



INDIAN WELLS VALLEY WATER DISTRICT

WATER RATE STUDY UPDATE 2012

February 2012



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BACKGROUND AND OBJECTIVES

In 2010, Bartle Wells Associates (BWA) completed a water cost of rate study that recommended four years of rate increases through 2014. However like many other Californian cities and water utilities in recent years, the Indian Wells Valley Water District (the District) has experienced a significant decrease in water sales which has resulted in a reduction of overall revenues. During the same time, the District has also strived to reduce overall expenses by implementing numerous cost-saving measures including staff layoffs, reducing activities not directly related to the production of water, and reorganizing the capital improvement program.

The decrease in water sales Statewide can generally be attributed to a combination of factors - significant conservation efforts including customers taking advantage of efficiency rebate programs and saving water to save money; the economic slowdown that has resulted in slow growth, foreclosures, and sluggish business; and the weather in which the past few years have seen abundant rainfall.

The purpose of this study is to update the projections in the previous water rate study using the most current budget and water consumption data and to recommend rates that will recover the full cost of providing service. Based on input from District staff and the Board of Directors, the objectives of the water rates are to:

- Meet the District's annual revenue requirement including operating, capital, debt service, and reserve expenses;
- Break out all operating and capital expenditures for arsenic treatment and calculate a separate Arsenic Compliance Charge;
- Fund depreciation annually;
- Evaluate the allocation between fixed vs. variable expenses and collect additional revenue from the Ready-to-Serve charge;
- Maintain a positive net cash flow at the end of each year;
- Utilize pay-as-you-go financing for future capital projects; and
- Meet reserve fund targets each year (equivalent to six months of annual operating expenses).

This report presents our findings and recommendations which were presented to the District's Finance committee, the District Board, and to the public.

THE DISTRICT

Customers

Indian Wells Valley Water District is located in Kern County, and serves approximately 12,000 customers in and around Ridgecrest, California, approximately 92% of which are residential. Table 1 shows meter counts and total equivalent meter units in service in the District. The majority of

existing customers are served by 5/8-inch or 3/4-inch meters. Since 2009, the District has experienced a 3 percent increase in customers.

Table 1. Customer by Meter Size (July 2010 - June 2011)							
Meter Size	Meter Ratios	Residential	Multi-Family	Commercial	Public	Total	Equivalent Meters
5/8-inch	1.0	3,288	61	157	21	3,527	3,527
3/4-inch	1.5	7,325	107	159	21	7,612	11,418
1-inch	2.5	232	124	79	16	451	1,128
1 1/2-inch	5.0	0	12	38	6	56	280
2-inch	8.0	0	34	68	30	132	1,056
3-inch	16.0	0	2	4	3	9	144
4-inch	25.0	0	2	2	4	8	200
6-inch	50.0	0	6	0	1	7	350
8-inch	80.0	0	1	0	3	4	320
10-inch	115.0	0	0	0	0	0	0
Total		10,845	349	507	105	11,806	18,423

Source: 2011-2012 Revised General Fund Budget.

Current Rates and Charges

Table 2 shows the District’s rates that were approved in February 2010. The rates are currently comprised of a fixed monthly service charge (“Ready-to-Serve” charge or RTS) and a quantity charge for each hundred cubic feet (hcf) of water consumed. The RTS charge is a fixed monthly fee based on meter size, payable irrespective of consumption. This basic service charge recognizes the fact that even when a customer does not use any water, the District incurs fixed costs in connection with the ability or readiness to serve each connection. Fixed costs include staffing, customer service, debt service, system upkeep, and water quality. All customers, residential and non-residential, are charged the same ready to serve charge.

The second component of the rate structure is a usage charge based on actual water consumption. The usage rate structure is an inclining block rate comprised of seven tiers with the cost of each incremental unit of water increasing in each tier. The amount of water allotted in each tier varies based on meter size. The tier breakpoints for each meter size are in proportion to each meter's capacity. For example, a 2-inch meter, which has 8.0 times the capacity of a 5/8-inch meter, has tier breakpoints that are eight times greater than those of the 5/8-inch meter. A customer with a 5/8-inch meter pays the Tier 1 rate for the first 5 hcf of water use while a customer with a 2-inch meter pays the Tier 1 rate for the first 40 hcf of monthly consumption.

The District also levies a “zone charge” for customers located in higher elevations to pay for the costs of power to pump the water to these locations.

Table 2. Adopted Water Rates					
		Mar 1, 2010	Feb 1, 2011	Feb 1, 2012	Feb 1, 2013
Monthly Ready-to-Serve Charge Including Arsenic Charge					
<u>Meter Size</u>	<u>Demand Factor</u>	<u>Monthly Charge</u>			
5/8 x 3/4-inch	1.0	\$16.35	\$17.49	\$18.71	\$20.02
3/4-inch	1.5	24.52	26.24	28.08	30.05
1-inch	2.5	40.87	43.73	46.79	50.07
1 1/2-inch	5.0	81.75	87.47	93.59	100.14
2-inch	8.0	130.81	139.97	149.77	160.25
3-inch	16.0	261.60	279.91	299.50	320.47
4-inch	25.0	408.76	437.37	467.99	500.75
6-inch	50.0	817.51	874.74	935.97	1,001.49
8-inch	80.0	1,308.02	1,399.58	1,497.55	1,602.38
10-inch	115.0	1,880.20	2,011.81	2,152.64	2,303.32
Water Usage Charges					
Single Family Residential					
<u>Tier</u>		<u>Charge per HCF*</u>			
1	0 - 5	\$0.71	\$0.71	\$0.76	\$0.81
2	5.01 - 12	0.92	1.00	1.07	1.14
3	12.01 - 24	1.16	1.25	1.34	1.43
4	24.01 - 31	1.43	1.75	1.87	2.00
5	31.01 - 38	1.81	2.25	2.41	2.58
6	38.01 - 45	2.04	2.75	2.94	3.14
7	45.01 & over	2.47	4.13	4.42	4.73
Multi-Family, Commercial, Public					
<u>Tier</u>	<u>Scaled Consumption (hcf/month)</u>	<u>Charge per HCF*</u>			
1	0 - 5 x demand factor	\$0.71	\$0.71	\$0.76	\$0.81
2	5.01 - 10 x demand factor	0.92	1.00	1.07	1.14
3	10.01 - 15 x demand factor	1.16	1.25	1.34	1.43
4	15.01 - 20 x demand factor	1.43	1.75	1.87	2.00
5	20.01 - 25 x demand factor	1.81	2.25	2.41	2.58
6	25.01 - 30 x demand factor	2.04	2.75	2.94	3.14
7	> 30.01 x demand factor	2.47	4.13	4.42	4.73
Zone Charges					
<u>Zone</u>	<u>Elevation Increase from Zone A</u>	<u>Charge per HCF*</u>			
A	-	\$0.000	\$0.000	\$0.000	\$0.000
B	100 feet	0.104	0.107	0.110	0.114
C	200 feet	0.208	0.214	0.220	0.227
D	300 feet	0.312	0.321	0.331	0.341
E	400 feet	0.416	0.428	0.441	0.454
* hcf - Hundred Cubic Feet 1 hcf = 748 gallons					

Water Consumption

Like many other water utilities, the District has experienced a sharp decline in total water consumption during the past few years. Table 3 shows total annual water consumption by all customers. Since 2008/09, water use has declined by roughly 13.2 percent. Based on the past few years, the decrease in water consumption seems to be a continuing trend, although it is difficult to project how much use will continue to decline. Despite planned water rates increases, the District has not seen increases in total water sales revenues.

Table 3. Total Annual Consumption (1)		
Year	Total Consumption (hcf)	Percent Change
2008/09	3,442,443	
2009/10	3,230,491	-6.2%
2010/11	2,987,997	-7.5%
Cumulative Decrease		-13.2%

1 - Consumption data for 2008/09 is based on use from July through June.
Consumption data for 2009/10 and 2010/11 is based on use from Nov through Oct.

Table 4 summarizes water use by tier for all single family residential customers. Approximately 85 percent of water use by single family residential customers is consumed in the first three tiers. The majority of bills fall within Tiers 1 through 3. Average monthly single family residential use is 19 hcf, and the median monthly use is 13 hcf.

Table 4. 2010/11 Single Family Residential Use by Tier (1)					
Tier	Monthly Use (HCF)	Number of Bills Ending		Water Consumption (HCF)	
		in Tier	% of Total	in Tier	% of Total
SINGLE FAMILY RESIDENTIAL - 5/8", 3/4", & 1" Meters					
Tier 1	0 - 5	22,619	18.4%	590,643	25.8%
Tier 2	5.01 - 12	35,297	28.7%	601,942	26.2%
Tier 3	12.01 - 24	33,663	27.4%	564,451	24.6%
Tier 4	24.01 - 31	10,787	8.8%	182,611	8.0%
Tier 5	31.01 - 38	7,257	5.9%	118,998	5.2%
Tier 6	38.01 - 45	4,789	3.9%	76,843	3.4%
Tier 7	45.01 & over	<u>8,424</u>	<u>6.9%</u>	<u>158,265</u>	<u>6.9%</u>
Total		122,836	100.0%	2,293,753	100.0%

1 - Analysis is based on use from Oct 2010 through Nov 2011.

DISTRICT FINANCES

Reserve Funds

As of January 1, 2011, the District held reserves of nearly \$6.82 million in both restricted and unrestricted reserves as shown in Table 5. Unrestricted reserves totaled roughly \$4.4 million including \$1.9 million in capital improvements and replacements and \$1.3 million in emergency reserves. The District has about \$2.5 million in debt service reserves which includes reserves required for debt and approximately \$284,000 for medical retirement benefits.

Table 5. Reserve Fund Balance	
Reserve Fund	July 1, 2011
Unrestricted	
Capital Improvements & Replacements	\$1,879,956
Emergency Reserve	1,305,848
Vehicle Replacement	350,000
Computer Equipment Replacement	100,000
Alternate Water Supply	46,702
Customer Deposits & Credits	194,526
<u>Prepaid Connection Fees</u>	<u>488,859</u>
Total Unrestricted Funds	4,365,891
Restricted	
2003 Bonds	514,267
Prop 44 & 55	335,675
2009 Bonds	1,321,180
<u>Post-Retirement Benefits - Health</u>	<u>283,774</u>
Total Restricted Funds	2,454,896
Total Fund Reserves (1)	\$6,820,787
Source: IWVWD Quarterly Investment Report, Quarter Ending June 2011	
1 Does not include proceeds of 2009 COPS which are earmarked for arsenic plant and other capital projects	

Operating Expenses

Based on the 2011/12 budget, total expenses including operating costs, debt service, and capital improvements/depreciation are projected at approximately \$10.7 million. Operating expenses total \$5.9 million, or 55 percent of total expenditures and include pumping plant, arsenic plant, transmission and distribution, engineering, customer accounts, field services, administrative and general expenditures, and depreciation funding. Non-operating expenses are estimated at \$4.8 million including debt service, depreciation, conservation, and alternative water supply. Table 6 shows an annual estimate of operating expenses through 2020/21.

Table 6. Annual Operating Expenditures (Not Including Debt Service)													
	Actual	Actual	Budget	Escalation	Projected								
	2009/10	2010/11	2011/12	Factor	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Operating Expenses													
Pumping Plant	\$1,125,220	\$1,122,649	\$995,000	3%	\$1,025,000	\$1,056,000	\$1,088,000	\$1,121,000	\$1,155,000	\$1,190,000	\$1,226,000	\$1,263,000	\$1,301,000
Arsenic Plant	19,273	51,122	641,000	3%	660,000	680,000	700,000	721,000	743,000	765,000	788,000	812,000	836,000
Transmission & Distribution (1)	1,255,903	1,225,657	1,350,000	3%	1,245,000	1,282,000	1,320,000	1,360,000	1,401,000	1,443,000	1,486,000	1,531,000	1,577,000
Engineering (1)	487,245	476,248	412,700	3%	330,000	340,000	350,000	361,000	372,000	383,000	394,000	406,000	418,000
Customer Accounts	382,836	337,385	368,600	3%	380,000	391,000	403,000	415,000	427,000	440,000	453,000	467,000	481,000
Field Services	463,017	424,190	353,500	3%	364,000	375,000	386,000	398,000	410,000	422,000	435,000	448,000	461,000
Admin/General	1,807,957	1,707,890	1,650,700	3%	1,700,000	1,751,000	1,804,000	1,858,000	1,914,000	1,971,000	2,030,000	2,091,000	2,154,000
Legislative	98,365	93,155	81,200	3%	84,000	87,000	90,000	93,000	96,000	99,000	102,000	105,000	108,000
Total Operating Expenses	5,639,816	5,438,296	5,852,700		5,788,000	5,962,000	6,141,000	6,327,000	6,518,000	6,713,000	6,914,000	7,123,000	7,336,000
Percent Change		-3.6%	7.6%		-1.1%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Non-Operating Expenses													
Depreciation (2)	2,272,777	2,201,318	2,487,000	varies	2,717,000	2,911,000	3,170,000	3,401,000	3,651,000	3,761,000	3,881,000	3,941,000	4,016,000
Miscellaneous (3)	93,442	105,731	105,400	3%	109,000	112,000	115,000	118,000	122,000	126,000	130,000	134,000	138,000
Conservation (1)	156,353	183,381	43,300	3%	40,500	42,000	43,000	44,000	45,000	46,000	47,000	48,000	49,000
Alternate Water Supply	366,620	147,600	37,500	3%	39,000	40,000	41,000	42,000	43,000	44,000	45,000	46,000	47,000
Total Non-Operating Expenses	2,889,192	2,638,030	2,673,200		2,905,500	3,105,000	3,369,000	3,605,000	3,861,000	3,977,000	4,103,000	4,169,000	4,250,000
Percent Change		-8.7%	1.3%		8.7%	6.9%	8.5%	7.0%	7.1%	3.0%	3.2%	1.6%	1.9%
TOTAL EXPENSES	8,529,008	8,076,326	8,525,900		8,693,500	9,067,000	9,510,000	9,932,000	10,379,000	10,690,000	11,017,000	11,292,000	11,586,000
Percent Change		-5.3%	5.6%		2.0%	4.3%	4.9%	4.4%	4.5%	3.0%	3.1%	2.5%	2.6%
<small>1 2012/13 expenses based on adjusted estimate due to reduced staff 2 Based on annual depreciation. From spreadsheet "Depreciation Workbook to 2021 Est for CIP Budget (112911)" 3 Includes Credit Card Service Charges, Misc State and County Fees, Dept Health Service Annual Fee, Recruitment and Relocation, Public Info, IWVCGWMG Expenses, LAFCO Expense Source: 2011-2012 Revised General Fund Budget</small>													

Capital Projects

The District's FY 2012 - 2012 capital improvement program includes over \$20.3 million in capital improvements, including projects for arsenic treatment facilities, new production wells, pumping plant, transmission and distribution, and alternative water supply. The 2011/12 budget includes roughly \$1.3 million in projects that include well improvements, environmental reporting, and arsenic treatment plant improvements. The District recently completed the construction of several major projects with the proceeds of the 2009 Certificates of Participation. Table 7 outlines the ten-year capital improvement program. The CIP will be reviewed and updated annually by District staff.

Table 7. Capital Improvement Program FY 2012 through 2021													
Project		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total	
Pumping Plant	Arsenic Treatment Plants	\$262,000										\$262,000	
	WSIP Environmental Reporting (WSIP Phase I)	\$251,500										\$251,500	
	Well Improvements (WSIP Phase I)	\$399,000	\$266,000									\$665,000	
	Replacement Well		\$950,000	\$950,000								\$1,900,000	
	Well No. 35 (WSIP Phase II)				\$1,900,000							\$1,900,000	
TOTAL PUMPING PLANT	\$912,500	\$1,216,000	\$950,000	\$1,900,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,978,500	
Transmission & Distribution	East Bowman A-Zone Reservoir #1	\$15,000					\$437,500	\$1,312,500				\$1,765,000	
	Trans. Line Ext. Bowman Rd to A-Zone Reservoir					\$1,500,000	\$2,250,000					\$3,750,000	
	D-Zone Reservoir	\$2,500										\$2,500	
	California Mainline Replacement	\$140,500										\$140,500	
	Burns Mainline Replacement	\$25,000	\$178,000									\$203,000	
	Ward Mainline Extension			\$533,000								\$533,000	
	Sunland to Forest Knoll Mainline Relocations				\$605,000							\$605,000	
	Greenlawn Mainline Replacement					\$89,000						\$89,000	
	Rancho Mainline Replacement					\$89,000						\$89,000	
	Forest Knoll Mainline Replacement					\$89,000						\$89,000	
	Springside Mainline Replacement					\$89,000						\$89,000	
	Primrose Mainline Replacement					\$89,000						\$89,000	
	Orchard Mainline Replacement					\$89,000						\$89,000	
	Gateway Mainline Replacement							\$178,000				\$178,000	
	French St Mainline Replacement								\$612,000			\$612,000	
	Las Flores Mainline Extension to China Lake Blvd								\$71,000			\$71,000	
	Old Navy Housing Area Mainline Replacement								\$100,001	\$621,500	\$621,500	\$1,343,001	
	Springer to Gateway Tank		\$500,000	\$500,000									\$1,000,000
	New Service Installations	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$9,000	\$90,000
	Fire Hydrants	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$75,000
Service Lateral Replacement Project		\$108,000	\$325,000		\$400,000			\$500,000	\$500,000	\$500,000		\$2,333,000	
TOTAL TRANSMISSION & DISTRIBUTION	\$199,500	\$802,500	\$1,374,500	\$621,500	\$2,450,500	\$2,704,000	\$1,507,000	\$1,299,501	\$1,138,000	\$1,138,000	\$1,138,000	\$13,235,001	
Tech	Firefly Installation Project	\$65,000										\$65,000	
	GIS Needs Assessment	\$1,000	\$24,000	\$100,000	\$100,000							\$225,000	
	Replacement Computer Equipment	\$26,000	\$31,575	\$21,500	\$1,200		\$20,000					\$100,275	
	Website Redesign				\$25,000							\$25,000	
	TOTAL TECH	\$92,000	\$55,575	\$121,500	\$126,200	\$0	\$20,000	\$0	\$0	\$0	\$0	\$0	\$415,275
Future Source of	Brackish Water Resource Study								\$200,000			\$200,000	
	Butterworth Well	\$5,000										\$5,000	
	Stine Property, Replace Well										\$750,000	\$750,000	
	TOTAL FUTURE SOURCE OF SUPPLY	\$5,000	\$0	\$0	\$0	\$0	\$0	\$0	\$200,000	\$0	\$750,000	\$955,000	
General Plant	Vehicles, Replacement - Trucks			\$50,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$225,000	
	Equipment, Replacement	\$17,500	\$8,750	\$8,750	\$8,750	\$8,750	\$8,750	\$8,750	\$8,750	\$8,750	\$8,750	\$96,250	
	Equipment, New	\$20,000		\$20,000		\$20,000		\$20,000		\$20,000		\$100,000	
	Miscellaneous Capital Purchases	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$250,000	
	Replacement Equipment, Customer Accounts	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$7,000	\$70,000	
	TOTAL GENERAL PLANT	\$69,500	\$40,750	\$110,750	\$65,750	\$85,750	\$85,750	\$85,750	\$85,750	\$85,750	\$85,750	\$85,750	\$741,250
	Total	\$1,278,500	\$2,114,825	\$2,556,750	\$2,713,450	\$2,536,250	\$2,789,750	\$1,592,750	\$1,565,251	\$1,223,750	\$1,953,750	\$1,953,750	\$20,325,026

Outstanding Debt

As shown on Table 8, the District has four outstanding debt issues with annual debt service for 2011/12 budgeted at \$2.1 million. Every year, the District's net revenues – total revenues less operating expenses – must be at least 120% of combined annual debt service payments. The District exceeds all coverage requirements in all of its debt covenants.

Table 8. Debt Service Payments (Includes Principal and Interest)												
Issue	Issue Amount	Annual Payments										
		2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Prop 55 Loan	\$4,480,000	\$279,519	\$279,519	\$279,519	\$279,519	\$279,519	\$279,519	\$279,519	\$279,519	\$279,519	\$279,519	\$279,519
Prop 44 Loan	641,000	44,592	22,296	0	0	0	0	0	0	0	0	0
Series 2003 Refunding Bonds	6,115,000	507,564	504,733	505,995	506,629	506,415	505,224	503,140	446,000	448,800	0	0
Series 2009 COPs	20,000,000	1,315,138	1,314,488	1,313,538	1,310,388	1,309,888	1,308,788	1,304,963	1,303,213	1,300,463	1,296,713	
Total Existing Debt Service	31,236,000	2,146,813	2,121,036	2,099,052	2,096,536	2,095,822	2,093,531	2,087,622	2,028,732	2,028,782	1,576,232	

Source: 2010/11 Audit Report

CASH FLOW PROJECTIONS

Table 9 details 10-year cash flow projections and the annual revenue requirements. This study proposes three years of rate increases through 2014. The first rate adjustment is projected to take effect on March 1, 2012. In subsequent years, rate adjustments will take effect annually on February 1, when overall water consumption is generally lower. The projections assume no new debt and that all future capital projects will be funded through water rates. The cash flow demonstrates that the District will be complying with its debt service coverage, maintaining a positive net cash flow, and meeting reserve fund targets through 2020/21.

Although only three-years of rate increases are recommended, the long-term cash flow enables the District to look ahead and anticipate future operating and capital needs. The District should review the cash flow each year and update the projections with the latest information to ensure that annual revenue requirements are met.

Table 9. Cash Flow Projection											
	Est. Actual	Budget	Projected								
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Assumptions:											
Zone Charge Rate Adjustment			3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Interest Earnings Rate			1.0%	1.5%	1.5%	1.5%	1.5%	2.0%	2.0%	2.0%	2.0%
Growth			0.0%	0.0%	0.0%	0.5%	0.5%	1.0%	1.0%	1.0%	1.0%
Beginning Fund Balance											
Total Unrestricted Reserves		4,365,892	5,340,621	6,088,573	6,664,807	7,173,873	8,089,337	8,952,878	11,127,037	13,501,676	16,218,876
REVENUES											
Water Sales											
Ready to Serve and Usage Charges (1)	7,146,441	6,954,148	8,366,172	8,633,560	9,003,781	9,372,615	9,763,671	9,973,057	10,206,373	10,330,408	10,525,083
Arsenic Charges	<u>740,907</u>	<u>1,498,217</u>	<u>1,580,141</u>	<u>1,599,476</u>	<u>1,617,271</u>	<u>1,637,921</u>	<u>1,659,151</u>	<u>1,678,474</u>	<u>1,700,249</u>	<u>1,722,324</u>	<u>1,743,699</u>
Total Water Sales Revenue	7,887,348	8,452,365	9,946,313	10,233,036	10,621,052	11,010,536	11,422,822	11,651,531	11,906,622	12,052,732	12,268,782
Other Revenues											
Zone Charges	114,692	114,000	117,000	121,000	125,000	129,000	133,000	137,000	141,000	145,000	149,000
Other Water Sales Revenues (2)	90,850	83,000	87,000	91,000	96,000	99,000	99,000	100,000	101,000	102,000	103,000
Water Service Revenues (3)	255,448	257,000	265,000	273,000	281,000	289,000	298,000	307,000	316,000	325,000	335,000
Capital Facility Fee	199,143	198,000	202,000	206,000	210,000	214,000	218,000	222,000	226,000	231,000	236,000
Distribution System Fee	2,607	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Interest	173,756	192,500	53,000	91,000	100,000	108,000	121,000	179,000	223,000	270,000	324,000
Miscellaneous Revenues (4)	<u>163,077</u>	<u>163,077</u>	<u>166,000</u>	<u>169,000</u>	<u>172,000</u>	<u>175,000</u>	<u>179,000</u>	<u>183,000</u>	<u>187,000</u>	<u>191,000</u>	<u>195,000</u>
Total Other Revenues	999,573	1,011,577	894,000	955,000	988,000	1,018,000	1,052,000	1,132,000	1,198,000	1,268,000	1,346,000
Proceeds from 2009 COPs	10,369,719	915,000	0	0	0	0	0	0	0	0	0
TOTAL REVENUES	19,256,640	10,378,942	10,840,313	11,188,036	11,609,052	12,028,536	12,474,822	12,783,531	13,104,622	13,320,732	13,614,782
EXPENSES											
Operating Expenses (5)											
Pumping Plant	1,122,649	995,000	1,025,000	1,056,000	1,088,000	1,121,000	1,155,000	1,190,000	1,226,000	1,263,000	1,301,000
Arsenic Plant	51,122	641,000	660,000	680,000	700,000	721,000	743,000	765,000	788,000	812,000	836,000
Transmission and Distribution	1,225,657	1,350,000	1,245,000	1,282,000	1,320,000	1,360,000	1,401,000	1,443,000	1,486,000	1,531,000	1,577,000
Engineering	476,248	412,700	330,000	340,000	350,000	361,000	372,000	383,000	394,000	406,000	418,000
Customer Accounts	337,385	368,600	380,000	391,000	403,000	415,000	427,000	440,000	453,000	467,000	481,000
Field Services	424,190	353,500	364,000	375,000	386,000	398,000	410,000	422,000	435,000	448,000	461,000
Admin/General	1,707,890	1,650,700	1,700,000	1,751,000	1,804,000	1,858,000	1,914,000	1,971,000	2,030,000	2,091,000	2,154,000
Legislative	<u>93,155</u>	<u>81,200</u>	<u>84,000</u>	<u>87,000</u>	<u>90,000</u>	<u>93,000</u>	<u>96,000</u>	<u>99,000</u>	<u>102,000</u>	<u>105,000</u>	<u>108,000</u>
Total Operating Expenses	5,438,296	5,852,700	5,788,000	5,962,000	6,141,000	6,327,000	6,518,000	6,713,000	6,914,000	7,123,000	7,336,000
Non-Operating Expenses											
Miscellaneous	105,731	105,400	109,000	112,000	115,000	118,000	122,000	126,000	130,000	134,000	138,000
Conservation	183,381	43,300	40,500	42,000	43,000	44,000	45,000	46,000	47,000	48,000	49,000
Alternate Water Supply	147,600	37,500	39,000	40,000	41,000	42,000	43,000	44,000	45,000	46,000	47,000
Capital Improvement Projects	13,197,190	1,278,500	2,114,825	2,556,750	2,713,450	2,536,250	2,789,750	1,592,750	1,565,251	1,223,750	1,953,750
Existing Debt	2,146,994	2,146,813	2,121,036	2,099,052	2,096,536	2,095,822	2,093,531	2,087,622	2,028,732	2,028,782	1,576,232
Transfer to Alternate Source of Supply	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Non-Operating Expenses	15,780,896	3,611,513	4,424,361	4,849,802	5,008,986	4,836,072	5,093,281	3,896,372	3,815,983	3,480,532	3,763,982
TOTAL EXPENSES	21,219,192	9,464,213	10,212,361	10,811,802	11,149,986	11,163,072	11,611,281	10,609,372	10,729,983	10,603,532	11,099,982
Net Cash Flow	(1,962,551)	914,729	627,952	376,234	459,066	865,464	863,541	2,174,159	2,374,639	2,717,200	2,514,800
Ending Fund Balance											
Total Unrestricted Reserves	4,365,892	5,340,621	6,088,573	6,664,807	7,173,873	8,089,337	8,952,878	11,127,037	13,501,676	16,218,876	18,733,676
Debt Service Coverage (Min. 1.20x)											
Coverage Met	6.44	2.11	2.38	2.49	2.61	2.72	2.85	2.91	3.05	3.05	3.98
	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Fund Reserve Target - 6 months of O&M											
Reserve Fund Target Met	2,719,148	2,926,350	2,894,000	2,981,000	3,070,500	3,163,500	3,259,000	3,356,500	3,457,000	3,561,500	3,668,000
	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
1 Rate adjustments effective March 1, 2012 and on February 1 of each year thereafter.											
2 Includes Bulk Rate, Construction Water, and Fire Prevention revenues											
3 Includes Customer Service Charges, Delinquent Billing Charge, 48-Hour Notice Charge, Turn-off Charge, New Service Installation Chrgs, Basic Facility Charges Refund, Plan Check, and Inspection Fees.											
4 Includes Olancho Farm Rent											
5 All Operating Expenses are escalated by 3% annually											

RECOMMENDED RATES AND RATE STRUCTURE ADJUSTMENTS

Arsenic Treatment Costs

To comply with Federal and State mandates, the District has made a significant investment to the arsenic treatment system including issuing \$14,000,000 in debt to finance the facilities. (Approximately 70 percent of the 2009 COP proceeds were used for arsenic projects.) Operating costs for arsenic treatment expenditures account for almost 8 percent of total operating expenses. The District’s water bills currently include a separate “Arsenic Compliance Charge,” informing customers of the actual costs related to arsenic.

The previous method was to subtract out the arsenic charge from the Ready-to-Serve Charge which may have caused confusion for some customers. Since the arsenic treatment plants are now fully operational, the District can better estimate future costs associated with arsenic treatment and accounts for these expenditures separately in the budget. Table 10 shows the proposed Arsenic Compliance Charge, calculated as a separate fixed charge based on meter size. To equitably share the costs amongst all customers, the charge includes all operating costs for arsenic and 70 percent of the debt service for the 2009 Certificates of Participation. On average, the costs related to arsenic treatment increase each year by about 1.2 percent through 2020/21.

	Budget					Projected						
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Total Annual Arsenic Expenses												
Arsenic O&M Costs (1)	\$641,000	\$660,000	\$680,000	\$700,000	\$721,000	\$743,000	\$765,000	\$788,000	\$812,000	\$836,000		
<u>Arsenic Capital Costs (2)</u>	<u>920,596</u>	<u>920,141</u>	<u>919,476</u>	<u>917,271</u>	<u>916,921</u>	<u>916,151</u>	<u>913,474</u>	<u>912,249</u>	<u>910,324</u>	<u>907,699</u>		
Total Arsenic Costs	\$1,561,596	\$1,580,141	\$1,599,476	\$1,617,271	\$1,637,921	\$1,659,151	\$1,678,474	\$1,700,249	\$1,722,324	\$1,743,699		
Percent Change		1.2%	1.2%	1.1%	1.3%	1.3%	1.2%	1.3%	1.3%	1.2%		
Total Equivalent Meters (3)	18,423	18,423	18,423	18,423	18,515	18,608	18,794	18,982	19,172	19,364		
Monthly Arsenic Charge												
<u>Meter Size</u>	<u>Meter Ratio</u>											
5/8 x 3/4-inch	1.0	\$6.53	\$7.06	\$7.15	\$7.23	\$7.32	\$7.37	\$7.43	\$7.44	\$7.46	\$7.49	\$7.50
3/4-inch	1.5	\$9.80	\$10.59	\$10.73	\$10.85	\$10.98	\$11.06	\$11.15	\$11.16	\$11.19	\$11.24	\$11.25
1-inch	2.5	\$16.33	\$17.65	\$17.88	\$18.08	\$18.30	\$18.43	\$18.58	\$18.60	\$18.65	\$18.73	\$18.75
1 1/2-inch	5.0	\$32.65	\$35.30	\$35.75	\$36.15	\$36.60	\$36.85	\$37.15	\$37.20	\$37.30	\$37.45	\$37.50
2-inch	8.0	\$52.24	\$56.48	\$57.20	\$57.84	\$58.56	\$58.96	\$59.44	\$59.52	\$59.68	\$59.92	\$60.00
3-inch	16.0	\$104.48	\$112.96	\$114.40	\$115.68	\$117.12	\$117.92	\$118.88	\$119.04	\$119.36	\$119.84	\$120.00
4-inch	25.0	\$163.25	\$176.50	\$178.75	\$180.75	\$183.00	\$184.25	\$185.75	\$186.00	\$186.50	\$187.25	\$187.50
6-inch	50.0	\$326.50	\$353.00	\$357.50	\$361.50	\$366.00	\$368.50	\$371.50	\$372.00	\$373.00	\$374.50	\$375.00
8-inch	80.0	\$522.40	\$564.80	\$572.00	\$578.40	\$585.60	\$589.60	\$594.40	\$595.20	\$596.80	\$599.20	\$600.00
10-inch	115.0	\$750.95	\$811.90	\$822.25	\$831.45	\$841.80	\$847.55	\$854.45	\$855.60	\$857.90	\$861.35	\$862.50
1- Arsenic costs increased by 3.0% annually beginning in 2012/13 as shown on Table 3. 2- Arsenic projects costs account for 70% of the Series 2009 COPs debt service. 3- Equivalent meters escalated by growth projections from cash flow.												

Fixed vs. Variable Allocation

As previously noted, the RTS charge is intended to recover the fixed costs of providing basic service, and the usage charge recovers the costs that fluctuate with the quantity of water purchased. Water utilities can recover costs from a combination of fixed and variable charges. The percentage of revenues derived from the fixed and variable charges varies for each agency and should be proportional to each system's expenditures. In 2010/11, the District's current fixed charges (the Ready-to-Serve Charge and the Arsenic Compliance Charge) comprised of 47 percent of total revenues while the usage charges account for 53 percent as shown on Table 11.

Table 11. Water Sales Revenue Breakdown - Fixed vs. Variable							
	Residential	Multi-Family	Commercial	Public	China Lake Acres	Total Revenue	% of Total
2009/10							
Ready-to-Serve (Basic) Charge	\$2,550,145	\$233,301	\$243,488	\$144,752	\$58,979	\$3,230,665	43.8%
Arsenic Charge	\$101,295	\$8,935	\$9,328	\$5,680	\$2,318	\$127,556	1.7%
<u>Usage Charges</u>	<u>2,921,234</u>	<u>343,595</u>	<u>339,004</u>	<u>323,021</u>	<u>87,539</u>	<u>4,014,394</u>	<u>54.5%</u>
Total Water Sales Revenue	5,572,674	585,831	591,820	473,453	148,836	7,372,615	100.0%
2010/11							
Ready-to-Serve (Basic) Charge	2,311,086	218,105	224,096	125,751	52,058	2,931,096	37.2%
Arsenic Charge	585,956	54,641	55,789	31,419	13,102	740,907	9.4%
<u>Usage Charges</u>	<u>2,973,557</u>	<u>409,010</u>	<u>408,878</u>	<u>342,392</u>	<u>81,508</u>	<u>4,215,345</u>	<u>53.4%</u>
Total Water Sales Revenue	5,870,599	681,756	688,763	499,563	146,668	7,887,348	100.0%
Source: "FY 2009-2010 RTS, Usage & Arsenic Charges Summary (110911)" and "FY 2010-2011 RTS, Usage & Arsenic Charges Summary (110911)"							

To ensure water rates are in line with District's costs, BWA evaluated the line-item expenditures including operations, depreciation, and debt service and allocated the 2011/12 budget between fixed and variable costs using industry standards and feedback from District staff. Table 12 shows the reallocation of expenditures with 52 percent attributed to fixed costs and 48 percent to variable expenses. The more costs that are recovered through fixed charges, the more secure the District's revenue stream. The level of revenue is predictable and not subject to variability as water sales fluctuate. As water sales have dropped sharply, despite the District's best efforts to reduce costs, expenses have not decreasing proportionately.

Table 12. Fixed vs. Variable Revenue Recovery Allocation (1)					
	Budget 2011/12	Allocation % (2)		Allocation \$	
		Ready to Serve Charge	Usage Charge	Ready to Serve Charge	Usage Charge
Operating Expenses					
Pumping Plant	\$995,000	20%	80%	\$199,000	\$796,000
Transmission and Distribution	1,350,000	20%	80%	270,000	1,080,000
Engineering	412,700	80%	20%	330,160	82,540
Customer Accounts	368,600	80%	20%	294,880	73,720
Field Services	353,500	80%	20%	282,800	70,700
Admin/General	1,650,700	50%	50%	825,350	825,350
<u>Legislative</u>	<u>81,200</u>	50%	50%	<u>40,600</u>	<u>40,600</u>
Total Operating Expenses	5,211,700	43%	57%	2,242,790	2,968,910
Non-Operating Expenses					
Depreciation (3)	2,487,000	50%	50%	1,243,500	1,243,500
Miscellaneous	105,400	50%	50%	52,700	52,700
Conservation	43,300	0	100%	0	43,300
Alternate Water Supply	37,500	0	100%	0	37,500
<u>Debt Service (4)</u>	<u>1,226,216</u>	100%	0%	<u>1,226,216</u>	<u>0</u>
Total Non-Operating Expenses	3,899,416	65%	35%	2,522,416	1,377,000
Total Expenses	9,111,116	52%	48%	4,765,206	4,345,910
Less Other Revenues	1,011,577				
Total Revenue Requirement	8,099,539	52%	48%	4,236,141	3,863,398
1 Allocations based on BWA estimates.					
2 Percentage to be recovered from fixed monthly charges and variable consumption charges.					
3 Annual depreciation calculation is to fund capital replacements.					
4 Includes all debt service for Prop 44 loan, Prop 55 loan, and 2003 bonds, and 30% of debt service for 2009 COPs.					

Proposed Water Rates

The proposed rates have been realigned and are designed to collect more revenue from the RTS charge. Because of the reallocation of costs, the RTS charge will increase more than the usage charges. The usage rates for Tiers 1 through 3 will decrease to minimize the impact on lifeline customers, who typically consume about five hcf per month. The proposed rates through February 1, 2014 are shown on Table 13. The rate adjustments are needed to provide sufficient revenues for the District's operating and capital programs.

Table 13. Proposed Water Rates					
		Proposed			
		Current	March 1, 2012	Feb 1, 2013	Feb 1, 2014
READY-TO-SERVE CHARGE NOT INCLUDING ARSENIC					
<u>Meter Size</u>	<u>Meter Ratios</u>				
5/8-inch	1.0	\$10.96	\$19.16	\$19.93	\$21.13
3/4-inch	1.5	\$16.44	\$28.74	\$29.90	\$31.70
1-inch	2.5	\$27.40	\$47.90	\$49.83	\$52.83
1 1/2-inch	5.0	\$54.82	\$95.80	\$99.65	\$105.65
2-inch	8.0	\$87.73	\$153.28	\$159.44	\$169.04
3-inch	16.0	\$175.43	\$306.56	\$318.88	\$338.08
4-inch	25.0	\$274.12	\$479.00	\$498.25	\$528.25
6-inch	50.0	\$548.24	\$958.00	\$996.50	\$1,056.50
8-inch	80.0	\$877.18	\$1,532.80	\$1,594.40	\$1,690.40
10-inch (1)	115.0	\$1,260.86	\$2,203.40	\$2,291.95	\$2,429.95
USAGE CHARGE					
<u>SINGLE FAMILY RESIDENTIAL (per hcf)</u>					
Tier 1	0 - 5	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	5.01 - 12	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	12.01 - 24	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	24.01 - 31	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	31.01 - 38	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	38.01 - 45	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	45.01 & over	\$4.13	\$4.13	\$4.13	\$4.25
<u>NON-SINGLE FAMILY RESIDENTIAL (per hcf)</u>					
<u>5/8" Meter</u>					
Tier 1	0 - 5	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	5.01 - 10	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	10.01 - 15	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	15.01 - 20	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	20.01 - 25	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	25.01 - 30	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	30.01 & over	\$4.13	\$4.13	\$4.13	\$4.25
<u>3/4" Meter</u>					
Tier 1	0 - 8	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	8.01 - 15	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	15.01 - 23	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	23.01 - 30	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	30.01 - 38	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	38.01.01 - 45	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	45.01 & over	\$4.13	\$4.13	\$4.13	\$4.25
<u>1" Meter</u>					
Tier 1	0 - 13	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	13.01 - 25	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	25.01 - 38	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	38.01 - 50	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	50.01 - 63	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	63.01 - 75	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	75.01 & over	\$4.13	\$4.13	\$4.13	\$4.25

1-1/2" Meter					
Tier 1	0 - 25	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	25.01 - 50	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	50.01 - 75	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	75.01 - 100	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	100.01 - 125	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	125.01 - 150	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	150.01 & over	\$4.13	\$4.13	\$4.13	\$4.25
2" Meter					
Tier 1	0 - 40	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	40.01 - 80	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	80.01 - 120	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	120.01 - 160	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	160.01 - 200	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	200.01 - 240	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	240.01 & over	\$4.13	\$4.13	\$4.13	\$4.25
3" Meter					
Tier 1	0 - 80	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	80.01 - 160	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	160.01 - 240	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	240.01 - 320	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	320.01 - 400	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	400.01 - 480	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	480.01 & over	\$4.13	\$4.13	\$4.13	\$4.25
4" Meter					
Tier 1	0 - 125	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	125.01 - 250	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	250.01 - 375	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	375.01 - 500	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	500.01 - 625	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	625.01 - 750	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	750.01 & over	\$4.13	\$4.13	\$4.13	\$4.25
6" Meter					
Tier 1	0 - 250	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	250.01 - 500	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	500.01 - 750	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	750.01 - 1000	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	1000.01 - 1250	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	1250.01 - 1500	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	1500.01 & over	\$4.13	\$4.13	\$4.13	\$4.25
8" Meter					
Tier 1	0 - 400	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	400.01 - 800	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	800.01 - 1200	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	1200.01 - 1600	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	1600.01 - 2000	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	2000.01 - 2400	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	2400.01 & over	\$4.13	\$4.13	\$4.13	\$4.25
10" Meter					
Tier 1	0 - 575	\$0.71	\$0.50	\$0.50	\$0.52
Tier 2	575.01 - 1150	\$1.00	\$0.60	\$0.60	\$0.62
Tier 3	1150.01 - 1725	\$1.25	\$1.00	\$1.00	\$1.03
Tier 4	1725.01 - 2300	\$1.75	\$1.75	\$1.75	\$1.80
Tier 5	2300.01 - 2875	\$2.25	\$2.25	\$2.25	\$2.32
Tier 6	2875.01 - 3450	\$2.75	\$2.75	\$2.75	\$2.83
Tier 7	3450.01 & over	\$4.13	\$4.13	\$4.13	\$4.25

Future Water Sales

The effect of conservation and decreased water use on revenues is difficult to forecast. It is assumed that more conservation will be experienced in the higher tiers (Tiers 4-7) than the lower tiers (Tiers 1-3). BWA evaluated several conservation scenarios ranging from a 1 to 4 percent decrease in overall water use and determined that the proposed rates are sufficient to meet revenue requirements.

Rates Impacts

Tables 14 and 15 show the impacts of the proposed rate adjustments for a variety of single family residential and commercial customers. Due to the structural changes in the rate tiers, some customers may face slightly higher or lower impacts based on meter size and actual water consumption.

Table 14. Single Family Residential Rate Impacts					
Customer	Water Use (hcf)	Current	Projected Monthly Bill		
			March 1, 2012	Feb 1, 2013	Feb 1, 2014
5/8" Meter					
Tier 1	5				
RTS Charge		\$10.96	\$19.16	\$19.93	\$21.13
Arsenic Charge		\$6.53	\$7.06	\$7.15	\$7.23
<u>Usage Charge</u>		<u>\$3.55</u>	<u>\$2.50</u>	<u>\$2.50</u>	<u>\$2.58</u>
Total Monthly Bill		\$21.04	\$28.72	\$29.58	\$30.94
<i>Dollar Change</i>			\$7.68	\$0.86	\$1.36
<i>% Change</i>			36.5%	3.0%	4.6%
Tier 2	12				
RTS Charge		\$10.96	\$19.16	\$19.93	\$21.13
Arsenic Charge		\$6.53	\$7.06	\$7.15	\$7.23
<u>Usage Charge</u>		<u>\$10.55</u>	<u>\$6.70</u>	<u>\$6.70</u>	<u>\$6.78</u>
Total Monthly Bill		\$28.04	\$32.92	\$33.78	\$35.14
<i>Dollar Change</i>			\$4.88	\$0.86	\$1.36
<i>% Change</i>			17.4%	2.6%	4.0%
Tier 3	24				
RTS Charge		\$10.96	\$19.16	\$19.93	\$21.13
Arsenic Charge		\$6.53	\$7.06	\$7.15	\$7.23
<u>Usage Charge</u>		<u>\$25.55</u>	<u>\$18.70</u>	<u>\$18.70</u>	<u>\$19.14</u>
Total Monthly Bill		\$43.04	\$44.92	\$45.78	\$47.50
<i>Dollar Change</i>			\$1.88	\$0.86	\$1.72
<i>% Change</i>			4.4%	1.9%	3.7%
Tier 4	31				
RTS Charge		\$10.96	\$19.16	\$19.93	\$21.13
Arsenic Charge		\$6.53	\$7.06	\$7.15	\$7.23
<u>Usage Charge</u>		<u>\$37.80</u>	<u>\$30.95</u>	<u>\$30.95</u>	<u>\$31.75</u>
Total Monthly Bill		\$55.29	\$57.17	\$58.03	\$60.11
<i>Dollar Change</i>			\$1.88	\$0.86	\$2.08
<i>% Change</i>			3.4%	1.5%	3.6%

Tier 5	38				
RTS Charge		\$10.96	\$19.16	\$19.93	\$21.13
Arsenic Charge		\$6.53	\$7.06	\$7.15	\$7.23
<u>Usage Charge</u>		<u>\$53.55</u>	<u>\$46.70</u>	<u>\$46.70</u>	<u>\$47.98</u>
Total Monthly Bill		\$71.04	\$72.92	\$73.78	\$76.34
<i>Dollar Change</i>			\$1.88	\$0.86	\$2.55
<i>% Change</i>			2.6%	1.2%	3.5%
Tier 6	45				
RTS Charge		\$10.96	\$19.16	\$19.93	\$21.13
Arsenic Charge		\$6.53	\$7.06	\$7.15	\$7.23
<u>Usage Charge</u>		<u>\$72.80</u>	<u>\$65.95</u>	<u>\$65.95</u>	<u>\$67.80</u>
Total Monthly Bill		\$90.29	\$92.17	\$93.03	\$96.16
<i>Dollar Change</i>			\$1.88	\$0.86	\$3.13
<i>% Change</i>			2.1%	0.9%	3.4%
Tier 7	60				
RTS Charge		\$10.96	\$19.16	\$19.93	\$21.13
Arsenic Charge		\$6.53	\$7.06	\$7.15	\$7.23
<u>Usage Charge</u>		<u>\$134.75</u>	<u>\$127.90</u>	<u>\$127.90</u>	<u>\$131.61</u>
Total Monthly Bill		\$152.24	\$154.12	\$154.98	\$159.97
<i>Dollar Change</i>			\$1.88	\$0.86	\$4.99
<i>% Change</i>			1.2%	0.6%	3.2%
3/4" Meter					
Tier 1	5				
RTS Charge		\$16.44	\$28.74	\$29.90	\$31.70
Arsenic Charge		\$9.80	\$10.59	\$10.73	\$10.85
<u>Usage Charge</u>		<u>\$3.55</u>	<u>\$2.50</u>	<u>\$2.50</u>	<u>\$2.58</u>
Total Monthly Bill		\$29.79	\$41.83	\$43.13	\$45.12
<i>Dollar Change</i>			\$12.04	\$1.30	\$1.99
<i>% Change</i>			40.4%	3.1%	4.6%
Tier 2	12				
RTS Charge		\$16.44	\$28.74	\$29.90	\$31.70
Arsenic Charge		\$9.80	\$10.59	\$10.73	\$10.85
<u>Usage Charge</u>		<u>\$10.55</u>	<u>\$6.70</u>	<u>\$6.70</u>	<u>\$6.78</u>
Total Monthly Bill		\$36.79	\$46.03	\$47.33	\$49.32
<i>Dollar Change</i>			\$9.24	\$1.30	\$1.99
<i>% Change</i>			25.1%	2.8%	4.2%
Tier 3	24				
RTS Charge		\$16.44	\$28.74	\$29.90	\$31.70
Arsenic Charge		\$9.80	\$10.59	\$10.73	\$10.85
<u>Usage Charge</u>		<u>\$25.55</u>	<u>\$18.70</u>	<u>\$18.70</u>	<u>\$19.14</u>
Total Monthly Bill		\$51.79	\$58.03	\$59.33	\$61.68
<i>Dollar Change</i>			\$6.24	\$1.30	\$2.35
<i>% Change</i>			12.0%	2.2%	4.0%
Tier 4	31				
RTS Charge		\$16.44	\$28.74	\$29.90	\$31.70
Arsenic Charge		\$9.80	\$10.59	\$10.73	\$10.85
<u>Usage Charge</u>		<u>\$37.80</u>	<u>\$30.95</u>	<u>\$30.95</u>	<u>\$31.75</u>
Total Monthly Bill		\$64.04	\$70.28	\$71.58	\$74.30
<i>Dollar Change</i>			\$6.24	\$1.30	\$2.72
<i>% Change</i>			9.7%	1.8%	3.8%

Tier 5	38				
RTS Charge		\$16.44	\$28.74	\$29.90	\$31.70
Arsenic Charge		\$9.80	\$10.59	\$10.73	\$10.85
<u>Usage Charge</u>		<u>\$53.55</u>	<u>\$46.70</u>	<u>\$46.70</u>	<u>\$47.98</u>
Total Monthly Bill		\$79.79	\$86.03	\$87.33	\$90.52
<i>Dollar Change</i>			\$6.24	\$1.30	\$3.19
<i>% Change</i>			7.8%	1.5%	3.7%
Tier 6	45				
RTS Charge		\$16.44	\$28.74	\$29.90	\$31.70
Arsenic Charge		\$9.80	\$10.59	\$10.73	\$10.85
<u>Usage Charge</u>		<u>\$72.80</u>	<u>\$65.95</u>	<u>\$65.95</u>	<u>\$67.80</u>
Total Monthly Bill		\$99.04	\$105.28	\$106.58	\$110.35
<i>Dollar Change</i>			\$6.24	\$1.30	\$3.77
<i>% Change</i>			6.3%	1.2%	3.5%
Tier 7	60				
RTS Charge		\$16.44	\$28.74	\$29.90	\$31.70
Arsenic Charge		\$9.80	\$10.59	\$10.73	\$10.85
<u>Usage Charge</u>		<u>\$134.75</u>	<u>\$127.90</u>	<u>\$127.90</u>	<u>\$131.61</u>
Total Monthly Bill		\$160.99	\$167.23	\$168.53	\$174.16
<i>Dollar Change</i>			\$6.24	\$1.30	\$5.63
<i>% Change</i>			3.9%	0.8%	3.3%
1" Meter					
Tier 1	5				
RTS Charge		\$27.40	\$47.90	\$49.83	\$52.83
Arsenic Charge		\$16.33	\$17.65	\$17.88	\$18.08
<u>Usage Charge</u>		<u>\$3.55</u>	<u>\$2.50</u>	<u>\$2.50</u>	<u>\$2.58</u>
Total Monthly Bill		\$47.28	\$68.05	\$70.21	\$73.48
<i>Dollar Change</i>			\$20.77	\$2.16	\$3.27
<i>% Change</i>			43.9%	3.2%	4.7%
Tier 2	12				
RTS Charge		\$27.40	\$47.90	\$49.83	\$52.83
Arsenic Charge		\$16.33	\$17.65	\$17.88	\$18.08
<u>Usage Charge</u>		<u>\$10.55</u>	<u>\$6.70</u>	<u>\$6.70</u>	<u>\$6.78</u>
Total Monthly Bill		\$54.28	\$72.25	\$74.41	\$77.68
<i>Dollar Change</i>			\$17.97	\$2.16	\$3.27
<i>% Change</i>			33.1%	3.0%	4.4%
Tier 3	24				
RTS Charge		\$27.40	\$47.90	\$49.83	\$52.83
Arsenic Charge		\$16.33	\$17.65	\$17.88	\$18.08
<u>Usage Charge</u>		<u>\$25.55</u>	<u>\$18.70</u>	<u>\$18.70</u>	<u>\$19.14</u>
Total Monthly Bill		\$69.28	\$84.25	\$86.41	\$90.04
<i>Dollar Change</i>			\$14.97	\$2.16	\$3.63
<i>% Change</i>			21.6%	2.6%	4.2%
Tier 4	31				
RTS Charge		\$27.40	\$47.90	\$49.83	\$52.83
Arsenic Charge		\$16.33	\$17.65	\$17.88	\$18.08
<u>Usage Charge</u>		<u>\$37.80</u>	<u>\$30.95</u>	<u>\$30.95</u>	<u>\$31.75</u>
Total Monthly Bill		\$81.53	\$96.50	\$98.66	\$102.66
<i>Dollar Change</i>			\$14.97	\$2.16	\$4.00
<i>% Change</i>			18.4%	2.2%	4.1%

Tier 5	38				
RTS Charge		\$27.40	\$47.90	\$49.83	\$52.83
Arsenic Charge		\$16.33	\$17.65	\$17.88	\$18.08
<u>Usage Charge</u>		<u>\$53.55</u>	<u>\$46.70</u>	<u>\$46.70</u>	<u>\$47.98</u>
Total Monthly Bill		\$97.28	\$112.25	\$114.41	\$118.88
<i>Dollar Change</i>			\$14.97	\$2.16	\$4.47
<i>% Change</i>			15.4%	1.9%	3.9%
Tier 6	45				
RTS Charge		\$27.40	\$47.90	\$49.83	\$52.83
Arsenic Charge		\$16.33	\$17.65	\$17.88	\$18.08
<u>Usage Charge</u>		<u>\$72.80</u>	<u>\$65.95</u>	<u>\$65.95</u>	<u>\$67.80</u>
Total Monthly Bill		\$116.53	\$131.50	\$133.66	\$138.71
<i>Dollar Change</i>			\$14.97	\$2.16	\$5.05
<i>% Change</i>			12.8%	1.6%	3.8%
Tier 7	60				
RTS Charge		\$27.40	\$47.90	\$49.83	\$52.83
Arsenic Charge		\$16.33	\$17.65	\$17.88	\$18.08
<u>Usage Charge</u>		<u>\$134.75</u>	<u>\$127.90</u>	<u>\$127.90</u>	<u>\$131.61</u>
Total Monthly Bill		\$178.48	\$193.45	\$195.61	\$202.52
<i>Dollar Change</i>			\$14.97	\$2.16	\$6.91
<i>% Change</i>			8.4%	1.1%	3.5%

Table 15. Non-Single Family Residential Rate Impacts					
Customer	Water Use (hcf)	Current	Projected Monthly Bill		
			March 1, 2012	Feb 1, 2013	Feb 1, 2014
Non-Single Family Residential Customers					
5/8"	5				
RTS Charge		\$10.96	\$19.16	\$19.93	\$21.13
Arsenic Charge		\$6.53	\$7.06	\$7.15	\$7.23
<u>Usage Charge</u>		<u>\$3.55</u>	<u>\$2.50</u>	<u>\$2.50</u>	<u>\$2.58</u>
Total Monthly Bill		\$21.04	\$28.72	\$29.58	\$30.94
<i>Dollar Change</i>			\$7.68	\$0.86	\$1.36
<i>% Change</i>			36.5%	3.0%	4.6%
5/8"	20				
RTS Charge		\$10.96	\$19.16	\$19.93	\$21.13
Arsenic Charge		\$6.53	\$7.06	\$7.15	\$7.23
<u>Usage Charge</u>		<u>\$23.55</u>	<u>\$19.25</u>	<u>\$19.25</u>	<u>\$19.83</u>
Total Monthly Bill		\$41.04	\$45.47	\$46.33	\$48.19
<i>Dollar Change</i>			\$4.43	\$0.86	\$1.86
<i>% Change</i>			10.8%	1.9%	4.0%
5/8"	35				
RTS Charge		\$10.96	\$19.16	\$19.93	\$21.13
Arsenic Charge		\$6.53	\$7.06	\$7.15	\$7.23
<u>Usage Charge</u>		<u>\$69.20</u>	<u>\$64.90</u>	<u>\$64.90</u>	<u>\$66.85</u>
Total Monthly Bill		\$86.69	\$91.12	\$91.98	\$95.21
<i>Dollar Change</i>			\$4.43	\$0.86	\$3.23
<i>% Change</i>			5.1%	0.9%	3.5%

3/4"	8				
RTS Charge		\$16.44	\$28.74	\$29.90	\$31.70
Arsenic Charge		\$9.80	\$10.59	\$10.73	\$10.85
<u>Usage Charge</u>		<u>\$5.68</u>	<u>\$4.00</u>	<u>\$4.00</u>	<u>\$4.12</u>
Total Monthly Bill		\$31.92	\$43.33	\$44.63	\$46.67
<i>Dollar Change</i>			\$11.41	\$1.30	\$2.04
<i>% Change</i>			35.7%	3.0%	4.6%
3/4"	30				
RTS Charge		\$16.44	\$28.74	\$29.90	\$31.70
Arsenic Charge		\$9.80	\$10.59	\$10.73	\$10.85
<u>Usage Charge</u>		<u>\$34.93</u>	<u>\$28.45</u>	<u>\$28.45</u>	<u>\$29.30</u>
Total Monthly Bill		\$61.17	\$67.78	\$69.08	\$71.85
<i>Dollar Change</i>			\$6.61	\$1.30	\$2.77
<i>% Change</i>			10.8%	1.9%	4.0%
1"	13				
RTS Charge		\$27.40	\$47.90	\$49.83	\$52.83
Arsenic Charge		\$16.33	\$17.65	\$17.88	\$18.08
<u>Usage Charge</u>		<u>\$9.23</u>	<u>\$6.50</u>	<u>\$6.50</u>	<u>\$6.70</u>
Total Monthly Bill		\$52.96	\$72.05	\$74.21	\$77.60
<i>Dollar Change</i>			\$19.09	\$2.16	\$3.39
<i>% Change</i>			36.0%	3.0%	4.6%
1"	75				
RTS Charge		\$27.40	\$47.90	\$49.83	\$52.83
Arsenic Charge		\$16.33	\$17.65	\$17.88	\$18.08
<u>Usage Charge</u>		<u>\$120.73</u>	<u>\$109.95</u>	<u>\$109.95</u>	<u>\$113.25</u>
Total Monthly Bill		\$164.46	\$175.50	\$177.66	\$184.15
<i>Dollar Change</i>			\$11.04	\$2.16	\$6.49
<i>% Change</i>			6.7%	1.2%	3.7%
1 1/2"	30				
RTS Charge		\$54.82	\$95.80	\$99.65	\$105.65
Arsenic Charge		\$32.65	\$35.30	\$35.75	\$36.15
<u>Usage Charge</u>		<u>\$22.75</u>	<u>\$15.50</u>	<u>\$15.50</u>	<u>\$15.97</u>
Total Monthly Bill		\$110.22	\$146.60	\$150.90	\$157.77
<i>Dollar Change</i>			\$36.38	\$4.30	\$6.86
<i>% Change</i>			33.0%	2.9%	4.5%
1 1/2"	150				
RTS Charge		\$54.82	\$95.80	\$99.65	\$105.65
Arsenic Charge		\$32.65	\$35.30	\$35.75	\$36.15
<u>Usage Charge</u>		<u>\$242.75</u>	<u>\$221.25</u>	<u>\$221.25</u>	<u>\$227.89</u>
Total Monthly Bill		\$330.22	\$352.35	\$356.65	\$369.69
<i>Dollar Change</i>			\$22.13	\$4.30	\$13.04
<i>% Change</i>			6.7%	1.2%	3.7%
2"	85				
RTS Charge		\$87.73	\$153.28	\$159.44	\$169.04
Arsenic Charge		\$52.24	\$56.48	\$57.20	\$57.84
<u>Usage Charge</u>		<u>\$74.65</u>	<u>\$49.00</u>	<u>\$49.00</u>	<u>\$50.47</u>
Total Monthly Bill		\$214.62	\$258.76	\$265.64	\$277.35
<i>Dollar Change</i>			\$44.14	\$6.88	\$11.71
<i>% Change</i>			20.6%	2.7%	4.4%

2"	160				
RTS Charge		\$87.73	\$153.28	\$159.44	\$169.04
Arsenic Charge		\$52.24	\$56.48	\$57.20	\$57.84
<u>Usage Charge</u>		<u>\$188.40</u>	<u>\$154.00</u>	<u>\$154.00</u>	<u>\$158.62</u>
Total Monthly Bill		\$328.37	\$363.76	\$370.64	\$385.50
<i>Dollar Change</i>			\$35.39	\$6.88	\$14.86
<i>% Change</i>			10.8%	1.9%	4.0%
3"	240				
RTS Charge		\$175.43	\$306.56	\$318.88	\$338.08
Arsenic Charge		\$104.48	\$112.96	\$114.40	\$115.68
<u>Usage Charge</u>		<u>\$236.80</u>	<u>\$168.00</u>	<u>\$168.00</u>	<u>\$173.04</u>
Total Monthly Bill		\$516.71	\$587.52	\$601.28	\$626.80
<i>Dollar Change</i>			\$70.81	\$13.76	\$25.52
<i>% Change</i>			13.7%	2.3%	4.2%
3"	600				
RTS Charge		\$175.43	\$306.56	\$318.88	\$338.08
Arsenic Charge		\$104.48	\$112.96	\$114.40	\$115.68
<u>Usage Charge</u>		<u>\$1,272.40</u>	<u>\$1,203.60</u>	<u>\$1,203.60</u>	<u>\$1,239.71</u>
Total Monthly Bill		\$1,552.31	\$1,623.12	\$1,636.88	\$1,693.47
<i>Dollar Change</i>			\$70.81	\$13.76	\$56.59
<i>% Change</i>			4.6%	0.8%	3.5%
4"	500				
RTS Charge		\$274.12	\$479.00	\$498.25	\$528.25
Arsenic Charge		\$163.25	\$176.50	\$178.75	\$180.75
<u>Usage Charge</u>		<u>\$588.75</u>	<u>\$481.25</u>	<u>\$481.25</u>	<u>\$495.69</u>
Total Monthly Bill		\$1,026.12	\$1,136.75	\$1,158.25	\$1,204.69
<i>Dollar Change</i>			\$110.63	\$21.50	\$46.44
<i>% Change</i>			10.8%	1.9%	4.0%
4"	1,000				
RTS Charge		\$274.12	\$479.00	\$498.25	\$528.25
Arsenic Charge		\$163.25	\$176.50	\$178.75	\$180.75
<u>Usage Charge</u>		<u>\$2,246.25</u>	<u>\$2,138.75</u>	<u>\$2,138.75</u>	<u>\$2,202.91</u>
Total Monthly Bill		\$2,683.62	\$2,794.25	\$2,815.75	\$2,911.91
<i>Dollar Change</i>			\$110.63	\$21.50	\$96.16
<i>% Change</i>			4.1%	0.8%	3.4%
6"	1,250				
RTS Charge		\$548.24	\$958.00	\$996.50	\$1,056.50
Arsenic Charge		\$326.50	\$353.00	\$357.50	\$361.50
<u>Usage Charge</u>		<u>\$1,740.00</u>	<u>\$1,525.00</u>	<u>\$1,525.00</u>	<u>\$1,570.75</u>
Total Monthly Bill		\$2,614.74	\$2,836.00	\$2,879.00	\$2,988.75
<i>Dollar Change</i>			\$221.26	\$43.00	\$109.75
<i>% Change</i>			8.5%	1.5%	3.8%

6"	3,500				
RTS Charge		\$548.24	\$958.00	\$996.50	\$1,056.50
Arsenic Charge		\$326.50	\$353.00	\$357.50	\$361.50
<u>Usage Charge</u>		<u>\$10,687.50</u>	<u>\$10,472.50</u>	<u>\$10,472.50</u>	<u>\$10,786.68</u>
Total Monthly Bill		\$11,562.24	\$11,783.50	\$11,826.50	\$12,204.68
<i>Dollar Change</i>			\$221.26	\$43.00	\$378.17
<i>% Change</i>			1.9%	0.4%	3.2%
8"	2,000				
RTS Charge		\$877.18	\$1,532.80	\$1,594.40	\$1,690.40
Arsenic Charge		\$522.40	\$564.80	\$572.00	\$578.40
<u>Usage Charge</u>		<u>\$2,784.00</u>	<u>\$2,440.00</u>	<u>\$2,440.00</u>	<u>\$2,513.20</u>
Total Monthly Bill		\$4,183.58	\$4,537.60	\$4,606.40	\$4,782.00
<i>Dollar Change</i>			\$354.02	\$68.80	\$175.60
<i>% Change</i>			8.5%	1.5%	3.8%
8"	7,400				
RTS Charge		\$877.18	\$1,532.80	\$1,594.40	\$1,690.40
Arsenic Charge		\$522.40	\$564.80	\$572.00	\$578.40
<u>Usage Charge</u>		<u>\$24,534.00</u>	<u>\$24,190.00</u>	<u>\$24,190.00</u>	<u>\$24,915.70</u>
Total Monthly Bill		\$25,933.58	\$26,287.60	\$26,356.40	\$27,184.50
<i>Dollar Change</i>			\$354.02	\$68.80	\$828.10
<i>% Change</i>			1.4%	0.3%	3.1%

Zone Charges

Zone charges are designed to recover the additional cost associated with pumping water to customers at higher elevations. The charge is calculated based on the elevation difference between the lowest zone (A) and highest zone, (E), with each zone located 100 feet higher in elevation. Customers in Zone A, the lowest elevation zone, do not pay a zone charge because they are in the base elevation zone. Customers in the higher zones pay a charge per each hcf consumed for each successive zone their water must be pumped through. BWA recommends that the District increase the zone charge by 3 percent each year. The increase is based on the increase in pumping plant expenditures which are escalated at 3 percent annually. Table 16 summarizes the proposed zone charges.

Zone	Current	Mar 1, 2012	Feb 1, 2013	Feb 1, 2014
A	\$0.000	\$0.000	\$0.000	\$0.000
B	\$0.107	\$0.110	\$0.113	\$0.116
C	\$0.214	\$0.220	\$0.226	\$0.233
D	\$0.321	\$0.330	\$0.339	\$0.349
E	\$0.428	\$0.440	\$0.452	\$0.466