

City of Grass Valley
Water Financing Plan & Rate Update
August 2007

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Table 1
City of Grass Valley
Outstanding 1991 California Safe Drinking Water SRF Loan

Date	Principal	Interest	Period Debt Svc	Fiscal Year Debt Svc
10/01/04	\$32,760.48	\$41,562.38	\$74,322.86	
04/01/05	33,481.53	40,841.33	74,322.86	148,645.72
10/01/05	33,766.24	40,556.62	74,322.86	
04/01/06	34,555.47	39,767.39	74,322.86	148,645.72
10/01/06	34,921.03	39,401.83	74,322.86	
04/01/07	35,723.36	38,599.50	74,322.86	148,645.72
10/01/07	36,115.07	38,207.79	74,322.86	
04/01/08	36,776.58	37,546.28	74,322.86	148,645.72
10/01/08	37,448.13	36,874.73	74,322.86	
04/01/09	38,228.57	36,094.29	74,322.86	148,645.72
10/01/09	38,626.20	35,696.66	74,322.86	
04/01/10	39,470.57	34,852.29	74,322.86	148,645.72
10/01/10	39,946.21	34,376.65	74,322.86	
04/01/11	40,805.55	33,517.31	74,322.86	148,645.72
10/01/11	41,311.09	33,011.77	74,322.86	
04/01/12	42,053.24	32,269.62	74,322.86	148,645.72
10/01/12	42,806.48	31,516.38	74,322.86	
04/01/13	43,654.81	30,668.05	74,322.86	148,645.72
10/01/13	44,181.51	30,141.35	74,322.86	
04/01/14	45,088.90	29,233.96	74,322.86	148,645.72
10/01/14	45,690.38	28,632.48	74,322.86	
04/01/15	46,614.89	27,707.97	74,322.86	148,645.72
10/01/15	47,250.54	27,072.32	74,322.86	
04/01/16	48,084.87	26,237.99	74,322.86	148,645.72
10/01/16	48,931.48	25,391.38	74,322.86	
04/01/17	49,857.41	24,465.45	74,322.86	148,645.72
10/01/17	50,531.66	23,791.20	74,322.86	
04/01/18	51,511.10	22,811.76	74,322.86	148,645.72
10/01/18	52,256.41	22,066.45	74,322.86	
04/01/19	53,255.41	21,067.45	74,322.86	148,645.72
10/01/19	54,039.79	20,283.07	74,322.86	
04/01/20	54,979.49	19,343.37	74,322.86	148,645.72
10/01/20	55,932.83	18,390.03	74,322.86	
04/01/21	56,947.47	17,375.39	74,322.86	148,645.72
10/01/21	57,790.37	16,532.49	74,322.86	
04/01/22	58,852.16	15,470.70	74,322.86	148,645.72
10/01/22	59,761.89	14,560.97	74,322.86	
04/01/23	60,846.04	13,476.82	74,322.86	148,645.72
10/01/23	61,800.42	12,522.44	74,322.86	
04/01/24	62,860.58	11,462.28	74,322.86	148,645.72
10/01/24	63,935.92	10,386.94	74,322.86	
04/01/25	65,051.96	9,270.90	74,322.86	148,645.72
10/01/25	66,087.64	8,235.22	74,322.86	
04/01/26	67,243.57	7,079.29	74,322.86	148,645.72
10/01/26	68,341.23	5,981.63	74,322.86	
04/01/27	69,522.72	4,800.14	74,322.86	148,645.72
10/01/27	70,671.43	3,651.43	74,322.86	
04/01/28	71,869.27	2,453.59	74,322.86	148,645.72
10/01/28	<u>73,492.16</u>	<u>1,238.78</u>	<u>74,730.94</u>	<u>74,730.94</u>
Total	2,465,732.11	1,176,496.11	3,642,228.22	3,642,228.22

Table 2
City of Grass Valley
Alta Hill Reservoir SRF Loan Estimates

Loan Funding Requirement	\$2,200,000
Term	20
Interest Rate	2.50%
Annual Debt service	141,124

Table 3
City of Grass Valley
Cash Flow Assumptions

RATE, GROWTH, & GENERAL FINANCIAL ASSUMPTIONS

- 1 Rate adjustments become effective on Jan-1 of each year; revenues are adjusted to account for mid-year rate adjustments.
- 2 Approximately 65% of annual water consumption occurs from Jul-Dec, with 35% of annual water use from Jan-Jun (based on historical billing data).
- 3 Growth in customer base conservatively projected based on 5 new 3/4" meter equivalents per year for financial planning purposes..
- 4 The cash flows use 2007/08 budget as the base year for future projections.
- 5 Interest rates earned on investments are projected at 3.0%.

REVENUE ASSUMPTIONS

- 1 Utility user fee revenues increase due to growth and rate adjustments effective Jan-1 each year.
- 2 2006/07 service charge revenues have been adjusted to account for City's adopted rate adjustment effective Jan-1, 2006.
- 3 Future impact fee revenues based on projected new water capacity charge and assume charge increases annually at 2% to account for construction cost inflation.
- 4 Interest earnings on fund reserves are estimated based on projected future interest rates multiplied by fund balance at beginning of year.

EXPENSE ASSUMPTIONS

- 1 General operating costs escalate at the projected annual rate of 6.0%.
 - 2 Water purchase projections account for projected growth in customer base and estimated future NID wholesale water rate increases which take effect on Jan-1 of each year.
 - 3 Debt service projections assume the City will obtain a CIEDB-ISRF Loan during the 2005/06 fiscal year to help fund the Alta Hill Reservoir Improvements.
 - 4 For financial planning purposes, assumes a \$1 million debt-financed project in 2011/12.
 - 5 Future ongoing capital improvement expenses are phased in to a level of \$500,000 in 2012/13.
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Table 4 - Water Cash Flow Projections - Existing Customers

	Actual	Estimated	Projected								
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
Rate Adjustment	12%	12%	18.5%	15.6%	13.5%	11.9%	10.6%	5.0%	5.0%	5.0%	5.0%
5/8" Meter Charge	\$12.05	\$13.50	\$16.00	\$18.50	\$21.00	\$23.50	\$26.00	\$27.30	\$28.67	\$30.10	\$31.61
New 5/8" Meter Equivalents		3	5	5	5	5	5	5	5	5	5
Net Growth		0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Interest Rate		4.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Cost Escalator				6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
NID Raw Wtr Rate Incr (Jan-1)			8.0%	8.0%	8.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Beginning Fund Balance	\$512,335	\$399,814	\$513,911	\$347,000	\$379,000	\$411,000	\$467,000	\$455,000	\$448,000	\$469,000	\$519,000
Revenues											
Utility service charges	1,133,507	1,370,000	1,560,000	1,835,000	2,105,000	2,380,000	2,655,000	2,875,000	3,025,000	3,180,000	3,345,000
Interest income	32,334	17,000	15,000	10,000	11,000	12,000	14,000	14,000	13,000	14,000	16,000
Other	<u>45,558</u>	<u>67,000</u>	<u>58,000</u>	<u>58,000</u>	<u>58,000</u>	<u>58,000</u>	<u>58,000</u>	<u>58,000</u>	<u>58,000</u>	<u>58,000</u>	<u>58,000</u>
Total revenues	1,211,399	1,454,000	1,633,000	1,903,000	2,174,000	2,450,000	2,727,000	2,947,000	3,096,000	3,252,000	3,419,000
Debt proceeds			2,200,000			1,000,000					
Expenses											
Operating											
Billing & administration	77,397	98,225	105,443	112,000	149,000	158,000	167,000	177,000	188,000	199,000	211,000
Payments to general gov't	135,415	141,372	146,038	155,000	164,000	174,000	184,000	195,000	207,000	219,000	232,000
Water treatment plant	196,491	225,000	316,433	335,000	355,000	376,000	399,000	423,000	448,000	475,000	504,000
Purchase of water from NID	260,050	260,000	298,518	290,000	313,000	335,000	352,000	371,000	390,000	410,000	431,000
Water distribution	<u>350,162</u>	<u>400,000</u>	<u>463,132</u>	<u>491,000</u>	<u>620,000</u>	<u>657,000</u>	<u>806,000</u>	<u>854,000</u>	<u>905,000</u>	<u>959,000</u>	<u>1,017,000</u>
Subtotal operating	1,019,515	1,124,597	1,329,564	1,383,000	1,601,000	1,700,000	1,908,000	2,020,000	2,138,000	2,262,000	2,395,000
Non-Operating											
1991 DWR Loan	154,672	155,306	155,263	155,000	155,000	155,000	155,000	155,000	155,000	155,000	155,000
2007 SRF Loan for Alta Res	0	0	0	141,000	141,000	141,000	141,000	141,000	141,000	141,000	141,000
2011 Loan Debt Svc (Projected)	0	0	0	0	0	0	84,000	84,000	84,000	84,000	84,000
Vehicle/equip replacement	0	0	40,000	42,000	45,000	48,000	51,000	54,000	57,000	60,000	64,000
Alta Hill Rsrvoir Improvements	0	0	2,400,000	0	0	0	0	0	0	0	0
Projected debt-funded project	0	0	0	0	0	1,000,000	0	0	0	0	0
Capital improvements	<u>133,020</u>	<u>60,000</u>	<u>75,000</u>	<u>150,000</u>	<u>200,000</u>	<u>350,000</u>	<u>400,000</u>	<u>500,000</u>	<u>500,000</u>	<u>500,000</u>	<u>550,000</u>
Subtotal non-operating	287,692	215,306	2,670,263	488,000	541,000	1,694,000	831,000	934,000	937,000	940,000	994,000
Total expenses	1,307,207	1,339,903	3,999,827	1,871,000	2,142,000	3,394,000	2,739,000	2,954,000	3,075,000	3,202,000	3,389,000
Revenues Less Expenses	(95,808)	114,097	(166,827)	32,000	32,000	56,000	(12,000)	(7,000)	21,000	50,000	30,000
Ending Fund Balance	416,527	513,911	347,084	379,000	411,000	467,000	455,000	448,000	469,000	519,000	549,000

Table 5 - Water Cash Flow Projections - Expansion Fund

	Actual	Estimated	Projected								
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
New 5/8" Meter Equivalents		3	5	5	5	5	5	5	5	5	5
Net Growth		0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Connection Fee (3/4" Meter)		\$4,795	\$5,464	\$7,204	\$8,101	\$8,300	\$8,500	\$8,700	\$8,900	\$9,100	\$9,300
Interest Rate		4.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Beginning Fund Balance	\$255,689	\$317,932	\$258,000	\$188,000	\$180,000	\$176,000	\$173,000	\$171,000	\$170,000	\$170,000	\$171,000
Revenues											
Connection / annexation fees	51,930	10,649	27,000	36,000	41,000	42,000	43,000	44,000	45,000	46,000	47,000
Interest income	<u>10,313</u>	<u>9,000</u>	<u>8,000</u>	<u>6,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>
Total revenues	62,243	19,649	35,000	42,000	46,000	47,000	48,000	49,000	50,000	51,000	52,000
Expenses											
Expansion capital projects	<u>0</u>	<u>80,000</u>	<u>105,000</u>	<u>50,000</u>	<u>50,000</u>	<u>50,000</u>	<u>50,000</u>	<u>50,000</u>	<u>50,000</u>	<u>50,000</u>	<u>50,000</u>
Revenues Less Expenses	62,243	(60,351)	(70,000)	(8,000)	(4,000)	(3,000)	(2,000)	(1,000)	0	1,000	2,000
Ending Fund Balance	317,932	257,581	188,000	180,000	176,000	173,000	171,000	170,000	170,000	171,000	173,000

Table 6
 City of Grass Valley
 Projected Water Rate Adjustments

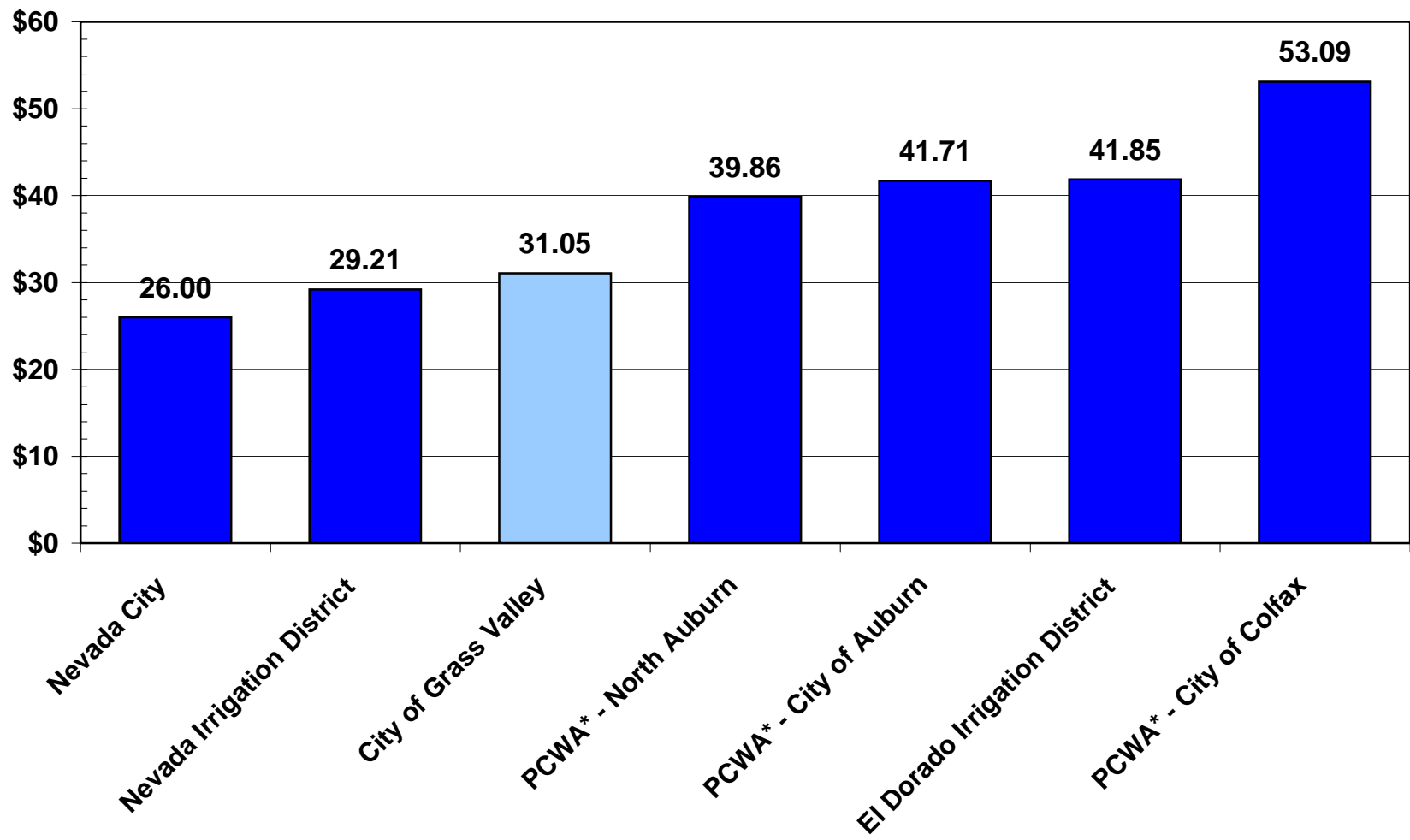
AWWA Meter Ratio	Current	Proposed					
	Jan-1 2007	Jan-1 2008	Jan-1 2009	Jan-1 2010	Jan-1 2011	Jan-1 2012	
Monthly Meter Charge							
<u>Meter Size</u>							
5/8"	1.00	\$13.50	\$16.00	\$18.50	\$21.00	\$23.50	\$26.00
3/4"	1.50	20.25	24.00	27.75	31.50	35.25	39.00
1"	2.50	33.75	40.00	46.25	52.50	58.75	65.00
1-1/2"	5.00	67.50	80.00	92.50	105.00	117.50	130.00
2"	8.00	108.00	128.00	148.00	168.00	188.00	208.00
3"	15.00	202.50	240.00	277.50	315.00	352.50	390.00
4"	25.00	337.50	400.00	462.50	525.00	587.50	650.00
6"	50.00	675.00	800.00	925.00	1,050.00	1,175.00	1,300.00
8"	80.00	1,080.00	1,280.00	1,480.00	1,680.00	1,880.00	2,080.00
Quantity Charge (Per 1,000 Gallons)							
Residential		\$1.95	\$2.31	\$2.67	\$3.03	\$3.39	\$3.75
Commercial		2.33	2.76	3.19	3.62	4.05	4.48

Table 7
 City of Grass Valley
 Projected Rate Impacts

		Current Rates	Projected				
			Jan-1 2008	Jan-1 2009	Jan-1 2010	Jan-1 2011	Jan-1 2012
Monthly 5/8" Meter Residential Water Bill & Impact							
<i>Accounts for both overall rate increase & adjustments to rate structure</i>							
<u>Usage Level (1,000 glns)</u>							
Low	4	\$21.30	\$25.24	\$29.18	\$33.12	\$37.06	\$41.00
Median (Est.)	7	\$27.15	\$32.17	\$37.19	\$42.21	\$47.23	\$52.25
Average	9	\$31.05	\$36.79	\$42.53	\$48.27	\$54.01	\$59.75
High	20	\$52.50	\$62.20	\$71.90	\$81.60	\$91.30	\$101.00

CHART A

Survey of Regional Water Rates Monthly Charge Per Typical Single Family Residence (5/8" Meter & 9,000 Gallons Average Monthly Water Use)



* Water service provided by Placer County Water Agency.

Water rates effective July 2007.