

STAFF REPORT

To: Coastside County Water District Board of Directors
From: David Dickson, General Manager
Agenda: February 9, 2010

Report

Date: February 5, 2010

Subject: Bartle Wells Rate Study

Recommendation:

None. Information only.

Background:

Following completion of the District's Financing Plan, presented to the Board in September 2009, Bartle Wells Associates has completed an evaluation of the District's water rate structure. Attachment A presents Bartle Wells' memo summarizing their analysis and recommendations.

In summary, Bartle Wells' review found that the District's rate structure is satisfactory based on normally applied criteria and does not need to be changed. They pointed out that the District may desire to make changes to upper residential tiers and water charges in order to encourage conservation. Their survey of water rates shows that the District's rates are comparable to those of other water utilities in our region.

Fiscal Impact:

None.



BARTLE WELLS ASSOCIATES
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January 26, 2010

Coastside County Water District
766 Main Street
Half Moon Bay CA 94019

Attention: David Dickson, General Manager

Subject: Water Rate Analysis

Bartle Wells Associates (BWA) has completed its water rate and consumption analysis for the Coastside County Water District (CCWD or District). This letter summarizes BWA's analysis and recommendation.

Recommendation

Based on our analysis, BWA concludes that the District does not need to change its current rate design. Water consumption patterns have been consistent for the past three fiscal years for both residential and non-residential customers, and the District has collected sufficient revenue with annual rate adjustments. To implement a stronger conservation incentive, the District could increase the charges for the tiers 3 and 4 or reduce the water allocations in each tier. However, at this time BWA finds there is no need to change the current tiers.

BWA finds the current rate schedule encourages efficient water usage, collects most revenue through the quantity charges (more than 70% as recommended in BMP 11), and specifies reasonable rate differentials among the four residential tiers. When the District sets base and quantity charges for the next fiscal year as part of its budget process, it should look again at water consumption data and the possibility of altering the water rate structure.

Current Rate Structure

The District's current rate structure consists of a base charge that varies by size of meter and a quantity charge that is uniform for non-residential customers and differs for each of the four tiers for residential customers. Bi-monthly water rates for FY 2009/10 are shown in Table 1.

Customer Accounts

A breakdown of water customers and meters is shown in Table 2. Approximately 80% of the customers are residential. The District's largest customer class is 5/8" residential meters, accounting for 77% of all customers.

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Water Consumption

BWA has examined residential water consumption (usage) data provided by CCWD for FY 2006/07 through FY 2008/09 as summarized on Table 3. The District's residential water use has decreased slightly each year, approximately 1.4% in 2007/08 and 3.8% in 2008/09. Notwithstanding the reduced water consumption, the first two tiers account for approximately 85% of the total residential usage.

Table 4 examines District's water usage for FY 2008/09. Total water use for FY 2008/09 was 973,697 hundred cubic feet (hcf), with residential usage being 555,638 hcf, accounting for 57.1% of total consumption.

Looking at the residential usage by tier in Table 4, approximately 42.9% of the residential water usage and approximately 26.8 % of the number of water bills are in the first tier. Around 83% of total residential water consumption and 82% of the residential water bills fall in the first two tiers.

As shown in Table 5, BWA calculates the average bi-monthly water usage to be 17 hcf, which falls in the second tier. On average for the three past fiscal years, median bimonthly water use was 14 hcf.

A more detailed, residential consumption block analysis for FY 2008/09 appears in Table 6 and is graphed in Chart 1.

Estimated Water Sales Revenue

The 2009/10 budget estimates revenue from water sales to be \$5,844,903. BWA applies the currently Board authorized FY 2009/10 water charges (base and quantity) to the number of meters and water usage for the prior FY 2008/09 and calculates the annual revenues to be \$5,758,811 as calculated in Tables 7 and 7a. Based on these estimates, the District will be collecting around 81.3% of total water sales revenue in the quantity charge and 18.7% in the base charge and will be in compliance with the California Urban Water Conservation Council's Best Management Practice (BMP) 11. However, BWA believes the currently authorized charges may collect less revenue (approximately \$86,000) than the District has budgeted. This under-collection may be exacerbated if less water is consumed (sold) in this fiscal year (2009/10).

Water Bill Survey

BWA has done a survey of neighboring agencies on the San Francisco peninsula. Chart 2 compares the residential monthly bill for the neighboring water agencies. The survey is based on a single family residential unit with a 5/8-inch meter and using 9 hcf per month. The chart indicates the District's water rates are comparable to other water agencies in the San Francisco peninsula area.

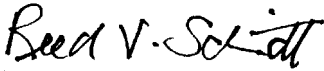
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BWA has completed its water rate analysis for CCWD. Our analysis demonstrates that the District's current tiered rate structure is adequate in collecting sufficient revenues and promoting conservation. Therefore, BWA does not recommend any changes to the rate structure at this time.

We have appreciated the cooperation and assistance of Dave Dickson and other members of the District staff.

Very truly yours,

BARTLE WELLS ASSOCIATES



Reed V. Schmidt, CIPFA
Principal



Catherine Tseng, CIPFA
Financial Analyst

Z:\Jobs\Coastside CWD 064\E-Water Rate Analysis\Final Documents\CCWD Water Rate Analysis and Recommendation Memo 01.26.2010.doc

Table 1
Coastside County Water District
2009/10 Bi-Monthly Water Rates

Base Charge

Meter Size	Charge	Meter Ratio
5/8"	\$24.06	1.0
5/8" for 2 dwelling units	\$52.92	1.0
3/4"	\$36.17	1.5
3/4" for 2 dwelling units	\$72.38	1.5
1"	\$60.28	2.5
1.5"	\$116.41	4.8
2"	\$192.94	8.0
3"	\$422.07	17.5
4"	\$1,447.28	60.2

Quantity Charge (Per hundred cubic feet of water delivered)

Residential (1)

0 - 8 hcf	\$3.93 per hcf
9 - 25 hcf	\$4.33 per hcf
26 - 40 hcf	\$5.63 per hcf
41 or more hcf	\$6.96 per hcf

All Other Customers

\$5.35 per hcf

(1) Residential customers include single family homes, duplexes, condos, townhouse, and all apartment buildings with individual meters.

Table 2
Coastside County Water District
Number of Accounts by Meter Size - 2008/09

Code	Description	2008/09	
		No. of Meters	% of Total
RESIDENTIAL			
10	1" Meter Residential	68	1.0%
33	3/4" for 2 units	1	0.0%
35	3/4" Meter Residential	122	1.7%
57	5/8" Meter for 2 units	17	0.2%
58	5/8" Meter Residential	<u>5,415</u>	<u>77.0%</u>
	Total Residential Meters	5,623	80.0%
OTHER CUSTOMERS			
1	1" Meter	105	1.5%
2	2" Meter	37	0.5%
3	3" Meter	2	0.0%
4	4" Meter	2	0.0%
12	1 1/2" Meter	20	0.3%
34	3/4" Meter	18	0.3%
3I	3" Interruptable	1	0.0%
3N	3" No Base Charge	1	0.0%
59	5/8" Meter	403	5.7%
6D	Detector Check Base/Comm Rate	1	0.0%
89	1 1/2" Detector Check	41	0.6%
90	3/4" Detector Check	9	0.1%
91	1" Detector Check	527	7.5%
92	2" Detector Check	48	0.7%
93	3" Detector Check	3	0.0%
94	4" Detector Check	116	1.6%
96	6" Detector Check	39	0.6%
98	8" Detector Check	11	0.2%
99	10" Detector Check	<u>24</u>	<u>0.3%</u>
	Total Other Customers	1,408	20.0%
	Total All Meters	7,031	100.0%

Source: CCWD Excel File "Rate Code Meter Data"

Table 3
Coastside County Water District
Residential Consumption By Tier Breakpoints

Tier	Use (hcf)	Number of Bills Ending		Water Consumption (hcf)	
		in Tier	% of Total	in Tier	% of Total
2006/07					
Tier 1	0 - 8	7,735	24.0%	233,951	40.0%
Tier 2	9 - 25	17,554	54.4%	253,206	43.3%
Tier 3	26 - 40	4,860	15.0%	64,183	11.0%
Tier 4	40 +	<u>2,147</u>	<u>6.6%</u>	<u>32,999</u>	<u>5.6%</u>
Total		32,296	100.0%	584,339	100.0%
2007/08					
Tier 1	0 - 8	8,372	25.5%	236,236	41.0%
Tier 2	9 - 25	17,708	54.0%	249,354	43.2%
Tier 3	26 - 40	4,778	14.6%	60,435	10.5%
Tier 4	40 +	<u>1,952</u>	<u>5.9%</u>	<u>30,524</u>	<u>5.3%</u>
Total		32,810	100.0%	576,549	100.0%
2008/09					
Tier 1	0 - 8	8,931	26.8%	238,546	42.9%
Tier 2	9 - 25	18,372	55.1%	240,637	43.3%
Tier 3	26 - 40	4,392	13.2%	51,993	9.4%
Tier 4	40 +	<u>1,657</u>	<u>5.0%</u>	<u>24,462</u>	<u>4.4%</u>
Total		33,352	100.0%	555,638	100.0%
Three-Year Average					
Tier 1	0 - 8	8,346	25.4%	236,244	41.3%
Tier 2	9 - 25	17,878	54.5%	247,732	43.3%
Tier 3	26 - 40	4,677	14.2%	58,870	10.3%
Tier 4	40 +	<u>1,919</u>	<u>5.8%</u>	<u>29,328</u>	<u>5.1%</u>
Total		32,819	100.0%	572,175	100.0%

Table 4
Coastside County Water District
Total Water Consumption - Based on 2008/09 data

Total Water Usage

	Water Use	% of Total
Residential	555,638	57.1%
Non-Residential	<u>418,059</u>	<u>42.9%</u>
	973,697	100.0%

Residential Water Usage

	Tier Breaks	2008/09 Water Use (hcf)	% of Total Water Sold	2008/09 No. of Bills	% of Total Total Bills
Tier 1	0 - 8	238,546	42.9%	8,931	26.8%
Tier 2	9 - 25	240,637	43.3%	18,372	55.1%
Tier 3	26 - 40	51,993	9.4%	4,392	13.2%
Tier 4	41 or +	<u>24,462</u>	<u>4.4%</u>	<u>1,657</u>	<u>5.0%</u>
		555,638	100.0%	33,352	100.0%

Non-Residential (Commercial) Water Usage

Month	Use (hcf)
July	96,884
August	9,849
September	80,263
October	8,487
November	63,759
December	6,372
January	48,269
February	5,725
March	37,463
April	6,071
May	46,982
June	<u>7,935</u>
Total	418,059

Table 5
Coastside County Water District
Residential Water Use Statistics

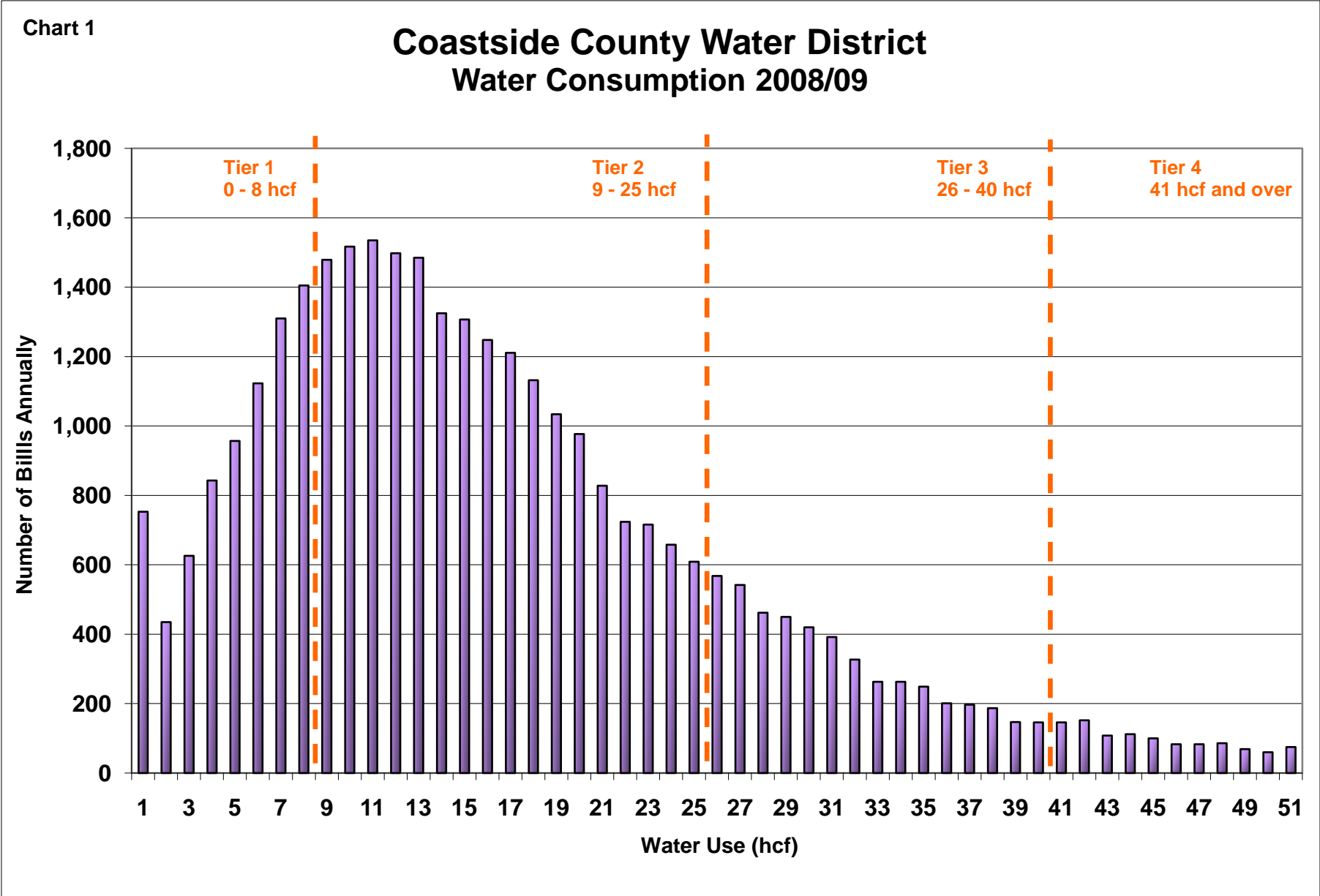
Fiscal Year	Bi-Monthly Water Use (hcf)			
	25th Percentile	Median ¹	Average ²	75th Percentile
2006/07	8	14	18	23
2007/08	8	14	18	23
2008/09	8	13	17	21
3-Year Avg (hcf)	8	14	17	22
3-Year Avg (AF)	0.11	0.19	0.23	0.30

1 Half of all annual bi-monthly bills have water use at or below this level.

2 Average is skewed upwards by a proportionally small number of high water users; approximately 2/3 of bills are below average with only 1/3 of bills above average.

Table 6
Coastside County Water District
Residential Consumption Block Analysis 2008/09

Use (hcf)	Number of Bills			Water Consumption (cct)		
	In Block	Cumulative	% of Total	In Block	Cumulative	% of Total
0	753	753	2.26%	0	0	0.00%
1	435	1,188	3.56%	435	435	0.08%
2	626	1,814	5.44%	1,252	1,687	0.30%
3	843	2,657	7.97%	2,529	4,216	0.76%
4	957	3,614	10.84%	3,828	8,044	1.45%
5	1,123	4,737	14.20%	5,615	13,659	2.46%
6	1,310	6,047	18.13%	7,860	21,519	3.87%
7	1,405	7,452	22.34%	9,835	31,354	5.64%
8	1,479	8,931	26.78%	11,832	43,186	7.77%
9	1,517	10,448	31.33%	13,653	56,839	10.23%
10	1,535	11,983	35.93%	15,350	72,189	12.99%
11	1,498	13,481	40.42%	16,478	88,667	15.96%
12	1,485	14,966	44.87%	17,820	106,487	19.16%
13	1,325	16,291	48.85%	17,225	123,712	22.26%
14	1,307	17,598	52.76%	18,298	142,010	25.56%
15	1,248	18,846	56.51%	18,720	160,730	28.93%
16	1,211	20,057	60.14%	19,376	180,106	32.41%
17	1,132	21,189	63.53%	19,244	199,350	35.88%
18	1,034	22,223	66.63%	18,612	217,962	39.23%
19	977	23,200	69.56%	18,563	236,525	42.57%
20	828	24,028	72.04%	16,560	253,085	45.55%
21	724	24,752	74.21%	15,204	268,289	48.28%
22	716	25,468	76.36%	15,752	284,041	51.12%
23	658	26,126	78.33%	15,134	299,175	53.84%
24	609	26,735	80.16%	14,616	313,791	56.47%
25	568	27,303	81.86%	14,200	327,991	59.03%
26	542	27,845	83.49%	14,092	342,083	61.57%
27	462	28,307	84.87%	12,474	354,557	63.81%
28	450	28,757	86.22%	12,600	367,157	66.08%
29	420	29,177	87.48%	12,180	379,337	68.27%
30	392	29,569	88.66%	11,760	391,097	70.39%
31	327	29,896	89.64%	10,137	401,234	72.21%
32	263	30,159	90.43%	8,416	409,650	73.73%
33	263	30,422	91.21%	8,679	418,329	75.29%
34	249	30,671	91.96%	8,466	426,795	76.81%
35	201	30,872	92.56%	7,035	433,830	78.08%
36	197	31,069	93.15%	7,092	440,922	79.35%
37	187	31,256	93.72%	6,919	447,841	80.60%
38	147	31,403	94.16%	5,586	453,427	81.60%
39	146	31,549	94.59%	5,694	459,121	82.63%
40	146	31,695	95.03%	5,840	464,961	83.68%
41	152	31,847	95.49%	6,232	471,193	84.80%
42	108	31,955	95.81%	4,536	475,729	85.62%
43	112	32,067	96.15%	4,816	480,545	86.49%
44	100	32,167	96.45%	4,400	484,945	87.28%
45	83	32,250	96.70%	3,735	488,680	87.95%
46	83	32,333	96.94%	3,818	492,498	88.64%
47	86	32,419	97.20%	4,042	496,540	89.36%
48	69	32,488	97.41%	3,312	499,852	89.96%
49	60	32,548	97.59%	2,940	502,792	90.49%
50	75	32,623	97.81%	3,750	506,542	91.16%
51	47	32,670	97.96%	2,397	508,939	91.60%
52	47	32,717	98.10%	2,444	511,383	92.04%
53	53	32,770	98.25%	2,809	514,192	92.54%
54	53	32,823	98.41%	2,862	517,054	93.06%
55	36	32,859	98.52%	1,980	519,034	93.41%
56	31	32,890	98.61%	1,736	520,770	93.72%
57	30	32,920	98.70%	1,710	522,480	94.03%
58	30	32,950	98.79%	1,740	524,220	94.35%
59	26	32,976	98.87%	1,534	525,754	94.62%
60	21	32,997	98.94%	1,260	527,014	94.85%
61	32	33,029	99.03%	1,952	528,966	95.20%
62	27	33,056	99.11%	1,674	530,640	95.50%
63	28	33,084	99.20%	1,764	532,404	95.82%
64	20	33,104	99.26%	1,280	533,684	96.05%
65	15	33,119	99.30%	975	534,659	96.22%
66	14	33,133	99.34%	924	535,583	96.39%
67	14	33,147	99.39%	938	536,521	96.56%
68	13	33,160	99.42%	884	537,405	96.72%
69	9	33,169	99.45%	621	538,026	96.83%
70	10	33,179	99.48%	700	538,726	96.96%
71	16	33,195	99.53%	1,136	539,862	97.16%
72	11	33,206	99.56%	792	540,654	97.30%
73	7	33,213	99.58%	511	541,165	97.40%
74	8	33,221	99.61%	592	541,757	97.50%
75	2	33,223	99.61%	150	541,907	97.53%
76	11	33,234	99.65%	836	542,743	97.68%
77	8	33,242	99.67%	616	543,359	97.79%
78	4	33,246	99.68%	312	543,671	97.85%
79	4	33,250	99.69%	316	543,987	97.90%
80	4	33,254	99.71%	320	544,307	97.96%
81	7	33,261	99.73%	567	544,874	98.06%
82	5	33,266	99.74%	410	545,284	98.14%
83	4	33,270	99.75%	332	545,616	98.20%
84	2	33,272	99.76%	168	545,784	98.23%
85	2	33,274	99.77%	170	545,954	98.26%
86	4	33,278	99.78%	344	546,298	98.32%
87	6	33,284	99.80%	522	546,820	98.41%
88	0	33,284	99.80%	0	546,820	98.41%
89	5	33,289	99.81%	445	547,265	98.49%
90	1	33,290	99.81%	90	547,355	98.51%
91	3	33,293	99.82%	273	547,628	98.56%
92	2	33,295	99.83%	184	547,812	98.59%
93	0	33,295	99.83%	0	547,812	98.59%
94	2	33,297	99.84%	188	548,000	98.63%
95	4	33,301	99.85%	380	548,380	98.69%
96	2	33,303	99.85%	192	548,572	98.73%
97	0	33,303	99.85%	0	548,572	98.73%
98	3	33,306	99.86%	294	548,866	98.78%
99	2	33,308	99.87%	198	549,064	98.82%
100	1	33,309	99.87%	100	549,164	98.83%
101-200	36	33,345	99.98%	4,523	553,687	99.65%
201-300	5	33,350	99.99%	1,179	554,866	99.86%
301-400	1	33,351	100.00%	329	555,195	99.92%
400 +	1	33,352	100.00%	443	555,638	100.00%
Total	33,352			555,638		



BARTLE WELLS ASSOCIATES
Jobs/CCWD/064-E/CCWD Water Rate Scenarios 01.26.2010.xlsx, Chart 1 - Bill vs Water Use, 1/29/2010

Table 7
Coastside County Water District
2009/10 Estimated Revenue (1)

	Residential	Commercial	Total
Quantity Charges	\$2,442,420	\$2,236,616	\$4,679,036
Base Charges (2)	<u>\$838,612</u>	<u>\$241,163</u>	<u>\$1,079,776</u>
Total Water Sales Revenue	\$3,281,032	\$2,477,779	\$5,758,811
Quantity Charges	74.4%	90.3%	81.3%
Base Charges (2)	<u>25.6%</u>	<u>9.7%</u>	<u>18.7%</u>
Total	100.0%	100.0%	100.0%

1 - Revenue based on 2009/10 rates. Consumption revenue based on 2008/09 water use.

Base charge revenue based on 2008/09 meter counts.

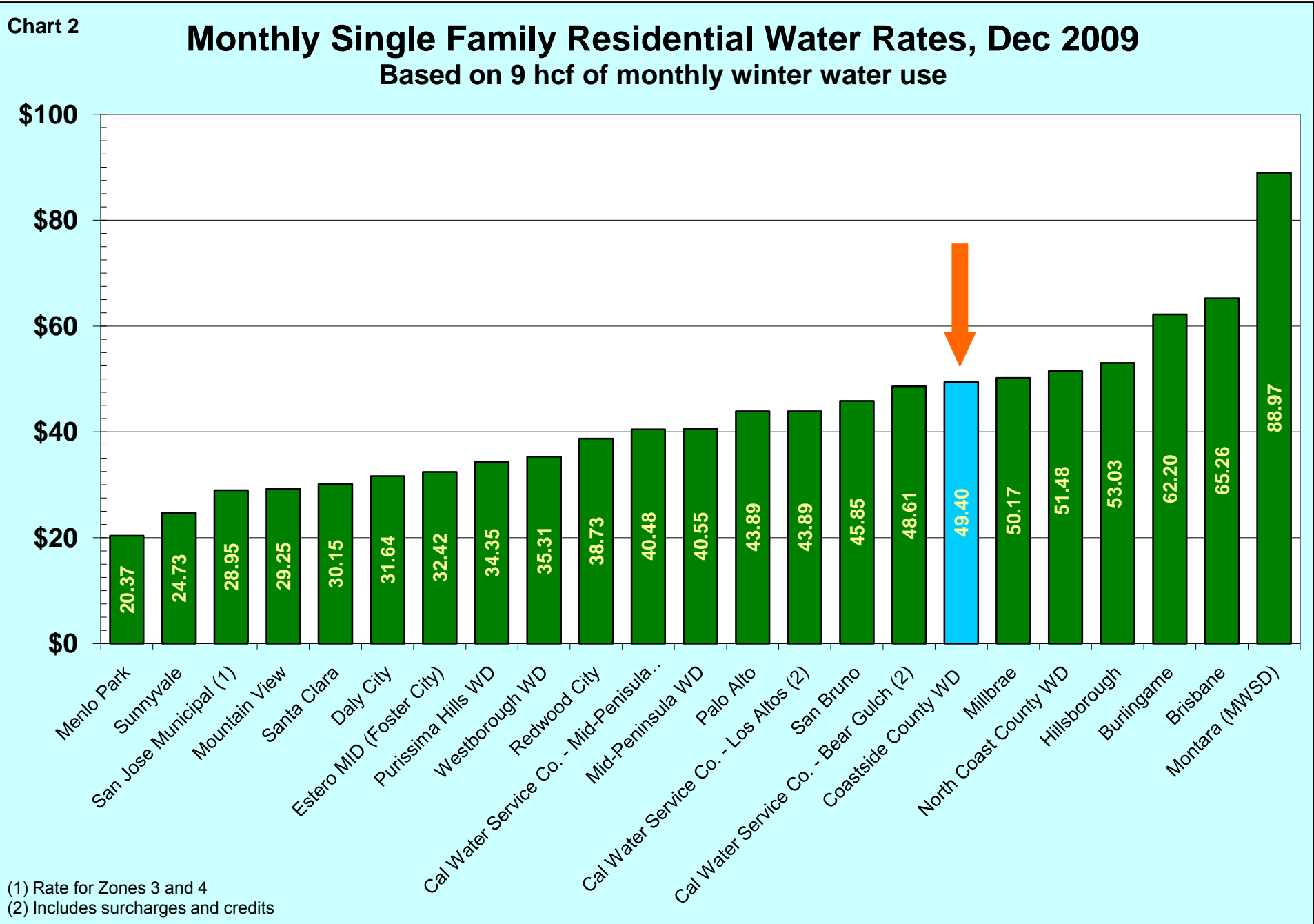
2 - Base charge revenues for Commercial include detector check revenue. *(need to check if calculating correctly)*

Table 7a
Coastside County Water District
Estimated Annual Base Charge and Quantity Charge Revenue

BASE CHARGE REVENUE				
Code	Description	2009/10		
		Base Charge	Base Revenue	
<u>Residential</u>				
10	1" Meter Residential	\$60.28	\$24,594	
33	3/4" for 2 units	\$72.38	\$434	
35	3/4" Meter Residential	\$36.17	\$26,476	
57	5/8" Meter for 2 units	\$52.92	\$5,398	
58	5/8" Meter Residential	\$24.06	<u>\$781,709</u>	
	Total Residential Meters		\$838,612	
<u>Other Customers</u>				
1	1" Meter	\$60.28	\$37,976	
2	2" Meter	\$192.94	\$42,833	
3	3" Meter	\$422.07	\$5,065	
4	4" Meter	\$1,447.28	\$17,367	
12	1 1/2" Meter	\$116.41	\$13,969	
34	3/4" Meter	\$36.17	\$3,906	
3I	3" Interruptable	\$422.07	\$2,532	
3N	3" No Base Charge	\$0.00	\$0	
59	5/8" Meter	\$24.06	\$58,177	
6D	Detector Check Base/Comm Rate	\$0.00	\$0	
89	1 1/2" Detector Check ¹	\$9.00	\$2,214	
90	3/4" Detector Check	\$4.50	\$243	
91	1" Detector Check	\$6.00	\$18,972	
92	2" Detector Check	\$12.00	\$3,456	
93	3" Detector Check	\$18.00	\$324	
94	4" Detector Check	\$24.00	\$16,704	
96	6" Detector Check	\$24.00	\$5,616	
98	8" Detector Check	\$48.00	\$3,168	
99	10" Detector Check	\$60.00	<u>\$8,640</u>	
	Total Other Customers		\$241,163	
TOTAL BASE CHARGE REVENUE			\$1,079,776	

1 - Detector Check Valves - bimonthly service charge is \$6 per inch of valve diameter - 2008/09 rate
Source: CCWD Excel File "Rate Code Meter Data"

QUANTITY CHARGE REVENUE				
<u>Residential Water Usage</u>				
	Tier Breaks	2008/09	2009/10	
		Water Use (hcf)	Rates	Est. Revenue
Tier 1	0 - 8	238,546	\$3.93	\$937,486
Tier 2	9 - 25	240,637	\$4.33	\$1,041,958
Tier 3	26 - 40	51,993	\$5.63	\$292,721
Tier 4	41 or +	<u>24,462</u>	\$6.96	<u>\$170,256</u>
		555,638		\$2,442,420
<u>Non-Residential (Commercial) Water Usage</u>		418,059	\$5.35	\$2,236,616
TOTAL QUANTITY CHARGE REVENUE				\$4,679,036



Bartle Wells Associates
CCWD Water Rate Scenarios 01.26.2010.xlsx, Chart 2 Water Rate Survey , 1/29/2010