



## Technical Memorandum

To: Mark Bryant, General Manager  
Garberville Sanitary District

From: Doug Dove, President

Re: Water and Wastewater Rate Study Update 2011

Date: November 11, 2011

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### Background

In 2009 Bartle Wells Associates conducted a water and wastewater rate study for Garberville Sanitary District (GSD). The water enterprise was running a deficit and was in need of a new water treatment system to comply with state mandates. The wastewater enterprise was under a 'Cease and Desist Order' until a new treatment plant could be constructed. In October 2009 the District implemented water and wastewater rate increases. At the August 2009 Proposition 218 rate hearing, five years of rate increases were approved with the last increase to be implemented in July 2013.

Since the 2009 study conditions have changed. Bartle Wells Associates was retained to update the cash flow projections and the rate projections based on the most recent data on water and wastewater usage and project costs.

### Water Enterprise

The District is working on construction of a water project that will result in a new water treatment system complying with state mandates. The District has secured a State funded, low interest loan to fund the design and a grant to fund the planning. Financing will be needed for construction. Depending on which design is chosen, construction costs are estimated to be about \$5.25 million. The District has submitted an application for a \$3 million grant. The remaining \$2.25 million is expected to be financed with a State Revolving Fund (SRF) loan at zero percent interest. SFR loans are typically repaid over 20 years; the District is likely to qualify for a 30 year repayment period, but the repayment period will not be determined until the California Department of Public Health (CDPH) has completed their financial evaluation of the District.

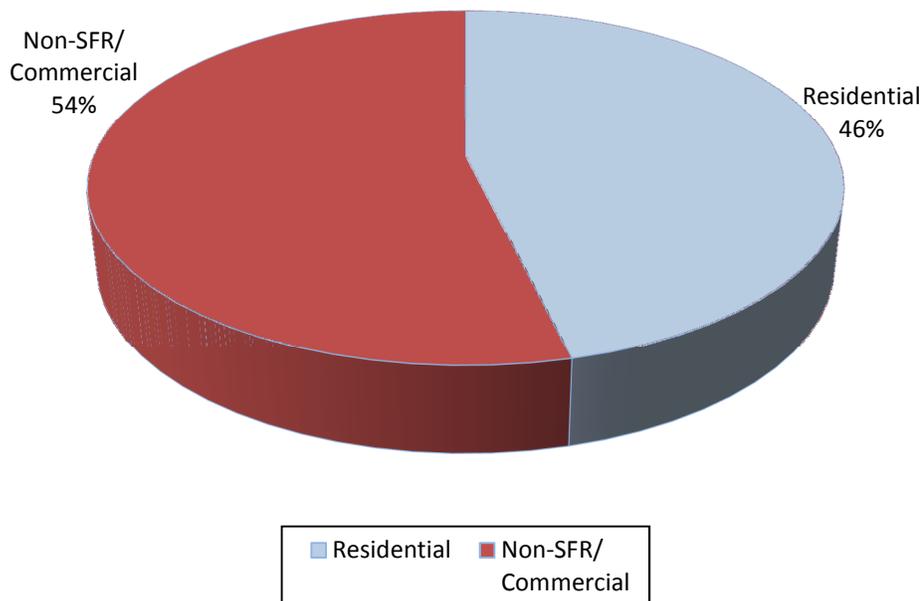
## Water Customers

The District provides water service to approximately 400 predominantly residential connections.

Meter Size	Single Family Residential	Non-SFR/ Commercial	Total Meters
5/8" & 3/4"	266	104	370
1"	1	12	13
1.5"	0	7	7
2"	<u>0</u>	<u>6</u>	<u>6</u>
Total	267	129	396

Water consumption from June 2010 to May 2011 shows that 46 percent of the water sold was consumed by single family residential customers, 54 percent of the water sold was for non-single family residential/commercial (multi-family and commercial). In calendar year 2008, residential accounts consumed 55 percent of the water sold while commercial connections accounted for 45 percent of the water consumption. This shift is likely due to reclassification of multi-family customers to non-single family/commercial (Non-SFR) and single family residential accounts altering their consumption due to increased rates.

### Water Consumption June 2010 – May 2011



## Water Rates

In September 2009 the District implemented a new single family residential rate structure. The current rate structure includes a monthly meter charge based on meter size and a two-tier inclining block rate for all water consumed. Tier 1 is for the first five units (hundred cubic feet, HCF) of water consumed, Tier 2 is for all water consumed over five HCF.

All non-single family residential/commercial water customers (multi-family, commercial, irrigation) pay a monthly meter charge based on meter size and a uniform consumption charge for all water consumed. All water is sold at the same price per unit which provides good conservation incentive. There are large differences in water use for different types of businesses. For example, a restaurant and a warehouse are likely to use vastly different amounts of water. It is difficult to establish an equitable tiered block rate structure for different commercial uses.

Water bills with the new rate structure and rate increase were sent to customers in October 2009. In July 2010 water rates increased 20 percent, in accordance with the Schedule of Monthly Water Rates set forth in the Proposition 218 notice. In July 2011 water rates were approved for a ten percent increase. The District held off on this increase until the water rate study update was complete.

Below is the Schedule of Monthly Water Rates as it appeared in the Proposition 218 notice.

<b>SCHEDULE OF MONTHLY WATER RATES</b>					
<b>Meter Size</b>	<b>35% Increase 9/2009</b>	<b>20% Increase 7/2010</b>	<b>10% Increase 7/2011</b>	<b>3% Increase 7/2012</b>	<b>3% Increase 7/2013</b>
5/8" & 3/4"	\$43.00	\$51.60	\$56.76	\$58.46	\$60.22
1"	86.00	103.20	113.52	116.93	120.43
1.5"	172.00	206.40	227.04	233.85	240.87
2"	258.00	309.60	340.56	350.78	361.30
Upper Zone Fixed Surcharge	\$5.00	\$6.00	\$6.60	\$6.80	\$7.00
Tier 1      0-5 hcf (\$/hcf)	\$0.50	\$0.60	\$0.66	\$0.68	\$0.70
Tier 2      Over 5 hcf (\$/hcf)	\$2.75	\$3.30	\$3.63	\$3.74	\$3.85
Non-Single Family Residential/Commercial (\$/hcf)	\$1.90	\$2.28	\$2.51	\$2.59	\$2.67
Upper Zone Variable Surcharge (\$/hcf)	\$0.40	\$0.48	\$0.53	\$0.54	\$0.56

## Cash Flow Projections

BWA developed a ten-year financial projection to evaluate long-term finances and determine rate increases. Water cash flow projections are shown on the following pages. The financial projections are based on the best information currently available as well as a number of reasonable and slightly conservative assumptions including:

- The projections assume no growth.
- Interest income estimated at one percent of beginning fund reserves over the next ten years.
- Operating costs are based on the 2010/11 actuals provided by the District and escalate at the annual rate of five percent for wages and utilities and three percent for operations and maintenance.
- Operations and maintenance expenses for the new water project are projected at an additional \$11,800 per year starting in fiscal year 2012/13, escalating at three percent per year.
- Total water project costs of \$5.25 million. Funding for anticipated water projects using proceeds from a \$3 million grant, \$2.25 million State Revolving Fund (SRF) loan, and District funds.
- No major additional capital improvement projects are anticipated outside of the water project.

The cash flow projections indicate that the District needs to continue to follow the approved Schedule of Monthly Water Rates. Rate adjustments have not been implemented as scheduled; therefore the District needs larger percentage increases to reach the approved dollar amounts. The adjustments are needed to enable the water enterprise to:

- Bring in sufficient revenues to cover operating costs and annual inflation.
- Fund the anticipated water projects, projected at \$5.25 million with \$2.25 million financed with a SRF loan with a repayment period of 30 years.
- Fund additional improvements and maintenance on a pay-as-you-go basis.
- Build fund reserves.
  - Recommended O&M reserves.
  - Recommended Capital reserves.

## Garberville Sanitary District 10-year Water Fund Cash Flow Summary

<b>Garberville Sanitary District</b>						
Water Projected Cashflow/Budget	<b>2010/11</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>
Rate Increase:	Approved 20%	Approved 10%	Approved 3%	Approved 3%	Proposed	Proposed
Fixed (meter charge)	20%	11%	11%	11%	0%	0%
Volume (consumption charge)	20%	10%	3%	3%	0%	0%
Typical Monthly Residential Water Bill	\$50.10	\$55.55	\$61.10	\$67.57	\$67.57	\$67.57
Beginning Fund Balance	68,129	188,510	213,752	331,481	518,771	633,080
<b>Revenues</b>						
Fixed - Residential	146,067	154,100	171,100	189,900	189,900	189,900
Fixed - Commercial	102,117	107,700	119,500	132,600	132,600	132,600
Volume - Residential	53,877	56,600	58,300	60,000	60,000	60,000
Volume - Commercial	61,509	64,600	66,500	68,500	68,500	68,500
Bulk Water Charges	10,756	1,400	1,400	1,400	1,400	1,400
Late Charges	3,341	3,341	3,341	3,341	3,341	3,341
Connection Fees	0	0	0	0	0	0
Interest	899	1,890	2,140	3,310	5,190	6,330
Misc. Revenue	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
<b>Total Water All Revenues</b>	<b>378,665</b>	<b>389,731</b>	<b>422,381</b>	<b>459,151</b>	<b>461,031</b>	<b>462,171</b>
<b>Expenses</b>						
<u>Administrative &amp; General</u>						
<b>Subtotal Administrative &amp; General</b>	<b>115,248</b>	<b>119,712</b>	<b>124,272</b>	<b>129,032</b>	<b>133,972</b>	<b>139,292</b>
<u>Water Distribution</u>						
<b>Subtotal Water Distribution</b>	<b>39,145</b>	<b>40,690</b>	<b>42,300</b>	<b>43,980</b>	<b>45,740</b>	<b>47,570</b>
<u>Water Treatment</u>						
<b>Subtotal Water Treatment</b>	<b>66,616</b>	<b>69,620</b>	<b>72,760</b>	<b>76,060</b>	<b>79,500</b>	<b>83,090</b>
<b>Total All Expenses</b>	<b>221,009</b>	<b>230,022</b>	<b>239,332</b>	<b>249,072</b>	<b>259,212</b>	<b>269,952</b>
<u>New Project O&amp;M Expenses</u>						
<b>Subtotal New Project O&amp;M</b>	<b>0</b>	<b>0</b>	<b>11,800</b>	<b>12,150</b>	<b>12,510</b>	<b>12,890</b>
<b>Total O&amp;M Expenses</b>	<b>221,009</b>	<b>230,022</b>	<b>251,132</b>	<b>261,222</b>	<b>271,722</b>	<b>282,842</b>
<b>Net Operating Revenue</b>	<b>157,657</b>	<b>159,709</b>	<b>171,249</b>	<b>197,929</b>	<b>189,309</b>	<b>179,329</b>
<b>Water Treatment Improvement Project</b>						
GSD Cash Funded	15,997	113,189	32,241	0	0	0
CDPH Design Loan Contract # 2007P103	21,279	21,279	21,279	10,639		
CDPH Planning Loan Contract # SRF11P124 (converting to grant)						
<i>5.25M project possible 3.0M Grant, 2.25M Loan</i>					75,000	75,000
<b>Subtotal Loans</b>	<b>37,276</b>	<b>134,468</b>	<b>53,520</b>	<b>10,639</b>	<b>75,000</b>	<b>75,000</b>
<b>Net Revenues</b>	<b>120,381</b>	<b>25,241</b>	<b>117,729</b>	<b>187,290</b>	<b>114,309</b>	<b>104,329</b>
<b>Ending Fund Balance</b>	<b>188,510</b>	<b>213,752</b>	<b>331,481</b>	<b>518,771</b>	<b>633,080</b>	<b>737,409</b>
<b>Debt Service Coverage (min 1.2)</b>	<b>7.41</b>	<b>7.51</b>	<b>8.05</b>	<b>18.60</b>	<b>2.52</b>	<b>2.39</b>

Source:

Water sales - email from District 8.2.2011  
Bulk water sale - verbal from District 7.28.2011  
Actual expenses from District 11.8.2011

**Garberville Sanitary District  
10-year Water Fund Cash Flow Summary (con't)**

<b>Garberville Sanitary District</b> Water Projected Cashflow/Budget	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19</b>	<b>2019/20</b>	<b>2020/21</b>
Rate Increase:	Proposed	Proposed	Proposed	Proposed	Proposed
Fixed (meter charge)	0%	0%	0%	0%	0%
Volume (consumption charge)	0%	0%	0%	0%	0%
Typical Monthly Residential Water Bill	\$67.57	\$67.57	\$67.57	\$67.57	\$67.57
Beginning Fund Balance	737,409	831,178	913,757	984,526	1,042,825
<b>Revenues</b>					
Fixed - Residential	189,900	189,900	189,900	189,900	189,900
Fixed - Commercial	132,600	132,600	132,600	132,600	132,600
Volume - Residential	60,000	60,000	60,000	60,000	60,000
Volume - Commercial	68,500	68,500	68,500	68,500	68,500
Bulk Water Charges	1,400	1,400	1,400	1,400	1,400
Late Charges	3,341	3,341	3,341	3,341	3,341
Connection Fees	0	0	0	0	0
Interest	7,370	8,310	9,140	9,850	10,430
Misc. Revenue	100	100	100	100	100
<b>Total Water All Revenues</b>	<b>463,211</b>	<b>464,151</b>	<b>464,981</b>	<b>465,691</b>	<b>466,271</b>
<b>Expenses</b>					
<u>Administrative &amp; General</u>					
<b>Subtotal Administrative &amp; General</b>	<b>144,812</b>	<b>150,602</b>	<b>156,632</b>	<b>162,902</b>	<b>169,472</b>
<u>Water Distribution</u>					
<b>Subtotal Water Distribution</b>	<b>49,480</b>	<b>51,470</b>	<b>53,540</b>	<b>55,710</b>	<b>57,960</b>
<u>Water Treatment</u>					
<b>Subtotal Water Treatment</b>	<b>86,870</b>	<b>90,820</b>	<b>94,950</b>	<b>99,270</b>	<b>103,790</b>
<b>Total All Expenses</b>	<b>281,162</b>	<b>292,892</b>	<b>305,122</b>	<b>317,882</b>	<b>331,222</b>
<u>New Project O&amp;M Expenses</u>					
<b>Subtotal New Project O&amp;M</b>	<b>13,280</b>	<b>13,680</b>	<b>14,090</b>	<b>14,510</b>	<b>14,950</b>
<b>Total O&amp;M Expenses</b>	<b>294,442</b>	<b>306,572</b>	<b>319,212</b>	<b>332,392</b>	<b>346,172</b>
<b>Net Operating Revenue</b>	<b>168,769</b>	<b>157,579</b>	<b>145,769</b>	<b>133,299</b>	<b>120,099</b>
<b>Water Treatment Improvement Project</b>					
GSD Cash Funded	0	0	0	0	0
CDPH Design Loan Contract # 2007P103					
CDPH Planning Loan Contract # SRF11P124 (converting to grant) 5.25M project possible 3.0M Grant, 2.25M Loan	75,000	75,000	75,000	75,000	75,000
<b>Subtotal Loans</b>	<b>75,000</b>	<b>75,000</b>	<b>75,000</b>	<b>75,000</b>	<b>75,000</b>
<b>Net Revenues</b>	<b>93,769</b>	<b>82,579</b>	<b>70,769</b>	<b>58,299</b>	<b>45,099</b>
<b>Ending Fund Balance</b>	<b>831,178</b>	<b>913,757</b>	<b>984,526</b>	<b>1,042,825</b>	<b>1,087,924</b>
<b>Debt Service Coverage (min 1.2)</b>	<b>2.25</b>	<b>2.10</b>	<b>1.94</b>	<b>1.78</b>	<b>1.60</b>

Source:

Water sales - email from District 8.2.2011  
Bulk water sale - verbal from District 7.28.2011  
Actual expenses from District 11.8.2011

# Garberville Sanitary District

## 10-year Water Fund Cash Flow Detail

Garberville Sanitary District											
Water Projected Cashflow/Budget											
	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Rate Increase:	Approved 20%	Approved 10%	Approved 3%	Approved 3%	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed	Proposed
Fixed (meter charge)	20%	11%	11%	11%	0%	0%	0%	0%	0%	0%	0%
Volume (consumption charge)	20%	10%	3%	3%	0%	0%	0%	0%	0%	0%	0%
Typical Monthly Residential Water Bill	\$50.10	\$55.55	\$61.10	\$67.57	\$67.57	\$67.57	\$67.57	\$67.57	\$67.57	\$67.57	\$67.57
Beginning Fund Balance	68,129	188,510	213,752	331,481	518,771	633,080	737,409	831,178	913,757	984,526	1,042,825
<b>Revenues</b>											
Fixed - Residential	146,067	154,100	171,100	189,900	189,900	189,900	189,900	189,900	189,900	189,900	189,900
Fixed - Commercial	102,117	107,700	119,500	132,600	132,600	132,600	132,600	132,600	132,600	132,600	132,600
Volume - Residential	53,877	56,600	58,300	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Volume - Commercial	61,509	64,600	66,500	68,500	68,500	68,500	68,500	68,500	68,500	68,500	68,500
Bulk Water Charges	10,756	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400
Late Charges	3,341	3,341	3,341	3,341	3,341	3,341	3,341	3,341	3,341	3,341	3,341
Connection Fees	0	0	0	0	0	0	0	0	0	0	0
Interest	899	1,890	2,140	3,310	5,190	6,330	7,370	8,310	9,140	9,850	10,430
Misc. Revenue	100	100	100	100	100	100	100	100	100	100	100
<b>Total Water All Revenues</b>	<b>378,665</b>	<b>389,731</b>	<b>422,381</b>	<b>459,151</b>	<b>461,031</b>	<b>462,171</b>	<b>463,211</b>	<b>464,151</b>	<b>464,981</b>	<b>465,691</b>	<b>466,271</b>
<b>Expenses</b>											
<b>Administrative &amp; General</b>											
Insurance	16,807	17,310	17,830	18,360	18,910	19,480	20,060	20,660	21,280	21,920	22,580
Advertising	103	110	110	110	110	110	110	110	110	110	110
Bad Debts	231	240	250	260	270	280	290	300	310	320	330
Bank Charges	175	180	190	200	210	220	230	240	250	260	270
Directors Fees	660	680	700	720	740	760	780	800	820	840	870
Dues & Memberships	1,391	1,430	1,470	1,510	1,560	1,610	1,660	1,710	1,760	1,810	1,860
Education & training	439	450	460	470	480	490	500	520	540	560	580
Education & training BOD	129	130	130	130	130	130	130	130	130	130	130
License & permits	3,110	3,200	3,300	3,400	3,500	3,610	3,720	3,830	3,940	4,060	4,180
Auto	1,563	1,610	1,660	1,710	1,760	1,810	1,860	1,920	1,980	2,040	2,100
Miscellaneous	0	0	0	0	0	0	0	0	0	0	0
Office Expense	2,100	2,160	2,220	2,290	2,360	2,430	2,500	2,580	2,660	2,740	2,820
Outside Services	7,453	7,680	7,910	8,150	8,390	8,640	8,900	9,170	9,450	9,730	10,020
Payroll Taxes	6,852	7,060	7,270	7,490	7,710	7,940	8,180	8,430	8,680	8,940	9,210
Postage	903	930	960	990	1,020	1,050	1,080	1,110	1,140	1,170	1,210
Professional Fees	8,837	9,100	9,370	9,650	9,940	10,240	10,550	10,870	11,200	11,540	11,890
Property Taxes	12	12	12	12	12	12	12	12	12	12	12
Repairs & maintenance	133	250	260	270	280	290	300	310	320	330	340
Rents	5,400	5,400	5,400	5,400	5,400	5,560	5,730	5,900	6,080	6,260	6,450
Retirement	1,218	1,250	1,290	1,330	1,370	1,410	1,450	1,490	1,530	1,580	1,630
Supplies	1,247	1,280	1,320	1,360	1,400	1,440	1,480	1,520	1,570	1,620	1,670
Telephone	2,428	2,500	2,580	2,660	2,740	2,820	2,900	2,990	3,080	3,170	3,270
Travel & Meetings	500	520	540	560	580	600	620	640	660	680	700
Utilities	1,004	1,050	1,100	1,160	1,220	1,280	1,340	1,410	1,480	1,550	1,630
Wages	51,296	53,860	56,550	59,380	62,350	65,470	68,740	72,180	75,790	79,580	83,560
Vacation Accrual Adjustment	1,257	1,320	1,390	1,460	1,530	1,610	1,690	1,770	1,860	1,950	2,050
<b>Subtotal Administrative &amp; General</b>	<b>115,248</b>	<b>119,712</b>	<b>124,272</b>	<b>129,032</b>	<b>133,972</b>	<b>139,292</b>	<b>144,812</b>	<b>150,602</b>	<b>156,632</b>	<b>162,902</b>	<b>169,472</b>
<b>Water Distribution</b>											
Pumping	0	0	0	0	0	0	0	0	0	0	0
Repairs & maintenance	20,150	20,750	21,370	22,010	22,670	23,350	24,050	24,770	25,510	26,280	27,070
Supplies	235	240	250	260	270	280	290	300	310	320	330
Utilities	6,734	7,070	7,420	7,790	8,180	8,590	9,020	9,470	9,940	10,440	10,960
Wages	12,026	12,630	13,260	13,920	14,620	15,350	16,120	16,930	17,780	18,670	19,600
<b>Subtotal Water Distribution</b>	<b>39,145</b>	<b>40,690</b>	<b>42,300</b>	<b>43,980</b>	<b>45,740</b>	<b>47,570</b>	<b>49,480</b>	<b>51,470</b>	<b>53,540</b>	<b>55,710</b>	<b>57,960</b>
<b>Water Treatment</b>											
Monitoring	1,115	1,150	1,180	1,220	1,260	1,300	1,340	1,380	1,420	1,460	1,500
Outside Services	0	0	0	0	0	0	0	0	0	0	0
Repairs & maintenance	2,166	2,230	2,300	2,370	2,440	2,510	2,590	2,670	2,750	2,830	2,910
Supplies	13,391	13,790	14,200	14,630	15,070	15,520	15,990	16,470	16,960	17,470	17,990
Utilities	34,605	36,340	38,160	40,070	42,070	44,170	46,380	48,700	51,140	53,700	56,390
Wages	15,339	16,110	16,920	17,770	18,660	19,590	20,570	21,600	22,680	23,810	25,000
<b>Subtotal Water Treatment</b>	<b>66,616</b>	<b>69,620</b>	<b>72,760</b>	<b>76,060</b>	<b>79,500</b>	<b>83,090</b>	<b>86,870</b>	<b>90,820</b>	<b>94,950</b>	<b>99,270</b>	<b>103,790</b>
<b>Total All Expenses</b>	<b>221,009</b>	<b>230,022</b>	<b>239,332</b>	<b>249,072</b>	<b>259,212</b>	<b>269,952</b>	<b>281,162</b>	<b>292,892</b>	<b>305,122</b>	<b>317,882</b>	<b>331,222</b>
<b>New Project O&amp;M Expenses</b>											
<b>Subtotal New Project O&amp;M</b>	<b>0</b>	<b>0</b>	<b>11,800</b>	<b>12,150</b>	<b>12,510</b>	<b>12,890</b>	<b>13,280</b>	<b>13,680</b>	<b>14,090</b>	<b>14,510</b>	<b>14,950</b>
<b>Total O&amp;M Expenses</b>	<b>221,009</b>	<b>230,022</b>	<b>251,132</b>	<b>261,222</b>	<b>271,722</b>	<b>282,842</b>	<b>294,442</b>	<b>306,572</b>	<b>319,212</b>	<b>332,392</b>	<b>346,172</b>
<b>Net Operating Revenue</b>	<b>157,657</b>	<b>159,709</b>	<b>171,249</b>	<b>197,929</b>	<b>189,309</b>	<b>179,329</b>	<b>168,769</b>	<b>157,579</b>	<b>145,769</b>	<b>133,299</b>	<b>120,099</b>
<b>Water Treatment Improvement Project</b>											
GSD Cash Funded	15,997	113,189	32,241	0	0	0	0	0	0	0	0
CDPH Design Loan Contract # 2007P103	21,279	21,279	21,279	10,639							
CDPH Planning Loan Contract # SRF11P124 (converting to grant)											
5.25M project possible 3.0M Grant, 2.25M Loan					75,000	75,000	75,000	75,000	75,000	75,000	75,000
<b>Subtotal Loans</b>	<b>37,276</b>	<b>134,468</b>	<b>53,520</b>	<b>10,639</b>	<b>75,000</b>	<b>75,000</b>	<b>75,000</b>	<b>75,000</b>	<b>75,000</b>	<b>75,000</b>	<b>75,000</b>
<b>Net Revenues</b>	<b>120,381</b>	<b>25,241</b>	<b>117,729</b>	<b>187,290</b>	<b>114,309</b>	<b>104,329</b>	<b>93,769</b>	<b>82,579</b>	<b>70,769</b>	<b>58,299</b>	<b>45,099</b>
<b>Ending Fund Balance</b>	<b>188,510</b>	<b>213,752</b>	<b>331,481</b>	<b>518,771</b>	<b>633,080</b>	<b>737,409</b>	<b>831,178</b>	<b>913,757</b>	<b>984,526</b>	<b>1,042,825</b>	<b>1,087,924</b>
<b>Debt Service Coverage (min 1.2)</b>	<b>7.41</b>	<b>7.51</b>	<b>8.05</b>	<b>18.60</b>	<b>2.52</b>	<b>2.39</b>	<b>2.25</b>	<b>2.10</b>	<b>1.94</b>	<b>1.78</b>	<b>1.60</b>

Source:  
 Water sales - email from District 8.2.2011  
 Bulk water sale - verbal from District 7.28.2011  
 Actual expenses from District 11.8.2011

## Water Enterprise Recommendations

Since the 2009 rate study, administrative & general, water treatment, and water transmission & distribution expenses have not increased as much as projected. Construction costs and additional operations and maintenance costs for the new water project have been better defined. Project costs have increased. Originally a State Revolving Fund loan for \$2 million was projected, now the loan amount is projected to be \$2.25 million. The SFR repayment period is projected to be 30 years. Originally operations and maintenance costs were projected to not increase when the new project was complete, now additional O&M costs for the new project are projected to be \$11,800 per year starting in fiscal year 2012/13.

With this new information, BWA recommends that the District continue to implement the Schedule of Monthly Water Rates that was approved at the Proposition 218 rate hearing in August 2009. Rate adjustments have not been implemented as scheduled therefore the District needs larger percentage increases to reach the approved dollar amounts.

<b>Approved Monthly Water Rates</b>				
<b>Meter Size</b>	<b>7/2010</b>	<b>7/2011</b>	<b>7/2012</b>	<b>7/2013</b>
5/8" & 3/4"	\$51.60	\$56.76	\$58.46	\$60.22
1"	103.2	113.52	116.93	120.43
1.5"	206.4	227.04	233.85	240.87
2"	309.6	340.56	350.78	361.30
Upper Zone Fixed Surcharge	\$6.00	\$6.60	\$6.80	\$7.00
Tier 1     0-500 cu ft (\$/hcf)	\$0.60	\$0.66	\$0.68	\$0.70
Tier 2     Over 500 cu ft (\$/hcf)	\$3.30	\$3.63	\$3.74	\$3.85
Non-Single Family Residential/Commercial (\$/hcf)	\$2.28	\$2.51	\$2.59	\$2.67
Upper Zone Variable Surcharge (\$/hcf)	\$0.48	\$0.53	\$0.54	\$0.56

<b>Recommended Monthly Water Rates</b>				
<b>Meter Size</b>	<b>7/2010</b>	<b>7/2011</b>	<b>7/2012</b>	<b>7/2013</b>
BWA's recommended percentage increase to reach final dollar amounts approved on Proposition 218 notice				
Fixed (meter charge)		11%	11%	11%
Volume (consumption charge)	Current Rates	10%	3%	3%
5/8" & 3/4"	\$43.80	\$48.62	\$53.97	\$60.22
1"	87.60	97.24	107.93	120.43
1.5"	175.20	194.47	215.86	240.87
2"	262.80	291.71	323.80	361.30
Upper Zone Fixed Surcharge	\$6.00	\$6.60	\$6.80	\$7.00
Tier 1     0-500 cu ft (\$/hcf)	\$0.60	\$0.66	\$0.68	\$0.70
Tier 2     Over 500 cu ft (\$/hcf)	\$3.30	\$3.63	\$3.74	\$3.85
Non-Single Family Residential/Commercial (\$/hcf)	\$2.28	\$2.51	\$2.59	\$2.67
Upper Zone Variable Surcharge (\$/hcf)	\$0.48	\$0.53	\$0.54	\$0.56

## Wastewater Enterprise

The District has completed construction of a wastewater project that has resulted in a completely new wastewater treatment plant which satisfies state mandates and repeals the ‘Cease and Desist Order’. Funding for the wastewater projects came from an American Recovery and Reinvestment Act (ARRA) grant, State Revolving Fund (SRF) low interest loan, a conventional loan, and District reserves.

## Wastewater Customers

The District currently provides wastewater service to approximately 350 customer connections; 233 residential, 114 non-single family residential/commercial. Flow from commercial customers is influenced by tourist traffic which takes place primarily in the summer and fall. GSD needs to size their facilities for peak flow.

## Wastewater Rates

In September 2009 the District implemented a new wastewater rate structure for all customers. Wastewater bills now include two components: a base monthly charge based on customer type and a monthly consumption charge (per HCF) based on the amount of water consumed. For single family residential customers the consumption charge is based on winter water usage (the average of all water consumed in January, February, and March). For non-single family residential/commercial customers the consumption charge is based on 90 percent of the previous months water usage and weighted by the strength of the discharge.

Wastewater bills with the new rate structure and increase were sent to customers in October 2009. In July 2010 wastewater rates increased three percent in accordance with the Schedule of Monthly Wastewater Rates set forth in the Proposition 218 notice. In July 2011 wastewater rates were approved for another three percent increase. The District held off on this increase until the wastewater rate study update was completed to see if the increase was needed.

SCHEDULE OF MONTHLY SINGLE FAMILY RESIDENTIAL WASTEWATER RATES

<b>Single Family Residential</b>	<b>Approved 50% Increase 9/2009</b>	<b>Approved 3% Increase 7/2010</b>	<b>Approved 3% Increase 7/2011</b>	<b>Approved 3% Increase 7/2012</b>	<b>Approved 3% Increase 7/2013</b>
Base Monthly Charge	\$31.09	\$32.02	\$32.98	\$33.97	\$34.99
Consumption per hcf	2.58	2.66	2.74	2.82	2.90

SCHEDULE OF MONTHLY NON-SINGLE FAMILY  
RESIDENTIAL/COMMERCIAL WASTEWATER RATES

<b>Non-Single Family Residential/Commercial</b>	<b>Approved 50% Increase 9/2009</b>	<b>Approved 3% Increase 7/2010</b>	<b>Approved 3% Increase 7/2011</b>	<b>Approved 3% Increase 7/2012</b>	<b>Approved 3% Increase 7/2013</b>
Base Monthly Charge	varies	varies	varies	varies	varies
Consumption Charge \$/hcf					
Low	\$1.89	\$1.95	\$2.01	\$2.07	\$2.13
Domestic	2.36	2.43	2.50	2.58	2.66
Medium	3.54	3.65	3.76	3.87	3.98
High	4.72	4.86	5.01	5.16	5.31

## Cash Flow Projections

BWA developed ten-year financial projections to evaluate long-term finances and determine rate increases. Wastewater cash flow projections are shown on the next page. The financial projections are based on the best information currently available as well as a number of reasonable and slightly conservative assumptions including:

- The projections assume no growth.
- Interest income estimated at one percent of beginning fund reserves over the next ten years.
- Operating costs are based on the 2010/11 actuals provided by the District and escalate at the annual rate of five percent for wages and utilities and three percent for operations and maintenance.
- No major additional capital improvement projects are anticipated.
- Maintain fund reserves.
  - Recommended O&M reserves.
  - Recommended Capital reserves.

# Garberville Sanitary District 10-year Wastewater Fund Cash Flow

<b>Garberville Sanitary District</b>												
Sewer Projected Cashflow/Budget												
	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
	Approved 50%	Approved 3%	Approved 3%	Approved 3%	Approved 3%	Proposed 0%						
Rate Increase:	50%	3%	3%	3%	3%	0%	0%	0%	0%	0%	0%	0%
Beginning Fund Balance	218,677	320,167	253,723	316,620	381,074	446,984	503,921	551,230	588,386	614,795	629,902	633,061
<b>Revenues</b>												
Sewer Charges	290,913	321,368	326,188	335,974	346,053	346,053	346,053	346,053	346,053	346,053	346,053	346,053
Late Charges	3,361	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015	2,015
Connection Fees	0	0	0	0	0	0	0	0	0	0	0	0
Interest		2,577	2,540	3,170	3,810	4,470	5,040	5,510	5,880	6,150	6,300	6,330
Property Tax Revenue	20,490	21,929	22,100	22,280	22,460	22,640	22,820	23,000	23,180	23,370	23,560	23,750
Misc. Revenue	<u>725</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Total all revenues	315,489	347,989	352,943	363,539	374,438	375,278	376,028	376,678	377,228	377,688	378,028	378,248
<b>Expenses</b>												
<b>Administrative &amp; General</b>												
Insurance	11,000	16,915	17,420	17,940	18,480	19,030	19,600	20,190	20,800	21,420	22,060	22,720
Advertising	100	55	60	62	64	66	68	70	72	74	76	78
Bad Debts	120	82	84	87	89	92	95	98	100	103	107	110
Bank Charges	10	120	120	124	127	131	135	139	143	148	152	157
Directors Fees	640	660	680	700	720	740	760	780	800	820	840	870
Dues & Memberships	778	820	840	870	900	930	960	990	1,020	1,050	1,080	1,110
Education & training	255	439	450	460	470	480	490	500	520	540	560	580
Education & training BOD	40	150	155	159	164	169	174	179	184	190	196	202
License & permits	11,000	10,934	11,260	11,600	11,950	12,310	12,680	13,060	13,450	13,850	14,270	14,700
Auto	800	1,341	1,380	1,420	1,460	1,500	1,550	1,600	1,650	1,700	1,750	1,800
Miscellaneous	20	0	0	0	0	0	0	0	0	0	0	0
Office Expense	2,050	2,063	2,120	2,180	2,250	2,320	2,390	2,460	2,530	2,610	2,690	2,770
Outside Services	6,500	4,723	4,860	5,010	5,160	5,310	5,470	5,630	5,800	5,970	6,150	6,330
Payroll Taxes	6,300	7,247	7,460	7,680	7,910	8,150	8,390	8,640	8,900	9,170	9,450	9,730
Postage	1,010	901	930	960	990	1,020	1,050	1,080	1,110	1,140	1,170	1,210
Professional Fees	9,300	6,318	6,510	6,710	6,910	7,120	7,330	7,550	7,780	8,010	8,250	8,500
Repairs & maintenance		133	250	260	270	280	290	300	310	320	330	340
Rents	4,800	4,800	4,800	4,800	4,800	4,800	4,944	5,092	5,245	5,402	5,565	5,731
Retirement	904	1,408	1,450	1,490	1,530	1,580	1,630	1,680	1,730	1,780	1,830	1,880
Supplies	250	1,476	1,520	1,570	1,620	1,670	1,720	1,770	1,820	1,870	1,930	1,990
Telephone	2,800	2,429	2,500	2,580	2,660	2,740	2,820	2,900	2,990	3,080	3,170	3,270
Travel & Meetings	680	236	240	250	260	270	280	290	300	310	320	330
Utilities	700	1,005	1,060	1,110	1,170	1,230	1,290	1,350	1,420	1,490	1,560	1,640
Wages	50,000	61,050	64,100	67,310	70,680	74,210	77,920	81,820	85,910	90,210	94,720	99,460
Vacation Accrual Adjustment	<u>7,502</u>	<u>1,257</u>	<u>1,320</u>	<u>1,390</u>	<u>1,460</u>	<u>1,530</u>	<u>1,610</u>	<u>1,690</u>	<u>1,770</u>	<u>1,860</u>	<u>1,950</u>	<u>2,050</u>
<b>Subtotal Administrative &amp; General</b>	<b>117,559</b>	<b>126,562</b>	<b>131,569</b>	<b>136,721</b>	<b>142,094</b>	<b>147,677</b>	<b>153,645</b>	<b>159,858</b>	<b>166,355</b>	<b>173,117</b>	<b>180,175</b>	<b>187,558</b>
<b>Wastewater Collection</b>												
Repairs & maintenance	13,200	33,920	26,924	27,730	28,560	29,420	30,300	31,210	32,150	33,110	34,100	35,120
Supplies	450	420	430	440	450	460	470	480	490	500	520	540
Utilities	4,200	4,270	4,480	4,700	4,940	5,190	5,450	5,720	6,010	6,310	6,630	6,960
Wages	<u>8,000</u>	<u>10,519</u>	<u>11,040</u>	<u>11,590</u>	<u>12,170</u>	<u>12,780</u>	<u>13,420</u>	<u>14,090</u>	<u>14,790</u>	<u>15,530</u>	<u>16,310</u>	<u>17,130</u>
<b>Subtotal Wastewater Collection</b>	<b>25,850</b>	<b>49,129</b>	<b>42,874</b>	<b>44,460</b>	<b>46,120</b>	<b>47,850</b>	<b>49,640</b>	<b>51,500</b>	<b>53,440</b>	<b>55,450</b>	<b>57,560</b>	<b>59,750</b>
<b>Wastewater Treatment</b>												
Monitoring	5,000	8,030	8,270	8,520	8,780	9,040	9,310	9,590	9,880	10,180	10,490	10,800
Outside Services	200	0	0	0	0	0	0	0	0	0	0	0
Repairs & maintenance	2,000	2,874	2,960	3,050	3,140	3,230	3,330	3,430	3,530	3,640	3,750	3,860
Supplies	18,400	11,608	11,960	12,320	12,690	13,070	13,460	13,860	14,280	14,710	15,150	15,600
Utilities	1,200	3,249	3,410	3,580	3,760	3,950	4,150	4,360	4,580	4,810	5,050	5,300
Wages	<u>17,700</u>	<u>27,310</u>	<u>28,680</u>	<u>30,110</u>	<u>31,620</u>	<u>33,200</u>	<u>34,860</u>	<u>36,600</u>	<u>38,430</u>	<u>40,350</u>	<u>42,370</u>	<u>44,490</u>
<b>Subtotal Wastewater Treatment</b>	<b>44,500</b>	<b>53,071</b>	<b>55,280</b>	<b>57,580</b>	<b>59,990</b>	<b>62,490</b>	<b>65,110</b>	<b>67,840</b>	<b>70,700</b>	<b>73,690</b>	<b>76,810</b>	<b>80,050</b>
Total all expenses	187,909	228,762	229,723	238,761	248,204	258,017	268,395	279,198	290,495	302,257	314,545	327,358
<b>New Project O&amp;M Expenses</b>												
<b>Subtotal New Project O&amp;M</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total O&amp;M expenses</b>	<b>187,909</b>	<b>228,762</b>	<b>229,723</b>	<b>238,761</b>	<b>248,204</b>	<b>258,017</b>	<b>268,395</b>	<b>279,198</b>	<b>290,495</b>	<b>302,257</b>	<b>314,545</b>	<b>327,358</b>
<b>Net Operating Revenues</b>	<b>127,580</b>	<b>119,227</b>	<b>123,221</b>	<b>124,778</b>	<b>126,234</b>	<b>117,261</b>	<b>107,633</b>	<b>97,481</b>	<b>86,733</b>	<b>75,431</b>	<b>63,483</b>	<b>50,890</b>
<b>Wastewater Improvement Project Loans **</b>												
GSD Cash Funded	0	125,347	0	0	0	0	0	0	0	0	0	0
New Sewer System MFC Loan (includes interest)	0	34,234	34,234	34,234	34,234	34,234	34,234	34,234	34,234	34,234	34,234	0
Existing SRF Loan (includes interest)	<u>26,090</u>	<u>26,090</u>	<u>26,090</u>	<u>26,090</u>	<u>26,090</u>	<u>26,090</u>	<u>26,090</u>	<u>26,090</u>	<u>26,090</u>	<u>26,090</u>	<u>26,090</u>	<u>26,090</u>
<b>Subtotal of Loans</b>	<b>26,090</b>	<b>185,671</b>	<b>60,324</b>	<b>26,090</b>								
<b>** \$2,290,415.00 was Grant Monies</b>												
<b>Net Revenues</b>	<b>101,490</b>	<b>(66,443)</b>	<b>62,897</b>	<b>64,454</b>	<b>65,910</b>	<b>56,937</b>	<b>47,309</b>	<b>37,157</b>	<b>26,409</b>	<b>15,107</b>	<b>3,159</b>	<b>24,800</b>
<b>Ending Fund Balance</b>	<b>320,167</b>	<b>253,723</b>	<b>316,620</b>	<b>381,074</b>	<b>446,984</b>	<b>503,921</b>	<b>551,230</b>	<b>588,386</b>	<b>614,795</b>	<b>629,902</b>	<b>633,061</b>	<b>657,862</b>
<b>Debt Service Coverage (min. 1.2)</b>	<b>4.89</b>	<b>1.98</b>	<b>2.04</b>	<b>2.07</b>	<b>2.09</b>	<b>1.94</b>	<b>1.78</b>	<b>1.62</b>	<b>1.44</b>	<b>1.25</b>	<b>1.05</b>	<b>1.95</b>

Source:  
2010/11 Sewer Actual vs. Budget - unaudited  
Profit & Loss for BWA May 2011  
Actual expenses from District 11.8.2011

## **Wastewater Enterprise Recommendations**

Since the 2009 rate study, revenues and expenses are lower than projected, but borrowing was higher than projected. With this new information, BWA recommends that the District continue to implement the Schedule of Monthly Single Family Residential and Non-Single Family Residential/Commercial Wastewater Rates that was approved at the Proposition 218 rate hearing in August 2009. The cash flow projection indicates that a rate increase may be needed in Fiscal Year 2019/20.