monrovia	\$22.38	\$36.88	\$51.38	\$65.88	\$80.38	\$94.88
City of Industry	\$28.74	\$44.74	\$61.74	\$78.74	\$95.74	\$112.74
LPVCWD (Zone 1)	\$27.39	\$43.21	\$59.71	\$76.21	\$92.71	\$109.21
LPVCWD (Zone 2)	\$29.49	\$47.33	\$65.83	\$84.33	\$102.83	\$121.33
LPVCWD (Zone 3)	\$31.19	\$49.77	\$68.77	\$87.77	\$106.77	\$125.77
LPVCWD (Zone 4)	\$29.99	\$48.33	\$67.33	\$86.33	\$105.33	\$124.33
LPVCWD (Zone 5)	\$32.59	\$53.53	\$75.13	\$96.73	\$118.33	\$139.93
City of Azusa City Limits	\$28.72	\$47.60	\$68.45	\$89.30	\$110.15	\$131.00
Suburban (Zone 1)	\$28.72	\$47.88	\$69.04	\$90.19	\$111.35	\$132.51
Suburban (Zone 2)	\$29.38	\$49.20	\$70.75	\$92.31	\$113.86	\$135.41
Suburban (Zone 3)	\$30.10	\$50.64	\$73.72	\$96.79	\$119.87	\$142.94
City of Azusa Non City Limits	\$46.43	\$65.32	\$86.17	\$107.02	\$127.87	\$148.72
VHWC (Zone 1)	\$38.80	\$51.80	\$71.30	\$92.10	\$118.10	\$144.10
VHWC (Zone 2)	\$40.20	\$54.60	\$74.10	\$97.70	\$125.10	\$152.50
VHWC (Zone 3)	\$41.85	\$57.90	\$80.45	\$104.30	\$133.35	\$162.40
VHWC (Zone 4)	\$41.65	\$57.50	\$79.85	\$103.50	\$132.35	\$161.20
San Gabriel Valley Water	\$41.94	\$63.55	\$85.15	\$106.76	\$128.36	\$149.97
City of Glendora(Zone 1)	\$43.37	\$58.37	\$76.75	\$96.25	\$115.75	\$135.25
City of Glendora(Zone 2)	\$44.47	\$60.57	\$80.05	\$100.65	\$121.25	\$141.85
City of Glendora(Zone 3)	\$45.67	\$62.97	\$83.65	\$105.45	\$127.25	\$149.05
City of Glendora(Zone 4)	\$52.27	\$76.17	\$103.45	\$131.85	\$160.25	\$188.65
Walnut Valley Water (Zone 1)	\$33.94	\$54.96	\$76.86	\$98.76	\$120.66	\$142.56
Walnut Valley Water (Zone 2)	\$35.74	\$58.56	\$82.26	\$105.96	\$129.66	\$153.36
Walnut Valley Water (Zone 3)	\$37.24	\$61.56	\$86.76	\$111.96	\$137.16	\$162.36
City of Covina	\$56.73	\$81.68	\$108.29	\$134.90	\$161.50	\$188.11
Rowland Water (Zone 1)	\$38.16	\$60.10	\$88.24	\$118.24	\$148.24	\$178.24
Rowland Water (Zone 2)	\$39.46	\$62.70	\$92.14	\$123.44	\$154.74	\$186.04
Rowland Water (Zone 3)	\$40.56	\$64.90	\$95.51	\$128.01	\$160.51	\$193.01
Rowland Water (Zone 4)	\$44.96	\$73.70	\$108.64	\$145.44	\$182.24	\$219.04
Rowland Water (Zone 5)	\$47.46	\$78.74	\$116.28	\$155.68	\$195.08	\$234.48
Rowland Water (Zone 6)	\$49.26	\$82.30	\$121.54	\$162.64	\$203.74	\$244.84
Golden State Water	\$46.28	\$80.66	\$120.64	\$161.09	\$201.54	\$241.99
<b>Average</b>	<b>\$37.63</b>	<b>\$57.95</b>	<b>\$81.41</b>	<b>\$105.60</b>	<b>\$130.37</b>	<b>\$155.15</b>

