

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

City of Grass Valley
Sewer Financing Plan & Rate Update
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Table 1
City of Grass Valley
Outstanding 1995 COPs (USDA Loan)

Date	Principal	Rate	Interest	Period Debt Svc	Fiscal Year Debt Svc	Allocation	
						Current 70.83%	Future 29.17%
08/01/06	255,000	4.50%	181,912.50	436,912.50			
02/01/07			176,175.00	176,175.00	613,087.50	434,250	178,838
08/01/07	270,000	4.50%	176,175.00	446,175.00			
02/01/08			170,100.00	170,100.00	616,275.00	436,508	179,767
08/01/08	280,000	4.50%	170,100.00	450,100.00			
02/01/09			163,800.00	163,800.00	613,900.00	434,825	179,075
08/01/09	295,000	4.50%	163,800.00	458,800.00			
02/01/10			157,162.50	157,162.50	615,962.50	436,286	179,676
08/01/10	305,000	4.50%	157,162.50	462,162.50			
02/01/11			150,300.00	150,300.00	612,462.50	433,807	178,655
08/01/11	320,000	4.50%	150,300.00	470,300.00			
02/01/12			143,100.00	143,100.00	613,400.00	434,471	178,929
08/01/12	335,000	4.50%	143,100.00	478,100.00			
02/01/13			135,562.50	135,562.50	613,662.50	434,657	179,005
08/01/13	350,000	4.50%	135,562.50	485,562.50			
02/01/14			127,687.50	127,687.50	613,250.00	434,365	178,885
08/01/14	365,000	4.50%	127,687.50	492,687.50			
02/01/15			119,475.00	119,475.00	612,162.50	433,595	178,568
08/01/15	385,000	4.50%	119,475.00	504,475.00			
02/01/16			110,812.50	110,812.50	615,287.50	435,808	179,479
08/01/16	400,000	4.50%	110,812.50	510,812.50			
02/01/17			101,812.50	101,812.50	612,625.00	433,922	178,703
08/01/17	420,000	4.50%	101,812.50	521,812.50			
02/01/18			92,362.50	92,362.50	614,175.00	435,020	179,155
08/01/18	435,000	4.50%	92,362.50	527,362.50			
02/01/19			82,575.00	82,575.00	609,937.50	432,019	177,919
08/01/19	455,000	4.50%	82,575.00	537,575.00			
02/01/20			72,337.50	72,337.50	609,912.50	432,001	177,911
08/01/20	480,000	4.50%	72,337.50	552,337.50			
02/01/21			61,537.50	61,537.50	613,875.00	434,808	179,067
08/01/21	500,000	4.50%	61,537.50	561,537.50			
02/01/22			50,287.50	50,287.50	611,825.00	433,356	178,469
08/01/22	525,000	4.50%	50,287.50	575,287.50			
02/01/23			38,475.00	38,475.00	613,762.50	434,728	179,035
08/01/23	545,000	4.50%	38,475.00	583,475.00			
02/01/24			26,212.50	26,212.50	609,687.50	431,842	177,846
08/01/24	570,000	4.50%	26,212.50	596,212.50			
02/01/25			13,387.50	13,387.50	609,600.00	431,780	177,820
08/01/25	595,000	4.50%	13,387.50	608,387.50	608,387.50	430,921	177,467
Total	8,085,000		4,168,237.50	12,253,237.50	12,253,237.50	8,678,969	3,574,269

Table 2
City of Grass Valley
2002 SRF Loan (Sewer Plant Expansion)

Loan Amount	\$8,892,277
Interest Rate	1.8029994%
Term (years)	20
Payments Per Year	1

Period	Date	Principal	Interest	Total Payment	Allocation	
					Current 35%	Future 65%
1	07/31/03	\$373,211.05	\$160,327.70	\$533,538.75	186,738	346,801
2	07/31/04	379,940.04	153,598.71	533,538.75	186,738	346,801
3	07/31/05	386,790.36	146,748.39	533,538.75	186,738	346,801
4	07/31/06	393,764.19	139,774.56	533,538.75	186,738	346,801
5	07/31/07	400,863.75	132,675.00	533,538.75	186,738	346,801
6	07/31/08	408,091.32	125,447.43	533,538.75	186,738	346,801
7	07/31/09	415,449.21	118,089.54	533,538.75	186,738	346,801
8	07/31/10	422,939.75	110,599.00	533,538.75	186,738	346,801
9	07/31/11	430,565.36	102,973.39	533,538.75	186,738	346,801
10	07/31/12	438,328.45	95,210.30	533,538.75	186,738	346,801
11	07/31/13	446,231.51	87,307.24	533,538.75	186,738	346,801
12	07/31/14	454,277.06	79,261.69	533,538.75	186,738	346,801
13	07/31/15	462,467.67	71,071.08	533,538.75	186,738	346,801
14	07/31/16	470,805.96	62,732.79	533,538.75	186,738	346,801
15	07/31/17	479,294.59	54,244.16	533,538.75	186,738	346,801
16	07/31/18	487,936.27	45,602.48	533,538.75	186,738	346,801
17	07/31/19	496,733.75	36,805.00	533,538.75	186,738	346,801
18	07/31/20	505,689.86	27,848.89	533,538.75	186,738	346,801
19	07/31/21	514,807.45	18,731.30	533,538.75	186,738	346,801
20	07/31/22	524,089.42	9,449.33	533,538.75	186,738	346,801
Total		8,892,277.00	1,778,498.00	10,670,775.00	3,734,755	6,936,020

Table 3
 City of Grass Valley
 New SRF Loan Estimates

	With Grant	Without Grant
Total Project Cost	7,000,000	7,000,000
Anticipated Funding Sources		
Small Communities Grant	2,000,000	0
SRF Loan	4,500,000	6,500,000
Cash Funding Requirement	<u>500,000</u>	<u>500,000</u>
Total	7,000,000	7,000,000
SRF Loan Amount		
SRF Loan Construction Proceeds	\$4,500,000	\$6,500,000
Accrued Interest to Project Completion ¹	60,000	80,000
Accrued Interest for One Additional Year	<u>114,000</u>	<u>165,000</u>
Total Loan Amount	4,674,000	6,745,000
Loan Terms		
Term (years)	20	20
Est. Interest Rate	2.50%	2.50%
Estimated Annual Loan Payment²	300,000	433,000
Wastewater Capital Reserve Fund Set Aside³	23,400	33,700

1 Assumes level monthly drawdowns during a one-year construction period.

2 Loan payments begin one year after completion of project construction.

3 SRF Loan recipients must set aside 0.5% of total loan amount for 10 years; the City can use these funds for ongoing repairs & replacements for the SRF-funded project.

Table 4
City of Grass Valley
General Fund Loan Repayment

Loan Amount

Funds Loaned from General Fund in 2006/07	\$1,100,000
Accrued Interest Through 2011/12 (5 Years)	<u>275,000</u>
Total Loan Amount	1,375,000

Loan Terms

Repayment Term (Years)	10
Est. Interest Rate	5.00%

Annual Payment (beginning 2012/13)	\$178,000
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Note: Assumes no payments for 5 years followed by a 10 year repayment term;

Table 5
City of Grass Valley
Projected 2012 Loan Estimates

Projected Loan Amount	\$5,000,000
Loan Terms	
Repayment Term (years)	20
Est. Interest Rate	5.50%
Annual Payment	418,000

Table 6
City of Grass Valley
Operating Fund Repayment to Expansion Fund

Funds Loaned from Expansion Fund to Operating Fund (est.)	\$600,000
Accrued Interest Through June 30, 2010	<u>75,000</u>
Total Loan Amount	675,000
Loan Terms	
Repayment Term (Years), <i>Starting 2009/10</i>	5
Est. Interest Rate	5.00%
Annual Payment	\$156,000

Table 7
City of Grass Valley
Sewer Service Charge Revenue Projections

	Estimated	Projected								
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Effective Date	Jan-1	Nov-1	Jul-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
Rate Adjustments	15%	32.5%	15.8%	6.3%	3.9%	3.8%	4.0%	4.0%	4.0%	4.0%
Effective Date			Jan-1							
Rate Adjustments			9.1%							
Net Growth	0.4%	0.3%	0.5%	0.5%	0.5%	0.8%	0.8%	0.8%	0.8%	0.8%
Jul-Aug	400,000	461,800	710,600	779,100	831,900	868,800	908,800	952,700	998,700	1,047,000
Sep-Oct	430,000	496,500	764,000	837,600	894,400	934,100	977,100	1,024,300	1,073,800	1,125,700
Nov-Dec	375,000	573,700	666,300	730,500	780,000	814,600	852,100	893,300	936,500	981,800
Jan-Feb	410,000	545,400	691,000	737,900	770,700	803,800	842,600	883,300	926,000	970,700
Mar-Apr	420,000	558,700	707,800	755,800	789,400	823,300	863,100	904,800	948,500	994,300
May-Jun	435,000	578,700	733,200	782,900	817,700	852,800	894,000	937,200	982,500	1,030,000
Total	2,470,000	3,214,800	4,272,900	4,623,800	4,884,100	5,097,400	5,337,700	5,595,600	5,866,000	6,149,500

Table 8
City of Grass Valley
Cash Flow Assumptions

REVENUE ASSUMPTIONS

- 1 Sewer service charge revenues for 2006/07 based on year-end estimates prior to final adjustments. Future service charge revenues based on 2006/07 revenues and increase due to rate adjustments and growth.
- 2 Interest earnings projected at 3% of beginning fund balances beginning 2008/09.
- 3 Future connection fee revenues based on proposed new sewer connection fee (which has not yet been adopted) and projected number of new connections.
- 4 Interest earnings projected at 3% of beginning fund balances beginning 2008/09.
- 5 Projections assume receipt of a \$2 million Small Community Grant and award of a \$4.5 million State Revolving Fund Loan with a 20-year term and 2.5% interest rate.
- 6 For financial planning purposes, the projections assume a \$5 million loan in 2011/12 for funding future treatment upgrades required by next NPDES Waste Discharge Permit renewal. This future loan will not impact funding requirements over the next 5 years.

EXPENSE ASSUMPTIONS

- 1 Operating costs are based on the 2007/08 Budget and increase at the annual rate of 5.0% to account for projected operating cost inflation. In addition, operating costs also include funding for additional needed maintenance costs, staffing needs including 3 sewer maintenance staff over the next 7 years and a 1/2 time staff member in billing and admin. Future operating expenses also include estimated costs for operating the new, required UV disinfection system.
 - 2 Debt service projections for outstanding bonds & loans assume expansion fund pays for its share of debt service pursuant to historical engineering cost allocations based on project benefit.
 - 3 Projected 2007 SRF Loan Debt Service for required NPDES permit compliance project assumes a \$2 million grant and \$4.5 million of loan funding with a 20-year term and 2.5% interest rate.
 - 4 Cash flows include repayment of loan from General Fund. Repayment includes accrued interest and begins 2012. Loan payments are based on a 5% interest rate and 10-year repayment term.
 - 5 Cash flows include repayment of funds temporarily loaned from Sewer Expansion Fund. Repayment includes accrued interest and begins 2009/10. Loan payments are based on a 5% interest rate and 5-year repayment term.
 - 6 New expenses for vehicle and equipment replacement range from \$50,000 to \$70,000 per year beginning 2007/08. This cost had been deferred in prior years due to budget deficits.
 - 7 Capital costs for repair and replacement of aging or substandard sewer collection system pipelines and lift stations projected to phase in to approximately \$1 million per year.
 - 8 Future costs for Newmont Mine litigation projected at \$200,000 per year for the next 5 years
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Table 9 - Sewer 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	Nov-1	Jul-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1	Jan-1
Rate Adjustments	15.0%	15.0%	32.5%	15.8%	6.3%	3.9%	3.8%	4.0%	4.0%	4.0%	4.0%
Single Family Monthly Charge	\$24.94	\$28.68	\$38.00	\$44.00	\$51.00	\$53.00	\$55.00	\$57.20	\$59.49	\$61.87	\$64.34
				Jan-1 9.1% \$48.00							
New Single Family Equivalents	150	40	25	50	50	50	75	75	75	75	75
Net Growth	1.5%	0.4%	0.3%	0.5%	0.5%	0.5%	0.8%	0.8%	0.8%	0.8%	0.8%
Cost Escalation				5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Interest Rate		5.0%	4.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Beginning Fund Balance	\$647,443	\$353,000	(\$164,000)	(\$132,000)	\$359,000	\$545,000	\$598,000	\$597,000	\$558,000	\$527,000	\$512,000
Revenues											
Utility service charges	2,150,020	2,480,000	3,205,000	4,265,000	4,615,000	4,875,000	5,085,000	5,330,000	5,585,000	5,855,000	6,140,000
Interest income	30,237	30,000	0	0	11,000	16,000	18,000	18,000	17,000	16,000	15,000
Other	<u>103,414</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>	<u>40,000</u>
Total revenues	2,283,671	2,550,000	3,245,000	4,305,000	4,666,000	4,931,000	5,143,000	5,388,000	5,642,000	5,911,000	6,195,000
General Fund Loan Proceeds	0	1,100,000	0	0	0	0	0	0	0	0	0
SRF Small Comm Grant	0	0	2,000,000	0	0	0	0	0	0	0	0
SRF Loan Proceeds	0	0	4,500,000	0	0	0	5,000,000	0	0	0	0
Expenses											
<u>Operating</u>											
Billing & administration	82,976	94,019	99,892	105,000	110,000	146,000	183,000	192,000	202,000	212,000	223,000
Payments to general gov't	174,205	181,870	187,871	197,000	207,000	217,000	228,000	239,000	251,000	264,000	277,000
Wastewater collection	266,602	278,152	288,307	333,000	450,000	473,000	607,000	637,000	789,000	828,000	869,000
Wastewater lift stations	86,103	105,091	98,263	123,000	129,000	135,000	142,000	149,000	156,000	164,000	172,000
Wastewater treatment plant	1,120,159	1,100,000	1,216,493	1,297,000	1,362,000	1,430,000	1,502,000	1,577,000	1,656,000	1,739,000	1,826,000
Capital outlay	11,068	5,658	10,000	20,000	21,000	22,000	23,000	24,000	25,000	26,000	27,000
New O&M for UV disinfection	<u>0</u>	<u>0</u>	<u>0</u>	<u>60,000</u>	<u>80,000</u>	<u>84,000</u>	<u>88,000</u>	<u>92,000</u>	<u>97,000</u>	<u>102,000</u>	<u>107,000</u>
Subtotal operating	1,741,113	1,764,790	1,900,826	2,135,000	2,359,000	2,507,000	2,773,000	2,910,000	3,176,000	3,335,000	3,501,000
<u>Non-Operating</u>											
1995 USDA Loan	614,000	614,000	614,000	614,000	614,000	614,000	614,000	614,000	614,000	614,000	614,000
2002 SRF Loan	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000	534,000
2007 SRF Loan, projected	0	0	0	0	300,000	300,000	300,000	300,000	300,000	300,000	300,000
2012 Loan, projected					0	0	0	418,000	418,000	418,000	418,000
Less debt allocated to expn	<u>(533,539)</u>	<u>(526,000)</u>	<u>(526,000)</u>	<u>(526,000)</u>	<u>(526,000)</u>	<u>(526,000)</u>	<u>(526,000)</u>	<u>(526,000)</u>	<u>(526,000)</u>	<u>(526,000)</u>	<u>(526,000)</u>
SRF Capital Rsrv Req	0	0	0	0	23,000	23,000	23,000	23,000	23,000	23,000	23,000
Gen Fund Loan Repayment	0	0	0	0	0	0	0	178,000	178,000	178,000	178,000
Expansion Fund Repayment	0	0	0	0	156,000	156,000	156,000	156,000	156,000	156,000	156,000
Vehicle/equip replacements	0	0	50,000	70,000	70,000	70,000	70,000	70,000	50,000	50,000	50,000
WWTP project & admin	0	0	6,740,000	287,000	0	0	5,000,000	0	0	0	0
Collection system CIP	233,072	180,000	200,000	500,000	750,000	1,000,000	1,000,000	750,000	750,000	1,000,000	1,100,000
Other (Newmont Mine litigation)	<u>287,000</u>	<u>1,600,000</u>	<u>200,000</u>	<u>200,000</u>	<u>200,000</u>	<u>200,000</u>	<u>200,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Subtotal non-operating	1,134,533	2,402,000	7,812,000	1,679,000	2,121,000	2,371,000	7,371,000	2,517,000	2,497,000	2,591,000	2,691,000
Total expenses	2,875,646	4,166,790	9,712,826	3,814,000	4,480,000	4,878,000	10,144,000	5,427,000	5,673,000	5,926,000	6,192,000
Revenues Less Expenses	(591,975)	(516,790)	32,174	491,000	186,000	53,000	(1,000)	(39,000)	(31,000)	(15,000)	3,000
Ending Fund Balance	55,468	(163,790)	(131,826)	359,000	545,000	598,000	597,000	558,000	527,000	512,000	515,000

Table 10 - Sewer 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
New Single Family Equivalents	150	40	25	50	50	50	75	75	75	75
Connection Fee Per EDU	\$5,069	\$5,464	\$5,464	\$7,520	\$8,579	\$8,750	\$8,930	\$9,110	\$9,290	\$9,480
Interest Rate			3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Beginning Fund Balance	\$2,432,040	\$1,900,000	\$1,294,000	\$92,000	(\$76,000)	(\$66,000)	(\$46,000)	(\$46,000)	(\$36,000)	(\$6,000)
Revenues										
Connection fees	872,497	150,000	140,000	380,000	430,000	440,000	670,000	680,000	700,000	710,000
Interest income	<u>87,882</u>	<u>50,000</u>	<u>39,000</u>	<u>3,000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total revenues	960,379	200,000	179,000	383,000	430,000	440,000	670,000	680,000	700,000	710,000
Expenses										
1995 USDA Loan: 29.17%	128,049	179,000	179,000	179,000	179,000	179,000	179,000	179,000	179,000	179,000
2002 SRF Loan: 35%	405,490	347,000	347,000	347,000	347,000	347,000	347,000	347,000	347,000	347,000
Repayment from Oper Fund	0	0	0	0	(156,000)	(156,000)	(156,000)	(156,000)	(156,000)	0
Expn Share of WWTP Project	263,574	275,000	160,000	0	0	0	0	0	0	0
Expansion Projects	<u>671,075</u>	<u>5,000</u>	<u>695,000</u>	<u>25,000</u>	<u>50,000</u>	<u>50,000</u>	<u>300,000</u>	<u>300,000</u>	<u>300,000</u>	<u>200,000</u>
Total expenses	1,468,188	806,000	1,381,000	551,000	420,000	420,000	670,000	670,000	670,000	726,000
Revenues Less Expenses	(507,809)	(606,000)	(1,202,000)	(168,000)	10,000	20,000	0	10,000	30,000	(16,000)
Ending Fund Balance	1,924,231	1,294,000	92,000	(76,000)	(66,000)	(46,000)	(46,000)	(36,000)	(6,000)	(22,000)

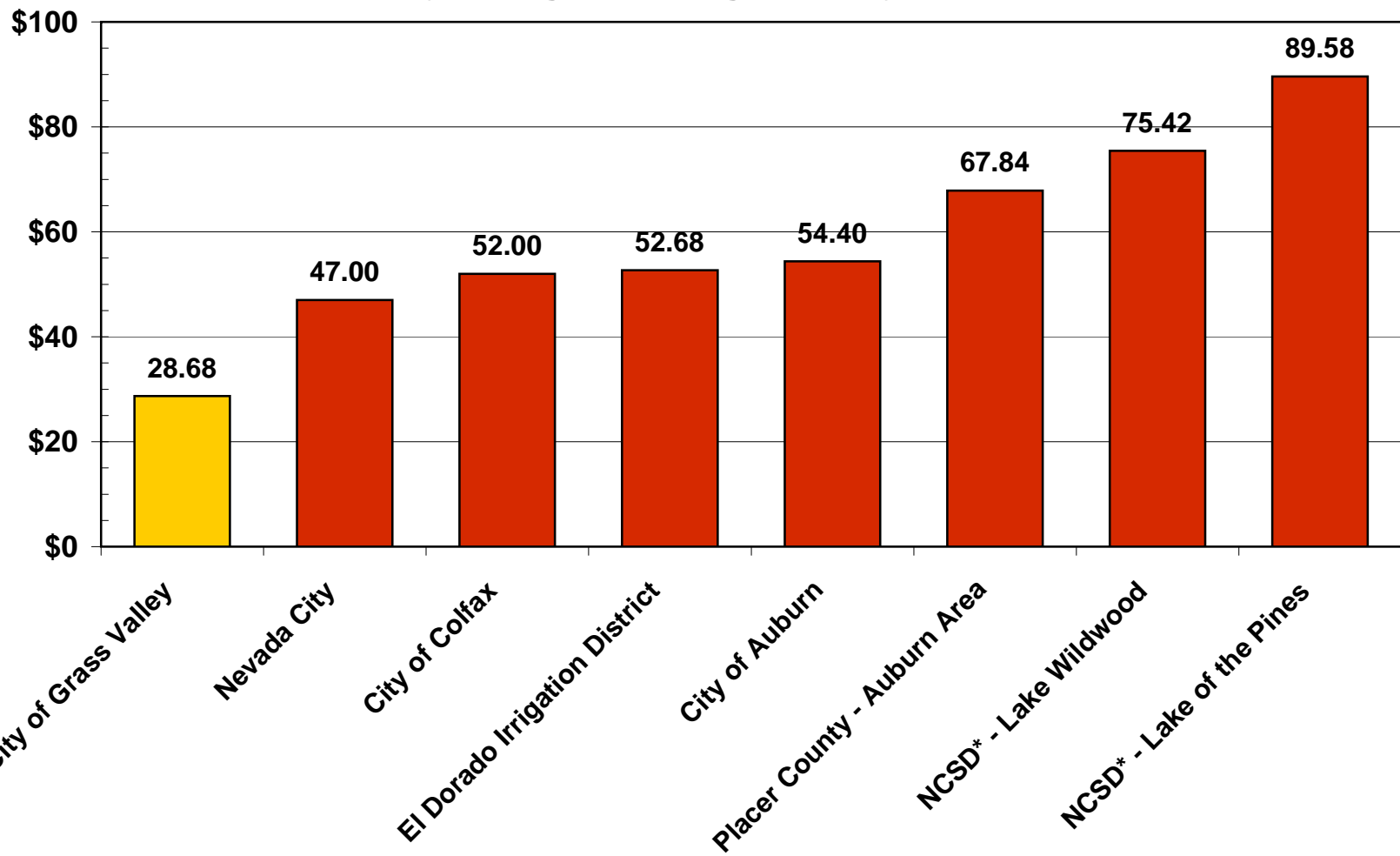
Table 11
 City of Grass Valley
 Projected Sewer Rates

	Current			Proposed			
	Jan-1 2007	Nov-1 2007	Jul-1 2008	Jan-1 2009	Jan-1 2010	Jan-1 2011	Jan-1 2012
RESIDENTIAL							
<u>Flat Monthly Charge Per Dwelling Unit</u>							
Single family & duplex	\$28.68	\$38.00	\$44.00	\$48.00	\$51.00	\$53.00	\$55.00
Multi-family 78.5%	22.52	29.84	34.55	37.69	40.05	41.62	43.19
Mobile home 57.6%	16.51	21.88	25.33	27.63	29.36	30.51	31.66
COMMERCIAL							
<u>Flat Monthly Charge Per Commercial Unit</u>							
	11.33	15.01	17.38	18.96	20.15	20.94	21.73
<u>Quantity Rate Per 1,000 Gallons of Sewer Discharge</u>							
Class A - Standard Strength <i>General Comm'l, Theaters, Laundries, Fairgrounds</i>	2.32	3.07	3.55	3.87	4.11	4.27	4.43
Class B - Moderate Strength <i>Hotels/Motels</i>	2.79	3.70	4.28	4.67	4.96	5.15	5.34
Class C - High Strength <i>Restaurants</i>	4.91	6.51	7.54	8.23	8.74	9.08	9.42
Class D - Schools <i>Schools</i>	2.07	2.74	3.17	3.46	3.68	3.82	3.96

Low Income Discount = 15% for residential customers with household income below the federal poverty level.

CHART A

Survey of Regional Sewer Rates Monthly Charge Per Single Family Residence



* Served by Nevada County Sanitation District.

Sewer rates effective July 2007.