

## **Cost-of-Services Study Rate Model Tables**

The final report, which was separately submitted, summarizes and documents the cost-of-service study and the broader issues addressed over the 18 months it took to complete the study. This appendix documents the details of the final rate model tables, and is the companion document to the actual Excel worksheet rate models.

The water and sewer rate tables below are presented in the order in which the rate analyses take place, beginning with the financial plan, followed by the cost-of-service analysis, and lastly the rate design tables. The water consumption data used in the model is included at the end of the water rate models.

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## SECTION 1. WATER RATE MODEL TABLES

Development of Revenue Requirements							
	Budget	Budget	Projected				
	2010	2011	2012	2013	2014	2015	2016
<b>SOURCES OF FUNDS</b>	<i>Adopted Rate Increases</i>	15%	5%	5%	5%		
	<i>Planned Rate Increases</i>		6%	6%	6%	5%	5%
Revenue at Present Rates							
Water sales (including increases)	\$17,800,025	\$21,800,108	\$ 23,931,996	\$ 26,564,516	\$ 29,486,613	\$ 30,960,943	\$ 32,508,990
Water service	\$0	\$0	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total Revenue at Present Rates</b>	<b>\$17,800,025</b>	<b>\$21,800,108</b>	<b>\$ 23,931,996</b>	<b>\$ 26,564,516</b>	<b>\$ 29,486,613</b>	<b>\$ 30,960,943</b>	<b>\$ 32,508,990</b>
Miscellaneous Revenues							
Hydroelectric revenues	\$7,500,000	\$8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000	\$ 8,000,000
Timber sales	\$0	\$0	\$ -	\$ -	\$ -	\$ -	\$ -
Investment Income	\$484,509	\$541,319	\$ 500,000	\$ 541,319	\$ 500,000	\$ 541,319	\$ 500,000
Surcharges	\$1,072,646	\$1,094,099	\$ 1,094,099	\$ 1,094,099	\$ 1,094,099	\$ 1,094,099	\$ 1,094,099
1% property tax revenues	\$6,300,000	\$6,240,000	\$ 5,580,000	\$ 5,580,000	\$ 5,580,000	\$ 5,580,000	\$ 5,580,000
Flood damage reimbursement	\$162,916	\$170,000	\$ 250,000	\$ 250,000	\$ 250,000	\$ -	\$ -
Other income	\$750,000	\$765,000	\$ 765,000	\$ 765,000	\$ 765,000	\$ 765,000	\$ 765,000
Recreation fees	\$1,000,000	\$1,050,000	\$ 1,038,735	\$ 1,059,510	\$ 1,080,700	\$ 1,102,314	\$ 1,124,361
Wholesale Contract with City of Placerville	\$0	\$423,183	\$ 431,647	\$ 440,280	\$ 449,085	\$ 458,067	\$ 467,228
<b>Total Miscellaneous Revenues</b>	<b>\$17,270,070</b>	<b>\$18,283,602</b>	<b>\$ 17,659,481</b>	<b>\$ 17,730,208</b>	<b>\$ 17,718,884</b>	<b>\$ 17,540,800</b>	<b>\$ 17,530,688</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>\$ 35,070,095</b>	<b>\$ 40,083,710</b>	<b>\$ 41,591,477</b>	<b>\$ 44,294,724</b>	<b>\$ 47,205,497</b>	<b>\$ 48,501,743</b>	<b>\$ 50,039,678</b>

Development of Revenue Requirements							
	Budget	Budget			Projected		
	2010	2011	2012	2013	2014	2015	2016
<b>APPLICATIONS OF FUNDS</b>							
Operation and Maintenance Expense							
<i>Direct Expenses</i>							
<b>Operations:</b>							
Administration	\$ 195,231	\$ 230,222	\$ 229,444	\$ 234,032	\$ 238,713	\$ 243,487	\$ 248,357
Water operations	\$ 7,552,742	\$ 9,927,187	\$ 9,307,816	\$ 9,493,972	\$ 9,683,852	\$ 9,877,529	\$ 10,075,079
Hydro operations	\$ 3,137,603	\$ 3,235,452	\$ 3,574,935	\$ 3,646,434	\$ 3,719,362	\$ 3,793,750	\$ 3,869,625
Environmental (Compliance)	\$ 1,140,573	\$ 54,682	\$ 56,322	\$ 57,449	\$ 58,598	\$ 59,769	\$ 60,965
Recreation (Previously Natural Resou	\$ 1,057,807	\$ 1,073,122	\$ 1,204,687	\$ 1,228,781	\$ 1,253,356	\$ 1,278,423	\$ 1,303,992
<b>Total Direct Expenses</b>	<b>\$ 13,083,957</b>	<b>\$ 14,520,665</b>	<b>\$ 14,373,204</b>	<b>\$ 14,660,668</b>	<b>\$ 14,953,881</b>	<b>\$ 15,252,959</b>	<b>\$ 15,558,018</b>
<i>Indirect Expenses</i>							
<b>Engineering</b>							
Management	\$ 120,758	\$ 150,708	\$ 122,835	\$ 125,292	\$ 127,798	\$ 130,354	\$ 132,961
Water	\$ (211,889)	\$ (60,304)	\$ (55,130)	\$ (56,233)	\$ (57,357)	\$ (58,504)	\$ (59,674)
Environmental Review	\$ -	\$ 718,927	\$ 659,462	\$ 672,652	\$ 686,105	\$ 699,827	\$ 713,823
Development Services	\$ -	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Hydro	\$ 155,909	\$ 146,048	\$ 163,434	\$ 166,703	\$ 170,037	\$ 173,437	\$ 176,906
GIS	\$ 226,237	\$ 194,477	\$ 212,170	\$ 216,414	\$ 220,742	\$ 225,157	\$ 229,660
Inspection	\$ (31,897)	\$ 19,942	\$ 14,676	\$ 14,969	\$ 15,269	\$ 15,574	\$ 15,886
Records	\$ 190,632	\$ 316,200	\$ 322,572	\$ 329,023	\$ 335,603	\$ 342,315	\$ 349,162
Communications	\$ 300,624	\$ 354,211	\$ 335,560	\$ 342,272	\$ 349,117	\$ 356,099	\$ 363,221
Office of the General Manager	\$ 1,608,789	\$ 1,992,108	\$ 1,610,269	\$ 1,642,474	\$ 1,675,324	\$ 1,708,830	\$ 1,743,007
Finance	\$ 3,591,736	\$ 4,426,141	\$ 5,008,402	\$ 5,108,570	\$ 5,210,741	\$ 5,314,956	\$ 5,421,255
Human Resources	\$ 1,294,459	\$ 1,414,696	\$ 1,369,551	\$ 1,396,942	\$ 1,424,881	\$ 1,453,378	\$ 1,482,446
Information Technology	\$ 1,484,135	\$ 1,436,759	\$ 1,522,687	\$ 1,553,141	\$ 1,584,204	\$ 1,615,888	\$ 1,648,206
New letter of credit at 1.2%	\$ 449,416	\$ 798,962	\$ 798,962	\$ 798,962	\$ 798,962	\$ 798,962	\$ 798,962
<b>Total Indirect Expenses</b>	<b>\$ 9,178,910</b>	<b>\$ 11,908,875</b>	<b>\$ 12,085,451</b>	<b>\$ 12,311,180</b>	<b>\$ 12,541,425</b>	<b>\$ 12,776,274</b>	<b>\$ 13,015,820</b>
<b>Total Operating and Maintenance Expense</b>	<b>\$ 22,262,867</b>	<b>\$ 26,429,540</b>	<b>\$ 26,458,654</b>	<b>\$ 26,971,848</b>	<b>\$ 27,495,306</b>	<b>\$ 28,029,233</b>	<b>\$ 28,573,838</b>
<i>Debt Service</i>							
<b>Total Water Debt Service</b>	<b>\$ 9,283,861</b>	<b>\$ 11,744,750</b>	<b>\$ 10,941,986</b>	<b>\$ 13,776,115</b>	<b>\$ 15,886,883</b>	<b>\$ 18,364,465</b>	<b>\$ 18,353,596</b>
<i>Capital Projects</i>							
Capital Funded Through Rates	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTAL REVENUE REQUIREMENTS</b>	<b>\$ 31,546,727</b>	<b>\$ 38,174,290</b>	<b>\$ 37,400,641</b>	<b>\$ 40,747,963</b>	<b>\$ 43,382,189</b>	<b>\$ 46,393,698</b>	<b>\$ 46,927,434</b>
Less: Non-Rate Revenue	\$ 17,270,070	\$ 18,283,602	\$ 17,659,481	\$ 17,730,208	\$ 17,718,884	\$ 17,540,800	\$ 17,530,688
<b>NET REV. REQTS. FROM RATES</b>	<b>\$ 14,276,657</b>	<b>\$ 19,890,689</b>	<b>\$ 19,741,160</b>	<b>\$ 23,017,755</b>	<b>\$ 25,663,304</b>	<b>\$ 28,852,898</b>	<b>\$ 29,396,747</b>
Less: Forecasted Revenues at Present Rates	\$ 17,800,025	\$ 21,800,108	\$ 23,931,996	\$ 26,564,516	\$ 29,486,613	\$ 30,960,943	\$ 32,508,990
Balance/(Deficiency) of Funds	\$ 3,523,368	\$ 1,909,419	\$ 4,190,837	\$ 3,546,760	\$ 3,823,309	\$ 2,108,045	\$ 3,112,244
<b>Balance/(Deficiency) as a % of Rates</b>	<b>19.8%</b>	<b>8.8%</b>	<b>17.5%</b>	<b>13.4%</b>	<b>13.0%</b>	<b>6.8%</b>	<b>9.6%</b>
<b>Additional Rate Adjustments*</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>
Additional Rate Revenue From Increase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Balance/(Defic.) of Funds, Adjusted</b>	<b>\$ 3,523,368</b>	<b>\$ 1,909,419</b>	<b>\$ 4,190,837</b>	<b>\$ 3,546,760</b>	<b>\$ 3,823,309</b>	<b>\$ 2,108,045</b>	<b>\$ 3,112,244</b>
<i>* Additional to adopted 2012 - 2014 increases plus currently planned increases shown above in Sources of Funds.</i>							
After Rate Adjustment, 1.25 Required	1.47	1.27	1.57	1.39	1.36	1.26	1.32
After Adjustment, w/o FCCs, 1.0 preferred	1.43	1.18	1.42	1.28	1.26	1.12	1.18

## Source and Use of Funds (by utility)

### WATER SYSTEM

	Projected				
	2012	2013	2014	2015	2016
<b>SOURCES OF FUNDS</b>					
Adopted Water Rate Increases		5%	5%		
Add'l. Planned Rate Increases		6%	6%	5%	5%
Projected Revenue					
Water sales (including increases)	\$ 23,931,996	\$ 26,564,516	\$ 29,486,613	\$ 30,960,943	\$ 32,508,990
Hydroelectric revenues	8,000,000	8,000,000	8,000,000	8,000,000	8,000,000
1% property tax revenues	5,580,000	5,580,000	5,580,000	5,580,000	5,580,000
Miscellaneous Revenues	4,079,481	4,150,208	4,138,884	3,960,800	3,950,688
<b>TOTAL SOURCES OF FUNDS</b>	<b>41,591,477</b>	<b>44,294,724</b>	<b>47,205,497</b>	<b>48,501,743</b>	<b>50,039,678</b>
<b>APPLICATIONS OF FUNDS</b>					
Operation and Maintenance Expense					
Direct Expenses	14,373,204	14,660,668	14,953,881	15,252,959	15,558,018
Indirect Expenses	12,085,451	12,311,180	12,541,425	12,776,274	13,015,820
Total Operating and Maintenance Expenses	26,458,654	26,971,848	27,495,306	28,029,233	28,573,838
Total Water Debt Service	10,941,986	13,776,115	15,886,883	18,364,465	18,353,596
<b>TOTAL REVENUE REQUIREMENTS</b>	<b>37,400,641</b>	<b>40,747,963</b>	<b>43,382,189</b>	<b>46,393,698</b>	<b>46,927,434</b>
Less: Non-Rate Revenue	17,659,481	17,730,208	17,718,884	17,540,800	17,530,688
<b>NET REV. REQTS. FROM RATES</b>	<b>\$ 19,741,160</b>	<b>\$ 23,017,755</b>	<b>\$ 25,663,304</b>	<b>\$ 28,852,898</b>	<b>\$ 29,396,747</b>

### SEWER SYSTEM

	Projected				
	2012	2013	2014	2015	2016
<b>SOURCES OF FUNDS</b>					
Adopted Water Rate Increases		5%	5%		
Add'l. Planned Rate Increases				5%	5%
Projected Revenue					
Wastewater service (including increases)	\$ 20,362,453	\$ 21,380,576	\$ 22,449,604	\$ 23,615,153	\$ 24,838,980
Recycle water services	781,295	820,360	861,378	861,378	861,378
1% property tax revenues	3,720,000	3,720,000	3,720,000	3,720,000	3,720,000
Miscellaneous Revenues	2,475,949	2,486,829	2,475,949	2,486,829	2,475,949
<b>TOTAL SOURCES OF FUNDS</b>	<b>27,339,697</b>	<b>28,407,765</b>	<b>29,506,931</b>	<b>30,683,360</b>	<b>31,896,307</b>
<b>APPLICATIONS OF FUNDS</b>					
Operation and Maintenance Expense					
Direct Expenses	9,566,189	9,757,513	9,952,663	10,151,717	10,354,751
Indirect Expenses	6,945,265	7,073,581	7,204,462	7,337,962	7,474,131
Total Operating and Maintenance Expenses	16,511,454	16,831,094	17,157,125	17,489,679	17,828,882
Total Wastewater Debt Service	9,129,983	9,413,659	10,349,216	11,441,709	11,432,590
<b>TOTAL REVENUE REQUIREMENTS</b>	<b>25,641,437</b>	<b>26,244,753</b>	<b>27,506,341</b>	<b>28,931,388</b>	<b>29,261,472</b>
Less: Non-Rate Revenue	6,195,949	6,206,829	6,195,949	6,206,829	6,195,949
<b>NET REV. REQTS. FROM RATES</b>	<b>\$ 19,445,488</b>	<b>\$ 20,037,924</b>	<b>\$ 21,310,392</b>	<b>\$ 22,724,559</b>	<b>\$ 23,065,523</b>

<b>WATER SYSTEM</b>								
<b>Debt Service</b>								
<b>Bond Description</b>	<b>Installments</b>							
	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
2003 A COPs (unrefunded portion)	\$ 170,771	\$ 239,352	\$ 240,687	\$ 238,578	\$ 235,127	\$ 234,169	\$ 235,801	\$ 235,801
2003a refinancing impact	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2004A COPs	\$ 3,831,932	\$ 3,828,639	\$ 3,351,177	\$ 2,752,373	\$ 2,745,851	\$ 2,747,564	\$ 2,744,007	\$ 2,744,007
20008A COPs	\$ 1,686,867	\$ 3,373,735	\$ 3,373,735	\$ 3,373,735	\$ 3,373,735	\$ 3,373,735	\$ 3,373,735	\$ 3,373,735
2009 A COPs	\$ 4,090,755	\$ 4,090,755	\$ 4,090,755	\$ 5,636,355	\$ 5,635,459	\$ 5,635,907	\$ 5,636,579	\$ 5,636,579
2010A COPs	\$ 446,530	\$ 446,530	\$ 446,530	\$ 446,530	\$ 446,530	\$ 446,530	\$ 446,530	\$ 446,530
2011A COPs (refunding)	\$ 741,899	\$ 821,796	\$ 821,796	\$ 821,796	\$ 821,796	\$ 3,490,488	\$ 3,488,422	\$ 3,488,422
2011A COPs (restructuring)	\$ 520,721	\$ 576,798	\$ 576,798	\$ 576,798	\$ 576,798	\$ 576,798	\$ 576,798	\$ 576,798
2012A (new issue)	\$ -	\$ -	\$ -	\$ -	\$ -			
2013A (new issue)	\$ -	\$ -	\$ 1,532,895	\$ 3,065,790	\$ 3,065,790	\$ 3,065,790	\$ 3,065,790	\$ 3,065,790
Additional state loan 2008	\$ 373,310	\$ 373,310	\$ 373,310	\$ 373,310	\$ 373,310	\$ 373,310	\$ 373,310	\$ 373,310
Prepayment on 2004A debt	\$ (2,000,000)	\$ (1,054,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	9,862,786	12,696,915	14,807,683	17,285,265	17,274,396	19,944,292	19,940,972	19,940,972
Preexisting State Obligations	1,079,200	1,079,200	1,079,200	1,079,200	1,079,200	1,079,200	1,079,200	1,079,200
<b>Total Water Debt Service</b>	<b>10,941,986</b>	<b>13,776,115</b>	<b>15,886,883</b>	<b>18,364,465</b>	<b>18,353,596</b>	<b>21,023,492</b>	<b>21,020,172</b>	<b>21,020,172</b>

Source - EID Finance Dept., Mark Price, email on 11-10-11.

<b>WATER SYSTEM</b>							
<b>Capital Improvement Plan</b>							
<b>Water CIP</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
<b>Expenditures</b>							
FERC	\$ 1,784,017	\$ 1,865,836	\$ 1,599,001	\$ 765,201	\$ 816,437	\$ 2,767,710	\$ 15,000,000
Water	\$ 13,298,339	\$ 4,935,000	\$ 4,410,750	\$ 8,273,325	\$ 28,779,340	\$ 25,119,340	
Hydroelectric	\$ 5,853,655	\$ 2,970,000	\$ 7,305,000	\$ 11,750,000	\$ 6,500,000	\$ 8,050,000	
Recreation	\$ 260,500	\$ 303,000	\$ 130,000	\$ 10,000	\$ 10,000	\$ 10,000	
General District	\$ 1,907,229	\$ 2,957,100	\$ 1,659,000	\$ 3,678,000	\$ 5,177,400	\$ 300,000	
<b>Total</b>	<b>\$ 23,103,740</b>	<b>\$ 13,030,936</b>	<b>\$ 15,103,751</b>	<b>\$ 24,476,526</b>	<b>\$ 41,283,177</b>	<b>\$ 36,247,050</b>	<b>\$ 15,000,000</b>
<b>Funding from or (to)</b>							
Facility capacity charges	322,644	957,800	1,436,700	1,436,700	1,436,700	2,394,500	2,394,500
Developer Contributions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Reserves	\$ -	\$ 10,695,000	\$ 9,000,000	\$ 23,039,826	\$ 31,226,174	\$ 2,000,000	\$ 2,900,000
Equipment Replacement Reserves	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<i>Total</i>	<b>\$ 322,644</b>	<b>\$ 11,652,800</b>	<b>\$ 10,436,700</b>	<b>\$ 24,476,526</b>	<b>\$ 32,662,874</b>	<b>\$ 4,394,500</b>	<b>\$ 5,294,500</b>
<i>Funding Shortfall</i>	<b>\$ (22,781,096)</b>	<b>\$ (1,378,136)</b>	<b>\$ (4,667,051)</b>	<b>\$ -</b>	<b>\$ (8,620,303)</b>	<b>\$ (31,852,550)</b>	<b>\$ (9,705,500)</b>

<b>WATER SYSTEM</b>					
<b>Development of the Commodity Allocation Factor</b>					
<b>Customer Class</b>	<b>2009 Sales (ccf)<sup>1</sup></b>	<b>Percent of Sales</b>	<b>Estimated Conservation</b>	<b>Estimated Sales w/ conservation for 2011</b>	<b>Percent of Adjusted Sales less ag and ditches</b>
Single Family Residential	6,796,402	71.5%	679,640	6,116,762	71.5%
Multi Family Residential	665,339	7.0%	66,534	598,805	7.0%
Comm. & Ind. (& potable landscape irrig.)	757,858	8.0%	75,786	682,072	8.0%
Agricultural Irrigation - w/ residence	<b>24,549</b>	0.3%	-	24,549	0.3%
Recreational Turf	<b>526,137</b>	5.5%	131,534	394,603	4.6%
Small Farm	<b>22,903</b>	0.2%	-	22,903	0.3%
Domestic Irrigation	<b>716,068</b>	7.5%	-	716,068	8.4%
Fire Hydrant/ Construction	-	0.0%	-	-	0.0%
Other	0	0.0%	0	0	0.0%
<b>Total</b>	<b>9,509,256</b>	<b>100%</b>		<b>8,555,762</b>	<b>100%</b>
<i>1. For Ag, Small Farm, and Domestic Irrigation, 2010 consumption (for Tier 1 only) was increased by 21.3% to estimate more typical 2009 usage. Rec Turf usage is 2010 data, increased by 4.2% to 2009 equivalent data, and then reduced by 25% to reflect the estimated price-response and conservation.</i>					
<b>Note:</b> Commodity Allocation Factors reflect Ag w/Resid, Small Farms/DI Tier 1 consumption and, therefore, allocate their proportional share of Potable system costs to these customers. This is reflected in their paying the Fixed Meter Charge for 3/4" Residential customers. Other capacity-related costs for Ag infrastructure is reflected in DA cost analysis and results in additional capacity-related costs for meters larger than 3/4".					

Development of the Commodity Allocation Factor (Direct Assignment)					
Customer Class - Direct Assignment	2009 Sales (ccf) <sup>1</sup>	Percent of Sales	Estimated Conservation	Estimated Sales w/ conservation for 2011	Percent of Adjusted Sales less ag and ditches
Agricultural Irrigation - w/ residence	1,539,554	70.4%	-	1,539,554	70.4%
Agricultural Irrigation - w/o residence	53,657	2.5%	-	53,657	2.5%
Small Farm	262,693	12.0%	-	262,693	12.0%
Raw Water - Landscape Irrigation	7,485	0.3%	-	7,485	0.3%
Raw Water - Continuous Flow/Flat	323,417	14.8%	-	323,417	14.8%
Other	-	0.0%	-	-	0.0%
<b>Total</b>	<b>2,186,806</b>	<b>100%</b>		<b>2,186,806</b>	<b>100%</b>
1. For Ag, Small Farm, and Domestic Irrigation, 2010 consumption (for Tiers 2 - 5) was increased by 21.3% to reflect more typical 2009 usage.					

Development of the Capacity Allocation Factor				
Customer Class	Average Day Use (MGD)	Peaking Factor <sup>1</sup>	Total Peak Day Use	Percent of Total
Single Family Residential	12.535	1.76	22.06	73.7%
Multi Family Residential	1.227	1.38	1.69	5.7%
Comm. & Ind. (& potable landscape irrig.)	1.398	1.15	1.61	5.4%
Agricultural Irrigation - w/ residence	0.050	1.76	0.09	0.3%
Recreational Turf	0.809	2.25	1.82	6.1%
Small Farm	0.047	1.76	0.08	0.3%
Domestic Irrigation	1.467	1.76	2.58	8.6%
Fire Hydrant/ Construction	0.000	3.92	0.00	0.0%
Other	0.000	1.00	0.00	0.0%
<b>Total</b>	<b>17.533</b>		<b>29.94</b>	<b>100.0%</b>
Notes: 1. Peaking factor is the ratio of 2010 max. month- to the annual-average consumption per account per month.				

Development of the Capacity Allocation Factor (Direct Assignment)				
Customer Class - Direct Assignment	Average Day Use (MGD)	Peaking Factor <sup>a</sup>	Total Peak Day Use	Percent of Total
Agricultural Irrigation - w/ residence	3.16	1.00	3.16	70.6%
Agricultural Irrigation - w/o residence	0.11	1.00	0.11	2.5%
Small Farm	0.54	1.00	0.54	12.1%
Raw Water - Landscape Irrigation	0.66	1.00	0.66	14.8%
Raw Water - Continuous Flow/Flat	0.00	1.00	0.00	0.0%
Other	0.00	1.00	0.00	0.0%
<b>Total</b>	<b>4.47</b>		<b>4.47</b>	<b>100.0%</b>

*a. All Direct assignment classes are considered "Ag-Related" and have peaking factors that were adjusted to reflect District policy (Principal #9) regarding levels of service and water quality (e.g., most District facilities are not used by Ag-related customers).*

Development of the Customer Allocation Factor		
Customer Class	No. of Accounts (2010)	Percent of Total
Single Family Residential	34,561	89.0%
Multi Family Residential	777	2.0%
Comm. & Ind. (& potable landscape irrig.)	1,687	4.3%
Agricultural Irrigation - w/ residence	206	0.5%
Recreational Turf	113	0.3%
Small Farm	196	0.5%
Domestic Irrigation	1,303	3.4%
Fire Hydrant/ Construction	-	0.0%
Other	-	0.0%
<b>Total</b>	<b>38,843</b>	<b>100%</b>
Direct Assignment - Customer Class	Number of Accounts <sup>a</sup>	Percent of Total
Agricultural Irrigation - w/ residence		
Agricultural Irrigation - w/o residence	9	60.0%
Small Farm		
Domestic Irrigation		
Raw Water - Landscape Irrigation	6	40.0%
Raw Water - Continuous Flow/Flat	N.A. <sup>a</sup>	N.A. <sup>a</sup>
<b>Total</b>	<b>15</b>	<b>100%</b>

*a. Ag w/o Resid and Raw Water customers are not charged a basic bi-monthly charge.*

Development of the Public Fire Protection Factor					
Customer Class	Number of Equivalent Units <sup>a</sup>	Public Fire Protection Req. (gpm)	Durration at gpm (min)	Total PFP Requirements (million gallons)	% of Total w/o DA
Single Family Residential	35,849	1,500	120	6,453	72.9%
Multi Family Residential	2,001	3,000	120	720	8.1%
Comm. & Ind. (& potable landscape irrig.)	3,796	3,000	120	1,366	15.4%
Agricultural Irrigation - w/ residence	206	1,500	120	37	0.4%
Agricultural Irrigation - w/o residence	--	-	-	-	0.0%
Recreational Turf	810	-	-	-	0.0%
Small Farm (& Domestic Irrig.)	1,499	1,500	120	270	3.0%
Fire Hydrant/ Construction	--	-	-	-	0.0%
Raw Water - Landscape Irrigation	--	-	-	-	0.0%
Raw Water - Continuous Flow/Flat	--	-	-	-	0.0%
Other	-	-	-	-	0.0%
<b>Total</b>	<b>44,161</b>	<b>--</b>	<b>--</b>	<b>8,847</b>	<b>100%</b>

a. Equivalent units is the number meters by size times their hydrologic factor. See the Fixed Meter (Basic Charges) calculation table. Per District staff, multi-family and commercial classes have been set at 3,000 pgm and 120 minutes.

WATER SYSTEM											
Functionalization and Classification of 2012 Expenses											
Account Type	Total 2012 Revenue Reqts.	Commodity (COM)	Capacity (CAP)	Customer (CA)	Fire Protection (FP)	Direct Assignment (DA)	Basis of Classification				
							(COM)	(CAP)	(CA)	(FP)	(DA)
Operation and Maintenance Expense											
Direct Expenses											
Operations:											
Administration	\$ 229,444	\$ -	\$ 213,383	\$ 11,472	\$ -	\$ 4,589	0.0%	93.0%	5.0%	0.0%	2.0%
Water operations	\$ 9,307,816	\$ 2,792,345	\$ 5,119,299	\$ 465,391	\$ 744,625	\$ 186,156	30.0%	55.0%	5.0%	8.0%	2.0%
Hydro operations	\$ 3,574,935	\$ -	\$ 3,503,436	\$ -	\$ -	\$ 71,499	0.0%	98.0%	0.0%	0.0%	2.0%
Environmental (Compliance)	\$ 56,322	\$ -	\$ 5,632	\$ 33,793	\$ 16,897	\$ -	0.0%	10.0%	60.0%	30.0%	0.0%
Recreation (Previously Natural Resource)	\$ 1,204,687	\$ -	\$ 602,344	\$ 602,344	\$ -	\$ -	0.0%	50.0%	50.0%	0.0%	0.0%
Total Direct Expenses	\$ 14,373,204	\$ 2,792,345	\$ 9,444,093	\$ 1,113,000	\$ 761,522	\$ 262,244					
Indirect Expenses											
Engineering											
Management	\$ 122,835	\$ 18,425	\$ 61,418	\$ 18,425	\$ 22,110	\$ 2,457	15.0%	50.0%	15.0%	18.0%	2.0%
Water	\$ (55,130)	\$ (8,270)	\$ (27,565)	\$ (8,270)	\$ (9,923)	\$ (1,103)	15.0%	50.0%	15.0%	18.0%	2.0%
Environmental Review	\$ 659,462	\$ -	\$ 659,462	\$ -	\$ -	\$ -	0.0%	100.0%	0.0%	0.0%	0.0%
Development Services	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	15.0%	50.0%	15.0%	20.0%	0.0%
Hydro	\$ 163,434	\$ -	\$ 163,434	\$ -	\$ -	\$ -	0.0%	100.0%	0.0%	0.0%	0.0%
GIS	\$ 212,170	\$ 53,043	\$ 53,043	\$ 53,043	\$ 53,043	\$ -	25.0%	25.0%	25.0%	25.0%	0.0%
Inspection	\$ 14,676	\$ -	\$ 7,338	\$ 3,669	\$ 3,669	\$ -	0.0%	50.0%	25.0%	25.0%	0.0%
Records	\$ 322,572	\$ -	\$ 96,771	\$ 161,286	\$ 58,063	\$ 6,451	0.0%	30.0%	50.0%	18.0%	2.0%
Communications	\$ 335,560	\$ -	\$ -	\$ 328,849	\$ -	\$ 6,711	0.0%	0.0%	98.0%	0.0%	2.0%
Office of the General Manager	\$ 1,610,269	\$ 161,027	\$ 161,027	\$ 1,127,188	\$ 128,822	\$ 32,205	10.0%	10.0%	70.0%	8.0%	2.0%
Finance	\$ 5,008,402	\$ -	\$ -	\$ 4,908,234	\$ -	\$ 100,168	0.0%	0.0%	98.0%	0.0%	2.0%
Human Resources	\$ 1,369,551	\$ 342,388	\$ 342,388	\$ 342,388	\$ 314,997	\$ 27,391	25.0%	25.0%	25.0%	23.0%	2.0%
Information Technology	\$ 1,522,687	\$ 380,672	\$ 380,672	\$ 380,672	\$ 350,218	\$ 30,454	25.0%	25.0%	25.0%	23.0%	2.0%
New letter of credit at 1.2%	\$ 798,962	\$ 383,502	\$ 399,481	\$ -	\$ -	\$ 15,979	48.0%	50.0%	0.0%	0.0%	2.0%
Total Indirect Expenses	\$ 12,085,451	\$ 1,330,787	\$ 2,297,469	\$ 7,315,484	\$ 920,998	\$ 220,714					
Total Operating and Maintenance Expenses	\$ 26,458,654	\$ 4,123,131	\$ 11,741,562	\$ 8,428,483	\$ 1,682,520	\$ 482,958					
Debt Service											
Total Water Debt Service	\$ 10,941,986	\$ 5,361,573	\$ 5,361,573	\$ -	\$ -	\$ 218,840	49.0%	49.0%	0.0%	0.0%	2.0%
Capital Projects											
Capital Funded Through Rates	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	49.0%	49.0%	0.0%	0.0%	2.0%
<b>TOTAL REVENUE REQUIREMENTS</b>	<b>\$ 37,400,641</b>	<b>\$ 9,484,705</b>	<b>\$ 17,103,135</b>	<b>\$ 8,428,483</b>	<b>\$ 1,682,520</b>	<b>\$ 701,798</b>	<b>25.4%</b>	<b>45.7%</b>	<b>22.5%</b>	<b>4.5%</b>	<b>1.9%</b>
Less: Non-Rate Revenue	\$ 17,659,481	\$ 4,478,398	\$ 8,075,597	\$ 3,979,682	\$ 794,436	\$ 331,368	25.4%	45.7%	22.5%	4.5%	1.9%
<b>NET REVENUE REQUIREMENTS</b>	<b>\$ 19,741,160</b>	<b>\$ 5,006,307</b>	<b>\$ 9,027,539</b>	<b>\$ 4,448,802</b>	<b>\$ 888,083</b>	<b>\$ 370,430</b>	<b>25.4%</b>	<b>45.7%</b>	<b>22.5%</b>	<b>4.5%</b>	<b>1.9%</b>

Adjustments to Functionalization and Classification of 2012 Expenses														
Adjustments:		(COM)	(CAP)	(CA)	(FP)	(DA)								
Adjusted Net Revenue Req'ts	\$ 19,370,730	\$ 5,006,307	\$ 9,027,539	\$ 4,448,802	\$ 888,083	\$ 370,430								
Adjustment for Current Rate Level:		25.8%	46.6%	23.0%	4.6%	1.9%	101.9%							
2012 COS Net Rev. Req't.	\$19,741,160													
2012 Current Rate Revenue	\$23,931,996													
Adjustment Factor	1.2123				\$ -	\$ -								
Adjusted Net Revenue Req'ts	\$ 23,482,929	\$ 6,069,092	\$ 10,943,988	\$ 5,393,235	\$ 1,076,614	\$ 449,068								
<b>Canadian Method Adjustment (50/50 Split):</b>		<i>Variable (COM)</i>	<i>Fixed (CAP)</i>	<i>Fixed (CA)</i>	<i>Fixed (FP)</i>									
Rate Revenue (\$)	\$ 23,482,929	\$ 11,741,464	\$ 7,379,100	\$ 3,636,446	\$ 725,918									
Rate Revenue (%)	100%	50%	31%	15%	3%									
<b>Allocation Adjustment for Direct Assignment Costs (50/50 Split):</b>														
<i>Direct Assignment Costs<sup>a</sup></i>		<i>Variable (COM)</i>	<i>Fixed (CAP)<sup>b</sup></i>	<i>Fixed (CA)<sup>b</sup></i>	<i>Fixed (FP)</i>									
Rate Revenue (\$)	\$449,068	\$224,534	\$154,994	\$69,540	\$0									
Rate Revenue (%)	100.0%	50%	35%	15%	0%									
<i>Adjustment for AG w/ Resid/SF/DI Accounts counted in Potable SFR:</i>														
<i>% Reductions (% counted in Potable SFR)</i>		6.3%	28.7%	99.1%	0%									
Adjusted Rate Revenue (%)	71.6%	46.8%	24.6%	0.1%	0%									
Adjusted Rate Revenue (\$)	\$ 321,504	\$ 210,353	\$ 110,544	\$ 606	\$ -									
<b>Shifted to Potable/SFR:</b>	\$ 127,564	\$ 14,181	\$ 44,450	\$ 68,934	\$ -									

  

Ag w/Resid. & SF/DI ADJUSTMENTS		
<b>Variable (COM) Adjustment</b>		
<i>Water Consumption (ccf/yr) from Table 16</i>		
24,549	0.9%	Ag w/Resid. Tier 1
143,419	5.4%	SF/DI Tier 1
	<b>6.3%</b>	Shifted to Potable/SFR
1,568,662	59.0%	Ag w/Resid. Tier 2
922,972	34.7%	SF/DI Tier 2
2,659,602	100.0%	
<b>Fixed (CAP) Adjustment</b>		
<i>Equiv. Meters</i>		
5,506	100.0%	Total Equiv. Meters
1,579	<b>28.7%</b>	Shifted to Potable/SFR
3,927	71.3%	Remaining in Ag/SF/DI
<b>Fixed (CA) Adjustment</b>		
<i>Accounts</i>		
1,720	100.0%	Total Accounts
1,705	<b>99.1%</b>	Shifted to Potable/SFR
15	0.9%	Remaining in Ag/SF/DI

a. Only Ag-related costs are included here (i.e., Ag w/ residence, Small Farms/DI are treated as potable customers for Tier 1 consumption).

b. Potable % allocations are adjusted due to the equivalent 5/8" and 3/4" meters for Ag w/Resid., Small Farms/DI accounts that are included in potable rates.

**WATER SYSTEM**

**Allocation of 2012 Revenue Requirements by Customer Class**

*(Excludes all Directly Assigned costs)*

Classification Components	Net Revenue Requirements ( <i>Canadian 50/50 Split</i> )	Ag w/ Resid., SF/DI Costs Shifted to Potable/SFR	Adjusted Net Rev. Reqts. (Includes Ag w/ Resid., SF/DI Accts.)	Customer Classes						
				Single Family Residential	Multi Family Residential	Comm. & Ind. (& potable landscape irrig.)	Agricultural Irrigation - w/ residence	Recreational Turf	Small Farm (& Domestic Irrig.)	Fire Hydrant/ Construction
Commodity	\$11,741,464.26953	\$14,180.54893	\$ 11,755,645	\$ 8,404,451	\$ 822,760	\$ 937,169	\$ 33,730	\$ 542,185	\$ 1,015,349	\$ -
Capacity	\$7,379,100.17916	\$44,449.55781	\$ 7,423,550	\$ 5,470,896	\$ 419,941	\$ 398,614	\$ 21,957	\$ 451,197	\$ 660,944	\$ -
Customer Related	\$3,636,445.72176	\$68,933.87102	\$ 3,705,380	\$ 3,296,904	\$ 74,121	\$ 160,929	\$ 19,651	\$ 10,779	\$ 142,995	\$ -
Public Fire Protection	\$725,918.36861	\$0.00000	\$ 725,918	\$ 529,493	\$ 59,118	\$ 112,125	\$ 3,043	\$ -	\$ 22,140	\$ -
<b>Net Revenue Requirement</b>	<b>\$ 23,482,929</b>	<b>\$ 127,564</b>	<b>\$ 23,610,493</b>	<b>\$ 17,701,744</b>	<b>\$ 1,375,941</b>	<b>\$ 1,608,837</b>	<b>\$ 78,381</b>	<b>\$ 1,004,162</b>	<b>\$ 1,841,428</b>	<b>\$ -</b>

Customer Class	Cost of Service Allocated Costs - 2012				Total Revenue		
	(COM2)	(CAP2)	(CA2)	(FP2)	COS Req't	at Present Rates	Percent Difference
Single Family Residential	\$ 8,404,451	\$ 5,470,896	\$ 3,296,904	\$ 529,493	\$ 17,701,744	\$ 17,243,671	3%
Multi Family Residential	\$ 822,760	\$ 419,941	\$ 74,121	\$ 59,118	\$ 1,375,941	\$ 1,190,543	16%
Comm. & Ind. (& potable landscape irrig.)	\$ 937,169	\$ 398,614	\$ 160,929	\$ 112,125	\$ 1,608,837	\$ 1,467,442	10%
Agricultural Irrigation - w/ residence	\$ 33,730	\$ 21,957	\$ 19,651	\$ 3,043	\$ 78,381	\$ 343,314	-77%
Recreational Turf	\$ 542,185	\$ 451,197	\$ 10,779	\$ -	\$ 1,004,162	\$ 483,259	108%
Small Farm (& Domestic Irrig.)	\$ 1,015,349	\$ 660,944	\$ 142,995	\$ 22,140	\$ 1,841,428	\$ 904,701	104%
Fire Hydrant/ Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 84,103	-100%
<b>Total</b>	<b>\$ 11,755,645</b>	<b>\$ 7,423,550</b>	<b>\$ 3,705,380</b>	<b>\$ 725,918</b>	<b>\$ 23,610,493</b>	<b>\$ 21,717,032</b>	<b>9%</b>

WATER SYSTEM

Calculation of Proposed Monthly Fixed Meter Service Charges for 2012

	Meter Size															
	5/8"	3/4"	1"	1.5"	1.5" T	2"	2" T	3"	3" T	4"	4" T	6"	6" T	8" T	12" T	
<b>Accounts/Equivalent Meters</b>																
Single Family Residential	3,987	29,213	1,042	103	7	18	46	-	2	1	4	-	1	-	-	
Multi Family Residential	79	315	133	72	6	133	20	10	3	2	-	4	-	-	-	
Comm. & Ind. (& potable landscape irrig.)	104	964	268	142	37	71	70	10	1	7	6	4	-	1	2	
Agricultural Irrigation - w/ residence <sup>1</sup>	-	206	-	-	-	-	-	-	-	-	-	-	-	-	-	
Recreational Turf	-	8	8	18	9	21	28	6	2	1	2	2	3	1	-	
Small Farm <sup>1</sup>	7	189	-	-	-	-	-	-	-	-	-	-	-	-	-	
Domestic Irrig. <sup>1</sup>	119	658	408	79	3	8	24	1	-	-	2	1	-	-	-	
Fire Hydrant/ Construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Accounts	-	4,296	31,553	1,859	414	62	251	188	27	8	11	14	11	4	2	
Hydraulic Capacity Factor <sup>2</sup>		1.0	1.0	1.7	3.3	4.0	5.3	5.3	10.7	11.7	16.7	21.0	33.3	46.7	80.0	
Total Equivalent Meters		4,296	31,553	3,160	1,366	248	1,330	996	289	94	184	294	366	187	160	
% of meters		9.6%	70.3%	7.0%	3.0%	0.6%	3.0%	2.2%	0.6%	0.2%	0.4%	0.7%	0.8%	0.4%	0.4%	
<b>Bi-Monthly Fixed Service Charges</b>																
Customer Costs (\$/Acct/bi-mo.) <sup>3</sup>	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	\$ 15.96	
Capacity Costs (\$/Acct/bi-mo.) <sup>4</sup>	\$ 29.08	\$ 29.08	\$ 49.44	\$ 95.97	\$ 116.32	\$ 154.13	\$ 154.13	\$ 311.16	\$ 340.24	\$ 485.64	\$ 610.69	\$ 968.38	\$ 1,358.06	\$ 2,326.44	\$ 4,847.71	
Bi-Monthly Meter Charge	\$ 45.04	\$ 45.04	\$ 65.39	\$ 111.92	\$ 132.28	\$ 170.08	\$ 170.08	\$ 327.12	\$ 356.20	\$ 501.60	\$ 626.65	\$ 984.34	\$ 1,374.01	\$ 2,342.39	\$ 4,863.67	
<b>Annual Revenue from Bi-Monthly Meter Charges</b>																
Customer Costs	\$ 3,705,380	\$ 411,305	\$ 3,020,925	\$ 177,983	\$ 39,637	\$ 5,936	\$ 24,031	\$ 17,999	\$ 2,585	\$ 766	\$ 1,053	\$ 1,340	\$ 1,053	\$ 383	\$ 191	
Capacity Costs	\$ 7,826,750	\$ 749,577	\$ 5,505,450	\$ 551,417	\$ 238,378	\$ 43,272	\$ 232,114	\$ 173,854	\$ 50,408	\$ 16,332	\$ 32,052	\$ 51,298	\$ 63,913	\$ 32,593	\$ 27,917	
	\$ 11,532,129	\$ 1,160,882	\$ 8,526,375	\$ 729,401	\$ 278,015	\$ 49,208	\$ 256,145	\$ 191,854	\$ 52,993	\$ 17,098	\$ 33,106	\$ 52,638	\$ 64,966	\$ 32,976	\$ 58,364	
<b>Annual Fixed Costs Allocated to Bi-Monthly Meter Charges</b>																
Customer Costs	\$ 3,705,380															
Capacity Costs	\$ 7,423,550															
	\$ 403,200	<i>Adjustment (deduction for Credit to Dual-Plumbed RW Single-Family customers for Basic Charges)</i>														
Total Capacity Costs	\$ 7,826,750															
Fixed Costs Recovered bi-monthly	\$ 11,532,129	\$ 11,532,129	<i>check</i>													
<b>Additional Fire Protection Fixed Charges (\$/Acct/bi-mo.)<sup>4</sup></b>																
Single Family Residential	\$ 529,493	\$ 2.46	\$ 2.46	\$ 4.18	\$ 8.12	\$ 9.85	\$ 13.05	\$ 13.05	N.A.	\$ 28.80	\$ 41.11	\$ 51.69	N.A.	\$ 114.96	N.A.	
Multi Family Residential	\$ 59,118	\$ 4.92	\$ 4.92	\$ 8.37	\$ 16.25	\$ 19.69	\$ 26.09	\$ 26.09	\$ 52.68	\$ 57.60	\$ 82.22	N.A.	\$ 163.95	N.A.	N.A.	
Comm. & Ind. (& potable landscape irrig.)	\$ 112,125	\$ 4.92	\$ 4.92	\$ 8.37	\$ 16.25	\$ 19.69	\$ 26.09	\$ 26.09	\$ 52.68	\$ 57.60	\$ 82.22	\$ 103.39	\$ 163.95	N.A.	\$ 393.87	
Agricultural Irrigation - w/ residence	\$ 3,043	N.A.	\$ 2.46	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
Small Farm (& Domestic Irrig.)	\$ 22,140	\$ 18.83	\$ 18.83	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
	\$ 725,918															
<b>Bi-Monthly Fixed Service Charges (\$/Acct/bi-mo.) (Including Fire Protection)</b>																
Single Family Residential	\$ 47.50	\$ 47.50	\$ 69.58	\$ 120.05	\$ 142.13	\$ 183.13	\$ 183.13	N.A.	\$ 385.00	\$ 542.71	\$ 678.34	N.A.	\$ 1,488.97	N.A.	N.A.	
Multi Family Residential	\$ 49.96	\$ 49.96	\$ 73.76	\$ 128.17	\$ 151.97	\$ 196.18	\$ 196.18	\$ 379.80	\$ 413.80	\$ 583.82	\$ 626.65	\$ 1,148.28	\$ 1,374.01	\$ 2,342.39	\$ 4,863.67	
Commercial and Industrial	\$ 49.96	\$ 49.96	\$ 73.76	\$ 128.17	\$ 151.97	\$ 196.18	\$ 196.18	\$ 379.80	\$ 413.80	\$ 583.82	\$ 730.04	\$ 1,148.28	\$ 1,374.01	\$ 2,736.26	\$ 5,684.38	
Agricultural Irrigation - w/ residence	N.A.	\$ 47.50	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
Small Farm (& Domestic Irrig.)	\$ 63.86	\$ 63.86	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	
<b>Annual Revenue from Bi-Monthly Meter Charges (Including Fire Protection)</b>																
Customer Costs	\$ 3,705,380	\$ 411,305	\$ 3,020,925	\$ 177,983	\$ 39,637	\$ 5,936	\$ 24,031	\$ 17,999	\$ 2,585	\$ 766	\$ 1,053	\$ 1,340	\$ 1,053	\$ 383	\$ 191	
Capacity Costs (Fire Protection Added)	\$ 8,552,668	\$ 814,662	\$ 5,999,099	\$ 597,718	\$ 264,260	\$ 48,766	\$ 265,462	\$ 191,546	\$ 56,730	\$ 18,060	\$ 36,739	\$ 56,261	\$ 71,782	\$ 33,283	\$ 30,280	
	\$ 12,258,048	\$ 12,258,048	<i>check</i>													

NOTES:

<sup>1</sup> All meters counted as 3/4"

<sup>2</sup> Source: AWWA Manual M22, Table 6-1. Displacement meters are used for smaller meters and Turbine class 2 for larger (T) meters.

<sup>3</sup> Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.

<sup>4</sup> Capacity costs are allocated by meter size and the hydraulic capacity of the meter.

<sup>5</sup> Fire Protection costs for Multi-Family and Commercial/Industrial are allocated based on equivalent meters.

**WATER SYSTEM**

**Proposed Consumptive Uniform & SFR Tiered Rates for 2012**

Potable Water Customer Class	Number of Accounts	Water Consumption (ccf/yr) <sup>1</sup>	Commodity Rates (\$/ccf)	Target Rev. Req't	Rate Structure
Single Family Residential	34,424	6,116,762	\$ 1.3740	\$ 8,404,451	Tiered
Multi Family Residential	777	598,805	\$ 1.3740	\$ 822,760	Uniform
Comm. & Ind. (& potable landscape irrig.)	1,687	682,072	\$ 1.3740	\$ 937,169	Uniform
Agricultural Irrigation - w/ residence <sup>2</sup>	206	24,549	\$ 1.3740	\$ 33,730	Tiered
Recreational Turf	109	394,603	\$ 1.3740	\$ 542,185	Uniform
Small Farm (& Domestic Irrig.) <sup>2</sup>	196	738,971	\$ 1.3740	\$ 1,015,349	Tiered
<b>Total</b>		<b>8,555,762</b>		<b>\$ 11,755,645</b>	

**Proposed Residential Tiered Rates for 2012**

Potable Water Customer Class	Upper Tier Breakpoint <sup>3</sup>	Water Consumption (ccf/yr) <sup>4</sup>	Commodity Rates		Target Rev. Req't
			(\$/ccf)	(\$/cf)	
Single Family Residential	Tier 1	1,800 cf/bi-mo.	\$1.1540	\$0.01154	\$2,881,501
	Tier 2	4,500 cf/bi-mo.	\$1.3929	\$0.01393	\$2,248,074
	Tier 3	-	2,005,818	\$1.6327	\$0.01633
<b>Total</b>		<b>6,116,762</b>			<b>\$8,404,451</b>

1. 2009 consumption less reductions to account for conservation in 2012. Recreational Turf is assumed to be 25% lower.

2. Includes only consumption occurring in Tier 1. Consumption above Tier 1 are Ag rates.

3. Same as current potable residential tiers.

4. Based on 2009 consumption by Tier for single-family residential consumption data less the estimated 2012 conservation of 10%.

## Report Table 3-1

### Current and Proposed Potable Water Base Charges (\$/Bi-Mo.)

<i>Meter Size</i>	Current Basic Charges <sup>a</sup> (\$/bi-mo.)	Proposed 2012 Basic Charges (\$/bi-mo.) <sup>b</sup>		
		Single-Family	Multi-Family & Commercial	Rec. Turf
5/8"	\$27.18	\$47.50	\$49.96	\$45.04
3/4"	\$27.18	\$47.50	\$49.96	\$45.04
1"	\$31.56	\$69.58	\$73.76	\$65.39
1.5"	\$36.65	\$120.05	\$128.17	\$111.92
1.5" T	\$42.54	\$142.13	\$151.97	\$132.28
2"	\$49.39	\$183.13	\$196.18	\$170.08
2" T	\$57.33	\$183.13	\$196.18	\$170.08
3"	\$66.56	\$369.72	\$379.80	\$327.12
3" T	\$77.28	\$385.00	\$413.80	\$356.20
4"	\$89.72	\$542.71	\$583.82	\$501.60
4" T	\$104.16	\$678.34	\$730.04	\$626.65
6"	\$120.92	\$1,075.65	\$1,148.28	\$984.34
6" T	\$140.39	\$1,488.97	\$1,374.01	\$1,374.01
8" T	\$162.98	\$2,550.70	\$2,736.26	\$2,342.39
10" T	\$189.20	\$4,039.68	\$4,333.55	\$3,709.76
12" T	\$219.66	\$5,315.03	\$5,684.38	\$4,863.67

a. Previously Board-adopted rate increase of 5% effective January 1, 2012.

b. Note: Charges include fire protection costs for all classes except Recreational Turf.

## Current and Proposed Volumetric Water Rates

Customer Class/Tier	Upper Tier Breakpoint	Volumetric Rates (\$/cf)		Change from Current (%)
		Current Rates <sup>d</sup>	Proposed	
Single Family Residential				
Tier 1	1,800 cf/bi-mo.	\$0.01374	\$0.01154	-16%
Tier 2	4,500 cf/bi-mo.	\$0.01659	\$0.01393	-16%
Tier 3	> 4,500 cf/bi-mo.	\$0.01945	\$0.01633	-16%
Agricultural Irrigation - w/ residence <sup>a</sup>	1,800 cf/bi-mo.	\$0.01374	\$0.01154	-16%
Small Farm <sup>a</sup>	1,800 cf/bi-mo.	\$0.01374	\$0.01154	-16%
Multi Family Residential	(single tier)	\$0.01500	\$0.01374	-8%
Comm. & Industrial <sup>b</sup>	(single tier)	\$0.01500	\$0.01374	-8%
Recreational Turf <sup>c</sup>				
Tier 1	13,300 cf/bi-mo. <sup>c</sup>	\$0.00751	\$0.01374	83%
Tier 2	75,000 cf/bi-mo. <sup>c</sup>	\$0.00774	\$0.01374	78%
Tier 3	>75,000 cf/bi-mo. <sup>c</sup>	\$0.00964	\$0.01374	43%

a. Includes only consumption occurring in Tier 1. Consumption above Tier 1 are Ag rates.

b. Includes potable landscape irrigation.

c. Current Rec Turf commodity charges consist of three tiers but tier breakpoints increase with meters sizes.

Only tier breakpoints for meters less than 2-inches are shown here.

d. Previously Board-adopted rate increase of 5% effective January 1, 2012.

**WATER SYSTEM**

**Allocation of 2012 Direct Assignment Revenue Requirements**

Classification Components	Net Revenue Requirements <sup>1</sup>	Customer Classes (Direct Assignment )					
		Agricultural Irrigation - w/ residence	Agricultural Irrigation - w/o residence	Small Farm	Domestic Irrigation	Raw Water - Landscape Irrigation	Raw Water - Continuous Flow/Flat
Commodity	\$ 210,353	\$ 148,093	\$ 5,161	\$ 25,269	\$ -	\$ 720	\$ 31,110
Capacity	\$ 110,544	\$ 78,092	\$ 2,722	\$ 13,325	\$ -	\$ 16,405	\$ -
Customer Related <sup>2</sup>	\$ 606	\$ -	\$ 364	\$ -	\$ -	\$ 243	\$ -
Public Fire Protection	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Net Revenue Requirement</b>	<b>\$ 321,504</b>	<b>\$ 226,185</b>	<b>\$ 8,247</b>	<b>\$ 38,594</b>	<b>\$ -</b>	<b>\$ 17,368</b>	<b>\$ 31,110</b>

<sup>1</sup> Assumes an allocation to Commodity, Capacity, Customer-Related and Fire Protection and classifications in the same proportion as non-DA costs with the exception of no fire protection costs.

<sup>2</sup> No Customer-Related costs are assigned to Ag w/ Resid., or Small Farms; these customers pay Customer-Related costs through their Potable charges. Ag w/o Resid, and Raw Water customers do not have potable charges, and therefore pay Customer-Related costs in DA charges.

**WATER SYSTEM**

**Allocation of 2012 Direct Assignment Revenue Requirements**

Customer Class - Direct Assignment	Cost of Service Allocated Costs - 2012 (Direct Assignment)				Total COS Revenue Req't
	(COM2)	(CAP2)	(CA2)	(FP2)	
Agricultural Irrigation - w/ residence	\$ 148,093	\$ 78,092	\$ -	\$ -	\$ 226,185
Agricultural Irrigation - w/o residence	\$ 5,161	\$ 2,722	\$ 364	\$ -	\$ 8,247
Small Farm	\$ 25,269	\$ 13,325	\$ -	\$ -	\$ 38,594
Domestic Irrigation	\$ -	\$ -	\$ -	\$ -	\$ -
Raw Water - Landscape Irrigation	\$ 720	\$ 16,405	\$ 243	\$ -	\$ 17,368
Raw Water - Continuous Flow/Flat	\$ 31,110	\$ -	\$ -	\$ -	\$ 31,110
<b>Total</b>	<b>\$ 210,353</b>	<b>\$ 110,544</b>	<b>\$ 606</b>	<b>\$ -</b>	<b>\$ 321,504</b>

WATER SYSTEM

Calculation of Proposed Monthly Fixed Meter Service Charges for Ag and Small Farm

Author:  
5/8" and 3/4" meters are counted in Potable water Meter service charge calculations.

	Meter Size																Total
	5/8"	3/4"	1"	1.5" T	2"	2" T	3"	3" T	4"	4" T	6"	6" T	8"	12" T			
<b>Accounts/Equivalent Meters</b>																	
Agricultural Irrigation - w/ residence			10	14	6	6	77	1	35	-	44	1	8	-	-	202	
Small Farm (ONLY)			43	15	5	-	26	-	1	-	2	-	-	-	-	92	
Total Accounts			53	29	11	6	103	1	36	-	46	1	8	-	-	294	
Agricultural Irrigation - without residence			-	-	1	-	8	-	-	-	-	-	-	-	-	9	
Raw Water - Landscape Irrigation		1	2	1	-	1	-	-	-	-	-	-	-	-	-	6	
Total Accounts		1	2	1	1	1	8	-	-	-	-	1	-	-	-	15	
Hydraulic Capacity Factor <sup>1</sup>	1.0	1.0	1.7	3.3	4.0	5.3	5.3	10.7	11.7	16.7	21.0	33.3	46.7	80.0	166.7		
Total Equivalent Meters	-	1	94	99	48	37	588	11	421	-	966	67	374	-	-	2,705	
% of equiv. meters	0.0%	0.0%	3.5%	3.7%	1.8%	1.4%	21.7%	0.4%	15.6%	0.0%	35.7%	2.5%	13.8%	0.0%	0.0%	100.0%	
<b>Bi-Monthly Fixed Service Charges (\$/Acct/bi-mo.)</b>																	
Meter Charge - Ag w/o Res. & Raw Lndscp.																	
Customer Costs - Ag w/o Res. & Raw Lndscp. <sup>2</sup>	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	\$ 6.74	
Capacity Costs - Ag w/o Res. & Raw Lndscp. <sup>3</sup>	\$ 6.81	\$ 6.81	\$ 11.58	\$ 22.48	\$ 27.24	\$ 36.10	\$ 36.10	\$ 72.88	\$ 79.69	\$ 113.75	\$ 143.03	\$ 226.81	\$ 318.08	\$ 544.89	\$ 1,135.41		
Meter Charge - Ag w/o Res. & Raw Landscape	\$ 13.55	\$ 13.55	\$ 18.32	\$ 29.22	\$ 33.98	\$ 42.84	\$ 42.84	\$ 79.62	\$ 86.43	\$ 120.48	\$ 149.77	\$ 233.55	\$ 324.82	\$ 551.63	\$ 1,142.15		
Meter Charge - Ag w/ Res. & Small Farm (ONLY)																	
Add'l Capacity Costs - Ag w/ Res. & SF (ONLY)	N.A.	N.A.	\$ 11.58	\$ 22.48	\$ 27.24	\$ 36.10	\$ 36.10	\$ 72.88	\$ 79.69	\$ 113.75	\$ 143.03	\$ 226.81	\$ 318.08	\$ 544.89	\$ 1,135.41		
plus Single-Family Basic Charge for 3/4" Meter	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	\$ 47.96	
Total Meter Charge - Ag w/ Res. & Small Farm (ONLY)	\$ 47.96	\$ 47.96	\$ 59.54	\$ 70.43	\$ 75.20	\$ 84.06	\$ 84.06	\$ 120.84	\$ 127.65	\$ 161.70	\$ 190.99	\$ 274.77	\$ 366.04	\$ 592.84	\$ 1,183.37		
<b>Annual Revenue from Bi-Monthly Meter Charges</b>																	
Customer Costs - Ag w/Res. & Small Farm (ONLY)	N.A.	N.A.	\$ 3,682.08	\$ 3,910.93	\$ 1,798.13	\$ 1,299.56	\$ 22,309.05	\$ 437.27	\$ 17,212.99	N.A.	\$ 39,477.08	\$ 1,360.86	\$ 15,267.74	N.A.	N.A.	\$ 106,756	
Customer Costs - Ag w/o Res. & Raw Lndscp.	N.A.	\$ 81.30	\$ 219.81	\$ 175.29	\$ 203.90	\$ 257.02	\$ 2,056.18	N.A.	N.A.	N.A.	\$ 1,401.29	N.A.	N.A.	N.A.	N.A.	\$ 4,395	
Customer Costs - Ag w/o Res. & Raw Landscape	N.A.	\$ 81	\$ 3,902	\$ 4,086	\$ 2,002	\$ 1,557	\$ 24,365	\$ 437	\$ 17,213	N.A.	\$ 39,477	\$ 2,762	\$ 15,268	N.A.	N.A.	\$ 111,150	
<b>Annual Fixed Costs Allocated to Bi-Monthly Meter Charges</b>																	
Customer Costs - Ag w/Res. & Small Farm (ONL)	\$ -																
Customer Costs - Ag w/o Res. & Raw Lndscp.	\$ 606																
Capacity Costs - All DA Classes	\$ 110,544																
Fixed Costs Recovered bi-monthly	\$ 111,150																

Note: ALL Ag w/Resid, Small Farms meters are counted as 3/4" meters in the Potable Fixed Meter charges, and are assigned the 3/4" Potable Residential Fixed Meter charge. Exhibit 9a - DA only assigns capacity charges for meters larger than 3/4" as an additional charge (but no customer costs).

NOTES:

<sup>1</sup> Source: AWWA Manual M22, Table 6-1. Displacement meters are used for smaller meters and Turbine class 2 for larger (T) meters.

<sup>2</sup> Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.

<sup>3</sup> Capacity costs are allocated by meter size and the hydraulic capacity of the meter.

## Report Table 3-3

### Basic Charges - Direct Assignment Classes for 2012

Customer Class/ Meter Size	Current Basic Charges	Proposed Basic Charges (\$/bi-mo.) <sup>a</sup>	
		Ag w/ Resid. & Small Farms <sup>b</sup>	Ag w/o Resid. & Raw
<b>Current Basic Charges</b>			
Domestic Irrigation	\$74.66	--	--
Metered Landscape	\$84.87	--	--
Small Farms (Potable Charges)		--	--
Ag w/o Residence (Potable Charges)		--	--
5/8"	\$27.18	\$47.50	\$13.55
3/4"	\$27.18	\$47.50	\$13.55
1"	\$31.56	\$59.54	\$18.32
1.5"	\$36.65	\$70.43	\$29.22
1.5" T	\$42.54	\$75.20	\$33.98
2"	\$49.39	\$84.06	\$42.84
2" T	\$57.33	\$84.06	\$42.84
3"	\$66.56	\$120.84	\$79.62
3" T	\$77.28	\$127.65	\$86.43
4"	\$89.72	\$161.70	\$120.48
4" T	\$104.16	\$190.99	\$149.77
6"	\$120.92	\$274.77	\$233.55
6" T	\$140.39	\$366.04	\$324.82
8" T	\$162.98	\$592.84	\$551.63
10" T	\$189.20	\$938.92	\$873.64
12" T	\$219.66	\$1,183.37	\$1,142.15

a. Charges exclude fire protection costs.

b. All Ag w/ Residence and Small Farm customer charges include the Potable Single-Family Basic Charge for a 3/4" meter plus additional capacity charges that reflect Ag-related infrastructure costs only.

Proposed Consumptive Tiered Rates for 2012  
 Ag w/& w/o Residence

Customer Class/Tier	Tier Range <sup>a,b</sup>	Water Consumption (ccf/yr) <sup>c</sup>	Commodity Rates		Total Rate Revenue	
			(\$/ccf)	(\$/cf)		
<b>Agricultural Irrigation</b>						
Agricultural Irrigation - (with residence)	Tier 1 (Potable Rate)	0-1,800 cf/bi-mo.	24,549	\$1.1540	\$0.01154	\$28,329
Agricultural Irrigation - (w/ & w/o residence) <sup>d</sup>	Tier 2 (Ag Irrig. Rate)	> 1,800 cf/bi-mo.	1,568,662	\$0.0960	\$0.00096	\$150,590
<i>Total - All Agricultural Irrigation Tiers</i>			1,593,211			\$178,919
<b>Small Farms</b>						
Small Farms	Tier 1 (Potable Rate)	0-1,800 cf/bi-mo.	22,903	\$1.1540	\$0.01154	\$26,430
Small Farms	Tier 2 (Ag Irrig. Rate)	> 1,800 cf/bi-mo.	262,693	\$0.0960	\$0.00096	\$25,218
<i>Total - All Small Farms Tiers</i>			285,596			\$51,648

a. Same as potable residential Tier 1 for agricultural with residence; Agricultural w/ residence is only charged Tier 2 rates after 1,800 cf.

b. Same as potable residential for Tiers 1 and 2.

c. Consumption for Tier 2 only includes usage greater than Tier 1. Reflects 2010 consumption plus 21.3% to approximate 2009 usage.

d. These are Agricultural rates based only on direct assignment costs.

## Proposed Raw Rates for 2012

Customer Class/Tier		Basic Charge or Flat Rate <sup>a</sup>	Water Consumption (ccf/yr) <sup>b</sup>	Commodity Rates	
				(\$/ccf)	(\$/cf)
Metered Landscape Irrigation	Uniform Rate <sup>a</sup>	(Same as Ag Irrig.)	--	\$0.0960	\$0.00096
Raw Water - Flat Rates <sup>b</sup>	1/2" flow	\$373.00	3,888	\$0.0960	\$0.00096
	1" flow	\$746.00	7,776	\$0.0960	\$0.00096
	2" flow	\$1,493.00	15,552	\$0.0960	\$0.00096
	4" flow	\$2,986.00	31,104	\$0.0960	\$0.00096
Raw Water - Continuous Flow <sup>c</sup>	Uniform Rate	N.A.	--	\$0.0960	\$0.00096

a. Same as Ag Irrigation Tier 2.

b. Based on miner's inch calculations (129,600 cf/miner's inch) and assumes year-round usage.

## Calculation of Ag/Small Farm Consumption Rates

Customer Class/Tier		Tier Range <sup>a</sup>	Water Consumption (ccf/yr) <sup>b</sup>	Commodity Rates		Total Rate Revenue
				(\$/ccf)	(\$/cf)	
Ag Irrigation - (with & w/o residence)	Tier 2 (Ag Irrig.)	> 1,800 cf/bi-mo.	1,593,211	\$0.0960	\$0.00096	\$152,947
Small Farms	Tier 2 (Small Farm)	> 1,800 cf/bi-mo.	262,693	\$0.0960	\$0.00096	\$25,218
Total			1,855,904			\$178,165

a. Same as potable residential for Tier 1.

b. Includes all consumption over Tier 1 usage; reflects 2010 consumption but adjusted up by 21.3% to estimate more typical 2009 usage.

Note: Tier 2 reflects "Ag Irrigation", and together generate the revenue requirements for these combined classes.

Target Revenue \$ 178,523

## SUMMARY OF WATER CONSUMPTION DATA:

<b>Data from Feb 2011:</b>				
<b>Current Single-Family 3-Tier Rate Structure</b>				
Tier 1 Breakpoint	1,800 cf			
Tier 2 Breakpoint	4,500			
<b>Number of Meters</b>				
Tier 1	Tier 2	Tier 3	Total	
17,807	9,077	7,114	33,998	
52%	27%	21%		
<b>Water Consumption</b>				
Tier 1	Tier 2	Tier 3	Total	
Tier 1 Water Consumption	91,346,876 98,028,000 76,834,800 266,209,676 40.8%			
Tier 2 Water Consumption	-- 56,815,028 115,252,200 172,067,228 26.4%			
Tier 3 Water Consumption	-- -- 213,844,779 213,844,779 32.8%			
<b>Total</b>	<b>652,121,683</b>			

reference: Summary of 2010 residential usage 2-18-11 v2.xlsx

<b>Current Single-Family- Peaking Factors</b>		
	Consumption	Peaking Factor
Jan-Feb	54,087,562	0.51
Mar-April	47,278,336	0.45
May-June	71,480,270	0.67
July-Aug	187,392,739	<b>1.76</b>
Sept-Oct	186,231,954	1.75
Nov-Dec	90,805,550	0.85
Annual Avg.	106,212,735	

<b>2010 to 2009 Single-Family Adjustment:</b>		
	Annual Consumption	Factor
\$2,010.00000	6,521,217	
\$2,009.00000	6,796,402	
		<b>1.0422</b>

<b>Current Single-Family</b>	
<b>No. Meters by Size</b>	
5/8"	3,987
3/4"	29,213
1"	1,042
1.5"	103
1.5" T	7
2"	18
2" T	46
3"	0
3" T	2
4"	1
4" T	4
6"	0
6" T	1
<b>Total</b>	<b>34,424</b>

Nov.-Dec. 2010 Data.

<b>Data from Feb 2011:</b>					
<b>Agricultural w/ and w/o Residence - SUMMARY</b>					
<i>Includes IMS and Non-IMS</i>					
Tier 1 Breakpoint	1,800	cf	w/Resid. Ac		206
Tier 2 Breakpoint	4,500	cf	w/o Resid.a		9
Tier 3 Breakpoint	20,000	cf	Total		215
Tier 4 Breakpoint	40,000	cf			
<b>Summary of Annual Water Consumption (w/ and w/o Residence)</b>					
<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>	<b>Tier 4</b>	<b>Tier 5</b>	<b>Total</b>
2,023,889	2,706,000	105,676,330	15,240,093	7,726,347	133,372,659
2%	2%	79%	11%	6%	100%
<i>less</i>					
<b>Summary of Annual Water Consumption (w/o Residence)</b>					
<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>	<b>Tier 4</b>	<b>Tier 5</b>	<b>Total</b>
0	0	3,929,100	408,300	86,200	4,423,600
0%	0%	89%	9%	2%	100%
<i>equals</i>					
<b>Summary of Annual Water Consumption (w/ Residence)</b>					
<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>	<b>Tier 4</b>	<b>Tier 5</b>	<b>Total</b>
2,023,889	2,706,000	101,747,230	14,831,793	7,640,147	128,949,059
2%	2%	79%	12%	6%	100%
Same as Potable Residential Tier 1	Consumption billed as a uniform tier (Tier 2) for all usage above 1,800 cf that is charged the Potable Residential volume charge.				
<b>Agricultural w/ and w/o Residence - PEAKING FACTORS</b>					
<b>Total Consumption:</b>				<b>Peaking Factors:</b>	
<u>Annual</u>	<u>Annual Avg.</u>	<u>July-Aug</u>	<u>Sept-Oct</u>	<u>July-Aug</u>	<u>Sept-Oct</u>
114,314,129	19,052,355	45,738,250	45,199,790	2.40	2.37
19,058,530	3,176,422	4,984,580	8,208,060	1.57	2.58
4,423,600	737,267	1,902,120	1,498,280	2.58	2.03
128,949,059	21,491,510	48,820,710	51,909,570	2.27	2.42
reference file: Ag Summary 2-16-11 v2.xlsx					

<b>Data from Feb 2011 to Use in Rates:</b>								
<b>Small Farm - SUMMARY</b>							<b>Small Farm - Meters by Size</b>	
							<b>No. Meters by Size</b>	
Tier 1 Breakpoint	1,800	cf				5/8"	7	
Tier 2 Breakpoint	4,500	cf				3/4"	97	
Tier 3 Breakpoint	40,000	cf				1"	43	
Total Accounts				196		1.5"	15	
<b>Summary of Annual Water Consumption</b>						1.5" T	5	
	<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>	<b>Tier 4</b>	<b>Total</b>	2"	0	
Tier 1 Water Consumption						2" T	26	
	192,598	460,800	945,000	289,800	1,888,198	3"	0	8%
Tier 2 Water Consumption						3" T	1	
	--	289,240	1,417,500	434,700	2,141,440	4"	0	9%
Tier 3 Water Consumption						4" T	2	
	--	--	5,663,799	5,715,500	11,379,299	6"	0	48%
Tier 4 Water Consumption						6" T	0	
	--	--	--	8,136,400	8,136,400	Total	196	35%
<b>Total</b>					<b>23,545,337</b>			100%

reference file: *Small Farm Summary 2-16-11 v2.xlsx*

<b>Data from Feb 2011 to Use in Rates:</b>								
<b>Domestic Irrigation - SUMMARY</b>					<b>Dom. Irr. - Meters by Size</b>		<b>Small Farm &amp; D.I. - Meters by Size</b>	
					<b>No. Meters by Size</b>		<b>No. Meters by Size</b>	
Tier 1 Breakpoint	1,800	cf			5/8"	119	5/8"	126
Tier 2 Breakpoint	4,500	cf			3/4"	658	3/4"	755
Tier 3 Breakpoint	40,000	cf			1"	408	1"	451
Total Accounts				1,303	1.5"	79	1.5"	94
<b>Summary of Annual Water Consumption</b>						1.5" T	3	1.5" T
	<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>	<b>Tier 4</b>	<b>Total</b>	2"	8	2"
Tier 1 Water Consumption						2" T	24	2" T
	2,080,351	4,006,800	5,632,200	734,400	12,453,751	3"	1	3"
Tier 2 Water Consumption						3" T	0	3" T
	--	2,439,961	8,448,300	1,101,600	11,989,861	4"	0	4"
Tier 3 Water Consumption						4" T	2	4" T
	--	--	27,613,193	14,484,000	42,097,193	6"	1	6"
Tier 4 Water Consumption						6" T	0	6" T
	--	--	--	12,172,080	12,172,080	Total	1,303	Total
<b>Total</b>					<b>78,712,885</b>			<b>1,499</b>

reference file: *Domestic Irrigation Summary 2-16-11 v2.xlsx*

reference file: *Domestic Irrigation Summary 2-16-11 v2.xlsx*

<b>Data from Feb 2011 to Use in Rates:</b>							
<b>Potable Rec Turf - SUMMARY</b>							
	Annual Usage in Cubic Feet	Annual Usage per Acre	July-Aug Usage in Cubic Feet	Annual Usage per Acre	Sept-Oct Usage in Cubic Feet	Annual Usage per Acre	
Total Usage	50,483,348	39,187,475	19,420,090	17,498,200	19,080,780	15,244,482	
Total Usage by acre	446,755	346,792	171,859	154,851	168,856	134,907	
Total Accounts							113

reference file: *Potable Rec Turf Summary 2010.xlsx*

Agricultural w/ and w/o Residence - No. Meters by Size					Rec Turf - Meters by Size	
	AMI in IMS	+ AMI Non-IMS	AMI w/o Resid.	Net w/ Resid.	No. Meters by Size	
5/8"	0	0	0	0	5/8"	0
3/4"	2	2	0	4	3/4"	8
1"	3	7	0	10	1"	8
1.5"	5	9	0	14	1.5"	18
1.5" T	5	2	1	6	1.5" T	9
2"	5	1	0	6	2"	21
2" T	56	29	8	77	2" T	28
3"	1	0	0	1	3"	6
3" T	25	10	0	35	3" T	2
4"	0	0	0	0	4"	1
4" T	35	9	0	44	4" T	2
6"	1	0	0	1	6"	2
6" T	8	0	0	8	6" T	3
Total	146	69	9	206	8" T	1
Nov.-Dec. 2010 Data.					Total	109
					reference file: <i>Potable Rec Turf Summary 2010.xlsx</i>	

## SECTION 2. SEWER RATE MODEL TABLES

### SEWER SYSTEM

#### Project Data

#### Customer Accounts, Consumption, and Revenue at Present Rates

Wastewater Utility Customer Classes	Number of Accounts	Estimated Consumption <sup>1,2</sup> (ccf.)	Actual Rate Revenue (Jul.09-Jun.10)	2011 projected Revenue	Percent of Wastewater/ Recycled Water Revenue
Single Family Residential	19,825	1,966,326	11,604,344	\$ 17,456,688	88.8%
Multi Family Residential	340	315,441	1,363,678	\$ 2,051,412	10.4%
<b>New Commercial Classes:</b>					
Commercial - Low	468	156,124	--	--	--
Commercial - Medium/Low	170	-	--	--	--
Commercial - Medium	30	3,830	--	--	--
Commercial - Medium/High	103	31,801	--	--	--
Commercial - High	-	-	--	--	--
Schools	23	44,442	101,943	\$ 153,355	0.8%
<b>Total Wastewater Accounts:</b>	<b>20,959</b>	<b>2,517,963</b>	<b>13,069,965</b>	<b>19,661,456</b>	<b>100%</b>
Commercial Landscape (Recycled Only)	155	284,882	115,245	\$ 140,150	19%
Recreational Turf (Recycled Only)	11	157,252	29,252	\$ 35,574	5%
Residential - Dual Plumbed (Recycled Only)	3,890	687,812	475,841	\$ 578,674	77%
<b>Total Recycled Water Accounts:</b>	<b>4,056</b>	<b>1,129,946</b>	<b>620,338</b>	<b>754,398</b>	<b>100%</b>
<b>Current Commercial Classes:</b>					
Commercial - Laundromat	4	2,346	7,831	\$ 11,781	0.1%
Commercial - Repair Shops/Service Stations	64	16,168	117,628	\$ 176,950	0.9%
Commercial - Light Industrial	56	15,308	157,570	\$ 237,037	1.2%
Commercial - Market	16	33,306	190,819	\$ 287,053	1.5%
Commercial - Restaurant	96	59,648	587,532	\$ 883,839	4.5%
Commercial - Other	546	181,851	984,076	\$ 1,480,368	7.5%

#### NOTES

1. Consumption for wastewater customers estimated from winter average calculation, November 2009 to February 2010, recycled water customers are from 2009 CAFR p. 68
2. Used state revenue guidelines to estimate school effluent based on number of staff/students
3. Recycled water consumption based on actual sales from 2009 CAFR

### SEWER SYSTEM

#### Escalation Factors

	2010	Projected									
		2011	2012	2013	2014	2015	2016	2017	2018	2019	
Rate Revenue	Approved	15.0%	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Misc. Revenue	Budget	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
O&M Expenses	Budget	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Capital Projects	CIP	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fixed	Fixed	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth	Budget	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	2.0%	2.0%

**SEWER SYSTEM**  
**Development of Revenue Requirements**

	Budget		Budget		Projected		
	2010	2011	2012	2013	2014	2015	2016
<b>SOURCES OF FUNDS</b>	<i>Adopted Rate Increases</i>		15%	5%	5%	5%	5%
	<i>Planned Rate Increases</i>		-	-	-	-	-
Operating Revenues							
Wastewater service	\$ 16,863,315	\$ 19,661,456	\$ 20,362,453	\$ 21,380,576	\$ 22,449,604	\$ 22,449,604	\$ 22,449,604
Recycled water sales	\$ 647,035	\$ 754,398	\$ 781,295	\$ 820,360	\$ 861,378	\$ 861,378	\$ 861,378
<b>Total Revenue at Present Rates</b>	<b>\$ 17,510,350</b>	<b>\$ 20,415,854</b>	<b>\$ 21,143,748</b>	<b>\$ 22,200,935</b>	<b>\$ 23,310,982</b>	<b>\$ 23,310,982</b>	<b>\$ 23,310,982</b>
Miscellaneous Revenues							
Investment income	\$ 400,000	\$ 360,880	\$ 350,000	\$ 360,880	\$ 350,000	\$ 360,880	\$ 350,000
Surcharges	\$ 867,597	\$ 884,949	\$ 884,949	\$ 884,949	\$ 884,949	\$ 884,949	\$ 884,949
IPP and cross connection program fees	\$ 50,000	\$ 425,000	\$ -	\$ -	\$ -	\$ -	\$ -
Property Taxes	\$ 4,100,000	\$ 4,160,000	\$ 3,720,000	\$ 3,720,000	\$ 3,720,000	\$ 3,720,000	\$ 3,720,000
Other income	\$ 800,000	\$ 816,000	\$ 1,241,000	\$ 1,241,000	\$ 1,241,000	\$ 1,241,000	\$ 1,241,000
<b>Total Miscellaneous Revenues</b>	<b>\$ 6,217,597</b>	<b>\$ 6,646,829</b>	<b>\$ 6,195,949</b>	<b>\$ 6,206,829</b>	<b>\$ 6,195,949</b>	<b>\$ 6,206,829</b>	<b>\$ 6,195,949</b>
<b>TOTAL SOURCES OF FUNDS</b>	<b>\$ 23,727,947</b>	<b>\$ 27,062,683</b>	<b>\$ 27,339,697</b>	<b>\$ 28,407,764</b>	<b>\$ 29,506,931</b>	<b>\$ 29,517,811</b>	<b>\$ 29,506,931</b>

**APPLICATIONS OF FUNDS**

	Budget		Budget		Projected		
	2010	2011	2012	2013	2014	2015	2016

Operation and Maintenance Expense							
<i>Direct Expenses (Operations)</i>							
Administration	\$ 129,386	\$ 139,459	\$ 138,987	\$ 141,767	\$ 144,603	\$ 147,495	\$ 150,444
Wastewater Operations	\$ 9,232,787	\$ 8,893,052	\$ 8,853,674	\$ 9,030,747	\$ 9,211,362	\$ 9,395,590	\$ 9,583,501
Recycled Water Operations	\$ 408,227	\$ 593,429	\$ 573,528	\$ 584,999	\$ 596,699	\$ 608,633	\$ 620,805
<b>Total Direct Expenses</b>	<b>\$ 9,770,400</b>	<b>\$ 9,625,940</b>	<b>\$ 9,566,189</b>	<b>\$ 9,757,513</b>	<b>\$ 9,952,663</b>	<b>\$ 10,151,717</b>	<b>\$ 10,354,751</b>
<i>Indirect Expenses</i>							
Natural Resources: Environmental Engineering	\$ 755,894	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Management	\$ 80,030	\$ 91,293	\$ 74,409	\$ 75,897	\$ 77,415	\$ 78,963	\$ 80,542
Wastewater	\$ 793,011	\$ 232,423	\$ 169,791	\$ 173,187	\$ 176,651	\$ 180,184	\$ 183,787
Recycled water	\$ -	\$ 7,100	\$ 13,751	\$ 14,026	\$ 14,307	\$ 14,593	\$ 14,885
GIS	\$ 149,934	\$ 117,806	\$ 128,524	\$ 131,094	\$ 133,716	\$ 136,391	\$ 139,118
Inspection	\$ (21,139)	\$ 12,080	\$ 8,890	\$ 9,068	\$ 9,249	\$ 9,434	\$ 9,623
Records	\$ 126,338	\$ 191,541	\$ 195,400	\$ 199,308	\$ 203,295	\$ 207,361	\$ 211,508
Environmental Review	\$ -	\$ 25,238	\$ 55,538	\$ 56,649	\$ 57,782	\$ 58,937	\$ 60,116
Environmental Compliance	\$ -	\$ 238,648	\$ 378,055	\$ 385,616	\$ 393,328	\$ 401,195	\$ 409,219
Communications	\$ 199,233	\$ 214,566	\$ 203,269	\$ 207,334	\$ 211,481	\$ 215,710	\$ 220,024
Office of the General Manager	\$ 1,066,195	\$ 1,188,113	\$ 975,434	\$ 994,943	\$ 1,014,842	\$ 1,035,139	\$ 1,055,841
Finance	\$ 1,799,086	\$ 2,149,227	\$ 2,460,709	\$ 2,509,923	\$ 2,560,122	\$ 2,611,324	\$ 2,663,551
Human Resources	\$ 857,879	\$ 856,964	\$ 829,617	\$ 846,210	\$ 863,134	\$ 880,396	\$ 898,004
Information Technology	\$ 983,583	\$ 870,329	\$ 922,381	\$ 940,828	\$ 959,645	\$ 978,838	\$ 998,415
New letter of credit at 1.2%	\$ 297,842	\$ 529,498	\$ 529,498	\$ 529,498	\$ 529,498	\$ 529,498	\$ 529,498
<b>Total Indirect Expenses</b>	<b>\$ 7,087,886</b>	<b>\$ 6,724,826</b>	<b>\$ 6,945,265</b>	<b>\$ 7,073,581</b>	<b>\$ 7,204,462</b>	<b>\$ 7,337,962</b>	<b>\$ 7,474,131</b>
<b>Total Operating and Maintenance Expenses</b>	<b>\$ 16,858,286</b>	<b>\$ 16,350,766</b>	<b>\$ 16,511,455</b>	<b>\$ 16,831,094</b>	<b>\$ 17,157,126</b>	<b>\$ 17,489,678</b>	<b>\$ 17,828,882</b>
Debt Service Installments							
Total Wastewater Debt Service	\$ 6,432,424	\$ 8,621,164	\$ 9,129,983	\$ 9,413,659	\$ 9,932,111	\$ 11,441,709	\$ 11,432,590
<b>Total Revenue Requirements</b>	<b>\$ 23,290,710</b>	<b>\$ 24,971,929</b>	<b>\$ 25,641,437</b>	<b>\$ 26,244,752</b>	<b>\$ 27,089,237</b>	<b>\$ 28,931,387</b>	<b>\$ 29,261,472</b>
Less: Non-Rate Revenue	\$ 6,217,597	\$ 6,646,829	\$ 6,195,949	\$ 6,206,829	\$ 6,195,949	\$ 6,206,829	\$ 6,195,949
<b>NET REVENUE REQUIREMENTS</b>	<b>\$ 17,073,113</b>	<b>\$ 18,325,101</b>	<b>\$ 19,445,488</b>	<b>\$ 20,037,924</b>	<b>\$ 20,893,288</b>	<b>\$ 22,724,559</b>	<b>\$ 23,065,523</b>
Less: Revenues at Present Rates	\$ 17,510,350	\$ 20,415,854	\$ 21,143,748	\$ 22,200,935	\$ 23,310,982	\$ 23,310,982	\$ 23,310,982
Balance/(Deficiency) of Funds	\$ 437,237	\$ 2,090,753	\$ 1,698,260	\$ 2,163,012	\$ 2,417,694	\$ 586,423	\$ 245,460
<b>Balance/(Deficiency) as a % of Rates</b>	<b>2.5%</b>	<b>10.2%</b>	<b>8.0%</b>	<b>9.7%</b>	<b>10.4%</b>	<b>2.5%</b>	<b>1.1%</b>
<b>Proposed Rate Adjustment</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>5%</b>	<b>5%</b>
Additional Rate Revenue From Increase	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,165,549	\$ 2,389,376
<b>Balance/(Deficiency) of Funds, Adjusted</b>	<b>\$ 437,237</b>	<b>\$ 2,090,753</b>	<b>\$ 1,698,260</b>	<b>\$ 2,163,012</b>	<b>\$ 2,417,694</b>	<b>\$ 1,751,972</b>	<b>\$ 2,634,835</b>
Debt Service Coverage Ratio							
Before Rate Adjustment, 1.25 Required	1.09	1.36	1.36	1.40	1.40	1.28	1.25
Before Adjustment, w/o FCCs, 1.0 preferred	1.07	1.24	1.19	1.23	1.24	1.05	1.02
After Rate Adjustment, 1.25 Required	1.09	1.36	1.36	1.40	1.40	1.38	1.46
After Adjustment, w/o FCCs, 1.0 preferred	1.07	1.24	1.19	1.23	1.24	1.15	1.23

**SEWER SYSTEM**

**Debt Service - Wastewater**

Bond Description	Installments									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 <sup>a</sup>
2003 A COPs (unrefunded portion)	3,298,873	1,204,409	126,792	177,711	178,701	177,135	174,573	173,862	175,074	175073.8375
2004A COPs	(2,082,564)	3,438,754	3,439,287	3,436,330	3,007,792	2,470,346	2,464,493	2,466,030	2,462,837	2462837.212
20008A COPs	3,199,721	432,303	1,080,758	2,161,515	2,161,515	2,161,515	2,161,515	2,161,515	2,161,515	2161515.125
2009 A COPs	243,551	3,214,164	3,214,164	3,214,164	3,214,164	4,428,564	4,427,860	4,428,212	4,428,740	4428740.36
2010A COPs	1,607,082	331,533	331,533	331,533	331,533	331,533	331,533	331,533	331,533	331532.6443
2011A COPs (refunding)	165,761	-	550,834	610,154	610,154	610,154	610,154	2,591,562	2,590,028	2590027.545
2011A COPs (restructuring)		-	386,616	428,252	428,252	428,252	428,252	428,252	428,252	428251.805
Prepayment on 2004A debt				(946,000)						
2013A (new issue)		-	-	-	-	834,210	834,210	834,210	834,210	834210
<b>Total Annual debt service installment</b>	<b>6,432,424</b>	<b>8,621,164</b>	<b>9,129,983</b>	<b>9,413,659</b>	<b>9,932,111</b>	<b>11,441,709</b>	<b>11,432,590</b>	<b>13,415,175</b>	<b>13,412,189</b>	<b>13,412,189</b>

a. Assumed to be the same as 2018.

**SEWER SYSTEM**

**Capital Improvement Plan**

Wastewater CIP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<i>Expenditures</i>										
Wastewater	\$ 7,269,824	\$ 4,366,000	\$ 1,315,000	\$ 1,325,000	\$ 1,425,000	\$ 225,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000	\$ 3,000,000
Recycled Water	\$ 3,120,000	\$ 565,000	\$ -	\$ 100,000	\$ 1,500,000	\$ -				
General District	\$ 1,271,486	\$ 1,971,400	\$ 1,106,000	\$ 2,452,000	\$ 3,451,600	\$ 200,000				
<i>Total</i>	<b>\$ 11,661,310</b>	<b>\$ 6,902,400</b>	<b>\$ 2,421,000</b>	<b>\$ 3,877,000</b>	<b>\$ 6,376,600</b>	<b>\$ 425,000</b>	<b>\$ 3,000,000</b>	<b>\$ 3,000,000</b>	<b>\$ 3,000,000</b>	<b>\$ 3,000,000</b>
<i>Funding</i>										
Facility capacity charges	\$ 120,798	\$ 1,042,200	\$ 1,563,300	\$ 1,563,300	\$ 1,563,300	\$ 2,605,500	\$ 2,605,500	\$ 1,600,000	\$ 1,600,000	\$ 1,600,000

<b>Report Table 2-1</b>		
	<b>2012 Water (in millions)</b>	<b>2012 Wastewater (in millions)</b>
Total Revenue Requirements	\$37.4	\$25.6
Net Revenue from Rates	\$19.7	\$19.4
Other Non-Rate Revenue		
Property Tax and Misc.	\$9.7	\$6.2
Hydro Revenue	\$8.0	--
Total Other Non-Rate Revenue	\$17.7	\$6.2
Balance of Funds	<b>\$4.2</b>	<b>\$1.7</b>

*Note: Budgets and reserves fluctuate over the fiscal year; this chart reflects current 2012 levels.*

#### SEWER SYSTEM

#### Development of the Volume Allocation Factor

Customer Class	Est. 2009 Volume <sup>1</sup> (ccf)	% of Volume (for each utility)	2009 Vol. w/o Recycled Water	% of Accounts (to allocate 2/3 of I&I)	% of Vol (to allocate 1/3 of I&I)	Estimated I&I (ccf)	Adjusted Flow Total (ccf)	Percent of Adjusted Vol.
Single Family Residential	1,966,326	74.6%	1,966,326	94.6%	74.6%	240,462	2,206,788	75.9%
Multi Family Residential	315,441	12.0%	315,441	1.6%	12.0%	13,870	329,311	11.3%
<b>New Commercial Classes:</b>								
Commercial - Low	156,124	5.9%	156,124	2.2%	5.9%	9,472	165,595	5.7%
Commercial - Medium/Low	82,069	3.1%	82,069	0.8%	3.1%	4,318	86,387	3.0%
Commercial - Medium	7,571	0.3%	7,571	0.1%	0.3%	523	8,094	0.3%
Commercial - Medium/High	62,864	2.4%	62,864	0.5%	2.4%	3,071	65,934	2.3%
Commercial - High	-	0.0%	-	0.0%	0.0%	-	-	0.0%
Schools	44,442	1.7%	44,442	0.1%	1.7%	1,737	46,179	1.6%
Commercial Landscape (Recycled Only)	190,000	26%	-	-	-	-	-	0.0%
Recreational Turf (Recycled Only)	66,000	9%	-	-	-	-	-	0.0%
Residential - Dual Plumbed (Recycled Only)	463,000	64%	-	-	-	-	-	0.0%
<b>Total</b>	<b>3,353,837</b>		<b>2,634,837</b>	<b>100%</b>	<b>100%</b>	<b>273,452</b>	<b>2,908,289</b>	<b>100%</b>
<b>Current Commercial Classes:</b>								
Commercial - Laundromat	2,346	0.1%	2,346	0.0%	0.1%	91	2,437	0.1%
Commercial - Repair Shops/Service Stations	16,168	0.6%	16,168	0.1%	0.6%	713	16,881	0.6%
Commercial - Light Industrial	15,308	0.6%	15,308	0.1%	0.6%	664	15,973	0.5%
Commercial - Market	33,306	1.3%	33,306	0.0%	1.3%	1,191	34,497	1.2%
Commercial - Restaurant	59,648	2.3%	59,648	0.1%	2.3%	2,294	61,942	2.1%
Commercial - Other	181,851	6.9%	181,851	0.7%	6.9%	7,603	189,455	6.5%

Target Total<sup>2</sup> (ccf): **2,908,289**  
ADWF, from 2009 CAFR (MGD) \$5.96 (VOL)

1. Sewer customer volume is winter water consumption (November through February).

Recycled volume is 2010 consumption less a 20% to account for conservation in response to higher and/or tiered rates in 2011.

2. Target Total: Total Influent from District's Records, 2009

**SEWER SYSTEM**

**Development of the Strength Allocation Factor**

Customer Class	Adjusted Annual Flow (ccf) <sup>1</sup>	Biochemical Oxygen Demand (BOD)				Total Suspended Solids (TSS)			
		Avg Strength Factor <sup>2</sup> (mg/l)	Calculated BOD (lb/yr)	Adjusted BOD (lb/yr)	Percent of Total	Avg Strength Factor <sup>2</sup> (mg/l)	Calculated TSS (lb/yr)	Adjusted TSS (lb/yr)	Percent of Total
Single Family Residential	2,206,788	229	3,152,563	3,275,299	69.63%	229	3,152,563	4,136,398	72.13%
Multi Family Residential	329,311	229	470,446	488,761	10.39%	229	470,446	617,260	10.76%
<b>New Commercial Classes:<sup>a</sup></b>									
Commercial - Low	165,595	140	144,625	192,930	4.10%	127	130,702	224,748	3.92%
Commercial - Medium/Low	86,387	262	141,385	188,607	4.01%	223	120,145	206,596	3.60%
Commercial - Medium	8,094	393	19,824	26,446	0.56%	535	27,019	46,461	0.81%
Commercial - Medium/High	65,934	887	364,900	486,776	10.35%	647	266,183	457,716	7.98%
Commercial - High	-	1,760	-	-	0.00%	1,536	-	-	0.00%
Schools	46,179	150	43,212	44,894	0.95%	120	34,570	45,358	0.79%
<b>Total</b>	<b>2,908,289</b>		<b>4,336,954</b>	<b>4,703,712</b>	<b>100%</b>		<b>4,201,627</b>	<b>5,734,538</b>	<b>100%</b>
		<i>Target, from Plant Data</i>	<b>4,703,712</b>		<i>(BOD)</i>		<b>5,734,538</b>		<i>(TSS)</i>
			<i>1.03893 Adjustment for WWTP Data</i>				<i>1.31207 Adjustment for WWTP Data</i>		

a. Commercial Class total pounds of BOD are set as the average between the District's 2011 classes and data and the pounds developed through the District's analysis of new commercial classes and strengths. Non-commercial classes are adjusted as needed to meet treatment plant data (i.e., total pounds to BOD and TSS).

b. Totals for Commercial Class BOD and TSS (Adjusted Pounds): BOD (lb/yr) = 894,758 TSS (lb/yr) = 935,522

(Note: These are set to meet the target average of 2011 commercial classes and the new classes shown above)

<i>Target Pounds of BOD and TSS</i>				894,758				935,522
<i>Adjustment Factor</i>				1.3340				1.7196

Adjustment Factor for New Commercial Categories:	BOD Lbs.	TSS Lbs.
Commercial Pounds from 9-15-11:	1,062,061	1,128,506
Commercial Pounds from Current Model <sup>1</sup> :	727,455	742,539
Average of 9-15-11 and Current Model:	<b>894,758</b>	<b>935,522</b>

**These are Target lbs. for New Commercial Categories**

These assume we use an average between the 2011 Commercial and Elizabeth's new Commercial categories and strengths.

1. Model as of December 2011.

Strength Classification	Active Accounts		Strength Factors		
	2009 Usage		BOD	TSS	
	(hcf)	(% of Total)	(mg/L)	(mg/L)	
Commercial - Low	<b>378,410</b>	<b>51%</b>	<b>468</b>	<b>140.0</b>	<b>126.5</b>
Commercial - Medium/Low	<b>198,918</b>	<b>27%</b>	<b>170</b>	<b>262.4</b>	<b>222.9</b>
Commercial - Medium	<b>18,350</b>	<b>2%</b>	<b>30</b>	<b>392.6</b>	<b>535.1</b>
Commercial - Medium/High	<b>152,368</b>	<b>20%</b>	<b>103</b>	<b>887.1</b>	<b>647.1</b>
Commercial - High	<b>0</b>	<b>0%</b>	<b>-</b>	<b>1,759.5</b>	<b>1,536.0</b>
<b>Grand Total</b>	<b>748,047</b>	<b>100%</b>	<b>771</b>	<b>--</b>	<b>--</b>

**SEWER SYSTEM**

**Development of the Customer Allocation Factor**

Customer Class	Number of Accounts	Adjusted, if needed	Percent of Total <sup>1</sup>
Single Family Residential	19,825	19,825	94.68%
Multi Family Residential	340	340	1.62%
<b>New Commercial Classes:</b>			
Commercial - Low	468	468	2.23%
Commercial - Medium/Low	170	170	0.81%
Commercial - Medium	30	30	0.14%
Commercial - Medium/High	103	103	0.49%
Commercial - High	0	0	0.00%
Schools	4	4	0.02%
Commercial Landscape (Recycled Only)	155	153	4.34%
Recreational Turf (Recycled Only)	11	12	0.34%
Residential - Dual Plumbed (Recycled Only)	3,890	3,360	95.32%
<b>Total</b>	<b>24,996</b>	<b>24,465</b>	<b>(CA)</b>
<b>Current Commercial Classes:</b>			
Commercial - Laundromat	4	4	0.02%
Commercial - Repair Shops/Service Stations	64	64	0.26%
Commercial - Light Industrial	56	56	0.23%
Commercial - Market	16	16	0.07%
Commercial - Restaurant	96	96	0.39%
Commercial - Other	546	546	2.23%

1. Reflects New Commercial Classes.

SEWER SYSTEM

Functionalization and Classification of Expenses

Account Type	Total Revenue Requirements 2012	Flow (VOL)	Strength		Customer Actual (CA)	Direct Assignment (DA)	Basis of Classification				
			(BOD)	(TSS)			(VOL)	(BOD)	(TSS)	(CA)	(DA)
<i>Operation and Maintenance Expense</i>											
<i>Direct Expenses (Operations)</i>											
Administration	\$ 138,987	\$ 47,691	\$ 20,848	\$ 20,848	\$ 41,696	\$ 7,904	34%	15%	15%	30%	6%
Wastewater Operations	\$ 8,853,674	\$ 4,426,837	\$ 2,213,419	\$ 2,213,419	\$ -	\$ -	50%	25%	25%	0%	0%
Recycled Water Operations	\$ 573,528	\$ -	\$ -	\$ -	\$ -	\$ 573,528	0%	0%	0%	0%	100%
	-----	-----	-----	-----	-----	-----					
<b>Total Direct Expenses</b>	<b>\$ 9,566,189</b>	<b>\$ 4,474,528</b>	<b>\$ 2,234,267</b>	<b>\$ 2,234,267</b>	<b>\$ 41,696</b>	<b>\$ 581,432</b>					
<i>Indirect Expenses</i>											
Natural Resources: Environmental Engineering	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	0%	25%	25%	0%	50%
Management	\$ 74,409	\$ 32,030	\$ 14,882	\$ 14,882	\$ 7,441	\$ 5,174	43%	20%	20%	10%	7%
Wastewater	\$ 169,791	\$ 67,916	\$ 33,958	\$ 33,958	\$ 16,979	\$ 16,979	40%	20%	20%	10%	10%
Development	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	70%	0%	0%	20%	10%
Recycled water	\$ 13,751	\$ -	\$ -	\$ -	\$ -	\$ 13,751	0%	0%	0%	0%	100%
GIS	\$ 128,524	\$ 89,717	\$ -	\$ -	\$ 32,131	\$ 6,676	70%	0%	0%	25%	5%
Inspection	\$ 8,890	\$ 3,760	\$ -	\$ -	\$ 4,445	\$ 685	42%	0%	0%	50%	8%
Records	\$ 195,400	\$ 86,845	\$ -	\$ -	\$ 97,700	\$ 10,855	44%	0%	0%	50%	6%
#REF!											
Environmental Review	\$ 55,538	\$ -	\$ 11,108	\$ 11,108	\$ 18,985	\$ 14,337	0%	20%	20%	34%	26%
Environmental Compliance	\$ 378,055	\$ -	\$ 61,915	\$ 61,915	\$ 123,830	\$ 130,395	0%	16%	16%	33%	34%
Communications	\$ 203,269	\$ -	\$ -	\$ -	\$ 191,109	\$ 12,160	0%	0%	0%	94%	6%
Office of the General Manager	\$ 975,434	\$ 146,315	\$ 48,772	\$ 48,772	\$ 663,187	\$ 68,389	15%	5%	5%	68%	7%
Finance	\$ 2,460,709	\$ -	\$ -	\$ -	\$ 2,339,962	\$ 120,747	0%	0%	0%	95%	5%
Human Resources	\$ 829,617	\$ 324,761	\$ 124,443	\$ 124,443	\$ 207,404	\$ 48,567	39%	15%	15%	25%	6%
Information Technology	\$ 922,381	\$ 273,509	\$ 184,476	\$ 184,476	\$ 230,595	\$ 49,324	30%	20%	20%	25%	5%
New letter of credit at 1.2%	\$ 529,498	\$ 238,274	\$ 132,374	\$ 132,374	\$ -	\$ 26,475	45%	25%	25%	0%	5%
	-----	-----	-----	-----	-----	-----					
<b>Total Indirect Expenses</b>	<b>\$ 6,945,265</b>	<b>\$ 1,263,128</b>	<b>\$ 611,927</b>	<b>\$ 611,927</b>	<b>\$ 3,933,768</b>	<b>\$ 524,514</b>					
	-----	-----	-----	-----	-----	-----					
<b>Total Operating and Maintenance Expenses</b>	<b>\$ 16,511,455</b>	<b>\$ 5,737,657</b>	<b>\$ 2,846,194</b>	<b>\$ 2,846,194</b>	<b>\$ 3,975,464</b>	<b>\$ 1,105,945</b>					
<i>Debt Service Installments</i>											
Total Wastewater Debt Service	\$ 9,129,983	\$ 4,564,991	\$ 2,282,496	\$ 2,282,496	\$ -	\$ -	50%	25%	25%	0%	0%
<b>TOTAL REVENUE REQUIREMENTS</b>	<b>\$ 25,641,437</b>	<b>\$ 10,302,648</b>	<b>\$ 5,128,690</b>	<b>\$ 5,128,690</b>	<b>\$ 3,975,464</b>	<b>\$ 1,105,945</b>	<b>40%</b>	<b>20%</b>	<b>20%</b>	<b>16%</b>	<b>4%</b>
Less: Non-Rate Revenue	\$ 6,195,949	\$ 2,580,733	\$ 1,284,697	\$ 1,284,697	\$ 995,823	\$ 50,000	42%	21%	21%	16%	1%
<b>NET REVENUE REQUIREMENTS</b>	<b>\$ 19,445,488</b>	<b>\$ 7,721,915</b>	<b>\$ 3,843,993</b>	<b>\$ 3,843,993</b>	<b>\$ 2,979,642</b>	<b>\$ 1,055,945</b>	<b>40%</b>	<b>20%</b>	<b>20%</b>	<b>15%</b>	<b>5%</b>

Functionalization and Classification of Expenses (cont.)												
Adjustments to Functionalization and Classification of Expenses							variable	variable	variable	fixed	other	
							VOL	BOD	TSS	CA	DA	
<b>Revenue to be Collected through fixed and variable charges</b>												
Fixed (customer, flow)	\$ 3,889,098	\$ -	\$ -	\$ -	\$ 3,677,909	\$ 211,189	0%	0%	0%	20%	20%	
Variable (treatment, flow)	\$ 15,556,391	\$ 7,355,817	\$ 3,677,909	\$ 3,677,909	\$ -	\$ 844,756	40%	20%	20%	0%	80%	
	-----	-----	-----	-----	-----	-----						
<b>Total</b>	<b>\$ 19,445,488</b>	<b>\$ 7,355,817</b>	<b>\$ 3,677,909</b>	<b>\$ 3,677,909</b>	<b>\$ 3,677,909</b>	<b>\$ 1,055,945</b>						
	<i>check</i>											
<b>Adjustment for Current Rate Level:</b>												
2011 COS Net Rev. Req't.	\$19,445,488											
2011 Current Rate Revenue	\$21,143,748									DA - Recycled		
Adjustment Factor	1.0873											
<b>Adjusted Net Revenue Req'ts</b>	<b>\$ 21,143,748</b>	<b>\$ 7,998,233</b>	<b>\$ 3,999,116</b>	<b>\$ 3,999,116</b>	<b>\$ 3,999,116</b>	<b>\$ 1,148,166</b>						
<i>Sewer Customers</i>	\$ 19,995,582											
<i>Recycled (DA)</i>	\$ 1,148,166											

**SEWER SYSTEM**

Allocation of Revenue Requirements												
Classification Components	Net Revenue Requirements	Customer Classes								Recycled Water		
		Single Family Residential	Multi Family Residential	Commercial - Low	Commercial - Medium/Low	Commercial - Medium	Commercial - Medium/High	Commercial - High	Schools	Commercial Landscape (Recycled Only)	Recreational Turf (Recycled Only)	Residential - Dual Plumbed (Recycled Only)
<b>Volume</b>	<b>\$ 7,998,233</b>	\$ 6,068,999	\$ 905,655	\$ 455,412	\$ 237,577	\$ 22,259	\$ 181,330	\$ -	\$ 127,000	\$ -	\$ -	\$ -
<b>Treatment</b>												
- BOD	\$ 3,999,116	\$ 2,784,673	\$ 415,547	\$ 164,030	\$ 160,354	\$ 22,484	\$ 413,859	\$ -	\$ 38,169	\$ -	\$ -	\$ -
- TSS	\$ 3,999,116	\$ 2,884,616	\$ 430,461	\$ 156,734	\$ 144,075	\$ 32,401	\$ 319,199	\$ -	\$ 31,631	\$ -	\$ -	\$ -
<b>Customer-Related</b>	<b>\$ 3,999,116</b>	\$ 3,786,204	\$ 64,934	\$ 89,379	\$ 32,467	\$ 5,729	\$ 19,671	\$ -	\$ 732	\$ -	\$ -	\$ -
<b>Direct Assignment</b>	<b>\$ 1,148,166</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 303,410	\$ 105,395	\$ 739,361
<b>Net Revenue Requirement</b>	<b>\$ 21,143,748</b>	<b>\$15,524,492</b>	<b>\$ 1,816,596</b>	<b>\$ 865,555</b>	<b>\$ 574,473</b>	<b>\$ 82,874</b>	<b>\$ 934,059</b>	<b>\$ -</b>	<b>\$ 197,533</b>	<b>\$ 303,410</b>	<b>\$ 105,395</b>	<b>\$ 739,361</b>

**Allocation of Revenue Requirements (cont.)**

Customer Class	Cost of Service Allocated Costs - 2012					Total Revenue		
	(CA)	(VOL)	(BOD)	(TSS)	(DA)	COS Req't <sup>a</sup>	at Present Rates	Percent Difference
Single Family Residential	\$3,786,204	\$6,068,999	\$2,784,673	\$2,884,616	-	\$15,524,492	\$17,456,688	-11%
Multi Family Residential	\$64,934	\$905,655	\$415,547	\$430,461	-	\$1,816,596	\$2,051,412	-11%
Commercial - Low	\$89,379	\$455,412	\$164,030	\$156,734	-	\$865,555	--	NA
Commercial - Medium/Low	\$32,467	\$237,577	\$160,354	\$144,075	-	\$574,473	--	NA
Commercial - Medium	\$5,729	\$22,259	\$22,484	\$32,401	-	\$82,874	--	NA
Commercial - Medium/High	\$19,671	\$181,330	\$413,859	\$319,199	-	\$934,059	--	NA
Commercial - High	\$0	\$0	\$0	\$0	-	\$0	--	NA
Schools	\$732	\$127,000	\$38,169	\$31,631	-	\$197,533	\$153,355	29%
<b>Total</b>	<b>\$3,999,116</b>	<b>\$7,998,233</b>	<b>\$3,999,116</b>	<b>\$3,999,116</b>	<b>-</b>	<b>\$19,995,582</b>	<b>\$19,661,456</b>	<b>2%</b>

a. Total Net Revenue Requirement less Direct Assignment costs.

**Annual COS Revenue Requirements by Customer Class**

Customer Class	Customer Costs				Effluent Flow			BOD			TSS		
	No. of Accts	\$/Acct/yr	\$/Acct/bi-mo	Annual Rev. Req't	ccf/yr	\$/ccf	Annual Rev. Req't	Load (lb/yr)	\$/lb	Annual Rev. Req't	Load (lb/yr)	\$/lb	Annual Rev. Req't
Single Family Residential	19,825	\$190.98	\$31.83	\$3,786,204	2,206,788	\$2.75	\$6,068,999	3,275,299	\$0.85	\$2,784,673	4,136,398	\$0.70	\$2,884,616
Multi Family Residential	340	\$190.98	\$31.83	\$64,934	329,311	\$2.75	\$905,655	488,761	\$0.85	\$415,547	617,260	\$0.70	\$430,461
Commercial - Low	468	\$190.98	\$31.83	\$89,379	165,595	\$2.75	\$455,412	192,930	\$0.85	\$164,030	224,748	\$0.70	\$156,734
Commercial - Medium/Low	170	\$190.98	\$31.83	\$32,467	86,387	\$2.75	\$237,577	188,607	\$0.85	\$160,354	206,596	\$0.70	\$144,075
Commercial - Medium	30	\$190.98	\$31.83	\$5,729	8,094	\$2.75	\$22,259	26,446	\$0.85	\$22,484	46,461	\$0.70	\$32,401
Commercial - Medium/High	103	\$190.98	\$31.83	\$19,671	65,934	\$2.75	\$181,330	486,776	\$0.85	\$413,859	457,716	\$0.70	\$319,199
Commercial - High	0	\$0.00	\$-	\$-	-	\$-	\$-	-	\$-	\$-	-	\$-	\$-
Schools	23	\$31.83	\$5.31	\$732	46,179	\$2.75	\$127,000	44,894	\$0.85	\$38,169	45,358	\$0.70	\$31,631
<b>Total</b>	<b>20,959</b>	<b>--</b>	<b>--</b>	<b>\$3,999,116</b>	<b>2,908,289</b>	<b>--</b>	<b>\$7,998,233</b>	<b>4,703,712</b>	<b>--</b>	<b>\$3,999,116</b>	<b>5,734,538</b>	<b>--</b>	<b>\$3,999,116</b>

**Monthly Fixed and Variable Wastewater Rates**

Customer Class	Cust. Cost Rev. Req't	No. of Accounts	Bi-Mo. Customer Service (Flat Rate) per Acct.	Annual Volume-Based Revenue Requirement (\$/yr)					Annual Water Use/Delivery (Recycled), ccf	ADA Rate School (\$/ADA/yr)	Volume-Based Rate (\$/ccf)	
				Flow	BOD	TSS	DA	Total			Flow	Treatment (BOD & TSS)
Single Family Residential	\$3,786,204	19,825	\$31.83	\$6,068,999	\$2,784,673	\$2,884,616	-	\$11,738,288	2,206,788	-	\$2.75	\$2.57
Multi Family Residential	\$64,934	340	\$31.83	\$905,655	\$415,547	\$430,461	-	\$1,751,663	329,311	-	\$2.75	\$2.57
Commercial - Low	\$89,379	468	\$31.83	\$455,412	\$164,030	\$156,734	-	\$776,176	165,595	-	\$2.75	\$1.94
Commercial - Medium/Low	\$32,467	170	\$31.83	\$237,577	\$160,354	\$144,075	-	\$542,007	86,387	-	\$2.75	\$3.52
Commercial - Medium	\$5,729	30	\$31.83	\$22,259	\$22,484	\$32,401	-	\$77,144	8,094	-	\$2.75	\$6.78
Commercial - Medium/High	\$19,671	103	\$31.83	\$181,330	\$413,859	\$319,199	-	\$914,388	65,934	-	\$2.75	\$11.12
Commercial - High	\$0	0	\$0.00	\$0	\$0	\$0	-	\$0	-	-	\$0.00	\$0.00
Schools	\$732	23	\$5.31	\$127,000	\$38,169	\$31,631	-	\$196,801	46,179	\$10.66	\$2.75	\$1.51
<b>Total</b>	<b>\$3,999,116</b>	<b>20,959</b>	<b>--</b>	<b>\$7,998,233</b>	<b>\$3,999,116</b>	<b>\$3,999,116</b>	<b>-</b>	<b>\$15,996,466</b>	<b>2,908,289</b>	<b>--</b>	<b>--</b>	<b>--</b>

### Summary of COS Bi-Monthly Sewer Charges

Customer Class	Customer Service Flat Rate (bi. mo.)	Volume-Based Rate (\$/ccf)		
		Flow	Treatment	Total (\$/ccf)
Single Family Residential	\$31.83	\$2.75	\$2.57	\$5.32
Multi Family Residential	\$31.83	\$2.75	\$2.57	\$5.32
Commercial - Low	\$31.83	\$2.75	\$1.94	\$4.69
Commercial - Medium/Low	\$31.83	\$2.75	\$3.52	\$6.27
Commercial - Medium	\$31.83	\$2.75	\$6.78	\$9.53
Commercial - Medium/High	\$31.83	\$2.75	\$11.12	\$13.87
Commercial - High	\$31.83	\$2.75	\$24.22	\$26.97
Schools	\$5.31	\$2.75	\$1.51	\$4.26

**Author:**  
Estimated as  
proportional to  
Medium/High rate.

### Comparison of Existing and New Cost-of-Service Rates

Customer Class	Existing 2012 Rates		2012 C.O.S. Rates		Estimated Revenue	
	Basic	Variable (\$ per ccf)	Basic	Variable (\$ per ccf)	Existing	2012 C.O.S. Rates
Single Family Residential	\$77.33	\$2.90	\$31.83	\$5.32	\$17,456,688	\$15,524,492
Multi Family Residential	\$77.33	\$2.90	\$31.83	\$5.32	\$2,051,412	\$1,816,596
Commercial - Low	\$69.76	\$3.85	\$31.83	\$4.69	--	\$865,555
Commercial - Medium/Low	\$69.76	\$5.80	\$31.83	\$6.27	--	\$574,473
Commercial - Medium	\$69.76	\$7.76	\$31.83	\$9.53	--	\$82,874
Commercial - Medium/High	\$69.76	\$8.32	\$31.83	\$13.87	--	\$934,059
Commercial - High	\$69.76	\$10.73	\$31.83	\$26.97	--	\$0
Schools	\$5.52/Student	N.A.	\$10.70/student	N.A.	\$153,355	\$197,533
Total	--	--	--	--	\$19,661,456	\$19,995,582

### Adjustments to Fixed vs. Variable Sewer Charges

Customer Class	Existing 2012 Rates		2012 C.O.S. Rates (50% of Resid. Revenue comes from Basic Charges)		
	Basic Charge	Variable (per cf)	Basic Charge	Variable (per cf)	Rate Rev. Generated
<i>% Allocation of Revenue</i>			<b>50%</b>	<b>50%</b>	<i>\$/yr.</i>
Single Family Residential	\$ 81.20	\$ 0.02898	\$ <b>65.26</b>	\$ <b>0.03517</b>	\$15,524,492
<i>% Allocation of Revenue</i>			<b>50%</b>	<b>50%</b>	
Multi Family Residential <sup>1</sup>	\$ 81.20	\$ 0.02898	\$ <b>32.06</b>	\$ <b>0.02758</b>	\$1,816,596
<i>% Allocation of Revenue</i>			<i>fixed</i>	<i>calculated</i>	
Commercial - Low	\$ 73.25	\$ 0.03853	\$ 69.76	\$ 0.04044	\$865,555
Commercial - Medium/Low	\$ 73.25	\$ 0.05798	\$ 69.76	\$ 0.05826	\$574,473
Commercial - Medium	\$ 73.25	\$ 0.07759	\$ 69.76	\$ 0.08688	\$82,874
Commercial - Medium/High	\$ 73.25	\$ 0.08320	\$ 69.76	\$ 0.13513	\$934,059
Commercial - High	\$ 73.25	\$ 0.10731	\$ 69.76	\$ 0.29436	\$0
<i>% Allocation of Revenue</i>			<i>100%</i>	<i>0%</i>	
Schools (Billed Annually/student)	\$5.52/Student	N.A.	\$ 10.70	\$ -	\$197,533
<i>% Allocation of Revenue</i>					

1. Number of multi-family units = 4,722

## Comparison of Current and Proposed Sewer Charges

Customer Class	Current Rates <sup>a</sup>		Proposed Rates	
	Basic Charge	Variable (\$ per cf)	Basic Charge	Variable (\$ per cf)
<b>Residential Classes</b>				
Single Family Residential	\$81.20	\$0.03043	\$65.26	\$0.03517
Multi Family Residential	\$81.20	\$0.03043	\$32.06	\$0.02758
<b>Current Commercial-Industrial</b>				
Commercial - Laundromat	\$73.25	\$0.04046	--	--
Commercial - Repair Shops/Service Sta.	\$73.25	\$0.06088	--	--
Commercial - Light Industrial	\$73.25	\$0.08147	--	--
Commercial - Market	\$73.25	\$0.08736	--	--
Commercial - Restaurant	\$73.25	\$0.11268	--	--
Commercial - Other	\$73.25	\$0.05217	--	--
<b>Proposed Commercial-Industrial<sup>b</sup></b>				
Commercial - Low	--	--	\$69.76	\$0.04044
Commercial - Medium/Low	--	--	\$69.76	\$0.05826
Commercial - Medium	--	--	\$69.76	\$0.08688
Commercial - Medium/High	--	--	\$69.76	\$0.13513
Commercial - High	--	--	\$69.76	\$0.29436
<b>Schools</b>				
Schools	\$5.80/student	\$5.04000	\$10.70/student	--

a. Previously Board-adopted rate increase of 5% effective January 1, 2012.

b. The District proposes changing these classes into categories tied to ranges of strength characteristics (concentrations of BOD and TSS).

SEWER SYSTEM

Functionalization and Classification of Expenses

RECYCLED WATER CUSTOMERS ONLY

Account Type	Recycled Water Revenue Req't	Commodity	Capacity	Fire Protection	Customer	Basis of Classification			
	2012	(COM)	(CAP)	(FP)	(CA)	(COM)	(CAP)	(FP)	(CA)
Operation and Maintenance Expense									
Direct Expenses (Operations)									
Administration	\$ 8,594	\$ -	\$ 8,594	\$ -	\$ -	0%	100%	0%	0%
Wastewater Operations	\$ -	\$ -	\$ -	\$ -	\$ -	40%	60%	0%	0%
Recycled Water Operations	\$ 623,617	\$ 218,266	\$ 218,266	\$ -	\$ 187,085	35%	35%	0%	30%
<b>Total Direct Expenses</b>	<b>\$ 632,210</b>	<b>\$ 218,266</b>	<b>\$ 226,860</b>	<b>\$ -</b>	<b>\$ 187,085</b>				
Indirect Expenses									
Natural Resources: Environmental Engineering	\$ -	\$ -	\$ -	\$ -	\$ -	0%	100%	0%	0%
Management	\$ 5,626	\$ 2,250	\$ 3,375	\$ -	\$ -	40%	60%	0%	0%
Wastewater	\$ 18,462	\$ 5,539	\$ 7,385	\$ -	\$ 5,539	30%	40%	0%	30%
Development	\$ -	\$ -	\$ -	\$ -	\$ -	0%	100%	0%	0%
Recycled water	\$ 14,952	\$ 10,466	\$ -	\$ -	\$ 4,486	70%	0%	0%	30%
GIS	\$ 7,259	\$ 2,178	\$ 2,904	\$ -	\$ 2,178	30%	40%	0%	30%
Inspection	\$ 744	\$ 223	\$ 298	\$ -	\$ 223	30%	40%	0%	30%
Records	\$ 11,803	\$ 3,541	\$ 4,721	\$ -	\$ 3,541	30%	40%	0%	30%
#REF!									
Environmental Review	\$ 15,590	\$ 4,677	\$ 6,236	\$ -	\$ 4,677	30%	40%	0%	30%
Environmental Compliance	\$ 141,783	\$ 42,535	\$ 56,713	\$ -	\$ 42,535	30%	40%	0%	30%
Communications	\$ 13,222	\$ -	\$ -	\$ -	\$ 13,222	0%	0%	0%	100%
Office of the General Manager	\$ 74,362	\$ 33,463	\$ 33,463	\$ -	\$ 7,436	45%	45%	0%	10%
Finance	\$ 131,293	\$ 65,646	\$ 65,646	\$ -	\$ -	50%	50%	0%	0%
Human Resources	\$ 52,808	\$ 23,764	\$ 23,764	\$ -	\$ 5,281	45%	45%	0%	10%
Information Technology	\$ 53,632	\$ 24,134	\$ 24,134	\$ -	\$ 5,363	45%	45%	0%	10%
New letter of credit at 1.2%	\$ 28,787	\$ 12,954	\$ 12,954	\$ -	\$ 2,879	45%	45%	0%	10%
<b>Total Indirect Expenses</b>	<b>\$ 570,322</b>	<b>\$ 231,370</b>	<b>\$ 241,593</b>	<b>\$ -</b>	<b>\$ 97,359</b>				
<b>Total Operating and Maintenance Exp.</b>	<b>\$ 1,202,532</b>	<b>\$ 449,636</b>	<b>\$ 468,453</b>	<b>\$ -</b>	<b>\$ 284,444</b>				
Debt Service Installments									
Total Wastewater Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	50%	50%	0%	0%
Capital Projects									
Rate-Funded CIP	\$ -	\$ -	\$ -	\$ -	\$ -	50%	50%	0%	0%
<b>TOTAL REVENUE REQUIREMENTS</b>	<b>\$ 1,202,532</b>	<b>\$ 449,636</b>	<b>\$ 468,453</b>	<b>\$ -</b>	<b>\$ 284,444</b>	<b>37%</b>	<b>39%</b>	<b>0%</b>	<b>24%</b>
Less: Non-Rate Revenue	\$ 54,367	\$ 20,328	\$ 21,179	\$ -	\$ 12,860	37%	39%	0%	24%
<b>NET REVENUE REQUIREMENTS</b>	<b>\$ 1,148,166</b>	<b>\$ 429,308</b>	<b>\$ 447,274</b>	<b>\$ -</b>	<b>\$ 271,584</b>	<b>37%</b>	<b>39%</b>	<b>0%</b>	<b>24%</b>
						variable	variable	variable	fixed

**SEWER SYSTEM**

**Allocation of Recycled Water Revenue Requirements**

Classification Components	Net Revenue Requirements (2012)	Customer Classes		
		Commercial Landscape (Recycled Only)	Recreational Turf (Recycled Only)	Residential - Dual Plumbed (Recycled Only)
<b>Commodity</b>	<b>\$ 429,308</b>	\$ 113,447	\$ 39,408	\$ 276,453
<b>Capacity</b>	<b>\$ 447,274</b>	\$ 81,414	\$ 55,332	\$ 310,528
<b>Fire Protection</b>	<b>\$ -</b>	\$ -	\$ -	\$ -
<b>Customer Related</b>	<b>\$ 271,584</b>	\$ 11,788	\$ 925	\$ 258,872
<b>Net Revenue Requirement</b>	<b>\$ 1,148,166</b>	<b>\$ 206,649</b>	<b>\$ 95,664</b>	<b>\$ 845,853</b>

**Analysis - Consumptive RECYCLED Rates for 2011 (Assumes No Fixed Charges)<sup>1</sup>**

Recycled Water Customer Class	Number of Accounts	Water Consumption (ccf/yr) <sup>2</sup>	Commodity Rates (Tied to Potable Rates) <sup>3</sup>		Rate Revenue	Rate Structure
			(\$/ccf)	(\$/cf)		
Potable Water Rate Basis <sup>4</sup>			(4)			
Commercial Landscape (Commodity Charges only)	153	190,000	\$1.5969	\$0.01597	\$303,410	Uniform
Recreational Turf (Commodity Charges only)	12	66,000	\$1.5969	\$0.01597	\$105,395	Uniform
Residential - Dual Plumbed (Commodity Charges only)	3,360	463,000	\$1.5969	\$0.01597	\$739,361	3 Tiers
<b>Total</b>	<b>3,525</b>	<b>719,000</b>	<b>--</b>	<b>--</b>	<b>\$1,148,166</b>	

1. Assumes no fixed monthly charges (all recycled water program rate revenue is collected through volumetric charges).
2. 2010 consumption less a 20% to account for conservation in response to higher and/or tiered rates in 2011.
3. These tiers reflect the broader industry practice of tying RW rates to potable rates.
4. Potable Water-based uniform tiers are set at 90% of current potable tier 2 rate but adjusted to meet revenue requirement.

**Proposed Dual-Plumbed RECYCLED Rates for 2011**

Recycled Water Customer Class	Customers	Dual-Plumbed Basic Charge (\$/bi-mo.)	Water Consumption (ccf/yr) <sup>2</sup>	Commodity Rates (Tied to Potable Rates) <sup>3</sup>		Rate Revenue
				(\$/ccf)	(\$/cf)	
<i>Total Dual-Plumbed - Basic Charges</i>	140,150	<b>\$20.00</b>	--	--	--	\$403,200
<i>Tiered Dual-Plumbed Recycled Rates</i>	<i>Breakpoint</i>			<i>Dual-Plumbed Tiered Rates</i>		
Tier 1 (50% of Potable Water -Tier 1)	3,000 cf/mo.	--	272,000	\$0.5770	<b>\$0.00577</b>	\$156,943
Tier 2 (70% of Potable Water -Tier 2)	4,500 cf/mo.	--	69,000	\$0.9750	<b>\$0.00975</b>	\$67,277
Tier 3 (90% of Potable Water -Tier 3)	-	--	122,000	<u>\$1.4694</u>	<b><u>\$0.01469</u></b>	<u>\$179,269</u>
<i>Total - Commodity Rates</i>	--		463,000	--	--	\$403,489
<i>Total Dual-Plumbed</i>						\$806,689

**Commercial Landscape Options (Assumes Fixed & Commodity Charges)<sup>a</sup>**

Commercial Landscape - Option Selected by COS Committee	Target Volumetric Revenue Requirement	Commercial Recycled Fixed Charges		Water Consumption (ccf/yr) <sup>b</sup>	Commodity Rates	
		% of Potable	Fixed Charge (3/4" Meter)		(\$/ccf)	(\$/cf)
40% of Fixed Charge Revenue <sup>a</sup>	\$37,281					
Commodity Charge Revenue	<u>\$113,447</u>					
<b>Total Recovered in Volumetric Rate</b>	<b>\$150,728</b>	<b>60%</b>	<b>\$27.02</b>	<b>190,000</b>	<b>\$0.7933</b>	<b>\$0.00793</b>

**Rec Turf Options (Assumes Fixed & Commodity Charges)<sup>a</sup>**

Rec Turf - Option Selected by COS Committee	Target Volumetric Revenue Requirement	Commercial Recycled Fixed Charges		Water Consumption (ccf/yr) <sup>b</sup>	Commodity Rates	
		% of Potable	Fixed Charge (3/4" Meter)		(\$/ccf)	(\$/cf)
40% of Fixed Charge Revenue <sup>a</sup>	\$22,502					
Commodity Charge Revenue	<u>\$39,408</u>					
<b>Total Recovered in Volumetric Rate</b>	<b>\$61,910</b>	<b>60%</b>	<b>\$27.02</b>	<b>66,000</b>	<b>\$0.9380</b>	<b>\$0.00938</b>

a. Fixed charges only collect 60% of this part of the revenue requirements, so the remaining 40% is added into volume charges.

b. 2010 consumption less a 20% reduction to account for conservation in response to higher and/or tiered rates in 2011.

## Recycled Water

### Analysis - Proposed Uniform Commodity Rates for 2011 *(Assumes Fixed & Commodity Charges)<sup>a</sup>*

Recycled Water Customer Class	Number of Accounts	Water Consumption (ccf/yr) <sup>b</sup>	Commodity Rates		Target Rev. Req't	Rate Structure
			(\$/ccf)	(\$/cf)		
Commercial Landscape <i>(Fixed and Commodity Charges)</i>	153	190,000	\$0.5971	\$0.00597	\$113,447	Uniform
Recreational Turf <i>(Fixed and Commodity Charges)</i>	12	66,000	\$0.5971	\$0.00597	\$39,408	Uniform
<b>Total</b>	<b>165</b>	<b>256,000</b>			<b>\$152,855</b>	

Target RW Commercial Commodity Revenue & Rate:	Baseline Option	Commercial Landscape - Option
COS Target Commodity Revenue	\$ 113,447	\$113,447
Additional Fixed Charge Revenue*	\$ 3,881	\$ 62,111.60
Adjusted Commodity Rev. Req't's.	\$ 117,328	\$175,559
Estimated Volume (ccf/yr)	\$ 190,000	190,000
Adjusted RW Comm. Commodity Charge (\$/ccf)	<b>\$0.6175</b>	<b>\$0.9240</b>

\* Needed to offset reduction in RW Commercial Fixed charge to match Rec Turf (Potable) Fixed Charges.

a. Assumes Fixed Charges include Customer and Capacity related costs, Commodity rates include Commodity related costs.

b. 2010 consumption less a 20% reduction to account for conservation in response to higher and/or tiered rates in 2011.

Proposed Monthly Fixed Meter Service Charges for 2011 - RECYCLED WATER

Recycled Water Customer Class	Number of Equivalent Meters	Meter Size															
		5/8*	3/4*	1*	1.5*	1.5* T	2*	2* T	3*	3* T	4*	4* T	6*	6* T	8* T	12* T	
<b>Accounts/Equivalent Meters</b>																	
Commercial Landscape (Recycled Only)	-	19	29	-	56	-	49	-	-	-	-	-	-	-	-	-	-
Recreational Turf (Recycled Only)	-	-	-	-	-	7	-	-	1	-	3	-	-	-	1	-	-
Total Accounts	-	19	29	-	56	7	49	-	1	-	3	-	-	-	1	-	-
<b>Hydraulic Capacity Factor<sup>1</sup></b>																	
Total Equivalent Meters	1.00	1.00	1.60	2.00	4.80	4.00	6.40	6.00	14.00	8.00	25.20	20.00	56.00	96.00	200.00	-	-
% of meters	0.0%	2.2%	5.4%	0.0%	31.2%	3.3%	36.4%	0.0%	1.6%	0.0%	8.8%	0.0%	0.0%	11.1%	0.0%	-	-
<b>Bi-Monthly Fixed Service Charges</b>																	
Customer Costs (\$/Acct/bi-mo.) <sup>2</sup>	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84	\$ 12.84
Capacity Costs (\$/Acct/bi-mo.) <sup>3</sup>	\$ -	\$ 26.46	\$ 42.33	\$ -	\$ 127.00	\$ 105.83	\$ 169.33	\$ -	\$ 370.41	\$ -	\$ 666.74	\$ -	\$ -	\$ 2,539.97	\$ -	\$ -	\$ -
Bi-Monthly Meter Charge	N.A.	\$ 39.30	\$ 55.17	N.A.	\$ 139.84	\$ 118.67	\$ 182.17	N.A.	\$ 383.25	N.A.	\$ 679.58	N.A.	N.A.	\$ 2,552.81	N.A.	N.A.	N.A.
<b>Annual Revenue from Bi-Monthly Meter Charges</b>																	
Customer Costs	\$ 12,712	\$ -	\$ 1,464	\$ 2,234	\$ -	\$ 4,315	\$ 539	\$ 3,775	\$ -	\$ 77	\$ -	\$ 231	\$ -	\$ -	\$ 77	\$ -	\$ -
Capacity Costs	\$ 136,746	\$ -	\$ 3,016	\$ 7,366	\$ -	\$ 42,672	\$ 4,445	\$ 49,783	\$ -	\$ 2,222	\$ -	\$ 12,001	\$ -	\$ -	\$ 15,240	\$ -	\$ -
Total	\$ 149,458	\$ -	\$ 4,480	\$ 9,600	\$ -	\$ 46,986	\$ 4,984	\$ 53,559	\$ -	\$ 2,300	\$ -	\$ 12,232	\$ -	\$ -	\$ 15,317	\$ -	\$ -
<b>Annual Fixed Costs Allocated to Bi-Monthly Meter Charges</b>																	
Customer Costs	\$ 12,712																
Capacity Costs	\$ 136,746																
Fixed Costs Recovered bi-monthly	\$ 149,458																
<b>RecTurf (Potable) Fixed Charges:</b>																	
	\$45.04	\$45.04	\$65.39	\$111.92	\$132.28	\$170.08	\$170.08	\$327.12	\$356.20	\$501.60	\$626.65	\$984.34	\$1,374.01	\$2,342.39	\$4,863.67		
<b>Annual Revenue from Bi-Monthly Meter Charges</b>																	
Fixed Costs Recovered bi-monthly	\$ 145,577	\$ -	\$ 5,134	\$ 11,378	\$ -	\$ 44,446	\$ 7,143	\$ 50,004	\$ -	\$ 2,137	\$ -	\$ 11,280	\$ -	\$ -	\$ 14,054	\$ -	\$ -
<b>Target RW Commercial Commodity Revenue &amp; Rate:</b>																	
COS Target Commodity Revenue	\$ 113,447																
Additional Fixed Charge Revenue*	\$ 3,881																
Adjusted Commodity Rev. Req't's.	\$ 117,328																
Estimated Volume (ccf/yr)	190,000																
Adjusted RW Comm. Commodity Charge (\$/ccf)	\$0.6175																

Author:  
Need to update if  
Potable Water COS  
changes!

NOTES:

- <sup>1</sup> Source: "Water Meters - Selection, Installation, Testing, and Maintenance," AWWA, Manual M6, Fourth Edition, Table 5-3, Displacement Meters and Class I Turbine Meters.
- <sup>2</sup> Customer costs are allocated to each customer by dividing the total customer costs by the total number of customers.
- <sup>3</sup> Capacity costs are allocated by meter size and the hydraulic capacity of the meter.
- <sup>4</sup> Assumes that Fire Protection costs for Multi-Family and Commercial/Industrial are allocated based on equivalent meters.
- \* Needed to offset reduction in RW Commercial Fixed charge to match Rec Turf (Potable) Fixed Charges.

## Current and Proposed Residential Dual-Plumbed Recycled Rates

Recycled Water Customer Class	Basic Charge	Breakpoint	Commodity Rates
<b>Current 2012 Dual-Plumbed Recycled Rates</b>			
Current Dual-Plumbed Volumetric Charges	--	--	\$0.00873
<b>Proposed Dual-Plumbed Recycled Rates</b>			
Basic Charge (\$/bi-mo.)	\$20.00	--	--
Recycled Commodity Charges (\$/cf)			
Tier 1 (50% of Potable Water -Tier 1)	--	3,000 cf/mo.	\$0.00577
Tier 2 (70% of Potable Water -Tier 2)	--	4,500 cf/mo.	\$0.00975
Tier 3 (90% of Potable Water -Tier 3)	--	--	\$0.01469

Report Table 3-8

Current vs. Proposed Commercial Recycled Rates

<b>Current Rates</b>			
Customer Class	Current Rates		
	Basic	Commodity (\$ per cf)	
Commercial Landscape	\$151.03	\$0.00873	
<b>Proposed 2012 Rates</b>			
<i>Proposed Commodity Rate (w/ Basic Charge)</i>			
Meter Size	Basic <sup>a</sup>	Commodity (\$ per cf)	
		Commercial Landscape	Rec Turf
5/8"	\$27.02	\$0.00793	\$0.00938
3/4"	\$27.02	"	"
1"	\$39.24	"	"
1.5"	\$67.15	"	"
1.5" T	\$79.37	"	"
2"	\$102.05	"	"
2" T	\$102.05	"	"
3"	\$196.27	"	"
3" T	\$213.72	"	"
4"	\$300.96	"	"
4" T	\$375.99	"	"
6"	\$590.60	"	"
6" T	\$824.41	"	"
8" T	\$1,405.44	"	"
10" T	\$2,225.86	"	"
12" T	\$2,918.20	"	"

a. Proportionally adjusted to 60% of Rec Turf (Potable) Fixed charges.

Report Table 3-8

Current vs. Proposed Commercial Recycled Rates

<b>Current Rates</b>			
Customer Class	Current Rates		
	Basic	Commodity (\$ per cf)	
Commercial Landscape	\$151.03	\$0.00873	
<b>Proposed 2012 Rates</b>			
<i>Proposed Commodity Rate (w/ Basic Charge)</i>			
Meter Size	Basic <sup>a</sup>	Commodity (\$ per cf)	
		Commercial Landscape	Rec Turf
5/8"	\$27.02	\$0.00793	\$0.00938
3/4"	\$27.02	"	"
1"	\$39.24	"	"
1.5"	\$67.15	"	"
1.5" T	\$79.37	"	"
2"	\$102.05	"	"
2" T	\$102.05	"	"
3"	\$196.27	"	"
3" T	\$213.72	"	"
4"	\$300.96	"	"
4" T	\$375.99	"	"
6"	\$590.60	"	"
6" T	\$824.41	"	"
8" T	\$1,405.44	"	"
10" T	\$2,225.86	"	"
12" T	\$2,918.20	"	"

a. Proportionally adjusted to 60% of Rec Turf (Potable) Fixed charges.